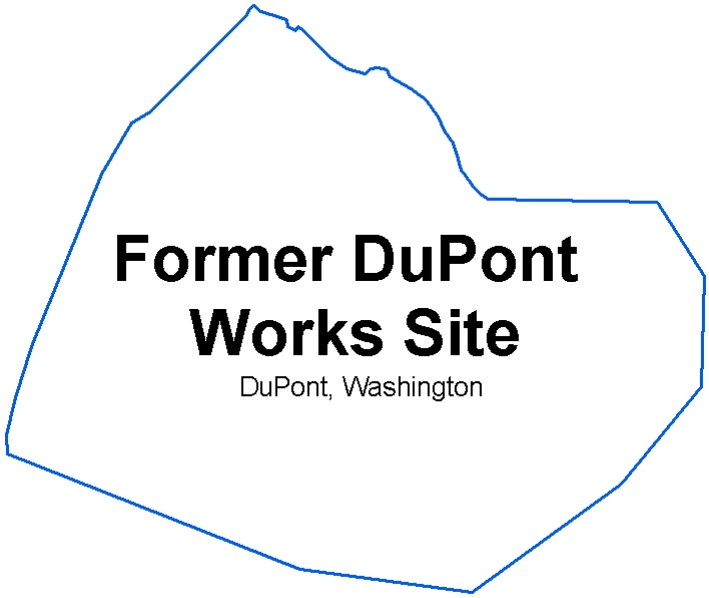
Closure Report



Prepared for:

The Weyerhaeuser Company and E.I. duPont de Nemours and Company

Prepared by:

Pacific Environmental and Redevelopment Corporation

8424 East Meadow Lake Drive

Snohomish, WA 98290

And

PIONEER TECHNOLOGIES CORPORATION

2612 Yelm Hwy SE, Suite B

Olympia, WA 98501-4826

Phone: 360.570.1700

March 2007

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

SECTION 1 – INTRODUCTION 1-1

1.1 Introduction 1-1
1.2 Purpose 1-1
1.3 Setting 1-2
1.4 Site Background 1-2
1.4.1 Property History 1-2
1.4.2 Regulatory History 1-2
1.5 Summary of Site Contamination 1-4
1.5.1 Surface Water and Sediment 1-4
1.5.2 Groundwater 1-4
1.5.3 Soil and Debris 1-5
1.6 Overview of Soil and Debris Remedial Actions 1-5
1.7 Cultural and Archaeological Management Plan 1-6
1.8 Report Organization 1-7

SECTION 2 – COMMERCIAL AREA REMEDIATION 2-1

2.1 Introduction 2-1
2.2 Interim Remedial Actions 2-1
2.2.1 Removal of Bunker-C Pipe, Storage Tanks, and Soil Excavation 2-1
2.2.2 Foundation Excavations 2-2
2.2.3 Narrow Gauge Railroad Soil Excavation 2-2
2.2.4 Hotspot Area Excavations 2-3
2.2.5 Sand Laydown Area Excavation 2-4
2.2.6 Soil Laydown Area Excavations 2-4
2.2.7 Areas for Additional Characterization Sampling 2-5
2.2.8 Perimeter Soil Excavation 2-5
2.2.9 On-Site Stockpile Excavations 2-6
2.3 Miscellaneous Small Units (MSUs) 2-6
2.4 Tree Root Zone Remediation 2-6

2.5 Large-Scale Excavation 2-7
2.6 Summary of Remedial Actions in the Commercial Area 2-7

SECTION 3 – GOLF COURSE AREAS 3-1

3.1 Introduction 3-1
3.2 Interim Remedial Actions 3-2
3.2.1 Removal of Bunker-C Pipe, Storage Tanks, and Soil Excavation 3-2
3.2.2 Foundation Excavations 3-2
3.2.3 NGRR Excavations 3-3
3.2.4 Hotspot Areas Excavations 3-3
3.2.5 Sand Laydown Areas Excavation 3-4
3.2.6 Storm Water Pipeline Area Excavation 3-4
3.2.7 On-Site Stockpile Excavations 3-5
3.3 Miscellaneous Small Units (MSUs) 3-5
3.4 Tree Root Zone Remediation 3-5
3.5 Large-Scale Excavation 3-6
3.6 Placement Area Cap Construction 3-7
3.7 Golf Course Construction 3-7
3.8 Summary of Remedial Actions in the Golf Course Area 3-8

SECTION 4 – INDUSTRIAL AREA 4-1

4.1 Introduction 4-1
4.2 Interim Remedial Actions 4-1
4.2.1 Hotspot Areas Excavations 4-1
4.3 Miscellaneous Small Units 4-2
4.4 Summary of Remedial Actions in the Industrial Area 4-3

SECTION 5 - HISTORICAL AREAS 5-1

5.1 Introduction 5-1
5.1.1 1833 Fort Nisqually Site (45PI55) 5-1
5.1.2 Fort Nisqually Cemetery (45PI404) 5-1
5.1.3 Shell Midden (45PI72) 5-2
5.1.4 Native American Graves (45PI712) 5-2
5.2 Historical Areas Cap Construction 5-2

5.3 Summary of Remedial Actions in the Historical Areas 5-3

SECTION 6 – OPEN SPACE AREAS 6-1

6.1 Introduction 6-1
6.2 Interim Remedial Actions 6-1
6.2.1 NGRR Excavation 6-1
6.2.2 Storm Water Pipeline Excavation 6-2
6.3 Miscellaneous Small Units 6-2
6.4 Tree Root Zone Remediation 6-2
6.5 Large-Scale Excavation 6-3
6.6 Summary of Remedial Actions in the Open Space Areas 6-3

SECTION 7 – ON-GOING REQUIREMENTS 7-1

7.1 Groundwater 7-1
7.2 Land-Use Restrictions 7-1
7.3 Future Investigations 7-1

SECTION 8 – HEALTH AND SAFETY 8-1

8.1 Introduction 8-1
8.2 Site Health and Safety Plan 8-2
8.3 Air Monitoring For Worker Safety During Remediation 8-2
8.3.1 Air Monitoring Approach 8-2
8.3.1.1 Personal Air Monitoring 8-3
8.3.1.2 Real-Time Air Monitoring 8-3
8.3.2 Air Monitoring Results 8-3
8.3.2.1 2001 Interim Source Removal Actions - Personal Air Monitoring Results 8-3
8.3.2.2 2002 Interim Remedial Actions - Personal Air Monitoring Results 8-3
8.3.2.3 2003 Final Site Remediation - Personal Air Monitoring Results 8-3
8.3.2.4 2001 Interim Source Removal Actions - Real-Time Air Monitoring Results 8-4
8.3.2.5 2002 Interim Remedial Actions - Real-Time Air Monitoring Results 8-4
8.3.2.6 2003 Final Site Remediation - Real-Time Air Monitoring Results 8-4
8.4 Perimeter Air Monitoring for Off-Site Particulate Emissions 8-4
8.4.1 PM_{10} Sampling Approach 8-4
8.4.2 PM_{10} Sampling Results 8-5

SECTION 9 – REFERENCES 9-1

TABLES

TABLE 2-1: Soil Cleanup Levels, Remediation Levels, and Screening Level Used for Evaluating Commercial Land Use

TABLE 2-2: Miscellaneous Small Units in Commercial Areas

TABLE 3-1: Soil Cleanup Levels, Remediation Levels, and Screening Level Used for Evaluating Golf Course Non-Placement Area and Placement Area Land Uses

TABLE 3-2: Miscellaneous Small Units in Golf Course Areas

TABLE 4-1: Soil Cleanup Levels Used for Evaluating Industrial Land Use

TABLE 5-1: Soil Cleanup Level, Remediation Level, and Screening Level Used for Evaluating Historical Areas

TABLE 5-2: Miscellaneous Small Units in Historical Areas

TABLE 6-1: Soil Cleanup Level and Screening Level Used for Evaluating Open Space Land Use

TABLE 6-2: Miscellaneous Small Units in Open Space Areas

FIGURES

FIGURE ES-1: Future Land Use Areas

FIGURE 1-1: Former DuPont Works Site Vicinity Map

FIGURE 1-2: Future Land-Use Areas

FIGURE 2-1: Commercial Area Remediation Units

FIGURE 2-2: Location of Interim Remedial Actions in Commercial Area Remediation Units

FIGURE 2-3: Locations of Tree Remediation in Commercial Area Remediation Units

FIGURE 2-4: Large-Scale Excavation within Commercial Area Remediation Units

FIGURE 3-1: Golf Course Area Remediation Units

FIGURE 3-2: Locations of Interim Remedial Actions in Golf Course Area Remediation Units

FIGURE 3-3: Locations of Tree Remediation in Golf Course Area Remediation Units

FIGURE 3-4: Large-Scale Excavation within Golf Course Area Remediation Units

FIGURE 4-1: Industrial Area Remediation Units

FIGURE 4-2: Locations of Interim Remedial Actions in the Industrial Area Remediation Units

FIGURE 5-1: Historical Area Remediation Units

FIGURE 6-1: Open Space Area Remediation Units

FIGURE 6-2: Locations of Interim Remedial Actions in Open Space Area Remediation Units

FIGURE 6-3: Locations of Tree Remediation in Open Space Area Remediation Units

FIGURE 6-4: Large-Scale Excavation within Open Space Area Remediation Units

FIGURE 7-1: Groundwater Monitoring Locations

APPENDICES

APPENDIX A: Archaeological Monitoring Plan and Report

APPENDIX B: Results of Confirmation Soil Sampling for All Land-Use Areas

APPENDIX C: Interim Remedial Action Memoranda

APPENDIX D: MSU Remediation Documentation

APPENDIX E: Tree Root Zone Remediation Program

APPENDIX F: Placement Areas, Ecological Cap, Human Health Cap and Golf Course Construction Documentation

APPENDIX G: Health and Safety Air Monitoring Reports

APPENDIX H: Site Deed Restrictions

ACRONYMS AND ABBREVIATIONS

Acronyms	Definition
2,4-DNT	2,4-Dinitrotoluene
2,6-DNT	2,6-Dinitrotoluene
AIHA	American Industrial Hygiene Association
BGS	Below Ground Surface
CAP	Cleanup Action Plan
CDB	Consent Decree Boundary
CL	Cleanup Level
CM	Commercial
Companies	Weyerhaeuser Company and E.I. duPont de Nemours and Company, Inc.
CY	Cubic Yard
DAHP	Washington State Department of Archaeology and Historic Preservation
DNT	Dinitrotoluene
DuPont	E.I. duPont de Nemours and Company, Inc.
Ecocap	Ecological Cap
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FS	Feasibility Study
GC	Golf Course
GPS	Global Positioning System
HASP	Health and Safety Plan
HI	Historical Area
HRA	Historical Research Associates
IN	Industrial
IRA	Interim Remedial Action
mg/kg	Milligrams Per Kilogram
MSL	Mean Sea Level
MSU	Miscellaneous Small Unit

Acronyms	Definition
MTCA	Model Toxics Control Act
Non-PA	Non-Placement Area
NGRR	Narrow Gauge Railroad
OS	Open Space
OSHA	Occupational Health and Safety Administration
PA	Placement Areas
PEL	Permissible Exposure Limit
PM_{10}	Respirable Particulate Matter
PM/SS	Project Manager/Site Supervisor
PMT	Project Management Team
ppb	Parts-Per-Billion
PQL	Practical Quantitation Limit
RA	Risk Assessment
RCW	Revised Code of Washington
RI	Remedial Investigation
RL	Remediation Level
RU	Remediation Unit
Site	Parcel One of the Former DuPont Works Site
SL	Screening Level
TNT	2,4,6-Trinitrotoluene
TPH	Total Petroleum Hydrocarbons
95% UCL	95 Percent Upper-Confidence Limit
ug/l	Micrograms Per Liter
ug/m^3	Micrograms Per Cubic Meter
WAC	Washington Administrative Code
Weyerhaeuser	Weyerhaeuser Company
WISHA	Washington Industrial Safety and Health Act

EXECUTIVE SUMMARY

ES.1 Introduction

This Closure Report provides complete documentation of the remediation completed at Parcel One of the Former DuPont Works Site. Initially, the Former DuPont Works Site consisted of two Parcels, Parcel One and Parcel Two. Remediation of Parcel Two was completed in 1996, and is not addressed in this report. Parcel One is the subject of this report, and will be referred to as the Site for the remainder of the document.

The remediation documented in this report fulfills the requirements of the First Consent Decree (No. 91 2 01703 1) and the Second Consent Decree (No. 03 2 10484 7), effective July, 1991 and August, 2003, respectively, between the lead agency, Washington State Department of Ecology (Ecology), and the principle responsible parties, Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont). Per the Second Consent Decree, the final remediation activities were conducted in accordance with the requirements identified in the Model Toxics Control Act (MTCA) Chapter 70.105D Revised Code of Washington (RCW) and the Cleanup Regulation Chapter 173-340 Washington Administrative Code (WAC) as implemented by Ecology. The cleanup-action decisions are described in the Cleanup Action Plan (CAP) (Ecology, 2003), and are based on the Remedial Investigation (RI) (URS Inc. and PIONEER, 2003), Risk Assessment (RA) (PIONEER, 2002) and Feasibility Study (FS) (WSNW and PIONEER, 2003) as well as other relevant documents in the administrative record.

The purpose of this report is to provide complete documentation of all remediation activities conducted at the Site, and to document compliance with the remediation provisions specified in the CAP. The Site was broken down into five land-use areas (i.e., Commercial [CM], Golf Course [GC], Industrial [IN], Historical [HI], and Open Space [OS] areas). The remedial actions conducted across the Site are described separately for each of the five land-use areas to enable a focused review of the separate areas of the Site to facilitate Site redevelopment. Archives of archeological work conducted at the Site, a complete listing of confirmation soil sampling results, background Site reports, specific remedial action program reports, and Site health and safety program reports are presented in Appendices.

ES.2 Summary of Site Remediation

Remedial actions at the Site included:

- Interim Remedial Action (IRA)
- Localized removal at Miscellaneous Small Remediation Units (MSUs) (e.g., removal of debris piles and stockpiles)
- Tree Root Zone Remediation
- Large-Scale Excavation (focused on arsenic and lead impacted surface soil)
- Capping

Numerous phases of remediation work have occurred at the Site. These remedial actions are briefly summarized below for the CM, GC, IN, HI, and OS areas, and the future land-use areas are presented in Figure ES-1.

ES.2.1 Commercial Area Remediation

The portion of the Site that was remediated for commercial land use comprised approximately 336 acres, which was divided into eight separate areas called Remediation Units (RUs). Remediation completed within the CM Area RUs included:

- IRAs (including excavation of soil and/or debris in hotspot areas and other areas where removal was required before other sequenced remediation could occur)
- MSU remediation
- Tree remediation
- Large-Scale Excavation

In addition, there was one RU that was designated for No Further Action based on the results of a comprehensive sampling program. The remedial actions completed within the eight CM Area RUs removed elevated levels of metals (i.e., arsenic, copper, and lead), explosives (i.e., 2,4-Dinitrotoluene [2,4-DNT], 2,6-Dinitrotoluene [2,6-DNT], nitrobenzene, and 2,4,6-Trinitrotoluene [TNT]), and petroleum hydrocarbons (Bunker-C fuel oil and motor oil). Figures showing all sampling locations, and the corresponding tables reflecting the soil sampling results associated with these locations, are presented in Appendix B. The sampling results presented in the Appendix B tables document the constituent concentrations that remain in place (i.e., those concentrations that met the Site cleanup levels (CLs), remediation levels (RLs), or screening level (SL) but did not meet Washington State standards for unrestricted land use). CLs were either MTCA table values derived by Ecology using default exposure assumptions, or Site-specific values derived by Ecology. RLs were derived using human health risk assessment procedures, incorporating exposure assumptions and other media-specific factors reflecting future Site conditions. There was one SL used, which was a value for lead derived by Ecology for protection of terrestrial ecological receptors. The sample results include both confirmation samples collected during Site remediation, and historical samples collected during the RI that had concentrations that met the applicable Site CLs, RLs, or SL. These concentrations document that Site remediation in the CM Area was completed in compliance with the CAP established by Ecology in 2003 (Ecology, 2003), and show that these areas are ready for future commercial development.

ES.2.2 Golf Course Area Remediation

The GC Area is 197 acres in size and consists of Placement Areas (PAs) and Non-Placement Areas (non-PA). GC Area PAs are discrete areas within the GC footprint where impacted soil from other areas of the Site were placed, and comprise approximately 75 acres. Non-Placement Areas within GC Area RUs are all areas within the GC footprint that are not PAs, and they comprise approximately 121 acres. These PAs were capped with at least one foot of gravel and six inches of soil.

The GC footprint was broken up into smaller RUs, which were designed to be similar in size. Within

each GC Area RU, there was both a PA and a non-PA.

Remediation completed within the PAs included IRA removal of soil when constituent concentrations were greater than the GC Area PA RLs. The soil with constituent concentrations greater than the GC Area PA RLs were placed on an asphalt pad and were either included in the arsenic and lead soil-screening program or sent off Site for disposal (PIONEER and WSNW, 2002). Contaminated soil from other areas on Site that had concentrations lower than the PA RLs, but above CLs, were then placed in the PAs, and the PAs were capped per the requirements of the CAP to prepare for construction of the GC.

Remediation completed within the non-PA GC Area RUs included:

- IRAs
- MSU remediation
- Tree remediation
- Large-Scale Excavation

The remedial actions completed within the eight GC Area RUs removed elevated levels of metals (i.e., arsenic, copper, and lead), explosives (i.e., 2,4-DNT, 2,6-DNT, nitrobenzene, and TNT), petroleum hydrocarbons (Bunker-C fuel oil and motor oil), and tetrachloroethene. Confirmation soil sampling results documenting the constituent concentrations that remained in place (i.e., those concentrations that met the CLs, RLs, or SL) are presented in Appendix B. These data document the successful completion of remedial activities in the GC Area RUs and that these activities were completed in a manner consistent with the CAP established by Ecology (Ecology, 2003). In addition, Appendix F presents data and As-builts that demonstrate that the ecocap and human health cap were constructed in a manner that met the design requirements identified in the CAP.

ES 2.3 Industrial Area Remediation

The northeast area of the Site will be used for industrial purposes as well as open space. The Industrial Area occupies 35.7 acres. Remediation completed within the Industrial Area included:

- IRAs
- MSU remediation

Remedial actions completed in the Industrial Area removed elevated levels of arsenic, lead, 2,4-DNT, 2,6-DNT, and TNT. Confirmation soil sampling results documenting the constituent concentrations that remained in place (i.e., those concentrations that met the CLs) are presented in Appendix B. The Industrial Area is in compliance with the CLs approved by Ecology in the 2003 CAP and this area is now ready for development for industrial uses.

ES 2.4 Historical Area Remediation

Four Historical (HI) Areas were identified at the Site, including the 1833 Fort Nisqually Site (Historical Site Number 45PI55), the Fort Nisqually Cemetery (Historical Site Number 45PI404), the Shell Midden (Historical Site Number 45PI72), and an area where Native American graves were found (Historical Site

Number 45PI712). In total, the HI Areas consisted of approximately six acres. Remedial actions completed in the HI Areas included:

- MSU remediation
- Capping

Each HI Area was assigned an RU number. Fort Nisqually was identified as RU HI-01, Fort Nisqually Cemetery was identified as RU HI-02, Native American Graves were identified as RU HI-03, and Shell Midden was identified as RU HI-04. Minimal remediation was done in the HI Area RUs to ensure the preservation of the historical artifacts. All work was completed under the direction/supervision of Historical Research Associates (HRA), the Nisqually Tribe, and the Washington State Department of Archaeology and Historic Preservation (DAHP). The remedial actions completed in the HI Areas included small-scale excavations of lead-contaminated soil in HI Area RU HI-01, and capping in the remaining three HI Areas. The constituents that were present above CLs, RLs, and SL were aldrin, arsenic, and lead. Soil sampling results documenting the constituent concentrations that remain in place are presented in Appendix B. Soil concentrations of arsenic and lead in HI-02, HI-03, and HI-04 were higher than the CLs in some instances. However, a protective cap constructed in the same manner as the GC cap (see Section 3.6) was placed over these areas to prevent exposure to human and ecological receptors. Therefore, the remedial objectives identified in the CAP established by Ecology (Ecology, 2003), were met in all HI Areas.

ES 2.5 Open Space Area Remediation

Four areas of the Site were designated for use as OS. Two OS Areas are located in the northeastern portion of the Site and are separated by Sequalitchew Creek, another is along the northern border of the Site and the last is the area surrounding Old Fort Lake. The OS Areas comprise approximately 72.2 acres. Remediation completed within the OS Areas included:

- IRAs
- MSU remediation
- Tree remediation
- Large-Scale Excavation

Minimal Large-Scale Excavation was conducted in the OS Areas due to the sensitive nature of the areas, and the overriding goal of trying to protect ecological habitat. The remedial actions were completed within the four OS Areas to remove elevated levels of arsenic and lead. Confirmation soil sampling results representing the constituent concentrations that remain in place (i.e., those concentrations that met the applicable CLs, RLs, and SLs) are presented in Appendix B. These data document the successful completion of remedial activities in the OS Areas and provide evidence that these activities were completed in a manner consistent with the CAP established by Ecology (Ecology, 2003).

ES.3 Conclusions

All land-use areas across the Site were successfully remediated in a manner consistent with the CAP established by Ecology (Ecology, 2003), and all areas of the Site are now ready for future development consistent with their land-use designation.

SECTION 1 – INTRODUCTION

1.1 Introduction

This Closure Report provides complete documentation of the remediation completed at Parcel One of the Former DuPont Works Site. Initially, the Former DuPont Works Site consisted of two Parcels, Parcel One and Parcel Two. Remediation of Parcel Two was completed in 1996, and is not addressed in this report. Parcel One is the subject of this report, and will be referred to as the Site for the remainder of the document.

The remediation documented in this report fulfills the requirements of the First Consent Decree (No. 91 2 01703 1) and the Second Consent Decree (No. 03 2 10484 7), effective July, 1991 and August, 2003, respectively, between the lead agency, Washington State Department of Ecology (Ecology), and the principle responsible parties, Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont). Per the Second Consent Decree, the final remediation activities were conducted in accordance with the requirements identified in the Model Toxics Control Act (MTCA) Cleanup Regulation (MTCA) Chapter 70.105D Revised Code of Washington (RCW) and the Cleanup Regulation Chapter 173-340 Washington Administrative Code (WAC) implemented by Ecology. The cleanup action decisions are described in the Cleanup Action Plan (CAP) (Ecology, 2003), and are based on the Remedial Investigation (RI) (URS Inc. and PIONEER, 2003), Risk Assessment (RA) (PIONEER, 2002) and Feasibility Study (FS) (WSNW and PIONEER, 2003) as well as other relevant documents in the administrative record.

This section presents the purpose of this report, the Site setting, Site background (i.e., property history and regulatory history), summary of site contamination, an overview of soil and debris remedial actions, an overview of the Site's Cultural and Archaeological Monitoring Plan, and a description of the overall report organization. Investigations and remediation work that were conducted at the Site were documented in a variety of reports that are briefly summarized and referenced in this Closure Report. All activities described in this report were conducted under the supervision of both Weyerhaeuser and DuPont (the Companies). West Shore Corporation (now called Pacific Environmental and Redevelopment Corporation) performed the day-to-day project management, and Active Construction was the remediation contractor.

1.2 Purpose

The purpose of this report is to provide complete documentation of all remediation activities conducted at the Site, and to document compliance with the remediation provisions specified in the CAP (Ecology, 2003). In addition, this report documents the post-remediation environmental conditions.

1.3 Setting

The Site is located within the limits of the City of DuPont in Pierce County, Washington, as shown in Figure 1-1. The Site is surrounded by Northwest Landing property, which is owned by Weyerhaeuser (to

the north and west) and Quadrant Real Estate Company property (to the east, and south). Burlington Northern railroad property is adjacent to the Weyerhaeuser property to the west. Puget Sound is located to the west of the Burlington Northern Railroad property.

The significant physical features of relief across the Site are numerous glacial kettles (i.e., depressions), the east-west trending valley of Sequalitchew Creek, a steep bluff that partially borders Burlington Northern Railroad property, and a small kettle lake in the southern portion of the Site called Old Fort Lake. Site elevations generally range from 200 to 225 feet above mean sea level (MSL), except within the kettles where elevations are approximately 150 feet above mean sea level (MSL).

1.4 Site Background

1.4.1 Property History

Native Americans originally inhabited the Site property. European settlement began in 1832, when the Hudson's Bay Company established a cabin/storehouse adjacent to Puget Sound at the mouth of Sequalitchew Creek, northwest of the Site. In 1833, the Hudson's Bay Company built Fort Nisqually, which was located in the northern portion of the Site. Ten years later, a new Fort Nisqually was built at a location adjacent to, but outside the eastern edge of the Site.

DuPont acquired the Site and adjacent areas in 1906 and constructed an explosives-manufacturing plant and the Historical Village of DuPont as a company town for plant workers. The Historical Village of DuPont is approximately one mile southeast of the Site (see Figure 1-1). DuPont manufactured explosives until the mid-1970s, when it sold the Site and adjacent areas to Weyerhaeuser. Weyerhaeuser and its subsidiary, Quadrant, still own much of the approximately 2,500 acres in the area, which they named Northwest Landing. Northwest Landing is a planned community within the City of DuPont and includes the Site. Quadrant has begun to develop Northwest Landing, but will not be allowed to develop the Site until cleanup is complete and approved by Ecology.

1.4.2 Regulatory History

The Site and Parcel Two were used for manufacturing commercial explosives from 1909 to 1976. Production of explosive materials ceased, and decommissioning of the buildings began in 1976, when Weyerhaeuser purchased the property from DuPont. As part of the cleanup process, asbestos was removed, salvageable materials were recovered, and structures were either burned or demolished. Actions taken at the Site subsequent to the shutdown in 1976 include the following:

- In 1985, Weyerhaeuser initiated studies to determine whether or not hazardous substances were present.
- In 1986, a Phase I Site Survey and Review was conducted to identify areas on Site that may have been of environmental concern (Hart Crowser, 1986).
- In 1986, soil contamination was first documented and reported to Ecology.
- In 1987, a Phase II Site Characterization study was performed, which characterized the type, concentration, and distribution of constituents at 38 areas on Site (Hart Crowser, 1987).

- In 1989, a Baseline Human Health Risk Assessment was performed using results of the Phase II study.
- In 1991, the Companies signed a Consent Decree (No. 91 2 01703 1) with Ecology, where they agreed to study the site and complete an RI, RA, and FS. The property was then divided into two main areas: Parcel 1 (approximately 841 acres), and Parcel 2 (approximately 205 acres).
- In 1994 and 1995, draft RI, RA, and FS reports were submitted to Ecology and underwent public review (Hart Crowser, 1994a, 1994b, 1994c).
- In 1996, based on the results of interim source removal actions, Ecology approved a CAP for Parcel 2. The CAP allowed for no further remediation activities at Parcel 2, except for the institutional controls that maintained the industrial use of Parcel 2 (Ecology, 1996).
- In 1997, Parcel 2 was deleted from the Consent Decree, and the deed requiring institutional controls to maintain the industrial use was recorded in the Pierce County Assessor's Office.
- Between 1990 and 2002, while studies and negotiations were ongoing, the Companies undertook interim source removal actions to cleanup soil and/or debris at the Site, in accordance with MTCA (Ecology, 2001a) and the Consent Decree.
- In 2003, to fulfill the provisions of the Consent Decree, final RI, RA, and FS reports were prepared. A description of the contents of each of these reports is presented below.
    - RI – The purpose of the RI was to collect sufficient information regarding the Site to enable the completion of the RA and FS. The RI characterized the nature and extent of contamination based on the existing conditions at the Site. The RI report presented the analytical data for the media that were collected at the Site. The data were presented for each RI area, which were defined based on historical manufacturing and production operations at the Site (URS Inc. and PIONEER, 2003).
    - RA – The RA evaluated Site conditions in relation to future land uses. The RA identified default soil cleanup levels (CLs) used for screening and presented the methods used to derive Site-specific remediation levels (RLs) protective of human health and ecological receptors based on future land use. These CLs and RLs were compared to Site–specific constituent concentrations to identify areas requiring additional evaluation in the FS (PIONEER, 2002).
    - FS – The FS evaluated potential cleanup methods designed to meet the remedial action objectives for the Site. The FS report provided information for the Companies to recommend options for remediation of selected areas, including both no action and action methods. Ecology evaluated the FS and selected the remedial measures it believed were appropriate (WSNW and PIONEER, 2003).
- In 2003, the Companies completed the detailed design and implementation of the remedial measures selected by Ecology in the CAP (Ecology, 2003). This decision was captured in a new Consent Decree (No. 03 2 10484 7), which was agreed to by the Companies and Ecology and was

entered by the Court on August 15, 2003.

1.5 Summary of Site Contamination

Site contamination resulted from manufacturing and from decommissioning the former explosives manufacturing facility. While the contamination was Site-wide, the highest concentrations occurred in areas associated with former building foundations, in areas where manufacturing materials were disposed, and along the Narrow Gauge Railroad (NGRR) tracks. NGRR tracks are located throughout the Site, and depicting them on figures would obscure other features. Therefore, they have been depicted only in Open Space (OS) Area figures, where their location does not hide other features of interest. The potentially contaminated media on Site included surface water and sediment, groundwater, and soil and debris. An overview of the contamination associated with each medium is presented below.

1.5.1 Surface Water and Sediment

Three surface water bodies (i.e., Puget Sound, Sequalitchew Creek, and Old Fort Lake) are located within or adjacent to the Site. Puget Sound is a large saltwater body located along the western boundary of the Burlington Northern Railroad west of the Site. Puget Sound directly and/or indirectly receives all groundwater and surface water discharge from the Site.

Constituent concentrations detected in surface water in Sequalitchew Creek and Old Fort Lake are consistent with those detected at the area background (i.e., upstream) sampling locations in Sequalitchew Creek and in other rivers and streams in Pierce County. Water samples were also collected from two seep-sampling locations that discharge Site groundwater to the intertidal area of Puget Sound. This groundwater discharge is naturally saline due to saltwater intrusion, which disqualifies it as a drinking water source in accordance with MTCA. Total dinitrotoluene (total DNT), which is the sum of 2,4-dinitrotoluene (2,4-DNT) and 2,6-dinitrotoluene (2,6-DNT), concentrations have ranged from nondetect to 0.27 µg/L in the 25 samples collected from SEEP 1 over the period of monitoring. DNT has not been detected in SEEP 2. All detected DNT concentrations at SEEP 1 have been at least 33 times lower than the protective surface water concentration of 9.1 µg/L. Based on this comparison, DNT in groundwater discharging from the Site via seeps to Puget Sound poses no concern to human health or the environment. A wide range of constituents was analyzed for the sediment samples, however none were detected at elevated concentrations.

Based on the data presented in the 1994 Draft RI report, Ecology verbally agreed to No Further Action for surface water and sediment within Site (Ecology 1996).

1.5.2 Groundwater

The only constituents detected at elevated concentrations in groundwater since 1996 were the isomers 2,4-DNT and 2,6-DNT. Because detected DNT concentrations were consistently low, were not affecting the regional aquifer, were not affecting surface water, and the aquifer was not used as a drinking water source, Ecology determined that no active remedial action was necessary, and long-term monitoring at selected wells would be sufficient (Ecology, 1996).

1.5.3 Soil and Debris

Of the 213 constituents evaluated during Site characterization, the RA identified only 11 constituents in soil (i.e., aldrin, arsenic, benzo(a)pyrene, DNT, copper, lead, mercury, nitrobenzene, 2,4,6-trinitrotoluene [TNT], tetrachlorethene, and total petroleum hydrocarbon [TPH]) as exceeding levels of concern for human and/or ecological receptors. Site soil contamination occurred as two distinct categories:

1. Widespread arsenic and lead impacted surface soil
2. Isolated, small occurrences of TPH, mercury, DNT and TNT, nitrobenzene, benzo(a)pyrene, aldrin, tetrachloroethylene, copper, and/or arsenic/lead impacted subsurface (i.e., depth greater than one foot below ground surface [bgs]) soil

Debris was primarily contaminated with lead in the form of lead-based paint. The total volume of contaminated soil was approximately 905,000 cubic yards (CY), and arsenic and lead contaminated soil accounted for approximately 96 percent of this volume.

1.6 Overview of Soil and Debris Remedial Actions

Remedial actions at the Site included interim remedial actions (IRAs), localized removal at miscellaneous small units (MSUs) (e.g., removal of debris piles and stockpiles), tree remediation, large-scale excavation focused on arsenic and lead impacted surface soil, and capping. These remedial actions occurred in several areas of the Site, and are discussed separately for each future land use area (i.e., Commercial [CM], Golf Course [GC], Industrial [IN], Historical [HI], and OS Areas). In general, these remedial actions consisted of the following:

- **Interim Remedial Actions:** IRAs were localized soil and/or debris removal actions conducted to minimize the potential for transport of residual constituents in soil, to protect groundwater (thereby minimizing potential future environmental impacts), to improve the safety and environmental conditions at the Site, to remove debris and facilitate a more complete and accurate RI, and to prepare for the final remediation of the Site. Materials were recycled off Site, incinerated off Site, or sent to an approved landfill. IRAs were completed around former Bunker-C pipelines and above-ground storage tanks, around building foundations, the former narrow gauge railroad, the soil and sand laydown areas, along a 250-foot swath of land on the southern perimeter of the Site, and in areas where there were elevated mercury concentrations. For each IRA, complete work plans were developed, reviewed by Ecology, and revised in accordance with their comments. Each IRA was described in a series of Interim Source Removal Memoranda submitted to Ecology following completion of the work.
- **Localized Removal at Miscellaneous Small Units:** MSUs were identified as areas where isolated, small occurrences of TPH, mercury, DNT and TNT, nitrobenzene, benzo(a)pyrene, aldrin, tetrachloroethylene, copper and/or arsenic/lead were found in subsurface soil (i.e., soil at a depth greater than one foot bgs). MSUs represented less than one percent of the total volume of contaminated soil on Site. Some of the soil from the MSUs was excavated and disposed of on Site in placement areas (PAs) within the GC, and some was transported off Site for disposal at an

Ecology/United States Environmental Protection Agency (EPA) approved landfill. Contaminated debris occurred on Site as piping, brick and other construction materials painted with lead-based paint. Stockpiles of formerly excavated material primarily consisted of soil, although in some cases there was also demolition debris. Debris and stockpile materials were sampled to characterize the constituent (e.g., arsenic, lead, etc.) concentration. Depending on the concentration, they were either excavated and disposed of on Site in PAs within the GC Area, or transported off Site for disposal at an Ecology/EPA approved landfill.

- **Tree Root Zone Remediation:** The purpose of this remedial action was to preserve selected trees within the future GC footprint. This remedial action involved sampling soil within tree drip lines (i.e., the approximate horizontal distance of the outstretched limbs and roots) for arsenic and lead. In instances where the arsenic CL or lead SL were exceeded, one foot of soil was carefully removed within the drip line of the tree, soil samples were collected, and the excavation was immediately filled with clean topsoil. If confirmation sample results exceeded the applicable cleanup goals, additional rounds of excavation and confirmation sampling were conducted until the remediation goals were achieved.
- **Large-Scale Excavation:** Large-Scale Excavation involved excavation of one foot of soil over large areas of the Site where elevated levels of arsenic and lead were present. Following excavation, confirmation samples were collected to confirm that the applicable cleanup goals were met. Where goals were not achieved, additional excavation was conducted until goals were met. Excavated soil was disposed of on Site in PAs within the GC Area.
- **On-Site Deposition with a Cap/Cover (Golf Course):** The majority of contaminated soil excavated from the Site was deposited in PAs that were located within the GC footprint. The contaminated soil was then covered with a cap that consisted of at least 12 inches of compacted gravel that was then topped with a minimum of six inches of clean soil.
- **Cap/Cover of Historical Areas:** Contaminated soil in the HI Areas was covered with a cap that consisted of at least 12 inches of compacted gravel that was then topped with a minimum of six inches of clean soil. After the minimal cap thickness was met, where planting was specified, additional soil was added to the depth necessary to cover the root ball of the designated plant(s).

1.7 Cultural and Archaeological Management Plan

All remediation work was done in accordance with the project's Cultural Resources Protection Plan (Historical Research Associates, Inc. [HRA], 2002). This plan, which was based upon cooperative agreements established between Weyerhaeuser, the Nisqually Tribe, and the Washington State Department of Archaeology and Historic Preservation (DAHP), identified the following guidelines for Site remediation and construction activities:

- Prior to the start of fieldwork, the Project's Archaeology Consultant (i.e., HRA) trained (or re-trained) all individuals involved in the program to identify items of cultural or historic significance.
- HRA was hired to monitor all clearing and excavation phases of the program.

- When a potential item of cultural or historic significance was discovered during Site preparation or field activities, all work in that area was stopped until all stakeholders were consulted.

In addition to the conditions of this agreement, the following was done:

- A representative of the Nisqually Tribe was hired by the Project Manager to monitor all excavation activities.
- Ecology, the Nisqually Tribe, and DAHP were formally contacted when a potential item of cultural or historic significance was discovered during Site preparation or field activities, with the exception of DuPont Works-era materials.

Multiple reports describing the processes used by HRA to monitor activities, and a description of any findings, were prepared and forwarded to Ecology, the Nisqually Tribe and DAHP. All of the reports prepared by HRA are included in this report in Appendix A.

1.8 Report Organization

A description of the Site remediation activities and the confirmation soil sampling conducted in each area of the Site is provided in the following sections. General descriptions of the remedial actions and technical construction specifications for remedial measures are provided in the Remedial Design Report for the Former DuPont Works Site (PIONEER, WSNW, and Asmundson, 2003).

Remediation was performed in accordance with the CAP (Ecology, 2003) to support the designated future uses of the Site. Future land uses, according to the Final Environmental Impact Statement (EIS) include CM, GC, IN, HI, and OS Areas. The Site future land-use areas are shown in Figure 1-2. Remediation of each area of the Site was conducted until soil concentrations in each area achieved the applicable cleanup goals, which were CLs, RLs, or a screening level (SL) specified for the future land use of that area. CLs were either MTCA table values derived by Ecology using default exposure assumptions, or Site-specific values derived by Ecology. RLs were derived using human health risk assessment procedures, incorporating exposure assumptions and other media-specific factors reflecting future Site conditions. There was one SL used, which was a value for lead derived by Ecology for protection of terrestrial ecological receptors. The sources of the CLs, RLs, and the SL used in this report are documented in the RA (PIONEER, 2002).

The Site remediation activities are presented in the following sections, organized by the designated future land-use areas:

- Commercial (Section 2)
- Golf Course (Section 3)
- Industrial (Section 4)
- Historical (Section 5)
- Open Space (Section 6)

The areas where specific remediation activities (e.g., IRAs, MSUs, Tree Remediation, etc.) occurred were

identified for each future land use. In some instances, areas with specific remediation activities may overlap future land-use areas (e.g., one MSU may stretch across the boundaries of both a CM and a GC area). When an overlap occurred, the remediation activity was addressed in both future land-use sections. Therefore, each section of the report contains a complete remediation picture for each future land-use area.

The final section of the report presents the Health and Safety Program for Site remediation, and summarizes air monitoring that was conducted as part of the program.

SECTION 2 – COMMERCIAL AREA REMEDIATION

2.1 Introduction

The CM Area constitutes the majority of the Site property. Most of the soil in this area will be covered by buildings, parking lots, and roads to allow for future commercial use such as offices and retail businesses. The portions of the CM Area that will not be covered by buildings or parking lots will have sidewalks and professionally landscaped and maintained areas.

The portion of the Site that was remediated for CM land use comprised approximately 336 acres (see Figure 2-1), which was divided into eight separate areas called Remediation Units (RUs). In the RA, however, nine CM Area RUs were identified. For this report, the former RU CM-08 was integrated into RUs CM-01 and CM-02. The former CM-09 then became CM-08. In addition, there was one RU (i.e., the newly designated CM-08) that was designated for No Further Action (NFA) based on the results of a comprehensive sampling program (see Section 2.6). Remediation completed within the CM Area RUs included:

- IRAs
- MSU remediation
- Tree root zone remediation
- Large-Scale Excavation

The CLs, RLs, and SL identified for the CM Area are shown in Table 2-1. Following completion of all of the remedial actions, the soil in all of the CM Area RUs met the applicable CLs, RLs, and the SL. Results of all confirmation soil sampling completed in the CM Area RUs, which identify the soil constituent concentrations left in place following remediation, are presented in Appendix B. The remedial actions are discussed below.

2.2 Interim Remedial Actions

IRAs were conducted in the CM Area RUs between 1992 and 2002, and included removal of a buried Bunker-C pipe and above-ground fuel storage tanks, and the excavation of the associated contaminated soil; excavation of soil around building foundations; excavation of soil along the NGRR; excavation of soil hotspot concentrations; excavation of soil in future sand laydown areas; excavation of soil in future soil laydown areas; and excavation of soil in areas identified for additional characterization sampling and in perimeter areas. Removal of on-Site stockpiles was also completed as an IRA. The locations of IRA areas within the CM Area RUs are shown in Figure 2-2. Each of these actions is described briefly below:

2.2.1 Removal of Bunker-C Pipe, Storage Tanks, and Soil Excavation

The purpose of this IRA was to remove buried Bunker-C pipeline sections, above-ground storage tanks, and the associated contaminated soil. Pipe sections and the above-ground storage tanks were removed,

steam cleaned, and taken off Site for disposal. One section of the pipe, located in a sloped area, was drained, cleaned, filled with grout and abandoned in place. Lead packing in the pipe joints was also removed and disposed of off Site. Following removal of the pipe and tanks, approximately 29,100 cubic yards of Bunker-C contaminated soil was removed, and 24 verification soil samples were taken from the former tank area and from the former pipeline stretch. Results of the verification sampling indicated that the former pipeline and tank area soil concentrations met the designated 570 mg/kg soil concentration for TPH.

The excavated soil was characterized for TPH concentrations, and was either disposed of off Site, or stockpiled for future use as backfill. Complete documentation of this IRA is contained in *Interim Source Removal Memorandum: Area 8 Pipeline and Former Above-Ground Storage Tanks, Former DuPont Works Site, DuPont Washington, Hart Crowser Document J-1747-64*, presented in Appendix C.

2.2.2 Foundation Excavations

The purpose of the foundation excavation program was to remove elevated arsenic and lead concentrations found in soil adjacent to building foundations. The source of arsenic was associated with use of herbicides, and the source of lead was lead sheeting that had been used to line the buildings, and lead-based paint chips that remained after building demolition. The locations of the foundations included in this IRA are shown in Figure 2-2. In this IRA, the top two feet of soil were excavated within 25 feet of selected foundations (i.e., buildings that had lead sheeting or lead paint). Following excavation at each location, a five-point composite confirmation sample was collected, which consisted of soil taken from each of the four sides of the excavation, and from the floor of the excavation. Some locations required up to three rounds of excavation before the arsenic RL and the lead SL were met. At the conclusion of the IRA, there were three locations within CM-01 (F-79, F-80, and F-90, shown on a map in the associated report in Appendix C) where the lead SL of 118 mg/kg was not met. All three of these locations were included in CM Area MSUs, and remediated during a later stage of Site cleanup. Locations F-79 and F-80 were included in MSU-39, and location F-90 was included in MSU-52/53. Remediation of these MSUs is described in detail in Appendix D.

The soil excavated during this IRA was placed in one of the GC Area PAs. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hot Spots, April 22, 2002* memorandum presented in Appendix C.

2.2.3 Narrow Gauge Railroad Soil Excavation

The purpose of this IRA was to remove elevated arsenic concentrations associated with the NGRR, where an arsenic-containing herbicide had historically been used for weed control. In this IRA, 1.5 feet of soil was excavated within 25 feet of the centerline of the NGRR. Some of the NGRR was not excavated due to the close proximity of timber that was identified for future harvesting. All remaining portions of the NGRR were designated as MSUs (i.e., NGRR MSUs) and excavation was done as part of the final remediation (see Appendix D). Following excavation, one five-point composite confirmation sample was collected from the excavation floor every 50 feet along the NGRR. Some locations required three rounds of excavation to achieve the Site-specific arsenic RL of 60 mg/kg. One location (R47C71) with an

arsenic concentration of 89 mg/kg, which was greater than the RL, was left in place. This concentration was left in place in CM-08, which was designated as a NFA area. CM-08 was designated as a NFA area because when all of the sample results were grouped together, the arsenic and lead concentrations in this RU met the MTCA three-fold criteria. Designation of CM-08 as a NFA area is described in detail in Section 2.2.7

The soil excavated during this IRA was placed in one of the GC Area PAs. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hot Spots, April 22, 2002* memorandum presented in Appendix C.

2.2.4 Hotspot Area Excavations

Two separate IRAs were completed for the hotspot areas within the CM Area RUs. One IRA was completed in 2000 and the other was completed in 2001. These IRAs are described in the following paragraphs.

- 2000 Hotspot IRA: The purpose of these excavations was to remove soil hotspot concentrations of arsenic or lead that exceeded the GC Area PA RLs of 530 mg/kg for arsenic and/or 4,100 mg/kg for lead. Concentrations above these RLs required treatment and off- Site disposal. Following excavation, five samples were collected within each 50-foot by 50-foot excavation. This included four discrete samples taken on each wall of the excavation, and one composite sample collected from the excavation floor. Excavation proceeded in the hotspot areas until arsenic and lead concentrations met levels that could be retained on Site within GC Area PAs. The excavation depth of each hotspot location varied, and ranged from a total excavation depth of one foot to eight and a half feet.

  Hotspot soil were excavated and stockpiled for future treatment at the on-Site screening plant and subsequent disposal in an Ecology-approved off-Site landfill. After the hotspot concentrations were removed, these areas were incorporated into the Large-Scale Excavation areas in order to ensure compliance with the applicable CM RLs and SLs. Complete documentation of this IRA is contained in the *Hot Spot Interim Action Report, Former DuPont Works Site, DuPont, Washington, October 4, 2000* memorandum presented in Appendix C. Documentation of the treatment process for the soil excavated during this IRA is contained in the *Interim Source Removal Actions: Screening Plant Report, January 22, 2002* memorandum presented in Appendix C.

- 2001 Hotspot IRA: The purpose of this IRA was to remove soil concentrations of arsenic, 2,4-DNT, 2,6-DNT, and/or TNT that were elevated above the CM Area RL and CLs. The area and depth of excavation varied, depending on the size and location of the elevated concentration.
  - This IRA included excavation at one location where there was an elevated arsenic concentration. This location is identified and described in Section 2.2.7, Areas for Additional Characterization Sampling. At this location (R71C85), the arsenic concentration was 580 mg/kg. Soil was excavated to a depth of one and a half feet, and extended 25 feet out to the north, south, east, and west from the location of the elevated

concentration. Following excavation, five verification samples were collected, one from each wall of the excavation and one from the floor of the excavation. Confirmation samples indicated that all arsenic concentrations were below the CM Area RL.

- The 2,4-DNT, 2,6-DNT, and TNT hotspot area included in this IRA was located in former Area 18, which was incorporated into CM-02. Soil was excavated to a depth of three feet, and extended 15 feet out to the north, south, east, and west of the location of elevated concentration. Following excavation, one verification sample was collected from the floor of the excavation. This confirmation sample indicated that the remaining concentrations of 2,4-DNT, 2,6-DNT, and TNT were below the CLs.
- All excavated soil with arsenic contamination was placed in GC Area PAs, and all 2,4-DNT, 2,6-DNT, and TNT contaminated soil was stockpiled for off-Site disposal in an Ecology-approved landfill. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hot Spots, April 22, 2002* memorandum presented in Appendix C.

2.2.5 Sand Laydown Area Excavation

The purpose of this IRA was to excavate arsenic and lead contaminated soil to provide clean areas for sand storage (i.e., sand laydown areas). The sand was needed to construct the final capping layer of the GC Area. In this IRA, soil was excavated to a depth of one and a half feet within each of the five staked storage areas in the CM Area. Following excavation, one discrete confirmation soil sample was collected within each grid node of a 50-foot sampling grid. Sample results for each storage area were combined for comparison to the MTCA three-fold criteria for establishing compliance with the arsenic RL and the lead SL. To meet the MTCA three-fold criteria, the 95 percent Upper-Confidence Limit (95% UCL) of the Mean Concentration of all samples had to be lower than the applicable RL or SL, no more than 10 percent of the samples could have a concentration greater than the RL or SL, and no samples could have a concentration greater than two times the RL or SL. All sand laydown areas met these criteria.

The soil excavated during this IRA was placed in a GC Area PA. Complete documentation of this IRA is contained in the *Sand Laydown Area Interim Action Report, Former DuPont Works Site, DuPont Washington, November 16, 2000* memorandum presented in Appendix C.

2.2.6 Soil Laydown Area Excavations

The purpose of these excavations was to excavate arsenic and lead contaminated soil to provide clean areas for topsoil storage. In this IRA, soil was excavated to a depth of one and a half feet within the staked storage areas. Following excavation, one discrete confirmation soil sample was collected within each grid node of a 150-foot sampling grid. Following excavation, all sample locations met the CM Area RL for arsenic and SL for lead.

The soil excavated during this IRA was placed in a GC Area PA. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hotspots, April 22, 2002* memorandum presented in Appendix C.

2.2.7 Areas for Additional Characterization Sampling

The purpose of this sampling program was to characterize arsenic and lead concentrations in soil in areas located in northeastern and southeastern portions of the Site. This sampling was done to identify areas of the Site that could be left in their existing condition because remediation was not necessary. In this IRA, a 75-foot grid was established in each area, and one five-point composite sample was collected from each 75-foot sampling grid. Sampling results were combined for each area separately to determine if the areas could potentially be designated as NFA areas, based on compliance with the MTCA three-fold criteria for establishing compliance with the applicable RL or SL. To meet the MTCA three-fold criteria, the 95% UCL concentration of all samples needed to be lower than the RL or SL, no more than 10 percent of the samples could have a concentration greater than the RL or SL, and no samples could have a concentration greater than two times the RL or SL.

Sampling results for the northeastern portion of the Site (designated as CM 11 in the associated report in Appendix C) indicated that there were several locations with lead concentrations greater than twice the CM Area SL. Therefore, this area was no longer considered a candidate for NFA, and was integrated into other CM Area RUs identified for large-scale excavation.

Sampling results for the southeastern portion of the Site (designated as CMs 12 & 13 in the associated report in Appendix C) indicated that there were several locations in the southern portion of this area where arsenic and/or lead concentrations were greater than twice the RL or SL, causing the entire area to be out of compliance with the MTCA three-fold criteria. However, there was a large portion of the middle and northern parts of the sampling area where the MTCA three-fold criteria was met. To facilitate remediation, the areas with elevated arsenic and/or lead concentrations were carved out and integrated into other CM Area RUs identified for large-scale excavation. After these areas were carved out, there were two isolated sample locations, R66C88 and R71C85 that had arsenic concentrations greater than twice the RL. Location R66C88 became MSU-29 and the elevated arsenic concentration was removed during a later stage of Site remediation; location R71C85 was identified as a hotspot, and was removed during the Hotspot IRA completed in 2001, discussed in Section 2.2.4. The remaining portions of CMs 12 and 13 where the three-fold criteria were met were combined to form CM-08, which was identified as a NFA area.

Detailed results of this sampling program, including maps showing the location of the referenced sample locations, are contained in the *2001 Site Characterization Program: Areas for Additional Sampling Parcel 1 – Consent Decree, June 5, 2001* memorandum presented in Appendix C.

2.2.8 Perimeter Soil Excavation

The purpose of this excavation program was to remove soil having arsenic and lead concentrations greater than the arsenic RL of 60 mg/kg and the lead SL of 118 mg/kg within 250 feet of the southern Site boundary. In the 250-foot perimeter area, at least one foot of soil was excavated. One soil sample was collected from each node on the 75-foot sampling grid from a depth of zero to six inches, and was analyzed for arsenic and lead. After the initial excavation, all sample locations met the applicable RL and SL except for one, where the lead concentration (144 mg/kg) exceeded the SL. In this location, one

additional foot of soil was removed. When the location was re-sampled, the lead concentration was below the goal.

The soil excavated during this IRA was placed in a GC Area PA. Complete documentation of this IRA is contained in the *Perimeter Soil and Storm Water Runoff Overflow Pipeline Interim Corrective Action, November 2002* memorandum presented in Appendix C.

2.2.9 On-Site Stockpile Excavations

The purpose of this IRA was to characterize and designate the appropriate disposal option for 164 stockpiles of soil and/or debris located across the Site. These stockpiles were created as a result of IRAs conducted between 1991 and 1995. Based on the characterization of the stockpile materials, 14 stockpiles were identified for direct off-Site disposal, seven stockpiles were identified for screening followed by off-Site disposal, 139 stockpiles were identified for placement in the GC Area PAs, and four stockpiles were identified for use as general fill.

Complete documentation of this IRA is contained in the *Interim Source Removal Actions: On-Site Stockpiles Report at the Former DuPont Works Site, January 28, 2002* memorandum presented in Appendix C. Documentation of the treatment process for the seven stockpiles identified for screening and off-Site disposal is contained in the *Interim Source Removal Actions: Screening Plant Report, January 22, 2002* memorandum presented in Appendix C.

2.3 Miscellaneous Small Units (MSUs)

MSUs located within the boundaries of the CU Area RUs included debris piles, foundations, sections of the NGRR, and other localized areas with soil concentrations of arsenic, copper, lead, Bunker-C fuel oil, motor oil, nitrobenzene, and/or TNT that were elevated over applicable CM Area CLs, RLs, or SL. The MSUs, their associated constituents, and the CM Area RU in which they are located are presented in Table 2-2. Following remediation, the remaining constituent concentrations met the applicable CLs, RLs or the SL. The remedial action completed for each MSU is discussed in Appendix D.

2.4 Tree Root Zone Remediation

There were nine trees within the CM Area RUs that had soil removed around the base to remediate elevated levels of arsenic and lead. Trees were selected for remediation based on the goal of preserving a buffer around the perimeter of the Site. The locations of Tree Remediation Areas within the CM Area RUs are shown in Figure 2-3.

This remedial action involved sampling within tree drip lines (i.e., the approximate horizontal distance of the outstretched limbs and roots) for arsenic and lead. Where the arsenic RL or the lead SL were exceeded, one foot of soil was carefully removed within the drip line of the tree, soil samples were collected, and the excavation was immediately filled with clean topsoil. If confirmation sample results exceeded the RL or SL, additional rounds of excavation and confirmation sampling were conducted until the remediation goals were achieved. The tree root zone sampling and remediation program results are presented in Appendix E.

2.5 Large-Scale Excavation

Large-scale excavation of arsenic and lead contaminated soil was the primary type of remediation conducted in the CM Area RUs. Conducted in the areas shown in light blue in Figure 2-4, large-scale excavation consisted of the following steps:

- All trees were cleared from the area (with the exception of nine trees chosen for preservation)
- All remaining vegetation was removed
- A global positioning system (GPS) was used to determine the elevations prior to excavation on a 75-foot grid (or 65-foot grid, depending on the dimensions of the RU). The tolerance of the GPS is 8/100 of a foot on the horizontal axis and 5/100 of a foot on the vertical axis. Elevations were also determined at all grid-sampling locations.
- Excavators and off-road trucks were used to remove one foot of soil that was then placed in the GC Area PAs
- The GPS was used to confirm that at least one foot of soil was removed from grid locations

Following the excavation of soil, the resulting surface soil was sampled, with one five-point composite sample collected for each grid node. If sampling results indicated that constituent concentrations were below the RLs or SL, the remediation was considered complete for the area represented by the grid node. If constituent concentrations were found to be above the remediation goals, excavation activities were repeated within the grid box in one-foot increments until the remediation goals were met for the grid location.

Over 1,900 sample locations were established to determine whether or not the large-scale remediation in the CM Area RUs was adequate. Of these sample locations, 50 required a second round of excavation, two required a third round of excavation, and one required a fourth round of excavation to meet the associated remediation goals.

2.6 Summary of Remedial Actions in the Commercial Area

The remedial actions described in this section were completed within the eight CM Area RUs (i.e., CM-01 through CM-08) to remove elevated levels of metals (i.e., arsenic, copper, and lead), explosives (i.e., 2,4-DNT, 2,6-DNT, nitrobenzene, and TNT), and petroleum hydrocarbons (i.e., Bunker-C Fuel Oil and motor oil). Figures showing all sampling locations, and corresponding tables presenting the soil sampling results associated with these locations, are presented in Appendix B. The sampling results presented in the Appendix B tables document the constituent concentrations that remain in place (i.e., those concentrations that met the applicable Site CLs, RLs, or the SL). The sample results include both confirmation samples collected during Site remediation, and historical samples collected during the RI that had concentrations that met the Site remediation goals. These concentrations document that Site remediation in the CM Area RUs was completed in compliance with the CAP established by Ecology (Ecology, 2003), and show that these areas are ready for future commercial development.

Table 2-1 – Soil Cleanup Levels, Remediation Levels, and Screening Level Used for Evaluating Commercial Land Use

Constituent	Cleanup Goals (mg/kg)	Source
Explosives		
Dinitrotoluene - Total	3.0	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Jim Odendahl and Ron Buchanan, January 11, 2001). Total of 2,4-Dinitrotoluene and 2,6-dinitrotoluene concentrations.
Nitrobenzene	0.051	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.
2,4,6-Trinitrotoluene	1.75	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Jim Odendahl and Ron Buchanan, January 11, 2001).
Petroleum Hydrocarbons		
Bunker C – Motor Oil	7,600	Cleanup Level; based on Ecology Agreement (PIONEER Technologies Corporation. 2002. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, DuPont, Washington, Appendix C)
Motor Oil	2,000	Cleanup Level; the MTCA Method A Table Value (173-340-745 WAC)
Inorganics		
Arsenic	60	Remediation Level; based on Ecology Agreement (Ecology letter from Mike Blum to Vern Moore and Izzy Zanikos, June 25, 1999).
Copper	263	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.
Lead	118	Screening Level; Ecology-derived soil screening value for protection of terrestrial ecological receptors (WAC 173-340-7493).

Table 2-2 – Miscellaneous Small Units In Commercial Areas

MSU	Constituents of Concern	RU Location of MSU[1]
MSU-01	Motor Oil (Bunker C)	CM-01
MSU-02	Motor Oil (Bunker C)	CM-01
MSU-03	Lead	CM-01
MSU-13	Lead	CM-01
MSU-22	Nitrobenzene	CM-02
MSU-23	Nitrobenzene	CM-02
MSU-24	2,4,6-Trinitrotoluene	CM-02
MSU-25	2,4,6-Trinitrotoluene	CM-02
MSU-29	Arsenic	CM-08
MSU-30	Arsenic	CM-08
MSU-31	Lead	CM-01
MSU-32	Lead	CM-01
MSU-33	Lead	CM-01
MSU-34	Lead	CM-01
MSU-35	Lead	CM-01
MSU-36	Lead,	CM-01
MSU-37	Lead	CM-01
MSU-38	Lead	CM-01
MSU-39	Lead	CM-01
MSU-40	Lead	CM-01
MSU-41	Lead	CM-01
MSU-42	Lead	CM-01
MSU-43	Lead	CM-01
MSU-44	Lead	CM-01
MSU-45	Lead	CM-01
MSU-46	Lead	CM-01
MSU-47	Lead	CM-01
MSU-48	Lead	CM-01
MSU-52	Lead	CM-01
MSU-53	Lead	CM-01
MSU-54	Lead	CM-05
MSU-56	Lead	CM-05
MSU-62	Lead	CM-05
MSU-63	Lead	CM-05
MSU-64	Lead	CM-05
MSU-65	Lead	CM-05
MSU-66	Lead	CM-05
MSU-67	Lead	CM-05
MSU-68	Lead	CM-05
MSU-69	Lead	CM-01
MSU-74	Lead	CM-02
MSU-75	Lead	CM-02
MSU-76	Copper, Lead	CM-02
MSU-77	Lead	CM-02

Table 2-2 – Miscellaneous Small Units In Commercial Areas

MSU	Constituents of Concern	RU Location of MSU[1]
MSU-82	Lead	CM-02
MSU-83	Lead	CM-02
MSU-84	Lead	CM-02
MSU-85	Lead	CM-02
MSU-86	Lead	CM-02
MSU-90	Lead	CM-07
MSU-91	Arsenic, Lead	CM-01
MSU-94	Arsenic	CM-07
MSU-101	Arsenic	CM-07
MSU-102	Arsenic	CM-07
MSU-103	Arsenic	CM-07
MSU-118	Lead	CM-01
MSU-119	Lead	CM-01
MSU-120	Arsenic	CM-01
MSU-150	Motor Oil	CM-01
MSU-D-1	Arsenic	CM-01
MSU-D-2	Arsenic, Lead	CM-01
MSU-D-3	Arsenic, Lead	CM-01
MSU-D-4	Arsenic, Lead	CM-01
MSU-D-5	Arsenic, Lead	CM-01
MSU-D-7	Arsenic, Lead	CM-01
MSU-D-15	Arsenic, Lead	CM-05
MSU-D-17	Arsenic, Lead	CM-03
MSU-D-18	Arsenic, Lead	CM-02
MSU-D-19	Lead	CM-01
MSU-D-20	Arsenic, Lead	CM-01
MSU-D-21	Arsenic, Lead	CM-01
MSU-D-23	Arsenic, Lead	CM-05
MSU-D-24	Arsenic, Lead	CM-04
MSU-F-3	Arsenic, Lead	CM-06
MSU-F-38	Arsenic, Lead	CM-01
MSU-F-39	Arsenic, Lead	CM-01
MSU-F-40	Arsenic, Lead	CM-05
MSU-F-41	Arsenic, Lead	CM-05
MSU-F-46	Arsenic, Lead	CM-05
MSU-F-47	Arsenic, Lead	CM-01
MSU-F-48	Arsenic, Lead	CM-01
MSU-F-49	Lead	CM-01
MSU-F-50	Arsenic, Lead	CM-01
MSU-F-51	Arsenic, Lead	CM-01
MSU-F-54	Arsenic, Lead	CM-07
MSU-F-55	Arsenic, Lead	CM-05
MSU-F-56	Arsenic, Lead	CM-05
MSU-F-CU-5A	Arsenic, Lead	CM-02
NGRR-01	Arsenic, Lead	CM-05
NGRR-01-1	Arsenic, Lead	CM-01
NGRR-01-2	Arsenic, Lead	CM-01

Table 2-2 – Miscellaneous Small Units In Commercial Areas

MSU	Constituents of Concern	RU Location of MSU[1]
NGRR-02	Arsenic, Lead	CM-01
NGRR-03	Arsenic, Lead	CM-01
NGRR-04	Arsenic, Lead	CM-06
NGRR-05	Lead	CM-01
NGRR-08	Arsenic, Lead	CM-01
NGRR-09	Arsenic, Lead	CM-05
NGRR-12B	Arsenic, Lead	CM-05
NGRR-14	Arsenic, Lead	CM-05
NGRR-15	Arsenic, Lead	CM-05
NGRR-21	Arsenic, Lead	CM-03
NGRR-23	Arsenic, Lead	CM-04
NGRR-28	Arsenic, Lead	CM-02
NGRR-29	Arsenic, Lead	CM-02
NGRR-30	Arsenic, Lead	CM-02
NGRR-34	Arsenic, Lead	CM-01
NGRR-36	Arsenic, Lead	CM-02
NGRR-38	Arsenic, Lead	CM-02
NGRR-40	Arsenic, Lead	CM-01
NGRR-42	Arsenic, Lead	CM-01
NGRR-43	Arsenic, Lead	CM-01
NGRR-44	Arsenic, Lead	CM-01
NGRR-46	Arsenic, Lead	CM-01

Notes:
[1] MSUs may be located in more than one remediation unit, and in some instances their boundaries overlap into different land-use areas.
CM – Commercial Area
MSU – Miscellaneous Small Unit
NGRR – Narrow Gauge Railroad
RU – Remediation Unit

SECTION 3 – GOLF COURSE AREAS

3.1 Introduction

The GC Area is 197 acres in size and consists of Placement Areas (PAs) and Non-Placement Areas (non-PAs). GC Area PAs were discrete areas within the GC Area that were used to place contaminated soil from other areas of the Site, and comprise approximately 75 acres of the 197-acre GC Area. After placement, the contaminated soil was covered with a cap that consisted of at least 12 inches of compacted gravel that was then topped with a minimum of six inches of clean soil. Non-Placement Areas comprised approximately 121 acres of the GC Area.

The GC Area was broken up into smaller RUs, GC–01 through GC–08, which were designed to be similar in size. Within each GC Area RU, there were both PAs and non-PAs.

Remedial actions completed in the GC Area RU PAs included IRA removal of soil with concentrations of explosives (i.e., 2,4-DNT, 2,6-DNT, and TNT), arsenic, and lead, that were greater than their associated CLs, RLs, or SL (see Table 3-1). The arsenic and lead soil with constituent concentrations greater than the GC Area PA RLs were placed on an asphalt pad and were either included in the arsenic and lead soil-screening program or sent off Site for disposal (PIONEER and WSNW, 2002). Arsenic and lead contaminated soil from other areas on Site were then placed in the PAs, and the PAs were capped.

Remediation completed within the non-PA GC Area RUs included:

- IRAs
- MSU remediation
- Tree Root Zone remediation
- Large-Scale Excavation

These remedial actions are discussed in more detail later in this section.

The eight GC Area RUs are shown in Figure 3-1. The remediation goals for the GC Area RUs (including both GC Non-PA and PA areas), are shown in Table 3-1. Following completion of all soil removal remedial actions, the soil in all of the GC Area RUs met the applicable CLs, RLs and the SL. Results of all confirmation soil sampling completed in the GC Area RUs, which identified the soil constituent concentrations left in place following remediation, are presented in Appendix B.

The following sections describe the soil removal actions (i.e., the IRAs, MSU remediation, tree remediation, and large-scale excavation), the PA cap construction, and the GC construction.

3.2 Interim Remedial Actions

IRAs were conducted in the GC Area RUs between 1998 and 2001, and included removal of Bunker-C pipe, storage tanks, and the associated affected soil; excavation of soil around building foundations; excavation of soil along the NGRR; excavation of soil in hotspot areas; excavation of soil in the sand

laydown areas; and excavation of soil along the trench where a storm-water runoff pipe was to be installed. Removal of on-Site stockpiles was also completed as an IRA. The locations of IRA areas within the GC Area RUs are shown in Figure 3-2. The GC Area IRAs are briefly described below.

3.2.1 Removal of Bunker-C Pipe, Storage Tanks, and Soil Excavation

The purpose of this IRA was to remove buried Bunker-C pipeline sections, above-ground storage tanks, and the associated contaminated soil. Pipe sections and the above-ground storage tanks were removed, steam cleaned, and taken off Site for disposal. One section of the pipe, located in a sloped area, was drained, cleaned, filled with grout and abandoned in place. Lead packing in the pipe joints was also removed and disposed of off Site. Following removal of the pipe and tanks, approximately 29,100 cubic yards of Bunker-C contaminated soil was removed, and 24 verification soil samples were taken from the former pipeline stretch and from the former tank area. Results of the verification sampling indicated that the former pipeline and tank area soil concentrations met the CL soil concentration of 570 mg/kg for TPH.

The excavated soil was characterized for TPH concentration, and was either disposed of off Site or stockpiled for future use as backfill. Complete documentation of this IRA is contained in *Interim Source Removal Memorandum: Area 8 Pipeline and Former Above-Ground Storage Tanks, Former DuPont Works Site, DuPont Washington, Hart Crowser Document J-1747-64*, presented in Appendix C.

3.2.2 Foundation Excavations

The purpose of this excavation program was to remove elevated lead concentrations found in soil adjacent to building foundations (the arsenic RL of 60 mg/kg was met at all locations). The source of this lead was lead sheeting that had been used to line the buildings, and lead-based paint chips that remained after building demolition. In this IRA, the top two feet of soil was excavated within 25 feet of selected foundations (i.e., buildings that had lead sheeting). Some locations required up to three rounds of excavation before remediation goals were met. There were four locations within GC-01 (F-244, F-249, F-252, and F-254, shown on a map in the associated report in Appendix C) where the lead SL of 118 mg/kg was not met. All four of these locations were included in GC Area MSUs, and were remediated during final Site cleanup. Location F-244 was included in MSU-59, location F-249 was included in MSU-58, location F-252 was included in MSU-57, and location F-254 was included in MSU-55. Remediation of these MSUs was completed in a later stage of Site remediation, and is described in detail in Appendix D.

The soil excavated during this IRA was placed in one of the GC Area PAs. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hotspots, April 22, 2002* memorandum presented in Appendix C.

3.2.3 NGRR Excavations

The purpose of these excavations was to remove elevated arsenic concentrations that were associated with the NGRR, where an arsenic-containing herbicide had historically been used for weed control. In this IRA, one and a half feet of soil was excavated within 25 feet of the centerline of the NGRR. A portion of the NGRR was not excavated due to the close proximity of timber that was identified for future

harvesting or because it was inside the GC Area. The remaining portion of the NGRR, outside of the GC Area PAs, was designated as an MSU (i.e., NGRR MSU) and excavation was done as part of the final remediation (see Appendix D). Following excavation, one five-point composite confirmation sample was collected from the excavation floor every 50 feet along the NGRR. Some locations required three rounds of excavation to achieve the arsenic RL of 60 mg/kg.

The soil excavated during this IRA was placed in one of the GC Area PAs. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hotspots, April 22, 2002* memorandum presented in Appendix C.

3.2.4 Hotspot Areas Excavations

Two separate IRAs were completed for the hotspot areas within the GC Area RUs. One IRA was completed in 2000, the other IRA was completed in 2001. These IRAs are described in the following paragraphs.

- 2000 Hotspot IRA: The purpose of this excavation was to remove hotspot area concentrations of arsenic and lead that exceeded the GC Area PA RLs of 530 mg/kg for arsenic and 4,100 mg/kg for lead. Following excavation, five samples were collected within each 50-foot by 50-foot excavation. This included four samples collected on each wall of the excavation, and one composite sample collected from the excavation floor. With the exception of three locations (5-VS-125, 5-VS-126, and 38-VS-56 –see Figures in Appendix B), excavation proceeded in the hotspot areas until arsenic and lead concentrations met levels that could be placed within GC Area PAs. The excavation depth of each hotspot location varied, and ranged from a total excavation depth of one foot to eight and a half feet. Locations 5-VS-125 and 5-VS-126 had arsenic concentrations greater than 530 mg/kg and were designated as MSU-96 and MSU-97, respectively, and were addressed during final Site remediation. Both of these MSUs were located in GC-01. Remediation of these MSUs is described in detail in Appendix D. Location 38-VS-56 also had an arsenic concentration greater than 530 mg/kg, and was removed during the 2001 Hotspot IRA, described in the following section.

  Hotspot soil were excavated and stockpiled for future treatment at the on-Site screening plant, and for subsequent disposal in an Ecology-approved off-Site landfill. After the hotspot concentrations were removed, these areas were either incorporated into a GC Area PA, where no additional excavation was needed, or became part of the Large-Scale Excavation area for GC Area non-PAs, where excavation was completed until soil concentrations met the RLs and the SL for the GC Area non-PAs.

  Complete documentation of this IRA is contained in the *Hotspot Interim Action Report, Former DuPont Works Site, DuPont, Washington, October 4, 2000* memorandum presented in Appendix C. Documentation of the treatment process for the soil excavated during this IRA is contained in the *Interim Source Removal Actions: Screening Plant Report, January 22, 2002* memorandum presented in Appendix C.

- 2001 Hotspot IRA: The purpose of this excavation was to remove a hotspot area of arsenic-

contaminated soil identified in Area 38 (location 38-VS-56, with a concentration of 970 mg/kg, shown on a map in the associated report in Appendix C), which remained after completion of 2000 Hotspot IRA. Soil was excavated to a depth of two feet, extending 25 feet out to the north, south, east, and west of this location. Following excavation, three verification samples were collected, one from each wall of the excavation (there were only three sides to this excavation due to an adjacent excavation) and one five-point composite sample from the floor of the excavation. Confirmation samples indicated that all measured arsenic concentrations were below the GC Area PA arsenic RL of 530 mg/kg. This location was included in a GC Area PA.

The excavated soil was stockpiled for future treatment at the on-Site screening plant and for subsequent disposal in an Ecology-approved off-Site landfill. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hotspots, April 22, 2002* memorandum presented in Appendix C. Documentation of the treatment process for the soil excavated during this IRA is contained in the *Interim Source Removal Actions: Screening Plant Report, January 22, 2002* memorandum presented in Appendix C.

3.2.5 Sand Laydown Areas Excavation

The purpose of this IRA was to excavate arsenic and lead impacted soil to provide clean areas for sand storage. The sand was needed to construct the final capping layer of the GC Area PAs. In this IRA, soil was excavated to a depth of one and a half feet within each of two areas staked for sand storage in the GC Area RUs. Following excavation, one discrete confirmation soil sample was collected within each grid node of a 50-foot sampling grid. Sample results for each storage area were combined for comparison to the MTCA three-fold criteria for establishing compliance with the applicable RL for arsenic and the SL for lead. To meet the MTCA three-fold criteria: the 95% UCL concentration of all samples had to be lower than the RL or SL; no more than 10 percent of the samples could have a concentration greater than the RL or SL; and no samples could have a concentration greater than two times the RL or SL. All sand laydown areas met these criteria.

The soil excavated during this IRA was placed in a GC Area PA. Complete documentation of this IRA is contained in the *Sand Laydown Area Interim Action Report, Former DuPont Works Site, DuPont Washington, November 16, 2000* memorandum presented in Appendix C.

3.2.6 Storm Water Pipeline Area Excavation

The purpose of this excavation was to remove soil having arsenic and lead concentrations over the arsenic RL of 60 mg/kg and the lead SL of 118 mg/kg, respectively, around the area where a storm water runoff overflow pipe was to be installed.

In the storm water runoff overflow pipeline area, one foot of soil was excavated within an approximate 50-foot by 25-foot box surrounding each of the pipeline sample locations. A five-point composite verification sample was collected from the bottom of each excavation at a depth of zero to six inches and was analyzed for arsenic and lead. After the initial round of excavation, all but two sample locations met

the Site-specific RL and SL. In the two locations where arsenic concentrations were 109 mg/kg and 80 mg/kg, one additional foot of soil was removed. When the locations were re-sampled, both had arsenic concentrations below the RL.

The soil excavated during this IRA was placed in a GC Area PA. Complete documentation of this IRA is contained in the *Perimeter Soil and Storm Water Runoff Overflow Pipeline Interim Corrective Action, November 2002* memorandum presented in Appendix C.

3.2.7 On-Site Stockpile Excavations

The purpose of this IRA was to characterize and designate the appropriate disposal option for 164 stockpiles of soil and/or debris located across the Site. These stockpiles were created as a result of IRAs conducted between 1991 and 1995. Based on characterization of the stockpiled materials, 14 stockpiles were identified for direct off-Site disposal, seven stockpiles were identified for screening followed by off-Site disposal, 139 stockpiles were identified for placement in the GC Area PAs, and four stockpiles were identified for use as general fill.

Complete documentation of this IRA is contained in the *Interim Source Removal Actions: On-Site Stockpiles Report at the Former DuPont Works Site, January 28, 2002* memorandum presented in Appendix C. Documentation of the treatment process for the seven stockpiles identified for screening and off-Site disposal is contained in the *Interim Source Removal Actions: Screening Plant Report, January 22, 2002* memorandum presented in Appendix C.

3.3 Miscellaneous Small Units (MSUs)

The MSUs within the GC Area RUs included debris piles, foundations, sections of the NGRR, and other localized areas with soil concentrations of arsenic, copper, lead, Bunker-C fuel oil, motor oil, 2,4-DNT, 2,6-DNT, tetrachloroethene, and/or TNT that were elevated over GC Area non-PA CLs, RLs, or the SL. The MSUs, their associated constituents, and the GC Area RU where they were located are presented in Table 3-2. Following the remediation completed in 2005, the remaining constituent concentrations met the applicable CLs, RLs, and SL. The remedial action completed for each MSU is discussed in Appendix D.

3.4 Tree Root Zone Remediation

There were over 300 trees within the GC Area RUs that were part of the Tree Root Zone Remediation program. Trees were selected for remediation based on the desire to preserve large trees within the GC Area and to create a buffer along the eastern perimeter of the Site. The locations of Tree Root Zone Remediation Areas within the GC Area RUs are shown in Figure 3-3.

Tree Root Zone Remediation involved sampling within tree drip lines (i.e., the approximate horizontal distance of the outstretched limbs and roots) for arsenic and lead. Where the arsenic RL or lead SL were exceeded, one foot of soil was carefully removed within the drip line of the tree, soil samples were collected, and the excavation was immediately filled with clean topsoil. If confirmation sample results exceeded the remediation goals, additional rounds of excavation and confirmation sampling were

conducted until the remediation goals were achieved. The remaining arsenic and lead soil concentrations met the arsenic RL of 60 mg/kg and the lead SL of 118 mg/kg around all trees that were left in place. The Tree Root Zone Remediation program is presented in Appendix E.

3.5 Large-Scale Excavation

Large-scale excavation of arsenic and lead contaminated soil was the primary type of remediation conducted in the non-PAs of the GC Area RUs. The Large-Scale Excavation Areas within the GC Area RUs are shown in Figure 3-4. Large-scale excavation consisted of the following steps:

- The boundaries for the Large-Scale Excavation were identified based on previous excavation boundaries, the consent decree boundary, or future land-use boundaries using a GPS. The tolerance of the GPS is 8/100 of a foot on the horizontal axis.
- All trees were cleared from the area (with the exception of approximately 300 trees chosen for preservation).
- Any remaining vegetation was removed.
- A GPS was used to determine the elevation on a 75-foot grid before any excavation took place. The tolerance of the GPS is 5/100 of a foot on the vertical axis. Elevations were determined at all grid-sampling locations.
- Excavators and off-road trucks were used to remove one foot of soil that was then placed in the GC Area PAs.
- The GPS was used to confirm that at least one foot of soil was removed from grid locations. If one foot of soil was not removed from a grid location, then additional excavation was done for the area until at least one foot of soil was removed.

Following the excavation of this soil, the remaining surface soil (zero to six inches) were sampled, with one five-point composite sample collected within each 75-foot grid area. If sampling results indicated that constituent concentrations were below applicable GC Area RLs and SL, the remediation was considered complete. If constituent concentrations were found to be above the GC Area RLs or the SL, excavation activities were repeated in one-foot increments until the RLs and the SL were met for the grid location.

Approximately 800 grid sample locations were established to complete the large-scale remediation in the GC Area non-PAs. Of these sample locations, 32 required a second round of excavation and three required a third round of excavation to meet the associated remediation goals.

3.6 Placement Area Cap Construction

Following the placement of contaminated soil, the PAs were covered with an engineered cap. The cap was constructed to be a minimum of 18 inches thick and consisted of two layers:

- An ecological cap (ecocap) to protect ecological receptors

- A human health cap that (combined with the ecocap) prevents humans from coming into contact with the contaminated soil

The ecocap consisted of at least 12 inches of low organic content Steilacoom gravel that was excavated on Site. The ecocap is an exposure barrier that will eliminate the possibility of animals coming into contact with PA soil or associated soil biota. The lack of organic content in the Steilacoom gravel makes it an unsuitable environment for soil biota. The ecocap was placed directly on top of the contaminated soil. Scrapers or trucks were used to transport the gravel to the PA, then a bulldozer was used to spread the gravel and a roller was used for compaction. A GPS survey was performed before and after the gravel was placed to ensure that a minimum of 12 inches of compacted gravel was placed over all of the contaminated soil. Once the ecocap was complete, the PA boundary and topographical elevations were surveyed, and a legal description was developed. This information is presented in Appendix F.

The second layer of the cap was the human health cap, which consisted of a minimum of six inches of clean soil, placed directly on top of the ecocap. The soil used to construct the human health cap varied in composition, but met all Ecology standards for "clean material." The majority of the soil used was topsoil obtained from off-Site sources and oversized sands purchased off Site. Off-road trucks were used to transport the majority of this soil to the PA for placement. A bulldozer was used to spread it to an initial depth of six inches over the ecocap. A GPS survey was performed before and after the soil was placed to ensure that a minimum of six inches of soil was placed over all of the ecocap. Additional soil was added until the depth of the human health and ecocap were greater than 18 inches. Once this thickness was reached, the GPS was used to survey the final contours of the cap. As-built documentation of the cap construction is presented in Appendix F.

3.7 Golf Course Construction

Following remediation activities, GC construction began in the areas contained within the GC footprint (i.e., the PA and non-PA areas). The PAs were built so that the final contours were consistent with the GC design contours and GC construction could be completed without having to dig into the ecocap or human health cap. Additional contouring of the GC Area PA was completed by adding more soil to the human health cap, and then grading that material.

In general, construction of the GC involved installation of drainage and irrigation systems, the addition of sand topsoil material, rough shaping of the formation of all GC contours and features (i.e., fairways, roughs, tees, greens, and sand bunkers), construction of cart paths, final grading, and seeding of the GC. In a few cases it was necessary to install drain-pipes in PAs. In those cases, the excavated material was placed in an uncompleted PA and the trench was backfilled with clean pipe bedding. As-built documentation of the GC construction is presented in Appendix F.

3.8 Summary of Remedial Actions in the Golf Course Area

The remedial actions described in this section were completed within the eight GC Area RUs to remove elevated levels of metals (i.e., arsenic, copper, and lead), explosives (i.e., 2,4-DNT, 2,6-DNT, nitrobenzene, and TNT), Bunker-C fuel oil, motor oil, and tetrachloroethene. Confirmation soil sampling results documenting the constituent concentrations that remain in place (i.e., those concentrations that met

the applicable CLs, RLs and the SL) are presented in Appendix B. These data document the successful completion of remedial activities in the GC Area RUs, and that these activities were completed in a manner consistent with the CAP established by Ecology (Ecology, 2003). In addition, Appendix F presents the data and As-builts that demonstrate that the ecocap and human health cap were constructed in a manner that met the design requirements identified in the CAP.

Table 3-1 – Soil Cleanup Levels, Remediation Levels, and the Screening Level Used for Evaluating Golf Course Non-Placement Area and Placement Area Land Uses

Constituent	Non-Placement Area Cleanup Goals (mg/kg)	Placement Area Cleanup Goals (mg/kg)	Source
Explosives			
Total Dinitrotoluene	3.0	3.0	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Jim Odendahl and Ron Buchanan, January 11, 2001). Total of 2,4-dinitrotoluene and 2,6-dinitrotoluene concentrations.
Nitrobenzene	0.051	0.05	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.
2,4,6-Trinitrotoluene	1.75	1.75	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Jim Odendahl and Ron Buchanan, January 11, 2001).
Petroleum Hydrocarbons			
Motor Oil (Bunker C)	7,600	7,600	Cleanup Level; based on Ecology Agreement (PIONEER Technologies Corporation. 2002. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, DuPont, Washington, Appendix C)
Motor Oil	2,000	2,000	Cleanup Level; the MTCA Method A Table Value (173-340-745 WAC).
Inorganics			
Arsenic	60	530	Remediation Level; based on Ecology Agreement (Ecology letter from Mike Blum to Vern Moore and Izzy Zanikos, June 25, 1999).
Copper	263	263	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.
Lead	118	4,100	Golf Course Area: Screening Level; based on Ecology-derived soil screening value for protection of terrestrial ecological receptors (WAC 173-340-7493) Placement Area: Remediation Level; based on Ecology Agreement (Ecology letter from Mike Blum to Vern Moore and Izzy Zanikos, May 3, 1999).
Mercury	24	24	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Vern Moore, Linda Rudisell, and Jack Frazier, August 12, 1993)
Volatile Organics			
Tetrachloroethene	0.0091	0.0091	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.

Table 3-2 – Miscellaneous Small Units in Golf Course Areas

MSU	Constituents of Concern	RU Location of MSU[1,2]
MSU-10	2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2,4,6-Trinitrotoluene	PA-01
MSU-14	Lead, Motor Oil	PA-04
MSU-15	Motor Oil	PA-04
MSU-16	Motor Oil	PA-04
MSU-18	Tetrachloroethene	PA-05
MSU-21	Copper	PA-03
MSU-26	2,4,6-Trinitrotoluene	GC-05
MSU-27	2,4,6-Trinitrotoluene	GC-05
MSU-28	2,4,6-Trinitrotoluene	GC-05
MSU-49	Lead	GC-01
MSU-50	Lead	GC-01
MSU-51	Lead	GC-01
MSU-55	Lead	GC-01
MSU-56	Lead	GC-01
MSU-57	Lead	GC-01
MSU-58	Lead	GC-01
MSU-59	Lead	GC-01
MSU-60	Lead	GC-01
MSU-61	Lead	GC-01/GC-02
MSU-70	Lead	GC-05
MSU-71	Lead	GC-05
MSU-72	Lead	GC-05
MSU-73	Lead	PA-05
MSU-78	Lead	GC-05
MSU-79	Arsenic	GC-05
MSU-80	Lead	GC-05
MSU-81	Lead	GC-05
MSU-87	Lead	GC-06
MSU-88	Lead	GC-07
MSU-89	Arsenic, Lead	GC-06
MSU-91	Arsenic, Lead	GC-02
MSU-92	Arsenic	GC-02/PA-02A
MSU-93	Arsenic	GC-03/PA-03
MSU-96	Arsenic	GC-01/PA-02A
MSU-97	Arsenic	PA-02A
MSU-121	Mercury	PA-02A
MSU-122	Mercury	PA-02A
MSU-123	Mercury	PA-02A
MSU-124	Mercury	PA-02A
MSU-125	Mercury	PA-02A
MSU-126	Mercury	PA-01
MSU-127	Mercury	PA-01
MSU-128	Mercury	PA-01
MSU-129	Mercury	PA-01/GC-01
MSU-D-6	Arsenic, Lead	GC-02

Table 3-2 – Miscellaneous Small Units in Golf Course Areas

MSU	Constituents of Concern	RU Location of MSU[1,2]
MSU-D-7	Arsenic, Lead	GC-01
MSU-D-8	Arsenic, Lead	GC-01
MSU-D-9	Arsenic, Lead	GC-01
MSU-D-10	Arsenic, Lead	PA-01
MSU-D-11	Arsenic, Lead	PA-01
MSU-D-12	Arsenic, Lead	GC-01
MSU-D-13	Arsenic, Lead	GC-01/GC-04/PA-04
MSU-D-14	Arsenic, Lead	GC-04
MSU-D-15	Arsenic, Lead	GC-04
MSU-D-16	Arsenic, Lead	GC-04
MSU-D-21	Arsenic, Lead	GC-02
MSU-D-24	Arsenic, Lead	GC-08
MSU-F-02	Arsenic, Lead	GC-02
MSU-F-03	Arsenic, Lead	GC-02
MSU-F-04	Arsenic, Lead	GC-01/PA-01
MSU-F-08	Arsenic, Lead	GC-02
MSU-F-09	Arsenic, Lead	GC-02
MSU-F-19	Arsenic, Lead	GC-04
MSU-F-20	Arsenic, Lead	GC-04
MSU-F-21	Arsenic, Lead	GC-06
MSU-F-23	Arsenic, Lead	GC-06
MSU-F-24	Arsenic, Lead	GC-06/GC-07
MSU-F-25	Arsenic, Lead	GC-06
MSU-F-26	Arsenic, Lead	GC-06/GC-07
MSU-F-27	Arsenic, Lead	GC-07
MSU-F-28	Arsenic, Lead	GC-06
MSU-F-29	Arsenic, Lead	GC-06
MSU-F-31	Arsenic, Lead	GC-07
MSU-F-32	Arsenic, Lead	GC-07/PA-07
MSU-F-33	Arsenic, Lead	GC-07/PA-07
MSU-F-35	Arsenic, Lead	GC-08
MSU-F-36	Arsenic, Lead	GC-07
MSU-F-37A	Arsenic, Lead	GC-07/PA-07
MSU-F-37B	Arsenic, Lead	GC-04
MSU-F-38	Arsenic, Lead	GC-05
MSU-F-39	Arsenic, Lead	GC-04
MSU-F-42	Arsenic, Lead	GC-02
MSU-F-44	Arsenic, Lead	GC-02
MSU-F-45	Arsenic, Lead	GC-01/GC-04/PA-04
MSU-F-46	Arsenic, Lead	GC-01
MSU-F-47	Arsenic, Lead	GC-01/GC-04
MSU-F-51	Arsenic, Lead	GC-01
MSU-F-52	Arsenic, Lead	GC-01
MSU-F-53	Arsenic, Lead	GC-01
MSU-F-54	Arsenic, Lead	GC-03
MSU-F-CU-4A	Arsenic, Lead	GC-05
NGRR-05	Lead	GC-01

Table 3-2 – Miscellaneous Small Units in Golf Course Areas

MSU	Constituents of Concern	RU Location of MSU[1,2]
NGRR-06	Arsenic, Lead	GC-02/PA-02A
NGRR-07	Arsenic, Lead	GC-02
NGRR-08	Arsenic, Lead	GC-01
NGRR-09	Arsenic, Lead	GC-01
NGRR-11	Arsenic, Lead	GC-05
NGRR-12A	Arsenic, Lead	GC-04
NGRR-12B	Arsenic, Lead	GC-01/GC-04
NGRR-16	Arsenic, Lead	GC-03/PA-03
NGRR-19	Arsenic, Lead	GC-04
NGRR-20	Arsenic, Lead	GC-04
NGRR-21	Arsenic, Lead	GC-07/GC-08/PA-07
NGRR-22	Arsenic, Lead	GC-08/PA-08
NGRR-23	Arsenic, Lead	GC-08
NGRR-24	Arsenic, Lead	GC-08/PA-08B
NGRR-25	Arsenic, Lead	GC-06/PA-06
NGRR-26	Arsenic, Lead	GC-06
NGRR-27	Arsenic, Lead	GC-06
NGRR-28	Arsenic, Lead	GC-06
NGRR-31	Arsenic, Lead	GC-06/PA-06
NGRR-32	Arsenic, Lead	GC-07/PA-07
NGRR-33A	Arsenic, Lead	GC-05/GC-06
NGRR-33B	Arsenic, Lead	GC-06/GC-07/PA-07
NGRR-33C	Arsenic, Lead	GC-06/GC-07
NGRR-34	Arsenic, Lead	GC-05
NGRR-35A	Arsenic, Lead	GC-04/GC-05
NGRR-35B	Arsenic, Lead	GC-05
NGRR-36	Arsenic, Lead	GC-06
NGRR-37A	Arsenic, Lead	GC-05/PA-05
NGRR-37B	Arsenic, Lead	GC-04
NGRR-39	Arsenic, Lead	GC-05/PA-05
NGRR-40	Arsenic, Lead	GC-05
NGRR-41	Arsenic, Lead	GC-01/PA-01
NGRR-43	Arsenic, Lead	GC-01

Notes:
[1] MSUs may be located in more than one remediation unit, and in some instances their boundaries overlap into different land-use areas.
[2] Golf Course Remediation Units include both non-placement areas (denoted with "GC" prefix) and placement areas (denoted with "PA" prefix).
GC – Golf Course
MSU – Miscellaneous Small Unit
NGRR – Narrow Gauge Railroad
RU – Remediation Unit

SECTION 4 – INDUSTRIAL AREA

4.1 Introduction

A portion of the area north of Sequalitchew Creek will be used for industrial purposes as well as OS (see Figure 4-1). Industrial use may include activities ranging from mining gravel to development of industrial facilities. The IN Area occupies 35.7 acres.

Remediation completed within the IN Area included:

- IRAs
- MSU remediation

The IN Area is shown in Figure 4-1, and the associated CLs for the IN Area are shown in Table 4-1. Following completion of all soil removal remedial actions, the soil in the IN Area met the CLs. Results of all confirmation soil sampling completed in the IN Area, which identify the soil constituent concentrations left in place following remediation, are presented in Appendix B.

4.2 Interim Remedial Actions

IRAs were conducted in the Industrial Area between 1999 and 2001, and included excavation of soil in hotspots, where there were elevated concentrations of arsenic, lead, 2,4-DNT, 2,6-DNT, and TNT. The locations of IRA areas within the IN Area are shown in Figure 4-2. The 2000 and 2001 IRAs are described below.

4.2.1 Hotspot Areas Excavations

Two separate IRAs were completed for the hotspot areas within the Industrial Area. One IRA was completed in 2000 and the other IRA was completed in 2001. These IRAs are described in the following paragraphs.

- 2000 Hotspot IRA: The purpose of this IRA was to remove soil hotspot areas of arsenic, lead, and TNT identified in RI sampling events in order to achieve compliance with the IN Area CLs. The area and depth of excavation varied, depending on the size and location of the hotspot area. This program resulted in excavation of three areas based on elevated concentrations of arsenic and/or lead and one area based on elevated concentrations of TNT. Following each round of excavation, five samples were collected within each 50-foot by 50-foot excavation. This included four samples collected on each wall of the excavation, and one composite sample collected from the excavation floor.
  - The data for each of the four excavations and the remaining area were compared to the IN Area CLs of 90 mg/kg for arsenic, 1,000 mg/kg for lead, and 1.75 mg/kg for TNT. The area excavated for elevated TNT concentrations (Area 10, identified on a map in the associated report in Appendix C) met the CL following the initial excavation. At

Ecology's suggestion, arsenic and lead data from the remaining three areas were grouped in the following manner:

- Hotspot data outside each excavation (i.e., samples out 25 feet from the perimeter of the excavation) were grouped together to demonstrate that the lateral extent of each excavation was in compliance with the CLs.
- Samples inside each excavation were grouped together to demonstrate that the vertical extent of each excavation was in compliance with CLs.

- After grouping the sampling results in accordance with Ecology's suggestion, the three excavations, as well as the IN Area as a whole, were in compliance with the MTCA three-fold criteria for IN Area CLs. To meet the MTCA three-fold criteria the 95% UCL concentration of all samples had to be lower than the CLs, no more than 10 percent of the samples could have a concentration greater than the CLs, and no samples could have a concentration greater than two times the CL.
- All excavated soil with arsenic and lead contamination was placed in GC Area PAs, and all TNT-contaminated soil was stockpiled for off-Site disposal.

Complete documentation of this IRA is contained in the *Hotspot Interim Action Report, Former DuPont Works Site, DuPont, Washington, October 4, 2000* memorandum presented in Appendix C.

- 2001 Hotspot IRA: The purpose of this IRA was to remove soil concentrations of 2,4-DNT, 2,6-DNT, and/or TNT that were elevated above the IN Area CLs. The area and depth of excavation varied, depending on the size and location of the hotspot area.
  - The 2,4-DNT, 2,6-DNT, and/or TNT hotspot area included in this IRA was located in former Area 10, in the northern portion of the Industrial Area. Soil was excavated to a depth of three feet, and extended 15 feet out to the north, south, east, and west of the location of the elevated concentration. Following excavation, five verification samples were collected; one from each wall of the excavation, and one five-point composite from the floor of the excavation. These confirmation samples indicated that the remaining concentrations of 2,4-DNT, 2,6-DNT, and TNT were below the Industrial Area CLs.
  - All 2,4-DNT, 2,6-DNT, and TNT contaminated soil was stockpiled for off-Site disposal in an Ecology-approved landfill.

  Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hotspots, April 22, 2002* memorandum presented in Appendix C.

4.3 Miscellaneous Small Units

There were two MSUs within the IN Area, and both had localized areas with soil concentrations of nitrobenzene that were elevated over IN Area CLs. Following remediation, nitrobenzene concentrations

met the CLs. The remedial action completed for each MSU is discussed in Appendix D.

4.4 Summary of Remedial Actions in the Industrial Area

Remedial actions completed in the IN Area consisted of IRAs completed between 1999 and 2001 to remove elevated levels of arsenic, lead, 2,4-DNT, 2,6-DNT, nitrobenzene, and TNT in the IN Area. Confirmation soil sampling results documenting the constituent concentrations that remain in place (i.e., those concentrations that met the CLs) are presented in Appendix B. The IN Area is in compliance with the CLs approved by Ecology and this area is now ready for development for industrial uses.

Table 4-1 – Soil Cleanup Levels Used for Evaluating Industrial Land Use

Constituent	Cleanup Goals (mg/kg)	Source
Explosives		
Dinitrotoluene - Total	3.0	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Jim Odendahl and Ron Buchanan, January 11, 2001). Total of 2,4-dinitrotoluene and 2,6-dinitrotoluene concentrations.
Nitrobenzene	0.051	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.
2,4,6-Trinitrotoluene (TNT)	1.75	Cleanup Level; based on Ecology Agreement (Ecology letter from Mike Blum to Jim Odendahl and Ron Buchanan, January 11, 2001).
Inorganics		
Arsenic	90	Cleanup Level, the MTCA Method C Industrial Level (Ecology letter from Mike Blum to Vern Moore and Izzy Zanikos, June 25, 1999).
Lead	1,000	Cleanup Level; based on the MTCA Method C Industrial Level (Letter from Mike Blum to Vern Moore and Izzy Zanikos, May 3, 1999).

SECTION 5 - HISTORICAL AREAS

5.1 Introduction

Four HI Areas (HI) have been identified on the Site, including the 1833 Fort Nisqually Site (Historical Site Number 45-PI-55), the Fort Nisqually Cemetery (Historical Site Number 45-PI-404), the Shell Midden (Historical Site Number 45-PI-72), and an area where Native American Graves were found (Historical Site Number 45-PI-712). In total, the HI Areas consist of approximately six acres. Each of these HI Areas was designated as a separate RU. The 1833 Fort Nisqually Site is identified in this report as HI Area RU HI-01; the Fort Nisqually Cemetery is identified as HI Area RU HI-02; the Native American Graves area is identified as HI Area RU HI-03; and the Shell Midden area is identified as HI Area RU HI-04

The location of the HI Area RUs is presented in Figure 5-1. A brief description of each of these areas is presented in the following paragraphs. Detailed descriptions are presented in the archeological reports provided in Appendix A.

Remedial actions completed in the HI Areas included:

- MSU remediation
- Capping

Minimal remediation was done in the HI Area RUs to ensure the preservation of the historical artifacts. All work was completed under the direction/supervision of HRA, the Nisqually Tribe and the DAHP. The applicable CL, RL, and SL identified for the HI Areas are shown in Table 5-1.

5.1.1 1833 Fort Nisqually Site (45PI55)

The 1833 Fort Nisqually Site is located to the west of Sequalitchew Creek, between the creek and Old Fort Lake. The 1833 Fort included a store, a kitchen, the Chief Factor's House, a dwelling house for the men, an Indian hall, stables, and agricultural buildings such as cellars and sheds. Following the listing of this Fort on the National Register in 1974, excavations uncovered the bases of posts used to support the palisades, which were enclosures established around the Fort. During remediation, a 63-foot buffer was established around the outline of the Fort's palisade, and this area was designated as a "protected area." Remediation activities included the excavation of two small areas to remove elevated lead concentrations. To preserve surface artifacts that were present, no additional soil excavation was done.

5.1.2 Fort Nisqually Cemetery (45PI404)

The Fort Nisqually Cemetery is located east of 1833 Fort Nisqually. It was inadvertently discovered in 1987 when skeletal remains were uncovered during construction work. A protective buffer was placed around the Cemetery to avoid damage during soil remediation activities. Soil remediation activities in this area involved the placement of a protective soil cap.

5.1.3 Shell Midden (45PI72)

The Shell Midden is located in the far southwest corner of the Site. About one-third of the Shell Midden is located within the Site, in a bluff-edge green belt area; the remainder lies outside the Consent Decree Area fence line. Historical investigations have confirmed the presence of extensive Shell Midden deposits, faunal remains, and stone tools. A buffer of 50 feet was established around the portion of the Shell Midden that is located within the Site. Soil remediation activities in this area involved the removal of trees growing on the Shell Midden and the placement of a protective soil cap.

5.1.4 Native American Graves (45PI712)

The Native American Graves are located near the eastern Site boundary. This area was discovered in January 2003 after heavy rains fell on a scraped area, revealing two pieces of human bone. Soil remediation activities in this area involved the placement of a protective soil cap. Miscellaneous Small Units

These MSUs located within the HI Area RUs included localized areas with soil concentrations of aldrin, arsenic, and lead that were elevated over the HI Area CL, RL, and SL. The MSUs, their associated constituents, and the HI Area RU where they are located are presented in Table 5-2. Following remediation, remaining constituent concentrations met the applicable CL, RL, and SL, or the area was capped. The remedial action completed for each MSU is discussed in Appendix D.

5.2 Historical Areas Cap Construction

Remediation of HI Area RUs HI-02, HI-03, and HI-04 included the placement of a cap to protect archeological artifacts and to be an exposure barrier. The cap was constructed to be a minimum of 18 inches thick and consisted of two layers:

- An ecocap to protect ecological receptors.
- A human health cap that (combined with the ecocap) prevents humans from coming into contact with the contaminated soil.

The cap for HI-04 was constructed to eliminate the potential for disturbing artifacts. Initially, a road was built by placing gravel over the contaminated soil. Then, any heavy equipment that was used in the process of logging and vegetation removal stayed on the newly built road. The cap was constructed along the road through the addition of more gravel and then soil.

The ecocaps for HI Area RUs HI-02 and HI-03 consisted of 12 inches of Steilacoom gravel that was excavated from the Site. The ecocap was placed directly on top of the contaminated soil. The second layer of the cap was the human health cap, which consisted of six inches of clean soil, placed directly on top of the ecocap. The soil used to construct the human health cap varied in composition, but met all Ecology standards for "clean material." The majority of the soil used was topsoil obtained from off-Site sources, and oversized sand purchased off Site. After the minimal cap thickness was met, where planting was specified, additional soil was added to the depth necessary to cover the root ball of the designated

plant.

5.3 Summary of Remedial Actions in the Historical Areas

The remedial actions completed in the HI Areas included MSU excavations of lead contaminated soil in HI Area RU HI-01, and capping in the remaining three HI Areas. The constituents that were present above the applicable CL, RL, and SL were aldrin, arsenic, and lead. Soil sampling results documenting the constituent concentrations that remain in place are presented in Appendix B. Soil concentrations of arsenic and lead in HI-02, HI-03, and HI-04 were higher than the CL, RL, or SL in some instances, however a cap was placed over these areas to prevent exposure to human and ecological receptors. Therefore, the remedial objectives identified in the CAP established by Ecology (Ecology, 2003), were met in all HI Areas.

Table 5-1 – Soil Cleanup Level, Remediation Level, and Screening Level Used for Evaluating Historical Areas

Constituent	Cleanup Goal (mg/kg)	Source
Inorganics		
Arsenic	32	Cleanup Level; Value is site-specific background level for arsenic. Ecology Agreement (Ecology letter from Mike Blum to Vern Moore and Izzy Zanikos, June 25, 1999)
Lead	118	Screening Level; Ecology-derived soil screening value for protection of terrestrial ecological receptors (WAC 173-340-7493)
Pesticides/PCBs		
Aldrin	0.005	Cleanup Level; the MTCA Method B Value protective of Groundwater. The derivation of this value is presented in WAC 173-340-740.

Table 5-2 – Miscellaneous Small Units in Historical Areas

MSU	Constituents of Concern	Location of MSU[1]
MSU-108	Arsenic	HI-04
MSU-109	Lead	HI-04
MSU-110	Arsenic	HI-04
MSU-111	Lead	HI-04
MSU-112	Arsenic	HI-04
MSU-113	Aldrin, Arsenic	HI-04
MSU-114	Arsenic	HI-01
MSU-115	Arsenic	HI-01
MSU-116	Arsenic	HI-01
MSU-117	Lead	HI-01
MSU-133	Arsenic	HI-02
MSU-134	Lead	HI-02
MSU-135	Arsenic	HI-02
MSU-136	Lead	HI-02
MSU-137	Lead	HI-02
MSU-138	Arsenic, Lead	HI-02
NGRR-12B	Arsenic, Lead	HI-02

Notes:
[1] MSUs may be located in more than one remediation unit, and in some instances their boundaries overlap into different land-use areas.

HI – Historical Area
MSU – Miscellaneous Small Unit
NGRR – Narrow Gauge Railroad
RU – Remediation Unit

SECTION 6 – OPEN SPACE AREAS

6.1 Introduction

Four areas of the Site were designated for use as OS (see Figure 6-1). The OS Areas comprise approximately 72.2 acres. The OS Areas border Sequalitchew Creek to the north and south, and surround Old Fort Lake.

Remediation completed within the OS Area included:

- IRAs
- MSU remediation
- Tree remediation
- Large-Scale Excavation

Minimal Large-Scale Excavation was conducted in the OS Area due to the sensitive nature of the areas, and the overriding goal of trying to protect ecological habitat.

The CL and SL identified for the OS Area RUs are shown in Table 6-1. Following completion of the remedial actions, the soil in all of the OS Area RUs met the applicable CL and RL. Results of all confirmation soil sampling completed in the OS Area, which identify the soil constituent concentrations left in place following remediation, are presented in Appendix B.

6.2 Interim Remedial Actions

IRAs were conducted in the OS Area between 1999 and 2001, and included the excavation of soil along the NGRR, and along the storm water pipeline excavation. The locations of IRA areas within the OS Area are shown in Figure 6-2. Each of these actions is described briefly below.

6.2.1 NGRR Excavation

The purpose of this excavation was to remove elevated arsenic concentrations found associated with the NGRR located along Sequalitchew Creek, where an arsenic-containing herbicide was historically used for weed control. In this IRA, one and a half feet of soil were excavated within 25 feet of the centerline of the NGRR. Some NGRR was not excavated due to the close proximity of timber that was identified for future harvesting. All remaining NGRR were designated as MSUs (i.e., NGRR MSUs) and excavation was done as part of the final remediation (see Appendix D). Following excavation, one five-point composite confirmation sample was collected from the excavation floor every 50 feet along the NGRR. After two rounds of excavation, there were still five locations (LR-68-0-02, LR-68-74-02, LR-68-525E-02, LR-68-600E-02, and LR-68-1575E-02, identified on a map in the associated report in Appendix C) where the arsenic CL of 32 mg/kg was not met. These locations were incorporated into the OS Area RUs identified for Large-Scale Excavation, and were excavated during final Site remediation.

The soil excavated during this IRA was placed in one of the GC Area PAs. Complete documentation of this IRA is contained in the *Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hotspots, April 22, 2002* memorandum presented in Appendix C.

6.2.2 Storm Water Pipeline Excavation

The purpose of this excavation was to remove soil having arsenic and lead concentrations over the arsenic CL of 32 mg/kg and the lead SL of 118 mg/kg, respectively, around the area where a storm water runoff overflow pipe was to be installed. For this IRA, one foot of soil was excavated within an approximate 50-foot by 25-foot box surrounding each of the pipeline sample locations. A five-point composite verification sample was collected from the bottom of each excavation at a depth of zero to six inches and analyzed for arsenic and lead. After excavation, all sample locations had arsenic concentrations below the CL.

The soil excavated during this IRA was placed in a GC Area PA. Complete documentation of this IRA is contained in the *Perimeter Soil and Storm Water Runoff Overflow Pipeline Interim Corrective Action, November 2002* memorandum presented in Appendix C.

6.3 Miscellaneous Small Units

The MSUs located within the OS Areas included one section of the NGRR, and other localized areas with elevated concentrations of arsenic and lead. The MSUs, associated constituents, and the OS Area where they were located are presented in Table 6-2. Following remediation, remaining constituent concentrations met the OS Area CL and SL except for four locations, two located in MSU-NGRR-48, and two located in MSU-NGRR-49. It was acceptable to leave these concentrations because these areas were covered with two feet of topsoil and will be paved with asphalt as part of a permanent walking trail that leads down to Puget Sound. The remedial action completed for each MSU and the confirmation sampling results are discussed in Appendix D.

6.4 Tree Root Zone Remediation

There were four trees within the OS Area RU OS-04 that were part of the Tree Root Zone Remediation. Trees were selected for remediation based on the desire to preserve vegetation on the Site where possible, and to create a buffer around the western perimeter of the Site. The locations of Tree Root Zone Remediation within the OS Area are shown in Figure 6-3.

Tree Root Zone Remediation involved sampling soil within tree drip lines (i.e., the approximate horizontal distance of the outstretched limbs and roots) for arsenic and lead. Where the arsenic CL or the lead SL were exceeded, one foot of soil was carefully removed within the drip line of the tree, soil samples were collected, and the excavation was immediately filled with clean topsoil. If the confirmation sample results exceeded the remediation goals, additional rounds of excavation and confirmation sampling were undertaken until the remediation goals were achieved. Of the four trees identified for the OS Area RU Tree Root Zone Remediation, three (i.e., T-188, T-189, and T-190) required one round of remediation, and the fourth tree did not require remediation.

Following remediation, remaining arsenic and lead concentrations met the arsenic CL of 32 mg/kg and

the lead SL of 118 mg/kg. The Tree Root Zone Remediation program is presented in Appendix E

6.5 Large-Scale Excavation

The Large-Scale Excavation within the OS Area RUs are shown in Figure 6-4. Large-Scale Excavation consisted of the following steps:

1. The boundaries for the Large-Scale Excavation were identified based on previous excavation boundaries, or future land-use boundaries using a GPS. The tolerance of the GPS is 8/100 of a foot on the horizontal axis.
2. All trees were cleared from the area (with the exception of trees chosen for preservation).
3. Any remaining vegetation was removed.
4. A GPS was used to determine the elevation on a 75-foot grid before any excavation took place. The tolerance of the GPS is 5/100 of a foot on the vertical axis. Elevations were determined at all grid sampling locations.
5. Excavators and off-road trucks were used to remove one foot of soil that was then placed in the GC Area PAs.
6. The GPS was used to confirm that at least one foot of soil was removed from grid locations. If one foot of soil had not been removed from a grid location, then additional excavation was done for the area.

Following the excavation of this soil, the remaining surface soil (zero to six inches) was sampled with one five-point composite sample collected within each 75-foot grid area. If sampling results indicated that constituent concentrations were below the applicable OS Area CL and SL, the remediation was considered complete. If constituent concentrations were found to be above the cleanup goals, excavation activities were repeated in one-foot increments until the cleanup goals were met for the grid location (i.e., the 75 foot by 75 foot box representing the sample location).

Twenty-eight sample locations were established to document completion of Large-Scale Excavation in the OS Area. Of these sample locations, three required a third round of excavation to meet the associated remediation goals.

6.6 Summary of Remedial Actions in the Open Space Areas

The remedial actions described in this section were completed within the OS Area to remove elevated levels of arsenic and lead. Confirmation soil sampling results representing the constituent concentrations that remain in place (i.e., those concentrations that met the CL and SL) are presented in Appendix B. These data document the successful completion of remedial activities in the OS Areas and provide evidence that these activities were completed in a manner consistent with the CAP established by Ecology (Ecology, 2003).

Table 6-1 – Soil Cleanup Level and Screening Level Used for Evaluating Open Space Land Use

Constituent	Cleanup Goal (mg/kg)	Source
Inorganics		
Arsenic	32	Cleanup Level; Value is site-specific background level for arsenic. Ecology Agreement (Ecology letter from Mike Blum to Vern Moore and Izzy Zanikos, June 25, 1999)
Lead	118	Screening Level; Ecology-derived soil screening value for protection of terrestrial ecological receptors (WAC 173-340-7493)

Table 6-2 – Miscellaneous Small Units In Open Space Areas

MSU	Constituents of Concern	RU Location of MSU[1]
MSU-98	Arsenic	OS-03
MSU-99	Arsenic	OS-02
MSU-100	Arsenic	OS-02
MSU-102	Arsenic	OS-02
MSU-103	Arsenic	OS-02
MSU-104	Lead	OS-01
MSU-105	Lead	OS-01
MSU-106	Lead	OS-01
NGRR-04	Arsenic, Lead	OS-01
NGRR-46	Arsenic, Lead	OS-03
NGRR-47	Arsenic, Lead	OS-03
NGRR-48	Arsenic, Lead	OS-03
NGRR-49	Arsenic, Lead	OS-03

Notes:
[1] MSUs may be located in more than one remediation unit, and in some instances their boundaries overlap into different land-use areas.
MSU – Miscellaneous Small Unit
NGRR – Narrow Gauge Railroad
OS – Open Space Area
RU – Remediation Unit

SECTION 7 – ON-GOING REQUIREMENTS

7.1 Groundwater

Groundwater monitoring is required at the Site until the total DNT groundwater concentration is below the practical quantitation limit (PQL) of 0.33 ug/l for four consecutive sampling rounds. Because the MTCA CL is lower than the PQL, Ecology defaults to the PQL as the CL until such time as technology advances, allowing detection of those constituents at lower concentrations. Testing for an isomer will be discontinued for a well if all individual DNT isomers are not detected for four consecutive sampling rounds. If only one isomer is detected in a well, then the single criterion (i.e., 32 ug/l for 2,4-DNT or 16 ug/l for 2,6-DNT) will be applied. Monitoring will be discontinued after approval from Ecology. The wells that will be monitored for DNT are monitoring well MW-19 and new monitoring wells DA-1, DA-2, DA-3, and DA-4. Current groundwater-monitoring locations are shown in Figure 7-1. The location of the GC boundary, including the GC Area PAs, are shown on this figure to provide spatial context for the monitoring well locations.

The highest DNT concentration in groundwater ever detected at the Site was 3.8 ug/L in MW-27 in January of 1995. However, DNT levels in this well declined below levels of concern in subsequent sampling rounds. This concentration was approximately 10 times higher than the PQL. If any of the results from future groundwater sampling are greater than 3.8 ug/L, Ecology will meet with the Companies to discuss the results.

7.2 Land-Use Restrictions

Intuitional controls, in the form of deed restrictions, will be placed upon the Site for perpetuity. These land-use restrictions will ensure that future development will be consistent with the goals of the cleanup, Ecology requirements, and the conditions and assumptions used to develop the Site-specific RLs. Site Deed Restrictions are presented in Appendix H.

7.3 Future Investigations

MTCA requires that Ecology conduct a review of the conditions and assumptions used to make their decisions on Project requirements at least every five years. This review and evaluation will be done to ensure that decisions made remain in compliance with state and federal law.

SECTION 8 – HEALTH AND SAFETY

8.1 Introduction

A safety policy was established for this remediation project, along with project-specific Health and Safety Plans (HASPs) developed by individual contractors. The safety policy outlined the safety requirements for all companies that participated in remediation activities at the Site. This policy was developed to assure the long-term safety of workers. In addition to the guidelines and procedures listed in the safety policy, the Site has an active health and safety program that meets Washington Industrial Safety and Health Act (WISHA) requirements and regulations. The program included requirements for a written HASP for each contractor working at the Site, including provisions for air monitoring to protect Site workers from unsafe working conditions. In addition to air monitoring, dust-prevention measures and perimeter dust monitoring was instituted during excavation work done within 500 feet of the Site boundary, to ensure that there were no off-Site impacts.

Key points from the safety policy included the following:

- Safety is the single most important factor in the work place. No work will be done on the Site except under the highest safety standards. At a minimum, this means following the rules and restrictions imposed by WISHA, the Occupational Safety and Health Administration (OSHA) and Weyerhaeuser and DuPont Company Safety Policies.
- Safety is a condition of employment. All contractors and employees must realize that the practice of unsafe work habits will result in immediate removal from the Site.
- The Project's goal is no incidents, accidents or loss of workdays. All accidents are preventable. As such, all Site contractors and employees will look for and report unsafe working conditions and personnel to the Project Management Team (PMT) as soon as possible.
- Safety procedures must apply to all contractors and workers. All contractors working on the Site have the potential to impact each other. As such, everyone working on the Site must follow the same procedures and precautions.
- All activities will follow Weyerhaeuser and DuPont Policies and Procedures. This will include Weyerhaeuser's Incident Investigations Program.
- All field or construction activities will be audited on a regular basis. Annual audits will be conducted by an independent or company auditor. DuPont company representatives will perform periodic audits.
- A safety briefing and debriefing will be held at the start and completion of each phase of the Project. A safety kickoff meeting will be held at the start of each activity. A debriefing will be held at the completion of each activity.
- A safety meeting will be held at the start of each workday. The safety meeting held at the start of each workday will provide the opportunity to discuss the work to be completed that day, any specific safety issues associated with that work and any observations or safety issues noted during the previous workday.

- Safety is the responsibility of each employee and contractor. All workers on Site must share in making the Site a safe work environment.
- Each Contractor is responsible for the health and safety of his/her employees. The PMT and Project Manager/Site Supervisor (PM/SS) will aid in the development of general guidelines but will not oversee the implementation of any health and safety program other than their own.
- Contractors are directly responsible for their subcontractors. The PMT will assess the safety performance of all contractors, not only by their actions, but by those of their subcontractors as well.

The HASP and air monitoring programs designed for both worker safety and prevention of off-Site dust migration are discussed in the following sections.

8.2 Site Health and Safety Plan

In accordance with the Site Health and Safety Policy, the contractors performing work at the Site prepared individual HASPs. These HASPs identified potential Site hazards, safe work practices, and emergency procedures. HASPs were prepared for IRAs (2001 and 2002), and final Site remediation (2003). A key component of the HASPs was air monitoring, which was the basis for determining the need for upgraded personal protective equipment and engineering controls. The air monitoring approach and results of this monitoring are presented in the following section.

8.3 Air Monitoring For Worker Safety During Remediation

Remediation of the Site involved different phases of removal of contaminants, including IRAs, which occurred in 2001 and 2002, and the final Site remediation, which was initiated in 2003. Final air monitoring reports were prepared for each phase of Site remediation to document exposures to Site workers (PIONEER and WSNW, 2002; PIONEER and WSNW 2003a; PIONEER and WSNW, 2004a). These reports are presented in Appendix G.

The air monitoring approach for each phase of Site remediation was similar, and is summarized below. Following the summary of the air monitoring approach, sampling results from each phase of remediation are presented.

8.3.1 Air Monitoring Approach

To ensure that workers were not exposed to elevated levels of arsenic and lead, the primary contaminants in on-Site soil, an air monitoring plan was prepared and implemented during remediation activities. This plan included provisions for both personal air monitoring, where sampling filters were attached to individual workers and the filters were sent to a laboratory for analysis, and real-time air monitoring, where a field monitor is placed near workers for instantaneous measurement of airborne dust concentrations. Personal air samples were taken in the breathing zone of workers expected to have the highest potential for exposure, and real-time air samples were taken in areas adjacent to workers, where airborne particulate levels were expected to be highest. The workers were informed of the results of the air monitoring at daily health and safety meetings.

8.3.1.1 Personal Air Monitoring

Personal air samples were collected during the first week of excavation activities. Workers expected to receive the highest exposure were monitored during an entire work shift. Samples were collected in the breathing zone of workers, and were analyzed for arsenic and lead by an American Industrial Hygiene Association (AIHA)-accredited laboratory, using the OSHA Method 125. AIHA-accredited laboratories are preferred because these laboratories participate in extensive quality control and quality assurance procedures that are monitored by OSHA.

8.3.1.2 Real-Time Air Monitoring

Real-time air monitoring was conducted using a mini-ram (personalDataRAM™, model pDR-1000AN, Monitoring Instruments for the Environment, Inc.) in order to ensure that that the permissible exposure limits (PELs) for arsenic and lead would not be exceeded. The use of the mini-ram was initiated during the first week of field activities. The frequency of sampling was determined based on the readings, changes in work patterns, or changes in soil conditions that could potentially result in increased dust emissions.

Using the highest measured lead concentration for the Site, the associated mini-ram concentration that would result in exposure to lead at the PEL of 5.0 mg/m^3 was calculated. Based on this calculation, a mini-ram action level of 2.5 mg/m^3 was established as a trigger for initiating the need for additional engineering controls or upgraded personal protective equipment. This mini-ram concentration was also protective for exposure to arsenic due to the lower concentrations of arsenic on Site.

8.3.2 Air Monitoring Results

8.3.2.1 2001 Interim Source Removal Actions - Personal Air Monitoring Results

Arsenic and lead were not detected in any of the samples above the sample detection limits that ranged from 0.2 micrograms per cubic meter (ug/m^3) to 0.5 ug/m^3. This detection limit was well below the WISHA PEL of 500 ug/m^3 for arsenic and 50 ug/m^3 for lead.

8.3.2.2 2002 Interim Remedial Actions - Personal Air Monitoring Results

All arsenic and lead levels were well below the WISHA PEL of 500 ug/m^3 for arsenic and 50 ug/m^3 for lead. The highest detected arsenic level was 3.32 ug/m^3, and the highest detected lead concentration was 16.9 ug/m^3.

8.3.2.3 2003 Final Site Remediation - Personal Air Monitoring Results

All arsenic and lead levels were well below the WISHA PEL of 500 ug/m^3 for arsenic and 50 ug/m^3 for lead. The highest detected arsenic level was 10.0 ug/m^3, and the highest detected lead concentration was 23.9 ug/m^3.

8.3.2.4 2001 Interim Source Removal Actions - Real-Time Air Monitoring Results

During periods of heavy equipment operation and times of maximum soil disturbance, continuous

particulate readings were taken adjacent to the worker assumed to have the maximum exposure. This person was chosen as the ground worker who directed the excavator operator. At no time were air concentrations above the 2.5 mg/m^3 action level. The maximum-recorded reading was 1.312 mg/m^3.

8.3.2.5 2002 Interim Remedial Actions - Real-Time Air Monitoring Results

During periods of heavy equipment operation and times of maximum soil disturbance, continuous particulate readings were taken next to workers expected to have the potential for maximum exposure. Workers chosen for monitoring included Heavy Equipment Operators, Archeologists and Ground People working adjacent to heavy equipment. There were three instances where the average air concentrations were above the 2.5 mg/m^3 action level. When these results were noted, additional soil wetting was implemented to reduce airborne dust levels. All average air concentrations were below the PEL of 5.0. The maximum average concentration was 3.47 mg/m^3.

8.3.2.6 2003 Final Site Remediation - Real-Time Air Monitoring Results

During periods of heavy equipment operation and times of maximum soil disturbance, continuous particulate readings were taken next to workers expected to have the potential for maximum exposure. Workers chosen for monitoring included Heavy Equipment Operators, Archeologists and Ground People working adjacent to heavy equipment. There were no instances where the average air concentrations were above the 2.5 mg/m^3 action level. The maximum average concentration was 1.39 mg/m^3.

8.4 Perimeter Air Monitoring for Off-Site Particulate Emissions

Perimeter air monitoring involved measurement of respirable particulate matter (PM_{10}) on Site, along the property fence line, to serve as a worst-case surrogate for particulate levels that may migrate off Site. The purpose of the PM_{10} sampling was to document the effectiveness of engineering controls in limiting off-Site migration of particulate during on-Site excavation and remediation work.

PM_{10} sampling was done during perimeter soil excavation conducted at the Site between June 19 and July 12, 2002, and between September 2 and November 14, 2003. Final perimeter PM_{10} air monitoring reports were prepared for both sampling periods (PIONEER and WSNW, 2003b; PIONEER and WSNW, 2004b). These reports are presented in Appendix G. The PM_{10} sampling approach for each phase of the perimeter soil excavation was similar, and is summarized below. Following the summary of the PM_{10} sampling approach, sampling results from each phase of PM_{10} sampling are presented.

8.4.1 PM_{10} Sampling Approach

Sampling for PM_{10} was conducted using Hi-Volume particulate samplers (GMW Model IP 10-8000 PM PM_{10}). PM_{10} samplers were set up along the south fence on the Site boundary, approximately 250 feet apart. Samplers were located directly adjacent to excavation activities to enable measurement of "worst case" particulate levels. Samplers were moved regularly to stay adjacent to the excavation activities as they progressed along the Site boundary. Depending on the size of the area to be excavated, three to four PM_{10} samplers were set up each day during excavation activities. Samples were collected on a 24-hour basis. The sample filters were removed daily and sent for analysis of PM_{10}, arsenic, and lead.

8.4.2 PM_{10} Sampling Results

During both the 2002 and 2003 sampling periods, all PM_{10}, arsenic, and lead levels were below health-based concentrations established to be protective of residential exposures. Based on the 2002 PM_{10} sampling results, and an evaluation of the wind speed and direction during the sampling period and other typical time periods, the following conclusions were made:

- The engineering controls used during the perimeter interim corrective action were successful in limiting off-Site particulate transport.
- The location of the excavation activities, as well as the wind speed and direction during the sampling period, could be considered a "worst case" scenario. Therefore it is unlikely that future excavation work would result in off-Site particulate levels that are of concern.
- The results from this program indicate negligible impacts to surrounding property from Site dust even under "worst case" conditions.

During the 2002 sampling event, the highest concentration of lead (0.019 parts-per-billion [ppb], 2003) was an order of magnitude below the health-based concentration (1.5 ppb). The highest concentration of arsenic (0.011 ppb, 2002) was below the health-based concentration of 0.017 ppb. Arsenic and lead were not detected in any samples collected during the 2003 sampling event.

SECTION 9 – REFERENCES

Ecology. (Washington State Department of Ecology). 1996. Personal Communication from Mike Blum to Vern Moore/Weyerhaeuser Company regarding Russ McMillan's June 14, 1996 Draft Parcel 2 Cleanup Action Plan comments during Parcel 2 CAP Meeting. June 26, 1996.

Ecology (Washington State Department of Ecology). 2001a. Model Toxics Control Act Cleanup Regulation (MTCA) Chapter 173-340 WAC. Feb. 12, 2001. Ecology Publication 94-06.

Ecology. (Washington State Department of Ecology). 2003. Cleanup Action Plan: Former DuPont Works Site, DuPont, WA.

Hart Crowser, Inc. 1986. Phase I Site Survey and Review Weyerhaeuser/DuPont Property, DuPont, Washington. September 1986.

Hart Crowser, Inc. 1987. Site Characterization Report, Phase II Sampling and Analysis, Former DuPont Works Site, DuPont, Washington. August 10, 1987.

Hart Crowser, Inc.1994a. Draft Remedial Investigation (Volumes 1 and 2). Former DuPont Works Site, DuPont, Washington. December 22, 1994.

Hart Crowser, Inc.1994b. Draft Risk Assessment. Former DuPont Works Site, DuPont, Washington. December 16, 1994.

Hart Crowser, Inc.1994c. Draft Feasibility Study. Former DuPont Works Site, DuPont, Washington. December 23, 1994.

HRA (Historical Research Associates). 2002. Cultural Resources Protection Plan for the former DuPont Works Site, DuPont, WA.

PIONEER (PIONEER Technologies Corporation). 2002. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, DuPont, Washington.

PIONEER and WSNW (PIONEER Technologies Corporation and West Shore Corporation NW). 2002. Interim Source Removal Actions: Air Monitoring Report at the Former DuPont Works Site, January 17, 2002.

PIONEER and WSNW (PIONEER Technologies Corporation and West Shore Corporation NW). 2003a. Personal Air Monitoring Report- 2002. Former DuPont Works Site. March 2003.

PIONEER and WSNW (PIONEER Technologies Corporation and West Shore Corporation NW). 2003b. Air Monitoring Report - PM_{10} - 2002. Former DuPont Works Site. March 2003.

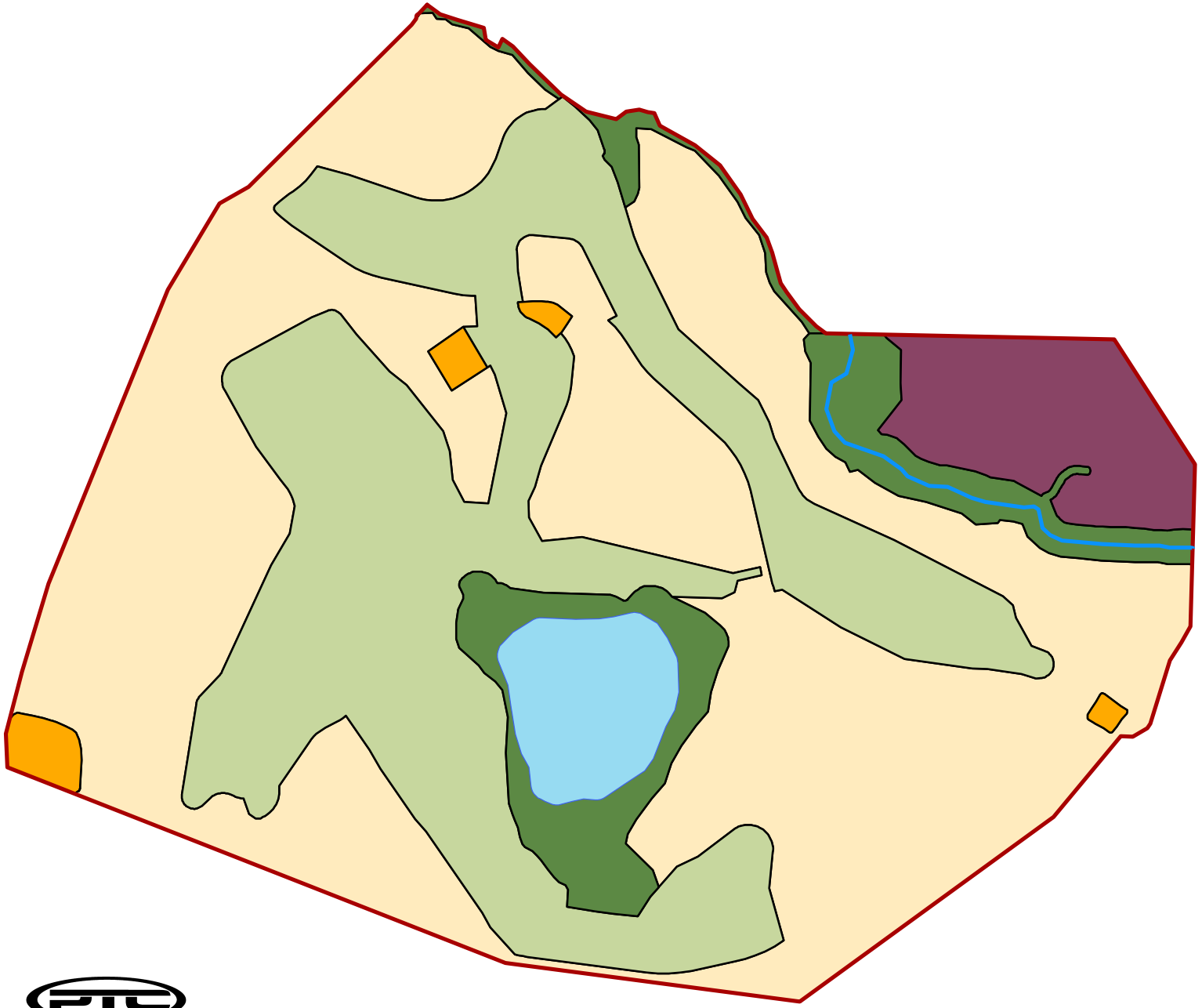
PIONEER and WSNW (PIONEER Technologies Corporation and West Shore Corporation NW). 2004a. Personal Air Monitoring Report- 2003. Former DuPont Works Site. January 2004.

PIONEER and WSNW (PIONEER Technologies Corporation and West Shore Corporation NW). 2004b. Air Monitoring Report - PM_{10} - 2003. Former DuPont Works Site. January 2004.

URS Inc. and PIONEER (URS Inc. and PIONEER Technologies Corporation). 2003. Remedial Investigation, Former DuPont Works Site, DuPont, Washington.

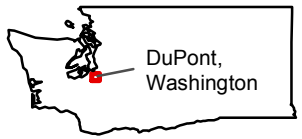
WSNW and PIONEER (West Shore Corporation NW and PIONEER Technologies Corporation). 2003. Feasibility Study for the Former DuPont Works Site, DuPont, Washington.

Figures



Legend

- Sequalitchew Creek
- Site Boundary
- Commercial Land Use Area
- Golf Course Land Use Area
- Industrial Land Use Area
- Historical Land Use Area
- Open Space Land Use Area
- Old Fort Lake



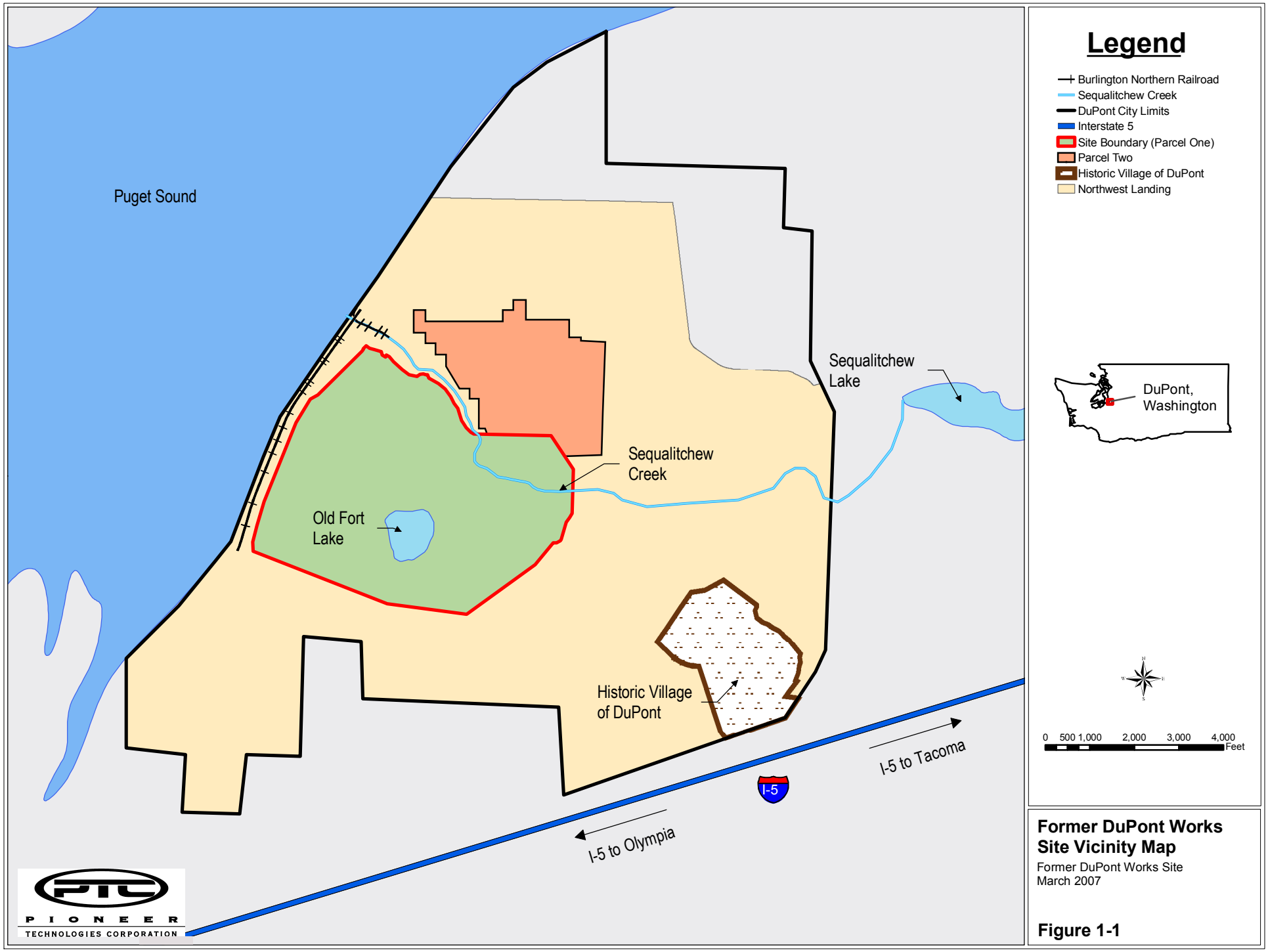
0 130 260 520 780 1,040 Feet

PIONEER TECHNOLOGIES CORPORATION

Future Land Use Areas

Former DuPont Works Site
March 2007

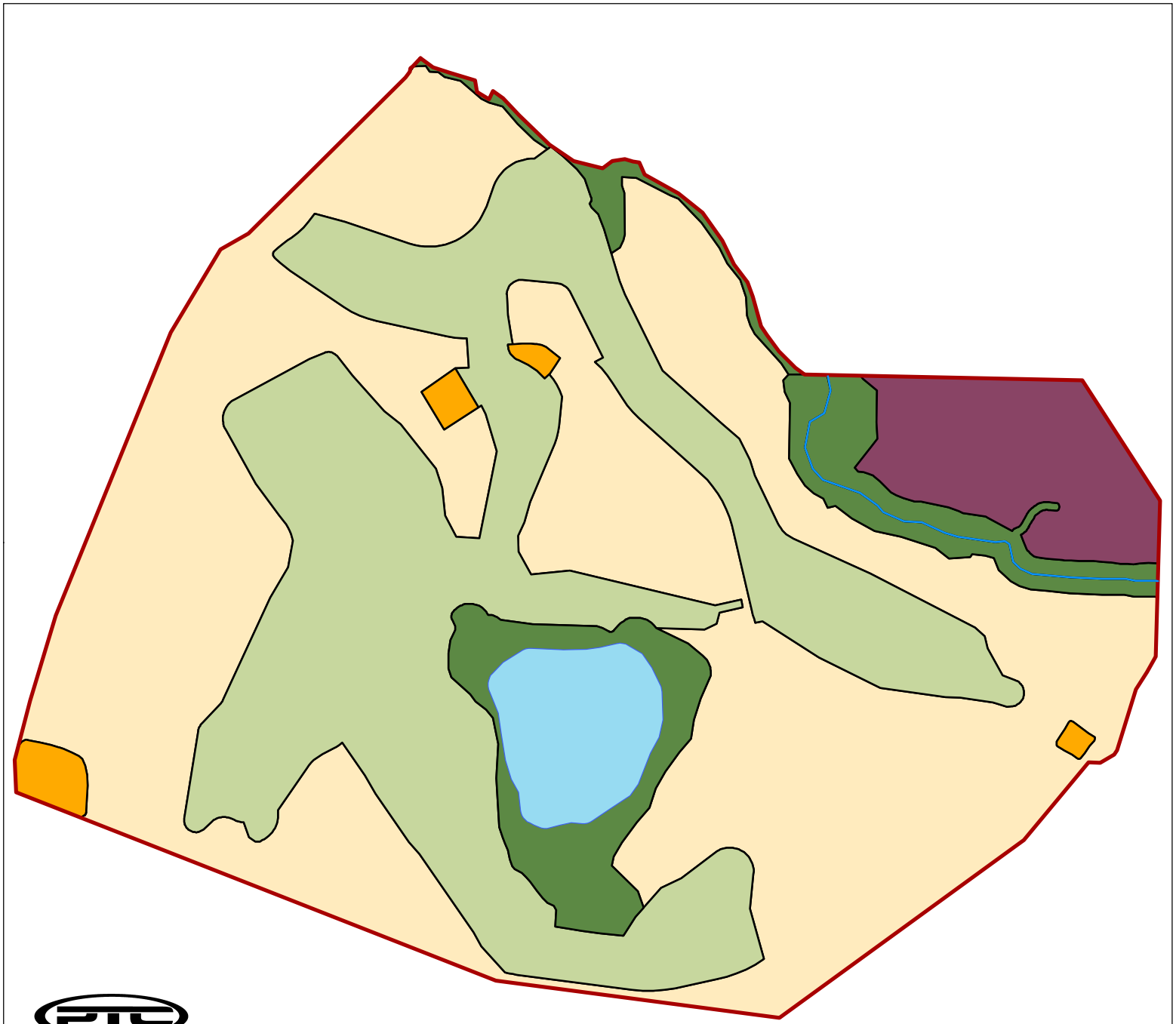
Figure ES-1



Former DuPont Works Site Vicinity Map

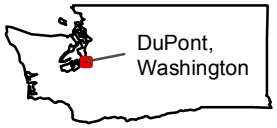
Former DuPont Works Site
March 2007

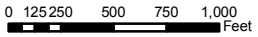
Figure 1-1



Legend

- Sequalitchew Creek
- Site Boundary
- Commercial Land Use Area
- Golf Course Land Use Area
- Industrial Land Use Area
- Historical Land Use Area
- Open Space Land Use Area
- Old Fort Lake



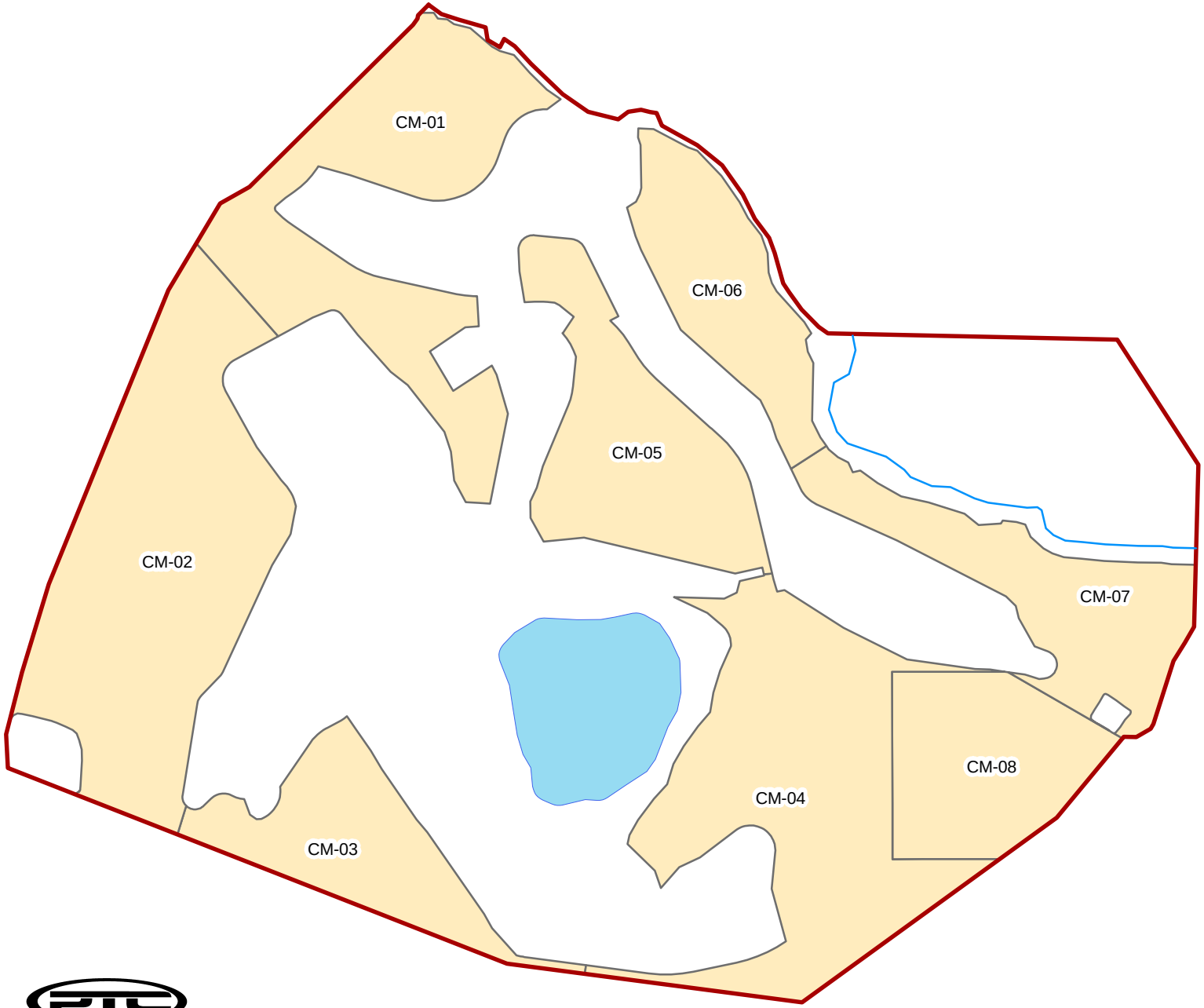


PIONEER
TECHNOLOGIES CORPORATION

Future
Land-Use Areas

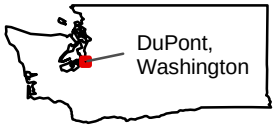
Former DuPont Works Site
March 2007

Figure 1-2



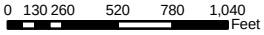
Legend

- Sequalitchew Creek
- Site Boundary
- Commercial Area Remediation Units
- Old Fort Lake



Notes

CM = Commercial

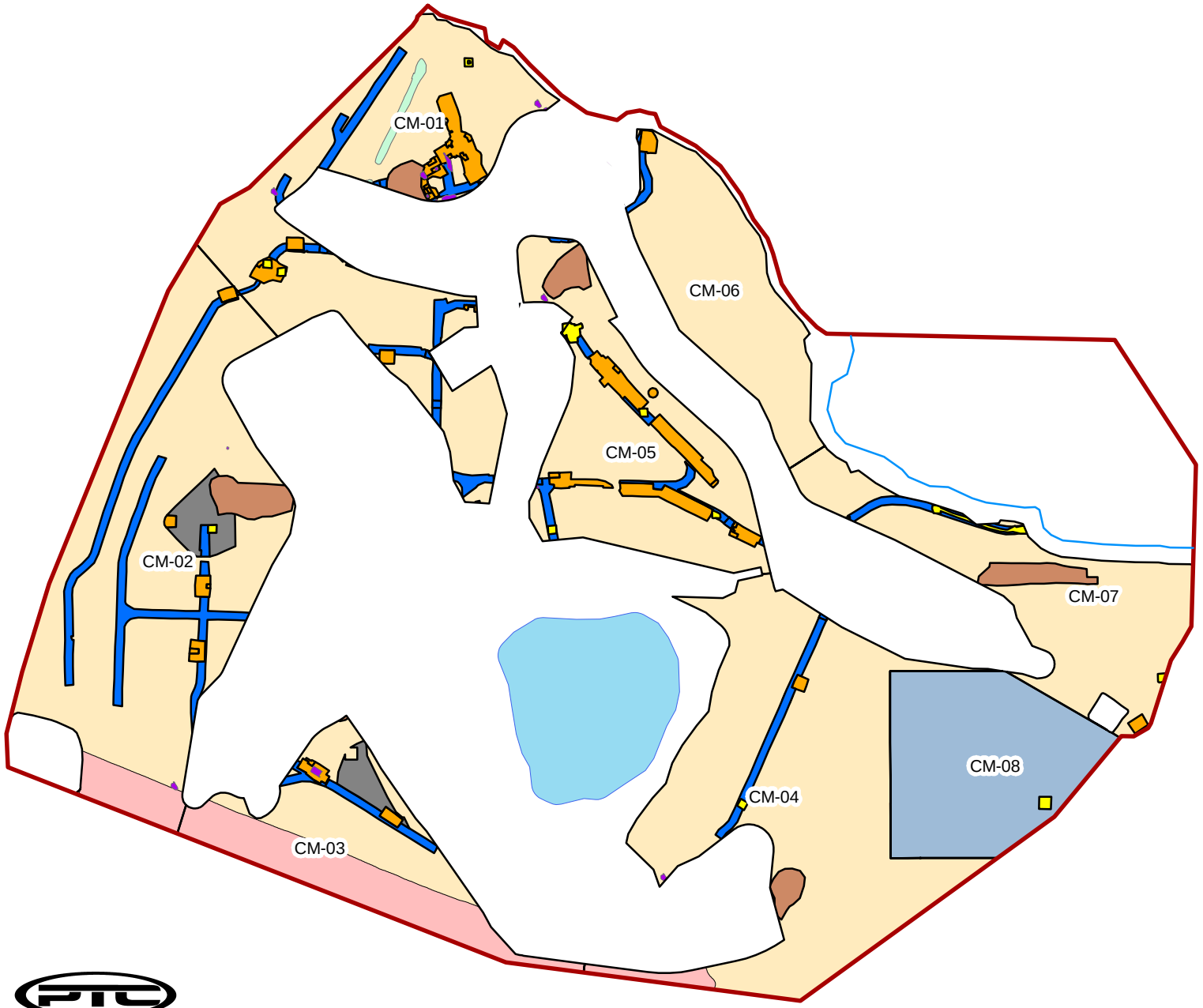


PIONEER TECHNOLOGIES CORPORATION

Commercial Area Remediation Units

Former DuPont Works Site
March 2007

Figure 2-1

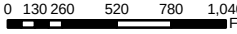


Legend

- Sequalitchew Creek
- Site Boundary
- Foundation Excavations
- Narrow Gauge Railroad Excavations
- Hotspot Areas
- Sand Laydown Area Excavations
- Soil Laydown Area Excavations
- No Further Action
- Bunker-C Pipeline and Above-Ground Storage Tank Excavation
- Perimeter Soil Excavation
- On-Site Stockpile Excavations
- Commercial Area Remediation Units
- Old Fort Lake

Notes

CM = Commercial

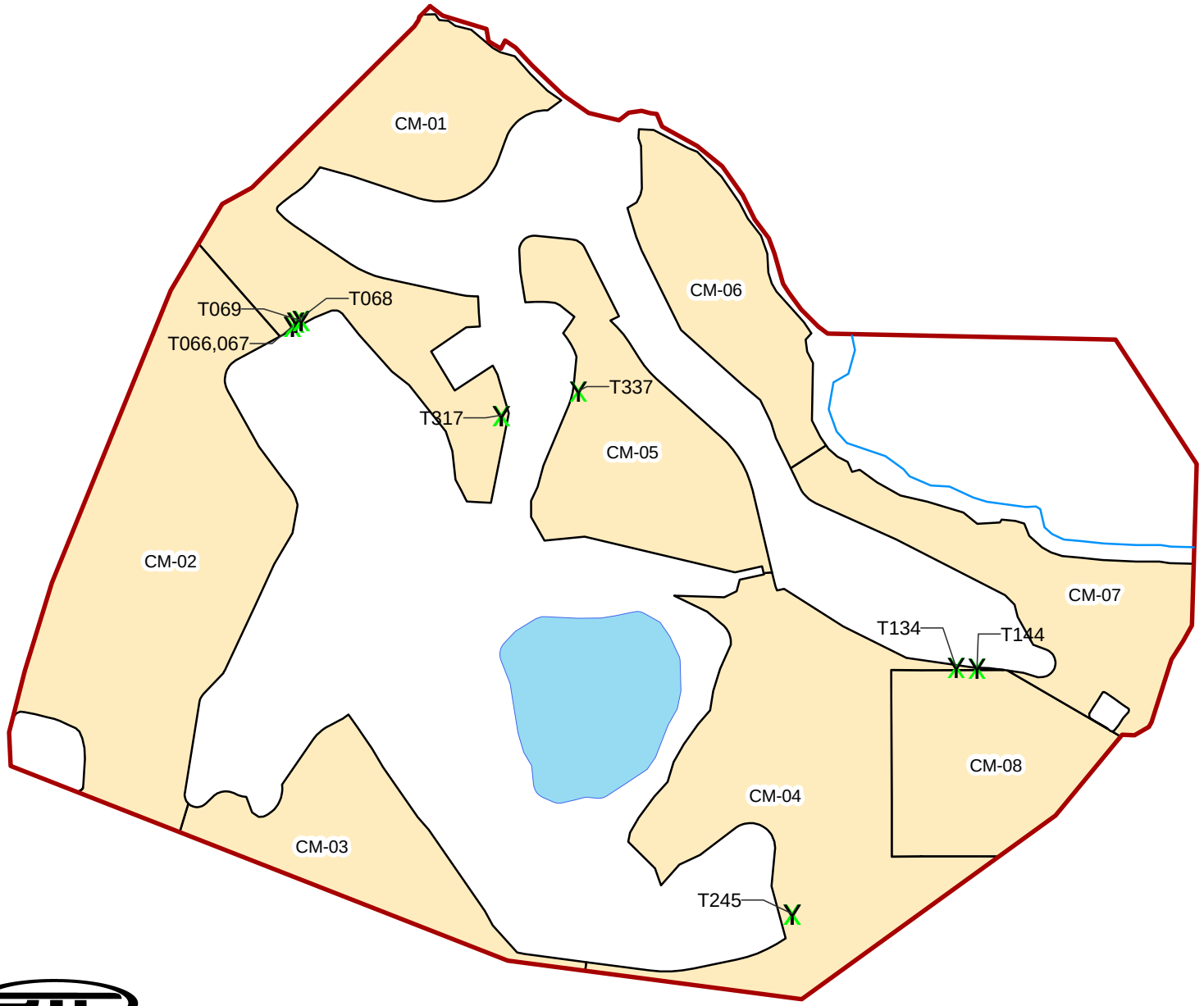


PIONEER TECHNOLOGIES CORPORATION

Location of Interim Remedial Actions in Commercial Area Remediation Units

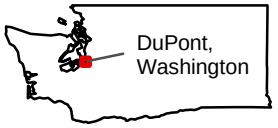
Former DuPont Works Site
March 2007

Figure 2-2



Legend

- Tree Locations in Commercial Area Remediation Units
- Sequalitchew Creek
- Site Boundary
- Commercial Area Remediation Units
- Old Fort Lake



Notes

CM = Commercial

The number associated with each tree represents the tree and sample number.

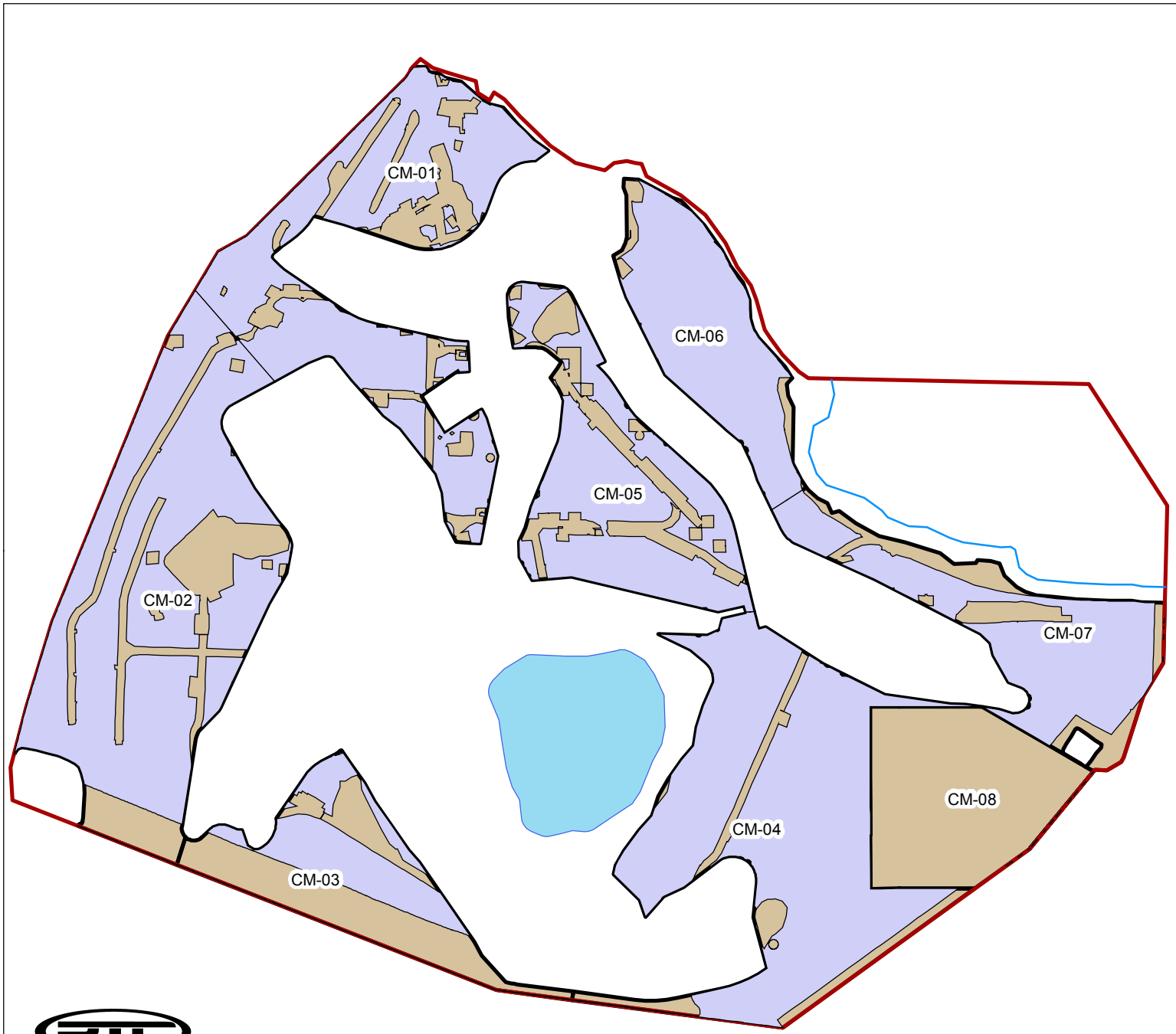
0 125250 500 750 1,000 Feet

Location of Tree Remediation in Commercial Area Remediation Units

Former DuPont Works Site
March 2007

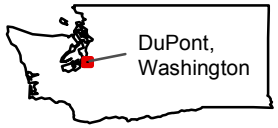
Figure 2-3

PIONEER TECHNOLOGIES CORPORATION



Legend

- Sequalitchew Creek
- Site Boundary
- Commercial Area Remediation Units
- IRA, MSU or No Further Action
- Large-Scale Excavation
- Old Fort Lake



Notes

CM = Commercial
IRA = Interim Remedial Actions
MSU = Miscellaneous Small Units

0 130 260 520 780 1,040 Feet

PIONEER TECHNOLOGIES CORPORATION

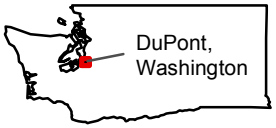
Large-Scale Excavation Within Commercial Area Remediation Units

Former DuPont Works Site
March 2007

Figure 2-4

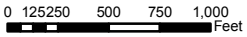
Legend

- Sequalitchew Creek
- Site Boundary
- Golf Course Area Remediation Units
- Golf Course Placement Areas
- Old Fort Lake



Notes

GC = Golf Course
PA = Placement Area



PIONEER TECHNOLOGIES CORPORATION

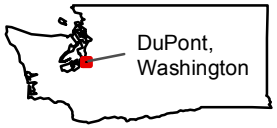
Golf Course Area Remediation Units

Former DuPont Works Site
March 2007

Figure 3-1

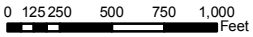
Legend

- Sequalitchew Creek
- Site Boundary
- Bunker-C Pipeline and Above-Ground Storage Tank Excavation
- On-Site Stockpile Excavations
- Stormwater Pipeline Excavation
- Sand Laydown Area Excavations
- Hotspot Areas
- Narrow Gauge Railroad Excavations
- Foundation Excavations
- Golf Course Area Remediation Units
- Golf Course Placement Areas
- Old Fort Lake



Notes

GC = Golf Course

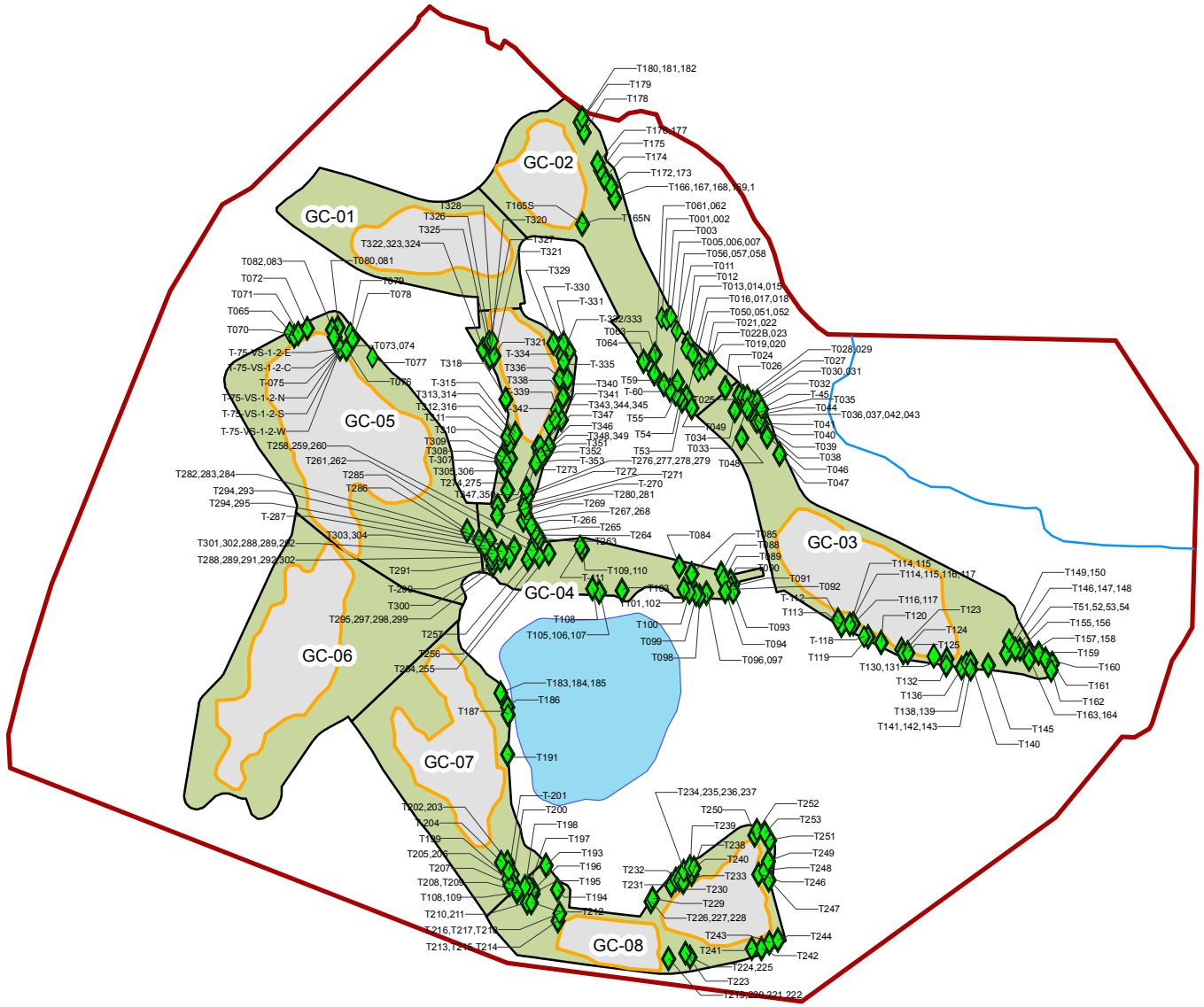


Locations of Interim Remedial Actions in Golf Course Area Remediation Units

Former DuPont Works Site
March 2007

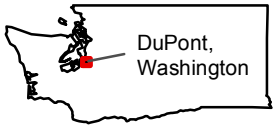
Figure 3-2

PIONEER TECHNOLOGIES CORPORATION



Legend

- Tree Locations in Golf Course Area Remediation Units
- Sequalitchew Creek
- Site Boundary
- Golf Course Area Remediation Units
- Golf Course Placement Areas
- Old Fort Lake



Notes

GC = Golf Course

The number associated with each tree represents the tree and sample number.

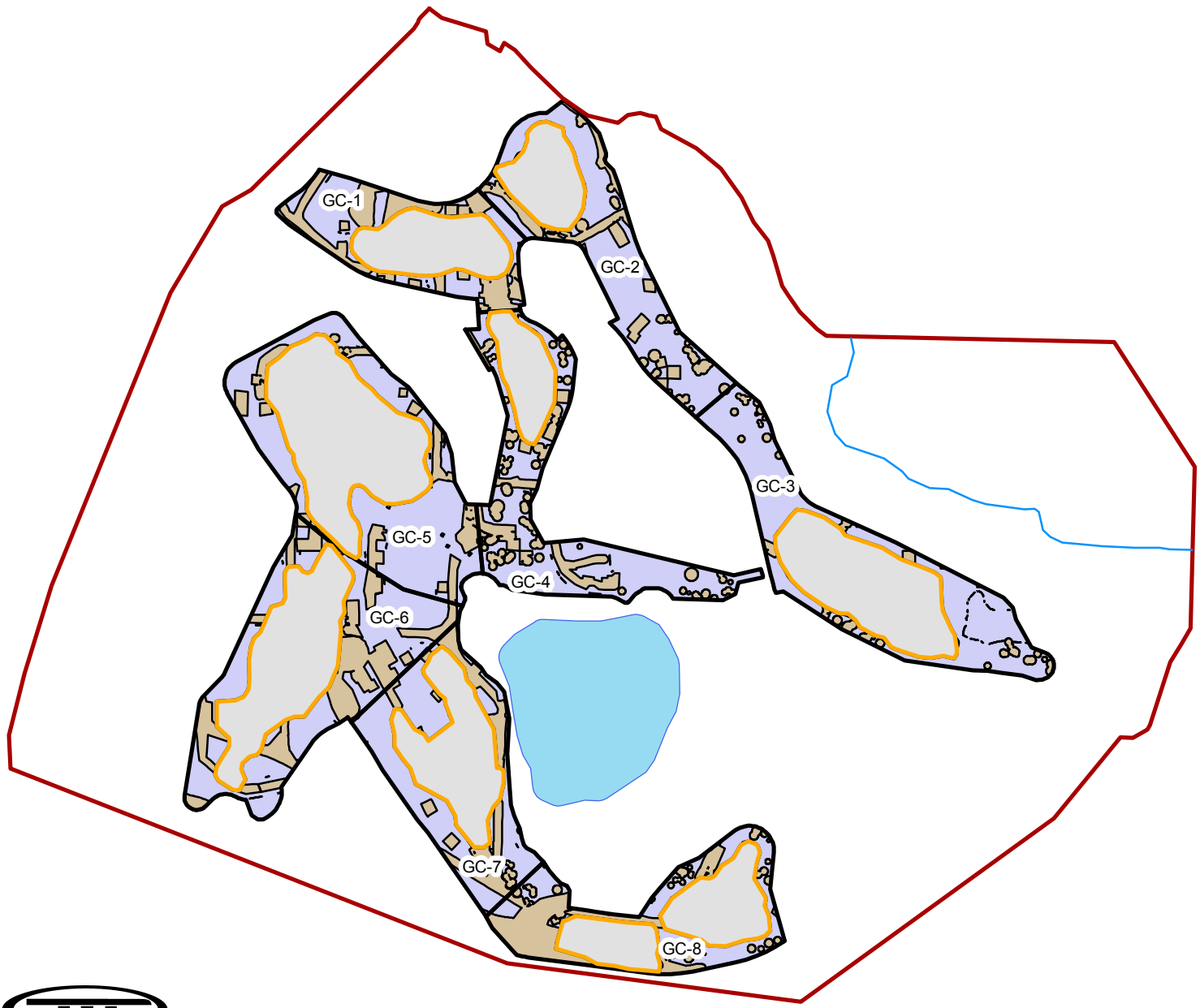
0 125250 500 750 1,000 Feet

Locations of Tree Remediation in Golf Course Area Remediation Units

Former DuPont Works Site
March 2007

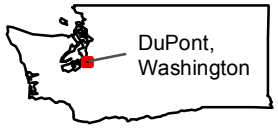
Figure 3-3

PIONEER TECHNOLOGIES CORPORATION



Legend

- Sequalitchew Creek
- Site Boundary
- Golf Course Area Remediation Units
- IRA, MSU or Areas for Additional Sampling
- Large Scale Excavation
- Golf Course Placement Areas
- Old Fort Lake



Notes

GC = Golf Course
IRA = Interim Remedial Actions
MSU = Miscellaneous Small Units

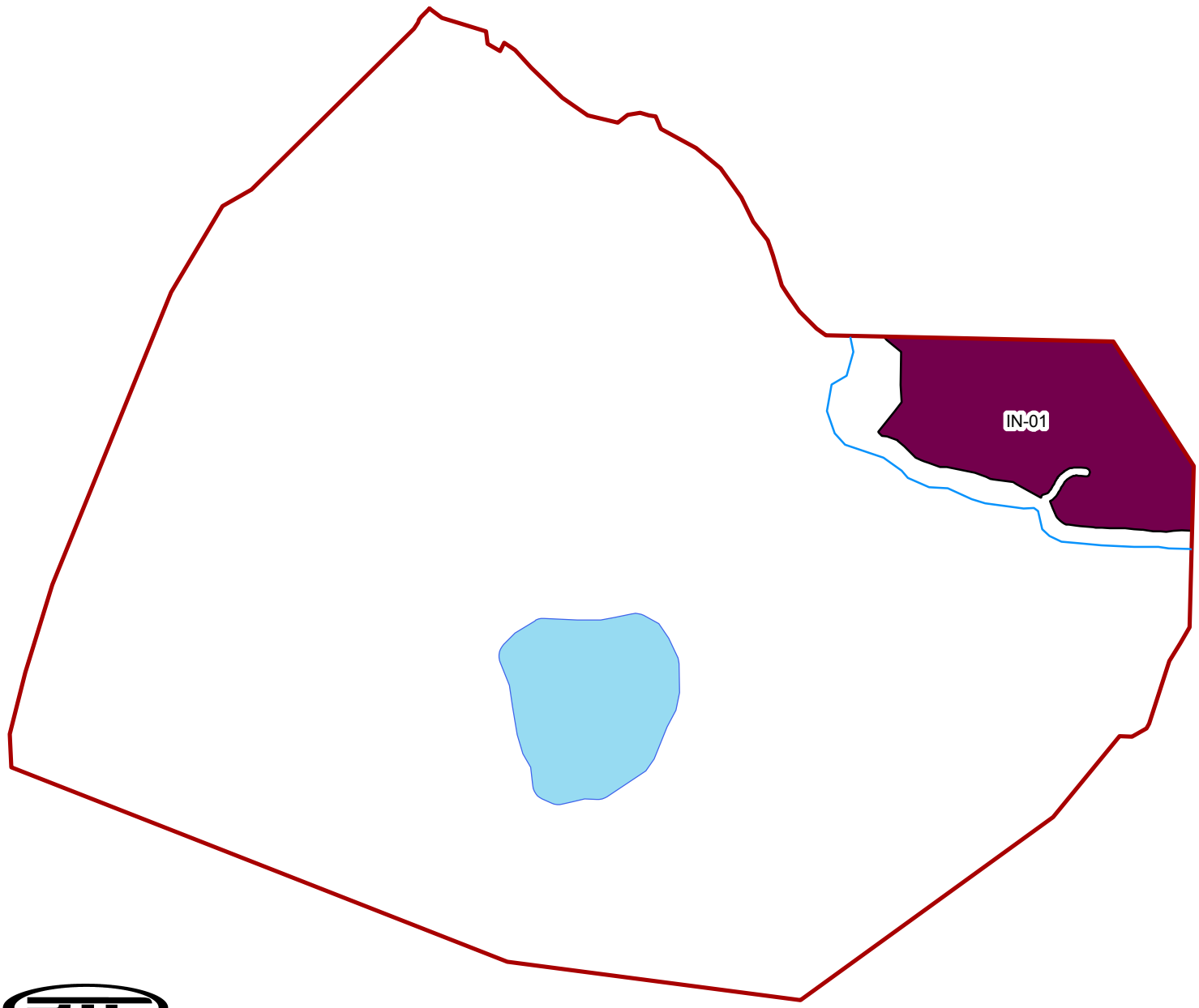
0 137.5 275 550 825 1,100 Feet

Large-Scale Excavation Within Golf Course Area Remediation Units

Former DuPont Works Site
March 2007

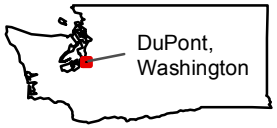
Figure 3-4

PIONEER TECHNOLOGIES CORPORATION



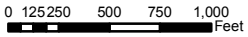
Legend

- Sequalitchew Creek
- Site Boundary
- Industrial Area Remediation Unit
- Old Fort Lake



Notes

IN = Industrial

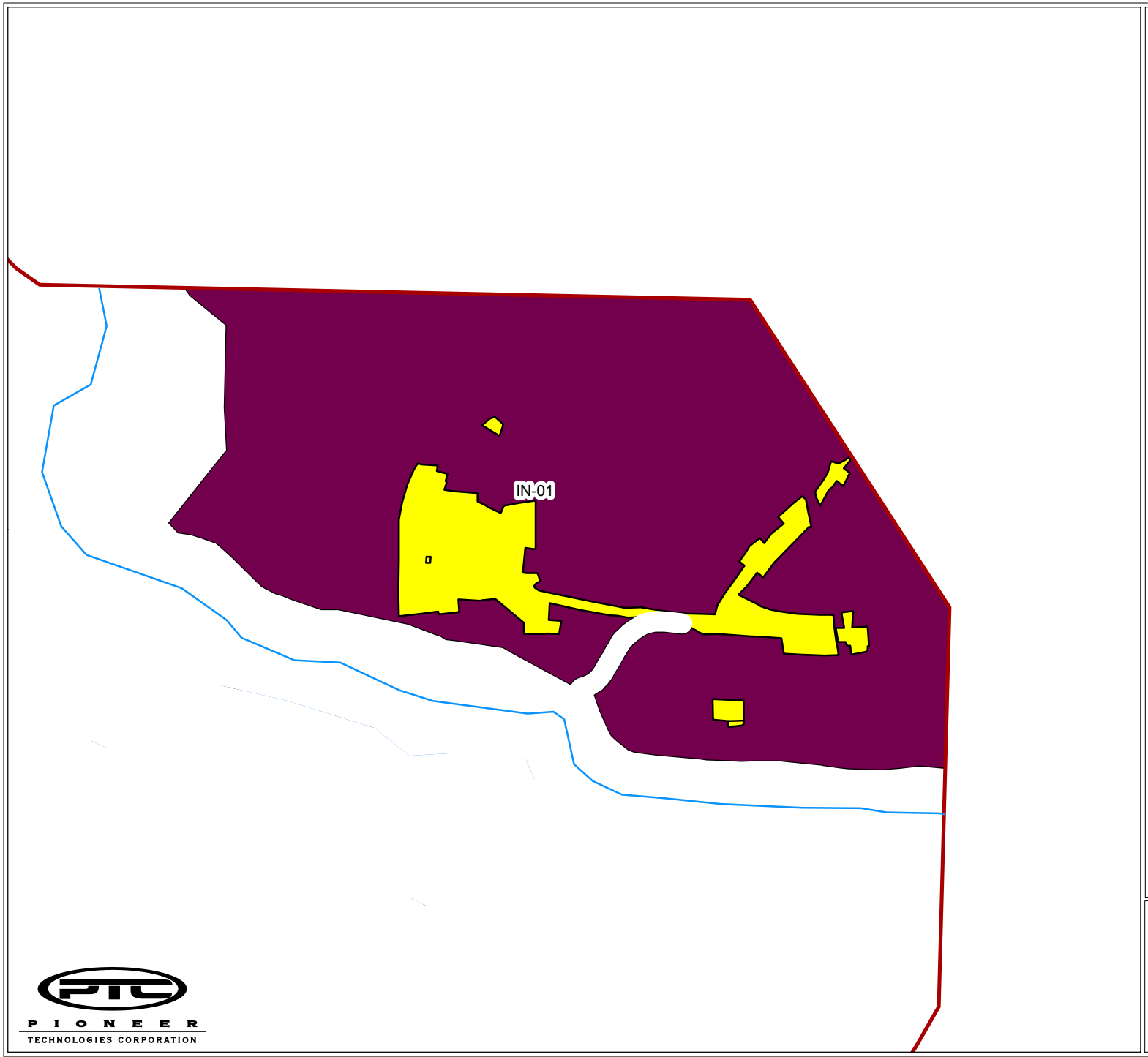


Industrial Area Remediation Unit

Former DuPont Works Site
March 2007

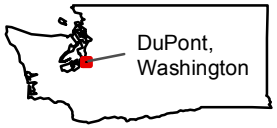
Figure 4-1

PIONEER TECHNOLOGIES CORPORATION



Legend

- Sequalitchew Creek
- Site Boundary
- Industrial Area Remediation Unit
- Hotspot Excavations



IN = Industrial

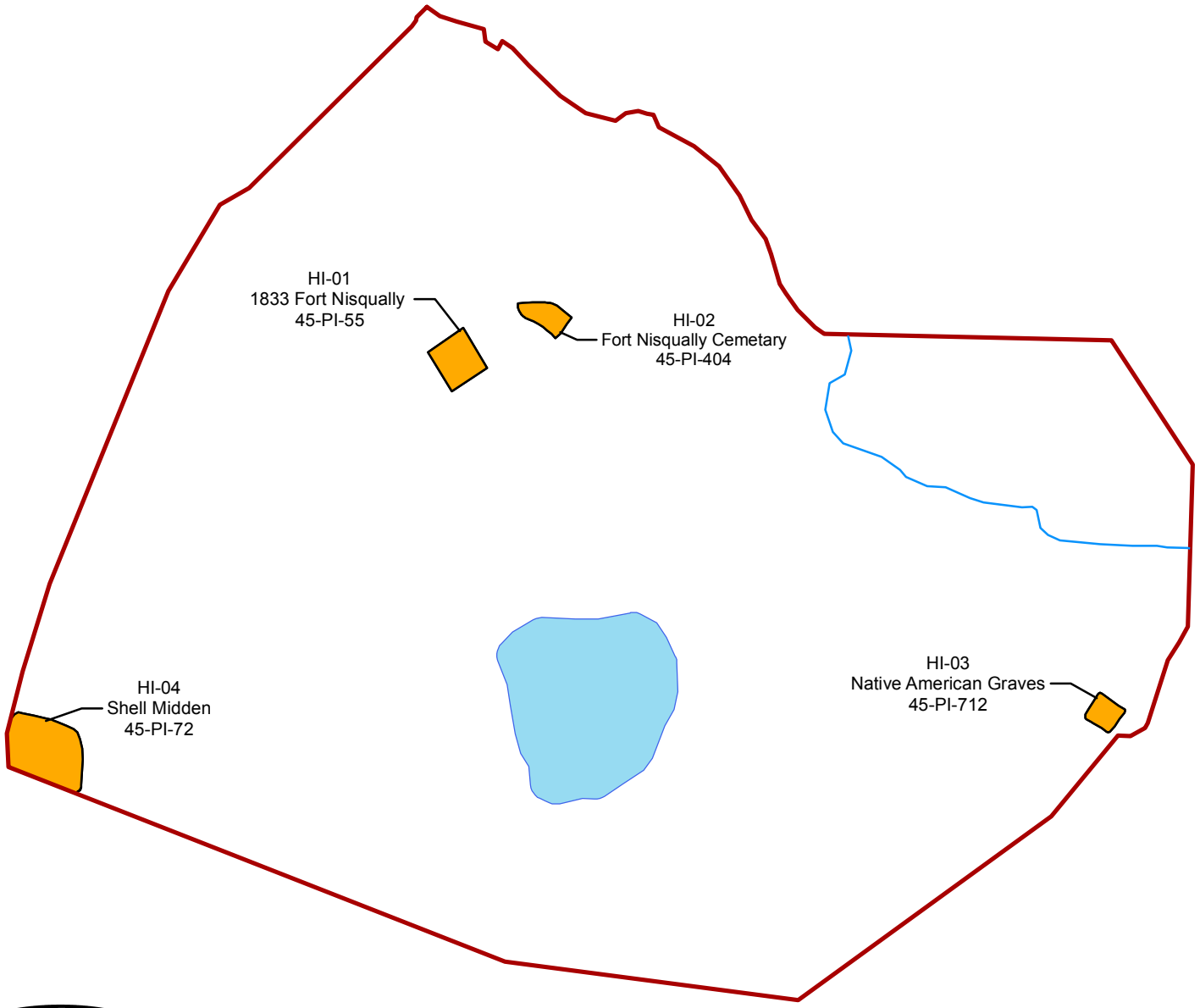
0 62.5 125 250 375 500 Feet

Locations of Interim Remedial Actions in the Industrial Area Remediation Unit

Former DuPont Works Site
March 2007

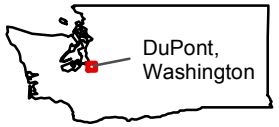
Figure 4-2

PIONEER
TECHNOLOGIES CORPORATION



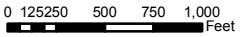
Legend

- Sequalitchew Creek
- Site Boundary
- Historical Area Remediation Units
- Old Fort Lake



Notes

HI = Historical

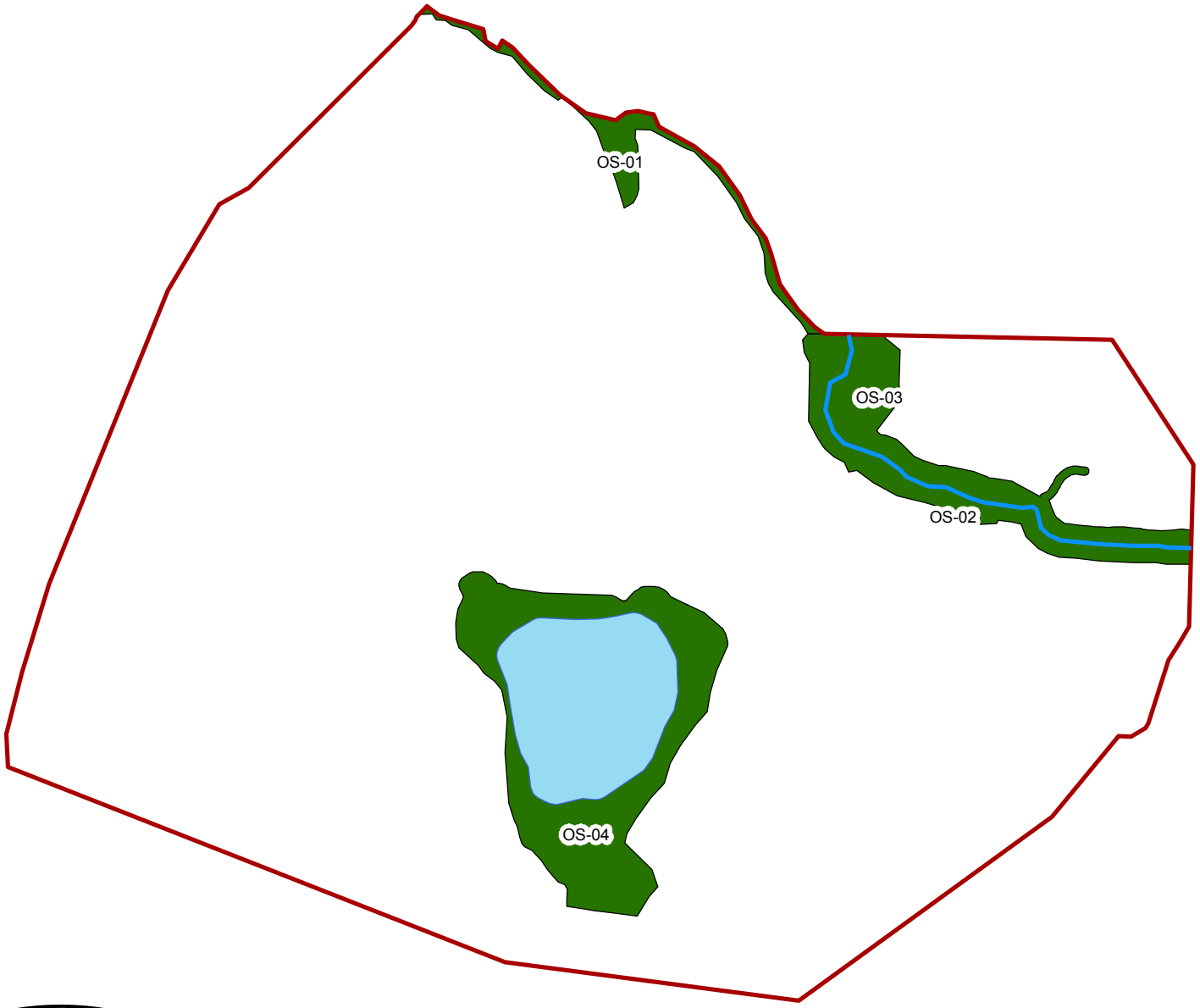


Historical Area Remediation Units

Former DuPont Works Site
March 2007

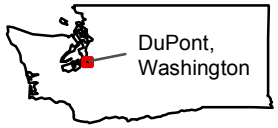
Figure 5-1

PIONEER TECHNOLOGIES CORPORATION



Legend

- Sequalitchew Creek
- Site Boundary
- Open Space Area Remediation Units
- Old Fort Lake



Notes

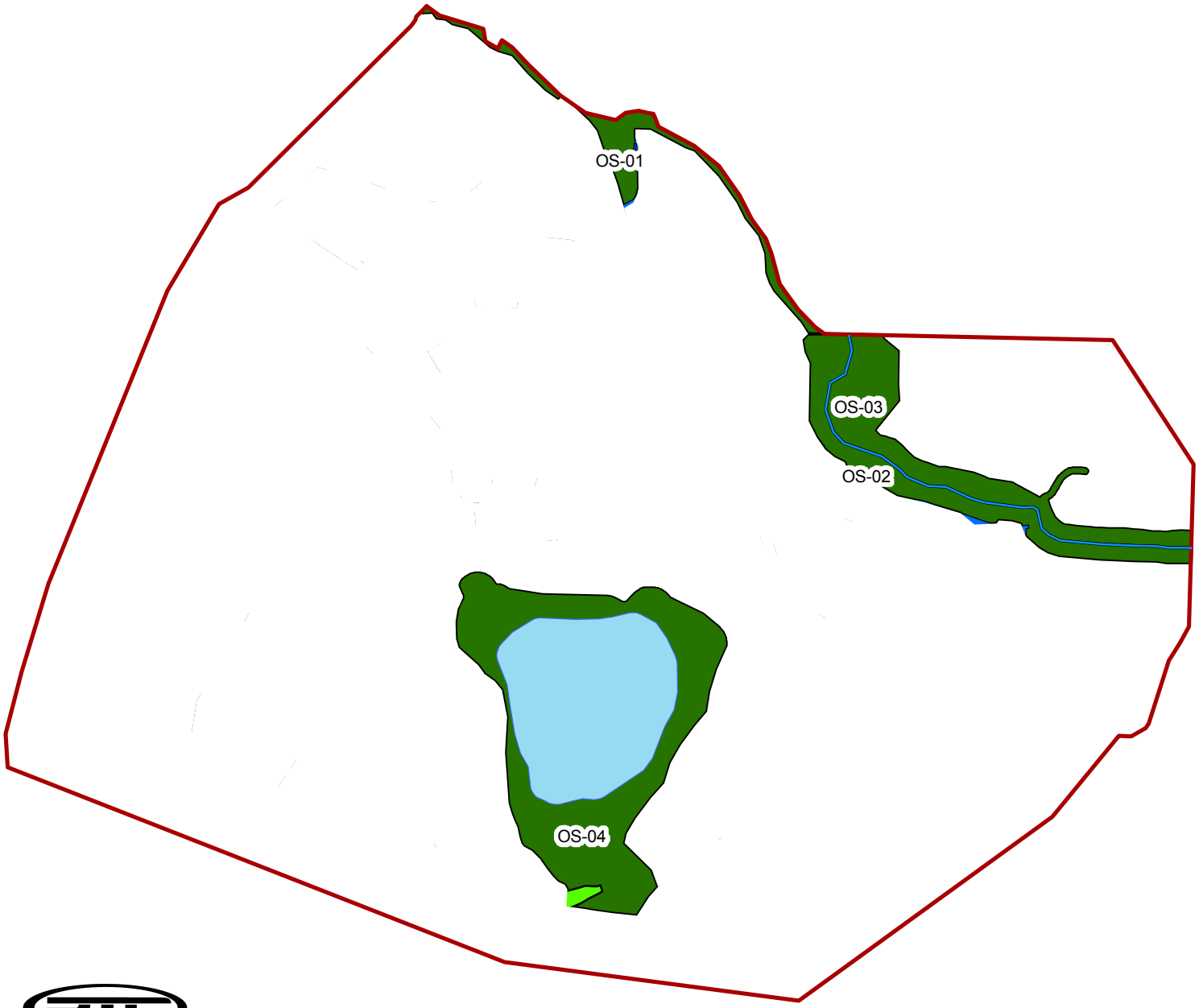
OS = Open Space

0 130260 520 780 1,040
Feet

PIONEER
TECHNOLOGIES CORPORATION

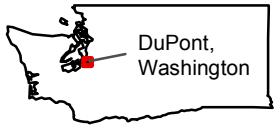
Open Space
Area Remediation Units
Former DuPont Works Site
March 2007

Figure 6-1



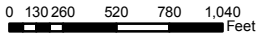
Legend

- Sequalitchew Creek
- Site Boundary
- Narrow Gauge Railroad Excavations
- Stormwater Pipeline Excavation
- Open Space Area Remediation Units
- Old Fort Lake



Notes

OS = Open Space



Locations of Interim Remedial Actions in Open Space Area Remediation Units

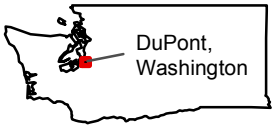
Former DuPont Works Site
March 2007

Figure 6-2

PIONEER
TECHNOLOGIES CORPORATION

Legend

- Tree Locations in Open Space Area Remediation Units
- Sequalitchew Creek
- Site Boundary
- Open Space Area Remediation Units
- Old Fort Lake



Notes

OS = Open Space

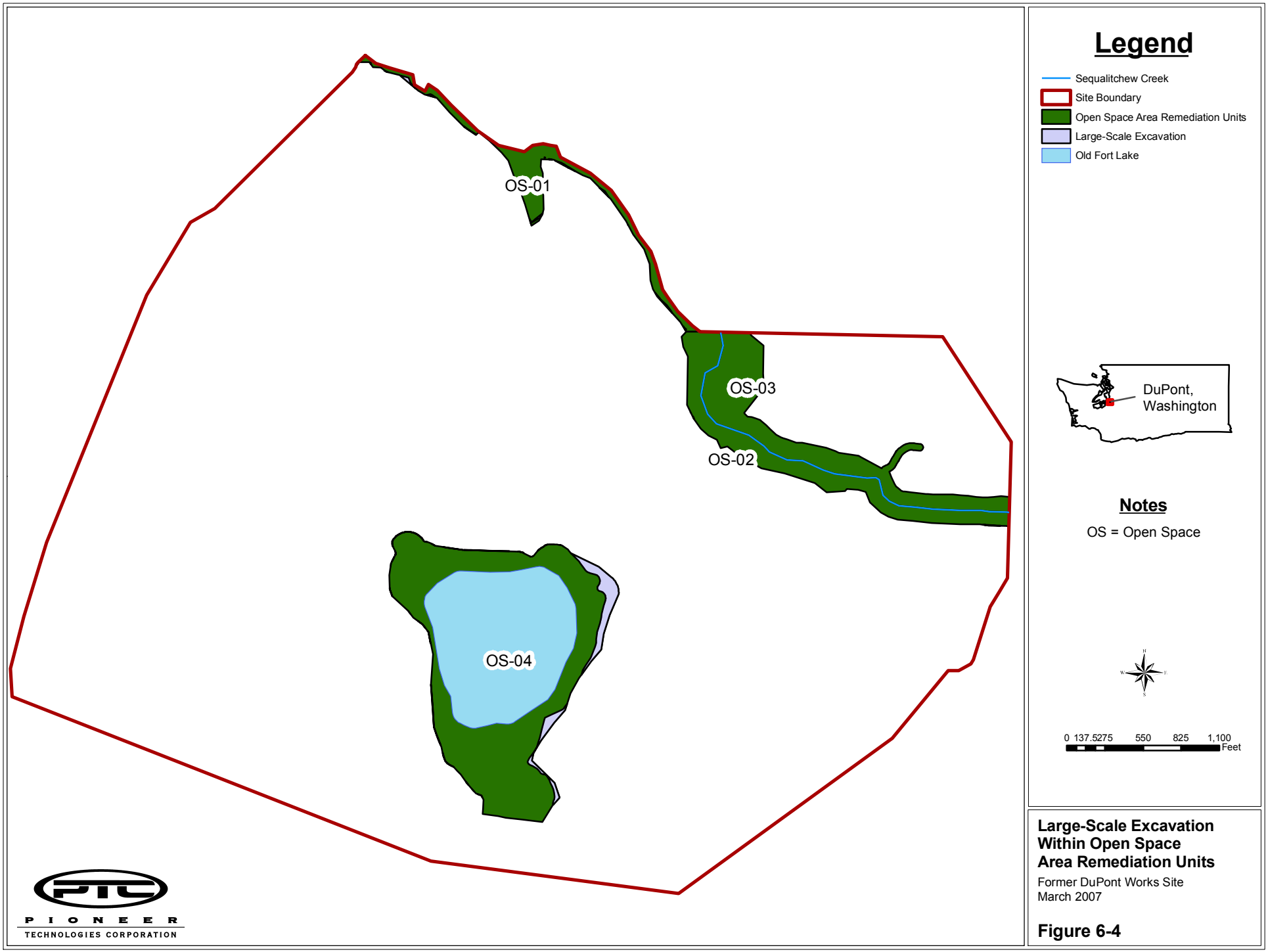
0 125250 500 750 1,000 Feet

PIONEER TECHNOLOGIES CORPORATION

Locations of Tree Remediation in Open Space Area Remediation Units

Former DuPont Works Site
March 2007

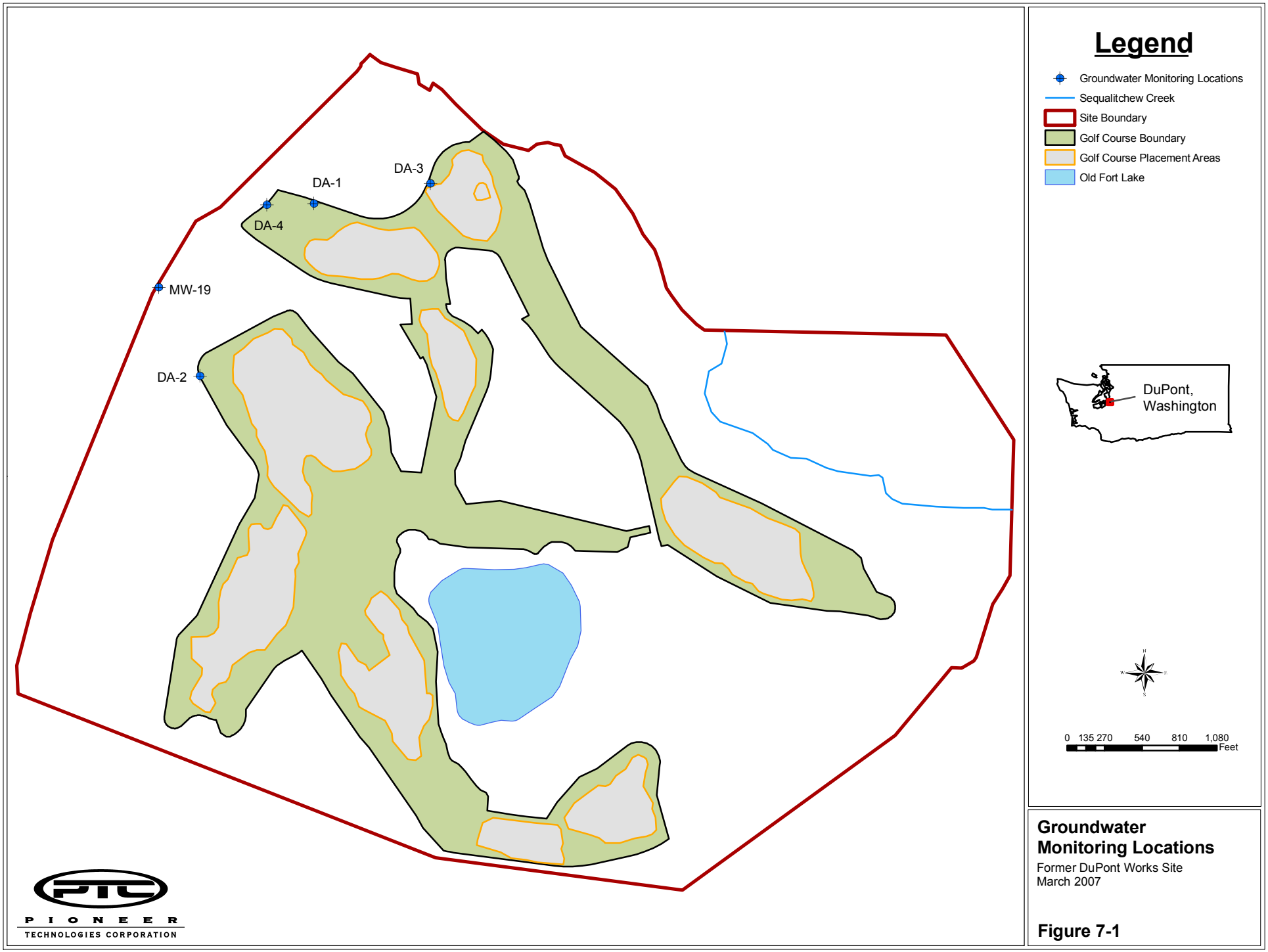
Figure 6-3



Large-Scale Excavation Within Open Space Area Remediation Units

Former DuPont Works Site
March 2007

Figure 6-4


DA-3
DA-1
DA-4
MW-19
DA-2
Legend
Groundwater Monitoring Locations
Sequalitchew Creek
Site Boundary
Golf Course Boundary
Golf Course Placement Areas
Old Fort Lake
DuPont, Washington
0 135 270 540 810 1,080
Feet
PIONEER
TECHNOLOGIES CORPORATION
Groundwater Monitoring Locations
Former DuPont Works Site
March 2007
Figure 7-1

APPENDIX A

ARCHEOLOGICAL MONITORING PLAN AND REPORT

TABLE OF CONTENTS

APPENDIX A.1 (AVAILABLE ON DVD)

HISTORICAL AND ARCHAEOLOGICAL DOCUMENT ARCHIVES – LIST OF DOCUMENTS

PDF	Description
Artifact Remains.pdf	Artifacts categorized and numbered
Hudson's Bay House 45-PI-401.pdf	National register of historic places- Hudson's Bay House
Nisqually Indian Burial Site 45-PI-404.pdf	Washington archaeological site inventory - Nisqually Indian Burial Site
Hudson's Bay Employees Houses 45-PI-405.pdf	National Register of Historic Places " 45-PI-405
1843 Fort Burial Site.pdf	Washington archaeological site inventory form " 1843 Fort Nisqually native American burial site"
Intel RR Dump 1 - 45-PI-440.pdf	Washington archaeological site inventory form 45-PI-440 March 13 1996
Intel Historic Road Remnant 45-PI-441.pdf	Washington archaeological site inventory form 45-PI-441 March 13 1996
1843 Fort - Draft Nomination.pdf	Fax- 1843 Draft Nomination
1843 Fort Nisqually 45-PI-56.pdf	National register of historic places "1843 Fort Nisqually"
1841 Independence Day.pdf	"Glimpses in pioneer life" and " In the beginning"
Development Within Village 2 and 4 1997-2000.pdf	Development of areas within village 2 and village 4, 1997 through 2000
Arch and Hist Investigations Divisions 6-7.pdf	Archaeological and historical investigations Divisions six and seven
Arch. Surveys Parcels AA-X.pdf	Survey's of Parcels AA through X
Arch. Surveys Divisions 1-8.pdf	Archaeological surveys of divisions 1-8
Bead Report.pdf	Study of trade beads
Glass Trade Beads.pdf	Beads from Fort Nisqually
Beads and Floral Remains.pdf	Data resulting from analyses of beads and floral remains December 1990
Bibliographies NW Landing.pdf	Various Bibliographies
Bricks and Brickmaking.pdf	"Bricks and brick making"
Brickyard Dump.pdf	Brickyard dump artifact catalog sheet
Burial Information New Sequalitchew Cemetery.pdf	The establishment of a cemetery for reburial of native American remains
Burning Ground Dump - 45-PI-64.pdf	National register of historic places "Burning ground dump"
Chloe Clarke School.pdf	Archaeological monitoring of the Chloe Clarke elementary school April 2001
City of DuPont - 45-PI-69.pdf	From Onat et al 1977 report
Crystallizer - 45-PI-75.pdf	National register of historical places "Crystallizer"
Cultural resources volume 1.pdf	Cultural resource development plan, Western Heritage October 1989
Cultural resources volume 2.pdf	Cultural resource development plan, Western Heritage March 15th - July 30th 1977

APPENDIX A.1 (AVAILABLE ON DVD)

HISTORICAL AND ARCHAEOLOGICAL DOCUMENT ARCHIVES – LIST OF DOCUMENTS

PDF	Description
Cultural resources volume 3.pdf	Cultural resource development plan, Western Heritage August 20th 1996
Cultural resources volume 4.pdf	Cultural resource development plan, Western Heritage July 27th 1993
Data Recovery Study of 45-PI-401.pdf	A data recovery study of Hudson's Bay dwellings February 1990
Data Recovery at Hudsons Bay Burials.pdf	A data recovery of Hudson's Bay burials December 1990
Division 3 Dump 45-PI-487.pdf	The status of cultural resources in the area designated village 2 Northwest landing DuPont Washington May 11th 1996
Division 6 and 7 Field Notes.pdf	Field notes From Division 6 and 7
Dump on Center Drive 45-PI-448.pdf	State of Washington Archaeological site inventory form "City of DuPont Garbage dump
Town of DuPont dump - 45-PI-65 .pdf	City of DuPont garbage dump
DuPont Families.pdf	Compilation editing and publication of the letters of Edward Huggins March 15, 1991
SW DuPont Site Testing Report.pdf	A report of archaeological testing at he DuPont southwest site
Edmond Marsh 45-PI-60.pdf	National register of historic places "Edmond Marsh"
DuPont Explosives Plant - 45-PI-70.pdf	From Onat etal 1977 report
Fauna -45-PI-405.pdf	Fauna summary sorted by unit code
Fort Nisqually Cemetery 45-PI-404.pdf	Nisqually Indian burial site October 31, 1988
HBC Fur Packing Shed.pdf	
Geo Recon - 45-PI-56.pdf	Tacoma metropolitan park board electromagnetic survey for cultural features, Fort Nisqually 1988 feature record
Green Journal #1 .pdf	The Journal of occurrences at Fort Nisqually Commencing May 30, 1833 Ending September 27, 1859
Green Journal #2.pdf	Continuation of Green Journal #1
Green Journal #3.pdf	Continuation of Green Journal #2
Highway Interchange.pdf	A Cultural resource survey of a highway interchange
Historic Preservation Act.pdf	Reflects October 1992 changes to the National Historic Preservation act
Historical Documents - Early Times in Pierce County.pdf	Early Times in Pierce County June 19, 1893
Hot Spot Removal Photos.pdf	Photos from the hot spot removal process
Hotspot 2000 Monitoring.pdf	Archaeological monitoring of the "Hot Spot" removal program
Hudson's Bay/PSAC Chest 45-PI-484.pdf	Pictures Of Various artifacts
I-5 Interchange.pdf	Information on WSDOT building the interchange for Interstate 5

APPENDIX A.1 (AVAILABLE ON DVD)

HISTORICAL AND ARCHAEOLOGICAL DOCUMENT ARCHIVES – LIST OF DOCUMENTS

PDF	Description
Indian house - 45-PI-73.pdf	National register of historic places "Indian house or Hall"
Inskip Observatory 45-PI-453.pdf	
Intel DuPont Campus Project.pdf	Intel DuPont campus project cultural resource assessment and monitoring
Journal of Occurrences at Fort Nisqually.pdf	The Journal of occurrences at Fort Nisqually Commencing May 30, 1833; Ending September 27, 1859
Journal Of Occurrences at Muck Station .pdf	Journal of Occurrences at "Muck Station" 1858 - 1859
Lars Carllson - Cultural Resource Survey.pdf	A cultural resource survey of the buildings/facilities of the E.I. DuPont De Nemours & company INC. explosives works
Lone Fir Grave 45-PI-451.pdf	State of Washington archaeological site inventory form "Lone fir grave site"
Lone Star Northwest.pdf	A Cultural resource survey of the proposed pioneer aggregates gravel extraction and barge-landing facility
Data Recovery Study of 45-PI-405.pdf	A data recovery study of the 45-PI-405
Mens Boarding House - 45-PI-57.pdf	National register of historic places " Men's boarding house"
Methodist Mission - 45-PI-66.pdf	National register of historic places " Methodist Mission"
Miscellaneous Archaeology Survey.pdf	Miscellaneous survey's
Monitoring DuPont.pdf	The proposed construction of Phase 1 of a local improvement district
Test Excavations Near the Mouth of Creek.pdf	Archaeological test excavations near the mouth of Sequalitchew creek
National Register Bulletins.pdf	National Register Bulletins
Newspaper Clippings.pdf	Various Newspaper Clippings
Nisqually Sequalitchew Historic District.pdf	Nisqually-Sequalitchew District Committee
Northwest Landing CRM Maps.pdf	Various Northwest landing Parcel maps
NWL Burial Information.pdf	information about Proposed cemetery at DuPont Washington
Old DuPont Warf.pdf	Pictures of the old DuPont Wharf
Old town dump - 45-PI-59.pdf	National register of historic places "Old town dump
Onat Archaeological Survey Report.pdf	Survey of archaeological and ethnographical resources at the DuPont site
Onats Camp - 45-PI-74.pdf	National register of historic places " Onats Camp"
Opening the Oregon Country.pdf	"Opening Oregon country"
Miscellaneous Explorations and Excavations.pdf	Missions , war games and railroad dumps 1989 Miscellaneous explorations and excavations
Orr farm - 45-PI-68.pdf	National register of historic places "Farm locality Orr Farm"

APPENDIX A.1 (AVAILABLE ON DVD)

HISTORICAL AND ARCHAEOLOGICAL DOCUMENT ARCHIVES – LIST OF DOCUMENTS

PDF	Description
Oxen Road - 45-PI-452.pdf	
Photos of Divisions 6-7.pdf	Photos of Divisions 6 and 7
Monitoring of 2001 Post Office Construction.pdf	Archaeological monitoring of construction at he new post office site March 2001
Preliminary Investigation of Hudsons Bay Company .pdf	A preliminary research investigation of the Hudson's Bay company/ Puget sound agricultural company sites
Railroad Dump #1 - 45-PI-61.pdf	National register of historic places " Railroad dump #1"
Railroad Dump #2 - 45-PI-62.pdf	National register of historic places " Railroad dump #2"
Railroad Dump #3 - 45-PI-63.pdf	National register of historic places " Railroad dump #3"
Sawmill - 45-PI-71.pdf	National register of historic places " Sawmill"
Sequalitchew Creek Gravesite - 45-PI-76.pdf	Archaeological test excavations near the mouth of Sequalitchew creek
Sequalitchew_Nisqually House - 45-PI-54.pdf	National register of historic places " Sequalitchew house"
South Shell Midden 45-PI-72.pdf	National register of historic places "5,700 year old Shell Midden
NE Shell Midden Site 45-PI-485.pdf	State of Washington archaeological site inventory form "Shell Midden"
Native American Skeletal Remains.pdf	An archaeological excavation of Native American remains at DuPont Washington October 1989
State and Federal CFRs, WACs, and RCWs.pdf	State and Federal CFRs, WACs, and RCWs
Tacoma and Steilacoom Railway.pdf	
Steilacoom Tribe Petition.pdf	Summary under the Criteria and evidence for proposed finding Steilacoom Tribe of Indians
Stratton and Lindeman - Survey of Historical Resources.pdf	Survey of Historical resources at the DuPont site
Update 63-66 .pdf	An update of the archaeological status of sites 45-PI-63 September 2001
Village.pdf	Archaeological monitoring of the development of areas within Village 2 and village 4
Wilkes Observatory - 45-PI-67 .pdf	National register of historic places " Wilkes Observatory"
Williamson Homestead 45-PI-454.pdf	
Yehle Farmstead 45-PI-449.pdf	

APPENDIX A.2 (AVAILABLE ON DVD)

FORMER DUPONT WORKS SITE ARCHAEOLOGICAL CORRESPONDENCE

CORRESPONDENCE.PDF

Description of Contents of Correspondence.pdf
▪ Transmittal to Stephenie Kramer, WA OAHP, re: 2003-2004 Monitoring Report
▪ Transmittal to Roxanne Woodruff, Descendants of Fort Nisqually Employees Association, re: Report on Treatment of Human Remains at 45PI712
▪ Transmittal to Stephenie Kramer, WA OAHP, re: archaeological testing reports 45PI712, 45PI576, 45PI713, 45PI55
▪ Transmittal to John Simmons, Nisqually Indian Tribe, and Dr. Allyson Brooks, WA OAHP, re: Report on Archaeological Testing at 45PI713
▪ Notification to Dr. Allyson Brooks, WA OAHP, and The Honorable Larry Sanchez, Nisqually Indian Tribe, re: Archaeological Testing planned for April 5-8, 2005, at HRA-26
▪ Notification to Gail Thompson, HRA, re: approval of blanket permit for burial, Archaeological Excavation Permit No. 04-03, with copies of notification letters to Roxanne Woodruff (Descendants of Fort Nisqually Employees Association), Larry Sanchez (Nisqually Indian Tribe), Dr. John Howard (Pierce County Chief Medical Examiner), Steve Young (Mayor, City of DuPont), Linda Naomi Goetz (President, AWA), and Bob Martin (Project Manager, DuPont Works Cleanup Project)
▪ Copy to Gail Thompson of letter from Descendants of Fort Nisqually Employees Association to Allyson Brooks, WA OAHP, re: HRA Application -- DuPont
▪ Notification to Allyson Brooks, WA OAHP, and Larry Sanchez, Nisqually Indian Tribe, re: archaeological testing planned for February 15-16, 2004, at 45PI713
▪ Copies to Gail Thompson of letters to Dr. John Howard (Pierce County Chief Medical Examiner), Judy Bridges (Descendants of the Employees of Fort Nisqually Association), Larry Sanchez (Nisqually Indian Tribe), Steve Young (Mayor, City of DuPont), Linda Naomi Goetz (AWA), and Bob Martin (Project Manager, DuPont Works Cleanup Project), re: HRA application for burial removal excavations within Parcel 1, former DuPont Works Site
▪ Copies of notification letters dated January 23, 2004, to Larry Sanchez (Nisqually Indian Tribe), Linda Naomi Goetz (AWA), Steve Young (Mayor, City of DuPont), and Bob Martin (Project Manager, DuPont Works Cleanup Project, re: approval of blanket permit for burial, Archaeological Excavation Permit No. 03-22
▪ Notification to Gail Thompson, HRA, re: approval of blanket permit for burial, Archaeological Excavation Permit No. 03-22
▪ Copies to Gail Thompson of letters to Larry Sanchez (Nisqually Indian Tribe), Steve Young (Mayor, City of DuPont), Linda Naomi Goetz (AWA), and Bob Martin (Project Manager, DuPont Works Cleanup Project), re: HRA application to conduct test excavations
▪ WA OAHP to G. Wessen, re: assignment of Smithsonian trinomials to three sites
▪ Request to Bill Tobin, Attorney, Nisqually Indian Tribe, re: Joe Kalama's participation in an Archaeology Month Event about the former DuPont Works site
▪ Copy to Gail Thompson of letter to Dr. Howard, Pierce County Medical Examiner, re: human remains from DuPont
▪ Transmittal to Ed Duke, Chief Investigator, Pierce County Medical Examiner's Office, of March 14, 2003, letter from Robert Martin, Weyerhaeuser, to Bill Tobin (Attorney, Nisqually Indian Tribe) and Allyson Brooks (State Historic Preservation Officer, WA OAHP), re: transfer and storage of remains from the Former DuPont Works Site; and April 16, 2003, letter from Burke Museum to Robert Martin, Weyerhaeuser
▪ Notification to Gail Thompson, HRA, re: determination of eligibility 45PI563

APPENDIX A.2 (AVAILABLE ON DVD)

FORMER DUPONT WORKS SITE ARCHAEOLOGICAL CORRESPONDENCE

CORRESPONDENCE.PDF

Description of Contents of Correspondence.pdf
▪ Response to Robert Whitlam, WA OAHP, re: determination of eligibility for 45PI563 (HRA-1), request for additional information in letter dated September 19, 2002
▪ Notification to Gail Thompson, HRA, re: determination of eligibility for HRA-1
▪ WA OAHP to Alex Maas, HRA, re: assignment of Smithsonian trinomial 45PI563 for HRA-1
▪ Request to Rob Whitlam, WA OAHP, for determination of eligibility, HRA-1
▪ Comments to Gail Thompson, HRA, re: Draft Research Design for Boundary Determination at 45PI55
▪ Transmittal to Larry Sanchez, Nisqually Indian Tribe, re: work plan for 45PI55 boundary delineation
▪ Transmittal to Allyson Brooks, WA OAHP, re: work plan for 45PI55 boundary delineation
▪ Comments to Gail Thompson, HRA, re: Draft Research Design for Boundary Determination at 45PI485
▪ Comments to Gail Thompson, HRA, re: Draft Research Design for Boundary Determination at 45PI404
▪ Transmittal to Larry Sanchez, Nisqually Indian Tribe, re: work plan for 45PI404 boundary determination
▪ Transmittal to Allyson Brooks, WA OAHP, re: work plan for 45PI404 boundary determination
▪ Transmittal to Larry Sanchez, Nisqually Indian Tribe, re: work plan for 45PI485 boundary determination
▪ Transmittal to Allyson Brooks, WA OAHP, re: work plan for 45PI485 boundary determination
▪ Fax to Dr. R. Daugherty re: request for boundary information at 45PI404

▪

APPENDIX A.2 (AVAILABLE ON DVD)

FORMER DUPONT WORKS SITE ARCHAEOLOGICAL REPORTS

PDF	Description
Implementation.pdf	Draft Archaeological Implementation Report for Remediation of Soils at the Former DuPont Works Site Parcel 1, City of DuPont, Pierce County, Washington
Monitoring_2001.pdf	Interim Archaeological Monitoring Report for the Former DuPont Works Site, Parcel 1
Monitoring_2002.pdf	2002 Field Season Archaeological Monitoring Report for the Former DuPont Works Site, Parcel 1, City of DuPont, Pierce County, Washington
Monitoring_2003-2004.pdf	Archaeological Monitoring Report for the 2003 and 2004 Field Seasons at the Former DuPont Works Site, Parcel 1, City of DuPont, Pierce County, Washington
45PI563.pdf	Archaeological Investigations at 45-PI-563, Former DuPont Works Site, Pierce County, Washington
45PI485.pdf	Exploring the Boundary and Possible Interpretation of 45PI485
45PI713.pdf	A Report of Archaeological Testing at 45PI713, Former DuPont Works Site, City of DuPont, Pierce County, Washington
45PI55.pdf	Archaeological Testing near 45PI55, Former DuPont Works Site, City of DuPont, Pierce County, Washington
45PI576.pdf	Archaeological Testing at 45PI576, Former DuPont Works Site, City of DuPont, Pierce County, Washington
45PI712.pdf	Treatment of Human Remains at 45PI712, Former DuPont Works Site, City of DuPont, Pierce County, Washington
45PI404.pdf	Archaeological Investigations at the Hudson's Bay Company/Native American Grave Site (45PI404), Former DuPont Works Site, Parcel 1, City of DuPont, Pierce County, Washington

APPENDIX A.2 (AVAILABLE ON DVD)

FORMER DUPONT WORKS SITE ARCHAEOLOGICAL PHOTOS FROM HRA AND WESSEN

Source	Folder and Contents
Historical Research Associates ,Inc.	45PI576 Artifact Photos_no log (33 JPEG images)
	45PI576 Monitoring_Excavation Photos_no log (45 JPEG images, 2 TIFF images)
	2001 photos (119 JPEG images, 5 CPT images), see included "Photo log.doc" for more information
	2002 photos (138 JPEG images), see included "Photo log.doc" for more information
	2003 photos (57 JPEG images), see included "Photo log.doc" for more information
	2004 photos (78 JPEG images, 2 additional folders containing collections of photos without any information), see included "Photo log.doc" for more information
Wessen	45PI576 Excavation Photos (19 JPEG images), see included "Photo Log for 45PI576.doc" for more information
	45PI712 Photos (30 JPEG images), see included "Photo Log for 45PI712.doc" for more information
	45PI713 Photos (16 JPEG images), see included "Photo Log for 45PI713.doc" for more information

APPENDIX B

RESULTS OF CONFIRMATION SOIL SAMPLING FOR ALL LAND-USE AREAS

TABLE OF CONTENTS

Appendix B.1 – Confirmation Sampling Results

List of Tables

Table	Title
B.1-A	Sample Results for CM-01A Remediation Unit
B.1-B	Sample Results for CM-01B Remediation Unit
B.2-A	Sample Results for CM-02A Remediation Unit
B.2-B	Sample Results for CM-02B Remediation Unit
B.3	Sample Results for CM-03 Remediation Unit
B.4	Sample Results for CM-04 Remediation Unit
B.5	Sample Results for CM-05 Remediation Unit
B.6	Sample Results for CM-06 Remediation Unit
B.7	Sample Results for CM-07 Remediation Unit
B.8	Sample Results for CM-08 Remediation Unit
B.9	Sample Results for GC-01 Remediation Unit
B.10	Sample Results for GC-02 Remediation Unit
B.11	Sample Results for GC-03 Remediation Unit
B.12	Sample Results for GC-04 Remediation Unit
B.13	Sample Results for GC-05 Remediation Unit
B.14	Sample Results for GC-06 Remediation Unit
B.15	Sample Results for GC-07 Remediation Unit
B.16	Sample Results for GC-08 Remediation Unit
B.17	Sample Results for GC-PA Remediation Unit
B.18	Sample Results for HI-01 Remediation Unit
B.19	Sample Results for HI-02 Remediation Unit
B.20	Sample Results for HI-04 Remediation Unit
B.21	Sample Results for IN-01 Remediation Unit
B.22	Sample Results for OS-01 Remediation Unit
B.23	Sample Results for OS-02 Remediation Unit
B.24	Sample Results for OS-03 Remediation Unit
B.25	Sample Results for OS-04 Remediation Unit

Appendix B.2 – Chemical Data Quality Reviews (Available on CD)

B.2.1 – Chemical Data Quality Review for April to Juene2003.pdf
Chemical Data Quality Review, Former DuPont Works Site, April - June 2003, Soil Sampling Event

B.2.2 – Chemical Data Quality Review for October to December 2003.pdf

Chemical Data Quality Review, Former DuPont Works Site, October – December 2003, Soil Sampling Event, Revised

B.2.3 – Chemical Data Quality Review for January to March 2004.pdf
Chemical Data Quality Review, Former DuPont Works Site, January - March 2004, Soil Sampling Event

B.2.4 – Chemical Data Quality Review for April to June 2004.pdf
Chemical Data Quality Review, Former DuPont Works Site, April - June 2004, Soil Sampling Event

B.2.5 – Chemical Data Quality Review for March 2006.pdf
Chemical Data Quality Review, Former DuPont Works Site, March 2006, Soil Sampling Event

APPENDIX B FIGURE INDEX

Figure	Title
B-1A	Remediation Unit – Commercial 1A
B-1B	Remediation Unit – Commercial 1B
B-2A	Remediation Unit – Commercial 2A
B-2B	Remediation Unit – Commercial 2B
B-3	Remediation Unit – Commercial 3
B-4	Remediation Unit – Commercial 4
B-5	Remediation Unit – Commercial 5
B-6	Remediation Unit – Commercial 6
B-7	Remediation Unit – Commercial 7
B-8	Remediation Unit – Commercial 8
B-9	Remediation Unit – Golf Course 1
B-10	Remediation Unit – Golf Course 2
B-11	Remediation Unit – Golf Course 3
B-12	Remediation Unit – Golf Course 4
B-13	Remediation Unit – Golf Course 5
B-14	Remediation Unit – Golf Course 6
B-15	Remediation Unit – Golf Course 7
B-16	Remediation Unit – Golf Course 8
B-17	Remediation Unit – Historical 1 and 2
B-18	Remediation Unit – Historical 4
B-19	Remediation Unit – Industrial
B-20	Remediation Unit – Open Space 1
B-21	Remediation Unit – Open Space 2 and 3
B-22	Remediation Unit – Open Space 4

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
25-TP-509	3-6	04/22/92	Yes	25-TP-509-S-2	7440-38-2	Arsenic	2.2		mg/kg
25-TP-509	3-6	04/22/92	Yes	25-TP-509-S-2	7440-50-8	Copper	8.4		mg/kg
25-TP-509	3-6	04/22/92	Yes	25-TP-509-S-2	7439-92-1	Lead	12.0		mg/kg
25-TP-509	3-6	04/22/92	Yes	25-TP-509-S-2	7439-97-6	Mercury	0.08	UJ	mg/kg
25-TP-518	0-3	11/04/92	Yes	25-TP-518-S-2	7440-38-2	Arsenic	2.4	J	mg/kg
25-TP-518	0-3	11/04/92	Yes	25-TP-518-S-2	7439-92-1	Lead	26.0	J	mg/kg
25-TP-518	0-3	11/04/92	Yes	25-TP-518-S-2	7439-97-6	Mercury	0.09	UJ	mg/kg
7-B-1	2.5-4	12/01/86	Yes	7-B-1,S-1	7439-92-1	Lead	94.0		mg/kg
7-B-3	3.5-5	04/28/87	Yes	7-B-3,S-1	7439-92-1	Lead	110.0		mg/kg
7-B-3	8.5-10	04/28/87	Yes	7-B-3,S-3	7439-92-1	Lead	31.0		mg/kg
7-B-3	13.5-15	04/28/87	Yes	7-B-3,S-5	7439-92-1	Lead	32.0		mg/kg
7-B-3	16.5-18	04/28/87	Yes	7-B-3,S-6	7439-92-1	Lead	30.0		mg/kg
7-B-4	3.5-5	04/29/87	Yes	7-B-4,S-1-DAVG	7439-92-1	Lead	52.0		mg/kg
7-B-4	28.5-30	04/29/87	Yes	7-B-4,S-11	7439-92-1	Lead	66.0		mg/kg
7-B-4	8.5-10	04/29/87	Yes	7-B-4,S-3	7439-92-1	Lead	52.0		mg/kg
7-B-4	13.5-15	04/29/87	Yes	7-B-4,S-5	7439-92-1	Lead	30.0		mg/kg
7-B-4	16-17.5	04/29/87	Yes	7-B-4,S-6	7439-92-1	Lead	26.0		mg/kg
7-B-4	23.5-25	04/29/87	Yes	7-B-4,S-9	7439-92-1	Lead	51.0		mg/kg
7-B-501	10-13	02/27/92	Yes	7-B-501-S-3-DAVG	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
7-B-501	10-13	02/27/92	Yes	7-B-501-S-3-DAVG	98-95-3	Nitrobenzene	0.1	U	mg/kg
7-B-501	10-13	02/27/92	Yes	7-B-501-S-3-DAVG	7440-38-2	Arsenic	6.9		mg/kg
7-B-501	10-13	02/27/92	Yes	7-B-501-S-3-DAVG	7440-50-8	Copper	47.0		mg/kg
7-B-501	10-13	02/27/92	Yes	7-B-501-S-3-DAVG	7439-92-1	Lead	54.0	J	mg/kg
7-B-501	10-13	02/27/92	Yes	7-B-501-S-3-DAVG	7439-97-6	Mercury	0.1		mg/kg
7-B-501	15-18	02/28/92	Yes	7-B-501-S-4-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-B-501	15-18	02/28/92	Yes	7-B-501-S-4-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-B-501	15-18	02/28/92	Yes	7-B-501-S-4-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-B-501	15-18	02/28/92	Yes	7-B-501-S-4-DAVG	7439-92-1	Lead	27.0		mg/kg
7-B-501	20-23	02/28/92	Yes	7-B-501-S-5	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
7-B-501	20-23	02/28/92	Yes	7-B-501-S-5	98-95-3	Nitrobenzene	0.1	U	mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
7-B-501	20-23	02/28/92	Yes	7-B-501-S-5	7439-92-1	Lead	16.0		mg/kg
7-B-502	2.5-4	06/26/92	Yes	7-B-502-S-1A	7440-38-2	Arsenic	1.5		mg/kg
7-B-502	2.5-4	06/26/92	Yes	7-B-502-S-1A	7440-50-8	Copper	3.0		mg/kg
7-B-502	2.5-4	06/26/92	Yes	7-B-502-S-1A	7439-92-1	Lead	82.0		mg/kg
7-B-502	2.5-4	06/26/92	Yes	7-B-502-S-1A	7439-97-6	Mercury	0.1	J	mg/kg
7-B-502	5-8	02/28/92	Yes	7-B-502-S-2	7439-92-1	Lead	54.0		mg/kg
7-B-502	10-13	02/28/92	Yes	7-B-502-S-3	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
7-B-502	10-13	02/28/92	Yes	7-B-502-S-3	98-95-3	Nitrobenzene	0.1	U	mg/kg
7-B-502	10-13	02/28/92	Yes	7-B-502-S-3	7440-38-2	Arsenic	3.5	J	mg/kg
7-B-502	10-13	02/28/92	Yes	7-B-502-S-3	7440-50-8	Copper	3.5		mg/kg
7-B-502	10-13	02/28/92	Yes	7-B-502-S-3	7439-92-1	Lead	39.0	J	mg/kg
7-B-502	10-13	02/28/92	Yes	7-B-502-S-3	7439-97-6	Mercury	0.07	U	mg/kg
7-B-503	50-51.5	07/21/92	Yes	7-B-503-S-11	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-B-503	50-51.5	07/21/92	Yes	7-B-503-S-11	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-B-503	50-51.5	07/21/92	Yes	7-B-503-S-11	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-B-503	55-56.5	07/21/92	Yes	7-B-503-S-12	7439-92-1	Lead	85.0		mg/kg
7-B-503	60-61.5	07/21/92	Yes	7-B-503-S-13	7439-92-1	Lead	96.0		mg/kg
7-B-503	65-66.5	07/21/92	Yes	7-B-503-S-14	7439-92-1	Lead	74.0		mg/kg
7-B-503	72.5-74	07/21/92	Yes	7-B-503-S-15A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-B-503	72.5-74	07/21/92	Yes	7-B-503-S-15A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-B-503	72.5-74	07/21/92	Yes	7-B-503-S-15A	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-B-503	72.5-74	07/21/92	Yes	7-B-503-S-15A	7439-92-1	Lead	66.0		mg/kg
7-B-503	70-71.5	07/21/92	Yes	7-B-503-S-15	7439-92-1	Lead	110.0		mg/kg
7-B-503	7.5-8	07/20/92	Yes	7-B-503-S-2A	118-96-7	2,4,6-Trinitrotoluene	0.005	U	mg/kg
7-B-503	7.5-8	07/20/92	Yes	7-B-503-S-2A	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
7-B-503	7.5-8	07/20/92	Yes	7-B-503-S-2A	98-95-3	Nitrobenzene	0.1	U	mg/kg
7-B-503	10-11.5	07/20/92	Yes	7-B-503-S-3	7439-92-1	Lead	6.1	U	mg/kg
7-B-503	15-16.5	07/20/92	Yes	7-B-503-S-4	7439-92-1	Lead	6.6	U	mg/kg
7-B-503	22.5-24	07/20/92	Yes	7-B-503-S-5A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-B-503	22.5-24	07/20/92	Yes	7-B-503-S-5A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
7-B-503	22.5-24	07/20/92	Yes	7-B-503-S-5A	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-B-503	20-21.5	07/20/92	Yes	7-B-503-S-5	7439-92-1	Lead	30.0		mg/kg
7-B-503	25-26.5	07/20/92	Yes	7-B-503-S-6	7439-92-1	Lead	58.0		mg/kg
7-B-503	35-35.5	07/20/92	Yes	7-B-503-S-8	7439-92-1	Lead	25.0		mg/kg
7-B-504	0-1	07/17/92	Yes	7-B-504-S-1-DAVG	7440-38-2	Arsenic	16.0		mg/kg
7-B-504	0-1	07/17/92	Yes	7-B-504-S-1-DAVG	7440-50-8	Copper	11.0		mg/kg
7-B-504	0-1	07/17/92	Yes	7-B-504-S-1-DAVG	7439-92-1	Lead	15.0		mg/kg
7-B-504	0-1	07/17/92	Yes	7-B-504-S-1-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
7-B-504	49-50.5	07/17/92	Yes	7-B-504-S-11	7439-92-1	Lead	5.2	U	mg/kg
7-B-504	5-6.5	07/17/92	Yes	7-B-504-S-2	7439-92-1	Lead	4.2	U	mg/kg
7-B-504	12.5-14	07/17/92	Yes	7-B-504-S-3A	7439-92-1	Lead	5.4	U	mg/kg
7-B-504	17.5-19	07/17/92	Yes	7-B-504-S-4A	7439-92-1	Lead	5.1	U	mg/kg
7-B-504	20-21.5	07/17/92	Yes	7-B-504-S-5	7439-92-1	Lead	5.5	U	mg/kg
7-B-504	25-26.5	07/17/92	Yes	7-B-504-S-6	7439-92-1	Lead	5.3	U	mg/kg
7-B-504	32.5-34	07/17/92	Yes	7-B-504-S-7	7439-92-1	Lead	5.2	U	mg/kg
7-B-504	40-41.5	07/17/92	Yes	7-B-504-S-9	7439-92-1	Lead	5.4	U	mg/kg
7-B-5	8-9.5	04/28/87	Yes	7-B-5,S-3	7439-92-1	Lead	41.0		mg/kg
7-B-5	13-14.5	04/28/87	Yes	7-B-5,S-5	7439-92-1	Lead	54.0		mg/kg
7-B-6	8.5-10	04/28/87	Yes	7-B-6,S-3	7439-92-1	Lead	28.0		mg/kg
7-B-6	13.5-15	04/28/87	Yes	7-B-6,S-5	7439-92-1	Lead	71.0		mg/kg
7-HA-502	2-3	07/01/92	Yes	7-HA-502-S-3	7439-92-1	Lead	32.0		mg/kg
7-HA-503	0-1	06/29/92	Yes	7-HA-503-S-1	7439-92-1	Lead	39.0		mg/kg
7-HA-503	1-2	06/29/92	Yes	7-HA-503-S-2	7439-92-1	Lead	5.8		mg/kg
7-HA-504	1-2	06/29/92	Yes	7-HA-504-S-2	7439-92-1	Lead	36.0		mg/kg
7-TP-501	3-6	03/05/92	Yes	7-TP-501-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-TP-501	3-6	03/05/92	Yes	7-TP-501-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-TP-501	3-6	03/05/92	Yes	7-TP-501-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-TP-501	3-6	03/05/92	Yes	7-TP-501-S-2-DAVG	7439-92-1	Lead	73.0		mg/kg
7-TP-501	8-10	03/05/92	Yes	7-TP-501-S-3	7440-38-2	Arsenic	2.8	J	mg/kg
7-TP-501	8-10	03/05/92	Yes	7-TP-501-S-3	7440-50-8	Copper	0.9		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
7-TP-501	8-10	03/05/92	Yes	7-TP-501-S-3	7439-92-1	Lead	39.0		mg/kg
7-TP-501	8-10	03/05/92	Yes	7-TP-501-S-3	7439-97-6	Mercury	0.09	U	mg/kg
7-TP-502	3-6	03/05/92	Yes	7-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-TP-502	3-6	03/05/92	Yes	7-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-TP-502	3-6	03/05/92	Yes	7-TP-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-TP-502	3-6	03/05/92	Yes	7-TP-502-S-2	7439-92-1	Lead	18.0		mg/kg
7-TP-502	8-10	03/05/92	Yes	7-TP-502-S-3	7439-92-1	Lead	16.0		mg/kg
7-TP-503	3-6	03/05/92	Yes	7-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-TP-503	3-6	03/05/92	Yes	7-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-TP-503	3-6	03/05/92	Yes	7-TP-503-S-2	98-95-3	Nitrobenzene	0.07	U	mg/kg
7-TP-503	3-6	03/05/92	Yes	7-TP-503-S-2	7439-92-1	Lead	66.0		mg/kg
7-TP-503	8-10	03/05/92	Yes	7-TP-503-S-3	7439-92-1	Lead	41.0		mg/kg
7-TP-504	0-1	03/05/92	Yes	7-TP-504-S-1	7439-92-1	Lead	65.0		mg/kg
7-TP-504	3-6	03/05/92	Yes	7-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
7-TP-504	3-6	03/05/92	Yes	7-TP-504-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
7-TP-504	3-6	03/05/92	Yes	7-TP-504-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
7-TP-504	3-6	03/05/92	Yes	7-TP-504-S-2	7439-92-1	Lead	12.0		mg/kg
7-TP-504	8-10	03/05/92	Yes	7-TP-504-S-3	7439-92-1	Lead	6.5		mg/kg
7-VS-20	8.5-9	01/25/00	No	7-VS-20	7440-38-2	Arsenic	3.2		mg/kg
7-VS-20	8.5-9	01/25/00	No	7-VS-20	7439-92-1	Lead	510.0		mg/kg
7-VS-2	0-0.5	09/16/99	Yes	7-VS-2	7440-38-2	Arsenic	2.5		mg/kg
7-VS-2	0-0.5	09/16/99	Yes	7-VS-2	7439-92-1	Lead	110.0		mg/kg
8-TPS-02	17-17.5	01/30/92	Yes	8-TPS-02-S-1	MOTOROIL	Motor Oil	10.0	U	mg/kg
8-TPS-04	14.5-15	01/31/92	Yes	8-TPS-04-S-1	MOTOROIL	Motor Oil	3000.0		mg/kg
8-TPS-04	14.5-15	01/31/92	Yes	8-TPS-04-S-1	127-18-4	Tetrachloroethene	0.05	U	mg/kg
8-TPS-04	16.5-17	01/31/92	Yes	8-TPS-04-S-2	MOTOROIL	Motor Oil	2100.0		mg/kg
8-TPS-04	16.5-17	01/31/92	Yes	8-TPS-04-S-2	127-18-4	Tetrachloroethene	0.05	U	mg/kg
F-29	2-2.5	06/12/01	Yes	01-F01-SS[F-29]C2-005	7440-38-2	Arsenic	5.6		mg/kg
F-29	2-2.5	06/12/01	Yes	01-F01-SS[F-29]C2-005	7439-92-1	Lead	8.5		mg/kg
F-30	2-2.5	06/12/01	Yes	01-F01-SS[F-30]C2-005	7440-38-2	Arsenic	4.1		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-30	2-2.5	06/12/01	Yes	01-F01-SS[F-30]C2-005	7439-92-1	Lead	28.0		mg/kg
F-31	2-2.5	06/12/01	Yes	01-F01-SS[F-31]C2-005	7440-38-2	Arsenic	12.0		mg/kg
F-31	2-2.5	06/12/01	Yes	01-F01-SS[F-31]C2-005	7439-92-1	Lead	37.0		mg/kg
F-32	2-2.5	06/12/01	Yes	01-F01-SS[F-32]C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-32	2-2.5	06/12/01	Yes	01-F01-SS[F-32]C2-005	7439-92-1	Lead	70.0		mg/kg
F-33	2-2.5	06/12/01	Yes	01-F01-SS[F-33]C2-005	7440-38-2	Arsenic	3.5		mg/kg
F-33	2-2.5	06/12/01	Yes	01-F01-SS[F-33]C2-005	7439-92-1	Lead	3.6		mg/kg
F-34	2-2.5	06/12/01	Yes	01-F01-SS[F-34]C2-005	7440-38-2	Arsenic	4.2		mg/kg
F-34	2-2.5	06/12/01	Yes	01-F01-SS[F-34]C2-005	7439-92-1	Lead	15.0		mg/kg
F-35	2-2.5	06/12/01	Yes	01-F01-SS[F-35]C2-005	7440-38-2	Arsenic	7.0		mg/kg
F-35	2-2.5	06/12/01	Yes	01-F01-SS[F-35]C2-005	7439-92-1	Lead	18.0		mg/kg
F-36	2-2.5	06/12/01	Yes	01-F01-SS[F-36]C2-005	7440-38-2	Arsenic	5.4		mg/kg
F-36	2-2.5	06/12/01	Yes	01-F01-SS[F-36]C2-005	7439-92-1	Lead	41.0		mg/kg
F-37	2-2.5	06/12/01	Yes	01-F01-SS[F-37]C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-37	2-2.5	06/12/01	Yes	01-F01-SS[F-37]C2-005	7439-92-1	Lead	43.0		mg/kg
F-38	2-2.5	06/12/01	Yes	01-F01-SS[F-38]C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-38	2-2.5	06/12/01	Yes	01-F01-SS[F-38]C2-005	7439-92-1	Lead	93.0		mg/kg
F-39	2-2.5	06/12/01	Yes	01-F01-SS[F-39]C2-005	7440-38-2	Arsenic	12.0		mg/kg
F-39	2-2.5	06/12/01	Yes	01-F01-SS[F-39]C2-005	7439-92-1	Lead	19.0		mg/kg
F-40	2-2.5	06/12/01	Yes	01-F01-SS[F-40]C2-005	7440-38-2	Arsenic	5.5		mg/kg
F-40	2-2.5	06/12/01	Yes	01-F01-SS[F-40]C2-005	7439-92-1	Lead	40.0		mg/kg
F-42-2	3-3.5	08/28/01	Yes	02-F01-SS[F-42-2]C2-030	7440-38-2	Arsenic	7.4		mg/kg
F-42-2	3-3.5	08/28/01	Yes	02-F01-SS[F-42-2]C2-030	7439-92-1	Lead	22.0		mg/kg
F-43	2-2.5	06/12/01	Yes	01-F01-SS[F-43]C2-005	7440-38-2	Arsenic	7.7		mg/kg
F-43	2-2.5	06/12/01	Yes	01-F01-SS[F-43]C2-005	7439-92-1	Lead	53.0		mg/kg
F-44	2-2.5	06/12/01	Yes	01-F01-SS[F-44]C2-005	7440-38-2	Arsenic	7.9		mg/kg
F-44	2-2.5	06/12/01	Yes	01-F01-SS[F-44]C2-005	7439-92-1	Lead	41.0		mg/kg
F-45	2-2.5	06/12/01	Yes	01-F01-SS[F-45]C2-005	7440-38-2	Arsenic	9.1		mg/kg
F-45	2-2.5	06/12/01	Yes	01-F01-SS[F-45]C2-005	7439-92-1	Lead	67.0		mg/kg
F-46	2-2.5	06/14/01	Yes	01-F01-SS[F-46]C2-005	7440-38-2	Arsenic	7.8		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-46	2-2.5	06/14/01	Yes	01-F01-SS[F-46]C2-005	7439-92-1	Lead	37.0		mg/kg
F-47	4-4.5	09/13/01	Yes	03-F01-SS-[F-47-3]-C2-050	7440-38-2	Arsenic	7.7		mg/kg
F-47	4-4.5	09/13/01	Yes	03-F01-SS-[F-47-3]-C2-050	7439-92-1	Lead	6.1		mg/kg
F-48	2-2.5	06/14/01	Yes	01-F01-SS[F-48]C2-005-DAVG	7440-38-2	Arsenic	4.8		mg/kg
F-48	2-2.5	06/14/01	Yes	01-F01-SS[F-48]C2-005-DAVG	7439-92-1	Lead	18.0		mg/kg
F-50	2-2.5	06/14/01	Yes	01-F01-SS[F-50]C2-005	7440-38-2	Arsenic	3.0		mg/kg
F-50	2-2.5	06/14/01	Yes	01-F01-SS[F-50]C2-005	7439-92-1	Lead	2.4		mg/kg
F-51	2-2.5	06/14/01	Yes	01-F01-SS[F-51]C2-005	7440-38-2	Arsenic	6.3		mg/kg
F-51	2-2.5	06/14/01	Yes	01-F01-SS[F-51]C2-005	7439-92-1	Lead	9.3		mg/kg
F-52	2-2.5	06/14/01	Yes	01-F01-SS[F-52]C2-005	7440-38-2	Arsenic	9.8		mg/kg
F-52	2-2.5	06/14/01	Yes	01-F01-SS[F-52]C2-005	7439-92-1	Lead	23.0		mg/kg
F-53	2-2.5	06/14/01	Yes	01-F01-SS[F-53]C2-005	7440-38-2	Arsenic	7.4		mg/kg
F-53	2-2.5	06/14/01	Yes	01-F01-SS[F-53]C2-005	7439-92-1	Lead	26.0		mg/kg
F-54	2-2.5	06/14/01	Yes	01-F01-SS[F-54]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-54	2-2.5	06/14/01	Yes	01-F01-SS[F-54]C2-005	7439-92-1	Lead	4.9		mg/kg
F-55	2-2.5	06/14/01	Yes	01-F01-SS[F-55]C2-005	7440-38-2	Arsenic	4.2		mg/kg
F-55	2-2.5	06/14/01	Yes	01-F01-SS[F-55]C2-005	7439-92-1	Lead	4.7		mg/kg
F-56	2-2.5	06/14/01	Yes	01-F01-SS[F-56]C2-005	7440-38-2	Arsenic	6.5		mg/kg
F-56	2-2.5	06/14/01	Yes	01-F01-SS[F-56]C2-005	7439-92-1	Lead	29.0		mg/kg
F-57	2-2.5	06/14/01	Yes	01-F01-SS[F-57]C2-005	7440-38-2	Arsenic	6.8		mg/kg
F-57	2-2.5	06/14/01	Yes	01-F01-SS[F-57]C2-005	7439-92-1	Lead	6.2		mg/kg
F-58	2-2.5	06/14/01	Yes	01-F01-SS[F-58]C2-005	7440-38-2	Arsenic	2.6		mg/kg
F-58	2-2.5	06/14/01	Yes	01-F01-SS[F-58]C2-005	7439-92-1	Lead	2.7		mg/kg
F-59	2-2.5	06/14/01	Yes	01-F01-SS[F-59]C2-005	7440-38-2	Arsenic	5.3		mg/kg
F-59	2-2.5	06/14/01	Yes	01-F01-SS[F-59]C2-005	7439-92-1	Lead	2.4	U	mg/kg
F-60	2-2.5	06/14/01	Yes	01-F01-SS[F-60]C2-005	7440-38-2	Arsenic	4.4		mg/kg
F-60	2-2.5	06/14/01	Yes	01-F01-SS[F-60]C2-005	7439-92-1	Lead	2.2	U	mg/kg
F-61	2-2.5	06/14/01	Yes	01-F01-SS[F-61]C2-005	7440-38-2	Arsenic	3.9		mg/kg
F-61	2-2.5	06/14/01	Yes	01-F01-SS[F-61]C2-005	7439-92-1	Lead	2.3	U	mg/kg
F-62	2-2.5	06/14/01	Yes	01-F01-SS[F-62]C2-005	7440-38-2	Arsenic	3.8		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-62	2-2.5	06/14/01	Yes	01-F01-SS[F-62]C2-005	7439-92-1	Lead	2.4		mg/kg
F-63	2-2.5	06/14/01	Yes	01-F01-SS[F-63]C2-005	7440-38-2	Arsenic	4.7		mg/kg
F-63	2-2.5	06/14/01	Yes	01-F01-SS[F-63]C2-005	7439-92-1	Lead	88.0		mg/kg
F-64	5-5.5	09/19/01	Yes	04-F01-SS-[F-64-4]-C2-060	7440-38-2	Arsenic	4.9		mg/kg
F-64	5-5.5	09/19/01	Yes	04-F01-SS-[F-64-4]-C2-060	7439-92-1	Lead	66.0		mg/kg
F-66	2-2.5	06/18/01	Yes	01-F01-SS[F-66]C2-005	7440-38-2	Arsenic	6.3		mg/kg
F-66	2-2.5	06/18/01	Yes	01-F01-SS[F-66]C2-005	7439-92-1	Lead	59.0		mg/kg
F-67-2	3-3.5	08/28/01	Yes	02-F01-SS[F-67-2]C2-030	7440-38-2	Arsenic	3.4		mg/kg
F-67-2	3-3.5	08/28/01	Yes	02-F01-SS[F-67-2]C2-030	7439-92-1	Lead	22.0		mg/kg
F-68	2-2.5	06/18/01	Yes	01-F01-SS[F-68]C2-005	7440-38-2	Arsenic	4.1		mg/kg
F-68	2-2.5	06/18/01	Yes	01-F01-SS[F-68]C2-005	7439-92-1	Lead	10.0		mg/kg
F-69	2-2.5	06/18/01	Yes	01-F01-SS[F-69]C2-005	7440-38-2	Arsenic	4.5		mg/kg
F-69	2-2.5	06/18/01	Yes	01-F01-SS[F-69]C2-005	7439-92-1	Lead	4.8		mg/kg
F-70	2-2.5	06/18/01	Yes	01-F01-SS[F-70]C2-005	7440-38-2	Arsenic	2.9		mg/kg
F-70	2-2.5	06/18/01	Yes	01-F01-SS[F-70]C2-005	7439-92-1	Lead	49.0		mg/kg
F-72	5-5.5	09/19/01	Yes	04-F02-SS-[F-72-4]-C2-060	7440-38-2	Arsenic	3.3		mg/kg
F-72	5-5.5	09/19/01	Yes	04-F02-SS-[F-72-4]-C2-060	7439-92-1	Lead	23.0		mg/kg
F-73	2-2.5	06/18/01	Yes	01-F02-SS[F-73]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-73	2-2.5	06/18/01	Yes	01-F02-SS[F-73]C2-005	7439-92-1	Lead	10.0		mg/kg
F-74	2-2.5	06/18/01	Yes	01-F02-SS[F-74]C2-005	7440-38-2	Arsenic	7.6		mg/kg
F-74	2-2.5	06/18/01	Yes	01-F02-SS[F-74]C2-005	7439-92-1	Lead	10.0		mg/kg
F-75	2-2.5	06/18/01	Yes	01-F02-SS[F-75]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-75	2-2.5	06/18/01	Yes	01-F02-SS[F-75]C2-005	7439-92-1	Lead	5.9		mg/kg
F-76	4-4.5	09/13/01	Yes	03-F02-SS-[F-76-3]-C2-050-DAVG	7440-38-2	Arsenic	6.2		mg/kg
F-76	4-4.5	09/13/01	Yes	03-F02-SS-[F-76-3]-C2-050-DAVG	7439-92-1	Lead	24.5		mg/kg
F-77	5-5.5	09/19/01	Yes	04-F02-SS-[F-77-4]-C2-060	7440-38-2	Arsenic	2.7		mg/kg
F-77	5-5.5	09/19/01	Yes	04-F02-SS-[F-77-4]-C2-060	7439-92-1	Lead	40.0		mg/kg
F-78-2	3-3.5	08/28/01	Yes	02-F02-SS[F-78-2]C2-030	7440-38-2	Arsenic	4.5		mg/kg
F-78-2	3-3.5	08/28/01	Yes	02-F02-SS[F-78-2]C2-030	7439-92-1	Lead	100.0		mg/kg
F-79	5-5.5	09/19/01	No	04-F02-SS-[F-79-4]-C2-060	7440-38-2	Arsenic	9.6		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-79	5-5.5	09/19/01	No	04-F02-SS-[F-79-4]-C2-060	7439-92-1	Lead	290.0		mg/kg
F-80	5-5.5	09/19/01	No	04-F02-SS-[F-80-4]-C2-060	7440-38-2	Arsenic	12.0		mg/kg
F-80	5-5.5	09/19/01	No	04-F02-SS-[F-80-4]-C2-060	7439-92-1	Lead	520.0		mg/kg
F-81	5-5.5	09/19/01	Yes	04-F02-SS-[F-81-4]-C2-060	7440-38-2	Arsenic	8.0		mg/kg
F-81	5-5.5	09/19/01	Yes	04-F02-SS-[F-81-4]-C2-060	7439-92-1	Lead	65.0		mg/kg
F-82	2-2.5	06/18/01	Yes	01-F02-SS[F-82]C2-005	7440-38-2	Arsenic	3.5		mg/kg
F-82	2-2.5	06/18/01	Yes	01-F02-SS[F-82]C2-005	7439-92-1	Lead	3.0		mg/kg
F-84-2	3-3.5	08/28/01	Yes	02-F02-SS[F-84-2]C3-030-DAVG	7440-38-2	Arsenic	4.2		mg/kg
F-84-2	3-3.5	08/28/01	Yes	02-F02-SS[F-84-2]C3-030-DAVG	7439-92-1	Lead	82.5		mg/kg
F-85-2	3-3.5	08/28/01	Yes	02-F02-SS[F-85-2]C2-030	7440-38-2	Arsenic	6.9		mg/kg
F-85-2	3-3.5	08/28/01	Yes	02-F02-SS[F-85-2]C2-030	7439-92-1	Lead	80.0		mg/kg
F-86	2-2.5	06/19/01	Yes	01-F02-SS[F-86]C2-005	7440-38-2	Arsenic	8.5		mg/kg
F-86	2-2.5	06/19/01	Yes	01-F02-SS[F-86]C2-005	7439-92-1	Lead	100.0		mg/kg
F-87	2-2.5	06/19/01	Yes	01-F02-SS[F-87]C2-005	7440-38-2	Arsenic	5.0		mg/kg
F-87	2-2.5	06/19/01	Yes	01-F02-SS[F-87]C2-005	7439-92-1	Lead	6.8		mg/kg
F-88	4-4.5	09/13/01	Yes	03-F02-SS-[F-88-3]-C2-050	7440-38-2	Arsenic	5.6		mg/kg
F-88	4-4.5	09/13/01	Yes	03-F02-SS-[F-88-3]-C2-050	7439-92-1	Lead	62.0		mg/kg
F-89	5-5.5	09/19/01	Yes	04-F02-SS-[F-89-4]-C2-060-DAVG	7440-38-2	Arsenic	7.1		mg/kg
F-89	5-5.5	09/19/01	Yes	04-F02-SS-[F-89-4]-C2-060-DAVG	7439-92-1	Lead	86.5		mg/kg
F-91-2	3-3.5	08/28/01	Yes	02-F02-SS[F-91-2]C2-030	7440-38-2	Arsenic	6.2		mg/kg
F-91-2	3-3.5	08/28/01	Yes	02-F02-SS[F-91-2]C2-030	7439-92-1	Lead	62.0		mg/kg
F-92-2	3-3.5	08/28/01	Yes	02-F02-SS[F-92-2]C2-030	7440-38-2	Arsenic	3.9		mg/kg
F-92-2	3-3.5	08/28/01	Yes	02-F02-SS[F-92-2]C2-030	7439-92-1	Lead	49.0		mg/kg
MSU-001-VS-B	1.5-2	07/28/03	Yes	1-SS-[MSU-1-VS-B]-C2_07/28/03_1.5	MOTOROIL	Motor Oil	37.0		mg/kg
MSU-002-VS-B	20-20.5	06/25/03	Yes	01-SS-[MSU-2-VS-B]-C2_06/25/03_21.5	MOTOROIL	Motor Oil	49.2	U	mg/kg
MSU-002-VS-E	20-21.5	06/25/03	Yes	01-SS-[MSU-2-VS-E]-C2_06/25/03_21.5	MOTOROIL	Motor Oil	48.2	U	mg/kg
MSU-002-VS-N	20-21.5	06/25/03	Yes	01-SS-[MSU-2-VS-N]-C2_06/25/03_21.5	MOTOROIL	Motor Oil	49.5	U	mg/kg
MSU-002-VS-S	20-21.5	06/25/03	Yes	01-SS-[MSU-2-VS-S]-C2_06/25/03_21.5	MOTOROIL	Motor Oil	48.3	U	mg/kg
MSU-002-VS-W	20-21.5	06/25/03	Yes	01-SS-[MSU-2-VS-W]-C2_06/25/03_21.5	MOTOROIL	Motor Oil	49.8	U	mg/kg
MSU-1-E	0-1.5	04/28/04	Yes	02-SS-MSU-1-E_04/28/04_0	MOTOROIL	Motor Oil	52.8	U	mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-1-N	0-1.5	04/28/04	Yes	02-SS-MSU-1-N_04/28/04_0	MOTOROIL	Motor Oil	50.2	U	mg/kg
MSU-1-W	0-1.5	04/28/04	Yes	02-SS-MSU-1-W_04/28/04_0	MOTOROIL	Motor Oil	48.3	U	mg/kg
MSU-150-1	0-1.5	04/29/04	Yes	MSU-150-1_04/29/04_0	MOTOROIL	Motor Oil	48.1	U	mg/kg
MSU-150-2	0-1.5	04/29/04	Yes	MSU-150-2_04/29/04_0	MOTOROIL	Motor Oil	997.0	X1	mg/kg
MSU-3-1-VS-B	2-2.5	09/30/03	No	01-SS-[MSU-3-1-VS-B]-C2_09/30/03_2	7439-92-1	Lead	43.2		mg/kg
MSU-3-E	0-0.5	06/26/03	No	01-SS-[MSU-03-E]-D1_06/26/03_0	7440-38-2	Arsenic	15.7		mg/kg
MSU-3-E	0-0.5	09/08/03	Yes	05-SS-[MSU-3-E]-D1_09/08/03_0	7439-92-1	Lead	88.2		mg/kg
MSU-3-N	0-0.5	06/26/03	No	01-SS-[MSU-03-N]-D1_06/26/03_0	7440-38-2	Arsenic	3.8		mg/kg
MSU-3-N	0-0.5	09/08/03	Yes	05-SS-[MSU-3-N]-D1_09/08/03_0	7439-92-1	Lead	77.9		mg/kg
MSU-3-S	0-0.5	06/26/03	No	01-SS-[MSU-03-S]-D1_06/26/03_0	7440-38-2	Arsenic	3.2		mg/kg
MSU-3-S	0-0.5	07/28/03	Yes	03-SS-[MSU-03-S]-D1_07/28/03_0	7439-92-1	Lead	45.0		mg/kg
MSU-3-VS-S	2.5-5	03/24/06	Yes	03-MSU-3-VS-S-2.5-5.0	7439-92-1	Lead	5.0		mg/Kg
MSU-3-W	0-0.5	06/26/03	No	01-SS-[MSU-03-W]-D1_06/26/03_0	7440-38-2	Arsenic	3.4		mg/kg
MSU-3-W	0.5-0.5	08/20/03	Yes	04-SS-[MSU-3-W]-D1_08/20/03_0	7439-92-1	Lead	61.2		mg/kg
MSU-32-VS-B	2.5-3	06/30/03	Yes	01-SS-[MSU-32-VS-B]-C2_06/30/03_2.5	7440-38-2	Arsenic	2.4		mg/kg
MSU-32-VS-B	2.5-3	06/30/03	Yes	01-SS-[MSU-32-VS-B]-C2_06/30/03_2.5	7439-92-1	Lead	31.3		mg/kg
MSU-33-1-VS-B	1.5-5.5	09/30/03	Yes	01-SS-[MSU-33-1-VS-B]-C2_09/30/03_1.5	7439-92-1	Lead	33.7		mg/kg
MSU-33-2-VS-B	1.5-2	09/30/03	No	01-SS-[MSU-33-2-VS-B]-C2_09/30/03_1.5	7439-92-1	Lead	62.2		mg/kg
MSU-33-6030-VS-B	5-5.5	11/12/03	Yes	02-SS-[MSU-33-6030-VS-B]-C2_11/12/03_3	7439-92-1	Lead	82.8		mg/kg
MSU-33-E	3.5-4.5	06/26/03	No	01-SS-[MSU-33-E]-D1_06/26/03_0	7440-38-2	Arsenic	14.7		mg/kg
MSU-33-E	3-4.5	07/16/03	Yes	02-SS-[MSU-33-E]-D1_AVG_07/16/03_0	7439-92-1	Lead	103.0		mg/kg
MSU-33-N	3.5-4.5	06/26/03	No	01-SS-[MSU-33-N]-D1_06/26/03_0	7440-38-2	Arsenic	5.4		mg/kg
MSU-33-S	3.5-4.5	06/26/03	No	01-SS-[MSU-33-S]-D1_06/26/03_0	7440-38-2	Arsenic	4.5		mg/kg
MSU-33-S	5-5.5	08/04/03	Yes	04-SS-[MSU-33-S]-D1_08/04/03_0	7439-92-1	Lead	70.7		mg/kg
MSU-33-VS-N	3.5-5	03/24/06	Yes	03-MSU-33-VS-N-3.5-5.0	7439-92-1	Lead	7.0		mg/Kg
MSU-33-W	3.5-4.5	06/26/03	No	01-SS-[MSU-33-W]-D1_06/26/03_0	7440-38-2	Arsenic	10.0		mg/kg
MSU-33-W	3-4.5	09/08/03	Yes	07-SS-[MSU-33-W]-D1_AVG_09/08/03_0	7439-92-1	Lead	93.0		mg/kg
MSU-34-VS-B	2-14	06/30/03	Yes	01-SS-[MSU-34-VS-B]-C2_06/30/03_2	7440-38-2	Arsenic	2.3	U	mg/kg
MSU-34-VS-B	2-14	06/30/03	Yes	01-SS-[MSU-34-VS-B]-C2_06/30/03_2	7439-92-1	Lead	42.4		mg/kg
MSU-35-1-VS-B	9-9.5	09/30/03	Yes	01-SS-[MSU-35-1-VS-B]-C2_09/30/03_6.5	7439-92-1	Lead	12.9		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-35-2-VS-B	9-9.5	09/30/03	Yes	01-SS-[MSU-35-2-VS-B]-C2_09/30/03_6.5	7439-92-1	Lead	84.7		mg/kg
MSU-35-E	2.5-9	06/26/03	No	01-SS-[MSU-35-E]-D1_06/26/03_0	7440-38-2	Arsenic	7.0		mg/kg
MSU-35-E	5.5-9	07/16/03	Yes	02-SS-[MSU-35-E]-D1_07/16/03_0	7439-92-1	Lead	103.0		mg/kg
MSU-35-N	2.5-9	06/26/03	No	01-SS-[MSU-35-N]-D1_06/26/03_0	7440-38-2	Arsenic	7.9		mg/kg
MSU-35-N	5.5-9	07/24/03	Yes	03-SS-[MSU-35-N]-D1_07/24/03_0	7439-92-1	Lead	50.4		mg/kg
MSU-35-S	2.5-9	06/26/03	No	01-SS-[MSU-35-S]-D1_06/26/03_0	7440-38-2	Arsenic	20.6		mg/kg
MSU-35-VS-S	9-9	03/24/06	Yes	03-MSU-35-VS-S-2.5-9.0	7439-92-1	Lead	42.0		mg/Kg
MSU-35-VS-W	9-9	03/24/06	Yes	03-MSU-35-VS-W-2.5-9.0_AVG	7439-92-1	Lead	7.4		mg/Kg
MSU-35-W	2.5-9	06/26/03	No	01-SS-[MSU-35-W]-D1_06/26/03_0	7440-38-2	Arsenic	26.9		mg/kg
MSU-36-E	3-5.5	06/26/03	Yes	01-SS-[MSU-36-E]-D1_06/26/03_0	7440-38-2	Arsenic	18.5		mg/kg
MSU-36-E	3-5.5	06/26/03	Yes	01-SS-[MSU-36-E]-D1_06/26/03_0	7439-92-1	Lead	74.7		mg/kg
MSU-36-N	3-5.5	06/26/03	Yes	01-SS-[MSU-36-N]-D1_06/26/03_0	7440-38-2	Arsenic	7.8		mg/kg
MSU-36-N	3-5.5	06/26/03	Yes	01-SS-[MSU-36-N]-D1_06/26/03_0	7439-92-1	Lead	111.0		mg/kg
MSU-36-S	3-5.5	06/26/03	No	01-SS-[MSU-36-S]-D1_06/26/03_0	7440-38-2	Arsenic	11.5		mg/kg
MSU-36-S	3-5.5	09/08/03	Yes	05-SS-[MSU-36-S]-D1_09/08/03_0	7439-92-1	Lead	43.3		mg/kg
MSU-36-VS-B	3.5-5.5	11/12/03	Yes	02-SS-[MSU-36-VS-B]-C2_11/12/03_3.5	7439-92-1	Lead	67.9		mg/kg
MSU-36-W	3-5.5	06/26/03	Yes	01-SS-[MSU-36-W]-D1_06/26/03_0	7440-38-2	Arsenic	6.6		mg/kg
MSU-36-W	3-5.5	06/26/03	Yes	01-SS-[MSU-36-W]-D1_06/26/03_0	7439-92-1	Lead	117.0		mg/kg
MSU-37-E	0-0.5	06/26/03	No	01-SS-[MSU-37-E]-D1_06/26/03_0	7440-38-2	Arsenic	15.0		mg/kg
MSU-37-E	0-0.5	04/29/04	No	3-MSU-37-E_04/29/04_0	MOTOROIL	Motor Oil	36.5	J	mg/kg
MSU-37-E	0-0.5	05/11/04	No	4-MSU-37-E_05/11/04_0	7439-92-1	Lead	47.8		mg/kg
MSU-37-E	0-2	05/24/04	Yes	5-MSU-37-E_05/24/04_0	MOTOROIL	Motor Oil	48.2	U	mg/kg
MSU-37-N	0-2	06/26/03	Yes	01-SS-[MSU-37-N]-D1_06/26/03_0	7440-38-2	Arsenic	11.0		mg/kg
MSU-37-N	0-2	06/26/03	Yes	01-SS-[MSU-37-N]-D1_06/26/03_0	7439-92-1	Lead	45.9		mg/kg
MSU-37-S	0-2	06/26/03	No	01-SS-[MSU-37-S]-D1_06/26/03_0	7440-38-2	Arsenic	10.2		mg/kg
MSU-37-S	0-2	04/29/04	Yes	3-MSU-37-S_04/29/04_0	7439-92-1	Lead	10.0		mg/kg
MSU-37-VS-B	2-2.5	07/24/03	Yes	01-SS-[MSU-37-VS-B]-C2_07/24/03_2	7440-38-2	Arsenic	4.2		mg/kg
MSU-37-VS-B	2-2.5	07/24/03	Yes	01-SS-[MSU-37-VS-B]-C2_07/24/03_2	7439-92-1	Lead	86.0		mg/kg
MSU-37-W	0-0.5	06/26/03	No	01-SS-[MSU-37-W]-D1_06/26/03_0	7440-38-2	Arsenic	8.7		mg/kg
MSU-37-W	0-2	04/29/04	Yes	3-MSU-37-W_04/29/04_0	7439-92-1	Lead	19.4		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-38-VS-B	4.5-2	06/23/03	Yes	01-SS-[MSU-38-VS-B]-C2_06/23/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-38-VS-B	4.5-2	06/23/03	Yes	01-SS-[MSU-38-VS-B]-C2_06/23/03_1.5	7439-92-1	Lead	69.7		mg/kg
MSU-39-VS-B	4.5-5	06/23/03	No	01-SS-[MSU-39-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	31.1		mg/kg
MSU-39-VS-B	10-10.5	08/18/03	Yes	04-SS-[MSU-39-VS-B]-C2_08/18/03_10	7439-92-1	Lead	29.3		mg/kg
MSU-40-VS-B	4.5-9	07/28/03	Yes	01-SS-[MSU-40-VS-B]-C2_07/28/03_4.5	7440-38-2	Arsenic	8.2		mg/kg
MSU-40-VS-B	4.5-9	07/28/03	Yes	01-SS-[MSU-40-VS-B]-C2_07/28/03_4.5	7439-92-1	Lead	106.0		mg/kg
MSU-41-VS-B	8.5-9	07/02/03	Yes	02-SS-[MSU-41-VS-B]-C2_07/02/03_8.5	7440-38-2	Arsenic	28.0		mg/kg
MSU-41-VS-B	8.5-9	07/02/03	Yes	02-SS-[MSU-41-VS-B]-C2_07/02/03_8.5	7439-92-1	Lead	36.6		mg/kg
MSU-42-VS-B	4.5-5	06/23/03	No	01-SS-[MSU-42-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	6.6		mg/kg
MSU-42-VS-B	11-11.5	07/24/03	Yes	03-SS-[MSU-42-VS-B]-C2_07/24/03_10.5	7439-92-1	Lead	82.7		mg/kg
MSU-43-VS-B	5-5.5	06/23/03	No	01-SS-[MSU-43-VS-B]-C2_06/23/03_5	7440-38-2	Arsenic	4.9		mg/kg
MSU-43-VS-B	17.5-13	09/22/03	Yes	06-SS-[MSU-43-VS-B]-C2_09/22/03_21.5	7439-92-1	Lead	25.5		mg/kg
MSU-43/44VS-B	11-11.5	07/24/03	Yes	03-SS-[MSU-43/44VS-B]-C2_07/24/03_10.5	7440-38-2	Arsenic	6.1		mg/kg
MSU-44-VS-B	5-5.5	06/23/03	No	01-SS-[MSU-44-VS-B]-C2_06/23/03_5	7440-38-2	Arsenic	8.4		mg/kg
MSU-44-VS-B	17.5-12.	08/06/03	Yes	04-SS-[MSU-44-VS-B]-C2_08/06/03_17.5	7439-92-1	Lead	26.8		mg/kg
MSU-45-VS-B	4.5-5	06/23/03	No	01-SS-[MSU-45-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	12.7		mg/kg
MSU-45-VS-B	8.5-8	07/28/03	Yes	03-SS-[MSU-45-VS-B]-C2_AVG_07/28/03_8.5	7439-92-1	Lead	6.6		mg/kg
MSU-46-VS-B	4.5-5	06/23/03	No	01-SS-[MSU-46-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	2.6		mg/kg
MSU-46-VS-B	6.5-7	07/02/03	Yes	02-SS-[MSU-46-VS-B]-C2_07/02/03_6.5	7439-92-1	Lead	30.7		mg/kg
MSU-47-VS-B	4.5-5	06/23/03	No	01-SS-[MSU-47-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	4.8		mg/kg
MSU-47-VS-B	6.5-7	07/02/03	Yes	02-SS-[MSU-47-VS-B]-C2_07/02/03_6.5	7439-92-1	Lead	12.1		mg/kg
MSU-48-VS-B	4.5-5	06/23/03	No	01-SS-[MSU-48-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-48-VS-B	6.5-7	07/02/03	Yes	02-SS-[MSU-48-VS-B]-C2_07/02/03_6.5	7439-92-1	Lead	66.7		mg/kg
MSU-52/53-VS-B	12-12.5	06/23/03	Yes	01-SS-[MSU-52/53-VS-B]-C2_06/23/03_12	7440-38-2	Arsenic	6.5		mg/kg
MSU-52/53-VS-B	12-12.5	06/23/03	Yes	01-SS-[MSU-52/53-VS-B]-C2_06/23/03_12	7439-92-1	Lead	93.6		mg/kg
MSU-D-1-N	0-0.5	03/04/04	Yes	01-MSU-D-1-N_03/04/04_0	7440-38-2	Arsenic	15.2		mg/kg
MSU-D-1-W	0-0.5	03/04/04	Yes	01-MSU-D-1-W_03/04/04_0	7440-38-2	Arsenic	8.8		mg/kg
MSU-D-1	1.5-2	05/11/04	No	2-MSU-D-1_05/11/04_1.5	7439-92-1	Lead	3.5		mg/kg
MSU-D-1	3-3.5	04/28/04	YES	3-MSU-D-1_04/28/04_3	7440-38-2	Arsenic	0.9	U	mg/kg
MSU-D-4	15-15.5	06/02/04	Yes	5-MSU-D-4-06/02/04_15	7439-92-1	Lead	554.0		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-D-4	6-6.5	04/28/04	No	5-MSU-D-4_04/28/04_6	7440-38-2	Arsenic	10.9		mg/kg
MSU-F-49-1	5-5.5	07/02/03	Yes	04-SS-[MSU-F-49-1]-C1_07/02/03_5	7439-92-1	Lead	84.0		mg/kg
MSU-F-49-2	4-4.5	06/23/03	Yes	03-SS-[MSU-F-49-2]-C1_06/23/03_4	7439-92-1	Lead	41.0		mg/kg
MSU-F-49	2-2.5	06/11/03	No	01-SS-[MSU-F-49-1]-C1_06/11/03_2	7440-38-2	Arsenic	13.0		mg/kg
MSU-F-49	2-2.5	06/11/03	No	01-SS-[MSU-F-49-2]-C1_06/11/03_2	7440-38-2	Arsenic	34.3		mg/kg
MSU-F-49	2-2.5	04/28/04	No	MSU-F-49_04/28/04_2	7440-38-2	Arsenic	8.9		mg/kg
MSU-F-49	2-2.5	04/28/04	No	MSU-F-49_04/28/04_2	7439-92-1	Lead	21.9		mg/kg
MSU-F-50-2	2-2.5	06/11/03	Yes	01-SS-[MSU-F-50-2]-C1_06/11/03_2	7440-38-2	Arsenic	2.1		mg/kg
MSU-F-50-2	2-2.5	06/11/03	Yes	01-SS-[MSU-F-50-2]-C1_06/11/03_2	7439-92-1	Lead	2.7		mg/kg
MSU-F-50	2-2.5	06/11/03	Yes	01-SS-[MSU-F-50-1]-C1_06/11/03_2	7440-38-2	Arsenic	5.2		mg/kg
MSU-F-50	2-2.5	06/11/03	Yes	01-SS-[MSU-F-50-1]-C1_06/11/03_2	7439-92-1	Lead	11.4		mg/kg
MSU-NGRR-01	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-01-1]-C1_06/02/03_1.5	7440-38-2	Arsenic	4.5		mg/kg
MSU-NGRR-01	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-01-1]-C1_06/02/03_1.5	7439-92-1	Lead	3.9		mg/kg
MSU-NGRR-02	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-02-1]-C1_AVG_06/02/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-NGRR-02	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-02-1]-C1_AVG_06/02/03_1.5	7439-92-1	Lead	4.1		mg/kg
MSU-NGRR-03	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-03-1]-C1_06/11/03_1.5	7440-38-2	Arsenic	10.1		mg/kg
MSU-NGRR-1-2	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-01-2]-C1_06/02/03_1.5	7440-38-2	Arsenic	4.6		mg/kg
MSU-NGRR-1-2	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-01-2]-C1_06/02/03_1.5	7439-92-1	Lead	3.3		mg/kg
MSU-NGRR-3-1	2.5-3	06/16/03	Yes	02-SS-[MSU-NGRR-03-1]-C2_06/16/03_2.5	7440-38-2	Arsenic	6.3		mg/kg
MSU-NGRR-3-1	2.5-3	06/16/03	Yes	02-SS-[MSU-NGRR-03-1]-C2_06/16/03_2.5	7439-92-1	Lead	65.3		mg/kg
NEW-1	1-1.5	03/10/04	Yes	1-NEW-1_03/10/04_1	7440-38-2	Arsenic	11.9		mg/kg
NEW-1	1-1.5	03/10/04	Yes	1-NEW-1_03/10/04_1	7439-92-1	Lead	6.8		mg/kg
NEW-2	1-1.5	03/18/04	Yes	01-New-2_03/18/04_1	7440-38-2	Arsenic	5.5		mg/kg
NEW-2	1-1.5	03/18/04	Yes	01-New-2_03/18/04_1	7439-92-1	Lead	5.1		mg/kg
NEW-3	1-1.5	03/18/04	Yes	01-New-3_03/18/04_1	7440-38-2	Arsenic	8.4		mg/kg
NEW-3	1-1.5	03/18/04	Yes	01-New-3_03/18/04_1	7439-92-1	Lead	6.9		mg/kg
NEW-4	1-1.5	03/23/04	Yes	01-New-4_03/23/04_1	7440-38-2	Arsenic	5.8		mg/kg
NEW-4	1-1.5	03/23/04	Yes	01-New-4_03/23/04_1	7439-92-1	Lead	7.8		mg/kg
NGRR-198	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-198]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-198	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-198]C2-005	7439-92-1	Lead	30.0		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-199	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-199]C2-005	7440-38-2	Arsenic	4.6		mg/kg
NGRR-199	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-199]C2-005	7439-92-1	Lead	7.3		mg/kg
NGRR-200	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-200]C2-005	7440-38-2	Arsenic	5.2		mg/kg
NGRR-200	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-200]C2-005	7439-92-1	Lead	55.0		mg/kg
NGRR-201	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-201]C2-005	7440-38-2	Arsenic	5.3		mg/kg
NGRR-201	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-201]C2-005	7439-92-1	Lead	14.0		mg/kg
NGRR-202	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-202]C2-005	7440-38-2	Arsenic	6.3		mg/kg
NGRR-202	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-202]C2-005	7439-92-1	Lead	24.0		mg/kg
NGRR-205	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-205]C2-005	7440-38-2	Arsenic	5.6		mg/kg
NGRR-205	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-205]C2-005	7439-92-1	Lead	36.0		mg/kg
NGRR-206	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-206]C2-005	7440-38-2	Arsenic	4.6		mg/kg
NGRR-206	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-206]C2-005	7439-92-1	Lead	9.2		mg/kg
NGRR-207	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-207]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-207	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-207]C2-005	7439-92-1	Lead	51.0		mg/kg
NGRR-245	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-245]C2-005-DAVG	7440-38-2	Arsenic	9.0		mg/kg
NGRR-245	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-245]C2-005-DAVG	7439-92-1	Lead	9.5		mg/kg
NGRR-247	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-247]C2-005	7440-38-2	Arsenic	9.8		mg/kg
NGRR-247	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-247]C2-005	7439-92-1	Lead	8.2		mg/kg
NGRR-248	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-248]C2-005	7440-38-2	Arsenic	7.8		mg/kg
NGRR-248	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-248]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-249	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-249]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-249	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-249]C2-005	7439-92-1	Lead	16.0		mg/kg
NGRR-250	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-250]C2-005	7440-38-2	Arsenic	7.9		mg/kg
NGRR-250	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-250]C2-005	7439-92-1	Lead	6.6		mg/kg
NGRR-251	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-251]C2-005	7440-38-2	Arsenic	6.8		mg/kg
NGRR-251	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-251]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-252	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-252]C2-005	7440-38-2	Arsenic	9.0		mg/kg
NGRR-252	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-252]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-253	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-253]C2-005	7440-38-2	Arsenic	7.8		mg/kg
NGRR-253	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-253]C2-005	7439-92-1	Lead	4.3		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-254	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-254]C2-005	7440-38-2	Arsenic	6.3		mg/kg
NGRR-254	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-254]C2-005	7439-92-1	Lead	5.0		mg/kg
NGRR-255	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-255]C2-005	7440-38-2	Arsenic	17.0		mg/kg
NGRR-255	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-255]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-256	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-256]C2-005	7440-38-2	Arsenic	9.6		mg/kg
NGRR-256	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-256]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-258	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-258]C2-005	7440-38-2	Arsenic	6.8		mg/kg
NGRR-258	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-258]C2-005	7439-92-1	Lead	5.7		mg/kg
NGRR-259	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-259]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-259	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-259]C2-005	7439-92-1	Lead	5.2		mg/kg
NGRR-260	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-260]C2-005	7440-38-2	Arsenic	6.8		mg/kg
NGRR-260	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-260]C2-005	7439-92-1	Lead	6.6		mg/kg
NGRR-261	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-261]C2-005-DAVG	7440-38-2	Arsenic	7.1		mg/kg
NGRR-261	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-261]C2-005-DAVG	7439-92-1	Lead	6.0		mg/kg
NGRR-263	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-263]C2-005	7440-38-2	Arsenic	7.5		mg/kg
NGRR-263	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-263]C2-005	7439-92-1	Lead	4.5		mg/kg
NGRR-264	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-264]C2-005	7440-38-2	Arsenic	9.5		mg/kg
NGRR-264	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-264]C2-005	7439-92-1	Lead	6.2		mg/kg
NGRR-265	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-265]C2-005	7440-38-2	Arsenic	4.0		mg/kg
NGRR-265	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-265]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-266	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-266]C2-005	7440-38-2	Arsenic	6.7		mg/kg
NGRR-266	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-266]C2-005	7439-92-1	Lead	5.8		mg/kg
NGRR-267	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-267]C2-005	7440-38-2	Arsenic	8.9		mg/kg
NGRR-267	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-267]C2-005	7439-92-1	Lead	8.0		mg/kg
NGRR-268	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-268]C2-005	7440-38-2	Arsenic	9.5		mg/kg
NGRR-268	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-268]C2-005	7439-92-1	Lead	6.8		mg/kg
NGRR-275	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-275]C2-005	7440-38-2	Arsenic	19.0		mg/kg
NGRR-275	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-275]C2-005	7439-92-1	Lead	22.0		mg/kg
R10C33	1-1.5	03/10/04	Yes	1-R10C33_03/10/04_1	7440-38-2	Arsenic	6.8		mg/kg
R10C33	1-1.5	03/10/04	Yes	1-R10C33_03/10/04_1	7439-92-1	Lead	7.0		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R10C34	1-1.5	03/10/04	Yes	1-R10C34_03/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R10C34	1-1.5	03/10/04	Yes	1-R10C34_03/10/04_1	7439-92-1	Lead	6.5		mg/kg
R10C35	1-1.5	03/10/04	Yes	1-R10C35_03/10/04_1	7440-38-2	Arsenic	10.3		mg/kg
R10C35	1-1.5	03/10/04	Yes	1-R10C35_03/10/04_1	7439-92-1	Lead	6.6		mg/kg
R10C36	1-1.5	03/10/04	Yes	1-R10C36_03/10/04_1	7440-38-2	Arsenic	13.2		mg/kg
R10C36	1-1.5	03/10/04	Yes	1-R10C36_03/10/04_1	7439-92-1	Lead	17.2		mg/kg
R10C38	1-1.5	04/09/04	Yes	1-R10C38_04/09/04_1	7440-38-2	Arsenic	6.8		mg/kg
R10C38	1-1.5	04/09/04	Yes	1-R10C38_04/09/04_1	7439-92-1	Lead	33.2		mg/kg
R10C39	1-1.5	04/09/04	Yes	1-R10C39_04/09/04_1	7440-38-2	Arsenic	6.4		mg/kg
R10C39	1-1.5	04/09/04	Yes	1-R10C39_04/09/04_1	7439-92-1	Lead	37.0		mg/kg
R10C40	1-1.5	04/09/04	Yes	1-R10C40_04/09/04_1	7440-38-2	Arsenic	6.3		mg/kg
R10C40	1-1.5	04/09/04	Yes	1-R10C40_04/09/04_1	7439-92-1	Lead	10.5		mg/kg
R11C32M	1-1.5	03/18/04	Yes	01-R11C32M_03/18/04_1	7440-38-2	Arsenic	9.6		mg/kg
R11C32M	1-1.5	03/18/04	Yes	01-R11C32M_03/18/04_1	7439-92-1	Lead	6.2		mg/kg
R11C33	1-1.5	03/10/04	Yes	1-R11C33_03/10/04_1	7440-38-2	Arsenic	10.0		mg/kg
R11C33	1-1.5	03/10/04	Yes	1-R11C33_03/10/04_1	7439-92-1	Lead	7.6		mg/kg
R11C34	1-1.5	03/10/04	Yes	1-R11C34_03/10/04_1	7440-38-2	Arsenic	9.9		mg/kg
R11C34	1-1.5	03/10/04	Yes	1-R11C34_03/10/04_1	7439-92-1	Lead	11.8		mg/kg
R11C35	1-1.5	03/10/04	Yes	1-R11C35_03/10/04_1	7440-38-2	Arsenic	11.5		mg/kg
R11C35	1-1.5	03/10/04	Yes	1-R11C35_03/10/04_1	7439-92-1	Lead	10.2		mg/kg
R11C36	1-1.5	04/05/04	Yes	01-R11C36_04/05/04_1	7440-38-2	Arsenic	11.0		mg/kg
R11C36	1-1.5	04/05/04	Yes	01-R11C36_04/05/04_1	7439-92-1	Lead	14.9		mg/kg
R11C41	1-1.5	04/09/04	Yes	1-R11C41_04/09/04_1	7440-38-2	Arsenic	7.6		mg/kg
R11C41	1-1.5	04/09/04	Yes	1-R11C41_04/09/04_1	7439-92-1	Lead	6.7		mg/kg
R11C42	1-1.5	04/09/04	Yes	1-R11C42_AVG_04/09/04_1	7440-38-2	Arsenic	7.1		mg/kg
R11C42	1-1.5	04/09/04	Yes	1-R11C42_AVG_04/09/04_1	7439-92-1	Lead	5.5		mg/kg
R12C31M	1-1.5	03/18/04	Yes	01-R12C31M_03/18/04_1	7440-38-2	Arsenic	6.2		mg/kg
R12C31M	1-1.5	03/18/04	Yes	01-R12C31M_03/18/04_1	7439-92-1	Lead	5.7		mg/kg
R12C33	1-1.5	03/10/04	Yes	1-R12C33_03/10/04_1	7440-38-2	Arsenic	5.8		mg/kg
R12C33	1-1.5	03/10/04	Yes	1-R12C33_03/10/04_1	7439-92-1	Lead	3.8		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R12C34	1-1.5	03/10/04	Yes	1-R12C34_03/10/04_1	7440-38-2	Arsenic	5.2		mg/kg
R12C34	1-1.5	03/10/04	Yes	1-R12C34_03/10/04_1	7439-92-1	Lead	3.5		mg/kg
R12C35	1-1.5	03/10/04	Yes	1-R12C35_03/10/04_1	7440-38-2	Arsenic	14.6		mg/kg
R12C35	1-1.5	03/10/04	Yes	1-R12C35_03/10/04_1	7439-92-1	Lead	14.0		mg/kg
R12C36	1-1.5	04/05/04	Yes	01-R12C36_04/05/04_1	7440-38-2	Arsenic	56.6		mg/kg
R12C36	1-1.5	04/05/04	Yes	01-R12C36_04/05/04_1	7439-92-1	Lead	22.7		mg/kg
R12C37	1-1.5	03/10/04	Yes	1-R12C37_03/10/04_1	7440-38-2	Arsenic	10.3		mg/kg
R12C37	1-1.5	03/10/04	Yes	1-R12C37_03/10/04_1	7439-92-1	Lead	11.9		mg/kg
R12C39	1-1.5	03/25/04	Yes	1-R12C39_03/25/04_1	7440-38-2	Arsenic	4.2		mg/kg
R12C39	1-1.5	03/25/04	Yes	1-R12C39_03/25/04_1	7439-92-1	Lead	30.5		mg/kg
R12C40	1-1.5	03/25/04	Yes	1-R12C40_AVG_03/25/04_1	7440-38-2	Arsenic	6.0		mg/kg
R12C40	1-1.5	03/25/04	Yes	1-R12C40_AVG_03/25/04_1	7439-92-1	Lead	6.3		mg/kg
R12C41	1-1.5	03/25/04	Yes	1-R12C41_03/25/04_1	7440-38-2	Arsenic	9.1		mg/kg
R12C41	1-1.5	03/25/04	Yes	1-R12C41_03/25/04_1	7439-92-1	Lead	9.9		mg/kg
R12C42	1-1.5	03/25/04	Yes	1-R12C42_03/25/04_1	7440-38-2	Arsenic	14.7		mg/kg
R12C42	1-1.5	03/25/04	Yes	1-R12C42_03/25/04_1	7439-92-1	Lead	6.7		mg/kg
R12C43	1-1.5	04/09/04	Yes	1-R12C43_04/09/04_1	7440-38-2	Arsenic	6.2		mg/kg
R12C43	1-1.5	04/09/04	Yes	1-R12C43_04/09/04_1	7439-92-1	Lead	8.5		mg/kg
R13C30	1-1.5	03/18/04	Yes	01-R13C30_03/18/04_1	7440-38-2	Arsenic	7.2		mg/kg
R13C30	1-1.5	03/18/04	Yes	01-R13C30_03/18/04_1	7439-92-1	Lead	6.9		mg/kg
R13C32	1-1.5	03/10/04	Yes	1-R13C32_03/10/04_1	7440-38-2	Arsenic	7.4		mg/kg
R13C32	1-1.5	03/10/04	Yes	1-R13C32_03/10/04_1	7439-92-1	Lead	6.3		mg/kg
R13C33	1-1.5	03/10/04	Yes	1-R13C33_03/10/04_1	7440-38-2	Arsenic	6.7		mg/kg
R13C33	1-1.5	03/10/04	Yes	1-R13C33_03/10/04_1	7439-92-1	Lead	5.4		mg/kg
R13C35	1-1.5	04/05/04	Yes	01-R13C35_AVG_04/05/04_1	7440-38-2	Arsenic	8.9		mg/kg
R13C35	1-1.5	04/05/04	Yes	01-R13C35_AVG_04/05/04_1	7439-92-1	Lead	7.5		mg/kg
R13C36	1-1.5	04/05/04	Yes	01-R13C36_04/05/04_1	7440-38-2	Arsenic	12.8		mg/kg
R13C36	1-1.5	04/05/04	Yes	01-R13C36_04/05/04_1	7439-92-1	Lead	12.0		mg/kg
R13C37	1-1.5	04/05/04	Yes	01-R13C37_04/05/04_1	7440-38-2	Arsenic	9.2		mg/kg
R13C37	1-1.5	04/05/04	Yes	01-R13C37_04/05/04_1	7439-92-1	Lead	10.1		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R13C38	1-1.5	03/25/04	Yes	1-R13C38_03/25/04_1	7440-38-2	Arsenic	8.6		mg/kg
R13C38	1-1.5	03/25/04	Yes	1-R13C38_03/25/04_1	7439-92-1	Lead	23.2		mg/kg
R13C39	1-1.5	03/25/04	Yes	1-R13C39_03/25/04_1	7440-38-2	Arsenic	4.7		mg/kg
R13C39	1-1.5	03/25/04	Yes	1-R13C39_03/25/04_1	7439-92-1	Lead	5.0		mg/kg
R13C40	1-1.5	03/25/04	Yes	1-R13C40_03/25/04_1	7440-38-2	Arsenic	5.7		mg/kg
R13C40	1-1.5	03/25/04	Yes	1-R13C40_03/25/04_1	7439-92-1	Lead	6.1		mg/kg
R13C41	1-1.5	03/25/04	Yes	1-R13C41_03/25/04_1	7440-38-2	Arsenic	7.0		mg/kg
R13C41	1-1.5	03/25/04	Yes	1-R13C41_03/25/04_1	7439-92-1	Lead	5.9		mg/kg
R13C42	1-1.5	03/25/04	Yes	1-R13C42_03/25/04_1	7440-38-2	Arsenic	10.9		mg/kg
R13C42	1-1.5	03/25/04	Yes	1-R13C42_03/25/04_1	7439-92-1	Lead	12.0		mg/kg
R13C43	1-1.5	03/10/04	Yes	1-R13C43_03/10/04_1	7440-38-2	Arsenic	5.4		mg/kg
R13C43	1-1.5	03/10/04	Yes	1-R13C43_03/10/04_1	7439-92-1	Lead	7.3		mg/kg
R13C44	1-1.5	04/09/04	Yes	1-R13C44_04/09/04_1	7440-38-2	Arsenic	9.4		mg/kg
R13C44	1-1.5	04/09/04	Yes	1-R13C44_04/09/04_1	7439-92-1	Lead	8.6		mg/kg
R14C29M	1-1.5	03/18/04	Yes	01-R14C29M_03/18/04_1	7440-38-2	Arsenic	7.6		mg/kg
R14C29M	1-1.5	03/18/04	Yes	01-R14C29M_03/18/04_1	7439-92-1	Lead	6.2		mg/kg
R14C30	1-1.5	03/18/04	Yes	01-R14C30_03/18/04_1	7440-38-2	Arsenic	5.7		mg/kg
R14C30	1-1.5	03/18/04	Yes	01-R14C30_03/18/04_1	7439-92-1	Lead	8.0		mg/kg
R14C31	1-1.5	03/10/04	Yes	1-R14C31_03/10/04_1	7440-38-2	Arsenic	6.5		mg/kg
R14C31	1-1.5	03/10/04	Yes	1-R14C31_03/10/04_1	7439-92-1	Lead	5.1		mg/kg
R14C32	1-1.5	03/10/04	Yes	1-R14C32_03/10/04_1	7440-38-2	Arsenic	7.4		mg/kg
R14C32	1-1.5	03/10/04	Yes	1-R14C32_03/10/04_1	7439-92-1	Lead	5.4		mg/kg
R14C33	1-1.5	03/10/04	Yes	1-R14C33_03/10/04_1	7440-38-2	Arsenic	18.4		mg/kg
R14C33	1-1.5	03/10/04	Yes	1-R14C33_03/10/04_1	7439-92-1	Lead	16.8		mg/kg
R14C34	1-1.5	03/10/04	Yes	1-R14C34_03/10/04_1	7440-38-2	Arsenic	14.1		mg/kg
R14C34	1-1.5	03/10/04	Yes	1-R14C34_03/10/04_1	7439-92-1	Lead	11.9		mg/kg
R14C35	1-1.5	03/10/04	Yes	1-R14C35_03/10/04_1	7440-38-2	Arsenic	10.6		mg/kg
R14C35	1-1.5	03/10/04	Yes	1-R14C35_03/10/04_1	7439-92-1	Lead	8.7		mg/kg
R14C36	1-1.5	03/10/04	Yes	1-R14C36_03/10/04_1	7440-38-2	Arsenic	12.7		mg/kg
R14C36	1-1.5	03/10/04	Yes	1-R14C36_03/10/04_1	7439-92-1	Lead	16.6		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R14C38	1-1.5	03/25/04	Yes	1-R14C38_03/25/04_1	7440-38-2	Arsenic	7.1		mg/kg
R14C38	1-1.5	03/25/04	Yes	1-R14C38_03/25/04_1	7439-92-1	Lead	32.3		mg/kg
R14C39	1-1.5	03/25/04	Yes	1-R14C39_03/25/04_1	7440-38-2	Arsenic	4.4		mg/kg
R14C39	1-1.5	03/25/04	Yes	1-R14C39_03/25/04_1	7439-92-1	Lead	5.3		mg/kg
R14C40	1-1.5	03/25/04	Yes	1-R14C40_03/25/04_1	7440-38-2	Arsenic	5.9		mg/kg
R14C40	1-1.5	03/25/04	Yes	1-R14C40_03/25/04_1	7439-92-1	Lead	6.9		mg/kg
R14C41	1-1.5	03/25/04	Yes	1-R14C41_03/25/04_1	7440-38-2	Arsenic	5.3		mg/kg
R14C41	1-1.5	03/25/04	Yes	1-R14C41_03/25/04_1	7439-92-1	Lead	5.6		mg/kg
R14C42	1-1.5	03/25/04	Yes	1-R14C42_03/25/04_1	7440-38-2	Arsenic	5.2		mg/kg
R14C42	1-1.5	03/25/04	Yes	1-R14C42_03/25/04_1	7439-92-1	Lead	5.6		mg/kg
R14C43	1-1.5	03/10/04	Yes	1-R14C43_03/10/04_1	7440-38-2	Arsenic	9.6		mg/kg
R14C43	1-1.5	03/10/04	Yes	1-R14C43_03/10/04_1	7439-92-1	Lead	10.7		mg/kg
R14C44	1-1.5	03/10/04	Yes	1-R14C44_03/10/04_1	7440-38-2	Arsenic	9.5		mg/kg
R14C44	1-1.5	03/10/04	Yes	1-R14C44_03/10/04_1	7439-92-1	Lead	17.9		mg/kg
R14C45	1-1.5	04/09/04	Yes	1-R14C45_04/09/04_1	7440-38-2	Arsenic	10.0		mg/kg
R14C45	1-1.5	04/09/04	Yes	1-R14C45_04/09/04_1	7439-92-1	Lead	31.1		mg/kg
R15C28	1-1.5	03/23/04	Yes	01-R15C28_03/23/04_1	7440-38-2	Arsenic	6.5		mg/kg
R15C28	1-1.5	03/23/04	Yes	01-R15C28_03/23/04_1	7439-92-1	Lead	6.5		mg/kg
R15C29	1-1.5	10/21/03	Yes	01-SS-[R15C29]-C2_10/21/03_1	7440-38-2	Arsenic	6.5		mg/kg
R15C29	1-1.5	10/21/03	Yes	01-SS-[R15C29]-C2_10/21/03_1	7439-92-1	Lead	5.2		mg/kg
R15C31	1-1.5	03/10/04	Yes	1-R15C31_03/10/04_1	7440-38-2	Arsenic	7.6		mg/kg
R15C31	1-1.5	03/10/04	Yes	1-R15C31_03/10/04_1	7439-92-1	Lead	6.8		mg/kg
R15C32	1-1.5	03/10/04	Yes	1-R15C32_AVG_03/10/04_1	7440-38-2	Arsenic	6.0		mg/kg
R15C32	1-1.5	03/10/04	Yes	1-R15C32_AVG_03/10/04_1	7439-92-1	Lead	4.1		mg/kg
R15C34	1-1.5	03/19/04	Yes	01-R15C34_03/19/04_1	7440-38-2	Arsenic	19.0		mg/kg
R15C34	1-1.5	03/19/04	Yes	01-R15C34_03/19/04_1	7439-92-1	Lead	19.4		mg/kg
R15C34	1-1.5	03/10/04	Yes	1-R15C34_03/10/04_1	7440-38-2	Arsenic	16.7		mg/kg
R15C34	1-1.5	03/10/04	Yes	1-R15C34_03/10/04_1	7439-92-1	Lead	49.9		mg/kg
R15C35	1-1.5	03/10/04	Yes	1-R15C35_03/10/04_1	7440-38-2	Arsenic	7.0		mg/kg
R15C35	1-1.5	03/10/04	Yes	1-R15C35_03/10/04_1	7439-92-1	Lead	7.3		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R15C36	1-1.5	03/19/04	Yes	01-R15C36_03/19/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R15C36	1-1.5	03/19/04	Yes	01-R15C36_03/19/04_1	7439-92-1	Lead	3.9		mg/kg
R15C38	1-1.5	03/10/04	Yes	1-R15C38_03/10/04_1	7440-38-2	Arsenic	6.3		mg/kg
R15C38	1-1.5	03/10/04	Yes	1-R15C38_03/10/04_1	7439-92-1	Lead	91.6		mg/kg
R15C39	1-1.5	03/10/04	Yes	1-R15C39_03/10/04_1	7440-38-2	Arsenic	6.2		mg/kg
R15C39	1-1.5	03/10/04	Yes	1-R15C39_03/10/04_1	7439-92-1	Lead	13.6		mg/kg
R15C40	1-1.5	03/10/04	Yes	1-R15C40_03/10/04_1	7440-38-2	Arsenic	14.4		mg/kg
R15C40	1-1.5	03/10/04	Yes	1-R15C40_03/10/04_1	7439-92-1	Lead	10.8		mg/kg
R15C41	1-1.5	03/10/04	Yes	1-R15C41_03/10/04_1	7440-38-2	Arsenic	6.7		mg/kg
R15C41	1-1.5	03/10/04	Yes	1-R15C41_03/10/04_1	7439-92-1	Lead	5.6		mg/kg
R15C42	1-1.5	03/10/04	Yes	1-R15C42_03/10/04_1	7440-38-2	Arsenic	7.2		mg/kg
R15C42	1-1.5	03/10/04	Yes	1-R15C42_03/10/04_1	7439-92-1	Lead	6.3		mg/kg
R15C43	1-1.5	03/10/04	Yes	1-R15C43_03/10/04_1	7440-38-2	Arsenic	9.1		mg/kg
R15C43	1-1.5	03/10/04	Yes	1-R15C43_03/10/04_1	7439-92-1	Lead	8.5		mg/kg
R15C44	1-1.5	03/10/04	Yes	1-R15C44_03/10/04_1	7440-38-2	Arsenic	10.4		mg/kg
R15C44	1-1.5	03/10/04	Yes	1-R15C44_03/10/04_1	7439-92-1	Lead	19.1		mg/kg
R16C27M	1-1.5	03/23/04	Yes	01-R16C27M_03/23/04_1	7440-38-2	Arsenic	4.1		mg/kg
R16C27M	1-1.5	03/23/04	Yes	01-R16C27M_03/23/04_1	7439-92-1	Lead	5.4		mg/kg
R16C30	1-1.5	03/10/04	Yes	1-R16C30_03/10/04_1	7440-38-2	Arsenic	12.9		mg/kg
R16C30	1-1.5	03/10/04	Yes	1-R16C30_03/10/04_1	7439-92-1	Lead	8.7		mg/kg
R16C31	1-1.5	03/10/04	Yes	1-R16C31_03/10/04_1	7440-38-2	Arsenic	7.3		mg/kg
R16C31	1-1.5	03/10/04	Yes	1-R16C31_03/10/04_1	7439-92-1	Lead	8.4		mg/kg
R16C32	1-1.5	03/10/04	Yes	1-R16C32_03/10/04_1	7440-38-2	Arsenic	22.5		mg/kg
R16C32	1-1.5	03/10/04	Yes	1-R16C32_03/10/04_1	7439-92-1	Lead	14.2		mg/kg
R16C33	1-1.5	03/10/04	Yes	1-R16C33_03/10/04_1	7440-38-2	Arsenic	9.7		mg/kg
R16C33	1-1.5	03/10/04	Yes	1-R16C33_03/10/04_1	7439-92-1	Lead	11.5		mg/kg
R16C34	1-1.5	03/18/04	Yes	01-R16C34_03/18/04_1	7440-38-2	Arsenic	4.0		mg/kg
R16C34	1-1.5	03/18/04	Yes	01-R16C34_03/18/04_1	7439-92-1	Lead	5.1		mg/kg
R16C34	1-1.5	03/10/04	Yes	1-R16C34_03/10/04_1	7440-38-2	Arsenic	5.3		mg/kg
R16C34	1-1.5	03/10/04	Yes	1-R16C34_03/10/04_1	7439-92-1	Lead	6.0		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R16C35	1-1.5	03/10/04	Yes	1-R16C35_03/10/04_1	7440-38-2	Arsenic	4.3		mg/kg
R16C35	1-1.5	03/10/04	Yes	1-R16C35_03/10/04_1	7439-92-1	Lead	9.2		mg/kg
R16C36	1-1.5	03/18/04	Yes	01-R16C36_03/18/04_1	7440-38-2	Arsenic	4.5		mg/kg
R16C36	1-1.5	03/18/04	Yes	01-R16C36_03/18/04_1	7439-92-1	Lead	9.3		mg/kg
R16C38	1-1.5	03/10/04	Yes	1-R16C38_03/10/04_1	7440-38-2	Arsenic	8.1		mg/kg
R16C38	1-1.5	03/10/04	Yes	1-R16C38_03/10/04_1	7439-92-1	Lead	11.2		mg/kg
R16C39	1-1.5	03/10/04	Yes	1-R16C39_03/10/04_1	7440-38-2	Arsenic	6.9		mg/kg
R16C39	1-1.5	03/10/04	Yes	1-R16C39_03/10/04_1	7439-92-1	Lead	13.6		mg/kg
R16C40	1-1.5	03/10/04	Yes	1-R16C40_AVG_03/10/04_1	7440-38-2	Arsenic	8.0		mg/kg
R16C40	1-1.5	03/10/04	Yes	1-R16C40_AVG_03/10/04_1	7439-92-1	Lead	16.0		mg/kg
R16C41	1-1.5	03/10/04	Yes	1-R16C41_03/10/04_1	7440-38-2	Arsenic	8.6		mg/kg
R16C41	1-1.5	03/10/04	Yes	1-R16C41_03/10/04_1	7439-92-1	Lead	14.1		mg/kg
R16C42	1-1.5	03/10/04	Yes	1-R16C42_03/10/04_1	7440-38-2	Arsenic	9.7		mg/kg
R16C42	1-1.5	03/10/04	Yes	1-R16C42_03/10/04_1	7439-92-1	Lead	9.1		mg/kg
R17C26	1-1.5	03/23/04	Yes	01-R17C26_AVG_03/23/04_1	7440-38-2	Arsenic	5.0		mg/kg
R17C26	1-1.5	03/23/04	Yes	01-R17C26_AVG_03/23/04_1	7439-92-1	Lead	7.4		mg/kg
R17C27	1-1.5	03/30/04	Yes	01-R17C27_03/30/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R17C27	1-1.5	03/30/04	Yes	01-R17C27_03/30/04_1	7439-92-1	Lead	3.3		mg/kg
R17C29	1-1.5	03/10/04	Yes	1-R17C29_03/10/04_1	7440-38-2	Arsenic	15.4		mg/kg
R17C29	1-1.5	03/10/04	Yes	1-R17C29_03/10/04_1	7439-92-1	Lead	14.1		mg/kg
R17C30	1-1.5	03/10/04	Yes	1-R17C30_03/10/04_1	7440-38-2	Arsenic	9.1		mg/kg
R17C30	1-1.5	03/10/04	Yes	1-R17C30_03/10/04_1	7439-92-1	Lead	6.2		mg/kg
R17C31	1-1.5	03/10/04	Yes	1-R17C31_03/10/04_1	7440-38-2	Arsenic	8.2		mg/kg
R17C31	1-1.5	03/10/04	Yes	1-R17C31_03/10/04_1	7439-92-1	Lead	9.6		mg/kg
R17C33	1-1.5	03/18/04	Yes	01-R17C33_03/18/04_1	7440-38-2	Arsenic	8.6		mg/kg
R17C33	1-1.5	03/18/04	Yes	01-R17C33_03/18/04_1	7439-92-1	Lead	7.8		mg/kg
R17C34	1-1.5	03/18/04	Yes	01-R17C34_03/18/04_1	7440-38-2	Arsenic	5.6		mg/kg
R17C34	1-1.5	03/18/04	Yes	01-R17C34_03/18/04_1	7439-92-1	Lead	17.6		mg/kg
R17C35	1-1.5	03/18/04	Yes	01-R17C35_03/18/04_1	7440-38-2	Arsenic	7.8		mg/kg
R17C35	1-1.5	03/18/04	Yes	01-R17C35_03/18/04_1	7439-92-1	Lead	43.9		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R17C36	1-1.5	03/18/04	Yes	01-R17C36_03/18/04_1	7440-38-2	Arsenic	6.6		mg/kg
R17C36	1-1.5	03/18/04	Yes	01-R17C36_03/18/04_1	7439-92-1	Lead	25.4		mg/kg
R17C37	1-1.5	03/25/04	No	1-R17C37_03/25/04_1	7440-38-2	Arsenic	9.9		mg/kg
R17C37	2-2.5	04/09/04	Yes	2-R17C37_04/09/04_2	7439-92-1	Lead	60.9		mg/kg
R17C39	1-1.5	03/25/04	Yes	1-R17C39_03/25/04_1	7440-38-2	Arsenic	8.7		mg/kg
R17C39	1-1.5	03/25/04	Yes	1-R17C39_03/25/04_1	7439-92-1	Lead	13.7		mg/kg
R17C40	1-1.5	03/25/04	Yes	1-R17C40_03/25/04_1	7440-38-2	Arsenic	8.9		mg/kg
R17C40	1-1.5	03/25/04	Yes	1-R17C40_03/25/04_1	7439-92-1	Lead	26.6		mg/kg
R17C41	1-1.5	03/25/04	Yes	1-R17C41_03/25/04_1	7440-38-2	Arsenic	7.8		mg/kg
R17C41	1-1.5	03/25/04	Yes	1-R17C41_03/25/04_1	7439-92-1	Lead	21.5		mg/kg
R18C25M	1-1.5	03/23/04	Yes	01-R18C25M_03/23/04_1	7440-38-2	Arsenic	9.4		mg/kg
R18C25M	1-1.5	03/23/04	Yes	01-R18C25M_03/23/04_1	7439-92-1	Lead	12.7		mg/kg
R18C26	1-1.5	03/30/04	Yes	01-R18C26_03/30/04_1	7440-38-2	Arsenic	0.9	U	mg/kg
R18C26	1-1.5	03/30/04	Yes	01-R18C26_03/30/04_1	7439-92-1	Lead	3.7		mg/kg
R18C27	1-1.5	03/30/04	Yes	01-R18C27_03/30/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R18C27	1-1.5	03/30/04	Yes	01-R18C27_03/30/04_1	7439-92-1	Lead	5.2		mg/kg
R18C29	1-1.5	03/10/04	Yes	1-R18C29_03/10/04_1	7440-38-2	Arsenic	6.1		mg/kg
R18C29	1-1.5	03/10/04	Yes	1-R18C29_03/10/04_1	7439-92-1	Lead	4.2		mg/kg
R18C30	1-1.5	03/10/04	Yes	1-R18C30_03/10/04_1	7440-38-2	Arsenic	11.9		mg/kg
R18C30	1-1.5	03/10/04	Yes	1-R18C30_03/10/04_1	7439-92-1	Lead	24.2		mg/kg
R18C31	1-1.5	03/10/04	Yes	1-R18C31_AVG_03/10/04_1	7440-38-2	Arsenic	11.1		mg/kg
R18C31	1-1.5	03/10/04	Yes	1-R18C31_AVG_03/10/04_1	7439-92-1	Lead	47.7		mg/kg
R18C33	1-1.5	03/19/04	Yes	01-R18C33_03/19/04_1	7440-38-2	Arsenic	3.8		mg/kg
R18C33	1-1.5	03/19/04	Yes	01-R18C33_03/19/04_1	7439-92-1	Lead	17.2		mg/kg
R18C34	1-1.5	03/19/04	Yes	01-R18C34_AVG_03/19/04_1	7440-38-2	Arsenic	19.4		mg/kg
R18C34	1-1.5	03/19/04	Yes	01-R18C34_AVG_03/19/04_1	7439-92-1	Lead	13.7		mg/kg
R18C35	1-1.5	03/19/04	Yes	01-R18C35_03/19/04_1	7440-38-2	Arsenic	4.6		mg/kg
R18C35	1-1.5	03/19/04	Yes	01-R18C35_03/19/04_1	7439-92-1	Lead	45.8		mg/kg
R18C36	1-1.5	03/19/04	Yes	01-R18C36_03/19/04_1	7440-38-2	Arsenic	1.4		mg/kg
R18C36	1-1.5	03/19/04	Yes	01-R18C36_03/19/04_1	7439-92-1	Lead	58.1		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R18C39	1-1.5	11/14/03	Yes	01-SS-[R18C39]-C2_11/14/03_1	7440-38-2	Arsenic	11.3		mg/kg
R18C39	1-1.5	11/14/03	Yes	01-SS-[R18C39]-C2_11/14/03_1	7439-92-1	Lead	22.4		mg/kg
R18C40	1-1.5	11/14/03	Yes	01-SS-[R18C40]-C2_11/14/03_1	7440-38-2	Arsenic	9.1		mg/kg
R18C40	1-1.5	11/14/03	Yes	01-SS-[R18C40]-C2_11/14/03_1	7439-92-1	Lead	77.4		mg/kg
R18C41	1-1.5	11/14/03	Yes	01-SS-[R18C41]-C2_11/14/03_1	7440-38-2	Arsenic	8.5		mg/kg
R18C41	1-1.5	11/14/03	Yes	01-SS-[R18C41]-C2_11/14/03_1	7439-92-1	Lead	37.4		mg/kg
R19C26	1-1.5	03/30/04	Yes	01-R19C26_AVG_03/30/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R19C26	1-1.5	03/30/04	Yes	01-R19C26_AVG_03/30/04_1	7439-92-1	Lead	4.4		mg/kg
R19C28	1-1.5	03/10/04	Yes	1-R19C28_03/10/04_1	7440-38-2	Arsenic	8.9		mg/kg
R19C28	1-1.5	03/10/04	Yes	1-R19C28_03/10/04_1	7439-92-1	Lead	11.3		mg/kg
R19C29	1-1.5	03/10/04	Yes	1-R19C29_03/10/04_1	7440-38-2	Arsenic	6.3		mg/kg
R19C29	1-1.5	03/10/04	Yes	1-R19C29_03/10/04_1	7439-92-1	Lead	5.5		mg/kg
R19C30	1-1.5	03/10/04	Yes	1-R19C30_03/10/04_1	7440-38-2	Arsenic	7.6		mg/kg
R19C30	1-1.5	03/10/04	Yes	1-R19C30_03/10/04_1	7439-92-1	Lead	10.4		mg/kg
R19C31	1-1.5	03/10/04	Yes	1-R19C31_03/10/04_1	7440-38-2	Arsenic	10.7		mg/kg
R19C31	1-1.5	03/10/04	Yes	1-R19C31_03/10/04_1	7439-92-1	Lead	9.9		mg/kg
R19C32	1-1.5	03/19/04	Yes	01-R19C32_03/19/04_1	7440-38-2	Arsenic	23.2		mg/kg
R19C32	1-1.5	03/19/04	Yes	01-R19C32_03/19/04_1	7439-92-1	Lead	9.8		mg/kg
R19C33	1-1.5	03/19/04	Yes	01-R19C33_03/19/04_1	7440-38-2	Arsenic	5.2		mg/kg
R19C33	1-1.5	03/19/04	Yes	01-R19C33_03/19/04_1	7439-92-1	Lead	8.9		mg/kg
R19C34	1-1.5	03/18/04	No	01-R19C34_03/18/04_1	7440-38-2	Arsenic	9.5		mg/kg
R19C34	2-2.5	04/09/04	Yes	2-R19C34_04/09/04_2	7439-92-1	Lead	68.1		mg/kg
R19C40	1-1.5	11/14/03	Yes	01-SS-[R19C40]-C2_11/14/03_1	7440-38-2	Arsenic	43.9		mg/kg
R19C40	1-1.5	11/14/03	Yes	01-SS-[R19C40]-C2_11/14/03_1	7439-92-1	Lead	104.0		mg/kg
R20C28	1-1.5	03/10/04	Yes	1-R20C28_03/10/04_1	7440-38-2	Arsenic	7.0		mg/kg
R20C28	1-1.5	03/10/04	Yes	1-R20C28_03/10/04_1	7439-92-1	Lead	7.4		mg/kg
R20C29	1-1.5	03/10/04	Yes	1-R20C29_AVG_03/10/04_1	7440-38-2	Arsenic	9.2		mg/kg
R20C29	1-1.5	03/10/04	Yes	1-R20C29_AVG_03/10/04_1	7439-92-1	Lead	17.1		mg/kg
R20C30	1-1.5	03/10/04	Yes	1-R20C30_03/10/04_1	7440-38-2	Arsenic	7.9		mg/kg
R20C30	1-1.5	03/10/04	Yes	1-R20C30_03/10/04_1	7439-92-1	Lead	9.0		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R20C31	1-1.5	03/10/04	Yes	1-R20C31_03/10/04_1	7440-38-2	Arsenic	11.1		mg/kg
R20C31	1-1.5	03/10/04	Yes	1-R20C31_03/10/04_1	7439-92-1	Lead	12.0		mg/kg
R20C32	1-1.5	04/05/04	Yes	01-R20C32_04/05/04_1	7440-38-2	Arsenic	9.6		mg/kg
R20C32	1-1.5	04/05/04	Yes	01-R20C32_04/05/04_1	7439-92-1	Lead	27.8		mg/kg
R20C38	1-1.5	11/26/03	No	01-SS-[R20C38]-C2_11/26/03_1	7440-38-2	Arsenic	11.4		mg/kg
R20C38	2-2.5	12/12/03	Yes	02-SS-[R20C38]-C2_12/12/03_2	7439-92-1	Lead	31.7		mg/kg
R20C40	1-1.5	11/14/03	Yes	01-SS-[R20C40]-C2_11/14/03_1	7440-38-2	Arsenic	23.7		mg/kg
R20C40	1-1.5	11/14/03	Yes	01-SS-[R20C40]-C2_11/14/03_1	7439-92-1	Lead	109.0		mg/kg
R21C36	1-1.5	11/26/03	Yes	01-SS-[R21C36]-C2_11/26/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R21C36	1-1.5	11/26/03	Yes	01-SS-[R21C36]-C2_11/26/03_1	7439-92-1	Lead	95.3		mg/kg
R22C37	1-1.5	11/26/03	Yes	01-SS-[R22C37]-C2_11/26/03_1	7440-38-2	Arsenic	5.8		mg/kg
R22C37	1-1.5	11/26/03	Yes	01-SS-[R22C37]-C2_11/26/03_1	7439-92-1	Lead	64.8		mg/kg
R8C35M	1-1.5	03/10/04	Yes	1-R8C35M_03/10/04_1	7440-38-2	Arsenic	17.2		mg/kg
R8C35M	1-1.5	03/10/04	Yes	1-R8C35M_03/10/04_1	7439-92-1	Lead	6.5		mg/kg
R8C37	1-1.5	04/09/04	Yes	1-R8C37_04/09/04_1	7440-38-2	Arsenic	23.3		mg/kg
R8C37	1-1.5	04/09/04	Yes	1-R8C37_04/09/04_1	7439-92-1	Lead	59.9		mg/kg
R9C34M	1-1.5	03/10/04	Yes	1-R9C34M_03/10/04_1	7440-38-2	Arsenic	5.8		mg/kg
R9C34M	1-1.5	03/10/04	Yes	1-R9C34M_03/10/04_2	7439-92-1	Lead	4.3		mg/kg
R9C35	1-1.5	03/10/04	Yes	1-R9C35_AVG_03/10/04_1	7440-38-2	Arsenic	16.1		mg/kg
R9C35	1-1.5	03/10/04	Yes	1-R9C35_AVG_03/10/04_1	7439-92-1	Lead	14.3		mg/kg
R9C36	1-1.5	03/10/04	Yes	1-R9C36_03/10/04_1	7440-38-2	Arsenic	13.2		mg/kg
R9C36	1-1.5	03/10/04	Yes	1-R9C36_03/10/04_1	7439-92-1	Lead	15.0		mg/kg
R9C37	1-1.5	03/10/04	Yes	1-R9C37_03/10/04_1	7440-38-2	Arsenic	12.3		mg/kg
R9C37	1-1.5	03/10/04	Yes	1-R9C37_03/10/04_1	7439-92-1	Lead	17.4		mg/kg
R9C38	1-1.5	04/09/04	Yes	1-R9C38_04/09/04_1	7440-38-2	Arsenic	9.6		mg/kg
R9C38	1-1.5	04/09/04	Yes	1-R9C38_04/09/04_1	7439-92-1	Lead	18.0		mg/kg
R9C39	1-1.5	04/09/04	Yes	1-R9C39_04/09/04_1	7440-38-2	Arsenic	6.5		mg/kg
R9C39	1-1.5	04/09/04	Yes	1-R9C39_04/09/04_1	7439-92-1	Lead	5.8		mg/kg
SA1-29-48	3-3.5	10/14/99	Yes	SA1-29-48	7440-38-2	Arsenic	2.2		mg/kg
SA1-29-48	3-3.5	10/14/99	Yes	SA1-29-48	7439-92-1	Lead	12.0		mg/kg

Table B.1-A
Sample Results for CM-01A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA1-30-48	3-3.5	10/14/99	Yes	SA1-30-48	7440-38-2	Arsenic	4.2		mg/kg
SA1-30-48	3-3.5	10/14/99	Yes	SA1-30-48	7439-92-1	Lead	46.0		mg/kg
SA1-30-49	3-3.5	10/14/99	Yes	SA1-30-49	7440-38-2	Arsenic	2.1	U	mg/kg
SA1-30-49	3-3.5	10/14/99	Yes	SA1-30-49	7439-92-1	Lead	26.0		mg/kg
SA1-30-51	3-3.5	10/14/99	Yes	SA1-30-51	7440-38-2	Arsenic	37.0		mg/kg
SA1-30-51	3-3.5	10/14/99	Yes	SA1-30-51	7439-92-1	Lead	61.0		mg/kg
SA1-31-48	3-3.5	10/14/99	Yes	SA1-31-48	7440-38-2	Arsenic	1.9	U	mg/kg
SA1-31-48	3-3.5	10/14/99	Yes	SA1-31-48	7439-92-1	Lead	1.4		mg/kg
SA1-31-49	3-3.5	10/14/99	Yes	SA1-31-49	7440-38-2	Arsenic	2.1	U	mg/kg
SA1-31-49	3-3.5	10/14/99	Yes	SA1-31-49	7439-92-1	Lead	17.0		mg/kg
SA1-32-49	3-3.5	10/14/99	Yes	SA1-32-49	7440-38-2	Arsenic	3.4		mg/kg
SA1-32-49	3-3.5	10/14/99	Yes	SA1-32-49	7439-92-1	Lead	41.0		mg/kg
SA1-32-51	3-3.5	10/14/99	Yes	SA1-32-51	7440-38-2	Arsenic	3.2		mg/kg
SA1-32-51	3-3.5	10/14/99	Yes	SA1-32-51	7439-92-1	Lead	100.0		mg/kg
SLA-1	1-1.5	07/02/03	Yes	01-SS-[SLA-1]-C1_07/02/03_1	7440-38-2	Arsenic	3.0		mg/kg
SLA-1	1-1.5	07/02/03	Yes	01-SS-[SLA-1]-C1_07/02/03_1	7439-92-1	Lead	5.0		mg/kg
SLA-2	1-1.5	07/02/03	Yes	01-SS-[SLA-2]-C1_07/02/03_1	7440-38-2	Arsenic	2.9		mg/kg
SLA-2	1-1.5	07/02/03	Yes	01-SS-[SLA-2]-C1_07/02/03_1	7439-92-1	Lead	4.5		mg/kg
SLA-3	1-1.5	07/02/03	Yes	01-SS-[SLA-3]-C1_07/02/03_1	7440-38-2	Arsenic	3.0		mg/kg
SLA-3	1-1.5	07/02/03	Yes	01-SS-[SLA-3]-C1_07/02/03_1	7439-92-1	Lead	4.3		mg/kg
WR-LD-2	1-1.5	04/23/03	Yes	01-SS-[WR-LD-2]-C1_04/23/03_1	7440-38-2	Arsenic	3.7		mg/kg
WR-LD-2	1-1.5	04/23/03	Yes	01-SS-[WR-LD-2]-C1_04/23/03_1	7439-92-1	Lead	16.7		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-514	0-0.5	03/04/92	Yes	18-SS-514	7439-92-1	Lead	87.0		mg/kg
18-SS-703	0-0.5	11/03/92	Yes	18-SS-703	7439-92-1	Lead	42.0		mg/kg
18-SS-871	0-0.5	04/05/93	Yes	18-SS-871	7439-92-1	Lead	54.0		mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	7440-38-2	Arsenic	2.3		mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	7440-50-8	Copper	11.0		mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	7439-92-1	Lead	5.5	U	mg/kg
18-TP-502	3-6	05/01/92	Yes	18-TP-502-S-2	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-502	8-10	05/01/92	Yes	18-TP-502-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-502	8-10	05/01/92	Yes	18-TP-502-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-502	8-10	05/01/92	Yes	18-TP-502-S-3	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-502	8-10	05/01/92	Yes	18-TP-502-S-3	7439-92-1	Lead	5.0	U	mg/kg
25-TP-510	0-1	04/22/92	Yes	25-TP-510-S-1	7440-38-2	Arsenic	9.9		mg/kg
25-TP-510	0-1	04/22/92	Yes	25-TP-510-S-1	7440-50-8	Copper	12.0		mg/kg
25-TP-510	0-1	04/22/92	Yes	25-TP-510-S-1	7439-92-1	Lead	6.4	U	mg/kg
25-TP-510	0-1	04/22/92	Yes	25-TP-510-S-1	7439-97-6	Mercury	0.1	UJ	mg/kg
25-TP-510	3-6	04/22/92	Yes	25-TP-510-S-2	7440-38-2	Arsenic	1.9		mg/kg
25-TP-510	3-6	04/22/92	Yes	25-TP-510-S-2	7440-50-8	Copper	10.0		mg/kg
25-TP-510	3-6	04/22/92	Yes	25-TP-510-S-2	7439-92-1	Lead	5.3	U	mg/kg
25-TP-510	3-6	04/22/92	Yes	25-TP-510-S-2	7439-97-6	Mercury	0.07	UJ	mg/kg
26-TP-509	3-6	03/24/92	Yes	26-TP-509-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-509	3-6	03/24/92	Yes	26-TP-509-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-509	3-6	03/24/92	Yes	26-TP-509-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-509	3-6	03/24/92	Yes	26-TP-509-S-2	7439-92-1	Lead	5.5	U	mg/kg
26-TP-509	8-10	03/24/92	Yes	26-TP-509-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-509	8-10	03/24/92	Yes	26-TP-509-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-509	8-10	03/24/92	Yes	26-TP-509-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-509	8-10	03/24/92	Yes	26-TP-509-S-3	7439-92-1	Lead	22.0		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-TP-520	0-1	06/30/92	Yes	26-TP-520-S-1	7439-92-1	Lead	29.0		mg/kg
26-TP-520	1-2	06/30/92	Yes	26-TP-520-S-2	7439-92-1	Lead	7.2		mg/kg
APA-TP-501	0-1	05/27/92	Yes	APA-TP-501-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
APA-TP-501	0-1	05/27/92	Yes	APA-TP-501-S-1-DAVG	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
APA-TP-501	0-1	05/27/92	Yes	APA-TP-501-S-1-DAVG	98-95-3	Nitrobenzene	0.1	U	mg/kg
APA-TP-501	3-5	05/27/92	Yes	APA-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
APA-TP-501	3-5	05/27/92	Yes	APA-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
APA-TP-501	3-5	05/27/92	Yes	APA-TP-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
APB-TP-502	0-1	05/27/92	Yes	APB-TP-502-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
APB-TP-502	0-1	05/27/92	Yes	APB-TP-502-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
APB-TP-502	0-1	05/27/92	Yes	APB-TP-502-S-1	98-95-3	Nitrobenzene	0.06	U	mg/kg
APB-TP-502	3-5	05/27/92	Yes	APB-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
APB-TP-502	3-5	05/27/92	Yes	APB-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
APB-TP-502	3-5	05/27/92	Yes	APB-TP-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
APC-PS-VS-04	0.5-1	12/11/98	Yes	APC-PS-VS-04-01	7440-38-2	Arsenic	6.6		mg/kg
APC-PS-VS-04	0.5-1	12/11/98	Yes	APC-PS-VS-04-01	7439-92-1	Lead	18.0		mg/kg
APC-PS-VS-04	1-2.2	12/11/98	Yes	APC-PS-VS-04-02	7440-38-2	Arsenic	3.4		mg/kg
APC-PS-VS-04	1-2.2	12/11/98	Yes	APC-PS-VS-04-02	7439-92-1	Lead	3.8		mg/kg
APC-PS-VS-04	1-1.9	12/11/98	Yes	APC-PS-VS-04-03	7440-38-2	Arsenic	4.2		mg/kg
APC-PS-VS-04	1-1.9	12/11/98	Yes	APC-PS-VS-04-03	7439-92-1	Lead	7.6		mg/kg
APC-PS-VS-04	1-2.2	12/11/98	Yes	APC-PS-VS-04-04	7440-38-2	Arsenic	9.2		mg/kg
APC-PS-VS-04	1-2.2	12/11/98	Yes	APC-PS-VS-04-04	7439-92-1	Lead	17.0		mg/kg
APC-PS-VS-04	0.8-1.3	12/11/98	Yes	APC-PS-VS-04-06	7440-38-2	Arsenic	3.1		mg/kg
APC-PS-VS-04	0.8-1.3	12/11/98	Yes	APC-PS-VS-04-06	7439-92-1	Lead	8.0		mg/kg
APC-PS-VS-04	1-1.6	12/11/98	Yes	APC-PS-VS-04-07	7440-38-2	Arsenic	4.5		mg/kg
APC-PS-VS-04	1-1.6	12/11/98	Yes	APC-PS-VS-04-07	7439-92-1	Lead	48.0		mg/kg
APC-PS-VS-04	0.8-1.3	12/11/98	Yes	APC-PS-VS-04-09	7440-38-2	Arsenic	4.2		mg/kg
APC-PS-VS-04	0.8-1.3	12/11/98	Yes	APC-PS-VS-04-09	7439-92-1	Lead	6.2		mg/kg
APC-PS-VS-04	1-1.5	12/11/98	Yes	APC-PS-VS-04-10	7440-38-2	Arsenic	3.8		mg/kg
APC-PS-VS-04	1-1.5	12/11/98	Yes	APC-PS-VS-04-10	7439-92-1	Lead	3.1		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
APC-TP-502	3-6	11/03/92	Yes	APC-TP-502-S-3	7440-38-2	Arsenic	3.1	J	mg/kg
APC-TP-502	3-6	11/03/92	Yes	APC-TP-502-S-3	7439-92-1	Lead	5.1	UJ	mg/kg
APC-TP-502	3-6	11/03/92	Yes	APC-TP-502-S-3	7439-97-6	Mercury	0.09	U	mg/kg
AS-LD-1	1-1.5	04/23/03	Yes	01-SS-[AS-LD-1]-C1_04/23/03_1	7440-38-2	Arsenic	2.7		mg/kg
AS-LD-1	1-1.5	04/23/03	Yes	01-SS-[AS-LD-1]-C1_04/23/03_1	7439-92-1	Lead	3.4		mg/kg
AS-LD-2	1-1.5	04/23/03	Yes	01-SS-[AS-LD-2]-C1_04/23/03_1	7440-38-2	Arsenic	6.4		mg/kg
AS-LD-2	1-1.5	04/23/03	Yes	01-SS-[AS-LD-2]-C1_04/23/03_1	7439-92-1	Lead	8.6		mg/kg
AS-LD-3	1-1.5	04/23/03	Yes	01-SS-[AS-LD-3]-C1_04/23/03_1	7440-38-2	Arsenic	3.1		mg/kg
AS-LD-3	1-1.5	04/23/03	Yes	01-SS-[AS-LD-3]-C1_04/23/03_1	7439-92-1	Lead	3.9		mg/kg
F-01	2-2.5	06/06/01	Yes	01-F08-SS[F-01] C2-005-DAVG	7440-38-2	Arsenic	3.9		mg/kg
F-01	2-2.5	06/06/01	Yes	01-F08-SS[F-01] C2-005-DAVG	7439-92-1	Lead	3.5		mg/kg
F-03	2-2.5	06/06/01	Yes	01-F08-SS[F-03] C2-005	7440-38-2	Arsenic	3.3		mg/kg
F-03	2-2.5	06/06/01	Yes	01-F08-SS[F-03] C2-005	7439-92-1	Lead	3.9		mg/kg
F-04	2-2.5	06/06/01	Yes	01-F08-SS[F-04] C2-005	7440-38-2	Arsenic	2.5		mg/kg
F-04	2-2.5	06/06/01	Yes	01-F08-SS[F-04] C2-005	7439-92-1	Lead	2.2		mg/kg
F-05	2-2.5	06/06/01	Yes	01-F08-SS[F-05] C2-005	7440-38-2	Arsenic	3.1		mg/kg
F-05	2-2.5	06/06/01	Yes	01-F08-SS[F-05] C2-005	7439-92-1	Lead	2.7		mg/kg
F-06	2-2.5	06/06/01	Yes	01-F08-SS[F-06] C2-005	7440-38-2	Arsenic	2.6		mg/kg
F-06	2-2.5	06/06/01	Yes	01-F08-SS[F-06] C2-005	7439-92-1	Lead	3.9		mg/kg
F-07	2-2.5	06/06/01	Yes	01-F08-SS[F-07] C2-005	7440-38-2	Arsenic	5.0		mg/kg
F-07	2-2.5	06/06/01	Yes	01-F08-SS[F-07] C2-005	7439-92-1	Lead	75.0		mg/kg
F-09	2-2.5	06/06/01	Yes	01-F08-SS[F-09] C2-005	7440-38-2	Arsenic	3.5		mg/kg
F-09	2-2.5	06/06/01	Yes	01-F08-SS[F-09] C2-005	7439-92-1	Lead	3.3		mg/kg
F-10	2-2.5	06/06/01	Yes	01-F08-SS[F-10] C2-005	7440-38-2	Arsenic	3.9		mg/kg
F-10	2-2.5	06/06/01	Yes	01-F08-SS[F-10] C2-005	7439-92-1	Lead	4.4		mg/kg
F-11	2-2.5	06/06/01	Yes	01-F08-SS[F-11] C2-005	7440-38-2	Arsenic	3.8		mg/kg
F-11	2-2.5	06/06/01	Yes	01-F08-SS[F-11] C2-005	7439-92-1	Lead	2.4		mg/kg
F-12	2-2.5	06/06/01	Yes	01-F08-SS[F-12] C2-005	7440-38-2	Arsenic	2.6		mg/kg
F-12	2-2.5	06/06/01	Yes	01-F08-SS[F-12] C2-005	7439-92-1	Lead	4.5		mg/kg
F-13	2-2.5	06/06/01	Yes	01-F08-SS[F-13] C2-005	7440-38-2	Arsenic	4.6		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-13	2-2.5	06/06/01	Yes	01-F08-SS[F-13] C2-005	7439-92-1	Lead	14.0		mg/kg
F-14	2-2.5	06/06/01	Yes	01-F08-SS[F-14] C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-14	2-2.5	06/06/01	Yes	01-F08-SS[F-14] C2-005	7439-92-1	Lead	13.0		mg/kg
F-15	2-2.5	06/06/01	Yes	01-F08-SS[F-15] C2-005	7440-38-2	Arsenic	3.2		mg/kg
F-15	2-2.5	06/06/01	Yes	01-F08-SS[F-15] C2-005	7439-92-1	Lead	7.0		mg/kg
F-16	2-2.5	06/06/01	Yes	01-F08-SS[F-16] C2-005	7440-38-2	Arsenic	3.1		mg/kg
F-16	2-2.5	06/06/01	Yes	01-F08-SS[F-16] C2-005	7439-92-1	Lead	3.5		mg/kg
F-17	2-2.5	06/06/01	Yes	01-F08-SS[F-17] C2-005-DAVG	7440-38-2	Arsenic	3.1		mg/kg
F-17	2-2.5	06/06/01	Yes	01-F08-SS[F-17] C2-005-DAVG	7439-92-1	Lead	2.6		mg/kg
F-177	2-2.5	07/19/01	Yes	01-F10-SS[F-177]C2-005	7440-38-2	Arsenic	2.4		mg/kg
F-177	2-2.5	07/19/01	Yes	01-F10-SS[F-177]C2-005	7439-92-1	Lead	4.5		mg/kg
F-178	2-2.5	07/19/01	Yes	01-F10-SS[F-178]C2-005	7440-38-2	Arsenic	11.0		mg/kg
F-178	2-2.5	07/19/01	Yes	01-F10-SS[F-178]C2-005	7439-92-1	Lead	98.0		mg/kg
F-179	2-2.5	07/19/01	Yes	01-F10-SS[F-179]C2-005	7440-38-2	Arsenic	5.5		mg/kg
F-179	2-2.5	07/19/01	Yes	01-F10-SS[F-179]C2-005	7439-92-1	Lead	89.0		mg/kg
F-180	2-2.5	07/19/01	Yes	01-F10-SS[F-180]C2-005	7440-38-2	Arsenic	10.0		mg/kg
F-180	2-2.5	07/19/01	Yes	01-F10-SS[F-180]C2-005	7439-92-1	Lead	60.0		mg/kg
F-181	2-2.5	07/19/01	Yes	01-F10-SS[F-181]C2-005	7440-38-2	Arsenic	12.0		mg/kg
F-181	2-2.5	07/19/01	Yes	01-F10-SS[F-181]C2-005	7439-92-1	Lead	16.0		mg/kg
F-182	2-2.5	07/19/01	Yes	01-F10-SS[F-182]C2-005	7440-38-2	Arsenic	4.6		mg/kg
F-182	2-2.5	07/19/01	Yes	01-F10-SS[F-182]C2-005	7439-92-1	Lead	18.0		mg/kg
F-20	2-2.5	06/07/01	Yes	01-F07-SS[F-20]C2-005	7440-38-2	Arsenic	2.8		mg/kg
F-20	2-2.5	06/07/01	Yes	01-F07-SS[F-20]C2-005	7439-92-1	Lead	2.3		mg/kg
F-21	2-2.5	06/07/01	Yes	01-F07-SS[F-21]C2-005	7440-38-2	Arsenic	2.7		mg/kg
F-21	2-2.5	06/07/01	Yes	01-F07-SS[F-21]C2-005	7439-92-1	Lead	2.5		mg/kg
F-22	2-2.5	06/07/01	Yes	01-F07-SS[F-22]C2-005	7440-38-2	Arsenic	2.5		mg/kg
F-22	2-2.5	06/07/01	Yes	01-F07-SS[F-22]C2-005	7439-92-1	Lead	2.3		mg/kg
F-23	2-2.5	06/07/01	Yes	01-F07-SS[F-23]C2-005	7440-38-2	Arsenic	2.0	U	mg/kg
F-23	2-2.5	06/07/01	Yes	01-F07-SS[F-23]C2-005	7439-92-1	Lead	2.1		mg/kg
F-24	2-2.5	06/07/01	Yes	01-F07-SS[F-24]C2-005	7440-38-2	Arsenic	3.4		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-24	2-2.5	06/07/01	Yes	01-F07-SS[F-24]C2-005	7439-92-1	Lead	2.3		mg/kg
F-241	2-2.5	08/14/01	Yes	01-F35-SS[F-241]C2-005	7440-38-2	Arsenic	6.0		mg/kg
F-241	2-2.5	08/14/01	Yes	01-F35-SS[F-241]C2-005	7439-92-1	Lead	12.0		mg/kg
F-242	2-2.5	08/14/01	Yes	01-F35-SS[F-242]C2-005	7440-38-2	Arsenic	8.3		mg/kg
F-242	2-2.5	08/14/01	Yes	01-F35-SS[F-242]C2-005	7439-92-1	Lead	25.0		mg/kg
F-243	2-2.5	08/14/01	Yes	01-F35-SS[F-243]C2-005	7440-38-2	Arsenic	24.0		mg/kg
F-243	2-2.5	08/14/01	Yes	01-F35-SS[F-243]C2-005	7439-92-1	Lead	68.0		mg/kg
F-273	2-2.5	08/28/01	Yes	01-F33-SS[F-273]C2-005-DAVG	7440-38-2	Arsenic	14.5		mg/kg
F-273	2-2.5	08/28/01	Yes	01-F33-SS[F-273]C2-005-DAVG	7439-92-1	Lead	80.0		mg/kg
F-8-2	3-3.5	08/30/01	Yes	02-F08-SS[F-08-2]C2-030	7440-38-2	Arsenic	2.6		mg/kg
F-8-2	3-3.5	08/30/01	Yes	02-F08-SS[F-08-2]C2-030	7439-92-1	Lead	90.0	J	mg/kg
LR-017-S-2	0.5-1	12/14/93	Yes	LR-017-S-2	7440-38-2	Arsenic	18.0	J	mg/kg
LR-017-S-3	1-2	12/14/93	Yes	LR-017-S-3	7440-38-2	Arsenic	8.8	J	mg/kg
LR-025-S-2	0.5-1	07/02/93	Yes	LR-025-S-2	7440-38-2	Arsenic	26.0		mg/kg
LR-025-S-3	1-2	12/10/93	Yes	LR-025-S-3	7440-38-2	Arsenic	21.0		mg/kg
MSU-118-VS-B	1.5-2	09/23/03	Yes	01-SS-[MSU-118-VS-B]-C2_09/23/03_1.5	7439-92-1	Lead	14.9		mg/kg
MSU-119-VS-B	1.5-2	09/23/03	Yes	01-SS-[MSU-119-VS-B]-C2_09/23/03_1.5	7439-92-1	Lead	3.0		mg/kg
MSU-120-VS-B	1.5-2	09/23/03	Yes	01-SS-[MSU-120-VS-B]-C2_09/23/03_1.5	7439-92-1	Lead	2.5		mg/kg
MSU-13-VS-B	2.5-3	07/07/03	Yes	01-SS-[MSU-13-VS-B]-C2_07/07/03_2.5	7440-38-2	Arsenic	5.0		mg/kg
MSU-13-VS-B	2.5-3	07/07/03	Yes	01-SS-[MSU-13-VS-B]-C2_07/07/03_2.5	7439-92-1	Lead	22.8		mg/kg
MSU-31-VS-B	2.5-3	07/07/03	Yes	01-SS-[MSU-31-VS-B]-C2_07/07/03_2.5	7440-38-2	Arsenic	4.3		mg/kg
MSU-31-VS-B	2.5-3	07/07/03	Yes	01-SS-[MSU-31-VS-B]-C2_07/07/03_2.5	7439-92-1	Lead	15.0		mg/kg
MSU-69-3-6-E	3-6	05/04/04	No	1-MSU-69-3-6-E_05/04/04_6	7440-38-2	Arsenic	3.8		mg/kg
MSU-69-3-6-E	3-6	05/12/04	Yes	3-MSU-69-3-6-E_05/12/04_6	7439-92-1	Lead	9.9		mg/kg
MSU-69-3-6-N	3-6	05/04/04	Yes	1-MSU-69-3-6-N_05/04/04_6	7440-38-2	Arsenic	4.5		mg/kg
MSU-69-3-6-N	3-6	05/04/04	Yes	1-MSU-69-3-6-N_05/04/04_6	7439-92-1	Lead	14.9		mg/kg
MSU-69-3-6-S	3-6	05/04/04	Yes	1-MSU-69-3-6-S_05/04/04_6	7440-38-2	Arsenic	5.9		mg/kg
MSU-69-3-6-S	3-6	05/10/04	No	2-MSU-69-3-6-S_05/10/04_6	7439-92-1	Lead	3.2		mg/kg
MSU-69-3-6-W	3-6	05/04/04	No	1-MSU-69-3-6-W_05/04/04_6	7440-38-2	Arsenic	5.0		mg/kg
MSU-69-3-6-W	3-6	05/10/04	Yes	2-MSU-69-3-6-W_05/10/04_6	7439-92-1	Lead	3.6		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-69-8-10-E	8-10	05/04/04	Yes	1-MSU-69-8-10-E_05/04/04_10	7440-38-2	Arsenic	3.3		mg/kg
MSU-69-8-10-E	8-10	05/04/04	Yes	1-MSU-69-8-10-E_05/04/04_10	7439-92-1	Lead	4.5		mg/kg
MSU-69-8-10-N	8-10	05/04/04	Yes	1-MSU-69-8-10-N_05/04/04_10	7440-38-2	Arsenic	3.3		mg/kg
MSU-69-8-10-N	8-10	05/04/04	Yes	1-MSU-69-8-10-N_05/04/04_10	7439-92-1	Lead	2.8		mg/kg
MSU-69-8-10-S	8-10	05/04/04	Yes	1-MSU-69-8-10-S_05/04/04_10	7440-38-2	Arsenic	3.5		mg/kg
MSU-69-8-10-S	8-10	05/04/04	Yes	1-MSU-69-8-10-S_05/04/04_10	7439-92-1	Lead	4.2		mg/kg
MSU-69-8-10-W	8-10	05/04/04	No	1-MSU-69-8-10-W_05/04/04_10	7440-38-2	Arsenic	4.7		mg/kg
MSU-69-8-10-W	8-10	05/10/04	Yes	2-MSU-69-8-10-W_05/10/04_10	7439-92-1	Lead	2.5		mg/kg
MSU-69-VS-B	4.5-5	10/07/03	No	02-SS-[MSU-69-VS-B]-C2_10/07/03_4.5	7439-92-1	Lead	29.3		mg/kg
MSU-69-VS-B	8-11.5	05/04/04	Yes	3-MSU-69-VS-B_05/04/04_10	7440-38-2	Arsenic	3.8		mg/kg
MSU-D-19	0-0.5	04/28/04	Yes	MSU-D-19_04/28/04_0	7440-38-2	Arsenic	5.8		mg/kg
MSU-D-19	0-0.5	04/28/04	Yes	MSU-D-19_04/28/04_0	7439-92-1	Lead	16.8		mg/kg
MSU-F-38	2-2.5	05/19/03	Yes	01-SS-[MSU-F-38-1]-C1_05/19/03_2	7440-38-2	Arsenic	7.6		mg/kg
MSU-F-38	2-2.5	05/19/03	Yes	01-SS-[MSU-F-38-1]-C1_05/19/03_2	7439-92-1	Lead	7.8		mg/kg
MSU-F-39	2-2.5	05/19/03	Yes	01-SS-[MSU-F-39-1}-C1_05/19/03_2	7440-38-2	Arsenic	3.1		mg/kg
MSU-F-39	2-2.5	05/19/03	Yes	01-SS-[MSU-F-39-1}-C1_05/19/03_2	7439-92-1	Lead	2.4		mg/kg
MSU-F-47-2	2-2.5	06/09/03	Yes	01-SS[MSU-F-47-2]C1_06/09/03_2	7440-38-2	Arsenic	4.3		mg/kg
MSU-F-47-2	2-2.5	06/09/03	Yes	01-SS[MSU-F-47-2]C1_06/09/03_2	7439-92-1	Lead	4.4		mg/kg
MSU-F-47	2-2.5	06/09/03	Yes	01-SS[MSU-F-47-1]C1_06/09/03_2	7440-38-2	Arsenic	3.8		mg/kg
MSU-F-47	2-2.5	06/09/03	Yes	01-SS[MSU-F-47-1]C1_06/09/03_2	7439-92-1	Lead	5.1		mg/kg
MSU-F-48	2-2.5	06/09/03	Yes	01-SS[MSU-F-48-1]C1_06/09/03_2	7440-38-2	Arsenic	2.7		mg/kg
MSU-F-48	2-2.5	06/09/03	Yes	01-SS[MSU-F-48-1]C1_06/09/03_2	7439-92-1	Lead	4.3		mg/kg
MSU-NGRR-42	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-42-1]-C1_04/23/03_1.5	7440-38-2	Arsenic	6.0		mg/kg
MSU-NGRR-42	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-42-1]-C1_04/23/03_1.5	7439-92-1	Lead	7.1		mg/kg
MSU-NGRR-44	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-44-1]-C1_06/09/03_1.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-NGRR-44	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-44-1]-C1_06/09/03_1.5	7439-92-1	Lead	5.1		mg/kg
MSU-NGRR-46	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-46-1]-C1_06/02/03_1.5	7440-38-2	Arsenic	4.1		mg/kg
MSU-NGRR-46	1.5-2	06/02/03	Yes	01-SS-[MSU-NGRR-46-1]-C1_06/02/03_1.5	7439-92-1	Lead	2.7		mg/kg
MSU-NGRR-8-3	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-3]-C1_06/09/03_1.5	7440-38-2	Arsenic	2.6		mg/kg
MSU-NGRR-8-3	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-3]-C1_06/09/03_1.5	7439-92-1	Lead	3.0		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-8-4	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-4]-C1_06/09/03_1.5	7440-38-2	Arsenic	4.1		mg/kg
MSU-NGRR-8-4	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-4]-C1_06/09/03_1.5	7439-92-1	Lead	6.9		mg/kg
MSU-NGRR-8-5	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-5]-C1_AVG_06/09/03_1.5	7440-38-2	Arsenic	3.3		mg/kg
MSU-NGRR-8-5	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-5]-C1_AVG_06/09/03_1.5	7439-92-1	Lead	6.2		mg/kg
NEW-5	1-1.5	03/23/04	Yes	01-New-5_03/23/04_1	7440-38-2	Arsenic	6.9		mg/kg
NEW-5	1-1.5	03/23/04	Yes	01-New-5_03/23/04_1	7439-92-1	Lead	12.6		mg/kg
NEW-6	1-1.5	03/23/04	Yes	01-New-6_03/23/04_1	7440-38-2	Arsenic	7.0		mg/kg
NEW-6	1-1.5	03/23/04	Yes	01-New-6_03/23/04_1	7439-92-1	Lead	13.1		mg/kg
NEW-7	1-1.5	04/09/04	Yes	1-NEW-7_04/09/04_1	7440-38-2	Arsenic	8.3		mg/kg
NEW-7	1-1.5	04/09/04	Yes	1-NEW-7_04/09/04_1	7439-92-1	Lead	11.9		mg/kg
NEW-8	1-1.5	04/09/04	Yes	1-NEW-8_04/09/04_1	7440-38-2	Arsenic	6.9		mg/kg
NEW-8	1-1.5	04/09/04	Yes	1-NEW-8_04/09/04_1	7439-92-1	Lead	6.7		mg/kg
NEW-9	1-1.5	04/12/04	Yes	1-NEW-9_04/12/04_1	7440-38-2	Arsenic	9.5		mg/kg
NEW-9	1-1.5	04/12/04	Yes	1-NEW-9_04/12/04_1	7439-92-1	Lead	22.2		mg/kg
NGRR-01	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-01]C2-005	7440-38-2	Arsenic	4.1		mg/kg
NGRR-01	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-01]C2-005	7439-92-1	Lead	6.4		mg/kg
NGRR-02	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-02]C2-005	7440-38-2	Arsenic	2.4		mg/kg
NGRR-02	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-02]C2-005	7439-92-1	Lead	3.1		mg/kg
NGRR-03	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-03]C2-005	7440-38-2	Arsenic	3.3		mg/kg
NGRR-03	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-03]C2-005	7439-92-1	Lead	3.1		mg/kg
NGRR-04	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-04]C2-005	7440-38-2	Arsenic	5.4		mg/kg
NGRR-04	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-04]C2-005	7439-92-1	Lead	5.0		mg/kg
NGRR-05	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-05]C2-005	7440-38-2	Arsenic	6.1		mg/kg
NGRR-05	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-05]C2-005	7439-92-1	Lead	3.2		mg/kg
NGRR-06	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-06]C2-005	7440-38-2	Arsenic	2.9		mg/kg
NGRR-06	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-06]C2-005	7439-92-1	Lead	2.9		mg/kg
NGRR-101	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-101]C2-005	7440-38-2	Arsenic	6.5		mg/kg
NGRR-101	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-101]C2-005	7439-92-1	Lead	5.8		mg/kg
NGRR-102	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-102]C2-005	7440-38-2	Arsenic	3.1		mg/kg
NGRR-102	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-102]C2-005	7439-92-1	Lead	76.0		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-120	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-120]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-120	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-120]C2-005	7439-92-1	Lead	19.0		mg/kg
NGRR-121	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-121]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-121	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-121]C2-005	7439-92-1	Lead	3.9		mg/kg
NGRR-122	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-122]C2-005	7440-38-2	Arsenic	5.7		mg/kg
NGRR-122	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-122]C2-005	7439-92-1	Lead	8.1		mg/kg
NGRR-123	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-123]C2-005	7440-38-2	Arsenic	3.8		mg/kg
NGRR-123	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-123]C2-005	7439-92-1	Lead	3.4		mg/kg
NGRR-124	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-124]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-124	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-124]C2-005	7439-92-1	Lead	6.6		mg/kg
NGRR-125-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-125-2]C2-025-DAVG	7440-38-2	Arsenic	5.3		mg/kg
NGRR-125-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-125-2]C2-025-DAVG	7439-92-1	Lead	14.5		mg/kg
NGRR-127	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-127]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-127	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-127]C2-005	7439-92-1	Lead	6.3		mg/kg
NGRR-128	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-128]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-128	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-128]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-129	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-129]C2-005	7440-38-2	Arsenic	7.7		mg/kg
NGRR-129	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-129]C2-005	7439-92-1	Lead	3.5		mg/kg
NGRR-130	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-130]C2-005	7440-38-2	Arsenic	7.0		mg/kg
NGRR-130	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-130]C2-005	7439-92-1	Lead	4.3		mg/kg
NGRR-131	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-131]C2-005	7440-38-2	Arsenic	7.3		mg/kg
NGRR-131	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-131]C2-005	7439-92-1	Lead	6.5		mg/kg
NGRR-132-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-132-2]C2-025	7440-38-2	Arsenic	3.9		mg/kg
NGRR-132-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-132-2]C2-025	7439-92-1	Lead	9.9	J	mg/kg
NGRR-133	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-133]C2-005	7440-38-2	Arsenic	4.4		mg/kg
NGRR-133	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-133]C2-005	7439-92-1	Lead	10.0		mg/kg
NGRR-134	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-134]C2-005	7440-38-2	Arsenic	21.0		mg/kg
NGRR-134	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-134]C2-005	7439-92-1	Lead	19.0		mg/kg
NGRR-283	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-283]C2-005-DAVG	7440-38-2	Arsenic	11.5		mg/kg
NGRR-283	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-283]C2-005-DAVG	7439-92-1	Lead	19.0		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-285	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-285]C2-005	7440-38-2	Arsenic	7.3		mg/kg
NGRR-285	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-285]C2-005	7439-92-1	Lead	8.8		mg/kg
NGRR-286	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-286]C2-005	7440-38-2	Arsenic	7.1		mg/kg
NGRR-286	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-286]C2-005	7439-92-1	Lead	6.7		mg/kg
NGRR-287	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-287]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-287	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-287]C2-005	7439-92-1	Lead	5.1		mg/kg
NGRR-303	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-303]C2-005	7440-38-2	Arsenic	46.0		mg/kg
NGRR-303	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-303]C2-005	7439-92-1	Lead	20.0		mg/kg
NGRR-304	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-304]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-304	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-304]C2-005	7439-92-1	Lead	7.2		mg/kg
NGRR-305	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-305]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-305	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-305]C2-005	7439-92-1	Lead	10.0		mg/kg
NGRR-306	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-306]C2-005	7440-38-2	Arsenic	4.6		mg/kg
NGRR-306	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-306]C2-005	7439-92-1	Lead	2.6		mg/kg
NGRR-307	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-307]C2-005	7440-38-2	Arsenic	17.0		mg/kg
NGRR-307	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-307]C2-005	7439-92-1	Lead	5.5		mg/kg
NGRR-308	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-308]C2-005	7440-38-2	Arsenic	19.0		mg/kg
NGRR-308	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-308]C2-005	7439-92-1	Lead	7.1		mg/kg
NGRR-309	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-309]C2-005	7440-38-2	Arsenic	34.0		mg/kg
NGRR-309	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-309]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-310	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-310]C2-005	7440-38-2	Arsenic	34.0		mg/kg
NGRR-310	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-310]C2-005	7439-92-1	Lead	37.0		mg/kg
NGRR-380	1.5-2	08/22/01	Yes	01-N01-SS[NGRR-380]C2-005	7440-38-2	Arsenic	3.1		mg/kg
NGRR-380	1.5-2	08/22/01	Yes	01-N01-SS[NGRR-380]C2-005	7439-92-1	Lead	3.4		mg/kg
NGRR-381	1.5-2	08/22/01	Yes	01-N01-SS[NGRR-381]C2-005	7440-38-2	Arsenic	2.5		mg/kg
NGRR-381	1.5-2	08/22/01	Yes	01-N01-SS[NGRR-381]C2-005	7439-92-1	Lead	2.7		mg/kg
NGRR-382	1.5-2	08/22/01	Yes	01-N01-SS[NGRR-382]C2-005	7440-38-2	Arsenic	3.5		mg/kg
NGRR-382	1.5-2	08/22/01	Yes	01-N01-SS[NGRR-382]C2-005	7439-92-1	Lead	2.7		mg/kg
NGRR-7-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-07-2]C2-025-DAVG	7440-38-2	Arsenic	4.6		mg/kg
NGRR-7-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-07-2]C2-025-DAVG	7439-92-1	Lead	21.5		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-88	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-88]C2-005	7440-38-2	Arsenic	3.9		mg/kg
NGRR-88	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-88]C2-005	7439-92-1	Lead	7.5		mg/kg
NGRR-89	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-89]C2-005	7440-38-2	Arsenic	37.0		mg/kg
NGRR-89	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-89]C2-005	7439-92-1	Lead	25.0		mg/kg
NGRR-90	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-90]C2-005	7440-38-2	Arsenic	7.2		mg/kg
NGRR-90	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-90]C2-005	7439-92-1	Lead	45.0		mg/kg
NGRR-91	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-91]C2-005	7440-38-2	Arsenic	3.1		mg/kg
NGRR-91	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-91]C2-005	7439-92-1	Lead	3.8		mg/kg
NGRR-92	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-92]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-92	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-92]C2-005	7439-92-1	Lead	22.0		mg/kg
NGRR-93	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-93]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-93	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-93]C2-005	7439-92-1	Lead	7.5		mg/kg
NGRR-94	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-94]C2-005	7440-38-2	Arsenic	14.0		mg/kg
NGRR-94	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-94]C2-005	7439-92-1	Lead	6.5		mg/kg
NGRR-95	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-95]C2-005-DAVG	7440-38-2	Arsenic	3.1		mg/kg
NGRR-95	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-95]C2-005-DAVG	7439-92-1	Lead	5.2		mg/kg
NGRR-97	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-97]C2-005	7440-38-2	Arsenic	3.4		mg/kg
NGRR-97	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-97]C2-005	7439-92-1	Lead	5.0		mg/kg
NGRR-98	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-98]C2-005	7440-38-2	Arsenic	5.3		mg/kg
NGRR-98	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-98]C2-005	7439-92-1	Lead	36.0		mg/kg
NGRR-99	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-99]C2-005	7440-38-2	Arsenic	2.9		mg/kg
NGRR-99	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-99]C2-005	7439-92-1	Lead	4.9		mg/kg
R19C24	1-1.5	03/23/04	Yes	01-R19C24_03/23/04_1	7440-38-2	Arsenic	5.1		mg/kg
R19C24	1-1.5	03/23/04	Yes	01-R19C24_03/23/04_1	7439-92-1	Lead	5.7		mg/kg
R19C25	1-1.5	03/30/04	Yes	01-R19C25_03/30/04_1	7440-38-2	Arsenic	3.0		mg/kg
R19C25	1-1.5	03/30/04	Yes	01-R19C25_03/30/04_1	7439-92-1	Lead	10.9		mg/kg
R20C23	1-1.5	03/23/04	Yes	01-R20C23_03/23/04_1	7440-38-2	Arsenic	4.8		mg/kg
R20C23	1-1.5	03/23/04	Yes	01-R20C23_03/23/04_1	7439-92-1	Lead	7.6		mg/kg
R20C24	1-1.5	03/30/04	Yes	01-R20C24_03/30/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R20C24	1-1.5	03/30/04	Yes	01-R20C24_03/30/04_1	7439-92-1	Lead	4.9		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R20C25	1-1.5	03/30/04	Yes	01-R20C25_03/30/04_1	7440-38-2	Arsenic	2.2		mg/kg
R20C25	1-1.5	03/30/04	Yes	01-R20C25_03/30/04_1	7439-92-1	Lead	7.5		mg/kg
R20C26	1-1.5	03/30/04	Yes	01-R20C26_03/30/04_1	7440-38-2	Arsenic	2.7		mg/kg
R20C26	1-1.5	03/30/04	Yes	01-R20C26_03/30/04_1	7439-92-1	Lead	11.6		mg/kg
R21C22	1-1.5	03/23/04	Yes	01-R21C22_03/23/04_1	7440-38-2	Arsenic	6.0		mg/kg
R21C22	1-1.5	03/23/04	Yes	01-R21C22_03/23/04_1	7439-92-1	Lead	52.5		mg/kg
R21C23	1-1.5	04/05/04	Yes	01-R21C23_04/05/04_1	7440-38-2	Arsenic	3.7		mg/kg
R21C23	1-1.5	04/05/04	Yes	01-R21C23_04/05/04_1	7439-92-1	Lead	2.9		mg/kg
R21C24	1-1.5	03/30/04	Yes	01-R21C24_03/30/04_1	7440-38-2	Arsenic	2.0		mg/kg
R21C24	1-1.5	03/30/04	Yes	01-R21C24_03/30/04_1	7439-92-1	Lead	6.6		mg/kg
R21C25	1-1.5	03/30/04	Yes	01-R21C25_03/30/04_1	7440-38-2	Arsenic	2.5		mg/kg
R21C25	1-1.5	03/30/04	Yes	01-R21C25_03/30/04_1	7439-92-1	Lead	7.6		mg/kg
R22C20	1-1.5	04/09/04	Yes	1-R22C20_04/09/04_1	7440-38-2	Arsenic	10.1		mg/kg
R22C20	1-1.5	04/09/04	Yes	1-R22C20_04/09/04_1	7439-92-1	Lead	12.8		mg/kg
R22C21	1-1.5	04/09/04	Yes	1-R22C21_04/09/04_1	7440-38-2	Arsenic	7.0		mg/kg
R22C21	1-1.5	04/09/04	Yes	1-R22C21_04/09/04_1	7439-92-1	Lead	5.3		mg/kg
R22C22	1-1.5	03/23/04	Yes	01-R22C22_03/23/04_1	7440-38-2	Arsenic	7.2		mg/kg
R22C22	1-1.5	03/23/04	Yes	01-R22C22_03/23/04_1	7439-92-1	Lead	116.0		mg/kg
R23C19	1-1.5	04/09/04	Yes	1-R23C19_04/09/04_1	7440-38-2	Arsenic	7.3		mg/kg
R23C19	1-1.5	04/09/04	Yes	1-R23C19_04/09/04_1	7439-92-1	Lead	6.6		mg/kg
R23C20	1-1.5	10/20/03	Yes	01-SS-[R23C20]-C2_10/20/03_1	7440-38-2	Arsenic	2.6		mg/kg
R23C20	1-1.5	10/20/03	Yes	01-SS-[R23C20]-C2_10/20/03_1	7439-92-1	Lead	5.8		mg/kg
R23C21	1-1.5	03/25/04	Yes	1-R23C21_03/25/04_1	7440-38-2	Arsenic	5.7		mg/kg
R23C21	1-1.5	03/25/04	Yes	1-R23C21_03/25/04_1	7439-92-1	Lead	6.3		mg/kg
R23C22	1-1.5	03/25/04	Yes	1-R23C22_03/25/04_1	7440-38-2	Arsenic	13.2		mg/kg
R23C22	1-1.5	03/25/04	Yes	1-R23C22_03/25/04_1	7439-92-1	Lead	20.0		mg/kg
R24C18	1-1.5	04/12/04	Yes	1-R24C18_04/12/04_1	7440-38-2	Arsenic	11.1		mg/kg
R24C18	1-1.5	04/12/04	Yes	1-R24C18_04/12/04_1	7439-92-1	Lead	18.1		mg/kg
R24C19	1-1.5	10/20/03	Yes	01-SS-[R24C19]-C2_10/20/03_1	7440-38-2	Arsenic	6.8		mg/kg
R24C19	1-1.5	10/20/03	Yes	01-SS-[R24C19]-C2_10/20/03_1	7439-92-1	Lead	11.3		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R24C20	1-1.5	03/25/04	Yes	1-R24C20_03/25/04_1	7440-38-2	Arsenic	5.3		mg/kg
R24C20	1-1.5	03/25/04	Yes	1-R24C20_03/25/04_1	7439-92-1	Lead	8.7		mg/kg
R24C21	1-1.5	03/25/04	Yes	1-R24C21_AVG_03/25/04_1	7440-38-2	Arsenic	5.8		mg/kg
R24C21	1-1.5	03/25/04	Yes	1-R24C21_AVG_03/25/04_1	7439-92-1	Lead	5.7		mg/kg
R24C22	1-1.5	03/25/04	Yes	1-R24C22_03/25/04_1	7440-38-2	Arsenic	7.8		mg/kg
R24C22	1-1.5	03/25/04	Yes	1-R24C22_03/25/04_1	7439-92-1	Lead	7.9		mg/kg
R24C23	1-1.5	03/25/04	Yes	1-R24C23_03/25/04_1	7440-38-2	Arsenic	5.5		mg/kg
R24C23	1-1.5	03/25/04	Yes	1-R24C23_03/25/04_1	7439-92-1	Lead	6.3		mg/kg
R25C18	1-1.5	10/20/03	Yes	01-SS-[R25C18]-C2_10/20/03_1	7440-38-2	Arsenic	10.5		mg/kg
R25C18	1-1.5	10/20/03	Yes	01-SS-[R25C18]-C2_10/20/03_1	7439-92-1	Lead	62.7		mg/kg
R25C19	1-1.5	03/25/04	Yes	1-R25C19_03/25/04_1	7440-38-2	Arsenic	4.3		mg/kg
R25C19	1-1.5	03/25/04	Yes	1-R25C19_03/25/04_1	7439-92-1	Lead	5.6		mg/kg
R25C20	1-1.5	03/25/04	Yes	1-R25C20_03/25/04_1	7440-38-2	Arsenic	6.7		mg/kg
R25C20	1-1.5	03/25/04	Yes	1-R25C20_03/25/04_1	7439-92-1	Lead	10.3		mg/kg
R25C21	1-1.5	03/25/04	Yes	1-R25C21_03/25/04_1	7440-38-2	Arsenic	9.4		mg/kg
R25C21	1-1.5	03/25/04	Yes	1-R25C21_03/25/04_1	7439-92-1	Lead	7.9		mg/kg
R25C22	1-1.5	03/25/04	Yes	1-R25C22_03/25/04_1	7440-38-2	Arsenic	6.5		mg/kg
R25C22	1-1.5	03/25/04	Yes	1-R25C22_03/25/04_1	7439-92-1	Lead	4.9		mg/kg
R25C23	1-1.5	03/25/04	Yes	1-R25C23_03/25/04_1	7440-38-2	Arsenic	7.1		mg/kg
R25C23	1-1.5	03/25/04	Yes	1-R25C23_03/25/04_1	7439-92-1	Lead	8.3		mg/kg
R25C24	1-1.5	03/25/04	Yes	1-R25C24_03/25/04_1	7440-38-2	Arsenic	11.3		mg/kg
R25C24	1-1.5	03/25/04	Yes	1-R25C24_03/25/04_1	7439-92-1	Lead	16.0		mg/kg
R25C25	1-1.5	03/25/04	Yes	1-R25C25_03/25/04_1	7440-38-2	Arsenic	17.3		mg/kg
R25C25	1-1.5	03/25/04	Yes	1-R25C25_03/25/04_1	7439-92-1	Lead	18.7		mg/kg
R26C17	1-1.5	04/12/04	Yes	1-R26C17_04/12/04_1	7440-38-2	Arsenic	10.0		mg/kg
R26C17	1-1.5	04/12/04	Yes	1-R26C17_04/12/04_1	7439-92-1	Lead	12.7		mg/kg
R26C18	1-1.5	10/20/03	Yes	01-SS-[R26C18]-C2_10/20/03_1	7440-38-2	Arsenic	9.9		mg/kg
R26C18	1-1.5	10/20/03	Yes	01-SS-[R26C18]-C2_10/20/03_1	7439-92-1	Lead	24.5		mg/kg
R26C19	1-1.5	03/25/04	Yes	1-R26C19_03/25/04_1	7440-38-2	Arsenic	5.8		mg/kg
R26C19	1-1.5	03/25/04	Yes	1-R26C19_03/25/04_1	7439-92-1	Lead	21.7		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R26C20	1-1.5	03/25/04	Yes	1-R26C20_03/25/04_1	7440-38-2	Arsenic	6.4		mg/kg
R26C20	1-1.5	03/25/04	Yes	1-R26C20_03/25/04_1	7439-92-1	Lead	19.6		mg/kg
R26C21	1-1.5	03/25/04	Yes	1-R26C21_03/25/04_1	7440-38-2	Arsenic	10.5		mg/kg
R26C21	1-1.5	03/25/04	Yes	1-R26C21_03/25/04_1	7439-92-1	Lead	13.0		mg/kg
R26C22	1-1.5	03/25/04	Yes	1-R26C22_03/25/04_1	7440-38-2	Arsenic	4.0		mg/kg
R26C22	1-1.5	03/25/04	Yes	1-R26C22_03/25/04_1	7439-92-1	Lead	4.3		mg/kg
R26C23	1-1.5	03/25/04	No	1-R26C23_03/25/04_1	7440-38-2	Arsenic	6.8		mg/kg
R26C23	2-2.5	04/09/04	Yes	2-R26C23_04/09/04_2	7439-92-1	Lead	2.6		mg/kg
R27C18	1-1.5	03/30/04	Yes	01R27C18_03/30/04_1	7440-38-2	Arsenic	3.8		mg/kg
R27C18	1-1.5	03/30/04	Yes	01R27C18_03/30/04_1	7439-92-1	Lead	9.1		mg/kg
R27C19	1-1.5	03/30/04	Yes	01-R27C19_03/30/04_1	7440-38-2	Arsenic	1.4		mg/kg
R27C19	1-1.5	03/30/04	Yes	01-R27C19_03/30/04_1	7439-92-1	Lead	8.8		mg/kg
R27C20	1-1.5	03/25/04	Yes	1-R27C20_03/25/04_1	7440-38-2	Arsenic	14.1		mg/kg
R27C20	1-1.5	03/25/04	Yes	1-R27C20_03/25/04_1	7439-92-1	Lead	25.9		mg/kg
R27C21	1-1.5	03/25/04	Yes	1-R27C21_03/25/04_1	7440-38-2	Arsenic	5.2		mg/kg
R27C21	1-1.5	03/25/04	Yes	1-R27C21_03/25/04_1	7439-92-1	Lead	46.6		mg/kg
R27C22	1-1.5	03/25/04	Yes	1-R27C22_03/25/04_1	7440-38-2	Arsenic	5.2		mg/kg
R27C22	1-1.5	03/25/04	Yes	1-R27C22_03/25/04_1	7439-92-1	Lead	89.4		mg/kg
R27C25	1-1.5	03/10/04	Yes	1-R27C25_03/10/04_1	7440-38-2	Arsenic	7.8		mg/kg
R27C25	1-1.5	03/10/04	Yes	1-R27C25_03/10/04_1	7439-92-1	Lead	6.3		mg/kg
R27C26	1-1.5	03/10/04	Yes	1-R27C26_03/10/04_1	7440-38-2	Arsenic	10.2		mg/kg
R27C26	1-1.5	03/10/04	Yes	1-R27C26_03/10/04_1	7439-92-1	Lead	16.6		mg/kg
R27C27	1-1.5	03/10/04	Yes	1-R27C27_03/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R27C27	1-1.5	03/10/04	Yes	1-R27C27_03/10/04_1	7439-92-1	Lead	4.9		mg/kg
R27C28	1-1.5	03/30/04	Yes	01-R27C28_03/30/04_1	7440-38-2	Arsenic	11.1		mg/kg
R27C28	1-1.5	03/30/04	Yes	01-R27C28_03/30/04_1	7439-92-1	Lead	30.0		mg/kg
R28C19	1-1.5	03/30/04	Yes	01-R28C19_03/30/04_1	7440-38-2	Arsenic	1.5		mg/kg
R28C19	1-1.5	03/30/04	Yes	01-R28C19_03/30/04_1	7439-92-1	Lead	9.6		mg/kg
R28C20	1-1.5	03/25/04	Yes	1-R28C20_03/25/04_1	7440-38-2	Arsenic	5.0		mg/kg
R28C20	1-1.5	03/25/04	Yes	1-R28C20_03/25/04_1	7439-92-1	Lead	5.4		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R28C21	1-1.5	03/25/04	Yes	1-R28C21_03/25/04_1	7440-38-2	Arsenic	4.6		mg/kg
R28C21	1-1.5	03/25/04	Yes	1-R28C21_03/25/04_1	7439-92-1	Lead	14.0		mg/kg
R28C24	1-1.5	03/10/04	Yes	1-R28C24_03/10/04_1	7440-38-2	Arsenic	8.0		mg/kg
R28C24	1-1.5	03/10/04	Yes	1-R28C24_03/10/04_1	7439-92-1	Lead	18.0		mg/kg
R28C25	1-1.5	03/10/04	Yes	1-R28C25_03/10/04_1	7440-38-2	Arsenic	10.8		mg/kg
R28C25	1-1.5	03/10/04	Yes	1-R28C25_03/10/04_1	7439-92-1	Lead	15.3		mg/kg
R28C26	1-1.5	03/10/04	Yes	1-R28C26_03/10/04_1	7440-38-2	Arsenic	7.2		mg/kg
R28C26	1-1.5	03/10/04	Yes	1-R28C26_03/10/04_1	7439-92-1	Lead	10.5		mg/kg
R28C27	1-1.5	03/10/04	Yes	1-R28C27_03/10/04_1	7440-38-2	Arsenic	9.9		mg/kg
R28C27	1-1.5	03/10/04	Yes	1-R28C27_03/10/04_1	7439-92-1	Lead	6.8		mg/kg
R28C28	1-1.5	03/09/04	Yes	1-R28C28_03/09/04_1	7440-38-2	Arsenic	47.0		mg/kg
R28C28	1-1.5	03/09/04	Yes	1-R28C28_03/09/04_1	7439-92-1	Lead	13.7		mg/kg
R28C29	1-1.5	03/09/04	Yes	1-R28C29_03/09/04_1	7440-38-2	Arsenic	9.3		mg/kg
R28C29	1-1.5	03/09/04	Yes	1-R28C29_03/09/04_1	7439-92-1	Lead	4.7		mg/kg
R29C20	1-1.5	03/25/04	Yes	1-R29C20_03/25/04_1	7440-38-2	Arsenic	5.8		mg/kg
R29C20	1-1.5	03/25/04	Yes	1-R29C20_03/25/04_1	7439-92-1	Lead	7.1		mg/kg
R29C21	1-1.5	03/25/04	Yes	1-R29C21_03/25/04_1	7440-38-2	Arsenic	5.9		mg/kg
R29C21	1-1.5	03/25/04	Yes	1-R29C21_03/25/04_1	7439-92-1	Lead	56.8		mg/kg
R29C22	1-1.5	03/30/04	Yes	01-R29C22_03/30/04_1	7440-38-2	Arsenic	2.2		mg/kg
R29C22	1-1.5	03/30/04	Yes	01-R29C22_03/30/04_1	7439-92-1	Lead	8.6		mg/kg
R29C23	1-1.5	03/30/04	Yes	01-R29C23_03/30/04_1	7440-38-2	Arsenic	8.1		mg/kg
R29C23	1-1.5	03/30/04	Yes	01-R29C23_03/30/04_1	7439-92-1	Lead	45.9		mg/kg
R29C24	1-1.5	03/10/04	Yes	1-R29C24_03/10/04_1	7440-38-2	Arsenic	8.7		mg/kg
R29C24	1-1.5	03/10/04	Yes	1-R29C24_03/10/04_1	7439-92-1	Lead	7.5		mg/kg
R29C25	1-1.5	03/10/04	Yes	1-R29C25_03/10/04_1	7440-38-2	Arsenic	6.7		mg/kg
R29C25	1-1.5	03/10/04	Yes	1-R29C25_03/10/04_1	7439-92-1	Lead	5.8		mg/kg
R29C26	1-1.5	03/10/04	Yes	1-R29C26_03/10/04_1	7440-38-2	Arsenic	9.6		mg/kg
R29C26	1-1.5	03/10/04	Yes	1-R29C26_03/10/04_1	7439-92-1	Lead	7.7		mg/kg
R29C27	1-1.5	03/10/04	Yes	1-R29C27_03/10/04_1	7440-38-2	Arsenic	44.3		mg/kg
R29C27	1-1.5	03/10/04	Yes	1-R29C27_03/10/04_1	7439-92-1	Lead	11.8		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R29C28	1-1.5	03/09/04	Yes	1-R29C28_03/09/04_1	7440-38-2	Arsenic	5.9		mg/kg
R29C28	1-1.5	03/09/04	Yes	1-R29C28_03/09/04_1	7439-92-1	Lead	4.2		mg/kg
R29C29	1-1.5	03/09/04	Yes	1-R29C29_03/09/04_1	7440-38-2	Arsenic	10.1		mg/kg
R29C29	1-1.5	03/09/04	Yes	1-R29C29_03/09/04_1	7439-92-1	Lead	11.9		mg/kg
R29C30	1-1.5	03/09/04	Yes	1-R29C30_03/09/04_1	7440-38-2	Arsenic	22.7		mg/kg
R29C30	1-1.5	03/09/04	Yes	1-R29C30_03/09/04_1	7439-92-1	Lead	21.6		mg/kg
R29C31	1-1.5	03/09/04	Yes	1-R29C31_AVG_03/09/04_1	7440-38-2	Arsenic	11.5		mg/kg
R29C31	1-1.5	03/09/04	Yes	1-R29C31_AVG_03/09/04_1	7439-92-1	Lead	14.1		mg/kg
R29C32	1-1.5	03/09/04	Yes	1-R29C32_03/09/04_1	7440-38-2	Arsenic	7.7		mg/kg
R29C32	1-1.5	03/09/04	Yes	1-R29C32_03/09/04_1	7439-92-1	Lead	9.1		mg/kg
R29C33	1-1.5	03/09/04	Yes	1-R29C33_03/09/04_1	7440-38-2	Arsenic	11.6		mg/kg
R29C33	1-1.5	03/09/04	Yes	1-R29C33_03/09/04_1	7439-92-1	Lead	15.9		mg/kg
R30C21	1-1.5	03/25/04	Yes	1-R30C21_03/25/04_1	7440-38-2	Arsenic	6.1		mg/kg
R30C21	1-1.5	03/25/04	Yes	1-R30C21_03/25/04_1	7439-92-1	Lead	8.2		mg/kg
R30C22	1-1.5	10/21/03	Yes	01-SS-[R30C22]-C2_10/21/03_1	7440-38-2	Arsenic	3.5		mg/kg
R30C22	1-1.5	10/21/03	Yes	01-SS-[R30C22]-C2_10/21/03_1	7439-92-1	Lead	10.7		mg/kg
R30C23	1-1.5	03/25/04	Yes	1-R30C23_03/25/04_1	7440-38-2	Arsenic	3.8		mg/kg
R30C23	1-1.5	03/25/04	Yes	1-R30C23_03/25/04_1	7439-92-1	Lead	3.7		mg/kg
R30C24	1-1.5	03/10/04	Yes	1-R30C24_03/10/04_1	7440-38-2	Arsenic	15.0		mg/kg
R30C24	1-1.5	03/10/04	Yes	1-R30C24_03/10/04_1	7439-92-1	Lead	15.5		mg/kg
R30C25	1-1.5	03/10/04	Yes	1-R30C25_03/10/04_1	7440-38-2	Arsenic	10.4		mg/kg
R30C25	1-1.5	03/10/04	Yes	1-R30C25_03/10/04_1	7439-92-1	Lead	10.3		mg/kg
R30C26	1-1.5	03/10/04	Yes	1-R30C26_03/10/04_1	7440-38-2	Arsenic	16.4		mg/kg
R30C26	1-1.5	03/10/04	Yes	1-R30C26_03/10/04_1	7439-92-1	Lead	17.6		mg/kg
R30C27	1-1.5	03/10/04	Yes	1-R30C27_03/10/04_1	7440-38-2	Arsenic	7.9		mg/kg
R30C27	1-1.5	03/10/04	Yes	1-R30C27_03/10/04_1	7439-92-1	Lead	7.1		mg/kg
R30C28	1-1.5	03/09/04	Yes	1-R30C28_03/09/04_1	7440-38-2	Arsenic	7.9		mg/kg
R30C28	1-1.5	03/09/04	Yes	1-R30C28_03/09/04_1	7439-92-1	Lead	5.7		mg/kg
R30C29	1-1.5	03/09/04	Yes	1-R30C29_03/09/04_1	7440-38-2	Arsenic	13.0		mg/kg
R30C29	1-1.5	03/09/04	Yes	1-R30C29_03/09/04_1	7439-92-1	Lead	8.0		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R30C30	1-1.5	03/09/04	Yes	1-R30C30_03/09/04_1	7440-38-2	Arsenic	16.8		mg/kg
R30C30	1-1.5	03/09/04	Yes	1-R30C30_03/09/04_1	7439-92-1	Lead	11.7		mg/kg
R30C31	1-1.5	03/09/04	Yes	1-R30C31_03/09/04_1	7440-38-2	Arsenic	16.7		mg/kg
R30C31	1-1.5	03/09/04	Yes	1-R30C31_03/09/04_1	7439-92-1	Lead	15.6		mg/kg
R30C32	1-1.5	03/09/04	Yes	1-R30C32_03/09/04_1	7440-38-2	Arsenic	8.3		mg/kg
R30C32	1-1.5	03/09/04	Yes	1-R30C32_03/09/04_1	7439-92-1	Lead	8.8		mg/kg
R30C33	1-1.5	03/09/04	Yes	1-R30C33_03/09/04_1	7440-38-2	Arsenic	7.2		mg/kg
R30C33	1-1.5	03/09/04	Yes	1-R30C33_03/09/04_1	7439-92-1	Lead	5.6		mg/kg
R30C34	1-1.5	03/09/04	Yes	1-R30C34_03/09/04_1	7440-38-2	Arsenic	15.0		mg/kg
R30C34	1-1.5	03/09/04	Yes	1-R30C34_03/09/04_1	7439-92-1	Lead	30.3		mg/kg
R30C35	1-1.5	03/09/04	Yes	1-R30C35_03/09/04_1	7440-38-2	Arsenic	6.1		mg/kg
R30C35	1-1.5	03/09/04	Yes	1-R30C35_03/09/04_1	7439-92-1	Lead	5.1		mg/kg
R30C37	1-1.5	03/09/04	Yes	1-R30C37_03/09/04_1	7440-38-2	Arsenic	7.5		mg/kg
R30C37	1-1.5	03/09/04	Yes	1-R30C37_03/09/04_1	7439-92-1	Lead	12.0		mg/kg
R30C38	1-1.5	03/09/04	Yes	1-R30C38_03/09/04_1	7440-38-2	Arsenic	5.4		mg/kg
R30C38	1-1.5	03/09/04	Yes	1-R30C38_03/09/04_1	7439-92-1	Lead	4.7		mg/kg
R31C22	1-1.5	10/21/03	Yes	01-SS-[R31C22]-C2_10/21/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R31C22	1-1.5	10/21/03	Yes	01-SS-[R31C22]-C2_10/21/03_1	7439-92-1	Lead	5.6		mg/kg
R31C23	1-1.5	10/21/03	Yes	01-SS-[R31C23]-C2_10/21/03_1	7440-38-2	Arsenic	2.7		mg/kg
R31C23	1-1.5	10/21/03	Yes	01-SS-[R31C23]-C2_10/21/03_1	7439-92-1	Lead	6.3		mg/kg
R31C24	1-1.5	03/10/04	Yes	1-R31C24_AVG_03/10/04_1	7440-38-2	Arsenic	16.7		mg/kg
R31C24	1-1.5	03/10/04	Yes	1-R31C24_AVG_03/10/04_1	7439-92-1	Lead	22.4		mg/kg
R31C25	1-1.5	03/10/04	Yes	1-R31C25_03/10/04_1	7440-38-2	Arsenic	13.8		mg/kg
R31C25	1-1.5	03/10/04	Yes	1-R31C25_03/10/04_1	7439-92-1	Lead	9.0		mg/kg
R31C26	1-1.5	03/10/04	Yes	1-R31C26_03/10/04_1	7440-38-2	Arsenic	49.9		mg/kg
R31C26	1-1.5	03/10/04	Yes	1-R31C26_03/10/04_1	7439-92-1	Lead	20.8		mg/kg
R31C27	1-1.5	03/10/04	Yes	1-R31C27_03/10/04_1	7440-38-2	Arsenic	7.8		mg/kg
R31C27	1-1.5	03/10/04	Yes	1-R31C27_03/10/04_1	7439-92-1	Lead	5.6		mg/kg
R31C28	1-1.5	03/09/04	Yes	1-R31C28_03/09/04_1	7440-38-2	Arsenic	7.5		mg/kg
R31C28	1-1.5	03/09/04	Yes	1-R31C28_03/09/04_1	7439-92-1	Lead	6.5		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R31C29	1-1.5	03/09/04	Yes	1-R31C29_03/09/04_1	7440-38-2	Arsenic	5.7		mg/kg
R31C29	1-1.5	03/09/04	Yes	1-R31C29_03/09/04_1	7439-92-1	Lead	4.7		mg/kg
R31C30	1-1.5	03/09/04	Yes	1-R31C30_03/09/04_1	7440-38-2	Arsenic	19.4		mg/kg
R31C30	1-1.5	03/09/04	Yes	1-R31C30_03/09/04_1	7439-92-1	Lead	27.2		mg/kg
R31C31	1-1.5	03/09/04	Yes	1-R31C31_03/09/04_1	7440-38-2	Arsenic	7.6		mg/kg
R31C31	1-1.5	03/09/04	Yes	1-R31C31_03/09/04_1	7439-92-1	Lead	7.1		mg/kg
R31C32	1-1.5	03/09/04	Yes	1-R31C32_03/09/04_1	7440-38-2	Arsenic	13.2		mg/kg
R31C32	1-1.5	03/09/04	Yes	1-R31C32_03/09/04_1	7439-92-1	Lead	11.6		mg/kg
R31C33	1-1.5	03/09/04	Yes	1-R31C33_03/09/04_1	7440-38-2	Arsenic	11.6		mg/kg
R31C33	1-1.5	03/09/04	Yes	1-R31C33_03/09/04_1	7439-92-1	Lead	12.9		mg/kg
R31C34	1-1.5	03/09/04	Yes	1-R31C34_AVG_03/09/04_1	7440-38-2	Arsenic	5.9		mg/kg
R31C34	1-1.5	03/09/04	Yes	1-R31C34_AVG_03/09/04_1	7439-92-1	Lead	5.6		mg/kg
R31C35	1-1.5	03/09/04	Yes	1-R31C35_03/09/04_1	7440-38-2	Arsenic	5.9		mg/kg
R31C35	1-1.5	03/09/04	Yes	1-R31C35_03/09/04_1	7439-92-1	Lead	5.5		mg/kg
R32C22	1-1.5	10/21/03	Yes	01-SS-[R32C22]-C2_10/21/03_1	7440-38-2	Arsenic	4.9		mg/kg
R32C22	1-1.5	10/21/03	Yes	01-SS-[R32C22]-C2_10/21/03_1	7439-92-1	Lead	10.2		mg/kg
R32C23	1-1.5	03/10/04	Yes	1-R32C23_03/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R32C23	1-1.5	03/10/04	Yes	1-R32C23_03/10/04_1	7439-92-1	Lead	7.1		mg/kg
R32C24	1-1.5	03/10/04	Yes	1-R32C24_03/10/04_1	7440-38-2	Arsenic	11.8		mg/kg
R32C24	1-1.5	03/10/04	Yes	1-R32C24_03/10/04_1	7439-92-1	Lead	6.1		mg/kg
R32C25	1-1.5	03/10/04	Yes	1-R32C25_03/10/04_1	7440-38-2	Arsenic	12.2		mg/kg
R32C25	1-1.5	03/10/04	Yes	1-R32C25_03/10/04_1	7439-92-1	Lead	6.9		mg/kg
R32C29	1-1.5	03/16/04	Yes	1-R32C29_03/16/04_1	7440-38-2	Arsenic	24.3		mg/kg
R32C29	1-1.5	03/16/04	Yes	1-R32C29_03/16/04_1	7439-92-1	Lead	48.3		mg/kg
R32C30	1-1.5	03/09/04	Yes	1-R32C30_03/09/04_1	7440-38-2	Arsenic	10.2		mg/kg
R32C30	1-1.5	03/09/04	Yes	1-R32C30_03/09/04_1	7439-92-1	Lead	6.3		mg/kg
R32C31	1-1.5	03/09/04	Yes	1-R32C31_03/09/04_1	7440-38-2	Arsenic	14.9		mg/kg
R32C31	1-1.5	03/09/04	Yes	1-R32C31_03/09/04_1	7439-92-1	Lead	6.9		mg/kg
R32C32	1-1.5	03/09/04	Yes	1-R32C32_03/09/04_1	7440-38-2	Arsenic	10.8		mg/kg
R32C32	1-1.5	03/09/04	Yes	1-R32C32_03/09/04_1	7439-92-1	Lead	8.2		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R32C33	1-1.5	03/09/04	Yes	1-R32C33_03/09/04_1	7440-38-2	Arsenic	6.3		mg/kg
R32C33	1-1.5	03/09/04	Yes	1-R32C33_03/09/04_1	7439-92-1	Lead	5.2		mg/kg
R32C34	1-1.5	03/09/04	Yes	1-R32C34_03/09/04_1	7440-38-2	Arsenic	7.0		mg/kg
R32C34	1-1.5	03/09/04	Yes	1-R32C34_03/09/04_1	7439-92-1	Lead	5.5		mg/kg
R32C35	1-1.5	03/09/04	Yes	1-R32C35_03/09/04_1	7440-38-2	Arsenic	5.2		mg/kg
R32C35	1-1.5	03/09/04	Yes	1-R32C35_03/09/04_1	7439-92-1	Lead	3.9		mg/kg
R32C37	1-1.5	03/09/04	Yes	1-R32C37_03/09/04_1	7440-38-2	Arsenic	7.0		mg/kg
R32C37	1-1.5	03/09/04	Yes	1-R32C37_03/09/04_1	7439-92-1	Lead	9.7		mg/kg
R32C38	1-1.5	03/09/04	Yes	1-R32C38_03/09/04_1	7440-38-2	Arsenic	6.3		mg/kg
R32C38	1-1.5	03/09/04	Yes	1-R32C38_03/09/04_1	7439-92-1	Lead	10.5		mg/kg
R32C39	1-1.5	03/09/04	Yes	1-R32C39_03/09/04_1	7440-38-2	Arsenic	5.4		mg/kg
R32C39	1-1.5	03/09/04	Yes	1-R32C39_03/09/04_1	7439-92-1	Lead	4.5		mg/kg
R33C23	1-1.5	04/05/04	Yes	01-R33C23_04/05/04_1	7440-38-2	Arsenic	4.5		mg/kg
R33C23	1-1.5	04/05/04	Yes	01-R33C23_04/05/04_1	7439-92-1	Lead	4.8		mg/kg
R33C23	1-1.5	03/10/04	Yes	1-R33C23_03/10/04_1	7440-38-2	Arsenic	6.5		mg/kg
R33C23	1-1.5	03/10/04	Yes	1-R33C23_03/10/04_1	7439-92-1	Lead	30.2		mg/kg
R33C30	1-1.5	03/09/04	Yes	1-R33C30_03/09/04_1	7440-38-2	Arsenic	9.6		mg/kg
R33C30	1-1.5	03/09/04	Yes	1-R33C30_03/09/04_1	7439-92-1	Lead	8.0		mg/kg
R33C31	1-1.5	03/09/04	Yes	1-R33C31_03/09/04_1	7440-38-2	Arsenic	9.2		mg/kg
R33C31	1-1.5	03/09/04	Yes	1-R33C31_03/09/04_1	7439-92-1	Lead	9.0		mg/kg
R33C32	1-1.5	03/09/04	Yes	1-R33C32_03/09/04_1	7440-38-2	Arsenic	8.5		mg/kg
R33C32	1-1.5	03/09/04	Yes	1-R33C32_03/09/04_1	7439-92-1	Lead	12.4		mg/kg
R33C33	1-1.5	03/09/04	Yes	1-R33C33_03/09/04_1	7440-38-2	Arsenic	12.1		mg/kg
R33C33	1-1.5	03/09/04	Yes	1-R33C33_03/09/04_1	7439-92-1	Lead	15.3		mg/kg
R33C34	1-1.5	03/09/04	Yes	1-R33C34_03/09/04_1	7440-38-2	Arsenic	5.7		mg/kg
R33C34	1-1.5	03/09/04	Yes	1-R33C34_03/09/04_1	7439-92-1	Lead	4.6		mg/kg
R33C35	1-1.5	03/09/04	Yes	1-R33C35_03/09/04_1	7440-38-2	Arsenic	8.4		mg/kg
R33C35	1-1.5	03/09/04	Yes	1-R33C35_03/09/04_1	7439-92-1	Lead	7.9		mg/kg
R33C37	1-1.5	03/31/04	Yes	01-R33C37_03/31/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R33C37	1-1.5	03/31/04	Yes	01-R33C37_03/31/04_1	7439-92-1	Lead	6.0		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R34C31	1-1.5	03/09/04	Yes	1-R34C31_03/09/04_1	7440-38-2	Arsenic	13.4		mg/kg
R34C31	1-1.5	03/09/04	Yes	1-R34C31_03/09/04_1	7439-92-1	Lead	23.1		mg/kg
R34C32	1-1.5	03/09/04	Yes	1-R34C32_03/09/04_1	7440-38-2	Arsenic	14.6		mg/kg
R34C32	1-1.5	03/09/04	Yes	1-R34C32_03/09/04_1	7439-92-1	Lead	26.5		mg/kg
R34C33	1-1.5	03/09/04	Yes	1-R34C33_03/09/04_1	7440-38-2	Arsenic	24.0		mg/kg
R34C33	1-1.5	03/09/04	Yes	1-R34C33_03/09/04_1	7439-92-1	Lead	27.3		mg/kg
R34C34	1-1.5	03/09/04	Yes	1-R34C34_AVG_03/09/04_1	7440-38-2	Arsenic	8.8		mg/kg
R34C34	1-1.5	03/09/04	Yes	1-R34C34_AVG_03/09/04_1	7439-92-1	Lead	6.7		mg/kg
R34C35	1-1.5	03/09/04	Yes	1-R34C35_03/09/04_1	7440-38-2	Arsenic	11.7		mg/kg
R34C35	1-1.5	03/09/04	Yes	1-R34C35_03/09/04_1	7439-92-1	Lead	9.6		mg/kg
R35C33	1-1.5	03/30/04	Yes	01-R35C33_03/30/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R35C33	1-1.5	03/30/04	Yes	01-R35C33_03/30/04_1	7439-92-1	Lead	15.3		mg/kg
R35C34	1-1.5	03/30/04	Yes	01-R35C34_03/30/04_1	7440-38-2	Arsenic	2.4		mg/kg
R35C34	1-1.5	03/30/04	Yes	01-R35C34_03/30/04_1	7439-92-1	Lead	13.4		mg/kg
R35C35	1-1.5	03/30/04	Yes	01-R35C35_03/30/04_1	7440-38-2	Arsenic	2.2		mg/kg
R35C35	1-1.5	03/30/04	Yes	01-R35C35_03/30/04_1	7439-92-1	Lead	6.3		mg/kg
R36C33	1-1.5	03/30/04	Yes	01-R36C33_AVG_03/30/04_1	7440-38-2	Arsenic	1.4		mg/kg
R36C33	1-1.5	03/30/04	Yes	01-R36C33_AVG_03/30/04_1	7439-92-1	Lead	13.6		mg/kg
R36C34	1-1.5	03/30/04	Yes	01-R36C34_03/30/04_1	7440-38-2	Arsenic	4.3		mg/kg
R36C34	1-1.5	03/30/04	Yes	01-R36C34_03/30/04_1	7439-92-1	Lead	27.5		mg/kg
R36C35	1-1.5	03/30/04	Yes	01-R36C35_03/30/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R36C35	1-1.5	03/30/04	Yes	01-R36C35_03/30/04_1	7439-92-1	Lead	3.9		mg/kg
R36C40	1-1.5	04/08/04	Yes	1-R36C40_04/08/04_1	7440-38-2	Arsenic	8.7		mg/kg
R36C40	1-1.5	04/08/04	Yes	1-R36C40_04/08/04_1	7439-92-1	Lead	8.1		mg/kg
R37C34	1-1.5	03/30/04	Yes	01-R37C34_03/30/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R37C34	1-1.5	03/30/04	Yes	01-R37C34_03/30/04_1	7439-92-1	Lead	4.3		mg/kg
R37C35	1-1.5	03/30/04	Yes	01-R37C35_03/30/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R37C35	1-1.5	03/30/04	Yes	01-R37C35_03/30/04_1	7439-92-1	Lead	2.8		mg/kg
R37C39	1-1.5	04/08/04	Yes	1-R37C39_04/08/04_1	7440-38-2	Arsenic	5.8		mg/kg
R37C39	1-1.5	04/08/04	Yes	1-R37C39_04/08/04_1	7439-92-1	Lead	4.2		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R37C40	1-1.5	04/08/04	Yes	1-R37C40_AVG_04/08/04_1	7440-38-2	Arsenic	8.4		mg/kg
R37C40	1-1.5	04/08/04	Yes	1-R37C40_AVG_04/08/04_1	7439-92-1	Lead	20.7		mg/kg
R38C35	1-1.5	03/26/04	Yes	01-R38C35_03/26/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R38C35	1-1.5	03/26/04	Yes	01-R38C35_03/26/04_1	7439-92-1	Lead	3.6		mg/kg
R38C37	1-1.5	04/30/04	Yes	1-R38C37_AVG_04/30/04_1	7440-38-2	Arsenic	5.3		mg/kg
R38C37	1-1.5	04/30/04	Yes	1-R38C37_AVG_04/30/04_1	7439-92-1	Lead	5.0		mg/kg
R38C38	1-1.5	04/30/04	Yes	1-R38C38_04/30/04_1	7440-38-2	Arsenic	9.8		mg/kg
R38C38	1-1.5	04/30/04	Yes	1-R38C38_04/30/04_1	7439-92-1	Lead	14.7		mg/kg
R38C39	1-1.5	04/08/04	No	1-R38C39_04/08/04_1	7440-38-2	Arsenic	10.8		mg/kg
R38C39	2-2.5	05/05/04	Yes	2-R38C39_05/05/04_2	7439-92-1	Lead	3.1		mg/kg
R38C40	1-1.5	04/08/04	Yes	1-R38C40_04/08/04_1	7440-38-2	Arsenic	9.0		mg/kg
R38C40	1-1.5	04/08/04	Yes	1-R38C40_04/08/04_1	7439-92-1	Lead	8.7		mg/kg
R38C41	1-1.5	04/08/04	Yes	1-R38C41_04/08/04_1	7440-38-2	Arsenic	8.0		mg/kg
R38C41	1-1.5	04/08/04	Yes	1-R38C41_04/08/04_1	7439-92-1	Lead	11.7		mg/kg
R39C35	1-1.5	03/26/04	Yes	01-R39C35_03/26/04_1	7440-38-2	Arsenic	6.0		mg/kg
R39C35	1-1.5	03/26/04	Yes	01-R39C35_03/26/04_1	7439-92-1	Lead	9.0		mg/kg
R39C37	1-1.5	03/09/04	Yes	1-R39C37_03/09/04_1	7440-38-2	Arsenic	11.9		mg/kg
R39C37	1-1.5	03/09/04	Yes	1-R39C37_03/09/04_1	7439-92-1	Lead	12.9		mg/kg
R39C38	1-1.5	04/08/04	No	1-R39C38_04/08/04_1	7440-38-2	Arsenic	7.1		mg/kg
R39C38	3-3.5	05/10/04	Yes	3-R39C38_05/10/04_3	7439-92-1	Lead	3.0		mg/kg
R39C39	2-2.5	04/02/04	Yes	02-R39C39_04/02/04_2	7439-92-1	Lead	36.5		mg/kg
R39C39	1-1.5	03/09/04	No	1-R39C39_03/09/04_1	7440-38-2	Arsenic	7.7		mg/kg
R39C40	1-1.5	03/09/04	Yes	1-R39C40_AVG_03/09/04_1	7440-38-2	Arsenic	13.6		mg/kg
R39C40	1-1.5	03/09/04	Yes	1-R39C40_AVG_03/09/04_1	7439-92-1	Lead	25.5		mg/kg
R39C41	1-1.5	03/09/04	Yes	1-R39C41_03/09/04_1	7440-38-2	Arsenic	11.2		mg/kg
R39C41	1-1.5	03/09/04	Yes	1-R39C41_03/09/04_1	7439-92-1	Lead	12.9		mg/kg
R40C37	1-1.5	03/09/04	Yes	1-R40C37_03/09/04_1	7440-38-2	Arsenic	9.3		mg/kg
R40C37	1-1.5	03/09/04	Yes	1-R40C37_03/09/04_1	7439-92-1	Lead	14.3		mg/kg
R40C38	1-1.5	03/09/04	Yes	1-R40C38_03/09/04_1	7440-38-2	Arsenic	7.5		mg/kg
R40C38	1-1.5	03/09/04	Yes	1-R40C38_03/09/04_1	7439-92-1	Lead	20.3		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R40C39	1-1.5	03/09/04	Yes	1-R40C39_03/09/04_1	7440-38-2	Arsenic	11.7		mg/kg
R40C39	1-1.5	03/09/04	Yes	1-R40C39_03/09/04_1	7439-92-1	Lead	9.7		mg/kg
R40C40	1-1.5	03/09/04	Yes	1-R40C40_03/09/04_1	7440-38-2	Arsenic	9.7		mg/kg
R40C40	1-1.5	03/09/04	Yes	1-R40C40_03/09/04_1	7439-92-1	Lead	5.5		mg/kg
R40C41	1-1.5	03/09/04	Yes	1-R40C41_03/09/04_1	7440-38-2	Arsenic	17.2		mg/kg
R40C41	1-1.5	03/09/04	Yes	1-R40C41_03/09/04_1	7439-92-1	Lead	20.8		mg/kg
R41C37	1-1.5	03/09/04	Yes	1-R41C37_03/09/04_1	7440-38-2	Arsenic	9.4		mg/kg
R41C37	1-1.5	03/09/04	Yes	1-R41C37_03/09/04_1	7439-92-1	Lead	10.0		mg/kg
R41C38	1-1.5	03/09/04	Yes	1-R41C38_03/09/04_1	7440-38-2	Arsenic	9.0		mg/kg
R41C38	1-1.5	03/09/04	Yes	1-R41C38_03/09/04_1	7439-92-1	Lead	8.0		mg/kg
R41C39	1-1.5	03/09/04	Yes	1-R41C39_03/09/04_1	7440-38-2	Arsenic	5.8		mg/kg
R41C39	1-1.5	03/09/04	Yes	1-R41C39_03/09/04_1	7439-92-1	Lead	4.8		mg/kg
R41C40	1-1.5	03/09/04	Yes	1-R41C40_03/09/04_1	7440-38-2	Arsenic	12.7		mg/kg
R41C40	1-1.5	03/09/04	Yes	1-R41C40_03/09/04_1	7439-92-1	Lead	4.2		mg/kg
R41C41	1-1.5	03/31/04	Yes	01-R41C41_03/31/04_1	7440-38-2	Arsenic	5.1		mg/kg
R41C41	1-1.5	03/31/04	Yes	01-R41C41_03/31/04_1	7439-92-1	Lead	9.1		mg/kg
R42C37	1-1.5	03/09/04	Yes	1-R42C37_03/09/04_1	7440-38-2	Arsenic	6.1		mg/kg
R42C37	1-1.5	03/09/04	Yes	1-R42C37_03/09/04_1	7439-92-1	Lead	4.2		mg/kg
R42C38	1-1.5	03/09/04	Yes	1-R42C38_03/09/04_1	7440-38-2	Arsenic	13.4		mg/kg
R42C38	1-1.5	03/09/04	Yes	1-R42C38_03/09/04_1	7439-92-1	Lead	4.3		mg/kg
R42C39	1-1.5	03/09/04	Yes	1-R42C39_03/09/04_1	7440-38-2	Arsenic	6.0		mg/kg
R42C39	1-1.5	03/09/04	Yes	1-R42C39_03/09/04_1	7439-92-1	Lead	5.2		mg/kg
R42C40	1-1.5	03/31/04	Yes	01-R42C40_03/31/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R42C40	1-1.5	03/31/04	Yes	01-R42C40_03/31/04_1	7439-92-1	Lead	5.5		mg/kg
R42C41	1-1.5	03/31/04	Yes	01-R42C41_03/31/04_1	7440-38-2	Arsenic	3.9		mg/kg
R42C41	1-1.5	03/31/04	Yes	01-R42C41_03/31/04_1	7439-92-1	Lead	7.5		mg/kg
R43C38	1-1.5	03/09/04	Yes	1-R43C38_03/09/04_1	7440-38-2	Arsenic	7.3		mg/kg
R43C38	1-1.5	03/09/04	Yes	1-R43C38_03/09/04_1	7439-92-1	Lead	7.0		mg/kg
R43C39	1-1.5	03/09/04	Yes	1-R43C39_03/09/04_1	7440-38-2	Arsenic	6.9		mg/kg
R43C39	1-1.5	03/09/04	Yes	1-R43C39_03/09/04_1	7439-92-1	Lead	4.4		mg/kg

Table B.1-B
Sample Results for CM-01B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R43C40	1-1.5	03/31/04	Yes	01-R43C40_03/31/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R43C40	1-1.5	03/31/04	Yes	01-R43C40_03/31/04_1	7439-92-1	Lead	5.4		mg/kg
R44C38	1-1.5	03/09/04	Yes	1-R44C38_AVG_03/09/04_1	7440-38-2	Arsenic	9.9		mg/kg
R44C38	1-1.5	03/09/04	Yes	1-R44C38_AVG_03/09/04_1	7439-92-1	Lead	13.6		mg/kg
R44C39	1-1.5	03/09/04	Yes	1-R44C39_03/09/04_1	7440-38-2	Arsenic	12.4		mg/kg
R44C39	1-1.5	03/09/04	Yes	1-R44C39_03/09/04_1	7439-92-1	Lead	25.7		mg/kg
R44C40	1-1.5	03/31/04	Yes	01-R44C40_03/31/04_1	7440-38-2	Arsenic	9.2		mg/kg
R44C40	1-1.5	03/31/04	Yes	01-R44C40_03/31/04_1	7439-92-1	Lead	13.7		mg/kg
R46C39	1-1.5	01/23/04	Yes	01-SS-[R46C39]-C2_01/23/04_1	7440-38-2	Arsenic	9.6		mg/kg
R46C39	1-1.5	01/23/04	Yes	01-SS-[R46C39]-C2_01/23/04_1	7439-92-1	Lead	10.9		mg/kg
R46C40	1-1.5	01/23/04	Yes	01-SS-[R46C40]-C2_01/23/04_1	7440-38-2	Arsenic	12.7		mg/kg
R46C40	1-1.5	01/23/04	Yes	01-SS-[R46C40]-C2_01/23/04_1	7439-92-1	Lead	9.8		mg/kg
T066,067	0-0.5	04/21/03	Yes	01-SS-[T-066,067]-C1_04/21/03_0	7440-38-2	Arsenic	43.3		mg/kg
T066,067	0-0.5	04/21/03	Yes	01-SS-[T-066,067]-C1_04/21/03_0	7439-92-1	Lead	55.4		mg/kg
T068	0-0.5	04/21/03	Yes	01-SS-[T068]-C1_04/21/03_0	7440-38-2	Arsenic	55.4		mg/kg
T068	0-0.5	04/21/03	Yes	01-SS-[T068]-C1_04/21/03_0	7439-92-1	Lead	47.5		mg/kg
T069	0-0.5	04/21/03	Yes	01-SS-[T069]-C1_04/21/03_0	7440-38-2	Arsenic	46.1		mg/kg
T069	0-0.5	04/21/03	Yes	01-SS-[T069]-C1_04/21/03_0	7439-92-1	Lead	64.0		mg/kg
T317	0-0.5	04/16/03	Yes	01-SS-[T317]-C1_04/16/03_0	7440-38-2	Arsenic	14.0		mg/kg
T317	0-0.5	04/16/03	Yes	01-SS-[T317]-C1_04/16/03_0	7439-92-1	Lead	32.5		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-665	0-0.5	11/02/92	Yes	18-SS-665	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
18-SS-665	0-0.5	11/02/92	Yes	18-SS-665	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-665	0-0.5	11/02/92	Yes	18-SS-665	98-95-3	Nitrobenzene	0.8	U	mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	DNT-TOTAL	DNT - Total	0.06		mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	7440-38-2	Arsenic	3.0		mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	7440-50-8	Copper	14.4		mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	7439-92-1	Lead	5.5		mg/kg
18-TP-504	3-6	05/11/92	Yes	18-TP-504-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-504	8-10	05/11/92	Yes	18-TP-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-504	8-10	05/11/92	Yes	18-TP-504-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-504	8-10	05/11/92	Yes	18-TP-504-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-504	8-10	05/11/92	Yes	18-TP-504-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-517	0-1	05/14/92	Yes	18-TP-517-S-1	7439-92-1	Lead	92.0		mg/kg
18-TP-517	3-6	05/14/92	Yes	18-TP-517-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-517	3-6	05/14/92	Yes	18-TP-517-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-517	3-6	05/14/92	Yes	18-TP-517-S-2	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-TP-517	3-6	05/14/92	Yes	18-TP-517-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-517	8-10	05/14/92	Yes	18-TP-517-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	7440-38-2	Arsenic	3.5		mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	7440-50-8	Copper	18.7		mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	7439-92-1	Lead	5.3	U	mg/kg
18-TP-519	3-6	05/11/92	Yes	18-TP-519-S-2-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-519	8-10	05/11/92	Yes	18-TP-519-S-3	118-96-7	2,4,6-Trinitrotoluene	0.03	UJ	mg/kg
18-TP-519	8-10	05/11/92	Yes	18-TP-519-S-3	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-TP-519	8-10	05/11/92	Yes	18-TP-519-S-3	98-95-3	Nitrobenzene	0.6	UJ	mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-519	8-10	05/11/92	Yes	18-TP-519-S-3	7439-92-1	Lead	18.0		mg/kg
18-TP-536	0-1	04/27/92	Yes	18-TP-536-S-1	7439-92-1	Lead	59.0		mg/kg
18-TP-536	3-6	04/27/92	Yes	18-TP-536-S-2	7440-38-2	Arsenic	2.8		mg/kg
18-TP-536	3-6	04/27/92	Yes	18-TP-536-S-2	7440-50-8	Copper	19.0		mg/kg
18-TP-536	3-6	04/27/92	Yes	18-TP-536-S-2	7439-92-1	Lead	5.5	U	mg/kg
18-TP-536	3-6	04/27/92	Yes	18-TP-536-S-2	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-536	8-10	04/27/92	Yes	18-TP-536-S-3	7439-92-1	Lead	5.2	U	mg/kg
18-TP-GS-16	3-4	07/02/93	Yes	18-TP-GS-16-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-17	0-1	07/02/93	Yes	18-TP-GS-17-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-17	3-4	07/02/93	Yes	18-TP-GS-17-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-23	0-1	07/02/93	Yes	18-TP-GS-23-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-23	3-4	07/02/93	Yes	18-TP-GS-23-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-104E	1-2	07/02/93	Yes	18-TR-104E,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-104E	3-4	07/02/93	Yes	18-TR-104E,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-104W	0-1	06/29/93	Yes	18-TR-104W,S-1	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-TR-104W	0-1	06/29/93	Yes	18-TR-104W,S-1	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-TR-104W	0-1	06/29/93	Yes	18-TR-104W,S-1	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TR-104W	3-4	07/02/93	Yes	18-TR-104W,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-107N	0-1	07/02/93	Yes	18-TR-107N,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-107N	3-4	07/02/93	Yes	18-TR-107N,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-117E	0-1	07/02/93	Yes	18-TR-117E,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-117E	3-4	07/02/93	Yes	18-TR-117E,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-117W	1-2	07/02/93	Yes	18-TR-117W,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-117W	4-5	07/02/93	Yes	18-TR-117W,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-119S	3-4	07/02/93	Yes	18-TR-119S,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-18N,S-1	3-3.5	08/15/01	Yes	02-C-SS-[18-TR-18N,S-1]-C2-010	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
18-TR-18N,S-1	3-3.5	08/15/01	Yes	02-C-SS-[18-TR-18N,S-1]-C2-010	DNT-TOTAL	DNT - Total	0.04		mg/kg
18-VS-26	3-3.5	04/12/93	Yes	18-VS-26	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-26	3-3.5	04/12/93	Yes	18-VS-26	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-26	3-3.5	04/12/93	Yes	18-VS-26	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-3A	0-1	12/08/92	Yes	18-VS-3A	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-3A	0-1	12/08/92	Yes	18-VS-3A	7439-92-1	Lead	33.0		mg/kg
18-VS-3B	3-6	12/08/92	Yes	18-VS-3B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-4A	0-1	12/08/92	Yes	18-VS-4A	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-4A	0-1	12/08/92	Yes	18-VS-4A	7439-92-1	Lead	24.0		mg/kg
18-VS-4B	3-6	12/08/92	Yes	18-VS-4B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18R-406	0.5-1	12/14/93	Yes	18R-406-S-2	7440-38-2	Arsenic	21.0	J	mg/kg
18R-406	1-2	12/14/93	Yes	18R-406-S-3	7440-38-2	Arsenic	4.5	J	mg/kg
F-260	2-2.5	08/22/01	Yes	01-F09-SS[F-260]C2-005-DAVG	7440-38-2	Arsenic	4.6		mg/kg
F-260	2-2.5	08/22/01	Yes	01-F09-SS[F-260]C2-005-DAVG	7439-92-1	Lead	4.4		mg/kg
F-262	2-2.5	08/22/01	Yes	01-F09-SS[F-262]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-262	2-2.5	08/22/01	Yes	01-F09-SS[F-262]C2-005	7439-92-1	Lead	4.4		mg/kg
F-263	2-2.5	08/22/01	Yes	01-F09-SS[F-263]C2-005	7440-38-2	Arsenic	5.9		mg/kg
F-263	2-2.5	08/22/01	Yes	01-F09-SS[F-263]C2-005	7439-92-1	Lead	7.7		mg/kg
F-264	2-2.5	08/22/01	Yes	01-F09-SS[F-264]C2-005	7440-38-2	Arsenic	4.0		mg/kg
F-264	2-2.5	08/22/01	Yes	01-F09-SS[F-264]C2-005	7439-92-1	Lead	3.6		mg/kg
F-265	2-2.5	08/22/01	Yes	01-F09-SS[F-265]C2-005	7440-38-2	Arsenic	4.0		mg/kg
F-265	2-2.5	08/22/01	Yes	01-F09-SS[F-265]C2-005	7439-92-1	Lead	17.0		mg/kg
F-266	2-2.5	08/22/01	Yes	01-F09-SS[F-266]C2-005	7440-38-2	Arsenic	6.0		mg/kg
F-266	2-2.5	08/22/01	Yes	01-F09-SS[F-266]C2-005	7439-92-1	Lead	5.7		mg/kg
F-268	2-2.5	08/22/01	Yes	01-F32-SS[F-268]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-268	2-2.5	08/22/01	Yes	01-F32-SS[F-268]C2-005	7439-92-1	Lead	3.9		mg/kg
F-269	2-2.5	08/22/01	Yes	01-F32-SS[F-269]C2-005	7440-38-2	Arsenic	26.0		mg/kg
F-269	2-2.5	08/22/01	Yes	01-F32-SS[F-269]C2-005	7439-92-1	Lead	32.0		mg/kg
F-270	2-2.5	08/22/01	Yes	01-F32-SS[F-270]C2-005	7440-38-2	Arsenic	4.5		mg/kg
F-270	2-2.5	08/22/01	Yes	01-F32-SS[F-270]C2-005	7439-92-1	Lead	4.3		mg/kg
F-271	2-2.5	08/22/01	Yes	01-F32-SS[F-271]C2-005	7440-38-2	Arsenic	2.8		mg/kg
F-271	2-2.5	08/22/01	Yes	01-F32-SS[F-271]C2-005	7439-92-1	Lead	2.5		mg/kg
F-272	2-2.5	08/22/01	Yes	01-F32-SS[F-272]C2-005	7440-38-2	Arsenic	4.4		mg/kg
F-272	2-2.5	08/22/01	Yes	01-F32-SS[F-272]C2-005	7439-92-1	Lead	5.6		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-059-S-2	0.5-1	12/10/93	Yes	LR-059-S-2	7440-38-2	Arsenic	39.0		mg/kg
LR-059-S-3	1-2	12/10/93	Yes	LR-059-S-3	7440-38-2	Arsenic	6.0		mg/kg
MSU-74-VS-B	1.5-3.5	07/02/03	Yes	01-SS-[MSU-74-VS-B]-C2_07/02/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-74-VS-B	1.5-3.5	07/02/03	Yes	01-SS-[MSU-74-VS-B]-C2_07/02/03_1.5	7439-92-1	Lead	4.6		mg/kg
MSU-75-VS-B	1.5-3.5	07/02/03	Yes	01-SS-[MSU-75-VS-B]-C2_07/02/03_1.5	7440-38-2	Arsenic	4.0		mg/kg
MSU-75-VS-B	1.5-3.5	07/02/03	Yes	01-SS-[MSU-75-VS-B]-C2_07/02/03_1.5	7439-92-1	Lead	4.6		mg/kg
MSU-76-E	0-0.5	06/19/03	Yes	01-SS-[MSU-76-E]-D1_06/19/03_0	7440-38-2	Arsenic	37.0		mg/kg
MSU-76-E	0-0.5	06/19/03	Yes	01-SS-[MSU-76-E]-D1_06/19/03_0	7440-50-8	Copper	44.6		mg/kg
MSU-76-E	0-0.5	06/19/03	Yes	01-SS-[MSU-76-E]-D1_06/19/03_0	7439-92-1	Lead	92.7		mg/kg
MSU-76-N	0-0.5	06/19/03	Yes	01-SS-[MSU-76-N]-D1_06/19/03_0	7440-38-2	Arsenic	10.1		mg/kg
MSU-76-N	0-0.5	06/19/03	Yes	01-SS-[MSU-76-N]-D1_06/19/03_0	7440-50-8	Copper	59.0		mg/kg
MSU-76-N	0-0.5	06/19/03	Yes	01-SS-[MSU-76-N]-D1_06/19/03_0	7439-92-1	Lead	27.9		mg/kg
MSU-76-S	0-0.5	06/19/03	Yes	01-SS-[MSU-76-S]-D1_06/19/03_0	7440-38-2	Arsenic	13.9		mg/kg
MSU-76-S	0-0.5	06/19/03	Yes	01-SS-[MSU-76-S]-D1_06/19/03_0	7440-50-8	Copper	22.9		mg/kg
MSU-76-S	0-0.5	06/19/03	Yes	01-SS-[MSU-76-S]-D1_06/19/03_0	7439-92-1	Lead	17.1		mg/kg
MSU-76-VS-0-6-E	0-6	08/07/03	Yes	01-SS-[MSU-76-VS-0-6-E]-C2_08/07/03_7.5	7439-92-1	Lead	7.4		mg/kg
MSU-76-VS-0-6-N	0-6	08/07/03	Yes	01-SS-[MSU-76-VS-0-6-N]-C2_08/07/03_7.5	7439-92-1	Lead	101.0		mg/kg
MSU-76-VS-0-6-S	0-6	09/22/03	Yes	02-SB-[MSU-76-VS-0-6-S]-C2_09/22/03_7.5	7439-92-1	Lead	5.6		mg/kg
MSU-76-VS-0-6-W	0-6	08/07/03	Yes	01-SS-[MSU-76-VS-0-6-W]-C2_08/07/03_7.5	7439-92-1	Lead	2.5		mg/kg
MSU-76-VS-15-17-E	15-17	08/07/03	Yes	01-SB-[MSU-76-VS-15-17-E]-C2_08/07/03_17.5	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-76-VS-15-17-N	15-17	08/07/03	Yes	01-SB-[MSU-76-VS-15-17-N]-C2_08/07/03_17.5	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-76-VS-15-17-S	15-17	08/07/03	Yes	01-SB-[MSU-76-VS-15-17-S]-C2_08/07/03_17.5	118-96-7	2,4,6-Trinitrotoluene	0.05	U	mg/kg
MSU-76-VS-15-17-W	15-17	08/07/03	Yes	01-SB-[MSU-76-VS-15-17-W]-C2_08/07/03_17.5	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-76-VS-B	17-17.5	08/07/03	Yes	01-SB-[MSU-76-VS-B]-C2_08/07/03_17.5	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-76-VS-B	17-17.5	08/07/03	Yes	01-SB-[MSU-76-VS-B]-C2_08/07/03_17.5	7439-92-1	Lead	2.0	U	mg/kg
MSU-76-W	0-0.5	06/19/03	Yes	01-SS-[MSU-76-W]-D1_06/19/03_0	7440-38-2	Arsenic	3.8		mg/kg
MSU-76-W	0-0.5	06/19/03	Yes	01-SS-[MSU-76-W]-D1_06/19/03_0	7440-50-8	Copper	45.9		mg/kg
MSU-76-W	0-0.5	06/19/03	Yes	01-SS-[MSU-76-W]-D1_06/19/03_0	7439-92-1	Lead	33.2		mg/kg
MSU-77-VS-B	5-6	08/11/03	Yes	01-SS-[MSU-77-VS-B]-C2_08/11/03_5	7439-92-1	Lead	2.0	U	mg/kg
MSU-77-VS-E	0-3.5	03/24/06	Yes	03-MSU-77-VS-E-0-3.5	7439-92-1	Lead	3.2		mg/Kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-77-VS-N	0-3.5	03/24/06	Yes	03-MSU-77-VS-N-0-3.5	7439-92-1	Lead	3.0		mg/Kg
MSU-77-VS-S	0-3.5	03/24/06	Yes	03-MSU-77-VS-S-0-3.5_AVG	7440-38-2	Arsenic	5.1	U	mg/Kg
MSU-77-VS-S	0-3.5	03/24/06	Yes	03-MSU-77-VS-S-0-3.5_AVG	7439-92-1	Lead	2.6		mg/Kg
MSU-77-VS-W	0-3.5	03/24/06	Yes	03-MSU-77-VS-W-0-3.5	7439-92-1	Lead	1.5	U	mg/Kg
MSU-F-CU-5A-2	2-2.5	04/28/03	Yes	01-SS-[MSU-F-CU-5A-2]-C1_04/28/03_2	7440-38-2	Arsenic	3.4		mg/kg
MSU-F-CU-5A-2	2-2.5	04/28/03	Yes	01-SS-[MSU-F-CU-5A-2]-C1_04/28/03_2	7439-92-1	Lead	11.9		mg/kg
MSU-F-CU-5A	3-3.5	05/13/03	Yes	01-SS-[MSU-F-CU-5A-1]C-2_05/13/03_2	7440-38-2	Arsenic	2.7		mg/kg
MSU-F-CU-5A	3-3.5	05/13/03	Yes	01-SS-[MSU-F-CU-5A-1]C-2_05/13/03_2	7439-92-1	Lead	3.5		mg/kg
NEW-10	1-1.5	04/12/04	Yes	1-NEW-10_04/12/04_1	7440-38-2	Arsenic	8.9		mg/kg
NEW-10	1-1.5	04/12/04	Yes	1-NEW-10_04/12/04_1	7439-92-1	Lead	8.8		mg/kg
NEW-11	1-1.5	04/12/04	No	1-NEW-11_04/12/04_1	7440-38-2	Arsenic	7.4		mg/kg
NEW-11	2-2.5	05/10/04	Yes	2-NEW-11_05/10/04_2	7439-92-1	Lead	21.1		mg/kg
NEW-12	1-1.5	04/12/04	Yes	1-NEW-12_04/12/04_1	7440-38-2	Arsenic	6.2		mg/kg
NEW-12	1-1.5	04/12/04	Yes	1-NEW-12_04/12/04_1	7439-92-1	Lead	5.8		mg/kg
NEW-14	1-1.5	04/12/04	Yes	1-NEW-14_04/12/04_1	7440-38-2	Arsenic	10.5		mg/kg
NEW-14	1-1.5	04/12/04	Yes	1-NEW-14_04/12/04_1	7439-92-1	Lead	8.6		mg/kg
NEW-15	1-1.5	04/12/04	Yes	1-NEW-15_04/12/04_1	7440-38-2	Arsenic	9.3		mg/kg
NEW-15	1-1.5	04/12/04	Yes	1-NEW-15_04/12/04_1	7439-92-1	Lead	4.7		mg/kg
NEW-16	1-1.5	04/12/04	Yes	1-NEW-16_04/12/04_1	7440-38-2	Arsenic	5.3		mg/kg
NEW-16	1-1.5	04/12/04	Yes	1-NEW-16_04/12/04_1	7439-92-1	Lead	3.6		mg/kg
NGRR-298	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-298]C2-005	7440-38-2	Arsenic	7.8		mg/kg
NGRR-298	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-298]C2-005	7439-92-1	Lead	9.6		mg/kg
NGRR-299	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-299]C2-005	7440-38-2	Arsenic	18.0		mg/kg
NGRR-299	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-299]C2-005	7439-92-1	Lead	26.0		mg/kg
NGRR-300	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-300]C2-005	7440-38-2	Arsenic	5.9		mg/kg
NGRR-300	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-300]C2-005	7439-92-1	Lead	55.0		mg/kg
NGRR-350	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-350]C2-005	7440-38-2	Arsenic	40.0	U	mg/kg
NGRR-350	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-350]C2-005	7439-92-1	Lead	20.0	UJ	mg/kg
NGRR-351	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-351]C2-005	7440-38-2	Arsenic	42.0	U	mg/kg
NGRR-351	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-351]C2-005	7439-92-1	Lead	21.0	UJ	mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-352	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-352]C2-005-DAVG	7440-38-2	Arsenic	43.0	U	mg/kg
NGRR-352	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-352]C2-005-DAVG	7439-92-1	Lead	21.0	UJ	mg/kg
NGRR-354	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-354]C2-005	7440-38-2	Arsenic	43.0	U	mg/kg
NGRR-354	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-354]C2-005	7439-92-1	Lead	21.0	UJ	mg/kg
NGRR-355	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-355]C2-005	7440-38-2	Arsenic	45.0	U	mg/kg
NGRR-355	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-355]C2-005	7439-92-1	Lead	22.0	UJ	mg/kg
NGRR-356	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-356]C2-005	7440-38-2	Arsenic	42.0	U	mg/kg
NGRR-356	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-356]C2-005	7439-92-1	Lead	21.0	UJ	mg/kg
NGRR-357	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-357]C2-005	7440-38-2	Arsenic	40.0	U	mg/kg
NGRR-357	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-357]C2-005	7439-92-1	Lead	20.0	UJ	mg/kg
NGRR-358	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-358]C2-005	7440-38-2	Arsenic	37.0	U	mg/kg
NGRR-358	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-358]C2-005	7439-92-1	Lead	18.0	UJ	mg/kg
NGRR-359	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-359]C2-005	7440-38-2	Arsenic	43.0	U	mg/kg
NGRR-359	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-359]C2-005	7439-92-1	Lead	22.0	UJ	mg/kg
NGRR-360	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-360]C2-005	7440-38-2	Arsenic	44.0	U	mg/kg
NGRR-360	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-360]C2-005	7439-92-1	Lead	22.0	UJ	mg/kg
NGRR-361	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-361]C2-005	7440-38-2	Arsenic	40.0	U	mg/kg
NGRR-361	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-361]C2-005	7439-92-1	Lead	20.0	UJ	mg/kg
NGRR-363	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-363]C2-005	7440-38-2	Arsenic	6.7		mg/kg
NGRR-363	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-363]C2-005	7439-92-1	Lead	8.3		mg/kg
NGRR-364	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-364]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-364	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-364]C2-005	7439-92-1	Lead	5.3		mg/kg
NGRR-365	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-365]C2-005	7440-38-2	Arsenic	3.6		mg/kg
NGRR-365	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-365]C2-005	7439-92-1	Lead	3.4		mg/kg
NGRR-366	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-366]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-366	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-366]C2-005	7439-92-1	Lead	5.9		mg/kg
NGRR-367	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-367]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-367	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-367]C2-005	7439-92-1	Lead	7.2		mg/kg
NGRR-369	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-369]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-369	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-369]C2-005	7439-92-1	Lead	6.4		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-370	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-370]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-370	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-370]C2-005	7439-92-1	Lead	15.0		mg/kg
NGRR-371	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-371]C2-005	7440-38-2	Arsenic	4.5		mg/kg
NGRR-371	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-371]C2-005	7439-92-1	Lead	5.6		mg/kg
NGRR-372	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-372]C2-005	7440-38-2	Arsenic	4.2		mg/kg
NGRR-372	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-372]C2-005	7439-92-1	Lead	4.9		mg/kg
NGRR-373	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-373]C2-005	7440-38-2	Arsenic	6.2		mg/kg
NGRR-373	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-373]C2-005	7439-92-1	Lead	5.1		mg/kg
NGRR-374	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-374]C2-005	7440-38-2	Arsenic	5.5		mg/kg
NGRR-374	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-374]C2-005	7439-92-1	Lead	4.0		mg/kg
NGRR-375	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-375]C2-005	7440-38-2	Arsenic	4.2		mg/kg
NGRR-375	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-375]C2-005	7439-92-1	Lead	3.6		mg/kg
NGRR-376	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-376]C2-005	7440-38-2	Arsenic	4.2		mg/kg
NGRR-376	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-376]C2-005	7439-92-1	Lead	3.8		mg/kg
NGRR-377	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-377]C2-005	7440-38-2	Arsenic	7.2		mg/kg
NGRR-377	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-377]C2-005	7439-92-1	Lead	7.1		mg/kg
NGRR-378	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-378]C2-005	7440-38-2	Arsenic	5.5		mg/kg
NGRR-378	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-378]C2-005	7439-92-1	Lead	6.4		mg/kg
NGRR-379	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-379]C2-005	7440-38-2	Arsenic	5.8		mg/kg
NGRR-379	1.5-2	08/21/01	Yes	01-N01-SS[NGRR-379]C2-005	7439-92-1	Lead	5.1		mg/kg
NGRR-414	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-414]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-414	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-414]C2-005	7439-92-1	Lead	8.2		mg/kg
NGRR-415	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-415]C2-005	7440-38-2	Arsenic	6.6		mg/kg
NGRR-415	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-415]C2-005	7439-92-1	Lead	3.9		mg/kg
NGRR-416	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-416]C2-005	7440-38-2	Arsenic	7.7		mg/kg
NGRR-416	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-416]C2-005	7439-92-1	Lead	7.7		mg/kg
NGRR-417	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-417]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-417	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-417]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-418	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-418]C2-005	7440-38-2	Arsenic	8.3		mg/kg
NGRR-418	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-418]C2-005	7439-92-1	Lead	5.4		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-419	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-419]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-419	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-419]C2-005	7439-92-1	Lead	8.6		mg/kg
NGRR-420	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-420]C2-005	7440-38-2	Arsenic	6.3		mg/kg
NGRR-420	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-420]C2-005	7439-92-1	Lead	4.0		mg/kg
NGRR-421	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-421]C2-005	7440-38-2	Arsenic	6.4		mg/kg
NGRR-421	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-421]C2-005	7439-92-1	Lead	5.0		mg/kg
R23C09	1.5-2	09/04/01	Yes	01-TS03-SS-[R23C09]-D1-015	7440-38-2	Arsenic	7.0		mg/kg
R23C09	1.5-2	09/04/01	Yes	01-TS03-SS-[R23C09]-D1-015	7439-92-1	Lead	17.0		mg/kg
R24C08	1.5-2	09/04/01	Yes	01-TS03-SS-[R24C08]-D1-015	7440-38-2	Arsenic	5.8		mg/kg
R24C08	1.5-2	09/04/01	Yes	01-TS03-SS-[R24C08]-D1-015	7439-92-1	Lead	8.8		mg/kg
R24C09	1.5-2	09/04/01	Yes	01-TS03-SS-[R24C09]-D1-015	7440-38-2	Arsenic	10.0		mg/kg
R24C09	1.5-2	09/04/01	Yes	01-TS03-SS-[R24C09]-D1-015	7439-92-1	Lead	9.2		mg/kg
R24C10	1.5-2	09/04/01	Yes	01-TS03-SS-[R24C10]-D1-015	7440-38-2	Arsenic	10.0		mg/kg
R24C10	1.5-2	09/04/01	Yes	01-TS03-SS-[R24C10]-D1-015	7439-92-1	Lead	28.0		mg/kg
R25C08	1.5-2	09/04/01	Yes	01-TS03-SS-[R25C08]-D1-015	7440-38-2	Arsenic	9.5		mg/kg
R25C08	1.5-2	09/04/01	Yes	01-TS03-SS-[R25C08]-D1-015	7439-92-1	Lead	21.0		mg/kg
R25C09	1.5-2	09/04/01	Yes	01-TS03-SS-[R25C09]-D1-015	7440-38-2	Arsenic	8.9		mg/kg
R25C09	1.5-2	09/04/01	Yes	01-TS03-SS-[R25C09]-D1-015	7439-92-1	Lead	96.0		mg/kg
R25C10	1.5-2	09/04/01	Yes	01-TS03-SS-[R25C10]-D1-015	7440-38-2	Arsenic	4.8		mg/kg
R25C10	1.5-2	09/04/01	Yes	01-TS03-SS-[R25C10]-D1-015	7439-92-1	Lead	12.0		mg/kg
R27C16	1-1.5	04/12/04	Yes	1-R27C16_04/12/04_1	7440-38-2	Arsenic	8.1		mg/kg
R27C16	1-1.5	04/12/04	Yes	1-R27C16_04/12/04_1	7439-92-1	Lead	9.6		mg/kg
R27C17	1-1.5	04/12/04	Yes	1-R27C17_AVG_04/12/04_1	7440-38-2	Arsenic	15.4		mg/kg
R27C17	1-1.5	04/12/04	Yes	1-R27C17_AVG_04/12/04_1	7439-92-1	Lead	17.6		mg/kg
R28C16	1-1.5	04/12/04	Yes	1-R28C16_04/12/04_1	7440-38-2	Arsenic	20.0		mg/kg
R28C16	1-1.5	04/12/04	Yes	1-R28C16_04/12/04_1	7439-92-1	Lead	31.5		mg/kg
R28C17	1-1.5	03/30/04	Yes	01-R28C17_03/30/04_1	7440-38-2	Arsenic	5.1		mg/kg
R28C17	1-1.5	03/30/04	Yes	01-R28C17_03/30/04_1	7439-92-1	Lead	11.4		mg/kg
R28C18	1-1.5	03/30/04	Yes	01-R28C18_03/30/04_1	7440-38-2	Arsenic	8.5		mg/kg
R28C18	1-1.5	03/30/04	Yes	01-R28C18_03/30/04_1	7439-92-1	Lead	8.9		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R29C15	1-1.5	04/12/04	Yes	1-R29C15_04/12/04_1	7440-38-2	Arsenic	7.6		mg/kg
R29C15	1-1.5	04/12/04	Yes	1-R29C15_04/12/04_1	7439-92-1	Lead	24.9		mg/kg
R29C16	1-1.5	10/20/03	Yes	01-SS-[R29C16]-C2_10/20/03_1	7440-38-2	Arsenic	12.0		mg/kg
R29C16	1-1.5	10/20/03	Yes	01-SS-[R29C16]-C2_10/20/03_1	7439-92-1	Lead	28.3		mg/kg
R29C17	1-1.5	03/30/04	Yes	01-R29C17_03/30/04_1	7440-38-2	Arsenic	7.3		mg/kg
R29C17	1-1.5	03/30/04	Yes	01-R29C17_03/30/04_1	7439-92-1	Lead	16.7		mg/kg
R29C18	1-1.5	03/30/04	Yes	01-R29C18_03/30/04_1	7440-38-2	Arsenic	12.0		mg/kg
R29C18	1-1.5	03/30/04	Yes	01-R29C18_03/30/04_1	7439-92-1	Lead	47.8		mg/kg
R29C19	1-1.5	03/30/04	Yes	01-R29C19_03/30/04_1	7440-38-2	Arsenic	2.9		mg/kg
R29C19	1-1.5	03/30/04	Yes	01-R29C19_03/30/04_1	7439-92-1	Lead	11.9		mg/kg
R30C15	1-1.5	04/12/04	No	1-R30C15_04/12/04_1	7440-38-2	Arsenic	13.6		mg/kg
R30C15	4-4.5	05/17/04	Yes	4-R30C15_05/17/04_4	7439-92-1	Lead	38.2		mg/kg
R30C16	1-1.5	10/20/03	Yes	01-SS-[R30C16]-C2_10/20/03_1	7440-38-2	Arsenic	3.1		mg/kg
R30C16	1-1.5	10/20/03	Yes	01-SS-[R30C16]-C2_10/20/03_1	7439-92-1	Lead	48.9		mg/kg
R30C17	1-1.5	03/30/04	Yes	01-R30C17_03/30/04_1	7440-38-2	Arsenic	8.9		mg/kg
R30C17	1-1.5	03/30/04	Yes	01-R30C17_03/30/04_1	7439-92-1	Lead	24.2		mg/kg
R30C18	1-1.5	03/30/04	Yes	01-R30C18_AVG_03/30/04_1	7440-38-2	Arsenic	3.5		mg/kg
R30C18	1-1.5	03/30/04	Yes	01-R30C18_AVG_03/30/04_1	7439-92-1	Lead	6.8		mg/kg
R30C20	1-1.5	03/25/04	Yes	1-R30C20_03/25/04_1	7440-38-2	Arsenic	5.0		mg/kg
R30C20	1-1.5	03/25/04	Yes	1-R30C20_03/25/04_1	7439-92-1	Lead	4.7		mg/kg
R31C14	1-1.5	04/12/04	Yes	1-R31C14_04/12/04_1	7440-38-2	Arsenic	5.7		mg/kg
R31C14	1-1.5	04/12/04	Yes	1-R31C14_04/12/04_1	7439-92-1	Lead	4.3		mg/kg
R31C15	1-1.5	10/20/03	Yes	01-SS-[R31C15]-C2_10/20/03_1	7440-38-2	Arsenic	4.9		mg/kg
R31C15	1-1.5	10/20/03	Yes	01-SS-[R31C15]-C2_10/20/03_1	7439-92-1	Lead	72.1		mg/kg
R31C16	1-1.5	10/20/03	Yes	01-SS-[R31C16]-C2_10/20/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R31C16	1-1.5	10/20/03	Yes	01-SS-[R31C16]-C2_10/20/03_1	7439-92-1	Lead	5.1		mg/kg
R31C17	1-1.5	03/30/04	Yes	01-R31C17_03/30/04_1	7440-38-2	Arsenic	5.5		mg/kg
R31C17	1-1.5	03/30/04	Yes	01-R31C17_03/30/04_1	7439-92-1	Lead	6.3		mg/kg
R31C19	1-1.5	10/21/03	Yes	01-SS-[R31C19]-C2_10/21/03_1	7440-38-2	Arsenic	7.5		mg/kg
R31C19	1-1.5	10/21/03	Yes	01-SS-[R31C19]-C2_10/21/03_1	7439-92-1	Lead	9.1		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R31C20	1-1.5	10/21/03	Yes	01-SS-[R31C20]-C2_10/21/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R31C20	1-1.5	10/21/03	Yes	01-SS-[R31C20]-C2_10/21/03_1	7439-92-1	Lead	4.9		mg/kg
R31C21	1-1.5	10/21/03	Yes	01-SS-[R31C21]-C2_10/21/03_1	7440-38-2	Arsenic	5.1		mg/kg
R31C21	1-1.5	10/21/03	Yes	01-SS-[R31C21]-C2_10/21/03_1	7439-92-1	Lead	8.1		mg/kg
R32C14	1-1.5	04/12/04	Yes	1-R32C14_04/12/04_1	7440-38-2	Arsenic	8.3		mg/kg
R32C14	1-1.5	04/12/04	Yes	1-R32C14_04/12/04_1	7439-92-1	Lead	8.6		mg/kg
R32C15	1-1.5	10/20/03	Yes	01-SS-[R32C15]-C2_10/20/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R32C15	1-1.5	10/20/03	Yes	01-SS-[R32C15]-C2_10/20/03_1	7439-92-1	Lead	3.9		mg/kg
R32C16	1-1.5	10/20/03	Yes	01-SS-[R32C16]-C2_10/20/03_1	7440-38-2	Arsenic	2.7	U	mg/kg
R32C16	1-1.5	10/20/03	Yes	01-SS-[R32C16]-C2_10/20/03_1	7439-92-1	Lead	5.5		mg/kg
R32C18	1-1.5	10/21/03	Yes	01-SS-[R32C18]-C2_10/21/03_1	7440-38-2	Arsenic	3.2		mg/kg
R32C18	1-1.5	10/21/03	Yes	01-SS-[R32C18]-C2_10/21/03_1	7439-92-1	Lead	9.2		mg/kg
R32C19	1-1.5	03/25/04	Yes	1-R32C19_03/25/04_1	7440-38-2	Arsenic	10.5		mg/kg
R32C19	1-1.5	03/25/04	Yes	1-R32C19_03/25/04_1	7439-92-1	Lead	12.1		mg/kg
R32C20	1-1.5	10/21/03	No	01-SS-[R32C20]-C2_10/21/03_1	7440-38-2	Arsenic	7.5		mg/kg
R32C20	2-2.5	11/20/03	Yes	02-SS-[R32C20]-C2_11/20/03_2	7439-92-1	Lead	3.2		mg/kg
R32C21	1-1.5	10/21/03	Yes	01-SS-[R32C21]-C2_10/21/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R32C21	1-1.5	10/21/03	Yes	01-SS-[R32C21]-C2_10/21/03_1	7439-92-1	Lead	13.1		mg/kg
R33C13	1-1.5	04/12/04	Yes	1-R33C13_04/12/04_1	7440-38-2	Arsenic	5.1		mg/kg
R33C13	1-1.5	04/12/04	Yes	1-R33C13_04/12/04_1	7439-92-1	Lead	3.2		mg/kg
R33C14	1-1.5	04/12/04	Yes	1-R33C14_04/12/04_1	7440-38-2	Arsenic	8.3		mg/kg
R33C14	1-1.5	04/12/04	Yes	1-R33C14_04/12/04_1	7439-92-1	Lead	51.4		mg/kg
R33C15	1-1.5	10/16/03	Yes	01-SS-[R33C15]-C2-A_10/16/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R33C15	1-1.5	10/16/03	Yes	01-SS-[R33C15]-C2-A_10/16/03_1	7439-92-1	Lead	3.8		mg/kg
R33C15	1-1.5	10/20/03	Yes	01-SS-[R33C15]-C2_10/20/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R33C15	1-1.5	10/20/03	Yes	01-SS-[R33C15]-C2_10/20/03_1	7439-92-1	Lead	4.2		mg/kg
R33C16	1-1.5	03/31/04	Yes	01-R33C16_03/31/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R33C16	1-1.5	03/31/04	Yes	01-R33C16_03/31/04_1	7439-92-1	Lead	4.6		mg/kg
R33C18	1-1.5	10/21/03	Yes	01-SS-[R33C18]-C2_10/21/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R33C18	1-1.5	10/21/03	Yes	01-SS-[R33C18]-C2_10/21/03_1	7439-92-1	Lead	5.1		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R33C19	1-1.5	10/21/03	Yes	01-SS-[R33C19]-C2_AVG_10/21/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
R33C19	1-1.5	10/21/03	Yes	01-SS-[R33C19]-C2_AVG_10/21/03_1	7439-92-1	Lead	6.5		mg/kg
R33C20	1-1.5	10/21/03	Yes	01-SS-[R33C20]-C2_10/21/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R33C20	1-1.5	10/21/03	Yes	01-SS-[R33C20]-C2_10/21/03_1	7439-92-1	Lead	4.0		mg/kg
R33C21	1-1.5	03/25/04	Yes	1-R33C21_03/25/04_1	7440-38-2	Arsenic	7.0		mg/kg
R33C21	1-1.5	03/25/04	Yes	1-R33C21_03/25/04_1	7439-92-1	Lead	7.7		mg/kg
R33C22	1-1.5	03/25/04	Yes	1-R33C22_03/25/04_1	7440-38-2	Arsenic	10.3		mg/kg
R33C22	1-1.5	03/25/04	Yes	1-R33C22_03/25/04_1	7439-92-1	Lead	17.6		mg/kg
R34C13	1-1.5	04/12/04	Yes	1-R34C13_04/12/04_1	7440-38-2	Arsenic	5.2		mg/kg
R34C13	1-1.5	04/12/04	Yes	1-R34C13_04/12/04_1	7439-92-1	Lead	4.3		mg/kg
R34C14	1-1.5	10/16/03	Yes	01-SS-[R34C14]-C2_10/16/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R34C14	1-1.5	10/16/03	Yes	01-SS-[R34C14]-C2_10/16/03_1	7439-92-1	Lead	4.3		mg/kg
R34C15	1-1.5	03/31/04	Yes	01-R34C15_AVG_03/31/04_1	7440-38-2	Arsenic	8.7		mg/kg
R34C15	1-1.5	03/31/04	Yes	01-R34C15_AVG_03/31/04_1	7439-92-1	Lead	19.1		mg/kg
R34C17	1-1.5	10/21/03	Yes	01-SS-[R34C17]-C2_10/21/03_1	7440-38-2	Arsenic	3.3		mg/kg
R34C17	1-1.5	10/21/03	Yes	01-SS-[R34C17]-C2_10/21/03_1	7439-92-1	Lead	19.4		mg/kg
R34C18	1-1.5	10/21/03	Yes	01-SS-[R34C18]-C2_10/21/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R34C18	1-1.5	10/21/03	Yes	01-SS-[R34C18]-C2_10/21/03_1	7439-92-1	Lead	7.2		mg/kg
R34C19	1-1.5	10/21/03	Yes	01-SS-[R34C19]-C2_10/21/03_1	7440-38-2	Arsenic	4.9		mg/kg
R34C19	1-1.5	10/21/03	Yes	01-SS-[R34C19]-C2_10/21/03_1	7439-92-1	Lead	15.7		mg/kg
R34C20	1-1.5	10/21/03	Yes	01-SS-[R34C20]-C2_10/21/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R34C20	1-1.5	10/21/03	Yes	01-SS-[R34C20]-C2_10/21/03_1	7439-92-1	Lead	10.0		mg/kg
R34C21	1-1.5	03/25/04	Yes	1-R34C21_AVG_03/25/04_1	7440-38-2	Arsenic	4.8		mg/kg
R34C21	1-1.5	03/25/04	Yes	1-R34C21_AVG_03/25/04_1	7439-92-1	Lead	5.7		mg/kg
R35C13	1-1.5	04/12/04	Yes	1-R35C13_04/12/04_1	7440-38-2	Arsenic	11.6		mg/kg
R35C13	1-1.5	04/12/04	Yes	1-R35C13_04/12/04_1	7439-92-1	Lead	17.3		mg/kg
R35C14	1-1.5	10/16/03	Yes	01-SS-[R35C14]-C2_10/16/03_1	7440-38-2	Arsenic	3.7		mg/kg
R35C14	1-1.5	10/16/03	Yes	01-SS-[R35C14]-C2_10/16/03_1	7439-92-1	Lead	8.9		mg/kg
R35C15	1-1.5	03/30/04	Yes	01-R35C15_03/30/04_1	7440-38-2	Arsenic	5.6		mg/kg
R35C15	1-1.5	03/30/04	Yes	01-R35C15_03/30/04_1	7439-92-1	Lead	15.7		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R35C16	1-1.5	03/30/04	Yes	01-R35C16_03/30/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R35C16	1-1.5	03/30/04	Yes	01-R35C16_03/30/04_1	7439-92-1	Lead	3.8		mg/kg
R35C17	1-1.5	03/30/04	Yes	01-R35C17_03/30/04_1	7440-38-2	Arsenic	5.0		mg/kg
R35C17	1-1.5	03/30/04	Yes	01-R35C17_03/30/04_1	7439-92-1	Lead	7.6		mg/kg
R35C18	1-1.5	03/30/04	Yes	01-R35C18_03/30/04_1	7440-38-2	Arsenic	3.6		mg/kg
R35C18	1-1.5	03/30/04	Yes	01-R35C18_03/30/04_1	7439-92-1	Lead	5.3		mg/kg
R35C19	1-1.5	03/30/04	Yes	01-R35C19_03/30/04_1	7440-38-2	Arsenic	8.6		mg/kg
R35C19	1-1.5	03/30/04	Yes	01-R35C19_03/30/04_1	7439-92-1	Lead	22.9		mg/kg
R36C12	1-1.5	04/12/04	Yes	1-R36C12_04/12/04_1	7440-38-2	Arsenic	6.9		mg/kg
R36C12	1-1.5	04/12/04	Yes	1-R36C12_04/12/04_1	7439-92-1	Lead	6.2		mg/kg
R36C13	1-1.5	10/16/03	Yes	01-SS-[R36C13]-C2_10/16/03_1	7440-38-2	Arsenic	3.6		mg/kg
R36C13	1-1.5	10/16/03	Yes	01-SS-[R36C13]-C2_10/16/03_1	7439-92-1	Lead	8.2		mg/kg
R36C14	1-1.5	10/16/03	Yes	01-SS-[R36C14]-C2_10/16/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R36C14	1-1.5	10/16/03	Yes	01-SS-[R36C14]-C2_10/16/03_1	7439-92-1	Lead	4.7		mg/kg
R36C16	1-1.5	03/30/04	Yes	01-R36C16_03/30/04_1	7440-38-2	Arsenic	2.0		mg/kg
R36C16	1-1.5	03/30/04	Yes	01-R36C16_03/30/04_1	7439-92-1	Lead	6.3		mg/kg
R36C17	1-1.5	03/30/04	Yes	01-R36C17_03/30/04_1	7440-38-2	Arsenic	8.1		mg/kg
R36C17	1-1.5	03/30/04	Yes	01-R36C17_03/30/04_1	7439-92-1	Lead	21.5		mg/kg
R36C18	1-1.5	04/08/04	Yes	1-R36C18_04/08/04_1	7440-38-2	Arsenic	11.5		mg/kg
R36C18	1-1.5	04/08/04	Yes	1-R36C18_04/08/04_1	7439-92-1	Lead	12.6		mg/kg
R37C12	1-1.5	04/12/04	Yes	1-R37C12_04/12/04_1	7440-38-2	Arsenic	6.6		mg/kg
R37C12	1-1.5	04/12/04	Yes	1-R37C12_04/12/04_1	7439-92-1	Lead	5.8		mg/kg
R37C13	1-1.5	10/16/03	Yes	01-SS-[R37C13]-C2_10/16/03_1	7440-38-2	Arsenic	7.9		mg/kg
R37C13	1-1.5	10/16/03	Yes	01-SS-[R37C13]-C2_10/16/03_1	7439-92-1	Lead	15.6		mg/kg
R37C14	1-1.5	03/30/04	Yes	01-R37C14_03/30/04_1	7440-38-2	Arsenic	4.4		mg/kg
R37C14	1-1.5	03/30/04	Yes	01-R37C14_03/30/04_1	7439-92-1	Lead	7.2		mg/kg
R37C15	1-1.5	03/30/04	Yes	01-R37C15_03/30/04_1	7440-38-2	Arsenic	5.6		mg/kg
R37C15	1-1.5	03/30/04	Yes	01-R37C15_03/30/04_1	7439-92-1	Lead	6.0		mg/kg
R37C16	1-1.5	03/30/04	Yes	01-R37C16_03/30/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R37C16	1-1.5	03/30/04	Yes	01-R37C16_03/30/04_1	7439-92-1	Lead	4.6		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R37C17	1-1.5	02/20/04	Yes	1-R37C17_02/20/04_1	7440-38-2	Arsenic	9.6		mg/kg
R37C17	1-1.5	02/20/04	Yes	1-R37C17_02/20/04_1	7439-92-1	Lead	8.9		mg/kg
R37C18	1-1.5	04/08/04	Yes	1-R37C18_04/08/04_1	7440-38-2	Arsenic	16.9		mg/kg
R37C18	1-1.5	04/08/04	Yes	1-R37C18_04/08/04_1	7439-92-1	Lead	24.4		mg/kg
R38C11	1-1.5	04/12/04	Yes	1-R38C11_04/12/04_1	7440-38-2	Arsenic	6.1		mg/kg
R38C11	1-1.5	04/12/04	Yes	1-R38C11_04/12/04_1	7439-92-1	Lead	6.4		mg/kg
R38C12	1-1.5	10/16/03	Yes	01-SS-[R38C12]-C2_10/16/03_1	7440-38-2	Arsenic	3.9		mg/kg
R38C12	1-1.5	10/16/03	Yes	01-SS-[R38C12]-C2_10/16/03_1	7439-92-1	Lead	7.1		mg/kg
R38C13	1-1.5	10/16/03	Yes	01-SS-[R38C13]-C2_10/16/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R38C13	1-1.5	10/16/03	Yes	01-SS-[R38C13]-C2_10/16/03_1	7439-92-1	Lead	3.5		mg/kg
R38C15	1-1.5	03/30/04	Yes	01-R38C15_03/30/04_1	7440-38-2	Arsenic	2.8		mg/kg
R38C15	1-1.5	03/30/04	Yes	01-R38C15_03/30/04_1	7439-92-1	Lead	5.2		mg/kg
R38C16	1-1.5	02/20/04	Yes	1-R38C16_02/20/04_1	7440-38-2	Arsenic	10.6		mg/kg
R38C16	1-1.5	02/20/04	Yes	1-R38C16_02/20/04_1	7439-92-1	Lead	7.3		mg/kg
R38C17	1-1.5	02/20/04	Yes	1-R38C17_02/20/04_1	7440-38-2	Arsenic	7.7		mg/kg
R38C17	1-1.5	02/20/04	Yes	1-R38C17_02/20/04_1	7439-92-1	Lead	7.1		mg/kg
R38C18	1-1.5	04/08/04	Yes	1-R38C18_04/08/04_1	7440-38-2	Arsenic	8.9		mg/kg
R38C18	1-1.5	04/08/04	Yes	1-R38C18_04/08/04_1	7439-92-1	Lead	4.7		mg/kg
R38C19	1-1.5	04/08/04	Yes	1-R38C19_04/08/04_1	7440-38-2	Arsenic	5.7		mg/kg
R38C19	1-1.5	04/08/04	Yes	1-R38C19_04/08/04_1	7439-92-1	Lead	4.3		mg/kg
R39C11	1-1.5	04/12/04	Yes	1-R39C11_04/12/04_1	7440-38-2	Arsenic	9.9		mg/kg
R39C11	1-1.5	04/12/04	Yes	1-R39C11_04/12/04_1	7439-92-1	Lead	8.1		mg/kg
R39C12	1-1.5	10/16/03	Yes	01-SS-[R39C12]-C2_10/16/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R39C12	1-1.5	10/16/03	Yes	01-SS-[R39C12]-C2_10/16/03_1	7439-92-1	Lead	4.8		mg/kg
R39C14	1-1.5	02/20/04	Yes	1-R39C14_02/20/04_1	7440-38-2	Arsenic	6.9		mg/kg
R39C14	1-1.5	02/20/04	Yes	1-R39C14_02/20/04_1	7439-92-1	Lead	5.6		mg/kg
R39C15	1-1.5	02/20/04	Yes	1-R39C15_02/20/04_1	7440-38-2	Arsenic	8.8		mg/kg
R39C15	1-1.5	02/20/04	Yes	1-R39C15_02/20/04_1	7439-92-1	Lead	7.9		mg/kg
R39C16	1-1.5	02/20/04	Yes	1-R39C16_02/20/04_1	7440-38-2	Arsenic	8.8		mg/kg
R39C16	1-1.5	02/20/04	Yes	1-R39C16_02/20/04_1	7439-92-1	Lead	6.3		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R39C17	1-1.5	02/20/04	Yes	1-R39C17_02/20/04_1	7440-38-2	Arsenic	6.4		mg/kg
R39C17	1-1.5	02/20/04	Yes	1-R39C17_02/20/04_1	7439-92-1	Lead	7.2		mg/kg
R39C18	1-1.5	04/08/04	Yes	1-R39C18_04/08/04_1	7440-38-2	Arsenic	6.9		mg/kg
R39C18	1-1.5	04/08/04	Yes	1-R39C18_04/08/04_1	7439-92-1	Lead	5.0		mg/kg
R39C19	1-1.5	04/08/04	Yes	1-R39C19_04/08/04_1	7440-38-2	Arsenic	7.1		mg/kg
R39C19	1-1.5	04/08/04	Yes	1-R39C19_04/08/04_1	7439-92-1	Lead	12.7		mg/kg
R40C11M	1-1.5	10/16/03	Yes	01-SS-[R40C11M]-C2_10/16/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R40C11M	1-1.5	10/16/03	Yes	01-SS-[R40C11M]-C2_10/16/03_1	7439-92-1	Lead	7.5		mg/kg
R40C12	1-1.5	02/20/04	Yes	1-R40C12_02/20/04_1	7440-38-2	Arsenic	19.4		mg/kg
R40C12	1-1.5	02/20/04	Yes	1-R40C12_02/20/04_1	7439-92-1	Lead	21.9		mg/kg
R40C13	1-1.5	02/20/04	Yes	1-R40C13_02/20/04_1	7440-38-2	Arsenic	5.2		mg/kg
R40C13	1-1.5	02/20/04	Yes	1-R40C13_02/20/04_1	7439-92-1	Lead	2.9		mg/kg
R40C14	1-1.5	02/20/04	Yes	1-R40C14_02/20/04_1	7440-38-2	Arsenic	15.0		mg/kg
R40C14	1-1.5	02/20/04	Yes	1-R40C14_02/20/04_1	7439-92-1	Lead	26.0		mg/kg
R40C15	1-1.5	02/20/04	Yes	1-R40C15_02/20/04_1	7440-38-2	Arsenic	19.2		mg/kg
R40C15	1-1.5	02/20/04	Yes	1-R40C15_02/20/04_1	7439-92-1	Lead	10.8		mg/kg
R40C16	1-1.5	02/20/04	Yes	1-R40C16_02/20/04_1	7440-38-2	Arsenic	12.8		mg/kg
R40C16	1-1.5	02/20/04	Yes	1-R40C16_02/20/04_1	7439-92-1	Lead	10.6		mg/kg
R40C17	1-1.5	02/20/04	Yes	1-R40C17_02/20/04_1	7440-38-2	Arsenic	7.0		mg/kg
R40C17	1-1.5	02/20/04	Yes	1-R40C17_02/20/04_1	7439-92-1	Lead	5.0		mg/kg
R40C18	1-1.5	04/08/04	Yes	1-R40C18_04/08/04_1	7440-38-2	Arsenic	5.2		mg/kg
R40C18	1-1.5	04/08/04	Yes	1-R40C18_04/08/04_1	7439-92-1	Lead	4.4		mg/kg
R40C19	1-1.5	04/08/04	Yes	1-R40C19_04/08/04_1	7440-38-2	Arsenic	5.8		mg/kg
R40C19	1-1.5	04/08/04	Yes	1-R40C19_04/08/04_1	7439-92-1	Lead	4.1		mg/kg
R40C20	1-1.5	03/10/04	Yes	1-R40C20_03/10/04_1	7440-38-2	Arsenic	8.6		mg/kg
R40C20	1-1.5	03/10/04	Yes	1-R40C20_03/10/04_1	7439-92-1	Lead	25.9		mg/kg
R41C10M	1-1.5	04/12/04	Yes	1-R41C10M_04/12/04_1	7440-38-2	Arsenic	12.9		mg/kg
R41C10M	1-1.5	04/12/04	Yes	1-R41C10M_04/12/04_1	7439-92-1	Lead	7.3		mg/kg
R41C11	1-1.5	10/16/03	Yes	01-SS-[R41C11]-C2_10/16/03_1	7440-38-2	Arsenic	7.0		mg/kg
R41C11	1-1.5	10/16/03	Yes	01-SS-[R41C11]-C2_10/16/03_1	7439-92-1	Lead	8.6		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R41C13	1-1.5	02/20/04	Yes	1-R41C13_02/20/04_1	7440-38-2	Arsenic	11.7		mg/kg
R41C13	1-1.5	02/20/04	Yes	1-R41C13_02/20/04_1	7439-92-1	Lead	13.4		mg/kg
R41C14	1-1.5	02/20/04	Yes	1-R41C14_02/20/04_1	7440-38-2	Arsenic	17.4		mg/kg
R41C14	1-1.5	02/20/04	Yes	1-R41C14_02/20/04_1	7439-92-1	Lead	17.5		mg/kg
R41C15	1-1.5	02/20/04	Yes	1-R41C15_02/20/04_1	7440-38-2	Arsenic	7.0		mg/kg
R41C15	1-1.5	02/20/04	Yes	1-R41C15_02/20/04_1	7439-92-1	Lead	4.5		mg/kg
R41C16	1-1.5	02/20/04	Yes	1-R41C16_AVG_02/20/04_1	7440-38-2	Arsenic	7.6		mg/kg
R41C16	1-1.5	02/20/04	Yes	1-R41C16_AVG_02/20/04_1	7439-92-1	Lead	4.7		mg/kg
R41C17	1-1.5	02/20/04	Yes	1-R41C17_02/20/04_1	7440-38-2	Arsenic	8.5		mg/kg
R41C17	1-1.5	02/20/04	Yes	1-R41C17_02/20/04_1	7439-92-1	Lead	7.2		mg/kg
R41C18	1-1.5	04/08/04	Yes	1-R41C18_04/08/04_1	7440-38-2	Arsenic	15.0		mg/kg
R41C18	1-1.5	04/08/04	Yes	1-R41C18_04/08/04_1	7439-92-1	Lead	24.8		mg/kg
R41C19	1-1.5	04/08/04	Yes	1-R41C19_04/08/04_1	7440-38-2	Arsenic	6.1		mg/kg
R41C19	1-1.5	04/08/04	Yes	1-R41C19_04/08/04_1	7439-92-1	Lead	6.6		mg/kg
R41C20	1-1.5	03/10/04	Yes	1-R41C20_03/10/04_1	7440-38-2	Arsenic	6.8		mg/kg
R41C20	1-1.5	03/10/04	Yes	1-R41C20_03/10/04_1	7439-92-1	Lead	9.4		mg/kg
R42C10M	1-1.5	10/16/03	Yes	01-SS-[R42C10M]-C2_10/16/03_1	7440-38-2	Arsenic	9.8		mg/kg
R42C10M	1-1.5	10/16/03	Yes	01-SS-[R42C10M]-C2_10/16/03_1	7439-92-1	Lead	11.3		mg/kg
R42C11	1-1.5	10/16/03	Yes	01-SS-[R42C11]-C2_10/16/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R42C11	1-1.5	10/16/03	Yes	01-SS-[R42C11]-C2_10/16/03_1	7439-92-1	Lead	3.9		mg/kg
R42C12	1-1.5	02/20/04	Yes	1-R42C12_02/20/04_1	7440-38-2	Arsenic	16.8		mg/kg
R42C12	1-1.5	02/20/04	Yes	1-R42C12_02/20/04_1	7439-92-1	Lead	27.2		mg/kg
R42C13	1-1.5	02/20/04	Yes	1-R42C13_02/20/04_1	7440-38-2	Arsenic	19.7		mg/kg
R42C13	1-1.5	02/20/04	Yes	1-R42C13_02/20/04_1	7439-92-1	Lead	59.2		mg/kg
R42C14	1-1.5	02/24/04	Yes	1-R42C14_02/24/04_1	7440-38-2	Arsenic	11.8		mg/kg
R42C14	1-1.5	02/24/04	Yes	1-R42C14_02/24/04_1	7439-92-1	Lead	9.1		mg/kg
R42C15	1-1.5	02/24/04	Yes	1-R42C15_02/24/04_1	7440-38-2	Arsenic	7.7		mg/kg
R42C15	1-1.5	02/24/04	Yes	1-R42C15_02/24/04_1	7439-92-1	Lead	4.8		mg/kg
R42C16	1-1.5	02/20/04	Yes	1-R42C16_02/20/04_1	7440-38-2	Arsenic	9.0		mg/kg
R42C16	1-1.5	02/20/04	Yes	1-R42C16_02/20/04_1	7439-92-1	Lead	4.7		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R42C17	1-1.5	02/20/04	Yes	1-R42C17_AVG_02/20/04_1	7440-38-2	Arsenic	11.5		mg/kg
R42C17	1-1.5	02/20/04	Yes	1-R42C17_AVG_02/20/04_1	7439-92-1	Lead	7.9		mg/kg
R42C18	1-1.5	04/08/04	Yes	1-R42C18_04/08/04_1	7440-38-2	Arsenic	7.3		mg/kg
R42C18	1-1.5	04/08/04	Yes	1-R42C18_04/08/04_1	7439-92-1	Lead	6.9		mg/kg
R42C19	1-1.5	04/08/04	Yes	1-R42C19_04/08/04_1	7440-38-2	Arsenic	9.8		mg/kg
R42C19	1-1.5	04/08/04	Yes	1-R42C19_04/08/04_1	7439-92-1	Lead	16.2		mg/kg
R42C20	1-1.5	03/10/04	Yes	1-R42C20_03/10/04_1	7440-38-2	Arsenic	8.5		mg/kg
R42C20	1-1.5	03/10/04	Yes	1-R42C20_03/10/04_1	7439-92-1	Lead	21.8		mg/kg
R42C21	1-1.5	03/10/04	Yes	1-R42C21_03/10/04_1	7440-38-2	Arsenic	10.3		mg/kg
R42C21	1-1.5	03/10/04	Yes	1-R42C21_03/10/04_1	7439-92-1	Lead	22.2		mg/kg
R43C10	1-1.5	10/16/03	Yes	01-SS-[R43C10]-C2_10/16/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R43C10	1-1.5	10/16/03	Yes	01-SS-[R43C10]-C2_10/16/03_1	7439-92-1	Lead	5.4		mg/kg
R43C12	1-1.5	03/31/04	Yes	01-R43C12_03/31/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R43C12	1-1.5	03/31/04	Yes	01-R43C12_03/31/04_1	7439-92-1	Lead	7.9		mg/kg
R43C13	1-1.5	03/31/04	Yes	01-R43C13_03/31/04_1	7440-38-2	Arsenic	1.6		mg/kg
R43C13	1-1.5	03/31/04	Yes	01-R43C13_03/31/04_1	7439-92-1	Lead	10.3		mg/kg
R43C14	1-1.5	02/24/04	Yes	1-R43C14_02/24/04_1	7440-38-2	Arsenic	8.2		mg/kg
R43C14	1-1.5	02/24/04	Yes	1-R43C14_02/24/04_1	7439-92-1	Lead	4.6		mg/kg
R43C15	1-1.5	02/24/04	Yes	1-R43C15_02/24/04_1	7440-38-2	Arsenic	9.2		mg/kg
R43C15	1-1.5	02/24/04	Yes	1-R43C15_02/24/04_1	7439-92-1	Lead	5.9		mg/kg
R43C16	1-1.5	02/20/04	Yes	1-R43C16_02/20/04_1	7440-38-2	Arsenic	10.1		mg/kg
R43C16	1-1.5	02/20/04	Yes	1-R43C16_02/20/04_1	7439-92-1	Lead	4.4		mg/kg
R43C17	1-1.5	02/20/04	Yes	1-R43C17_02/20/04_1	7440-38-2	Arsenic	12.3		mg/kg
R43C17	1-1.5	02/20/04	Yes	1-R43C17_02/20/04_1	7439-92-1	Lead	6.4		mg/kg
R43C18	1-1.5	04/08/04	Yes	1-R43C18_04/08/04_1	7440-38-2	Arsenic	9.9		mg/kg
R43C18	1-1.5	04/08/04	Yes	1-R43C18_04/08/04_1	7439-92-1	Lead	10.3		mg/kg
R43C19	1-1.5	04/08/04	Yes	1-R43C19_04/08/04_1	7440-38-2	Arsenic	8.8		mg/kg
R43C19	1-1.5	04/08/04	Yes	1-R43C19_04/08/04_1	7439-92-1	Lead	52.8		mg/kg
R43C20	1-1.5	03/10/04	Yes	1-R43C20_03/10/04_1	7440-38-2	Arsenic	8.3		mg/kg
R43C20	1-1.5	03/10/04	Yes	1-R43C20_03/10/04_1	7439-92-1	Lead	38.0		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R43C21	1-1.5	03/10/04	Yes	1-R43C21_03/10/04_1	7440-38-2	Arsenic	7.8		mg/kg
R43C21	1-1.5	03/10/04	Yes	1-R43C21_03/10/04_1	7439-92-1	Lead	9.6		mg/kg
R43C9	1-1.5	04/12/04	Yes	1-R43C9_04/12/04_1	7440-38-2	Arsenic	8.6		mg/kg
R43C9	1-1.5	04/12/04	Yes	1-R43C9_04/12/04_1	7439-92-1	Lead	9.5		mg/kg
R44C10	1-1.5	10/16/03	Yes	01-SS-[R44C10]-C2_10/16/03_1	7440-38-2	Arsenic	3.7		mg/kg
R44C10	1-1.5	10/16/03	Yes	01-SS-[R44C10]-C2_10/16/03_1	7439-92-1	Lead	6.7		mg/kg
R44C11	1-1.5	02/20/04	Yes	1-R44C11_02/20/04_1	7440-38-2	Arsenic	6.8		mg/kg
R44C11	1-1.5	02/20/04	Yes	1-R44C11_02/20/04_1	7439-92-1	Lead	4.9		mg/kg
R44C12	1-1.5	02/20/04	Yes	1-R44C12_02/20/04_1	7440-38-2	Arsenic	9.9		mg/kg
R44C12	1-1.5	02/20/04	Yes	1-R44C12_02/20/04_1	7439-92-1	Lead	10.6		mg/kg
R44C14	1-1.5	02/24/04	Yes	1-R44C14_02/24/04_1	7440-38-2	Arsenic	8.1		mg/kg
R44C14	1-1.5	02/24/04	Yes	1-R44C14_02/24/04_1	7439-92-1	Lead	6.8		mg/kg
R44C15	1-1.5	02/24/04	Yes	1-R44C15_AVG_02/24/04_1	7440-38-2	Arsenic	7.7		mg/kg
R44C15	1-1.5	02/24/04	Yes	1-R44C15_AVG_02/24/04_1	7439-92-1	Lead	6.9		mg/kg
R44C16	1-1.5	02/20/04	Yes	1-R44C16_02/20/04_1	7440-38-2	Arsenic	6.9		mg/kg
R44C16	1-1.5	02/20/04	Yes	1-R44C16_02/20/04_1	7439-92-1	Lead	5.0		mg/kg
R44C17	1-1.5	03/31/04	Yes	01-R44C17_03/31/04_1	7440-38-2	Arsenic	1.5		mg/kg
R44C17	1-1.5	03/31/04	Yes	01-R44C17_03/31/04_1	7439-92-1	Lead	6.7		mg/kg
R44C18	1-1.5	04/08/04	Yes	1-R44C18_04/08/04_1	7440-38-2	Arsenic	12.6		mg/kg
R44C18	1-1.5	04/08/04	Yes	1-R44C18_04/08/04_1	7439-92-1	Lead	20.3		mg/kg
R44C19	1-1.5	04/05/04	Yes	01-R44C19_04/05/04_1	7440-38-2	Arsenic	9.4		mg/kg
R44C19	1-1.5	04/05/04	Yes	01-R44C19_04/05/04_1	7439-92-1	Lead	25.5		mg/kg
R44C20	1-1.5	03/10/04	Yes	1-R44C20_03/10/04_1	7440-38-2	Arsenic	6.2		mg/kg
R44C20	1-1.5	03/10/04	Yes	1-R44C20_03/10/04_1	7439-92-1	Lead	10.5		mg/kg
R44C21	1-1.5	03/10/04	Yes	1-R44C21_03/10/04_1	7440-38-2	Arsenic	6.5		mg/kg
R44C21	1-1.5	03/10/04	Yes	1-R44C21_03/10/04_1	7439-92-1	Lead	5.2		mg/kg
R44C22	1-1.5	03/16/04	Yes	1-R44C22_03/16/04_1	7440-38-2	Arsenic	3.5		mg/kg
R44C22	1-1.5	03/16/04	Yes	1-R44C22_03/16/04_1	7439-92-1	Lead	5.5		mg/kg
R44C9M	1-1.5	04/12/04	Yes	1-R44C9M_04/12/04_1	7440-38-2	Arsenic	8.3		mg/kg
R44C9M	1-1.5	04/12/04	Yes	1-R44C9M_04/12/04_1	7439-92-1	Lead	5.9		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R45C11	1-1.5	02/20/04	Yes	1-R45C11_02/20/04_1	7440-38-2	Arsenic	8.5		mg/kg
R45C11	1-1.5	02/20/04	Yes	1-R45C11_02/20/04_1	7439-92-1	Lead	5.0		mg/kg
R45C12	1-1.5	02/20/04	Yes	1-R45C12_02/20/04_1	7440-38-2	Arsenic	10.4		mg/kg
R45C12	1-1.5	02/20/04	Yes	1-R45C12_02/20/04_1	7439-92-1	Lead	5.7		mg/kg
R45C14	1-1.5	02/20/04	Yes	1-R45C14_02/20/04_1	7440-38-2	Arsenic	6.7		mg/kg
R45C14	1-1.5	02/20/04	Yes	1-R45C14_02/20/04_1	7439-92-1	Lead	5.0		mg/kg
R45C15	1-1.5	02/20/04	Yes	1-R45C15_02/20/04_1	7440-38-2	Arsenic	14.4		mg/kg
R45C15	1-1.5	02/20/04	Yes	1-R45C15_02/20/04_1	7439-92-1	Lead	16.1		mg/kg
R45C16	1-1.5	03/31/04	Yes	01-R45C16_03/31/04_1	7440-38-2	Arsenic	7.7		mg/kg
R45C16	1-1.5	03/31/04	Yes	01-R45C16_03/31/04_1	7439-92-1	Lead	12.5		mg/kg
R45C17	1-1.5	03/31/04	Yes	01-R45C17_03/31/04_1	7440-38-2	Arsenic	6.3		mg/kg
R45C17	1-1.5	03/31/04	Yes	01-R45C17_03/31/04_1	7439-92-1	Lead	18.8		mg/kg
R45C20	1-1.5	03/10/04	Yes	1-R45C20_03/10/04_1	7440-38-2	Arsenic	6.3		mg/kg
R45C20	1-1.5	03/10/04	Yes	1-R45C20_03/10/04_1	7439-92-1	Lead	9.4		mg/kg
R45C21	1-1.5	03/10/04	Yes	1-R45C21_03/10/04_1	7440-38-2	Arsenic	8.6		mg/kg
R45C21	1-1.5	03/10/04	Yes	1-R45C21_03/10/04_1	7439-92-1	Lead	18.9		mg/kg
R45C22	1-1.5	03/10/04	Yes	1-R45C22_03/10/04_1	7440-38-2	Arsenic	5.5		mg/kg
R45C22	1-1.5	03/10/04	Yes	1-R45C22_03/10/04_1	7439-92-1	Lead	4.5		mg/kg
R45C23	1-1.5	03/16/04	Yes	1-R45C23_AVG_03/16/04_1	7440-38-2	Arsenic	4.4		mg/kg
R45C23	1-1.5	03/16/04	Yes	1-R45C23_AVG_03/16/04_1	7439-92-1	Lead	20.3		mg/kg
R45C9	1-1.5	04/12/04	Yes	1-R45C9_04/12/04_1	7440-38-2	Arsenic	12.7		mg/kg
R45C9	1-1.5	04/12/04	Yes	1-R45C9_04/12/04_1	7439-92-1	Lead	13.3		mg/kg
R46C11	1-1.5	02/20/04	Yes	1-R46C11_02/20/04_1	7440-38-2	Arsenic	18.4		mg/kg
R46C11	1-1.5	02/20/04	Yes	1-R46C11_02/20/04_1	7439-92-1	Lead	18.9		mg/kg
R46C12	1-1.5	02/20/04	Yes	1-R46C12_02/20/04_1	7440-38-2	Arsenic	8.5		mg/kg
R46C12	1-1.5	02/20/04	Yes	1-R46C12_02/20/04_1	7439-92-1	Lead	5.6		mg/kg
R46C13	1-1.5	02/20/04	Yes	1-R46C13_02/20/04_1	7440-38-2	Arsenic	7.5		mg/kg
R46C13	1-1.5	02/20/04	Yes	1-R46C13_02/20/04_1	7439-92-1	Lead	4.7		mg/kg
R46C14	1-1.5	02/20/04	Yes	1-R46C14_02/20/04_1	7440-38-2	Arsenic	10.1		mg/kg
R46C14	1-1.5	02/20/04	Yes	1-R46C14_02/20/04_1	7439-92-1	Lead	7.3		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R46C15	1-1.5	03/31/04	Yes	01-R46C15_03/31/04_1	7440-38-2	Arsenic	7.1		mg/kg
R46C15	1-1.5	03/31/04	Yes	01-R46C15_03/31/04_1	7439-92-1	Lead	16.9		mg/kg
R47C13	1-1.5	02/20/04	Yes	1-R47C13_02/20/04_1	7440-38-2	Arsenic	15.4		mg/kg
R47C13	1-1.5	02/20/04	Yes	1-R47C13_02/20/04_1	7439-92-1	Lead	9.5		mg/kg
R47C14	1-1.5	03/31/04	Yes	01-R47C14_03/31/04_1	7440-38-2	Arsenic	18.8		mg/kg
R47C14	1-1.5	03/31/04	Yes	01-R47C14_03/31/04_1	7439-92-1	Lead	8.9		mg/kg
R48C14	1-1.5	04/05/04	Yes	01-R48C14_04/05/04_1	7440-38-2	Arsenic	23.6		mg/kg
R48C14	1-1.5	04/05/04	Yes	01-R48C14_04/05/04_1	7439-92-1	Lead	28.9		mg/kg
R48C20	1-1.5	03/31/04	Yes	01-R48C20_03/31/04_1	7440-38-2	Arsenic	8.8		mg/kg
R48C20	1-1.5	03/31/04	Yes	01-R48C20_03/31/04_1	7439-92-1	Lead	37.7		mg/kg
R48C22	1-1.5	01/19/04	Yes	01-SS-[R48C22]-C2_01/19/04_1	7440-38-2	Arsenic	7.1		mg/kg
R48C22	1-1.5	01/19/04	Yes	01-SS-[R48C22]-C2_01/19/04_1	7439-92-1	Lead	15.0		mg/kg
R48C23	1-1.5	01/19/04	Yes	01-SS-[R48C23]-C2_01/19/04_1	7440-38-2	Arsenic	6.0		mg/kg
R48C23	1-1.5	01/19/04	Yes	01-SS-[R48C23]-C2_01/19/04_1	7439-92-1	Lead	16.3		mg/kg
R48C24	1-1.5	01/19/04	Yes	01-SS-[R48C24]-C2_01/19/04_1	7440-38-2	Arsenic	6.2		mg/kg
R48C24	1-1.5	01/19/04	Yes	01-SS-[R48C24]-C2_01/19/04_1	7439-92-1	Lead	42.1		mg/kg
R49C20	1-1.5	01/20/04	Yes	01-SS-[R49C20]-C2_01/20/04_1	7440-38-2	Arsenic	9.7		mg/kg
R49C20	1-1.5	01/20/04	Yes	01-SS-[R49C20]-C2_01/20/04_1	7439-92-1	Lead	25.2		mg/kg
R49C21	1-1.5	01/19/04	Yes	01-SS-[R49C21]-C2_AVG_01/19/04_1	7440-38-2	Arsenic	13.4		mg/kg
R49C21	1-1.5	01/19/04	Yes	01-SS-[R49C21]-C2_AVG_01/19/04_1	7439-92-1	Lead	17.4		mg/kg
R49C22	1-1.5	02/03/04	Yes	R49C22_02/03/04_1	7440-38-2	Arsenic	10.1		mg/kg
R49C22	1-1.5	02/03/04	Yes	R49C22_02/03/04_1	7439-92-1	Lead	18.7		mg/kg
R49C23	1-1.5	02/03/04	Yes	R49C23_02/03/04_1	7440-38-2	Arsenic	9.9		mg/kg
R49C23	1-1.5	02/03/04	Yes	R49C23_02/03/04_1	7439-92-1	Lead	58.4		mg/kg
R49C24	1-1.5	01/19/04	No	01-SS-[R49C24]-C2_01/19/04_1	7440-38-2	Arsenic	5.3		mg/kg
R49C24	2-2.5	02/06/04	Yes	2-R49C24_02/06/04_2	7439-92-1	Lead	18.0		mg/kg
R50C20	1-1.5	01/20/04	Yes	01-SS-[R50C20]-C2_01/20/04_1	7440-38-2	Arsenic	11.2		mg/kg
R50C20	1-1.5	01/20/04	Yes	01-SS-[R50C20]-C2_01/20/04_1	7439-92-1	Lead	15.5		mg/kg
R50C21	1-1.5	01/19/04	Yes	01-SS-[R50C21]-C2_01/19/04_1	7440-38-2	Arsenic	23.7		mg/kg
R50C21	1-1.5	01/19/04	Yes	01-SS-[R50C21]-C2_01/19/04_1	7439-92-1	Lead	10.0		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R50C22	1-1.5	02/03/04	Yes	R50C22_02/03/04_1	7440-38-2	Arsenic	40.9		mg/kg
R50C22	1-1.5	02/03/04	Yes	R50C22_02/03/04_1	7439-92-1	Lead	60.8		mg/kg
R50C23	1-1.5	02/03/04	Yes	R50C23_02/03/04_1	7440-38-2	Arsenic	11.3		mg/kg
R50C23	1-1.5	02/03/04	Yes	R50C23_02/03/04_1	7439-92-1	Lead	22.6		mg/kg
R51C18	2-2.5	03/25/04	Yes	02-R51C18_AVG_03/25/04_2	7440-38-2	Arsenic	7.0		mg/kg
R51C18	1-1.5	02/03/04	No	R51C18_02/03/04_1	7439-92-1	Lead	26.1		mg/kg
R51C19	1-1.5	02/03/04	Yes	R51C19_02/03/04_1	7440-38-2	Arsenic	8.6		mg/kg
R51C19	1-1.5	02/03/04	Yes	R51C19_02/03/04_1	7439-92-1	Lead	10.0		mg/kg
R51C20	1-1.5	01/20/04	Yes	01-SS-[R51C20]-C2_01/20/04_1	7440-38-2	Arsenic	10.1		mg/kg
R51C20	1-1.5	01/20/04	Yes	01-SS-[R51C20]-C2_01/20/04_1	7439-92-1	Lead	12.7		mg/kg
R51C21	1-1.5	01/20/04	Yes	01-SS-[R51C21]-C2_01/20/04_1	7440-38-2	Arsenic	13.6		mg/kg
R51C21	1-1.5	01/20/04	Yes	01-SS-[R51C21]-C2_01/20/04_1	7439-92-1	Lead	16.2		mg/kg
R51C22	1-1.5	01/30/04	Yes	01-SS-[R51C22]-C2_01/30/04_1	7440-38-2	Arsenic	6.8		mg/kg
R51C22	1-1.5	01/30/04	Yes	01-SS-[R51C22]-C2_01/30/04_1	7439-92-1	Lead	5.8		mg/kg
R51C23	1-1.5	01/19/04	Yes	01-SS-[R51C23]-C2_01/19/04_1	7440-38-2	Arsenic	6.0		mg/kg
R51C23	1-1.5	01/19/04	Yes	01-SS-[R51C23]-C2_01/19/04_1	7439-92-1	Lead	7.5		mg/kg
R52C20	1-1.5	01/20/04	Yes	01-SS-[R52C20]-C2_01/20/04_1	7440-38-2	Arsenic	14.8		mg/kg
R52C20	1-1.5	01/20/04	Yes	01-SS-[R52C20]-C2_01/20/04_1	7439-92-1	Lead	23.1		mg/kg
R52C21	1-1.5	02/03/04	Yes	R52C21_02/03/04_1	7440-38-2	Arsenic	7.9		mg/kg
R52C21	1-1.5	02/03/04	Yes	R52C21_02/03/04_1	7439-92-1	Lead	8.5		mg/kg
R52C22	1-1.5	02/03/04	Yes	R52C22_02/03/04_1	7440-38-2	Arsenic	8.6		mg/kg
R52C22	1-1.5	02/03/04	Yes	R52C22_02/03/04_1	7439-92-1	Lead	9.2		mg/kg
R53C21	1-1.5	01/20/04	Yes	01-SS-[R53C21]-C2_01/20/04_1	7440-38-2	Arsenic	13.3		mg/kg
R53C21	1-1.5	01/20/04	Yes	01-SS-[R53C21]-C2_01/20/04_1	7439-92-1	Lead	6.1		mg/kg
R53C22	1-1.5	02/10/04	Yes	1-R53C22_02/10/04_1	7440-38-2	Arsenic	9.1		mg/kg
R53C22	1-1.5	02/10/04	Yes	1-R53C22_02/10/04_1	7439-92-1	Lead	12.3		mg/kg
SA6-67-26	1.5-2	10/15/99	Yes	SA6-67-26	7440-38-2	Arsenic	20.0		mg/kg
SA6-67-26	1.5-2	10/15/99	Yes	SA6-67-26	7439-92-1	Lead	37.0		mg/kg
SA6-67-27	1.5-2	10/15/99	Yes	SA6-67-27	7440-38-2	Arsenic	16.0		mg/kg
SA6-67-27	1.5-2	10/15/99	Yes	SA6-67-27	7439-92-1	Lead	43.0		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA6-67-28	1.5-2	10/15/99	Yes	SA6-67-28	7440-38-2	Arsenic	2.7		mg/kg
SA6-67-28	1.5-2	10/15/99	Yes	SA6-67-28	7439-92-1	Lead	8.8		mg/kg
SA6-67-29	1.5-2	10/15/99	Yes	SA6-67-29	7440-38-2	Arsenic	7.2		mg/kg
SA6-67-29	1.5-2	10/15/99	Yes	SA6-67-29	7439-92-1	Lead	24.0		mg/kg
SA6-67-30	1.5-2	10/15/99	Yes	SA6-67-30	7440-38-2	Arsenic	3.3		mg/kg
SA6-67-30	1.5-2	10/15/99	Yes	SA6-67-30	7439-92-1	Lead	5.4		mg/kg
SA6-67-31	1.5-2	10/15/99	Yes	SA6-67-31	7440-38-2	Arsenic	3.8		mg/kg
SA6-67-31	1.5-2	10/15/99	Yes	SA6-67-31	7439-92-1	Lead	4.8		mg/kg
SA6-67-32	1.5-2	10/15/99	Yes	SA6-67-32	7440-38-2	Arsenic	10.0		mg/kg
SA6-67-32	1.5-2	10/15/99	Yes	SA6-67-32	7439-92-1	Lead	53.0		mg/kg
SA6-67-33	1.5-2	10/15/99	Yes	SA6-67-33	7440-38-2	Arsenic	3.5		mg/kg
SA6-67-33	1.5-2	10/15/99	Yes	SA6-67-33	7439-92-1	Lead	4.8		mg/kg
SA6-67-34	1.5-2	10/15/99	Yes	SA6-67-34	7440-38-2	Arsenic	3.0		mg/kg
SA6-67-34	1.5-2	10/15/99	Yes	SA6-67-34	7439-92-1	Lead	4.4		mg/kg
SA6-67-35	1.5-2	10/15/99	Yes	SA6-67-35	7440-38-2	Arsenic	2.8		mg/kg
SA6-67-35	1.5-2	10/15/99	Yes	SA6-67-35	7439-92-1	Lead	4.7		mg/kg
SA6-68-26	1.5-2	10/15/99	Yes	SA6-68-26	7440-38-2	Arsenic	5.5		mg/kg
SA6-68-26	1.5-2	10/15/99	Yes	SA6-68-26	7439-92-1	Lead	4.3	U	mg/kg
SA6-68-28	1.5-2	10/15/99	Yes	SA6-68-28	7440-38-2	Arsenic	9.4		mg/kg
SA6-68-28	1.5-2	10/15/99	Yes	SA6-68-28	7439-92-1	Lead	15.0		mg/kg
SA6-68-29	1.5-2	10/15/99	Yes	SA6-68-29	7440-38-2	Arsenic	16.0		mg/kg
SA6-68-29	1.5-2	10/15/99	Yes	SA6-68-29	7439-92-1	Lead	39.0		mg/kg
SA6-68-30	1.5-2	10/15/99	Yes	SA6-68-30	7440-38-2	Arsenic	5.2		mg/kg
SA6-68-30	1.5-2	10/15/99	Yes	SA6-68-30	7439-92-1	Lead	12.0		mg/kg
SA6-68-31	1.5-2	10/15/99	Yes	SA6-68-31	7440-38-2	Arsenic	6.2		mg/kg
SA6-68-31	1.5-2	10/15/99	Yes	SA6-68-31	7439-92-1	Lead	7.1		mg/kg
SA6-68-32	1.5-2	10/15/99	Yes	SA6-68-32	7440-38-2	Arsenic	4.3		mg/kg
SA6-68-32	1.5-2	10/15/99	Yes	SA6-68-32	7439-92-1	Lead	6.3		mg/kg
SA6-68-33	1.5-2	10/15/99	Yes	SA6-68-33	7440-38-2	Arsenic	18.0		mg/kg
SA6-68-33	1.5-2	10/15/99	Yes	SA6-68-33	7439-92-1	Lead	16.0		mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA6-68-34	1.5-2	10/15/99	Yes	SA6-68-34	7440-38-2	Arsenic	4.4		mg/kg
SA6-68-34	1.5-2	10/15/99	Yes	SA6-68-34	7439-92-1	Lead	7.0		mg/kg
SA6-68-35	1.5-2	10/15/99	Yes	SA6-68-35	7440-38-2	Arsenic	4.9		mg/kg
SA6-68-35	1.5-2	10/15/99	Yes	SA6-68-35	7439-92-1	Lead	8.3		mg/kg
SA6-69-27	1.5-2	10/15/99	Yes	SA6-69-27	7440-38-2	Arsenic	3.5		mg/kg
SA6-69-27	1.5-2	10/15/99	Yes	SA6-69-27	7439-92-1	Lead	6.2		mg/kg
SA6-69-28	1.5-2	10/15/99	Yes	SA6-69-28	7440-38-2	Arsenic	2.3		mg/kg
SA6-69-28	1.5-2	10/15/99	Yes	SA6-69-28	7439-92-1	Lead	4.2	U	mg/kg
SA6-69-29	1.5-2	10/15/99	Yes	SA6-69-29	7440-38-2	Arsenic	2.5		mg/kg
SA6-69-29	1.5-2	10/15/99	Yes	SA6-69-29	7439-92-1	Lead	4.7	U	mg/kg
SA6-69-30	1.5-2	10/15/99	Yes	SA6-69-30	7440-38-2	Arsenic	5.9		mg/kg
SA6-69-30	1.5-2	10/15/99	Yes	SA6-69-30	7439-92-1	Lead	5.1		mg/kg
SA6-69-31	1.5-2	10/15/99	Yes	SA6-69-31	7440-38-2	Arsenic	5.6		mg/kg
SA6-69-31	1.5-2	10/15/99	Yes	SA6-69-31	7439-92-1	Lead	12.0		mg/kg
SA6-69-32	1.5-2	10/15/99	Yes	SA6-69-32	7440-38-2	Arsenic	3.7		mg/kg
SA6-69-32	1.5-2	10/15/99	Yes	SA6-69-32	7439-92-1	Lead	7.2		mg/kg
SA6-69-33	1.5-2	10/15/99	Yes	SA6-69-33	7440-38-2	Arsenic	5.1		mg/kg
SA6-69-33	1.5-2	10/15/99	Yes	SA6-69-33	7439-92-1	Lead	18.0		mg/kg
SA6-69-34	1.5-2	10/15/99	Yes	SA6-69-34	7440-38-2	Arsenic	4.0		mg/kg
SA6-69-34	1.5-2	10/15/99	Yes	SA6-69-34	7439-92-1	Lead	5.9		mg/kg
SA6-69-35	1.5-2	10/15/99	Yes	SA6-69-35	7440-38-2	Arsenic	3.4		mg/kg
SA6-69-35	1.5-2	10/15/99	Yes	SA6-69-35	7439-92-1	Lead	4.8		mg/kg
SA6-70-27	1.5-2	10/15/99	Yes	SA6-70-27	7440-38-2	Arsenic	19.0		mg/kg
SA6-70-27	1.5-2	10/15/99	Yes	SA6-70-27	7439-92-1	Lead	44.0		mg/kg
SA6-70-28	1.5-2	10/15/99	Yes	SA6-70-28	7440-38-2	Arsenic	3.1		mg/kg
SA6-70-28	1.5-2	10/15/99	Yes	SA6-70-28	7439-92-1	Lead	6.8		mg/kg
SA6-70-29	1.5-2	10/15/99	Yes	SA6-70-29	7440-38-2	Arsenic	2.1	U	mg/kg
SA6-70-29	1.5-2	10/15/99	Yes	SA6-70-29	7439-92-1	Lead	4.1	U	mg/kg
SA6-70-30	1.5-2	10/15/99	Yes	SA6-70-30	7440-38-2	Arsenic	2.4		mg/kg
SA6-70-30	1.5-2	10/15/99	Yes	SA6-70-30	7439-92-1	Lead	4.5	U	mg/kg

Table B.2-A
Sample Results for CM-02A Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA6-70-31	1.5-2	10/15/99	Yes	SA6-70-31	7440-38-2	Arsenic	37.0		mg/kg
SA6-70-31	1.5-2	10/15/99	Yes	SA6-70-31	7439-92-1	Lead	58.0		mg/kg
SA6-70-32	1.5-2	10/15/99	Yes	SA6-70-32	7440-38-2	Arsenic	12.0		mg/kg
SA6-70-32	1.5-2	10/15/99	Yes	SA6-70-32	7439-92-1	Lead	27.0		mg/kg
SA6-70-33	1.5-2	10/15/99	Yes	SA6-70-33	7440-38-2	Arsenic	6.2		mg/kg
SA6-70-33	1.5-2	10/15/99	Yes	SA6-70-33	7439-92-1	Lead	11.0		mg/kg
SA6-70-34	1.5-2	10/15/99	Yes	SA6-70-34	7440-38-2	Arsenic	3.7		mg/kg
SA6-70-34	1.5-2	10/15/99	Yes	SA6-70-34	7439-92-1	Lead	6.4		mg/kg
SA6-70-35	1.5-2	10/15/99	Yes	SA6-70-35	7440-38-2	Arsenic	7.8		mg/kg
SA6-70-35	1.5-2	10/15/99	Yes	SA6-70-35	7439-92-1	Lead	15.0		mg/kg
SA6-70-36	1.5-2	10/15/99	Yes	SA6-70-36	7440-38-2	Arsenic	3.6		mg/kg
SA6-70-36	1.5-2	10/15/99	Yes	SA6-70-36	7439-92-1	Lead	5.7		mg/kg
SA6-71-28	1.5-2	10/15/99	Yes	SA6-71-28	7440-38-2	Arsenic	39.0		mg/kg
SA6-71-28	1.5-2	10/15/99	Yes	SA6-71-28	7439-92-1	Lead	110.0		mg/kg
SA6-71-29	1.5-2	10/15/99	Yes	SA6-71-29	7440-38-2	Arsenic	2.9		mg/kg
SA6-71-29	1.5-2	10/15/99	Yes	SA6-71-29	7439-92-1	Lead	3.8	U	mg/kg
SA6-71-30	1.5-2	10/15/99	Yes	SA6-71-30	7440-38-2	Arsenic	4.0		mg/kg
SA6-71-30	1.5-2	10/15/99	Yes	SA6-71-30	7439-92-1	Lead	5.4		mg/kg
SA6-71-31	1.5-2	10/15/99	Yes	SA6-71-31	7440-38-2	Arsenic	22.0		mg/kg
SA6-71-31	1.5-2	10/15/99	Yes	SA6-71-31	7439-92-1	Lead	77.0		mg/kg
SA6-71-32	1.5-2	10/15/99	Yes	SA6-71-32	7440-38-2	Arsenic	8.6		mg/kg
SA6-71-32	1.5-2	10/15/99	Yes	SA6-71-32	7439-92-1	Lead	17.0		mg/kg
SA6-71-34	1.5-2	10/15/99	Yes	SA6-71-34	7440-38-2	Arsenic	5.5		mg/kg
SA6-71-34	1.5-2	10/15/99	Yes	SA6-71-34	7439-92-1	Lead	8.0		mg/kg
SA6-71-35	1.5-2	10/15/99	Yes	SA6-71-35	7440-38-2	Arsenic	3.8		mg/kg
SA6-71-35	1.5-2	10/15/99	Yes	SA6-71-35	7439-92-1	Lead	6.9		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
11-B-501	5-8	02/21/92	Yes	11-B-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.2		mg/kg
11-B-501	5-8	02/21/92	Yes	11-B-501-S-2	DNT-TOTAL	DNT - Total	0.02		mg/kg
11-B-501	5-8	02/21/92	Yes	11-B-501-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.04		mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	7440-38-2	Arsenic	2.3		mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	7440-50-8	Copper	17.0		mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	7439-92-1	Lead	5.5	U	mg/kg
11-B-501	10-11.5	02/21/92	Yes	11-B-501-S-3	7439-97-6	Mercury	0.08	U	mg/kg
11-B-501	15-16.5	02/21/92	Yes	11-B-501-S-4	118-96-7	2,4,6-Trinitrotoluene	0.05		mg/kg
11-B-501	15-16.5	02/21/92	Yes	11-B-501-S-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-B-501	15-16.5	02/21/92	Yes	11-B-501-S-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-B-501	20-22.5	02/21/92	Yes	11-B-501-S-5	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
11-B-501	20-22.5	02/21/92	Yes	11-B-501-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-B-501	20-22.5	02/21/92	Yes	11-B-501-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-B-501	25-26.5	02/21/92	Yes	11-B-501-S-6	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
11-B-501	25-26.5	02/21/92	Yes	11-B-501-S-6	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-B-501	25-26.5	02/21/92	Yes	11-B-501-S-6	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-TP-503	8-10	02/21/92	Yes	11-TP-503-S-3	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
11-TP-503	8-10	02/21/92	Yes	11-TP-503-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-TP-503	8-10	02/21/92	Yes	11-TP-503-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-TP-504	0-1	02/21/92	Yes	11-TP-504-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
11-TP-504	0-1	02/21/92	Yes	11-TP-504-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-TP-504	0-1	02/21/92	Yes	11-TP-504-S-1	98-95-3	Nitrobenzene	0.07	U	mg/kg
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	7440-38-2	Arsenic	3.3		mg/kg
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	7440-50-8	Copper	17.0		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	7439-92-1	Lead	5.3	U	mg/kg
11-TP-504	3-6	02/21/92	Yes	11-TP-504-S-2	7439-97-6	Mercury	0.07	U	mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	7440-38-2	Arsenic	1.4		mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	7440-50-8	Copper	8.6		mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	7439-92-1	Lead	5.2	U	mg/kg
11-TP-504	8-10	02/21/92	Yes	11-TP-504-S-3	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-28	0-5	04/29/87	Yes	18-TP-28,S-1	7439-92-1	Lead	26.0		mg/kg
18-TP-520	8-10	04/27/92	Yes	18-TP-520-S-3	7439-92-1	Lead	5.4	U	mg/kg
18-TP-531	0-1	05/15/92	Yes	18-TP-531-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TP-531	0-1	05/15/92	Yes	18-TP-531-S-1-DAVG	DNT-TOTAL	DNT - Total	0.03	U	mg/kg
18-TP-531	0-1	05/15/92	Yes	18-TP-531-S-1-DAVG	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-531	0-1	05/15/92	Yes	18-TP-531-S-1-DAVG	7439-92-1	Lead	12.0		mg/kg
18-TP-531	3-6	05/15/92	Yes	18-TP-531-S-2	7440-38-2	Arsenic	3.3		mg/kg
18-TP-531	3-6	05/15/92	Yes	18-TP-531-S-2	7440-50-8	Copper	16.4		mg/kg
18-TP-531	3-6	05/15/92	Yes	18-TP-531-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-531	3-6	05/15/92	Yes	18-TP-531-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-531	8-10	05/15/92	Yes	18-TP-531-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-537	3-6	04/24/92	Yes	18-TP-537-S-2	7440-38-2	Arsenic	1.9		mg/kg
18-TP-537	3-6	04/24/92	Yes	18-TP-537-S-2	7440-50-8	Copper	16.0		mg/kg
18-TP-537	3-6	04/24/92	Yes	18-TP-537-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-537	3-6	04/24/92	Yes	18-TP-537-S-2	7439-97-6	Mercury	0.08	U	mg/kg
18-TP-537	8-10	04/24/92	Yes	18-TP-537-S-3	7439-92-1	Lead	4.9	U	mg/kg
18-TP-538	3-6	04/24/92	Yes	18-TP-538-S-2	7440-38-2	Arsenic	1.0		mg/kg
18-TP-538	3-6	04/24/92	Yes	18-TP-538-S-2	7440-50-8	Copper	14.0		mg/kg
18-TP-538	3-6	04/24/92	Yes	18-TP-538-S-2	7439-92-1	Lead	5.3	U	mg/kg
18-TP-538	3-6	04/24/92	Yes	18-TP-538-S-2	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-538	8-10	04/24/92	Yes	18-TP-538-S-3	7439-92-1	Lead	37.0		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-539	0-1	04/24/92	Yes	18-TP-539-S-1	7439-92-1	Lead	36.0		mg/kg
18-TP-539	3-6	04/24/92	Yes	18-TP-539-S-2	7440-38-2	Arsenic	2.2		mg/kg
18-TP-539	3-6	04/24/92	Yes	18-TP-539-S-2	7440-50-8	Copper	13.0		mg/kg
18-TP-539	3-6	04/24/92	Yes	18-TP-539-S-2	7439-92-1	Lead	5.5	U	mg/kg
18-TP-539	3-6	04/24/92	Yes	18-TP-539-S-2	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-539	8-10	04/24/92	Yes	18-TP-539-S-3	7439-92-1	Lead	4.9	U	mg/kg
18-TP-540	3-6	04/24/92	Yes	18-TP-540-S-2-DAVG	7440-38-2	Arsenic	1.7		mg/kg
18-TP-540	3-6	04/24/92	Yes	18-TP-540-S-2-DAVG	7440-50-8	Copper	14.0		mg/kg
18-TP-540	3-6	04/24/92	Yes	18-TP-540-S-2-DAVG	7439-92-1	Lead	5.4	U	mg/kg
18-TP-540	3-6	04/24/92	Yes	18-TP-540-S-2-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-540	8-10	04/24/92	Yes	18-TP-540-S-3	7439-92-1	Lead	7.1		mg/kg
18-TP-541	0-1	04/24/92	Yes	18-TP-541-S-1	7439-92-1	Lead	18.0		mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	7440-38-2	Arsenic	1.6		mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	7440-50-8	Copper	15.0		mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	7439-92-1	Lead	5.2	U	mg/kg
18-TP-541	3-6	04/24/92	Yes	18-TP-541-S-2	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-541	8-10	04/24/92	Yes	18-TP-541-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	7440-38-2	Arsenic	1.4	J	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	7440-50-8	Copper	7.0	J	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	7439-92-1	Lead	5.2	U	mg/kg
18-TP-542	3-6	04/28/92	Yes	18-TP-542-S-2-DAVG	7439-97-6	Mercury	0.08	U	mg/kg
18-TP-542	8-10	04/28/92	Yes	18-TP-542-S-3	7439-92-1	Lead	5.5	U	mg/kg
18R-445	0.5-1	12/14/93	Yes	18R-445-S-2	7440-38-2	Arsenic	8.6	J	mg/kg
18R-445	1-2	12/14/93	Yes	18R-445-S-3	7440-38-2	Arsenic	8.4	J	mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18R-461	0.5-1	12/13/93	Yes	18R-461-S-2	7440-38-2	Arsenic	21.0	J	mg/kg
18R-461	1-2	12/13/93	Yes	18R-461-S-3	7440-38-2	Arsenic	4.9	J	mg/kg
F-220	2-2.5	08/08/01	Yes	01-F30-SS[F-220]C2-005	7440-38-2	Arsenic	7.2		mg/kg
F-220	2-2.5	08/08/01	Yes	01-F30-SS[F-220]C2-005	7439-92-1	Lead	7.8		mg/kg
F-221	2-2.5	08/08/01	Yes	01-F30-SS[F-221]C2-005	7440-38-2	Arsenic	8.7		mg/kg
F-221	2-2.5	08/08/01	Yes	01-F30-SS[F-221]C2-005	7439-92-1	Lead	23.0		mg/kg
F-222	2-2.5	08/08/01	Yes	01-F30-SS[F-222]C2-005	7440-38-2	Arsenic	8.7		mg/kg
F-222	2-2.5	08/08/01	Yes	01-F30-SS[F-222]C2-005	7439-92-1	Lead	12.0		mg/kg
F-223	2-2.5	08/08/01	Yes	01-F30-SS[F-223]C2-005	7440-38-2	Arsenic	6.9		mg/kg
F-223	2-2.5	08/08/01	Yes	01-F30-SS[F-223]C2-005	7439-92-1	Lead	15.0		mg/kg
F-224	2-2.5	08/08/01	Yes	01-F30-SS[F-224]C2-005	7440-38-2	Arsenic	6.0		mg/kg
F-224	2-2.5	08/08/01	Yes	01-F30-SS[F-224]C2-005	7439-92-1	Lead	7.9		mg/kg
F-225	2-2.5	08/08/01	Yes	01-F30-SS[F-225]C2-005	7440-38-2	Arsenic	4.6		mg/kg
F-225	2-2.5	08/08/01	Yes	01-F30-SS[F-225]C2-005	7439-92-1	Lead	5.7		mg/kg
F-226	2-2.5	08/08/01	Yes	01-F30-SS[F-226]C2-005	7440-38-2	Arsenic	5.0		mg/kg
F-226	2-2.5	08/08/01	Yes	01-F30-SS[F-226]C2-005	7439-92-1	Lead	11.0		mg/kg
F-227-2	3-3.5	08/30/01	Yes	02-F30-SS[F-227-2]C2-030	7440-38-2	Arsenic	5.6		mg/kg
F-227-2	3-3.5	08/30/01	Yes	02-F30-SS[F-227-2]C2-030	7439-92-1	Lead	35.0	J	mg/kg
F-228	2-2.5	08/08/01	Yes	01-F30-SS[F-228]C2-005	7440-38-2	Arsenic	4.8		mg/kg
F-228	2-2.5	08/08/01	Yes	01-F30-SS[F-228]C2-005	7439-92-1	Lead	12.0		mg/kg
F-229	2-2.5	08/08/01	Yes	01-F30-SS[F-229]C2-005	7440-38-2	Arsenic	7.4		mg/kg
F-229	2-2.5	08/08/01	Yes	01-F30-SS[F-229]C2-005	7439-92-1	Lead	9.3		mg/kg
F-231	2-2.5	08/09/01	Yes	01-F31-SS[F-231]C2-005	7440-38-2	Arsenic	8.4		mg/kg
F-231	2-2.5	08/09/01	Yes	01-F31-SS[F-231]C2-005	7439-92-1	Lead	7.0		mg/kg
F-232	2-2.5	08/09/01	Yes	01-F31-SS[F-232]C2-005	7440-38-2	Arsenic	5.4		mg/kg
F-232	2-2.5	08/09/01	Yes	01-F31-SS[F-232]C2-005	7439-92-1	Lead	6.0		mg/kg
F-233-2	3-3.5	08/30/01	Yes	02-F31-SS[F-233-2]C2-030	7440-38-2	Arsenic	5.7		mg/kg
F-233-2	3-3.5	08/30/01	Yes	02-F31-SS[F-233-2]C2-030	7439-92-1	Lead	54.0	J	mg/kg
F-234	2-2.5	08/09/01	Yes	01-F31-SS[F-234]C2-005	7440-38-2	Arsenic	5.1		mg/kg
F-234	2-2.5	08/09/01	Yes	01-F31-SS[F-234]C2-005	7439-92-1	Lead	4.5		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-235	2-2.5	08/09/01	Yes	01-F31-SS[F-235]C2-005	7440-38-2	Arsenic	6.1		mg/kg
F-235	2-2.5	08/09/01	Yes	01-F31-SS[F-235]C2-005	7439-92-1	Lead	14.0		mg/kg
F-236	2-2.5	08/09/01	Yes	01-F31-SS[F-236]C2-005	7440-38-2	Arsenic	6.9		mg/kg
F-236	2-2.5	08/09/01	Yes	01-F31-SS[F-236]C2-005	7439-92-1	Lead	16.0		mg/kg
F-237	2-2.5	08/09/01	Yes	01-F31-SS[F-237]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-237	2-2.5	08/09/01	Yes	01-F31-SS[F-237]C2-005	7439-92-1	Lead	14.0		mg/kg
F-239	2-2.5	08/09/01	Yes	01-F31-SS[F-239]C2-005	7440-38-2	Arsenic	4.9		mg/kg
F-239	2-2.5	08/09/01	Yes	01-F31-SS[F-239]C2-005	7439-92-1	Lead	5.1		mg/kg
F-240	2-2.5	08/09/01	Yes	01-F31-SS[F-240]C2-005	7440-38-2	Arsenic	6.5		mg/kg
F-240	2-2.5	08/09/01	Yes	01-F31-SS[F-240]C2-005	7439-92-1	Lead	6.1		mg/kg
LR-208	0-0.5	11/16/93	Yes	LR-208	7440-38-2	Arsenic	39.0		mg/kg
LR-209	0-0.5	03/25/93	Yes	LR-209-DAVG	7440-38-2	Arsenic	17.0		mg/kg
LR-209	0-0.5	03/25/93	Yes	LR-209-DAVG	7439-92-1	Lead	38.0		mg/kg
MSU-22-E	0-1	01/13/04	Yes	01-SS-[MSU-22-E]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-22-N	0-1	01/13/04	Yes	01-SS-[MSU-22-N]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-22-S	0-1	01/13/04	Yes	01-SS-[MSU-22-S]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-22-VS-3-6-E	3-6	07/31/03	Yes	01-SB-[MSU-22-VS-3-6-E]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-3-6-N	3-6	07/31/03	Yes	01-SB-[MSU-22-VS-3-6-N]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-3-6-S	3-6	07/31/03	Yes	01-SB-[MSU-22-VS-3-6-S]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-3-6-W	3-6	07/31/03	Yes	01-SB-[MSU-22-VS-3-6-W]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-8-11-E	8-11	07/31/03	Yes	01-SB-[MSU-22-VS-8-11-E]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-8-11-N	8-11	07/31/03	Yes	01-SB-[MSU-22-VS-8-11-N]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-8-11-S	8-11	07/31/03	Yes	01-SB-[MSU-22-VS-8-11-S]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-8-11-W	8-11	07/31/03	Yes	01-SB-[MSU-22-VS-8-11-W]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-VS-B	11-11.5	07/31/03	Yes	01-SB-[MSU-22-VS-B]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-22-W	0-11	01/13/04	Yes	01-SS-[MSU-22-W]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-23-E	0-1	05/22/03	No	01-SS-[MSU-23-E]-D1_05/22/03_0	7440-38-2	Arsenic	4.4		mg/kg
MSU-23-E	0-1	05/22/03	No	01-SS-[MSU-23-E]-D1_05/22/03_0	7439-92-1	Lead	4.3		mg/kg
MSU-23-E	0-1	01/13/04	Yes	02-SS-[MSU-23-E]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-23-N	0-1	01/13/04	Yes	01-SS-[MSU-23-N]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-23-N	0-1	05/22/03	Yes	01-SS-[MSU-23-N]-D1_05/22/03_0	7440-38-2	Arsenic	6.4		mg/kg
MSU-23-N	0-1	05/22/03	Yes	01-SS-[MSU-23-N]-D1_05/22/03_0	7439-92-1	Lead	5.9		mg/kg
MSU-23-S	0-1	05/22/03	No	01-SS-[MSU-23-S]-D1_05/22/03_0	7440-38-2	Arsenic	11.5		mg/kg
MSU-23-S	0-1	05/22/03	No	01-SS-[MSU-23-S]-D1_05/22/03_0	7439-92-1	Lead	17.8		mg/kg
MSU-23-S	0-1	01/13/04	Yes	02-SS-[MSU-23-S]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-23-VS-0-1-E	0-1	07/31/03	Yes	01-SB-[MSU-23-VS-0-1-E]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-0-1-N	0-1	07/31/03	Yes	01-SB-[MSU-23-VS-0-1-N]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-0-1-S	0-1	07/31/03	Yes	01-SB-[MSU-23-VS-0-1-S]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-0-1-W	0-1	07/31/03	Yes	01-SB-[MSU-23-VS-0-1-W]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-3-6-E	3-6	07/31/03	Yes	01-SB-[MSU-23-VS-3-6-E]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-3-6-N	3-6	07/31/03	Yes	01-SB-[MSU-23-VS-3-6-N]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-3-6-S	3-6	07/31/03	Yes	01-SB-[MSU-23-VS-3-6-S]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-3-6-W	3-6	07/31/03	Yes	01-SB-[MSU-23-VS-3-6-W]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-8-11-E	8-11	07/31/03	Yes	01-SB-[MSU-23-VS-8-11-E]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-8-11-N	8-11	07/31/03	Yes	01-SB-[MSU-23-VS-8-11-N]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-8-11-S	8-11	07/31/03	Yes	01-SB-[MSU-23-VS-8-11-S]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-8-11-W	8-11	07/31/03	Yes	01-SB-[MSU-23-VS-8-11-W]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-VS-B	11-11.5	07/31/03	Yes	01-SB-[MSU-23-VS-B]-C2_07/31/03_11.5	98-95-3	Nitrobenzene	0.04	U	mg/kg
MSU-23-W	0-1	05/22/03	No	01-SS-[MSU-23-W]-D1_05/22/03_0	7440-38-2	Arsenic	7.4		mg/kg
MSU-23-W	0-1	05/22/03	No	01-SS-[MSU-23-W]-D1_05/22/03_0	7439-92-1	Lead	6.8		mg/kg
MSU-23-W	0-1	01/13/04	Yes	02-SS-[MSU-23-W]-D1_01/13/04_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-24-E	3-6	05/22/03	Yes	01-SS-[MSU-24-E]-D1_05/22/03_0	7440-38-2	Arsenic	15.4		mg/kg
MSU-24-E	3-6	05/22/03	Yes	01-SS-[MSU-24-E]-D1_05/22/03_0	7439-92-1	Lead	12.0		mg/kg
MSU-24-N	3-6	05/22/03	Yes	01-SS-[MSU-24-N]-D1_05/22/03_0	7440-38-2	Arsenic	30.1		mg/kg
MSU-24-N	3-6	05/22/03	Yes	01-SS-[MSU-24-N]-D1_05/22/03_0	7439-92-1	Lead	111.0		mg/kg
MSU-24-S	3-6	05/22/03	Yes	01-SS-[MSU-24-S]-D1_AVG_05/22/03_0	7440-38-2	Arsenic	3.4		mg/kg
MSU-24-S	3-6	05/22/03	Yes	01-SS-[MSU-24-S]-D1_AVG_05/22/03_0	7439-92-1	Lead	3.4		mg/kg
MSU-24-VS-3-7-E	3-7	09/23/03	Yes	02-SS-[MSU-24-VS-3-7-E]-C2_AVG_09/23/03_7	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-24-VS-3-7-E	3-7	09/23/03	Yes	02-SS-[MSU-24-VS-3-7-E]-C2_AVG_09/23/03_7	DNT-TOTAL	DNT - Total	0.09	U	mg/kg
MSU-24-VS-3-7-E	3-7	09/23/03	Yes	02-SS-[MSU-24-VS-3-7-E]-C2_AVG_09/23/03_7	98-95-3	Nitrobenzene	0.04	U	mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-24-VS-3-7-N	3-7	07/08/03	Yes	01-SB-[MSU-24-VS-3-7-N]-C2_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	0.1	J	mg/kg
MSU-24-VS-3-7-S	3-7	07/08/03	Yes	01-SB-[MSU-24-VS-3-7-S]-C2_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-24-VS-3-7-W	3-7	07/08/03	Yes	01-SB-[MSU-24-VS-3-7-W]-C2_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-24-VS-B	3-7	09/23/03	Yes	02-SS-[MSU-24-VS-B]-C2_09/23/03_7	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-24-W	3-6	05/22/03	Yes	01-SS-[MSU-24-W]-D1_05/22/03_0	7440-38-2	Arsenic	4.0		mg/kg
MSU-24-W	3-6	05/22/03	Yes	01-SS-[MSU-24-W]-D1_05/22/03_0	7439-92-1	Lead	4.2		mg/kg
MSU-25-B	7-7.5	07/08/03	Yes	01-SB-[MSU-25-B]-C2_AVG_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	0.5		mg/kg
MSU-25-VS-3-7-E	3-7	07/08/03	Yes	01-SB-[MSU-25-VS-3-7-E]-C2_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	1.6		mg/kg
MSU-25-VS-3-7-N	3-7	07/08/03	Yes	01-SB-[MSU-25-VS-3-7-N]-C2_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	0.6		mg/kg
MSU-25-VS-3-7-S	3-7	09/23/03	Yes	02-SS-[MSU-25-VS-3-7-S]-C2_09/23/03_7	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-25-VS-3-7-W	3-7	07/08/03	Yes	01-SB-[MSU-25-VS-3-7-W]-C2_07/08/03_7	118-96-7	2,4,6-Trinitrotoluene	0.3		mg/kg
MSU-82-E	0-6	06/30/03	Yes	01-SS-[MSU-82-E]-D1_06/30/03_0	7440-38-2	Arsenic	7.7		mg/kg
MSU-82-E	0-6	06/30/03	Yes	01-SS-[MSU-82-E]-D1_06/30/03_0	7439-92-1	Lead	26.7		mg/kg
MSU-82-N	0-6	06/30/03	Yes	01-SS-[MSU-82-N]-D1_06/30/03_0	7440-38-2	Arsenic	17.5		mg/kg
MSU-82-N	0-6	06/30/03	Yes	01-SS-[MSU-82-N]-D1_06/30/03_0	7439-92-1	Lead	23.2		mg/kg
MSU-82-S	0-6	06/30/03	Yes	01-SS-[MSU-82-S]-D1_06/30/03_0	7440-38-2	Arsenic	8.3		mg/kg
MSU-82-S	0-6	06/30/03	Yes	01-SS-[MSU-82-S]-D1_06/30/03_0	7439-92-1	Lead	25.4		mg/kg
MSU-82-VS-B	6.5-7	08/18/03	Yes	01-SS-[MSU-82-VS-B]-C2_AVG_08/18/03_6.5	7439-92-1	Lead	8.1		mg/kg
MSU-82-W	0-6	06/30/03	No	01-SS-[MSU-82-W]-D1_AVG_06/30/03_0	7440-38-2	Arsenic	9.2		mg/kg
MSU-82-W	0-6.5	07/14/03	Yes	02-SS-[MSU-82-W]-D1_AVG_07/14/03_0	7439-92-1	Lead	25.9		mg/kg
MSU-83-VS-B	3.5-5.5	07/01/03	Yes	01-SS[MSU-83-VS-B]-C2_07/01/03_3.5	7440-38-2	Arsenic	4.8		mg/kg
MSU-83-VS-B	3.5-5.5	07/01/03	Yes	01-SS[MSU-83-VS-B]-C2_07/01/03_3.5	7439-92-1	Lead	14.2		mg/kg
MSU-83-VS-N	0-3	03/24/06	Yes	03-MSU-83-VS-N-0-3.0	7439-92-1	Lead	3.9		mg/Kg
MSU-84-E	0-4	06/25/03	Yes	01-SS-[MSU-84-E]-D1_06/25/03_0	7440-38-2	Arsenic	7.5		mg/kg
MSU-84-E	0-4	06/25/03	Yes	01-SS-[MSU-84-E]-D1_06/25/03_0	7439-92-1	Lead	16.3		mg/kg
MSU-84-N	0-4	06/25/03	Yes	01-SS-[MSU-84-N]-D1_06/25/03_0	7440-38-2	Arsenic	5.4		mg/kg
MSU-84-N	0-4	06/25/03	Yes	01-SS-[MSU-84-N]-D1_06/25/03_0	7439-92-1	Lead	5.3		mg/kg
MSU-84-S	0-4	06/25/03	Yes	01-SS-[MSU-84-S]-D1_06/25/03_0	7440-38-2	Arsenic	20.4		mg/kg
MSU-84-S	0-4	06/25/03	Yes	01-SS-[MSU-84-S]-D1_06/25/03_0	7439-92-1	Lead	19.9		mg/kg
MSU-84-VS-B	5-5.5	07/31/03	Yes	01-SB-[MSU-84-VS-B]-C2_07/31/03_5	7439-92-1	Lead	15.8		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-84-W	0-4	06/25/03	Yes	01-SS-[MSU-84-W]-D1_06/25/03_0	7440-38-2	Arsenic	8.0		mg/kg
MSU-84-W	0-4	06/25/03	Yes	01-SS-[MSU-84-W]-D1_06/25/03_0	7439-92-1	Lead	5.9		mg/kg
MSU-85-E	0-5	06/25/03	Yes	01-SS-[MSU-85-E]-D1_06/25/03_0	7440-38-2	Arsenic	14.4		mg/kg
MSU-85-E	0-5	06/25/03	Yes	01-SS-[MSU-85-E]-D1_06/25/03_0	7439-92-1	Lead	17.4		mg/kg
MSU-85-N	0-5	06/25/03	Yes	01-SS-[MSU-85-N]-D1_06/25/03_0	7440-38-2	Arsenic	10.0		mg/kg
MSU-85-N	0-5	06/25/03	Yes	01-SS-[MSU-85-N]-D1_06/25/03_0	7439-92-1	Lead	11.5		mg/kg
MSU-85-S	0-5	06/25/03	No	01-SS-[MSU-85-S]-D1_06/25/03_0	7440-38-2	Arsenic	14.5		mg/kg
MSU-85-S	0-6.5	07/15/03	Yes	02-SS-[MSU-85-S]-D1_AVG_07/15/03_0	7439-92-1	Lead	48.1		mg/kg
MSU-85-VS-B	7.5-8	08/18/03	Yes	01-SS-[MSU-85-VS-B]-C2_08/18/03_7.5	7439-92-1	Lead	4.6		mg/kg
MSU-85-W	0-5	06/25/03	Yes	01-SS-[MSU-85-W]-D1_06/25/03_0	7440-38-2	Arsenic	5.4		mg/kg
MSU-85-W	0-5	06/25/03	Yes	01-SS-[MSU-85-W]-D1_06/25/03_0	7439-92-1	Lead	4.0		mg/kg
MSU-86-VS-B	5-5.5	07/07/03	Yes	01-SS-[MSU-86-VS-B]-C2_07/07/03_5	7440-38-2	Arsenic	4.8		mg/kg
MSU-86-VS-B	5-5.5	07/07/03	Yes	01-SS-[MSU-86-VS-B]-C2_07/07/03_5	7439-92-1	Lead	43.9		mg/kg
MSU-86-VS-E	0-3	03/24/06	Yes	03-MSU-86-VS-E-0-3.0	7439-92-1	Lead	2.7		mg/Kg
MSU-86-VS-N	0-3	03/24/06	Yes	03-MSU-86-VS-N-0-3.0	7439-92-1	Lead	3.0		mg/Kg
MSU-86-VS-W	0-3	03/24/06	Yes	03-MSU-86-VS-W-0-3.0	7439-92-1	Lead	1.8		mg/Kg
MSU-NGRR-29	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-29-1]-C1_04/24/03_1.5	7440-38-2	Arsenic	5.4		mg/kg
MSU-NGRR-29	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-29-1]-C1_04/24/03_1.5	7439-92-1	Lead	5.6		mg/kg
MSU-NGRR-30	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-30-1]-C1_04/24/03_1.5	7440-38-2	Arsenic	4.6		mg/kg
MSU-NGRR-30	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-30-1]-C1_04/24/03_1.5	7439-92-1	Lead	6.4		mg/kg
MSU-NGRR-38	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-38-1]-C1_04/23/03_1.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-NGRR-38	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-38-1]-C1_04/23/03_1.5	7439-92-1	Lead	2.7		mg/kg
NEW-17	1-1.5	04/12/04	Yes	1-NEW-17_04/12/04_1	7440-38-2	Arsenic	9.9		mg/kg
NEW-17	1-1.5	04/12/04	Yes	1-NEW-17_04/12/04_1	7439-92-1	Lead	9.7		mg/kg
NEW-18	1-1.5	04/12/04	Yes	1-NEW-18_04/12/04_1	7440-38-2	Arsenic	6.4		mg/kg
NEW-18	1-1.5	04/12/04	Yes	1-NEW-18_04/12/04_1	7439-92-1	Lead	3.8		mg/kg
NEW-19	1-1.5	03/25/04	Yes	01-New-19_03/25/04_1	7440-38-2	Arsenic	4.3		mg/kg
NEW-19	1-1.5	03/25/04	Yes	01-New-19_03/25/04_1	7439-92-1	Lead	4.3		mg/kg
NEW-20	1-1.5	03/25/04	Yes	01-New-20_03/25/04_1	7440-38-2	Arsenic	6.2		mg/kg
NEW-20	1-1.5	03/25/04	Yes	01-New-20_03/25/04_1	7439-92-1	Lead	6.5		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NEW-21	1-1.5	03/25/04	Yes	01-New-21_03/25/04_1	7440-38-2	Arsenic	4.7		mg/kg
NEW-21	1-1.5	03/25/04	Yes	01-New-21_03/25/04_1	7439-92-1	Lead	5.6		mg/kg
NEW-22	1-1.5	03/25/04	Yes	01-New-22_03/25/04_1	7440-38-2	Arsenic	8.7		mg/kg
NEW-22	1-1.5	03/25/04	Yes	01-New-22_03/25/04_1	7439-92-1	Lead	10.6		mg/kg
NGRR-210	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-210]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-210	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-210]C2-005	7439-92-1	Lead	9.4		mg/kg
NGRR-211	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-211]C2-005	7440-38-2	Arsenic	7.7		mg/kg
NGRR-211	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-211]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-212	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-212]C2-005	7440-38-2	Arsenic	5.0		mg/kg
NGRR-212	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-212]C2-005	7439-92-1	Lead	3.6		mg/kg
NGRR-213	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-213]C2-005	7440-38-2	Arsenic	4.9		mg/kg
NGRR-213	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-213]C2-005	7439-92-1	Lead	3.3		mg/kg
NGRR-214	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-214]C2-005	7440-38-2	Arsenic	38.0		mg/kg
NGRR-214	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-214]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-215	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-215]C2-005	7440-38-2	Arsenic	55.0		mg/kg
NGRR-215	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-215]C2-005	7439-92-1	Lead	4.2		mg/kg
NGRR-216	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-216]C2-005	7440-38-2	Arsenic	7.2		mg/kg
NGRR-216	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-216]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-217	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-217]C2-005	7440-38-2	Arsenic	5.2		mg/kg
NGRR-217	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-217]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-218	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-218]C2-005	7440-38-2	Arsenic	50.0		mg/kg
NGRR-218	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-218]C2-005	7439-92-1	Lead	66.0		mg/kg
NGRR-219	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-219]C2-005	7440-38-2	Arsenic	7.4		mg/kg
NGRR-219	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-219]C2-005	7439-92-1	Lead	6.2		mg/kg
NGRR-220	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-220]C2-005	7440-38-2	Arsenic	9.8		mg/kg
NGRR-220	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-220]C2-005	7439-92-1	Lead	6.7		mg/kg
NGRR-221	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-221]C2-005	7440-38-2	Arsenic	9.1		mg/kg
NGRR-221	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-221]C2-005	7439-92-1	Lead	5.4		mg/kg
NGRR-222	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-222]C2-005	7440-38-2	Arsenic	14.0		mg/kg
NGRR-222	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-222]C2-005	7439-92-1	Lead	5.3		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-223	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-223]C2-005-DAVG	7440-38-2	Arsenic	6.3		mg/kg
NGRR-223	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-223]C2-005-DAVG	7439-92-1	Lead	5.8		mg/kg
NGRR-225	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-225]C2-005	7440-38-2	Arsenic	5.6		mg/kg
NGRR-225	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-225]C2-005	7439-92-1	Lead	5.5		mg/kg
NGRR-226	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-226]C2-005	7440-38-2	Arsenic	18.0		mg/kg
NGRR-226	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-226]C2-005	7439-92-1	Lead	25.0		mg/kg
NGRR-227	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-227]C2-005	7440-38-2	Arsenic	4.9		mg/kg
NGRR-227	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-227]C2-005	7439-92-1	Lead	6.2		mg/kg
NGRR-228	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-228]C2-005	7440-38-2	Arsenic	5.0		mg/kg
NGRR-228	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-228]C2-005	7439-92-1	Lead	4.2		mg/kg
NGRR-229	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-229]C2-005	7440-38-2	Arsenic	4.9		mg/kg
NGRR-229	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-229]C2-005	7439-92-1	Lead	4.4		mg/kg
NGRR-231	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-231]C2-005	7440-38-2	Arsenic	6.5		mg/kg
NGRR-231	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-231]C2-005	7439-92-1	Lead	25.0		mg/kg
NGRR-232	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-232]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-232	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-232]C2-005	7439-92-1	Lead	4.9		mg/kg
NGRR-233	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-233]C2-005	7440-38-2	Arsenic	6.4		mg/kg
NGRR-233	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-233]C2-005	7439-92-1	Lead	6.0		mg/kg
NGRR-234	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-234]C2-005	7440-38-2	Arsenic	5.1		mg/kg
NGRR-234	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-234]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-235	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-235]C2-005-DAVG	7440-38-2	Arsenic	6.5		mg/kg
NGRR-235	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-235]C2-005-DAVG	7439-92-1	Lead	7.0		mg/kg
NGRR-237	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-237]C2-005	7440-38-2	Arsenic	4.8		mg/kg
NGRR-237	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-237]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-238	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-238]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-238	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-238]C2-005	7439-92-1	Lead	7.8		mg/kg
NGRR-239	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-239]C2-005	7440-38-2	Arsenic	4.6		mg/kg
NGRR-239	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-239]C2-005	7439-92-1	Lead	5.4		mg/kg
NGRR-240	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-240]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-240	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-240]C2-005	7439-92-1	Lead	13.0		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-241	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-241]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-241	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-241]C2-005	7439-92-1	Lead	8.3		mg/kg
NGRR-242	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-242]C2-005	7440-38-2	Arsenic	3.9		mg/kg
NGRR-242	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-242]C2-005	7439-92-1	Lead	5.2		mg/kg
NGRR-243	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-243]C2-005	7440-38-2	Arsenic	5.9		mg/kg
NGRR-243	1.5-2	08/09/01	Yes	01-N01-SS[NGRR-243]C2-005	7439-92-1	Lead	4.8		mg/kg
NGRR-297	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-297]C2-005	7440-38-2	Arsenic	8.4		mg/kg
NGRR-297	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-297]C2-005	7439-92-1	Lead	7.7		mg/kg
NGRR-321	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-321]C2-005-DAVG	7440-38-2	Arsenic	42.0	U	mg/kg
NGRR-321	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-321]C2-005-DAVG	7439-92-1	Lead	21.0	U	mg/kg
NGRR-323	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-323]C2-005	7440-38-2	Arsenic	40.0	U	mg/kg
NGRR-323	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-323]C2-005	7439-92-1	Lead	41.0		mg/kg
NGRR-324	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-324]C2-005	7440-38-2	Arsenic	37.0	U	mg/kg
NGRR-324	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-324]C2-005	7439-92-1	Lead	18.0	U	mg/kg
NGRR-325	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-325]C2-005	7440-38-2	Arsenic	36.0	U	mg/kg
NGRR-325	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-325]C2-005	7439-92-1	Lead	18.0	U	mg/kg
NGRR-326	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-326]C2-005	7440-38-2	Arsenic	37.0	U	mg/kg
NGRR-326	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-326]C2-005	7439-92-1	Lead	18.0	U	mg/kg
NGRR-327	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-327]C2-005	7440-38-2	Arsenic	36.0	U	mg/kg
NGRR-327	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-327]C2-005	7439-92-1	Lead	18.0	U	mg/kg
NGRR-328	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-328]C2-005	7440-38-2	Arsenic	39.0	U	mg/kg
NGRR-328	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-328]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-329	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-329]C2-005	7440-38-2	Arsenic	37.0	U	mg/kg
NGRR-329	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-329]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-330	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-330]C2-005	7440-38-2	Arsenic	39.0	U	mg/kg
NGRR-330	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-330]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-331	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-331]C2-005	7440-38-2	Arsenic	35.0	U	mg/kg
NGRR-331	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-331]C2-005	7439-92-1	Lead	18.0	U	mg/kg
NGRR-333	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-333]C2-005	7440-38-2	Arsenic	46.0	U	mg/kg
NGRR-333	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-333]C2-005	7439-92-1	Lead	23.0	U	mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-334	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-334]C2-005	7440-38-2	Arsenic	42.0	U	mg/kg
NGRR-334	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-334]C2-005	7439-92-1	Lead	21.0	U	mg/kg
NGRR-335	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-335]C2-005	7440-38-2	Arsenic	43.0	U	mg/kg
NGRR-335	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-335]C2-005	7439-92-1	Lead	22.0		mg/kg
NGRR-336	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-336]C2-005	7440-38-2	Arsenic	38.0	U	mg/kg
NGRR-336	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-336]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-337	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-337]C2-005	7440-38-2	Arsenic	39.0	U	mg/kg
NGRR-337	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-337]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-338	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-338]C2-005	7440-38-2	Arsenic	41.0	U	mg/kg
NGRR-338	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-338]C2-005	7439-92-1	Lead	20.0	U	mg/kg
NGRR-339	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-339]C2-005	7440-38-2	Arsenic	38.0	U	mg/kg
NGRR-339	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-339]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-340	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-340]C2-005	7440-38-2	Arsenic	39.0	U	mg/kg
NGRR-340	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-340]C2-005	7439-92-1	Lead	19.0	U	mg/kg
NGRR-341	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-341]C2-005	7440-38-2	Arsenic	41.0	U	mg/kg
NGRR-341	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-341]C2-005	7439-92-1	Lead	21.0	U	mg/kg
NGRR-342	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-342]C2-005-DAVG	7440-38-2	Arsenic	42.0	U	mg/kg
NGRR-342	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-342]C2-005-DAVG	7439-92-1	Lead	46.0	J	mg/kg
NGRR-344	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-344]C2-005	7440-38-2	Arsenic	43.0	U	mg/kg
NGRR-344	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-344]C2-005	7439-92-1	Lead	21.0	UJ	mg/kg
NGRR-345	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-345]C2-005	7440-38-2	Arsenic	39.0	U	mg/kg
NGRR-345	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-345]C2-005	7439-92-1	Lead	20.0	UJ	mg/kg
NGRR-346	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-346]C2-005	7440-38-2	Arsenic	41.0	U	mg/kg
NGRR-346	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-346]C2-005	7439-92-1	Lead	21.0	UJ	mg/kg
NGRR-347	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-347]C2-005	7440-38-2	Arsenic	38.0	U	mg/kg
NGRR-347	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-347]C2-005	7439-92-1	Lead	19.0	UJ	mg/kg
NGRR-348	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-348]C2-005	7440-38-2	Arsenic	41.0	U	mg/kg
NGRR-348	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-348]C2-005	7439-92-1	Lead	20.0	UJ	mg/kg
NGRR-349	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-349]C2-005	7440-38-2	Arsenic	38.0	U	mg/kg
NGRR-349	1.5-2	08/20/01	Yes	01-N01-SS[NGRR-349]C2-005	7439-92-1	Lead	19.0	UJ	mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-38-VS-136-2	1.5-2	04/28/04	Yes	NGRR-38-VS-136-2_04/28/04_1.5	7440-38-2	Arsenic	5.4		mg/kg
NGRR-383	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-383]C2-005-DAVG	7440-38-2	Arsenic	5.1		mg/kg
NGRR-383	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-383]C2-005-DAVG	7439-92-1	Lead	5.4		mg/kg
NGRR-385	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-385]C2-005	7440-38-2	Arsenic	5.7		mg/kg
NGRR-385	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-385]C2-005	7439-92-1	Lead	6.8		mg/kg
NGRR-386	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-386]C2-005	7440-38-2	Arsenic	6.0		mg/kg
NGRR-386	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-386]C2-005	7439-92-1	Lead	3.8		mg/kg
NGRR-387	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-387]C2-005	7440-38-2	Arsenic	3.5		mg/kg
NGRR-387	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-387]C2-005	7439-92-1	Lead	2.2	U	mg/kg
NGRR-388	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-388]C2-005	7440-38-2	Arsenic	6.6		mg/kg
NGRR-388	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-388]C2-005	7439-92-1	Lead	6.2		mg/kg
NGRR-389	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-389]C2-005	7440-38-2	Arsenic	8.6		mg/kg
NGRR-389	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-389]C2-005	7439-92-1	Lead	7.0		mg/kg
NGRR-390	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-390]C2-005	7440-38-2	Arsenic	5.9		mg/kg
NGRR-390	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-390]C2-005	7439-92-1	Lead	3.7		mg/kg
NGRR-391	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-391]C2-005	7440-38-2	Arsenic	7.1		mg/kg
NGRR-391	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-391]C2-005	7439-92-1	Lead	3.4		mg/kg
NGRR-392	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-392]C2-005	7440-38-2	Arsenic	7.9		mg/kg
NGRR-392	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-392]C2-005	7439-92-1	Lead	4.3		mg/kg
NGRR-393	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-393]C2-005	7440-38-2	Arsenic	3.6		mg/kg
NGRR-393	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-393]C2-005	7439-92-1	Lead	62.0		mg/kg
NGRR-395	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-395]C2-005	7440-38-2	Arsenic	4.0		mg/kg
NGRR-395	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-395]C2-005	7439-92-1	Lead	4.0		mg/kg
NGRR-396	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-396]C2-005	7440-38-2	Arsenic	3.4		mg/kg
NGRR-396	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-396]C2-005	7439-92-1	Lead	3.6		mg/kg
NGRR-397	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-397]C2-005	7440-38-2	Arsenic	7.8		mg/kg
NGRR-397	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-397]C2-005	7439-92-1	Lead	17.0		mg/kg
NGRR-398	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-398]C2-005	7440-38-2	Arsenic	3.3		mg/kg
NGRR-398	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-398]C2-005	7439-92-1	Lead	3.1		mg/kg
NGRR-399	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-399]C2-005	7440-38-2	Arsenic	13.0		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-399	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-399]C2-005	7439-92-1	Lead	15.0		mg/kg
NGRR-400	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-400]C2-005	7440-38-2	Arsenic	3.3		mg/kg
NGRR-400	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-400]C2-005	7439-92-1	Lead	4.5		mg/kg
NGRR-401	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-401]C2-005	7440-38-2	Arsenic	4.5		mg/kg
NGRR-401	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-401]C2-005	7439-92-1	Lead	2.7		mg/kg
NGRR-402	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-402]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-402	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-402]C2-005	7439-92-1	Lead	8.3		mg/kg
NGRR-403	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-403]C2-005	7440-38-2	Arsenic	8.4		mg/kg
NGRR-403	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-403]C2-005	7439-92-1	Lead	9.3		mg/kg
NGRR-404	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-404]C2-005	7440-38-2	Arsenic	8.7		mg/kg
NGRR-404	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-404]C2-005	7439-92-1	Lead	6.8		mg/kg
NGRR-405	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-405]C2-005	7440-38-2	Arsenic	7.0		mg/kg
NGRR-405	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-405]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-406	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-406]C2-005	7440-38-2	Arsenic	6.5		mg/kg
NGRR-406	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-406]C2-005	7439-92-1	Lead	9.0		mg/kg
NGRR-407	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-407]C2-005	7440-38-2	Arsenic	9.8		mg/kg
NGRR-407	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-407]C2-005	7439-92-1	Lead	16.0		mg/kg
NGRR-408	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-408]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-408	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-408]C2-005	7439-92-1	Lead	15.0		mg/kg
NGRR-409	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-409]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-409	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-409]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-410	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-410]C2-005	7440-38-2	Arsenic	14.0		mg/kg
NGRR-410	1.5-2	08/23/01	Yes	01-N01-SS[NGRR-410]C2-005	7439-92-1	Lead	18.0		mg/kg
NGRR-411	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-411]C2-005-DAVG	7440-38-2	Arsenic	9.3		mg/kg
NGRR-411	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-411]C2-005-DAVG	7439-92-1	Lead	8.1		mg/kg
NGRR-413	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-413]C2-005	7440-38-2	Arsenic	3.0		mg/kg
NGRR-413	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-413]C2-005	7439-92-1	Lead	2.0	U	mg/kg
R46C8M	1-1.5	04/12/04	Yes	1-R46C8M_04/12/04_1	7440-38-2	Arsenic	12.0		mg/kg
R46C8M	1-1.5	04/12/04	Yes	1-R46C8M_04/12/04_1	7439-92-1	Lead	10.4		mg/kg
R46C9	1-1.5	10/16/03	Yes	01-SS-[R46C9]-C2_10/16/03_1	7440-38-2	Arsenic	2.5	U	mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R46C9	1-1.5	10/16/03	Yes	01-SS-[R46C9]-C2_10/16/03_1	7439-92-1	Lead	5.0		mg/kg
R47C10	1-1.5	01/13/04	Yes	01-SS-[R47C10]-C2_01/13/04_1	7440-38-2	Arsenic	2.9		mg/kg
R47C10	1-1.5	01/13/04	Yes	01-SS-[R47C10]-C2_01/13/04_1	7439-92-1	Lead	3.1		mg/kg
R47C11	1-1.5	01/13/04	Yes	01-SS-[R47C11]-C2_01/13/04_1	7440-38-2	Arsenic	7.7		mg/kg
R47C11	1-1.5	01/13/04	Yes	01-SS-[R47C11]-C2_01/13/04_1	7439-92-1	Lead	10.5		mg/kg
R47C8	1-1.5	04/12/04	Yes	1-R47C8_04/12/04_1	7440-38-2	Arsenic	15.4		mg/kg
R47C8	1-1.5	04/12/04	Yes	1-R47C8_04/12/04_1	7439-92-1	Lead	20.5		mg/kg
R47C9	1-1.5	10/16/03	Yes	01-SS-[R47C9]-C2_10/16/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R47C9	1-1.5	10/16/03	Yes	01-SS-[R47C9]-C2_10/16/03_1	7439-92-1	Lead	3.2		mg/kg
R48C10	1-1.5	01/13/04	Yes	01-SS-[R48C10]-C2_01/13/04_1	7440-38-2	Arsenic	5.2		mg/kg
R48C10	1-1.5	01/13/04	Yes	01-SS-[R48C10]-C2_01/13/04_1	7439-92-1	Lead	7.0		mg/kg
R48C11	1-1.5	01/13/04	Yes	01-SS-[R48C11]-C2_01/13/04_1	7440-38-2	Arsenic	8.4		mg/kg
R48C11	1-1.5	01/13/04	Yes	01-SS-[R48C11]-C2_01/13/04_1	7439-92-1	Lead	11.0		mg/kg
R48C13	1-1.5	04/05/04	No	01-R48C13_04/05/04_1	7439-92-1	Lead	23.9		mg/kg
R48C13	2-2.5	05/05/04	Yes	2-R48C13_05/05/04_2	7440-38-2	Arsenic	11.1		mg/kg
R48C7	1-1.5	04/12/04	Yes	1-R48C7_AVG_04/12/04_1	7440-38-2	Arsenic	8.3		mg/kg
R48C7	1-1.5	04/12/04	Yes	1-R48C7_AVG_04/12/04_1	7439-92-1	Lead	7.9		mg/kg
R48C8	1-1.5	10/16/03	Yes	01-SS-[R48C8]-C2_10/16/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R48C8	1-1.5	10/16/03	Yes	01-SS-[R48C8]-C2_10/16/03_1	7439-92-1	Lead	4.9		mg/kg
R49C10	1-1.5	01/13/04	Yes	01-SS-[R49C10]-C2_01/13/04_1	7440-38-2	Arsenic	8.4		mg/kg
R49C10	1-1.5	01/13/04	Yes	01-SS-[R49C10]-C2_01/13/04_1	7439-92-1	Lead	9.1		mg/kg
R49C11	1-1.5	01/13/04	Yes	01-SS-[R49C11]-C2_01/13/04_1	7440-38-2	Arsenic	6.1		mg/kg
R49C11	1-1.5	01/13/04	Yes	01-SS-[R49C11]-C2_01/13/04_1	7439-92-1	Lead	6.3		mg/kg
R49C12	1-1.5	01/13/04	Yes	01-SS-[R49C12]-C2_AVG_01/13/04_1	7440-38-2	Arsenic	3.7		mg/kg
R49C12	1-1.5	01/13/04	Yes	01-SS-[R49C12]-C2_AVG_01/13/04_1	7439-92-1	Lead	4.6		mg/kg
R49C13	1-1.5	02/04/04	Yes	1-R49C13_02/04/04_1	7440-38-2	Arsenic	10.0		mg/kg
R49C13	1-1.5	02/04/04	Yes	1-R49C13_02/04/04_1	7439-92-1	Lead	12.3		mg/kg
R49C14	1-1.5	04/05/04	Yes	01-R49C14_04/05/04_1	7440-38-2	Arsenic	11.8		mg/kg
R49C14	1-1.5	04/05/04	Yes	01-R49C14_04/05/04_1	7439-92-1	Lead	14.7		mg/kg
R49C7	1-1.5	10/15/03	Yes	01-SS-[R49C7]-C2_10/15/03_1	7440-38-2	Arsenic	8.3		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R49C7	1-1.5	10/15/03	Yes	01-SS-[R49C7]-C2_10/15/03_1	7439-92-1	Lead	23.2		mg/kg
R49C8	1-1.5	10/15/03	Yes	01-SS-[R49C8]-C2_10/15/03_1	7440-38-2	Arsenic	2.8		mg/kg
R49C8	1-1.5	10/15/03	Yes	01-SS-[R49C8]-C2_10/15/03_1	7439-92-1	Lead	6.8		mg/kg
R50C10	1-1.5	01/13/04	Yes	01-SS-[R50C10]-C2_01/13/04_1	7440-38-2	Arsenic	3.9		mg/kg
R50C10	1-1.5	01/13/04	Yes	01-SS-[R50C10]-C2_01/13/04_1	7439-92-1	Lead	3.7		mg/kg
R50C12	1-1.5	01/14/04	Yes	01-SS[R50C12]-C2_01/14/04_1	7440-38-2	Arsenic	9.5		mg/kg
R50C12	1-1.5	01/14/04	Yes	01-SS[R50C12]-C2_01/14/04_1	7439-92-1	Lead	16.6		mg/kg
R50C13	1-1.5	01/14/04	Yes	01-SS[R50C13]-C2_01/14/04_1	7440-38-2	Arsenic	3.5		mg/kg
R50C13	1-1.5	01/14/04	Yes	01-SS[R50C13]-C2_01/14/04_1	7439-92-1	Lead	3.1		mg/kg
R50C14	1-1.5	02/04/04	Yes	1-R50C14_02/04/04_1	7440-38-2	Arsenic	17.6		mg/kg
R50C14	1-1.5	02/04/04	Yes	1-R50C14_02/04/04_1	7439-92-1	Lead	17.6		mg/kg
R50C15	1-1.5	02/04/04	Yes	1-R50C15_02/04/04_1	7440-38-2	Arsenic	30.8		mg/kg
R50C15	1-1.5	02/04/04	Yes	1-R50C15_02/04/04_1	7439-92-1	Lead	51.3		mg/kg
R50C6	1-1.5	03/25/04	Yes	01-R50C6_03/25/04_1	7440-38-2	Arsenic	3.6		mg/kg
R50C6	1-1.5	03/25/04	Yes	01-R50C6_03/25/04_1	7439-92-1	Lead	3.5		mg/kg
R50C7	1-1.5	03/25/04	Yes	01-R50C7_03/25/04_1	7440-38-2	Arsenic	10.7		mg/kg
R50C7	1-1.5	03/25/04	Yes	01-R50C7_03/25/04_1	7439-92-1	Lead	8.7		mg/kg
R50C8	1-1.5	02/04/04	Yes	1-R50C8_02/04/04_1	7440-38-2	Arsenic	8.0		mg/kg
R50C8	1-1.5	02/04/04	Yes	1-R50C8_02/04/04_1	7439-92-1	Lead	8.4		mg/kg
R50C9	1-1.5	01/13/04	Yes	01-SS-[R50C9]-C2_01/13/04_1	7440-38-2	Arsenic	11.0		mg/kg
R50C9	1-1.5	01/13/04	Yes	01-SS-[R50C9]-C2_01/13/04_1	7439-92-1	Lead	10.8		mg/kg
R51C10	1-1.5	01/13/04	Yes	01-SS-[R51C10]-C2_01/13/04_1	7440-38-2	Arsenic	6.2		mg/kg
R51C10	1-1.5	01/13/04	Yes	01-SS-[R51C10]-C2_01/13/04_1	7439-92-1	Lead	9.3		mg/kg
R51C11	1-1.5	01/13/04	Yes	01-SS-[R51C11]-C2_01/13/04_1	7440-38-2	Arsenic	5.8		mg/kg
R51C11	1-1.5	01/13/04	Yes	01-SS-[R51C11]-C2_01/13/04_1	7439-92-1	Lead	3.5		mg/kg
R51C12	1-1.5	01/13/04	Yes	01-SS-[R51C12]-C2_01/13/04_1	7440-38-2	Arsenic	3.6		mg/kg
R51C12	1-1.5	01/13/04	Yes	01-SS-[R51C12]-C2_01/13/04_1	7439-92-1	Lead	3.2		mg/kg
R51C13	1-1.5	01/14/04	Yes	01-SS[R51C13]-C2_01/14/04_1	7440-38-2	Arsenic	3.7		mg/kg
R51C13	1-1.5	01/14/04	Yes	01-SS[R51C13]-C2_01/14/04_1	7439-92-1	Lead	3.6		mg/kg
R51C14	1-1.5	01/14/04	Yes	01-SS[R51C14]-C2_01/14/04_1	7440-38-2	Arsenic	2.9		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R51C14	1-1.5	01/14/04	Yes	01-SS[R51C14]-C2_01/14/04_1	7439-92-1	Lead	5.2		mg/kg
R51C15	1-1.5	02/04/04	Yes	1-R51C15_02/04/04_1	7440-38-2	Arsenic	7.3		mg/kg
R51C15	1-1.5	02/04/04	Yes	1-R51C15_02/04/04_1	7439-92-1	Lead	7.0		mg/kg
R51C16	1-1.5	02/04/04	Yes	1-R51C16_02/04/04_1	7440-38-2	Arsenic	11.6		mg/kg
R51C16	1-1.5	02/04/04	Yes	1-R51C16_02/04/04_1	7439-92-1	Lead	19.9		mg/kg
R51C6	1-1.5	03/25/04	Yes	01-R51C6_03/25/04_1	7440-38-2	Arsenic	5.3		mg/kg
R51C6	1-1.5	03/25/04	Yes	01-R51C6_03/25/04_1	7439-92-1	Lead	4.4		mg/kg
R51C7	1-1.5	10/15/03	Yes	01-SS-[R51C7]-C2_10/15/03_1	7440-38-2	Arsenic	32.4		mg/kg
R51C7	1-1.5	10/15/03	Yes	01-SS-[R51C7]-C2_10/15/03_1	7439-92-1	Lead	73.0		mg/kg
R51C9	1-1.5	01/13/04	Yes	01-SS-[R51C9]-C2_01/13/04_1	7440-38-2	Arsenic	5.4		mg/kg
R51C9	1-1.5	01/13/04	Yes	01-SS-[R51C9]-C2_01/13/04_1	7439-92-1	Lead	5.0		mg/kg
R52C10	1-1.5	01/20/04	Yes	01-SS-[R52C10]-C2_01/20/04_1	7440-38-2	Arsenic	5.8		mg/kg
R52C10	1-1.5	01/20/04	Yes	01-SS-[R52C10]-C2_01/20/04_1	7439-92-1	Lead	4.2		mg/kg
R52C11	1-1.5	01/14/04	Yes	01-SS[R52C11]-C2_01/14/04_1	7440-38-2	Arsenic	6.1		mg/kg
R52C11	1-1.5	01/14/04	Yes	01-SS[R52C11]-C2_01/14/04_1	7439-92-1	Lead	9.7		mg/kg
R52C12	1-1.5	01/14/04	Yes	01-SS[R52C12]-C2_01/14/04_1	7440-38-2	Arsenic	2.9		mg/kg
R52C12	1-1.5	01/14/04	Yes	01-SS[R52C12]-C2_01/14/04_1	7439-92-1	Lead	2.7		mg/kg
R52C13	1-1.5	01/14/04	Yes	01-SS[R52C13]-C2_01/14/04_1	7440-38-2	Arsenic	6.7		mg/kg
R52C13	1-1.5	01/14/04	Yes	01-SS[R52C13]-C2_01/14/04_1	7439-92-1	Lead	7.2		mg/kg
R52C14	1-1.5	01/14/04	Yes	01-SS[R52C14]-C2_01/14/04_1	7440-38-2	Arsenic	4.5		mg/kg
R52C14	1-1.5	01/14/04	Yes	01-SS[R52C14]-C2_01/14/04_1	7439-92-1	Lead	4.9		mg/kg
R52C15	1-1.5	02/04/04	Yes	1-R52C15_02/04/04_1	7440-38-2	Arsenic	11.5		mg/kg
R52C15	1-1.5	02/04/04	Yes	1-R52C15_02/04/04_1	7439-92-1	Lead	11.1		mg/kg
R52C16	1-1.5	02/04/04	Yes	1-R52C16_02/04/04_1	7440-38-2	Arsenic	15.9		mg/kg
R52C16	1-1.5	02/04/04	Yes	1-R52C16_02/04/04_1	7439-92-1	Lead	30.3		mg/kg
R52C18	1-1.5	01/20/04	Yes	01-SS-[R52C18]-C2_01/20/04_1	7440-38-2	Arsenic	9.6		mg/kg
R52C18	1-1.5	01/20/04	Yes	01-SS-[R52C18]-C2_01/20/04_1	7439-92-1	Lead	21.0		mg/kg
R52C19	1-1.5	01/20/04	Yes	01-SS-[R52C19]-C2_01/20/04_1	7440-38-2	Arsenic	14.5		mg/kg
R52C19	1-1.5	01/20/04	Yes	01-SS-[R52C19]-C2_01/20/04_1	7439-92-1	Lead	11.6		mg/kg
R52C6M	1-1.5	03/25/04	Yes	01-R52C6M_03/25/04_1	7440-38-2	Arsenic	8.7		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R52C6M	1-1.5	03/25/04	Yes	01-R52C6M_03/25/04_1	7439-92-1	Lead	6.4		mg/kg
R52C8	1-1.5	01/20/04	Yes	01-SS-[R52C8]-C2_01/20/04_1	7440-38-2	Arsenic	7.4		mg/kg
R52C8	1-1.5	01/20/04	Yes	01-SS-[R52C8]-C2_01/20/04_1	7439-92-1	Lead	6.4		mg/kg
R52C9	1-1.5	01/30/04	Yes	01-SS-[R52C9]-C2_01/30/04_1	7440-38-2	Arsenic	13.0		mg/kg
R52C9	1-1.5	01/30/04	Yes	01-SS-[R52C9]-C2_01/30/04_1	7439-92-1	Lead	13.5		mg/kg
R53C10	1-1.5	01/20/04	Yes	01-SS-[R53C10]-C2_01/20/04_1	7440-38-2	Arsenic	7.4		mg/kg
R53C10	1-1.5	01/20/04	Yes	01-SS-[R53C10]-C2_01/20/04_1	7439-92-1	Lead	5.6		mg/kg
R53C11	1-1.5	01/14/04	Yes	01-SS[R53C11]-C2_01/14/04_1	7440-38-2	Arsenic	3.6		mg/kg
R53C11	1-1.5	01/14/04	Yes	01-SS[R53C11]-C2_01/14/04_1	7439-92-1	Lead	3.2		mg/kg
R53C12	1-1.5	01/14/04	Yes	01-SS[R53C12]-C2_01/14/04_1	7440-38-2	Arsenic	4.2		mg/kg
R53C12	1-1.5	01/14/04	Yes	01-SS[R53C12]-C2_01/14/04_1	7439-92-1	Lead	4.7		mg/kg
R53C13	1-1.5	01/14/04	Yes	01-SS[R53C13]-C2_01/14/04_1	7440-38-2	Arsenic	8.7		mg/kg
R53C13	1-1.5	01/14/04	Yes	01-SS[R53C13]-C2_01/14/04_1	7439-92-1	Lead	8.4		mg/kg
R53C14	1-1.5	02/04/04	Yes	1-R53C14_02/04/04_1	7440-38-2	Arsenic	8.8		mg/kg
R53C14	1-1.5	02/04/04	Yes	1-R53C14_02/04/04_1	7439-92-1	Lead	91.9		mg/kg
R53C15	1-1.5	02/04/04	Yes	1-R53C15_02/04/04_1	7440-38-2	Arsenic	7.2		mg/kg
R53C15	1-1.5	02/04/04	Yes	1-R53C15_02/04/04_1	7439-92-1	Lead	9.1		mg/kg
R53C16	1-1.5	02/04/04	Yes	1-R53C16_02/04/04_1	7440-38-2	Arsenic	13.1		mg/kg
R53C16	1-1.5	02/04/04	Yes	1-R53C16_02/04/04_1	7439-92-1	Lead	21.4		mg/kg
R53C18	1-1.5	01/20/04	Yes	01-SS-[R53C18]-C2_01/20/04_1	7440-38-2	Arsenic	10.2		mg/kg
R53C18	1-1.5	01/20/04	Yes	01-SS-[R53C18]-C2_01/20/04_1	7439-92-1	Lead	12.0		mg/kg
R53C19	1-1.5	01/20/04	Yes	01-SS-[R53C19]-C2_01/20/04_1	7440-38-2	Arsenic	6.1		mg/kg
R53C19	1-1.5	01/20/04	Yes	01-SS-[R53C19]-C2_01/20/04_1	7439-92-1	Lead	4.5		mg/kg
R53C20	1-1.5	01/20/04	Yes	01-SS-[R53C20]-C2_01/20/04_1	7440-38-2	Arsenic	9.6		mg/kg
R53C20	1-1.5	01/20/04	Yes	01-SS-[R53C20]-C2_01/20/04_1	7439-92-1	Lead	10.1		mg/kg
R53C5	1-1.5	03/25/04	Yes	01-R53C5_03/25/04_1	7440-38-2	Arsenic	4.4		mg/kg
R53C5	1-1.5	03/25/04	Yes	01-R53C5_03/25/04_1	7439-92-1	Lead	4.3		mg/kg
R53C6	1-1.5	10/15/03	Yes	01-SS-[R53C6]-C2_AVG_10/15/03_1	7440-38-2	Arsenic	10.3		mg/kg
R53C6	1-1.5	10/15/03	Yes	01-SS-[R53C6]-C2_AVG_10/15/03_1	7439-92-1	Lead	5.2		mg/kg
R53C7	1-1.5	01/20/04	Yes	01-SS-[R53C7]-C2_01/20/04_1	7440-38-2	Arsenic	9.7		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R53C7	1-1.5	01/20/04	Yes	01-SS-[R53C7]-C2_01/20/04_1	7439-92-1	Lead	9.2		mg/kg
R53C8	1-1.5	02/04/04	Yes	1-R53C8_02/04/04_1	7440-38-2	Arsenic	9.8		mg/kg
R53C8	1-1.5	02/04/04	Yes	1-R53C8_02/04/04_1	7439-92-1	Lead	11.2		mg/kg
R53C9	1-1.5	01/30/04	Yes	01-SS-[R53C9]-C2_01/30/04_1	7440-38-2	Arsenic	11.0		mg/kg
R53C9	1-1.5	01/30/04	Yes	01-SS-[R53C9]-C2_01/30/04_1	7439-92-1	Lead	7.6		mg/kg
R54C10	1-1.5	02/04/04	Yes	1-R54C10_02/04/04_1	7440-38-2	Arsenic	10.2		mg/kg
R54C10	1-1.5	02/04/04	Yes	1-R54C10_02/04/04_1	7439-92-1	Lead	7.3		mg/kg
R54C11	1-1.5	01/14/04	Yes	01-SS[R54C11]-C2_01/14/04_1	7440-38-2	Arsenic	4.1		mg/kg
R54C11	1-1.5	01/14/04	Yes	01-SS[R54C11]-C2_01/14/04_1	7439-92-1	Lead	4.1		mg/kg
R54C12	1-1.5	01/14/04	Yes	01-SS[R54C12]-C2_01/14/04_1	7440-38-2	Arsenic	4.1		mg/kg
R54C12	1-1.5	01/14/04	Yes	01-SS[R54C12]-C2_01/14/04_1	7439-92-1	Lead	4.4		mg/kg
R54C13	1-1.5	01/14/04	Yes	01-SS[R54C13]-C2_01/14/04_1	7440-38-2	Arsenic	9.8		mg/kg
R54C13	1-1.5	01/14/04	Yes	01-SS[R54C13]-C2_01/14/04_1	7439-92-1	Lead	11.8		mg/kg
R54C14	1-1.5	02/04/04	Yes	1-R54C14_02/04/04_1	7440-38-2	Arsenic	7.0		mg/kg
R54C14	1-1.5	02/04/04	Yes	1-R54C14_02/04/04_1	7439-92-1	Lead	6.2		mg/kg
R54C15	1-1.5	02/04/04	Yes	1-R54C15_02/04/04_1	7440-38-2	Arsenic	11.9		mg/kg
R54C15	1-1.5	02/04/04	Yes	1-R54C15_02/04/04_1	7439-92-1	Lead	9.8		mg/kg
R54C16	1-1.5	01/14/04	Yes	01-SS[R54C16]-C2_01/14/04_1	7440-38-2	Arsenic	9.0		mg/kg
R54C16	1-1.5	01/14/04	Yes	01-SS[R54C16]-C2_01/14/04_1	7439-92-1	Lead	11.0		mg/kg
R54C18	1-1.5	01/20/04	Yes	01-SS-[R54C18]-C2_01/20/04_1	7440-38-2	Arsenic	9.3		mg/kg
R54C18	1-1.5	01/20/04	Yes	01-SS-[R54C18]-C2_01/20/04_1	7439-92-1	Lead	11.9		mg/kg
R54C19	1-1.5	01/20/04	Yes	01-SS-[R54C19]-C2_01/20/04_1	7440-38-2	Arsenic	7.8		mg/kg
R54C19	1-1.5	01/20/04	Yes	01-SS-[R54C19]-C2_01/20/04_1	7439-92-1	Lead	6.8		mg/kg
R54C20	1-1.5	01/20/04	Yes	01-SS-[R54C20]-C2_01/20/04_1	7440-38-2	Arsenic	7.7		mg/kg
R54C20	1-1.5	01/20/04	Yes	01-SS-[R54C20]-C2_01/20/04_1	7439-92-1	Lead	8.0		mg/kg
R54C21	1-1.5	01/20/04	Yes	01-SS-[R54C21]-C2_01/20/04_1	7440-38-2	Arsenic	8.5		mg/kg
R54C21	1-1.5	01/20/04	Yes	01-SS-[R54C21]-C2_01/20/04_1	7439-92-1	Lead	10.1		mg/kg
R54C5M	1-1.5	03/25/04	Yes	01-R54C5M_AVG_03/25/04_1	7440-38-2	Arsenic	8.8		mg/kg
R54C5M	1-1.5	03/25/04	Yes	01-R54C5M_AVG_03/25/04_1	7439-92-1	Lead	7.9		mg/kg
R54C7	1-1.5	01/20/04	Yes	01-SS-[R54C7]-C2_AVG_01/20/04_1	7440-38-2	Arsenic	5.0		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R54C7	1-1.5	01/20/04	Yes	01-SS-[R54C7]-C2_AVG_01/20/04_1	7439-92-1	Lead	3.8		mg/kg
R54C8	1-1.5	02/04/04	Yes	1-R54C8_02/04/04_1	7440-38-2	Arsenic	6.1		mg/kg
R54C8	1-1.5	02/04/04	Yes	1-R54C8_02/04/04_1	7439-92-1	Lead	5.5		mg/kg
R54C9	1-1.5	01/30/04	Yes	01-SS-[R54C9]-C2_01/30/04_1	7440-38-2	Arsenic	12.0		mg/kg
R54C9	1-1.5	01/30/04	Yes	01-SS-[R54C9]-C2_01/30/04_1	7439-92-1	Lead	12.4		mg/kg
R55C10	1-1.5	02/03/04	Yes	R55C10_02/03/04_1	7440-38-2	Arsenic	7.3		mg/kg
R55C10	1-1.5	02/03/04	Yes	R55C10_02/03/04_1	7439-92-1	Lead	9.4		mg/kg
R55C12	1-1.5	01/14/04	Yes	01-SS[R55C12]-C2_01/14/04_1	7440-38-2	Arsenic	14.8		mg/kg
R55C12	1-1.5	01/14/04	Yes	01-SS[R55C12]-C2_01/14/04_1	7439-92-1	Lead	21.7		mg/kg
R55C13	1-1.5	01/14/04	Yes	01-SS[R55C13]-C2_01/14/04_1	7440-38-2	Arsenic	15.8		mg/kg
R55C13	1-1.5	01/14/04	Yes	01-SS[R55C13]-C2_01/14/04_1	7439-92-1	Lead	23.5		mg/kg
R55C14	1-1.5	01/14/04	Yes	01-SS[R55C14]-C2_01/14/04_1	7440-38-2	Arsenic	3.0		mg/kg
R55C14	1-1.5	01/14/04	Yes	01-SS[R55C14]-C2_01/14/04_1	7439-92-1	Lead	3.0		mg/kg
R55C15	1-1.5	01/14/04	Yes	01-SS[R55C15]-C2_01/14/04_1	7440-38-2	Arsenic	4.6		mg/kg
R55C15	1-1.5	01/14/04	Yes	01-SS[R55C15]-C2_01/14/04_1	7439-92-1	Lead	5.1		mg/kg
R55C16	1-1.5	01/14/04	Yes	01-SS[R55C16]-C2_01/14/04_1	7440-38-2	Arsenic	7.1		mg/kg
R55C16	1-1.5	01/14/04	Yes	01-SS[R55C16]-C2_01/14/04_1	7439-92-1	Lead	13.1		mg/kg
R55C18	1-1.5	01/20/04	Yes	01-SS-[R55C18]-C2_01/20/04_1	7440-38-2	Arsenic	9.8		mg/kg
R55C18	1-1.5	01/20/04	Yes	01-SS-[R55C18]-C2_01/20/04_1	7439-92-1	Lead	10.1		mg/kg
R55C19	1-1.5	01/20/04	Yes	01-SS-[R55C19]-C2_01/20/04_1	7440-38-2	Arsenic	15.2		mg/kg
R55C19	1-1.5	01/20/04	Yes	01-SS-[R55C19]-C2_01/20/04_1	7439-92-1	Lead	14.5		mg/kg
R55C20	1-1.5	02/03/04	Yes	R55C20_02/03/04_1	7440-38-2	Arsenic	12.0		mg/kg
R55C20	1-1.5	02/03/04	Yes	R55C20_02/03/04_1	7439-92-1	Lead	13.6		mg/kg
R55C21	1-1.5	01/20/04	Yes	01-SS-[R55C21]-C2_01/20/04_1	7440-38-2	Arsenic	7.8		mg/kg
R55C21	1-1.5	01/20/04	Yes	01-SS-[R55C21]-C2_01/20/04_1	7439-92-1	Lead	5.9		mg/kg
R55C5M	1-1.5	10/15/03	Yes	01-SS-[R55C5M]-C2_10/15/03_1	7440-38-2	Arsenic	2.5	U	mg/kg
R55C5M	1-1.5	10/15/03	Yes	01-SS-[R55C5M]-C2_10/15/03_1	7439-92-1	Lead	6.0		mg/kg
R55C7	1-1.5	01/20/04	Yes	01-SS-[R55C7]-C2_01/20/04_1	7440-38-2	Arsenic	7.6		mg/kg
R55C7	1-1.5	01/20/04	Yes	01-SS-[R55C7]-C2_01/20/04_1	7439-92-1	Lead	8.0		mg/kg
R55C8	1-1.5	01/20/04	Yes	01-SS-[R55C8]-C2_01/20/04_1	7440-38-2	Arsenic	11.2		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R55C8	1-1.5	01/20/04	Yes	01-SS-[R55C8]-C2_01/20/04_1	7439-92-1	Lead	15.8		mg/kg
R55C9	1-1.5	01/20/04	Yes	01-SS-[R55C9]-C2_01/20/04_1	7440-38-2	Arsenic	17.1		mg/kg
R55C9	1-1.5	01/20/04	Yes	01-SS-[R55C9]-C2_01/20/04_1	7439-92-1	Lead	26.2		mg/kg
R56C10	1-1.5	01/14/04	Yes	01-SS[R56C10]-C2_01/14/04_1	7440-38-2	Arsenic	5.2		mg/kg
R56C10	1-1.5	01/14/04	Yes	01-SS[R56C10]-C2_01/14/04_1	7439-92-1	Lead	12.1		mg/kg
R56C12	1-1.5	01/14/04	Yes	01-SS[R56C12]-C2_01/14/04_1	7440-38-2	Arsenic	6.6		mg/kg
R56C12	1-1.5	01/14/04	Yes	01-SS[R56C12]-C2_01/14/04_1	7439-92-1	Lead	7.3		mg/kg
R56C13	1-1.5	01/14/04	Yes	01-SS-[R56C13]-C2_01/14/04_1	7440-38-2	Arsenic	7.6		mg/kg
R56C13	1-1.5	01/14/04	Yes	01-SS-[R56C13]-C2_01/14/04_1	7439-92-1	Lead	8.4		mg/kg
R56C4	1-1.5	03/25/04	Yes	01-R56C4_03/25/04_1	7440-38-2	Arsenic	4.8		mg/kg
R56C4	1-1.5	03/25/04	Yes	01-R56C4_03/25/04_1	7439-92-1	Lead	4.1		mg/kg
R56C5	1-1.5	10/15/03	Yes	01-SS-[R56C5]-C2_10/15/03_1	7440-38-2	Arsenic	3.3		mg/kg
R56C5	1-1.5	10/15/03	Yes	01-SS-[R56C5]-C2_10/15/03_1	7439-92-1	Lead	8.1		mg/kg
R56C7	1-1.5	01/20/04	Yes	01-SS-[R56C7]-C2_01/20/04_1	7440-38-2	Arsenic	19.8		mg/kg
R56C7	1-1.5	01/20/04	Yes	01-SS-[R56C7]-C2_01/20/04_1	7439-92-1	Lead	14.9		mg/kg
R56C8	1-1.5	01/20/04	Yes	01-SS-[R56C8]-C2_01/20/04_1	7440-38-2	Arsenic	15.9		mg/kg
R56C8	1-1.5	01/20/04	Yes	01-SS-[R56C8]-C2_01/20/04_1	7439-92-1	Lead	18.6		mg/kg
R56C9	1-1.5	01/20/04	Yes	01-SS-[R56C9]-C2_01/20/04_1	7440-38-2	Arsenic	16.5		mg/kg
R56C9	1-1.5	01/20/04	Yes	01-SS-[R56C9]-C2_01/20/04_1	7439-92-1	Lead	46.5		mg/kg
R57C10	1-1.5	02/03/04	Yes	R57C10_02/03/04_1	7440-38-2	Arsenic	4.9		mg/kg
R57C10	1-1.5	02/03/04	Yes	R57C10_02/03/04_1	7439-92-1	Lead	9.3		mg/kg
R57C11	1-1.5	01/14/04	Yes	01-SS-[R57C11]-C2_01/14/04_1	7440-38-2	Arsenic	8.6		mg/kg
R57C11	1-1.5	01/14/04	Yes	01-SS-[R57C11]-C2_01/14/04_1	7439-92-1	Lead	13.6		mg/kg
R57C12	1-1.5	01/14/04	Yes	01-SS-[R57C12]-C2_01/14/04_1	7440-38-2	Arsenic	4.1		mg/kg
R57C12	1-1.5	01/14/04	Yes	01-SS-[R57C12]-C2_01/14/04_1	7439-92-1	Lead	7.8		mg/kg
R57C13	1-1.5	01/14/04	Yes	01-SS-[R57C13]-C2_01/14/04_1	7440-38-2	Arsenic	4.4		mg/kg
R57C13	1-1.5	01/14/04	Yes	01-SS-[R57C13]-C2_01/14/04_1	7439-92-1	Lead	8.4		mg/kg
R57C14	1-1.5	01/14/04	Yes	01-SS[R57C14]-C2_01/14/04_1	7440-38-2	Arsenic	5.0		mg/kg
R57C14	1-1.5	01/14/04	Yes	01-SS[R57C14]-C2_01/14/04_1	7439-92-1	Lead	4.2		mg/kg
R57C15	1-1.5	01/14/04	Yes	01-SS[R57C15]-C2_01/14/04_1	7440-38-2	Arsenic	3.6		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R57C15	1-1.5	01/14/04	Yes	01-SS[R57C15]-C2_01/14/04_1	7439-92-1	Lead	3.9		mg/kg
R57C16	1-1.5	01/14/04	Yes	01-SS[R57C16]-C2_01/14/04_1	7440-38-2	Arsenic	5.4		mg/kg
R57C16	1-1.5	01/14/04	Yes	01-SS[R57C16]-C2_01/14/04_1	7439-92-1	Lead	5.7		mg/kg
R57C18	1-1.5	01/20/04	Yes	01-SS-[R57C18]-C2_01/20/04_1	7440-38-2	Arsenic	23.7		mg/kg
R57C18	1-1.5	01/20/04	Yes	01-SS-[R57C18]-C2_01/20/04_1	7439-92-1	Lead	3.7		mg/kg
R57C19	1-1.5	01/20/04	Yes	01-SS-[R57C19]-C2_01/20/04_1	7440-38-2	Arsenic	24.4		mg/kg
R57C19	1-1.5	01/20/04	Yes	01-SS-[R57C19]-C2_01/20/04_1	7439-92-1	Lead	11.9		mg/kg
R57C20	1-1.5	01/20/04	Yes	01-SS-[R57C20]-C2_01/20/04_1	7440-38-2	Arsenic	42.1		mg/kg
R57C20	1-1.5	01/20/04	Yes	01-SS-[R57C20]-C2_01/20/04_1	7439-92-1	Lead	11.5		mg/kg
R57C4	1-1.5	03/25/04	Yes	01-R57C4_03/25/04_1	7440-38-2	Arsenic	8.4		mg/kg
R57C4	1-1.5	03/25/04	Yes	01-R57C4_03/25/04_1	7439-92-1	Lead	9.1		mg/kg
R57C5	1-1.5	10/15/03	Yes	01-SS-[R57C5]-C2_10/15/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R57C5	1-1.5	10/15/03	Yes	01-SS-[R57C5]-C2_10/15/03_1	7439-92-1	Lead	3.4		mg/kg
R57C7	1-1.5	02/03/04	Yes	R57C7_02/03/04_1	7440-38-2	Arsenic	9.7		mg/kg
R57C7	1-1.5	02/03/04	Yes	R57C7_02/03/04_1	7439-92-1	Lead	14.5		mg/kg
R57C8	1-1.5	02/03/04	Yes	R57C8_02/03/04_1	7440-38-2	Arsenic	10.8		mg/kg
R57C8	1-1.5	02/03/04	Yes	R57C8_02/03/04_1	7439-92-1	Lead	14.4		mg/kg
R57C9	1-1.5	02/03/04	Yes	R57C9_02/03/04_1	7440-38-2	Arsenic	6.9		mg/kg
R57C9	1-1.5	02/03/04	Yes	R57C9_02/03/04_1	7439-92-1	Lead	9.2		mg/kg
R58C10	1-1.5	01/14/04	Yes	01-SS-[R58C10]-C2_01/14/04_1	7440-38-2	Arsenic	5.0		mg/kg
R58C10	1-1.5	01/14/04	Yes	01-SS-[R58C10]-C2_01/14/04_1	7439-92-1	Lead	5.2		mg/kg
R58C11	1-1.5	01/14/04	Yes	01-SS-[R58C11]-C2_01/14/04_1	7440-38-2	Arsenic	5.2		mg/kg
R58C11	1-1.5	01/14/04	Yes	01-SS-[R58C11]-C2_01/14/04_1	7439-92-1	Lead	4.6		mg/kg
R58C12	1-1.5	01/14/04	Yes	01-SS-[R58C12]-C2_01/14/04_1	7440-38-2	Arsenic	4.9		mg/kg
R58C12	1-1.5	01/14/04	Yes	01-SS-[R58C12]-C2_01/14/04_1	7439-92-1	Lead	3.5		mg/kg
R58C13	1-1.5	01/14/04	Yes	01-SS-[R58C13]-C2_01/14/04_1	7440-38-2	Arsenic	13.6		mg/kg
R58C13	1-1.5	01/14/04	Yes	01-SS-[R58C13]-C2_01/14/04_1	7439-92-1	Lead	15.4		mg/kg
R58C14	1-1.5	01/14/04	Yes	01-SS-[R58C14]-C2_01/14/04_1	7440-38-2	Arsenic	8.3		mg/kg
R58C14	1-1.5	01/14/04	Yes	01-SS-[R58C14]-C2_01/14/04_1	7439-92-1	Lead	4.7		mg/kg
R58C15	1-1.5	01/14/04	Yes	01-SS-[R58C15]-C2_01/14/04_1	7440-38-2	Arsenic	7.4		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R58C15	1-1.5	01/14/04	Yes	01-SS-[R58C15]-C2_01/14/04_1	7439-92-1	Lead	12.0		mg/kg
R58C16	1-1.5	01/15/04	Yes	01-SS-[R58C16]-C2_01/15/04_1	7440-38-2	Arsenic	4.7		mg/kg
R58C16	1-1.5	01/15/04	Yes	01-SS-[R58C16]-C2_01/15/04_1	7439-92-1	Lead	6.4		mg/kg
R58C18	1-1.5	01/20/04	Yes	01-SS-[R58C18]-C2_01/20/04_1	7440-38-2	Arsenic	4.9		mg/kg
R58C18	1-1.5	01/20/04	Yes	01-SS-[R58C18]-C2_01/20/04_1	7439-92-1	Lead	3.7		mg/kg
R58C19	1-1.5	01/20/04	Yes	01-SS-[R58C19]-C2_01/20/04_1	7440-38-2	Arsenic	6.8		mg/kg
R58C19	1-1.5	01/20/04	Yes	01-SS-[R58C19]-C2_01/20/04_1	7439-92-1	Lead	4.9		mg/kg
R58C4M	1-1.5	10/15/03	Yes	01-SS-[R58C4M]-C2_10/15/03_1	7440-38-2	Arsenic	6.0		mg/kg
R58C4M	1-1.5	10/15/03	Yes	01-SS-[R58C4M]-C2_10/15/03_1	7439-92-1	Lead	12.8		mg/kg
R58C5	1-1.5	10/15/03	Yes	01-SS-[R58C5]-C2_10/15/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R58C5	1-1.5	10/15/03	Yes	01-SS-[R58C5]-C2_10/15/03_1	7439-92-1	Lead	5.2		mg/kg
R58C7	1-1.5	02/03/04	Yes	R58C7_02/03/04_1	7440-38-2	Arsenic	9.2		mg/kg
R58C7	1-1.5	02/03/04	Yes	R58C7_02/03/04_1	7439-92-1	Lead	9.5		mg/kg
R58C8	1-1.5	02/03/04	Yes	R58C8_AVG_02/03/04_1	7440-38-2	Arsenic	11.4		mg/kg
R58C8	1-1.5	02/03/04	Yes	R58C8_AVG_02/03/04_1	7439-92-1	Lead	12.6		mg/kg
R58C9	1-1.5	02/03/04	Yes	R58C9_02/03/04_1	7440-38-2	Arsenic	9.9		mg/kg
R58C9	1-1.5	02/03/04	Yes	R58C9_02/03/04_1	7439-92-1	Lead	11.2		mg/kg
R59C10	1-1.5	01/15/04	Yes	01-SS-[R59C10]-C2_01/15/04_1	7440-38-2	Arsenic	3.8		mg/kg
R59C10	1-1.5	01/15/04	Yes	01-SS-[R59C10]-C2_01/15/04_1	7439-92-1	Lead	4.4		mg/kg
R59C11	1-1.5	01/15/04	Yes	01-SS-[R59C11]-C2_01/15/04_1	7440-38-2	Arsenic	5.2		mg/kg
R59C11	1-1.5	01/15/04	Yes	01-SS-[R59C11]-C2_01/15/04_1	7439-92-1	Lead	5.8		mg/kg
R59C12	1-1.5	01/15/04	Yes	01-SS-[R59C12]-C2_01/15/04_1	7440-38-2	Arsenic	6.9		mg/kg
R59C12	1-1.5	01/15/04	Yes	01-SS-[R59C12]-C2_01/15/04_1	7439-92-1	Lead	4.3		mg/kg
R59C13	1-1.5	01/15/04	Yes	01-SS-[R59C13]-C2_01/15/04_1	7440-38-2	Arsenic	6.6		mg/kg
R59C13	1-1.5	01/15/04	Yes	01-SS-[R59C13]-C2_01/15/04_1	7439-92-1	Lead	5.4		mg/kg
R59C14	1-1.5	01/15/04	Yes	01-SS-[R59C14]-C2_01/15/04_1	7440-38-2	Arsenic	12.0		mg/kg
R59C14	1-1.5	01/15/04	Yes	01-SS-[R59C14]-C2_01/15/04_1	7439-92-1	Lead	9.3		mg/kg
R59C15	1-1.5	01/15/04	Yes	01-SS-[R59C15]-C2_01/15/04_1	7440-38-2	Arsenic	11.0		mg/kg
R59C15	1-1.5	01/15/04	Yes	01-SS-[R59C15]-C2_01/15/04_1	7439-92-1	Lead	8.6		mg/kg
R59C16	1-1.5	01/15/04	Yes	01-SS-[R59C16]-C2_01/15/04_1	7440-38-2	Arsenic	4.2		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R59C16	1-1.5	01/15/04	Yes	01-SS-[R59C16]-C2_01/15/04_1	7439-92-1	Lead	8.5		mg/kg
R59C18	1-1.5	01/20/04	Yes	01-SS-[R59C18]-C2_01/20/04_1	7440-38-2	Arsenic	9.5		mg/kg
R59C18	1-1.5	01/20/04	Yes	01-SS-[R59C18]-C2_01/20/04_1	7439-92-1	Lead	8.6		mg/kg
R59C19	1-1.5	01/20/04	Yes	01-SS-[R59C19]-C2_01/20/04_1	7440-38-2	Arsenic	12.2		mg/kg
R59C19	1-1.5	01/20/04	Yes	01-SS-[R59C19]-C2_01/20/04_1	7439-92-1	Lead	12.7		mg/kg
R59C3	1-1.5	03/25/04	Yes	01-R59C3_03/25/04_1	7440-38-2	Arsenic	3.5		mg/kg
R59C3	1-1.5	03/25/04	Yes	01-R59C3_03/25/04_1	7439-92-1	Lead	2.7		mg/kg
R59C4	1-1.5	10/15/03	Yes	01-SS-[R59C4]-C2_10/15/03_1	7440-38-2	Arsenic	12.9		mg/kg
R59C4	1-1.5	10/15/03	Yes	01-SS-[R59C4]-C2_10/15/03_1	7439-92-1	Lead	19.4		mg/kg
R59C5	1-1.5	10/15/03	Yes	01-SS-[R59C5]-C2_10/15/03_1	7440-38-2	Arsenic	4.3		mg/kg
R59C5	1-1.5	10/15/03	Yes	01-SS-[R59C5]-C2_10/15/03_1	7439-92-1	Lead	9.9		mg/kg
R59C7	1-1.5	02/03/04	Yes	R59C7_02/03/04_1	7440-38-2	Arsenic	10.0		mg/kg
R59C7	1-1.5	02/03/04	Yes	R59C7_02/03/04_1	7439-92-1	Lead	13.6		mg/kg
R59C8	1-1.5	02/03/04	Yes	R59C8_02/03/04_1	7440-38-2	Arsenic	11.4		mg/kg
R59C8	1-1.5	02/03/04	Yes	R59C8_02/03/04_1	7439-92-1	Lead	14.2		mg/kg
R59C9	1-1.5	02/03/04	Yes	R59C9_02/03/04_1	7440-38-2	Arsenic	8.1		mg/kg
R59C9	1-1.5	02/03/04	Yes	R59C9_02/03/04_1	7439-92-1	Lead	11.6		mg/kg
R60C11	1-1.5	01/15/04	Yes	01-SS-[R60C11]-C2_01/15/04_1	7440-38-2	Arsenic	4.2		mg/kg
R60C11	1-1.5	01/15/04	Yes	01-SS-[R60C11]-C2_01/15/04_1	7439-92-1	Lead	3.8		mg/kg
R60C12	1-1.5	01/15/04	Yes	01-SS-[R60C12]-C2_01/15/04_1	7440-38-2	Arsenic	12.0		mg/kg
R60C12	1-1.5	01/15/04	Yes	01-SS-[R60C12]-C2_01/15/04_1	7439-92-1	Lead	15.7		mg/kg
R60C13	1-1.5	01/15/04	Yes	01-SS-[R60C13]-C2_01/15/04_1	7440-38-2	Arsenic	5.0		mg/kg
R60C13	1-1.5	01/15/04	Yes	01-SS-[R60C13]-C2_01/15/04_1	7439-92-1	Lead	5.9		mg/kg
R60C14	1-1.5	01/15/04	Yes	01-SS-[R60C14]-C2_01/15/04_1	7440-38-2	Arsenic	8.4		mg/kg
R60C14	1-1.5	01/15/04	Yes	01-SS-[R60C14]-C2_01/15/04_1	7439-92-1	Lead	9.0		mg/kg
R60C15	1-1.5	01/15/04	Yes	01-SS-[R60C15]-C2_01/15/04_1	7440-38-2	Arsenic	6.5		mg/kg
R60C15	1-1.5	01/15/04	Yes	01-SS-[R60C15]-C2_01/15/04_1	7439-92-1	Lead	5.9		mg/kg
R60C16	1-1.5	01/15/04	Yes	01-SS-[R60C16]-C2_01/15/04_1	7440-38-2	Arsenic	24.5		mg/kg
R60C16	1-1.5	01/15/04	Yes	01-SS-[R60C16]-C2_01/15/04_1	7439-92-1	Lead	16.4		mg/kg
R60C18	1-1.5	01/20/04	Yes	01-SS-[R60C18]-C2_01/20/04_1	7440-38-2	Arsenic	8.8		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R60C18	1-1.5	01/20/04	Yes	01-SS-[R60C18]-C2_01/20/04_1	7439-92-1	Lead	8.9		mg/kg
R60C3	1-1.5	03/25/04	Yes	01-R60C3_03/25/04_1	7440-38-2	Arsenic	6.6		mg/kg
R60C3	1-1.5	03/25/04	Yes	01-R60C3_03/25/04_1	7439-92-1	Lead	6.5		mg/kg
R60C4	1-1.5	10/15/03	Yes	01-SS-[R60C4]-C2_10/15/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R60C4	1-1.5	10/15/03	Yes	01-SS-[R60C4]-C2_10/15/03_1	7439-92-1	Lead	7.2		mg/kg
R60C5	1-1.5	10/15/03	Yes	01-SS-[R60C5]-C2_10/15/03_1	7440-38-2	Arsenic	2.5		mg/kg
R60C5	1-1.5	10/15/03	Yes	01-SS-[R60C5]-C2_10/15/03_1	7439-92-1	Lead	8.5		mg/kg
R60C7	1-1.5	02/03/04	Yes	R60C7_02/03/04_1	7440-38-2	Arsenic	9.9		mg/kg
R60C7	1-1.5	02/03/04	Yes	R60C7_02/03/04_1	7439-92-1	Lead	15.6		mg/kg
R60C8	1-1.5	02/03/04	Yes	R60C8_02/03/04_1	7440-38-2	Arsenic	7.3		mg/kg
R60C8	1-1.5	02/03/04	Yes	R60C8_02/03/04_1	7439-92-1	Lead	7.3		mg/kg
R60C9	1-1.5	02/03/04	Yes	R60C9_02/03/04_1	7440-38-2	Arsenic	19.3		mg/kg
R60C9	1-1.5	02/03/04	Yes	R60C9_02/03/04_1	7439-92-1	Lead	29.9		mg/kg
R61C11	1-1.5	01/15/04	Yes	01-SS-[R61C11]-C2_01/15/04_1	7440-38-2	Arsenic	4.8		mg/kg
R61C11	1-1.5	01/15/04	Yes	01-SS-[R61C11]-C2_01/15/04_1	7439-92-1	Lead	4.4		mg/kg
R61C12	1-1.5	01/15/04	Yes	01-SS-[R61C12]-C2_01/15/04_1	7440-38-2	Arsenic	4.1		mg/kg
R61C12	1-1.5	01/15/04	Yes	01-SS-[R61C12]-C2_01/15/04_1	7439-92-1	Lead	4.4		mg/kg
R61C13	1-1.5	01/15/04	Yes	01-SS-[R61C13]-C2_01/15/04_1	7440-38-2	Arsenic	7.9		mg/kg
R61C13	1-1.5	01/15/04	Yes	01-SS-[R61C13]-C2_01/15/04_1	7439-92-1	Lead	9.4		mg/kg
R61C14	1-1.5	01/15/04	Yes	01-SS-[R61C14]-C2_01/15/04_1	7440-38-2	Arsenic	5.4		mg/kg
R61C14	1-1.5	01/15/04	Yes	01-SS-[R61C14]-C2_01/15/04_1	7439-92-1	Lead	5.2		mg/kg
R61C15	1-1.5	01/15/04	Yes	01-SS-[R61C15]-C2_01/15/04_1	7440-38-2	Arsenic	5.0		mg/kg
R61C15	1-1.5	01/15/04	Yes	01-SS-[R61C15]-C2_01/15/04_1	7439-92-1	Lead	3.8		mg/kg
R61C16	1-1.5	01/15/04	Yes	01-SS-[R61C16]-C2_AVG_01/15/04_1	7440-38-2	Arsenic	8.5		mg/kg
R61C16	1-1.5	01/15/04	Yes	01-SS-[R61C16]-C2_AVG_01/15/04_1	7439-92-1	Lead	8.6		mg/kg
R61C18	1-1.5	01/20/04	Yes	01-SS-[R61C18]-C2_01/20/04_1	7440-38-2	Arsenic	10.6		mg/kg
R61C18	1-1.5	01/20/04	Yes	01-SS-[R61C18]-C2_01/20/04_1	7439-92-1	Lead	13.8		mg/kg
R61C3M	1-1.5	10/15/03	Yes	01-SS-[R61C3M]-C2_10/15/03_1	7440-38-2	Arsenic	10.8		mg/kg
R61C3M	1-1.5	10/15/03	Yes	01-SS-[R61C3M]-C2_10/15/03_1	7439-92-1	Lead	21.2		mg/kg
R61C4	1-1.5	02/03/04	Yes	R61C4_02/03/04_1	7440-38-2	Arsenic	9.5		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R61C4	1-1.5	02/03/04	Yes	R61C4_02/03/04_1	7439-92-1	Lead	9.1		mg/kg
R61C5	1-1.5	10/15/03	Yes	01-SS-[R61C5]-C2_10/15/03_1	7440-38-2	Arsenic	3.0		mg/kg
R61C5	1-1.5	10/15/03	Yes	01-SS-[R61C5]-C2_10/15/03_1	7439-92-1	Lead	5.1		mg/kg
R61C7	1-1.5	01/16/04	Yes	01-SS-[R61C7]-C2_AVG_01/16/04_1	7440-38-2	Arsenic	11.1		mg/kg
R61C7	1-1.5	01/16/04	Yes	01-SS-[R61C7]-C2_AVG_01/16/04_1	7439-92-1	Lead	21.6		mg/kg
R61C8	1-1.5	02/03/04	Yes	R61C8_02/03/04_1	7440-38-2	Arsenic	12.9		mg/kg
R61C8	1-1.5	02/03/04	Yes	R61C8_02/03/04_1	7439-92-1	Lead	31.4		mg/kg
R61C9	1-1.5	02/03/04	Yes	R61C9_02/03/04_1	7440-38-2	Arsenic	7.3		mg/kg
R61C9	1-1.5	02/03/04	Yes	R61C9_02/03/04_1	7439-92-1	Lead	13.6		mg/kg
R62C11	1-1.5	01/15/04	Yes	01-SS-[R62C11]-C2_01/15/04_1	7440-38-2	Arsenic	6.2		mg/kg
R62C11	1-1.5	01/15/04	Yes	01-SS-[R62C11]-C2_01/15/04_1	7439-92-1	Lead	9.9		mg/kg
R62C12	1-1.5	01/15/04	Yes	01-SS-[R62C12]-C2_01/15/04_1	7440-38-2	Arsenic	4.8		mg/kg
R62C12	1-1.5	01/15/04	Yes	01-SS-[R62C12]-C2_01/15/04_1	7439-92-1	Lead	5.0		mg/kg
R62C13	1-1.5	01/15/04	Yes	01-SS-[R62C13]-C2_01/15/04_1	7440-38-2	Arsenic	6.8		mg/kg
R62C13	1-1.5	01/15/04	Yes	01-SS-[R62C13]-C2_01/15/04_1	7439-92-1	Lead	5.7		mg/kg
R62C14	1-1.5	01/15/04	Yes	01-SS-[R62C14]-C2_01/15/04_1	7440-38-2	Arsenic	12.1		mg/kg
R62C14	1-1.5	01/15/04	Yes	01-SS-[R62C14]-C2_01/15/04_1	7439-92-1	Lead	14.6		mg/kg
R62C15	1-1.5	01/15/04	Yes	01-SS-[R62C15]-C2_01/15/04_1	7440-38-2	Arsenic	9.3		mg/kg
R62C15	1-1.5	01/15/04	Yes	01-SS-[R62C15]-C2_01/15/04_1	7439-92-1	Lead	14.4		mg/kg
R62C16	1-1.5	01/15/04	Yes	01-SS-[R62C16]-C2_01/15/04_1	7440-38-2	Arsenic	4.4		mg/kg
R62C16	1-1.5	01/15/04	Yes	01-SS-[R62C16]-C2_01/15/04_1	7439-92-1	Lead	3.7		mg/kg
R62C3M	1-1.5	02/03/04	Yes	R62C3M_02/03/04_1	7440-38-2	Arsenic	15.5		mg/kg
R62C3M	1-1.5	02/03/04	Yes	R62C3M_02/03/04_1	7439-92-1	Lead	18.8		mg/kg
R62C4	1-1.5	02/03/04	Yes	R62C4_AVG_02/03/04_1	7440-38-2	Arsenic	8.0		mg/kg
R62C4	1-1.5	02/03/04	Yes	R62C4_AVG_02/03/04_1	7439-92-1	Lead	6.8		mg/kg
R62C5	1-1.5	02/03/04	Yes	R62C5_02/03/04_1	7440-38-2	Arsenic	7.7		mg/kg
R62C5	1-1.5	02/03/04	Yes	R62C5_02/03/04_1	7439-92-1	Lead	6.3		mg/kg
R62C6	1-1.5	02/03/04	Yes	R62C6_02/03/04_1	7440-38-2	Arsenic	24.4		mg/kg
R62C6	1-1.5	02/03/04	Yes	R62C6_02/03/04_1	7439-92-1	Lead	33.4		mg/kg
R62C7	1-1.5	01/16/04	Yes	01-SS-[R62C7]-C2_01/16/04_1	7440-38-2	Arsenic	8.4		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R62C7	1-1.5	01/16/04	Yes	01-SS-[R62C7]-C2_01/16/04_1	7439-92-1	Lead	6.0		mg/kg
R62C8	1-1.5	02/03/04	Yes	R62C8_02/03/04_1	7440-38-2	Arsenic	6.7		mg/kg
R62C8	1-1.5	02/03/04	Yes	R62C8_02/03/04_1	7439-92-1	Lead	25.7		mg/kg
R62C9	1-1.5	02/03/04	Yes	R62C9_02/03/04_1	7440-38-2	Arsenic	11.1		mg/kg
R62C9	1-1.5	02/03/04	Yes	R62C9_02/03/04_1	7439-92-1	Lead	12.7		mg/kg
R63C11	1-1.5	01/15/04	Yes	01-SS-[R63C11]-C2_01/15/04_1	7440-38-2	Arsenic	9.4		mg/kg
R63C11	1-1.5	01/15/04	Yes	01-SS-[R63C11]-C2_01/15/04_1	7439-92-1	Lead	16.6		mg/kg
R63C12	1-1.5	01/15/04	Yes	01-SS-[R63C12]-C2_01/15/04_1	7440-38-2	Arsenic	10.0		mg/kg
R63C12	1-1.5	01/15/04	Yes	01-SS-[R63C12]-C2_01/15/04_1	7439-92-1	Lead	15.7		mg/kg
R63C13	1-1.5	01/15/04	Yes	01-SS-[R63C13]-C2_01/15/04_1	7440-38-2	Arsenic	9.2		mg/kg
R63C13	1-1.5	01/15/04	Yes	01-SS-[R63C13]-C2_01/15/04_1	7439-92-1	Lead	11.6		mg/kg
R63C14	1-1.5	01/15/04	Yes	01-SS-[R63C14]-C2_01/15/04_1	7440-38-2	Arsenic	5.7		mg/kg
R63C14	1-1.5	01/15/04	Yes	01-SS-[R63C14]-C2_01/15/04_1	7439-92-1	Lead	6.1		mg/kg
R63C15	1-1.5	01/15/04	Yes	01-SS-[R63C15]-C2_01/15/04_1	7440-38-2	Arsenic	5.5		mg/kg
R63C15	1-1.5	01/15/04	Yes	01-SS-[R63C15]-C2_01/15/04_1	7439-92-1	Lead	5.3		mg/kg
R63C16	1-1.5	01/15/04	Yes	01-SS-[R63C16]-C2_01/15/04_1	7440-38-2	Arsenic	2.4		mg/kg
R63C16	1-1.5	01/15/04	Yes	01-SS-[R63C16]-C2_01/15/04_1	7439-92-1	Lead	2.4		mg/kg
R63C2	1-1.5	03/25/04	Yes	01-R63C2_03/25/04_1	7440-38-2	Arsenic	5.5		mg/kg
R63C2	1-1.5	03/25/04	Yes	01-R63C2_03/25/04_1	7439-92-1	Lead	5.4		mg/kg
R63C4	1-1.5	10/15/03	Yes	01-SS-[R63C4]-C2_10/15/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R63C4	1-1.5	10/15/03	Yes	01-SS-[R63C4]-C2_10/15/03_1	7439-92-1	Lead	4.0		mg/kg
R63C5	1-1.5	02/03/04	Yes	R63C5_02/03/04_1	7440-38-2	Arsenic	12.5		mg/kg
R63C5	1-1.5	02/03/04	Yes	R63C5_02/03/04_1	7439-92-1	Lead	6.9		mg/kg
R63C6	1-1.5	02/03/04	Yes	R63C6_02/03/04_1	7440-38-2	Arsenic	14.9		mg/kg
R63C6	1-1.5	02/03/04	Yes	R63C6_02/03/04_1	7439-92-1	Lead	19.3		mg/kg
R63C7	1-1.5	02/03/04	Yes	R63C7_02/03/04_1	7440-38-2	Arsenic	20.6		mg/kg
R63C7	1-1.5	02/03/04	Yes	R63C7_02/03/04_1	7439-92-1	Lead	22.6		mg/kg
R63C8	1-1.5	02/02/04	Yes	01-SS-[R63C8]-C2_02/02/04_1	7440-38-2	Arsenic	6.0		mg/kg
R63C8	1-1.5	02/02/04	Yes	01-SS-[R63C8]-C2_02/02/04_1	7439-92-1	Lead	4.8		mg/kg
R63C9	1-1.5	02/02/04	Yes	01-SS-[R63C9]-C2_02/02/04_1	7440-38-2	Arsenic	5.9		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R63C9	1-1.5	02/02/04	Yes	01-SS-[R63C9]-C2_02/02/04_1	7439-92-1	Lead	5.6		mg/kg
R64C10	1-1.5	02/02/04	Yes	01-SS-[R64C10]-C2_02/02/04_1	7440-38-2	Arsenic	6.4		mg/kg
R64C10	1-1.5	02/02/04	Yes	01-SS-[R64C10]-C2_02/02/04_1	7439-92-1	Lead	7.6		mg/kg
R64C11	1-1.5	02/02/04	Yes	01-SS-[R64C11]-C2_02/02/04_1	7440-38-2	Arsenic	7.5		mg/kg
R64C11	1-1.5	02/02/04	Yes	01-SS-[R64C11]-C2_02/02/04_1	7439-92-1	Lead	5.5		mg/kg
R64C12	1-1.5	01/15/04	Yes	01-SS-[R64C12]-C2_01/15/04_1	7440-38-2	Arsenic	9.6		mg/kg
R64C12	1-1.5	01/15/04	Yes	01-SS-[R64C12]-C2_01/15/04_1	7439-92-1	Lead	10.9		mg/kg
R64C13	1-1.5	01/15/04	Yes	01-SS-[R64C13]-C2_01/15/04_1	7440-38-2	Arsenic	4.7		mg/kg
R64C13	1-1.5	01/15/04	Yes	01-SS-[R64C13]-C2_01/15/04_1	7439-92-1	Lead	4.4		mg/kg
R64C14	1-1.5	01/15/04	Yes	01-SS-[R64C14]-C2_01/15/04_1	7440-38-2	Arsenic	6.7		mg/kg
R64C14	1-1.5	01/15/04	Yes	01-SS-[R64C14]-C2_01/15/04_1	7439-92-1	Lead	6.6		mg/kg
R64C15	1-1.5	01/15/04	Yes	01-SS-[R64C15]-C2_01/15/04_1	7440-38-2	Arsenic	6.8		mg/kg
R64C15	1-1.5	01/15/04	Yes	01-SS-[R64C15]-C2_01/15/04_1	7439-92-1	Lead	11.8		mg/kg
R64C16	1-1.5	01/15/04	Yes	01-SS-[R64C16]-C2_01/15/04_1	7440-38-2	Arsenic	5.0		mg/kg
R64C16	1-1.5	01/15/04	Yes	01-SS-[R64C16]-C2_01/15/04_1	7439-92-1	Lead	5.2		mg/kg
R64C4	1-1.5	02/03/04	Yes	R64C4_02/03/04_1	7440-38-2	Arsenic	12.7		mg/kg
R64C4	1-1.5	02/03/04	Yes	R64C4_02/03/04_1	7439-92-1	Lead	14.5		mg/kg
R64C5	1-1.5	02/03/04	Yes	R64C5_02/03/04_1	7440-38-2	Arsenic	6.8		mg/kg
R64C5	1-1.5	02/03/04	Yes	R64C5_02/03/04_1	7439-92-1	Lead	6.0		mg/kg
R64C6	1-1.5	02/03/04	Yes	R64C6_02/03/04_1	7440-38-2	Arsenic	6.3		mg/kg
R64C6	1-1.5	02/03/04	Yes	R64C6_02/03/04_1	7439-92-1	Lead	6.4		mg/kg
R64C7	1-1.5	02/02/04	Yes	01-SS-[R64C7]-C2_02/02/04_1	7440-38-2	Arsenic	12.1		mg/kg
R64C7	1-1.5	02/02/04	Yes	01-SS-[R64C7]-C2_02/02/04_1	7439-92-1	Lead	12.4		mg/kg
R64C8	1-1.5	02/02/04	Yes	01-SS-[R64C8]-C2_02/02/04_1	7440-38-2	Arsenic	7.8		mg/kg
R64C8	1-1.5	02/02/04	Yes	01-SS-[R64C8]-C2_02/02/04_1	7439-92-1	Lead	8.2		mg/kg
R64C9	1-1.5	02/02/04	Yes	01-SS-[R64C9]-C2_02/02/04_1	7440-38-2	Arsenic	7.2		mg/kg
R64C9	1-1.5	02/02/04	Yes	01-SS-[R64C9]-C2_02/02/04_1	7439-92-1	Lead	4.9		mg/kg
R65C10	1-1.5	01/16/04	Yes	01-SS-[R65C10]-C2_01/16/04_1	7440-38-2	Arsenic	8.6		mg/kg
R65C10	1-1.5	01/16/04	Yes	01-SS-[R65C10]-C2_01/16/04_1	7439-92-1	Lead	7.6		mg/kg
R65C11	1-1.5	02/02/04	Yes	01-SS-[R65C11]-C2_02/02/04_1	7440-38-2	Arsenic	5.0		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R65C11	1-1.5	02/02/04	Yes	01-SS-[R65C11]-C2_02/02/04_1	7439-92-1	Lead	3.1		mg/kg
R65C12	1-1.5	01/15/04	Yes	01-SS-[R65C12]-C2_01/15/04_1	7440-38-2	Arsenic	9.6		mg/kg
R65C12	1-1.5	01/15/04	Yes	01-SS-[R65C12]-C2_01/15/04_1	7439-92-1	Lead	11.8		mg/kg
R65C13	1-1.5	01/15/04	Yes	01-SS-[R65C13]-C2_01/15/04_1	7440-38-2	Arsenic	9.7		mg/kg
R65C13	1-1.5	01/15/04	Yes	01-SS-[R65C13]-C2_01/15/04_1	7439-92-1	Lead	4.5		mg/kg
R65C14	1-1.5	01/15/04	Yes	01-SS-[R65C14]-C2_01/15/04_1	7440-38-2	Arsenic	10.1		mg/kg
R65C14	1-1.5	01/15/04	Yes	01-SS-[R65C14]-C2_01/15/04_1	7439-92-1	Lead	8.8		mg/kg
R65C15	1-1.5	01/15/04	Yes	01-SS-[R65C15]-C2_01/15/04_1	7440-38-2	Arsenic	5.9		mg/kg
R65C15	1-1.5	01/15/04	Yes	01-SS-[R65C15]-C2_01/15/04_1	7439-92-1	Lead	5.8		mg/kg
R65C16	1-1.5	01/16/04	Yes	01-SS-[R65C16]-C2_01/16/04_1	7440-38-2	Arsenic	16.8		mg/kg
R65C16	1-1.5	01/16/04	Yes	01-SS-[R65C16]-C2_01/16/04_1	7439-92-1	Lead	14.4		mg/kg
R65C7	1-1.5	01/16/04	Yes	01-SS-[R65C7]-C2_01/16/04_1	7440-38-2	Arsenic	5.7		mg/kg
R65C7	1-1.5	01/16/04	Yes	01-SS-[R65C7]-C2_01/16/04_1	7439-92-1	Lead	5.1		mg/kg
R65C8	1-1.5	01/16/04	Yes	01-SS-[R65C8]-C2_01/16/04_1	7440-38-2	Arsenic	6.6		mg/kg
R65C8	1-1.5	01/16/04	Yes	01-SS-[R65C8]-C2_01/16/04_1	7439-92-1	Lead	8.1		mg/kg
R65C9	1-1.5	01/16/04	Yes	01-SS-[R65C9]-C2_01/16/04_1	7440-38-2	Arsenic	8.6		mg/kg
R65C9	1-1.5	01/16/04	Yes	01-SS-[R65C9]-C2_01/16/04_1	7439-92-1	Lead	34.5		mg/kg
R66C10	1-1.5	01/16/04	Yes	01-SS-[R66C10]-C2_01/16/04_1	7440-38-2	Arsenic	5.2		mg/kg
R66C10	1-1.5	01/16/04	Yes	01-SS-[R66C10]-C2_01/16/04_1	7439-92-1	Lead	3.9		mg/kg
R66C11	1-1.5	01/16/04	Yes	01-SS-[R66C11]-C2_01/16/04_1	7440-38-2	Arsenic	10.9		mg/kg
R66C11	1-1.5	01/16/04	Yes	01-SS-[R66C11]-C2_01/16/04_1	7439-92-1	Lead	13.7		mg/kg
R66C12	1-1.5	01/16/04	Yes	01-SS-[R66C12]-C2_01/16/04_1	7440-38-2	Arsenic	8.5		mg/kg
R66C12	1-1.5	01/16/04	Yes	01-SS-[R66C12]-C2_01/16/04_1	7439-92-1	Lead	8.1		mg/kg
R66C13	1-1.5	02/02/04	Yes	01-SS-[R66C13]-C2_02/02/04_1	7440-38-2	Arsenic	6.6		mg/kg
R66C13	1-1.5	02/02/04	Yes	01-SS-[R66C13]-C2_02/02/04_1	7439-92-1	Lead	4.6		mg/kg
R66C14	1-1.5	02/02/04	Yes	01-SS-[R66C14]-C2_02/02/04_1	7440-38-2	Arsenic	7.9		mg/kg
R66C14	1-1.5	02/02/04	Yes	01-SS-[R66C14]-C2_02/02/04_1	7439-92-1	Lead	6.1		mg/kg
R66C15	1-1.5	02/02/04	Yes	01-SS-[R66C15]-C2_02/02/04_1	7440-38-2	Arsenic	14.8		mg/kg
R66C15	1-1.5	02/02/04	Yes	01-SS-[R66C15]-C2_02/02/04_1	7439-92-1	Lead	9.1		mg/kg
R66C16	1-1.5	02/02/04	Yes	01-SS-[R66C16]-C2_02/02/04_1	7440-38-2	Arsenic	21.7		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R66C16	1-1.5	02/02/04	Yes	01-SS-[R66C16]-C2_02/02/04_1	7439-92-1	Lead	9.7		mg/kg
R66C8	1-1.5	01/16/04	Yes	01-SS-[R66C8]-C2_01/16/04_1	7440-38-2	Arsenic	6.6		mg/kg
R66C8	1-1.5	01/16/04	Yes	01-SS-[R66C8]-C2_01/16/04_1	7439-92-1	Lead	7.3		mg/kg
R66C9	1-1.5	01/16/04	Yes	01-SS-[R66C9]-C2_01/16/04_1	7440-38-2	Arsenic	5.1		mg/kg
R66C9	1-1.5	01/16/04	Yes	01-SS-[R66C9]-C2_01/16/04_1	7439-92-1	Lead	6.5		mg/kg
R67C10	1-1.5	01/16/04	Yes	01-SS-[R67C10]-C2_01/16/04_1	7440-38-2	Arsenic	10.5		mg/kg
R67C10	1-1.5	01/16/04	Yes	01-SS-[R67C10]-C2_01/16/04_1	7439-92-1	Lead	8.1		mg/kg
R67C11	1-1.5	02/02/04	Yes	01-SS-[R67C11]-C2_02/02/04_1	7440-38-2	Arsenic	8.5		mg/kg
R67C11	1-1.5	02/02/04	Yes	01-SS-[R67C11]-C2_02/02/04_1	7439-92-1	Lead	5.9		mg/kg
R67C12	1-1.5	02/02/04	Yes	01-SS-[R67C12]-C2_02/02/04_1	7440-38-2	Arsenic	8.3		mg/kg
R67C12	1-1.5	02/02/04	Yes	01-SS-[R67C12]-C2_02/02/04_1	7439-92-1	Lead	4.6		mg/kg
R67C13	1-1.5	02/02/04	Yes	01-SS-[R67C13]-C2_02/02/04_1	7440-38-2	Arsenic	8.8		mg/kg
R67C13	1-1.5	02/02/04	Yes	01-SS-[R67C13]-C2_02/02/04_1	7439-92-1	Lead	7.6		mg/kg
R67C14	1-1.5	02/02/04	Yes	01-SS-[R67C14]-C2_02/02/04_1	7440-38-2	Arsenic	15.9		mg/kg
R67C14	1-1.5	02/02/04	Yes	01-SS-[R67C14]-C2_02/02/04_1	7439-92-1	Lead	11.0		mg/kg
R67C15	1-1.5	02/02/04	Yes	01-SS-[R67C15]-C2_02/02/04_1	7440-38-2	Arsenic	9.7		mg/kg
R67C15	1-1.5	02/02/04	Yes	01-SS-[R67C15]-C2_02/02/04_1	7439-92-1	Lead	9.5		mg/kg
R67C8	1-1.5	01/16/04	Yes	01-SS-[R67C8]-C2_01/16/04_1	7440-38-2	Arsenic	3.4		mg/kg
R67C8	1-1.5	01/16/04	Yes	01-SS-[R67C8]-C2_01/16/04_1	7439-92-1	Lead	2.9		mg/kg
R67C9	1-1.5	01/16/04	Yes	01-SS-[R67C9]-C2_01/16/04_1	7440-38-2	Arsenic	3.7		mg/kg
R67C9	1-1.5	01/16/04	Yes	01-SS-[R67C9]-C2_01/16/04_1	7439-92-1	Lead	3.6		mg/kg
R68C10	1-1.5	07/11/02	Yes	01-SS-[75-R68C10]-D1-050	7440-38-2	Arsenic	14.6		mg/kg
R68C10	1-1.5	07/11/02	Yes	01-SS-[75-R68C10]-D1-050	7439-92-1	Lead	15.1		mg/kg
R68C11	1-1.5	02/02/04	Yes	01-SS-[R68C11]-C2_AVG_02/02/04_1	7440-38-2	Arsenic	6.3		mg/kg
R68C11	1-1.5	02/02/04	Yes	01-SS-[R68C11]-C2_AVG_02/02/04_1	7439-92-1	Lead	6.0		mg/kg
R68C12	1-1.5	02/02/04	Yes	01-SS-[R68C12]-C2_02/02/04_1	7440-38-2	Arsenic	6.8		mg/kg
R68C12	1-1.5	02/02/04	Yes	01-SS-[R68C12]-C2_02/02/04_1	7439-92-1	Lead	5.4		mg/kg
R68C13	1-1.5	01/16/04	Yes	01-SS-[R68C13]-C2_01/16/04_1	7440-38-2	Arsenic	11.2		mg/kg
R68C13	1-1.5	01/16/04	Yes	01-SS-[R68C13]-C2_01/16/04_1	7439-92-1	Lead	13.4		mg/kg
R68C14	1-1.5	01/16/04	Yes	01-SS-[R68C14]-C2_01/16/04_1	7440-38-2	Arsenic	8.8		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R68C14	1-1.5	01/16/04	Yes	01-SS-[R68C14]-C2_01/16/04_1	7439-92-1	Lead	11.7		mg/kg
R68C15	1-1.5	02/02/04	Yes	01-SS-[R68C15]-C2_02/02/04_1	7440-38-2	Arsenic	9.5		mg/kg
R68C15	1-1.5	02/02/04	Yes	01-SS-[R68C15]-C2_02/02/04_1	7439-92-1	Lead	12.5		mg/kg
R68C8	1-1.5	07/11/02	Yes	01-SS-[75-R68C8]-D1-050	7440-38-2	Arsenic	6.3		mg/kg
R68C8	1-1.5	07/11/02	Yes	01-SS-[75-R68C8]-D1-050	7439-92-1	Lead	5.8		mg/kg
R68C9	1-1.5	07/11/02	Yes	01-SS-[75-R68C9]-D1-050	7440-38-2	Arsenic	7.5		mg/kg
R68C9	1-1.5	07/11/02	Yes	01-SS-[75-R68C9]-D1-050	7439-92-1	Lead	8.4		mg/kg
R69C10	1-1.5	07/11/02	Yes	01-SS-[75-R69C10]-D1-050	7440-38-2	Arsenic	7.8		mg/kg
R69C10	1-1.5	07/11/02	Yes	01-SS-[75-R69C10]-D1-050	7439-92-1	Lead	16.6		mg/kg
R69C11	1-1.5	07/11/02	Yes	01-SS-[75-R69C11]-D1-050	7440-38-2	Arsenic	2.7		mg/kg
R69C11	1-1.5	07/11/02	Yes	01-SS-[75-R69C11]-D1-050	7439-92-1	Lead	4.0		mg/kg
R69C12	1-1.5	07/11/02	Yes	01-SS-[75-R69C12]-D1-050	7440-38-2	Arsenic	3.6		mg/kg
R69C12	1-1.5	07/11/02	Yes	01-SS-[75-R69C12]-D1-050	7439-92-1	Lead	6.8		mg/kg
R69C13	1-1.5	02/02/04	Yes	01-SS-[R69C13]-C2_02/02/04_1	7440-38-2	Arsenic	7.4		mg/kg
R69C13	1-1.5	02/02/04	Yes	01-SS-[R69C13]-C2_02/02/04_1	7439-92-1	Lead	7.6		mg/kg
R69C14	1-1.5	02/02/04	Yes	01-SS-[R69C14]-C2_02/02/04_1	7440-38-2	Arsenic	15.5		mg/kg
R69C14	1-1.5	02/02/04	Yes	01-SS-[R69C14]-C2_02/02/04_1	7439-92-1	Lead	15.2		mg/kg
R69C15	1-1.5	02/02/04	Yes	01-SS-[R69C15]-C2_02/02/04_1	7440-38-2	Arsenic	18.6		mg/kg
R69C15	1-1.5	02/02/04	Yes	01-SS-[R69C15]-C2_02/02/04_1	7439-92-1	Lead	26.9		mg/kg
R69C8	1-1.5	07/11/02	Yes	01-SS-[75-R69C8]-D1-050	7440-38-2	Arsenic	2.5		mg/kg
R69C8	1-1.5	07/11/02	Yes	01-SS-[75-R69C8]-D1-050	7439-92-1	Lead	4.8		mg/kg
R69C9	1-1.5	07/11/02	Yes	01-SS-[75-R69C9]-D1-050	7440-38-2	Arsenic	3.5		mg/kg
R69C9	1-1.5	07/11/02	Yes	01-SS-[75-R69C9]-D1-050	7439-92-1	Lead	4.7		mg/kg
R70C10	1-1.5	07/11/02	Yes	01-SS-[75-R70C10]-D1-050	7440-38-2	Arsenic	5.3		mg/kg
R70C10	1-1.5	07/11/02	Yes	01-SS-[75-R70C10]-D1-050	7439-92-1	Lead	5.1		mg/kg
R70C11	1-1.5	07/11/02	Yes	01-SS-[75-R70C11]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R70C11	1-1.5	07/11/02	Yes	01-SS-[75-R70C11]-D1-050	7439-92-1	Lead	4.5		mg/kg
R70C12	1-1.5	07/11/02	Yes	01-SS-[75-R70C12]-D1-050	7440-38-2	Arsenic	4.0		mg/kg
R70C12	1-1.5	07/11/02	Yes	01-SS-[75-R70C12]-D1-050	7439-92-1	Lead	4.3		mg/kg
R70C13	1-1.5	07/11/02	Yes	01-SS-[75-R70C13]-D1-050	7440-38-2	Arsenic	21.1		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R70C13	1-1.5	07/11/02	Yes	01-SS-[75-R70C13]-D1-050	7439-92-1	Lead	52.5		mg/kg
R70C14	1-1.5	07/11/02	Yes	01-SS-[75-R70C14]-D1-050	7440-38-2	Arsenic	5.7		mg/kg
R70C14	1-1.5	07/11/02	Yes	01-SS-[75-R70C14]-D1-050	7439-92-1	Lead	7.5		mg/kg
R70C15	1-1.5	07/11/02	Yes	01-SS-[75-R70C15]-D1-050	7440-38-2	Arsenic	3.6		mg/kg
R70C15	1-1.5	07/11/02	Yes	01-SS-[75-R70C15]-D1-050	7439-92-1	Lead	3.9		mg/kg
R70C8	1-1.5	07/11/02	Yes	01-SS-[75-R70C8]-D1-050	7440-38-2	Arsenic	2.8		mg/kg
R70C8	1-1.5	07/11/02	Yes	01-SS-[75-R70C8]-D1-050	7439-92-1	Lead	4.8		mg/kg
R70C9	1-1.5	07/11/02	Yes	01-SS-[75-R70C9]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R70C9	1-1.5	07/11/02	Yes	01-SS-[75-R70C9]-D1-050	7439-92-1	Lead	3.8		mg/kg
R71C10	1-1.5	07/11/02	Yes	01-SS-[75-R71C10]-D1-050	7440-38-2	Arsenic	2.1		mg/kg
R71C10	1-1.5	07/11/02	Yes	01-SS-[75-R71C10]-D1-050	7439-92-1	Lead	2.4		mg/kg
R71C11	1-1.5	07/11/02	Yes	01-SS-[75-R71C11]-D1-050	7440-38-2	Arsenic	3.2		mg/kg
R71C11	1-1.5	07/11/02	Yes	01-SS-[75-R71C11]-D1-050	7439-92-1	Lead	4.6		mg/kg
R71C12	1-1.5	07/11/02	Yes	01-SS-[75-R71C12]-D1-050	7440-38-2	Arsenic	2.8		mg/kg
R71C12	1-1.5	07/11/02	Yes	01-SS-[75-R71C12]-D1-050	7439-92-1	Lead	4.3		mg/kg
R71C13	1-1.5	07/11/02	Yes	01-SS-[75-R71C13]-D1-050	7440-38-2	Arsenic	5.0		mg/kg
R71C13	1-1.5	07/11/02	Yes	01-SS-[75-R71C13]-D1-050	7439-92-1	Lead	4.1		mg/kg
R71C14	1-1.5	07/16/02	Yes	01-SS-[75-R71C14]-D1-050	7440-38-2	Arsenic	4.5		mg/kg
R71C14	1-1.5	07/16/02	Yes	01-SS-[75-R71C14]-D1-050	7439-92-1	Lead	5.7		mg/kg
R71C15	1-1.5	07/16/02	Yes	01-SS-[75-R71C15]-D1-050	7440-38-2	Arsenic	2.7		mg/kg
R71C15	1-1.5	07/16/02	Yes	01-SS-[75-R71C15]-D1-050	7439-92-1	Lead	4.3		mg/kg
R71C9	1-1.5	07/11/02	Yes	01-SS-[75-R71C9]-D1-050	7440-38-2	Arsenic	2.9		mg/kg
R71C9	1-1.5	07/11/02	Yes	01-SS-[75-R71C9]-D1-050	7439-92-1	Lead	4.3		mg/kg
R72C12	1-1.5	07/11/02	Yes	01-SS-[75-R72C12]-D1-050	7440-38-2	Arsenic	2.3		mg/kg
R72C12	1-1.5	07/11/02	Yes	01-SS-[75-R72C12]-D1-050	7439-92-1	Lead	2.9		mg/kg
R72C13	1-1.5	07/11/02	Yes	01-SS-[75-R72C13]-D1-050	7440-38-2	Arsenic	2.4		mg/kg
R72C13	1-1.5	07/11/02	Yes	01-SS-[75-R72C13]-D1-050	7439-92-1	Lead	3.3		mg/kg
R72C14	1-1.5	07/11/02	Yes	01-SS-[75-R72C14]-D1-050	7440-38-2	Arsenic	1.8		mg/kg
R72C14	1-1.5	07/11/02	Yes	01-SS-[75-R72C14]-D1-050	7439-92-1	Lead	3.1		mg/kg
R72C15	1-1.5	07/11/02	Yes	01-SS-[75-R72C15]-D1-050	7440-38-2	Arsenic	1.8		mg/kg

Table B.2-B
Sample Results for CM-02B Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R72C15	1-1.5	07/11/02	Yes	01-SS-[75-R72C15]-D1-050	7439-92-1	Lead	3.7		mg/kg
R73C14	1-1.5	07/11/02	Yes	01-SS-[75-R73C14]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R73C14	1-1.5	07/11/02	Yes	01-SS-[75-R73C14]-D1-050	7439-92-1	Lead	5.4		mg/kg
R73C15	1-1.5	07/11/02	Yes	01-SS-[75-R73C15]-D1-050	7440-38-2	Arsenic	2.2		mg/kg
R73C15	1-1.5	07/11/02	Yes	01-SS-[75-R73C15]-D1-050	7439-92-1	Lead	4.3		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	7440-38-2	Arsenic	5.8		mg/kg
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	7440-50-8	Copper	8.4	J	mg/kg
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-546	3-6	04/28/92	Yes	18-TP-546-S-2	7439-97-6	Mercury	0.08	U	mg/kg
18-TP-546	8-10	04/28/92	Yes	18-TP-546-S-3	7439-92-1	Lead	5.2	U	mg/kg
F-183	2-2.5	07/30/01	Yes	01-F37-SS[F-183]C2-005	7440-38-2	Arsenic	8.6		mg/kg
F-183	2-2.5	07/30/01	Yes	01-F37-SS[F-183]C2-005	7439-92-1	Lead	9.0		mg/kg
F-184	2-2.5	07/30/01	Yes	01-F37-SS[F-184]C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-184	2-2.5	07/30/01	Yes	01-F37-SS[F-184]C2-005	7439-92-1	Lead	10.0		mg/kg
F-185	2-2.5	07/30/01	Yes	01-F37-SS[F-185]C2-005	7440-38-2	Arsenic	26.0		mg/kg
F-185	2-2.5	07/30/01	Yes	01-F37-SS[F-185]C2-005	7439-92-1	Lead	9.9		mg/kg
F-186	2-2.5	07/30/01	Yes	01-F37-SS[F-186]C2-005	7440-38-2	Arsenic	8.6		mg/kg
F-186	2-2.5	07/30/01	Yes	01-F37-SS[F-186]C2-005	7439-92-1	Lead	14.0		mg/kg
F-187	2-2.5	07/30/01	Yes	01-F37-SS[F-187]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-187	2-2.5	07/30/01	Yes	01-F37-SS[F-187]C2-005	7439-92-1	Lead	3.9		mg/kg
F-188	2-2.5	07/30/01	Yes	01-F37-SS[F-188]C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-188	2-2.5	07/30/01	Yes	01-F37-SS[F-188]C2-005	7439-92-1	Lead	62.0		mg/kg
F-189	2-2.5	07/30/01	Yes	01-F37-SS[F-189]C2-005-DAVG	7440-38-2	Arsenic	4.5		mg/kg
F-189	2-2.5	07/30/01	Yes	01-F37-SS[F-189]C2-005-DAVG	7439-92-1	Lead	3.0		mg/kg
F-191	2-2.5	07/30/01	Yes	01-F37-SS[F-191]C2-005	7440-38-2	Arsenic	4.7		mg/kg
F-191	2-2.5	07/30/01	Yes	01-F37-SS[F-191]C2-005	7439-92-1	Lead	5.5		mg/kg
F-192	2-2.5	07/30/01	Yes	01-F37-SS[F-192]C2-005	7440-38-2	Arsenic	6.9		mg/kg
F-192	2-2.5	07/30/01	Yes	01-F37-SS[F-192]C2-005	7439-92-1	Lead	5.2		mg/kg
F-199	2-2.5	08/02/01	Yes	01-F29-SS[F-199]C2-005	7440-38-2	Arsenic	6.0		mg/kg
F-199	2-2.5	08/02/01	Yes	01-F29-SS[F-199]C2-005	7439-92-1	Lead	10.0		mg/kg
F-200	2-2.5	08/02/01	Yes	01-F29-SS[F-200]C2-005	7440-38-2	Arsenic	9.2		mg/kg
F-200	2-2.5	08/02/01	Yes	01-F29-SS[F-200]C2-005	7439-92-1	Lead	20.0		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-201	2-2.5	08/02/01	Yes	01-F29-SS[F-201]C2-005	7440-38-2	Arsenic	4.3		mg/kg
F-201	2-2.5	08/02/01	Yes	01-F29-SS[F-201]C2-005	7439-92-1	Lead	74.0		mg/kg
F-202	2-2.5	08/02/01	Yes	01-F29-SS[F-202]C2-005	7440-38-2	Arsenic	3.9		mg/kg
F-202	2-2.5	08/02/01	Yes	01-F29-SS[F-202]C2-005	7439-92-1	Lead	12.0		mg/kg
F-203	2-2.5	08/02/01	Yes	01-F29-SS[F-203]C2-005	7440-38-2	Arsenic	4.1		mg/kg
F-203	2-2.5	08/02/01	Yes	01-F29-SS[F-203]C2-005	7439-92-1	Lead	11.0		mg/kg
F-204	2-2.5	08/02/01	Yes	01-F29-SS[F-204]C2-005	7440-38-2	Arsenic	4.7		mg/kg
F-204	2-2.5	08/02/01	Yes	01-F29-SS[F-204]C2-005	7439-92-1	Lead	25.0		mg/kg
F-205-2	3-3.5	08/30/01	Yes	02-F29-SS[F-205-2]C2-030	7440-38-2	Arsenic	3.9		mg/kg
F-205-2	3-3.5	08/30/01	Yes	02-F29-SS[F-205-2]C2-030	7439-92-1	Lead	13.0		mg/kg
F-206	2-2.5	08/02/01	Yes	01-F29-SS[F-206]C2-005	7440-38-2	Arsenic	3.8		mg/kg
F-206	2-2.5	08/02/01	Yes	01-F29-SS[F-206]C2-005	7439-92-1	Lead	6.7		mg/kg
F-207	2-2.5	08/02/01	Yes	01-F29-SS[F-207]C2-005	7440-38-2	Arsenic	17.0		mg/kg
F-207	2-2.5	08/02/01	Yes	01-F29-SS[F-207]C2-005	7439-92-1	Lead	53.0		mg/kg
F-208	2-2.5	08/02/01	Yes	01-F29-SS[F-208]C2-005	7440-38-2	Arsenic	5.2		mg/kg
F-208	2-2.5	08/02/01	Yes	01-F29-SS[F-208]C2-005	7439-92-1	Lead	24.0		mg/kg
F-209	2-2.5	08/02/01	Yes	01-F29-SS[F-209]C2-005	7440-38-2	Arsenic	8.1		mg/kg
F-209	2-2.5	08/02/01	Yes	01-F29-SS[F-209]C2-005	7439-92-1	Lead	33.0		mg/kg
F-210	2-2.5	08/02/01	Yes	01-F29-SS[F-210]C2-005	7440-38-2	Arsenic	9.5		mg/kg
F-210	2-2.5	08/02/01	Yes	01-F29-SS[F-210]C2-005	7439-92-1	Lead	51.0		mg/kg
LR-210	0-0.5	11/16/93	Yes	LR-210	7440-38-2	Arsenic	15.0		mg/kg
LR-225A	0-0.5	12/06/93	Yes	LR-225A	7440-38-2	Arsenic	8.1		mg/kg
LR-225	0-0.5	11/16/93	Yes	LR-225-DAVG	7440-38-2	Arsenic	19.0		mg/kg
LR-226	0-0.5	11/16/93	Yes	LR-226	7440-38-2	Arsenic	48.0		mg/kg
LR-227	0-0.5	11/16/93	Yes	LR-227	7440-38-2	Arsenic	38.0		mg/kg
LR-241	0-0.5	11/16/93	Yes	LR-241	7440-38-2	Arsenic	8.1		mg/kg
LR-242	0-0.5	03/25/93	Yes	LR-242	7440-38-2	Arsenic	4.5		mg/kg
LR-242	0-0.5	03/25/93	Yes	LR-242	7439-92-1	Lead	5.0	U	mg/kg
LR-243	0-0.5	11/16/93	Yes	LR-243	7440-38-2	Arsenic	3.6		mg/kg
LR-254A	0-0.5	12/06/93	Yes	LR-254A	7440-38-2	Arsenic	2.0		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-254	0-0.5	11/16/93	Yes	LR-254	7440-38-2	Arsenic	40.0		mg/kg
LR-264	0-0.5	03/25/93	No	LR-264	7440-38-2	Arsenic	36.0		mg/kg
LR-264	0-0.5	03/25/93	No	LR-264	7439-92-1	Lead	287.0		mg/kg
MSU-NGRR-21-25	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-25]-C1_AVG_05/07/03_1.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-NGRR-21-25	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-25]-C1_AVG_05/07/03_1.5	7439-92-1	Lead	2.8		mg/kg
NGRR-138	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-138]C2-005	7440-38-2	Arsenic	4.8		mg/kg
NGRR-138	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-138]C2-005	7439-92-1	Lead	9.4		mg/kg
NGRR-139	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-139]C2-005	7440-38-2	Arsenic	5.4		mg/kg
NGRR-139	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-139]C2-005	7439-92-1	Lead	5.3		mg/kg
NGRR-140	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-140]C2-005	7440-38-2	Arsenic	18.0		mg/kg
NGRR-140	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-140]C2-005	7439-92-1	Lead	16.0		mg/kg
NGRR-141	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-141]C2-005	7440-38-2	Arsenic	24.0		mg/kg
NGRR-141	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-141]C2-005	7439-92-1	Lead	28.0		mg/kg
NGRR-142	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-142]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-142	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-142]C2-005	7439-92-1	Lead	15.0		mg/kg
NGRR-143	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-143]C2-005	7440-38-2	Arsenic	16.0		mg/kg
NGRR-143	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-143]C2-005	7439-92-1	Lead	5.1		mg/kg
NGRR-144	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-144]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-144	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-144]C2-005	7439-92-1	Lead	8.8		mg/kg
NGRR-145	3.5-4	09/13/01	Yes	03-N01-SS-[NGRR-145-3]-C2-050	7440-38-2	Arsenic	6.0		mg/kg
NGRR-145	3.5-4	09/13/01	Yes	03-N01-SS-[NGRR-145-3]-C2-050	7439-92-1	Lead	5.5		mg/kg
NGRR-146	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-146]C2-005	7440-38-2	Arsenic	28.0		mg/kg
NGRR-146	1.5-2	07/30/01	Yes	01-N01-SS[NGRR-146]C2-005	7439-92-1	Lead	12.0		mg/kg
NGRR-148	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-148]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-148	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-148]C2-005	7439-92-1	Lead	8.2		mg/kg
NGRR-149	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-149]C2-005	7440-38-2	Arsenic	7.3		mg/kg
NGRR-149	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-149]C2-005	7439-92-1	Lead	4.6		mg/kg
NGRR-150	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-150]C2-005	7440-38-2	Arsenic	5.8		mg/kg
NGRR-150	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-150]C2-005	7439-92-1	Lead	3.4		mg/kg
NGRR-151	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-151]C2-005	7440-38-2	Arsenic	5.1		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-151	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-151]C2-005	7439-92-1	Lead	2.8		mg/kg
NGRR-152	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-152]C2-005	7440-38-2	Arsenic	3.6		mg/kg
NGRR-152	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-152]C2-005	7439-92-1	Lead	2.1	U	mg/kg
NGRR-153	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-153]C2-005-DAVG	7440-38-2	Arsenic	3.5		mg/kg
NGRR-153	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-153]C2-005-DAVG	7439-92-1	Lead	2.3		mg/kg
NGRR-156-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-156-2]C2-025	7440-38-2	Arsenic	5.3		mg/kg
NGRR-156-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-156-2]C2-025	7439-92-1	Lead	2.0		mg/kg
NGRR-157	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-157]C2-005	7440-38-2	Arsenic	6.4		mg/kg
NGRR-157	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-157]C2-005	7439-92-1	Lead	6.8		mg/kg
NGRR-158	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-158]C2-005	7440-38-2	Arsenic	16.0		mg/kg
NGRR-158	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-158]C2-005	7439-92-1	Lead	17.0		mg/kg
NGRR-159	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-159]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-159	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-159]C2-005	7439-92-1	Lead	3.9		mg/kg
NGRR-160	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-160]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-160	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-160]C2-005	7439-92-1	Lead	5.0		mg/kg
NGRR-164	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-164]C2-005-DAVG	7440-38-2	Arsenic	10.5		mg/kg
NGRR-164	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-164]C2-005-DAVG	7439-92-1	Lead	54.5		mg/kg
NGRR-166	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-166]C2-005	7440-38-2	Arsenic	5.7		mg/kg
NGRR-166	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-166]C2-005	7439-92-1	Lead	8.5		mg/kg
R34C15_TS04	2.5-3	09/19/01	Yes	02-TS04-SS-[R34C15-2]-D2-030	7440-38-2	Arsenic	8.2		mg/kg
R34C15_TS04	2.5-3	09/19/01	Yes	02-TS04-SS-[R34C15-2]-D2-030	7439-92-1	Lead	5.8		mg/kg
R35C14_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R35C14]-D1-015	7440-38-2	Arsenic	33.0		mg/kg
R35C14_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R35C14]-D1-015	7439-92-1	Lead	19.0		mg/kg
R35C15_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R35C15]-D1-015	7440-38-2	Arsenic	10.0		mg/kg
R35C15_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R35C15]-D1-015	7439-92-1	Lead	9.5		mg/kg
R35C16_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R35C16]-D1-015	7440-38-2	Arsenic	8.1		mg/kg
R35C16_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R35C16]-D1-015	7439-92-1	Lead	15.0		mg/kg
R36C16_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R36C16]-D1-015	7440-38-2	Arsenic	19.0		mg/kg
R36C16_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R36C16]-D1-015	7439-92-1	Lead	31.0		mg/kg
R37C17_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R37C17]-D1-015	7440-38-2	Arsenic	16.0		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R37C17_TS04	1.5-2	09/04/01	Yes	01-TS04-SS[R37C17]-D1-015	7439-92-1	Lead	22.0		mg/kg
R65C27	1-1.5	11/17/03	Yes	01-SS-[R65C27]-C2_11/17/03_1	7440-38-2	Arsenic	7.5		mg/kg
R65C27	1-1.5	11/17/03	Yes	01-SS-[R65C27]-C2_11/17/03_1	7439-92-1	Lead	12.0		mg/kg
R65C28	1-1.5	11/17/03	Yes	01-SS-[R65C28]-C2_11/17/03_1	7440-38-2	Arsenic	4.5		mg/kg
R65C28	1-1.5	11/17/03	Yes	01-SS-[R65C28]-C2_11/17/03_1	7439-92-1	Lead	3.8		mg/kg
R65C29	1-1.5	03/03/04	Yes	01-R65C29_03/03/04_1	7440-38-2	Arsenic	5.7		mg/kg
R65C29	1-1.5	03/03/04	Yes	01-R65C29_03/03/04_1	7439-92-1	Lead	4.9		mg/kg
R65C29	1-1.5	11/17/03	Yes	01-SS-[R65C29]-C2_11/17/03_1	7440-38-2	Arsenic	7.5		mg/kg
R65C29	1-1.5	11/17/03	Yes	01-SS-[R65C29]-C2_11/17/03_1	7439-92-1	Lead	15.3		mg/kg
R66C26	1-1.5	11/17/03	Yes	01-SS-[R66C26]-C2_11/17/03_1	7440-38-2	Arsenic	4.6		mg/kg
R66C26	1-1.5	11/17/03	Yes	01-SS-[R66C26]-C2_11/17/03_1	7439-92-1	Lead	5.2		mg/kg
R66C27	1-1.5	11/17/03	Yes	01-SS-[R66C27]-C2_11/17/03_1	7440-38-2	Arsenic	8.5		mg/kg
R66C27	1-1.5	11/17/03	Yes	01-SS-[R66C27]-C2_11/17/03_1	7439-92-1	Lead	11.8		mg/kg
R66C28	1-1.5	03/03/04	Yes	01-R66C28_03/03/04_1	7440-38-2	Arsenic	49.6		mg/kg
R66C28	1-1.5	03/03/04	Yes	01-R66C28_03/03/04_1	7439-92-1	Lead	56.8		mg/kg
R66C28	1-1.5	11/17/03	Yes	01-SS-[R66C28]-C2_11/17/03_1	7440-38-2	Arsenic	2.5	U	mg/kg
R66C28	1-1.5	11/17/03	Yes	01-SS-[R66C28]-C2_11/17/03_1	7439-92-1	Lead	4.8		mg/kg
R66C29	1-1.5	11/17/03	Yes	01-SS-[R66C29]-C2_11/17/03_1	7440-38-2	Arsenic	6.0		mg/kg
R66C29	1-1.5	11/17/03	Yes	01-SS-[R66C29]-C2_11/17/03_1	7439-92-1	Lead	13.7		mg/kg
R67C26	1-1.5	11/17/03	Yes	01-SS-[R67C26]-C2_11/17/03_1	7440-38-2	Arsenic	10.1		mg/kg
R67C26	1-1.5	11/17/03	Yes	01-SS-[R67C26]-C2_11/17/03_1	7439-92-1	Lead	15.5		mg/kg
R67C27	1-1.5	11/17/03	Yes	01-SS-[R67C27]-C2_11/17/03_1	7440-38-2	Arsenic	17.9		mg/kg
R67C27	1-1.5	11/17/03	Yes	01-SS-[R67C27]-C2_11/17/03_1	7439-92-1	Lead	42.6		mg/kg
R67C28	1-1.5	11/17/03	Yes	01-SS-[R67C28]-C2_11/17/03_1	7440-38-2	Arsenic	13.8		mg/kg
R67C28	1-1.5	11/17/03	Yes	01-SS-[R67C28]-C2_11/17/03_1	7439-92-1	Lead	41.5		mg/kg
R68C27	1-1.5	11/17/03	Yes	01-SS-[R68C27]-C2_11/17/03_1	7440-38-2	Arsenic	7.3		mg/kg
R68C27	1-1.5	11/17/03	Yes	01-SS-[R68C27]-C2_11/17/03_1	7439-92-1	Lead	15.3		mg/kg
R68C31	1-1.5	11/19/03	Yes	01-SS-[R68C31]-C2_11/19/03_1	7440-38-2	Arsenic	2.6	U	mg/kg
R68C31	1-1.5	11/19/03	Yes	01-SS-[R68C31]-C2_11/19/03_1	7439-92-1	Lead	2.6	U	mg/kg
R70C24	1-1.5	11/17/03	Yes	01-SS-[R70C24]-C2_AVG_11/17/03_1	7440-38-2	Arsenic	7.7		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R70C24	1-1.5	11/17/03	Yes	01-SS-[R70C24]-C2_AVG_11/17/03_1	7439-92-1	Lead	11.5		mg/kg
R70C25	1-1.5	11/17/03	Yes	01-SS-[R70C25]-C2_11/17/03_1	7440-38-2	Arsenic	5.3		mg/kg
R70C25	1-1.5	11/17/03	Yes	01-SS-[R70C25]-C2_11/17/03_1	7439-92-1	Lead	8.1		mg/kg
R70C26	1-1.5	11/17/03	Yes	01-SS-[R70C26]-C2_11/17/03_1	7440-38-2	Arsenic	3.2		mg/kg
R70C26	1-1.5	11/17/03	Yes	01-SS-[R70C26]-C2_11/17/03_1	7439-92-1	Lead	5.2		mg/kg
R70C27	1-1.5	03/03/04	Yes	01-R70C27_03/03/04_1	7440-38-2	Arsenic	8.0		mg/kg
R70C27	1-1.5	03/03/04	Yes	01-R70C27_03/03/04_1	7439-92-1	Lead	9.5		mg/kg
R70C32	1-1.5	11/20/03	Yes	01-SS-[R70C32]-C2_11/20/03_1	7440-38-2	Arsenic	27.1		mg/kg
R70C32	1-1.5	11/20/03	Yes	01-SS-[R70C32]-C2_11/20/03_1	7439-92-1	Lead	83.7		mg/kg
R71C18	1-1.5	02/02/04	Yes	01-SS-[R71C18]-C2_02/02/04_1	7440-38-2	Arsenic	6.7		mg/kg
R71C18	1-1.5	02/02/04	Yes	01-SS-[R71C18]-C2_02/02/04_1	7439-92-1	Lead	6.4		mg/kg
R71C19	1-1.5	11/17/03	Yes	01-SS-[R71C19]-C2_11/17/03_1	7440-38-2	Arsenic	40.5		mg/kg
R71C19	1-1.5	11/17/03	Yes	01-SS-[R71C19]-C2_11/17/03_1	7439-92-1	Lead	30.7		mg/kg
R71C20	1-1.5	11/17/03	Yes	01-SS-[R71C20]-C2_11/17/03_1	7440-38-2	Arsenic	6.9		mg/kg
R71C20	1-1.5	11/17/03	Yes	01-SS-[R71C20]-C2_11/17/03_1	7439-92-1	Lead	12.1		mg/kg
R71C24	1-1.5	11/17/03	Yes	01-SS-[R71C24]-C2_11/17/03_1	7440-38-2	Arsenic	12.0		mg/kg
R71C24	1-1.5	11/17/03	Yes	01-SS-[R71C24]-C2_11/17/03_1	7439-92-1	Lead	14.3		mg/kg
R71C25	1-1.5	11/17/03	Yes	01-SS-[R71C25]-C2_11/17/03_1	7440-38-2	Arsenic	7.0		mg/kg
R71C25	1-1.5	11/17/03	Yes	01-SS-[R71C25]-C2_11/17/03_1	7439-92-1	Lead	12.6		mg/kg
R71C26	1-1.5	11/14/03	Yes	01-SS-[R71C26]-C2_11/14/03_1	7440-38-2	Arsenic	8.1		mg/kg
R71C26	1-1.5	11/14/03	Yes	01-SS-[R71C26]-C2_11/14/03_1	7439-92-1	Lead	10.9		mg/kg
R71C27	1-1.5	11/14/03	Yes	01-SS-[R71C27]-C2_11/14/03_1	7440-38-2	Arsenic	14.9		mg/kg
R71C27	1-1.5	11/14/03	Yes	01-SS-[R71C27]-C2_11/14/03_1	7439-92-1	Lead	22.9		mg/kg
R71C28	1-1.5	11/14/03	Yes	01-SS-[R71C28]-C2_11/14/03_1	7440-38-2	Arsenic	13.4		mg/kg
R71C28	1-1.5	11/14/03	Yes	01-SS-[R71C28]-C2_11/14/03_1	7439-92-1	Lead	17.9		mg/kg
R71C29	1-1.5	03/03/04	Yes	01-R71C29_03/03/04_1	7440-38-2	Arsenic	9.3		mg/kg
R71C29	1-1.5	03/03/04	Yes	01-R71C29_03/03/04_1	7439-92-1	Lead	8.3		mg/kg
R71C33	1-1.5	11/20/03	Yes	01-SS-[R71C33]-C2_11/20/03_1	7440-38-2	Arsenic	14.0		mg/kg
R71C33	1-1.5	11/20/03	Yes	01-SS-[R71C33]-C2_11/20/03_1	7439-92-1	Lead	16.4		mg/kg
R72C16	1-1.5	07/11/02	Yes	01-SS-[75-R72C16]-D1-050	7440-38-2	Arsenic	13.4		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R72C16	1-1.5	07/11/02	Yes	01-SS-[75-R72C16]-D1-050	7439-92-1	Lead	7.7		mg/kg
R72C17	1-1.5	07/11/02	Yes	01-SS-[75-R72C17]-D1-050	7440-38-2	Arsenic	3.3		mg/kg
R72C17	1-1.5	07/11/02	Yes	01-SS-[75-R72C17]-D1-050	7439-92-1	Lead	6.0		mg/kg
R72C18	1-1.5	07/11/02	Yes	01-SS-[75-R72C18]-D1-050	7440-38-2	Arsenic	2.5		mg/kg
R72C18	1-1.5	07/11/02	Yes	01-SS-[75-R72C18]-D1-050	7439-92-1	Lead	3.1		mg/kg
R72C19	1-1.5	07/10/02	Yes	01-SS-[75-R72C19]-D1-050	7440-38-2	Arsenic	6.1		mg/kg
R72C19	1-1.5	07/10/02	Yes	01-SS-[75-R72C19]-D1-050	7439-92-1	Lead	8.7		mg/kg
R72C20	1-1.5	07/10/02	Yes	01-SS-[75-R72C20]-D1-050	7440-38-2	Arsenic	5.0		mg/kg
R72C20	1-1.5	07/10/02	Yes	01-SS-[75-R72C20]-D1-050	7439-92-1	Lead	5.0		mg/kg
R72C21	1-1.5	11/14/03	Yes	01-SS-[R72C21]-C2_11/14/03_1	7440-38-2	Arsenic	2.8		mg/kg
R72C21	1-1.5	11/14/03	Yes	01-SS-[R72C21]-C2_11/14/03_1	7439-92-1	Lead	5.7		mg/kg
R72C23	1-1.5	11/14/03	Yes	01-SS-[R72C23]-C2_11/14/03_1	7440-38-2	Arsenic	6.3		mg/kg
R72C23	1-1.5	11/14/03	Yes	01-SS-[R72C23]-C2_11/14/03_1	7439-92-1	Lead	11.0		mg/kg
R72C24	1-1.5	11/14/03	Yes	01-SS-[R72C24]-C2_11/14/03_1	7440-38-2	Arsenic	4.7		mg/kg
R72C24	1-1.5	11/14/03	Yes	01-SS-[R72C24]-C2_11/14/03_1	7439-92-1	Lead	9.5		mg/kg
R72C25	1-1.5	11/14/03	Yes	01-SS-[R72C25]-C2_11/14/03_1	7440-38-2	Arsenic	4.6		mg/kg
R72C25	1-1.5	11/14/03	Yes	01-SS-[R72C25]-C2_11/14/03_1	7439-92-1	Lead	9.0		mg/kg
R72C26	1-1.5	11/14/03	Yes	01-SS-[R72C26]-C2_11/14/03_1	7440-38-2	Arsenic	17.6		mg/kg
R72C26	1-1.5	11/14/03	Yes	01-SS-[R72C26]-C2_11/14/03_1	7439-92-1	Lead	47.4		mg/kg
R72C27	1-1.5	11/14/03	Yes	01-SS-[R72C27]-C2_11/14/03_1	7440-38-2	Arsenic	19.8		mg/kg
R72C27	1-1.5	11/14/03	Yes	01-SS-[R72C27]-C2_11/14/03_1	7439-92-1	Lead	37.8		mg/kg
R72C28	1-1.5	11/14/03	Yes	01-SS-[R72C28]-C2_11/14/03_1	7440-38-2	Arsenic	5.6		mg/kg
R72C28	1-1.5	11/14/03	Yes	01-SS-[R72C28]-C2_11/14/03_1	7439-92-1	Lead	10.8		mg/kg
R72C29	1-1.5	11/14/03	Yes	01-SS-[R72C29]-C2_11/14/03_1	7440-38-2	Arsenic	6.6		mg/kg
R72C29	1-1.5	11/14/03	Yes	01-SS-[R72C29]-C2_11/14/03_1	7439-92-1	Lead	8.6		mg/kg
R72C30	1-1.5	11/14/03	Yes	01-SS-[R72C30]-C2_11/14/03_1	7440-38-2	Arsenic	2.5		mg/kg
R72C30	1-1.5	11/14/03	Yes	01-SS-[R72C30]-C2_11/14/03_1	7439-92-1	Lead	3.8		mg/kg
R72C33	1-1.5	02/24/04	Yes	1-R72C33_02/24/04_1	7440-38-2	Arsenic	10.5		mg/kg
R72C33	1-1.5	02/24/04	Yes	1-R72C33_02/24/04_1	7439-92-1	Lead	6.5		mg/kg
R72C34	1-1.5	11/20/03	Yes	01-SS-[R72C34]-C2_11/20/03_1	7440-38-2	Arsenic	11.5		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R72C34	1-1.5	11/20/03	Yes	01-SS-[R72C34]-C2_11/20/03_1	7439-92-1	Lead	9.3		mg/kg
R73C16	1-1.5	07/11/02	Yes	01-SS-[75-R73C16]-D1-050	7440-38-2	Arsenic	1.9		mg/kg
R73C16	1-1.5	07/11/02	Yes	01-SS-[75-R73C16]-D1-050	7439-92-1	Lead	5.5		mg/kg
R73C17	1-1.5	07/11/02	Yes	01-SS-[75-R73C17]-D1-050	7440-38-2	Arsenic	2.2		mg/kg
R73C17	1-1.5	07/11/02	Yes	01-SS-[75-R73C17]-D1-050	7439-92-1	Lead	2.7		mg/kg
R73C18	1-1.5	07/11/02	Yes	01-SS-[75-R73C18]-D1-050	7440-38-2	Arsenic	3.1		mg/kg
R73C18	1-1.5	07/11/02	Yes	01-SS-[75-R73C18]-D1-050	7439-92-1	Lead	4.3		mg/kg
R73C19	1-1.5	07/10/02	Yes	01-SS-[75-R73C19]-D1-050	7440-38-2	Arsenic	10.1		mg/kg
R73C19	1-1.5	07/10/02	Yes	01-SS-[75-R73C19]-D1-050	7439-92-1	Lead	6.8		mg/kg
R73C20	1-1.5	07/10/02	Yes	01-SS-[75-R73C20]-D1-050	7440-38-2	Arsenic	8.4		mg/kg
R73C20	1-1.5	07/10/02	Yes	01-SS-[75-R73C20]-D1-050	7439-92-1	Lead	5.1		mg/kg
R73C21	1-1.5	07/10/02	Yes	01-SS-[75-R73C21]-D1-050	7440-38-2	Arsenic	5.2		mg/kg
R73C21	1-1.5	07/10/02	Yes	01-SS-[75-R73C21]-D1-050	7439-92-1	Lead	4.9		mg/kg
R73C22	1-1.5	07/10/02	Yes	01-SS-[75-R73C22]-D1-050	7440-38-2	Arsenic	6.0		mg/kg
R73C22	1-1.5	07/10/02	Yes	01-SS-[75-R73C22]-D1-050	7439-92-1	Lead	4.6		mg/kg
R73C23	1-1.5	03/03/04	Yes	01-R73C23_03/03/04_1	7440-38-2	Arsenic	7.2		mg/kg
R73C23	1-1.5	03/03/04	Yes	01-R73C23_03/03/04_1	7439-92-1	Lead	6.4		mg/kg
R73C24	1-1.5	11/14/03	Yes	01-SS-[R73C24]-C2_11/14/03_1	7440-38-2	Arsenic	3.7		mg/kg
R73C24	1-1.5	11/14/03	Yes	01-SS-[R73C24]-C2_11/14/03_1	7439-92-1	Lead	5.4		mg/kg
R73C25	1-1.5	03/03/04	Yes	01-R73C25_03/03/04_1	7440-38-2	Arsenic	6.7		mg/kg
R73C25	1-1.5	03/03/04	Yes	01-R73C25_03/03/04_1	7439-92-1	Lead	8.1		mg/kg
R73C26	1-1.5	11/14/03	Yes	01-SS-[R73C26]-C2_11/14/03_1	7440-38-2	Arsenic	7.4		mg/kg
R73C26	1-1.5	11/14/03	Yes	01-SS-[R73C26]-C2_11/14/03_1	7439-92-1	Lead	4.3		mg/kg
R73C27	1-1.5	11/14/03	Yes	01-SS-[R73C27]-C2_11/14/03_1	7440-38-2	Arsenic	10.3		mg/kg
R73C27	1-1.5	11/14/03	Yes	01-SS-[R73C27]-C2_11/14/03_1	7439-92-1	Lead	16.0		mg/kg
R73C28	1-1.5	11/14/03	Yes	01-SS-[R73C28]-C2_11/14/03_1	7440-38-2	Arsenic	7.1		mg/kg
R73C28	1-1.5	11/14/03	Yes	01-SS-[R73C28]-C2_11/14/03_1	7439-92-1	Lead	9.7		mg/kg
R73C29	1-1.5	11/14/03	Yes	01-SS-[R73C29]-C2_11/14/03_1	7440-38-2	Arsenic	4.4		mg/kg
R73C29	1-1.5	11/14/03	Yes	01-SS-[R73C29]-C2_11/14/03_1	7439-92-1	Lead	4.8		mg/kg
R73C30	1-1.5	11/14/03	Yes	01-SS-[R73C30]-C2_AVG_11/14/03_1	7440-38-2	Arsenic	8.7		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R73C30	1-1.5	11/14/03	Yes	01-SS-[R73C30]-C2_AVG_11/14/03_1	7439-92-1	Lead	11.6		mg/kg
R73C31	1-1.5	11/14/03	Yes	01-SS-[R73C31]-C2_11/14/03_1	7440-38-2	Arsenic	5.1		mg/kg
R73C31	1-1.5	11/14/03	Yes	01-SS-[R73C31]-C2_11/14/03_1	7439-92-1	Lead	6.7		mg/kg
R73C32	1-1.5	11/14/03	Yes	01-SS-[R73C32]-C2_11/14/03_1	7440-38-2	Arsenic	9.3		mg/kg
R73C32	1-1.5	11/14/03	Yes	01-SS-[R73C32]-C2_11/14/03_1	7439-92-1	Lead	9.6		mg/kg
R73C34	1-1.5	11/20/03	Yes	01-SS-[R73C34]-C2_11/20/03_1	7440-38-2	Arsenic	24.3		mg/kg
R73C34	1-1.5	11/20/03	Yes	01-SS-[R73C34]-C2_11/20/03_1	7439-92-1	Lead	9.8		mg/kg
R74C17	1-1.5	07/11/02	Yes	01-SS-[75-R74C17]-D1-050	7440-38-2	Arsenic	2.7		mg/kg
R74C17	1-1.5	07/11/02	Yes	01-SS-[75-R74C17]-D1-050	7439-92-1	Lead	5.0		mg/kg
R74C18	1-1.5	07/11/02	Yes	01-SS-[75-R74C18]-D1-050	7440-38-2	Arsenic	3.7		mg/kg
R74C18	1-1.5	07/11/02	Yes	01-SS-[75-R74C18]-D1-050	7439-92-1	Lead	4.4		mg/kg
R74C19	1-1.5	07/11/02	Yes	01-SS-[75-R74C19]-D1-050	7440-38-2	Arsenic	3.2		mg/kg
R74C19	1-1.5	07/11/02	Yes	01-SS-[75-R74C19]-D1-050	7439-92-1	Lead	3.3		mg/kg
R74C20	1-1.5	07/10/02	Yes	01-SS-[75-R74C20]-D1-050	7440-38-2	Arsenic	5.6		mg/kg
R74C20	1-1.5	07/10/02	Yes	01-SS-[75-R74C20]-D1-050	7439-92-1	Lead	3.8		mg/kg
R74C21	1-1.5	07/10/02	Yes	01-SS-[75-R74C21]-D1-050	7440-38-2	Arsenic	3.2		mg/kg
R74C21	1-1.5	07/10/02	Yes	01-SS-[75-R74C21]-D1-050	7439-92-1	Lead	3.1		mg/kg
R74C22	1-1.5	07/10/02	Yes	01-SS-[75-R74C22]-D1-050	7440-38-2	Arsenic	8.1		mg/kg
R74C22	1-1.5	07/10/02	Yes	01-SS-[75-R74C22]-D1-050	7439-92-1	Lead	5.3		mg/kg
R74C23	1-1.5	07/10/02	Yes	01-SS-[75-R74C23]-D1-050	7440-38-2	Arsenic	5.3		mg/kg
R74C23	1-1.5	07/10/02	Yes	01-SS-[75-R74C23]-D1-050	7439-92-1	Lead	4.7		mg/kg
R74C24	1-1.5	07/10/02	Yes	01-SS-[75-R74C24]-D1-050	7440-38-2	Arsenic	2.6		mg/kg
R74C24	1-1.5	07/10/02	Yes	01-SS-[75-R74C24]-D1-050	7439-92-1	Lead	2.3		mg/kg
R74C25	1-1.5	07/10/02	Yes	01-SS-[75-R74C25]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R74C25	1-1.5	07/10/02	Yes	01-SS-[75-R74C25]-D1-050	7439-92-1	Lead	2.5		mg/kg
R74C26	1-1.5	11/14/03	Yes	01-SS-[R74C26]-C2_11/14/03_1	7440-38-2	Arsenic	9.6		mg/kg
R74C26	1-1.5	11/14/03	Yes	01-SS-[R74C26]-C2_11/14/03_1	7439-92-1	Lead	86.0		mg/kg
R74C27	1-1.5	11/14/03	Yes	01-SS-[R74C27]-C2_11/14/03_1	7440-38-2	Arsenic	8.6		mg/kg
R74C27	1-1.5	11/14/03	Yes	01-SS-[R74C27]-C2_11/14/03_1	7439-92-1	Lead	9.2		mg/kg
R74C28	1-1.5	11/14/03	Yes	01-SS-[R74C28]-C2_11/14/03_1	7440-38-2	Arsenic	9.1		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R74C28	1-1.5	11/14/03	Yes	01-SS-[R74C28]-C2_11/14/03_1	7439-92-1	Lead	13.1		mg/kg
R74C29	1-1.5	11/14/03	Yes	01-SS-[R74C29]-C2_11/14/03_1	7440-38-2	Arsenic	11.0		mg/kg
R74C29	1-1.5	11/14/03	Yes	01-SS-[R74C29]-C2_11/14/03_1	7439-92-1	Lead	19.7		mg/kg
R74C30	1-1.5	11/14/03	Yes	01-SS-[R74C30]-C2_11/14/03_1	7440-38-2	Arsenic	10.3		mg/kg
R74C30	1-1.5	11/14/03	Yes	01-SS-[R74C30]-C2_11/14/03_1	7439-92-1	Lead	16.1		mg/kg
R74C31	1-1.5	11/12/03	Yes	01-SS-[R74C31]-C2_11/12/03_1	7440-38-2	Arsenic	6.5		mg/kg
R74C31	1-1.5	11/12/03	Yes	01-SS-[R74C31]-C2_11/12/03_1	7439-92-1	Lead	9.6		mg/kg
R74C32	1-1.5	11/12/03	Yes	01-SS-[R74C32]-C2_11/12/03_1	7440-38-2	Arsenic	6.4		mg/kg
R74C32	1-1.5	11/12/03	Yes	01-SS-[R74C32]-C2_11/12/03_1	7439-92-1	Lead	8.6		mg/kg
R74C33	1-1.5	11/12/03	Yes	01-SS-[R74C33]-C2_11/12/03_1	7440-38-2	Arsenic	6.6		mg/kg
R74C33	1-1.5	11/12/03	Yes	01-SS-[R74C33]-C2_11/12/03_1	7439-92-1	Lead	6.1		mg/kg
R74C34	1-1.5	11/12/03	Yes	01-SS-[R74C34]-C2_AVG_11/12/03_1	7440-38-2	Arsenic	8.2		mg/kg
R74C34	1-1.5	11/12/03	Yes	01-SS-[R74C34]-C2_AVG_11/12/03_1	7439-92-1	Lead	11.1		mg/kg
R75C19	1-1.5	07/11/02	Yes	01-SS-[75-R75C19]-D1-050	7440-38-2	Arsenic	3.6		mg/kg
R75C19	1-1.5	07/11/02	Yes	01-SS-[75-R75C19]-D1-050	7439-92-1	Lead	6.1		mg/kg
R75C20	1-1.5	07/10/02	Yes	01-SS-[75-R75C20]-D1-050	7440-38-2	Arsenic	6.8		mg/kg
R75C20	1-1.5	07/10/02	Yes	01-SS-[75-R75C20]-D1-050	7439-92-1	Lead	4.6		mg/kg
R75C21	1-1.5	07/10/02	Yes	01-SS-[75-R75C21]-D1-050	7440-38-2	Arsenic	5.1		mg/kg
R75C21	1-1.5	07/10/02	Yes	01-SS-[75-R75C21]-D1-050	7439-92-1	Lead	3.4		mg/kg
R75C22	1-1.5	07/10/02	Yes	01-SS-[75-R75C22]-D1-050	7440-38-2	Arsenic	5.8		mg/kg
R75C22	1-1.5	07/10/02	Yes	01-SS-[75-R75C22]-D1-050	7439-92-1	Lead	4.9		mg/kg
R75C23	1-1.5	07/10/02	Yes	01-SS-[75-R75C23]-D1-050	7440-38-2	Arsenic	13.5		mg/kg
R75C23	1-1.5	07/10/02	Yes	01-SS-[75-R75C23]-D1-050	7439-92-1	Lead	21.8		mg/kg
R75C24	1-1.5	07/10/02	Yes	01-SS-[75-R75C24]-D1-050	7440-38-2	Arsenic	59.9		mg/kg
R75C24	1-1.5	07/10/02	Yes	01-SS-[75-R75C24]-D1-050	7439-92-1	Lead	56.4		mg/kg
R75C25	1-1.5	06/25/02	Yes	01-SS-[75-R75C25]-D1-050	7440-38-2	Arsenic	2.9		mg/kg
R75C25	1-1.5	06/25/02	Yes	01-SS-[75-R75C25]-D1-050	7439-92-1	Lead	4.5		mg/kg
R75C26	1-1.5	06/25/02	Yes	01-SS-[75-R75C26]-D1-050	7440-38-2	Arsenic	5.4		mg/kg
R75C26	1-1.5	06/25/02	Yes	01-SS-[75-R75C26]-D1-050	7439-92-1	Lead	7.3		mg/kg
R75C27	1-1.5	06/25/02	Yes	01-SS-[75-R75C27]-D1-050	7440-38-2	Arsenic	6.9		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R75C27	1-1.5	06/25/02	Yes	01-SS-[75-R75C27]-D1-050	7439-92-1	Lead	5.6		mg/kg
R75C28	1-1.5	06/25/02	Yes	01-SS-[75-R75C28]-D1-050	7440-38-2	Arsenic	12.0		mg/kg
R75C28	1-1.5	06/25/02	Yes	01-SS-[75-R75C28]-D1-050	7439-92-1	Lead	19.0		mg/kg
R75C29	1-1.5	11/12/03	Yes	01-SS-[R75C29]-C2_11/12/03_1	7440-38-2	Arsenic	5.1		mg/kg
R75C29	1-1.5	11/12/03	Yes	01-SS-[R75C29]-C2_11/12/03_1	7439-92-1	Lead	8.3		mg/kg
R75C30	1-1.5	11/12/03	Yes	01-SS-[R75C30]-C2_11/12/03_1	7440-38-2	Arsenic	5.1		mg/kg
R75C30	1-1.5	11/12/03	Yes	01-SS-[R75C30]-C2_11/12/03_1	7439-92-1	Lead	10.3		mg/kg
R75C31	1-1.5	11/12/03	Yes	01-SS-[R75C31]-C2_11/12/03_1	7440-38-2	Arsenic	6.4		mg/kg
R75C31	1-1.5	11/12/03	Yes	01-SS-[R75C31]-C2_11/12/03_1	7439-92-1	Lead	9.6		mg/kg
R75C32	1-1.5	11/12/03	Yes	01-SS-[R75C32]-C2_11/12/03_1	7440-38-2	Arsenic	9.0		mg/kg
R75C32	1-1.5	11/12/03	Yes	01-SS-[R75C32]-C2_11/12/03_1	7439-92-1	Lead	9.5		mg/kg
R75C33	1-1.5	11/12/03	Yes	01-SS-[R75C33]-C2_11/12/03_1	7440-38-2	Arsenic	7.2		mg/kg
R75C33	1-1.5	11/12/03	Yes	01-SS-[R75C33]-C2_11/12/03_1	7439-92-1	Lead	11.9		mg/kg
R75C34	1-1.5	11/12/03	Yes	01-SS-[R75C34]-C2_11/12/03_1	7440-38-2	Arsenic	7.4		mg/kg
R75C34	1-1.5	11/12/03	Yes	01-SS-[R75C34]-C2_11/12/03_1	7439-92-1	Lead	10.7		mg/kg
R75C35	1-1.5	11/21/03	Yes	01-SS-[R75C35]-C2_11/21/03_1	7440-38-2	Arsenic	55.0		mg/kg
R75C35	1-1.5	11/21/03	Yes	01-SS-[R75C35]-C2_11/21/03_1	7439-92-1	Lead	16.6		mg/kg
R75C36	1-1.5	11/21/03	Yes	01-SS-[R75C36]-C2_11/21/03_1	7440-38-2	Arsenic	16.4		mg/kg
R75C36	1-1.5	11/21/03	Yes	01-SS-[R75C36]-C2_11/21/03_1	7439-92-1	Lead	17.2		mg/kg
R76C22	1-1.5	07/10/02	Yes	01-SS-[75-R76C22]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R76C22	1-1.5	07/10/02	Yes	01-SS-[75-R76C22]-D1-050	7439-92-1	Lead	2.6		mg/kg
R76C23	1-1.5	07/10/02	Yes	01-SS-[75-R76C23]-D1-050	7440-38-2	Arsenic	6.4		mg/kg
R76C23	1-1.5	07/10/02	Yes	01-SS-[75-R76C23]-D1-050	7439-92-1	Lead	4.8		mg/kg
R76C24	1-1.5	06/25/02	Yes	01-SS-[75-R76C24]-D1-050	7440-38-2	Arsenic	15.0		mg/kg
R76C24	1-1.5	06/25/02	Yes	01-SS-[75-R76C24]-D1-050	7439-92-1	Lead	18.1		mg/kg
R76C25	1-1.5	06/25/02	Yes	01-SS-[75-R76C25]-D1-050	7440-38-2	Arsenic	12.9		mg/kg
R76C25	1-1.5	06/25/02	Yes	01-SS-[75-R76C25]-D1-050	7439-92-1	Lead	6.4		mg/kg
R76C26	1-1.5	06/25/02	Yes	01-SS-[75-R76C26]-D1-050	7440-38-2	Arsenic	2.8		mg/kg
R76C26	1-1.5	06/25/02	Yes	01-SS-[75-R76C26]-D1-050	7439-92-1	Lead	4.4		mg/kg
R76C27	1-1.5	06/25/02	Yes	01-SS-[75-R76C27]-D1-050	7440-38-2	Arsenic	4.7		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R76C27	1-1.5	06/25/02	Yes	01-SS-[75-R76C27]-D1-050	7439-92-1	Lead	6.2		mg/kg
R76C28	1-1.5	06/25/02	Yes	01-SS-[75-R76C28]-D1-050	7440-38-2	Arsenic	2.5		mg/kg
R76C28	1-1.5	06/25/02	Yes	01-SS-[75-R76C28]-D1-050	7439-92-1	Lead	4.3		mg/kg
R76C29	1-1.5	06/25/02	Yes	01-SS-[75-R76C29]-D1-050	7440-38-2	Arsenic	3.3		mg/kg
R76C29	1-1.5	06/25/02	Yes	01-SS-[75-R76C29]-D1-050	7439-92-1	Lead	6.2		mg/kg
R76C30	1-1.5	06/25/02	Yes	01-SS-[75-R76C30]-D1-050	7440-38-2	Arsenic	4.3		mg/kg
R76C30	1-1.5	06/25/02	Yes	01-SS-[75-R76C30]-D1-050	7439-92-1	Lead	5.8		mg/kg
R76C31	1-1.5	11/12/03	Yes	01-SS-[R76C31]-C2_11/12/03_1	7440-38-2	Arsenic	3.4		mg/kg
R76C31	1-1.5	11/12/03	Yes	01-SS-[R76C31]-C2_11/12/03_1	7439-92-1	Lead	3.9		mg/kg
R76C32	1-1.5	11/12/03	Yes	01-SS-[R76C32]-C2_11/12/03_1	7440-38-2	Arsenic	10.0		mg/kg
R76C32	1-1.5	11/12/03	Yes	01-SS-[R76C32]-C2_11/12/03_1	7439-92-1	Lead	16.7		mg/kg
R76C33	1-1.5	11/12/03	Yes	01-SS-[R76C33]-C2_11/12/03_1	7440-38-2	Arsenic	7.9		mg/kg
R76C33	1-1.5	11/12/03	Yes	01-SS-[R76C33]-C2_11/12/03_1	7439-92-1	Lead	10.9		mg/kg
R76C34	1-1.5	11/10/03	Yes	01-SS-[R76C34]-C2_11/10/03_1	7440-38-2	Arsenic	15.7		mg/kg
R76C34	1-1.5	11/10/03	Yes	01-SS-[R76C34]-C2_11/10/03_1	7439-92-1	Lead	23.8		mg/kg
R76C35	1-1.5	11/10/03	Yes	01-SS-[R76C35]-C2_11/10/03_1	7440-38-2	Arsenic	13.4		mg/kg
R76C35	1-1.5	11/10/03	Yes	01-SS-[R76C35]-C2_11/10/03_1	7439-92-1	Lead	11.3		mg/kg
R76C36	1-1.5	11/10/03	Yes	01-SS-[R76C36]-C2_11/10/03_1	7440-38-2	Arsenic	7.8		mg/kg
R76C36	1-1.5	11/10/03	Yes	01-SS-[R76C36]-C2_11/10/03_1	7439-92-1	Lead	11.4		mg/kg
R77C25	1-1.5	06/25/02	Yes	01-SS-[75-R77C25]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R77C25	1-1.5	06/25/02	Yes	01-SS-[75-R77C25]-D1-050	7439-92-1	Lead	4.6		mg/kg
R77C26	1-1.5	06/25/02	Yes	01-SS-[75-R77C26]-D1-050	7440-38-2	Arsenic	8.6		mg/kg
R77C26	1-1.5	06/25/02	Yes	01-SS-[75-R77C26]-D1-050	7439-92-1	Lead	7.4		mg/kg
R77C27	1-1.5	06/25/02	Yes	01-SS-[75-R77C27]-D1-050	7440-38-2	Arsenic	22.1		mg/kg
R77C27	1-1.5	06/25/02	Yes	01-SS-[75-R77C27]-D1-050	7439-92-1	Lead	80.1		mg/kg
R77C28	1-1.5	06/25/02	Yes	01-SS-[75-R77C28]-D1-050	7440-38-2	Arsenic	5.1		mg/kg
R77C28	1-1.5	06/25/02	Yes	01-SS-[75-R77C28]-D1-050	7439-92-1	Lead	5.1		mg/kg
R77C29	1-1.5	06/25/02	Yes	01-SS-[75-R77C29]-D1-050	7440-38-2	Arsenic	2.8		mg/kg
R77C29	1-1.5	06/25/02	Yes	01-SS-[75-R77C29]-D1-050	7439-92-1	Lead	4.4		mg/kg
R77C30	1-1.5	06/25/02	Yes	01-SS-[75-R77C30]-D1-050	7440-38-2	Arsenic	6.4		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R77C30	1-1.5	06/25/02	Yes	01-SS-[75-R77C30]-D1-050	7439-92-1	Lead	20.3		mg/kg
R77C31	1-1.5	06/25/02	Yes	01-SS-[75-R77C31]-D1-050	7440-38-2	Arsenic	4.7		mg/kg
R77C31	1-1.5	06/25/02	Yes	01-SS-[75-R77C31]-D1-050	7439-92-1	Lead	13.8		mg/kg
R77C32	1-1.5	07/09/02	Yes	01-SS-[75-R77C32]-D1-050	7440-38-2	Arsenic	3.6		mg/kg
R77C32	1-1.5	07/09/02	Yes	01-SS-[75-R77C32]-D1-050	7439-92-1	Lead	2.4		mg/kg
R77C33	1-1.5	03/03/04	Yes	01-R77C33_03/03/04_1	7440-38-2	Arsenic	13.0		mg/kg
R77C33	1-1.5	03/03/04	Yes	01-R77C33_03/03/04_1	7439-92-1	Lead	18.7		mg/kg
R77C33	1-1.5	07/09/02	Yes	01-SS-[75-R77C33]-D1-050	7440-38-2	Arsenic	10.4		mg/kg
R77C33	1-1.5	07/09/02	Yes	01-SS-[75-R77C33]-D1-050	7439-92-1	Lead	6.0		mg/kg
R77C34	1-1.5	11/10/03	Yes	01-SS-[R77C34]-C2_11/10/03_1	7440-38-2	Arsenic	12.1		mg/kg
R77C34	1-1.5	11/10/03	Yes	01-SS-[R77C34]-C2_11/10/03_1	7439-92-1	Lead	22.5		mg/kg
R77C35	1-1.5	11/10/03	Yes	01-SS-[R77C35]-C2_11/10/03_1	7440-38-2	Arsenic	4.0		mg/kg
R77C35	1-1.5	11/10/03	Yes	01-SS-[R77C35]-C2_11/10/03_1	7439-92-1	Lead	5.9		mg/kg
R77C36	1-1.5	11/10/03	Yes	01-SS-[R77C36]-C2_11/10/03_1	7440-38-2	Arsenic	8.5		mg/kg
R77C36	1-1.5	11/10/03	Yes	01-SS-[R77C36]-C2_11/10/03_1	7439-92-1	Lead	14.1		mg/kg
R77C37	1-1.5	11/10/03	Yes	01-SS-[R77C37]-C2_11/10/03_1	7440-38-2	Arsenic	5.5		mg/kg
R77C37	1-1.5	11/10/03	Yes	01-SS-[R77C37]-C2_11/10/03_1	7439-92-1	Lead	9.3		mg/kg
R78C27	1-1.5	06/25/02	Yes	01-SS-[75-R78C27]-D1-050	7440-38-2	Arsenic	2.0		mg/kg
R78C27	1-1.5	06/25/02	Yes	01-SS-[75-R78C27]-D1-050	7439-92-1	Lead	4.0		mg/kg
R78C28	1-1.5	06/25/02	Yes	01-SS-[75-R78C28]-D1-050	7440-38-2	Arsenic	2.3		mg/kg
R78C28	1-1.5	06/25/02	Yes	01-SS-[75-R78C28]-D1-050	7439-92-1	Lead	3.7		mg/kg
R78C29	1-1.5	06/25/02	Yes	01-SS-[75-R78C29]-D1-050	7440-38-2	Arsenic	4.2		mg/kg
R78C29	1-1.5	06/25/02	Yes	01-SS-[75-R78C29]-D1-050	7439-92-1	Lead	6.8		mg/kg
R78C30	1-1.5	06/25/02	Yes	01-SS-[75-R78C30]-D1-050	7440-38-2	Arsenic	39.6		mg/kg
R78C30	1-1.5	06/25/02	Yes	01-SS-[75-R78C30]-D1-050	7439-92-1	Lead	63.1		mg/kg
R78C31	1-1.5	07/09/02	Yes	01-SS-[75-R78C31]-D1-050	7440-38-2	Arsenic	3.1		mg/kg
R78C31	1-1.5	07/09/02	Yes	01-SS-[75-R78C31]-D1-050	7439-92-1	Lead	2.3		mg/kg
R78C32	1-1.5	07/09/02	Yes	01-SS-[75-R78C32]-D1-050	7440-38-2	Arsenic	3.6		mg/kg
R78C32	1-1.5	07/09/02	Yes	01-SS-[75-R78C32]-D1-050	7439-92-1	Lead	2.2		mg/kg
R78C33	1-1.5	07/09/02	Yes	01-SS-[75-R78C33]-D1-050	7440-38-2	Arsenic	5.4		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R78C33	1-1.5	07/09/02	Yes	01-SS-[75-R78C33]-D1-050	7439-92-1	Lead	3.3		mg/kg
R78C34	1-1.5	07/09/02	Yes	01-SS-[75-R78C34]-D1-050	7440-38-2	Arsenic	3.4		mg/kg
R78C34	1-1.5	07/09/02	Yes	01-SS-[75-R78C34]-D1-050	7439-92-1	Lead	2.0		mg/kg
R78C35	1-1.5	07/09/02	Yes	01-SS-[75-R78C35]-D1-050	7440-38-2	Arsenic	2.8		mg/kg
R78C35	1-1.5	07/09/02	Yes	01-SS-[75-R78C35]-D1-050	7439-92-1	Lead	2.2		mg/kg
R78C36	1-1.5	11/10/03	Yes	01-SS-[R78C36]-C2_11/10/03_1	7440-38-2	Arsenic	4.1		mg/kg
R78C36	1-1.5	11/10/03	Yes	01-SS-[R78C36]-C2_11/10/03_1	7439-92-1	Lead	6.0		mg/kg
R78C37	1-1.5	11/10/03	Yes	01-SS-[R78C37]-C2_11/10/03_1	7440-38-2	Arsenic	4.2		mg/kg
R78C37	1-1.5	11/10/03	Yes	01-SS-[R78C37]-C2_11/10/03_1	7439-92-1	Lead	4.6		mg/kg
R79C30	1-1.5	06/25/02	Yes	01-SS-[75-R79C30]-D1-050	7440-38-2	Arsenic	3.8		mg/kg
R79C30	1-1.5	06/25/02	Yes	01-SS-[75-R79C30]-D1-050	7439-92-1	Lead	6.6		mg/kg
R79C31	1-1.5	07/09/02	Yes	01-SS-[75-R79C31]-D1-050	7440-38-2	Arsenic	3.1		mg/kg
R79C31	1-1.5	07/09/02	Yes	01-SS-[75-R79C31]-D1-050	7439-92-1	Lead	1.9		mg/kg
R79C32	1-1.5	07/09/02	Yes	01-SS-[75-R79C32]-D1-050	7440-38-2	Arsenic	2.7		mg/kg
R79C32	1-1.5	07/09/02	Yes	01-SS-[75-R79C32]-D1-050	7439-92-1	Lead	3.4		mg/kg
R79C33	1-1.5	07/09/02	Yes	01-SS-[75-R79C33]-D1-050	7440-38-2	Arsenic	5.3		mg/kg
R79C33	1-1.5	07/09/02	Yes	01-SS-[75-R79C33]-D1-050	7439-92-1	Lead	4.5		mg/kg
R79C34	1-1.5	07/09/02	Yes	01-SS-[75-R79C34]-D1-050	7440-38-2	Arsenic	3.8		mg/kg
R79C34	1-1.5	07/09/02	Yes	01-SS-[75-R79C34]-D1-050	7439-92-1	Lead	2.1		mg/kg
R79C35	1-1.5	07/09/02	Yes	01-SS-[75-R79C35]-D1-050	7440-38-2	Arsenic	3.8		mg/kg
R79C35	1-1.5	07/09/02	Yes	01-SS-[75-R79C35]-D1-050	7439-92-1	Lead	2.3		mg/kg
R79C36	1-1.5	07/09/02	Yes	01-SS-[75-R79C36]-D1-050	7440-38-2	Arsenic	3.4		mg/kg
R79C36	1-1.5	07/09/02	Yes	01-SS-[75-R79C36]-D1-050	7439-92-1	Lead	2.5		mg/kg
R79C37	1-1.5	07/09/02	Yes	01-SS-[75-R79C37]-D1-050	7440-38-2	Arsenic	5.5		mg/kg
R79C37	1-1.5	07/09/02	Yes	01-SS-[75-R79C37]-D1-050	7439-92-1	Lead	3.3		mg/kg
R79C38	1-1.5	07/09/02	Yes	01-SS-[75-R79C38]-D1-050	7440-38-2	Arsenic	5.1		mg/kg
R79C38	1-1.5	07/09/02	Yes	01-SS-[75-R79C38]-D1-050	7439-92-1	Lead	3.9		mg/kg
R79C38	1-1.5	11/10/03	Yes	01-SS-[R79C38]-C2_11/10/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R79C38	1-1.5	11/10/03	Yes	01-SS-[R79C38]-C2_11/10/03_1	7439-92-1	Lead	3.1		mg/kg
R79C39	1-1.5	02/26/04	Yes	01-R79C39_02/26/04_1	7440-38-2	Arsenic	12.5		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R79C39	1-1.5	02/26/04	Yes	01-R79C39_02/26/04_1	7439-92-1	Lead	9.6		mg/kg
R80C32	1-1.5	07/09/02	Yes	01-SS-[75-R80C32]-D1-050	7440-38-2	Arsenic	2.9		mg/kg
R80C32	1-1.5	07/09/02	Yes	01-SS-[75-R80C32]-D1-050	7439-92-1	Lead	2.2		mg/kg
R80C33	1-1.5	07/09/02	Yes	01-SS-[75-R80C33]-D1-050	7440-38-2	Arsenic	2.2		mg/kg
R80C33	1-1.5	07/09/02	Yes	01-SS-[75-R80C33]-D1-050	7439-92-1	Lead	1.9	U	mg/kg
R80C34	1-1.5	07/09/02	Yes	01-SS-[75-R80C34]-D1-050	7440-38-2	Arsenic	25.2		mg/kg
R80C34	1-1.5	07/09/02	Yes	01-SS-[75-R80C34]-D1-050	7439-92-1	Lead	67.7		mg/kg
R80C35	1-1.5	07/09/02	Yes	01-SS-[75-R80C35]-D1-050	7440-38-2	Arsenic	6.9		mg/kg
R80C35	1-1.5	07/09/02	Yes	01-SS-[75-R80C35]-D1-050	7439-92-1	Lead	3.9		mg/kg
R80C36	1-1.5	07/09/02	Yes	01-SS-[75-R80C36]-D1-050	7440-38-2	Arsenic	5.3		mg/kg
R80C36	1-1.5	07/09/02	Yes	01-SS-[75-R80C36]-D1-050	7439-92-1	Lead	2.6		mg/kg
R80C37	1-1.5	07/09/02	Yes	01-SS-[75-R80C37]-D1-050	7440-38-2	Arsenic	5.9		mg/kg
R80C37	1-1.5	07/09/02	Yes	01-SS-[75-R80C37]-D1-050	7439-92-1	Lead	4.6		mg/kg
R80C38	1-1.5	07/09/02	Yes	01-SS-[75-R80C38]-D1-050	7440-38-2	Arsenic	4.1		mg/kg
R80C38	1-1.5	07/09/02	Yes	01-SS-[75-R80C38]-D1-050	7439-92-1	Lead	2.6		mg/kg
R80C39	1-1.5	07/02/02	Yes	01-SS-[75-R80C39]-D1-050	7440-38-2	Arsenic	16.8		mg/kg
R80C39	1-1.5	07/02/02	Yes	01-SS-[75-R80C39]-D1-050	7439-92-1	Lead	13.9		mg/kg
R81C35	1-1.5	07/09/02	Yes	01-SS-[75-R81C35]-D1-050	7440-38-2	Arsenic	5.9		mg/kg
R81C35	1-1.5	07/09/02	Yes	01-SS-[75-R81C35]-D1-050	7439-92-1	Lead	7.3		mg/kg
R81C36	1-1.5	07/09/02	Yes	01-SS-[75-R81C36]-D1-050	7440-38-2	Arsenic	6.2		mg/kg
R81C36	1-1.5	07/09/02	Yes	01-SS-[75-R81C36]-D1-050	7439-92-1	Lead	4.7		mg/kg
R81C37	1-1.5	07/09/02	Yes	01-SS-[75-R81C37]-D1-050	7440-38-2	Arsenic	15.0		mg/kg
R81C37	1-1.5	07/09/02	Yes	01-SS-[75-R81C37]-D1-050	7439-92-1	Lead	4.6		mg/kg
R81C38	1-1.5	07/09/02	Yes	01-SS-[75-R81C38]-D1-050	7440-38-2	Arsenic	4.2		mg/kg
R81C38	1-1.5	07/09/02	Yes	01-SS-[75-R81C38]-D1-050	7439-92-1	Lead	3.3		mg/kg
R81C39	1-1.5	07/02/02	Yes	01-SS-[75-R81C39]-D1-050	7440-38-2	Arsenic	2.9		mg/kg
R81C39	1-1.5	07/02/02	Yes	01-SS-[75-R81C39]-D1-050	7439-92-1	Lead	4.4		mg/kg
R81C40	1-1.5	07/02/02	Yes	01-SS-[75-R81C40]-D1-050	7440-38-2	Arsenic	2.9		mg/kg
R81C40	1-1.5	07/02/02	Yes	01-SS-[75-R81C40]-D1-050	7439-92-1	Lead	4.9		mg/kg
R82C37	1-1.5	07/09/02	Yes	01-SS-[75-R82C37]-D1-050	7440-38-2	Arsenic	4.0		mg/kg

Table B.3
Sample Results for CM-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R82C37	1-1.5	07/09/02	Yes	01-SS-[75-R82C37]-D1-050	7439-92-1	Lead	2.9		mg/kg
R82C38	1-1.5	07/09/02	Yes	01-SS-[75-R82C38]-D1-050	7440-38-2	Arsenic	4.4		mg/kg
R82C38	1-1.5	07/09/02	Yes	01-SS-[75-R82C38]-D1-050	7439-92-1	Lead	2.7		mg/kg
R82C39	1-1.5	07/02/02	Yes	01-SS-[75-R82C39]-D1-050	7440-38-2	Arsenic	16.9		mg/kg
R82C39	1-1.5	07/02/02	Yes	01-SS-[75-R82C39]-D1-050	7439-92-1	Lead	18.2		mg/kg
R82C40	1-1.5	07/02/02	Yes	01-SS-[75-R82C40]-D1-050	7440-38-2	Arsenic	3.2		mg/kg
R82C40	1-1.5	07/02/02	Yes	01-SS-[75-R82C40]-D1-050	7439-92-1	Lead	4.3		mg/kg
R82C41	1-1.5	07/02/02	Yes	01-SS-[75-R82C41]-D1-050	7440-38-2	Arsenic	3.9		mg/kg
R82C41	1-1.5	07/02/02	Yes	01-SS-[75-R82C41]-D1-050	7439-92-1	Lead	4.9		mg/kg
R83C40	1-1.5	07/02/02	Yes	01-SS-[75-R83C40]-D1-050	7440-38-2	Arsenic	34.8		mg/kg
R83C40	1-1.5	07/02/02	Yes	01-SS-[75-R83C40]-D1-050	7439-92-1	Lead	22.1		mg/kg
R83C41	1-1.5	07/02/02	Yes	01-SS-[75-R83C41]-D1-050	7440-38-2	Arsenic	4.6		mg/kg
R83C41	1-1.5	07/02/02	Yes	01-SS-[75-R83C41]-D1-050	7439-92-1	Lead	5.8		mg/kg
R83C42	1-1.5	07/02/02	Yes	01-SS-[75-R83C42]-D1-050	7440-38-2	Arsenic	4.0		mg/kg
R83C42	1-1.5	07/02/02	Yes	01-SS-[75-R83C42]-D1-050	7439-92-1	Lead	5.4		mg/kg
R84C43	1-1.5	07/02/02	Yes	01-SS-[75-R84C43]-D1-050	7440-38-2	Arsenic	3.0		mg/kg
R84C43	1-1.5	07/02/02	Yes	01-SS-[75-R84C43]-D1-050	7439-92-1	Lead	4.1		mg/kg
R84C44	1-1.5	07/02/02	Yes	01-SS-[75-R84C44]-D1-050	7440-38-2	Arsenic	3.2		mg/kg
R84C44	1-1.5	07/02/02	Yes	01-SS-[75-R84C44]-D1-050	7439-92-1	Lead	4.3		mg/kg
R84C45	1-1.5	07/02/02	Yes	01-SS-[75-R84C45]-D1-050	7440-38-2	Arsenic	2.4		mg/kg
R84C45	1-1.5	07/02/02	Yes	01-SS-[75-R84C45]-D1-050	7439-92-1	Lead	2.4		mg/kg
R84C46	1-1.5	07/02/02	Yes	01-SS-[75-R84C46]-D1-050	7440-38-2	Arsenic	3.9		mg/kg
R84C46	1-1.5	07/02/02	Yes	01-SS-[75-R84C46]-D1-050	7439-92-1	Lead	4.4		mg/kg
R84C47	1-1.5	07/16/02	Yes	01-SS-[75-R84C47]-D1-050	7440-38-2	Arsenic	4.9		mg/kg
R84C47	1-1.5	07/16/02	Yes	01-SS-[75-R84C47]-D1-050	7439-92-1	Lead	5.1		mg/kg
SA5-96-42a	1.5-2	10/13/99	Yes	SA5-96-42a	7440-38-2	Arsenic	2.8		mg/kg
SA5-96-42a	1.5-2	10/13/99	Yes	SA5-96-42a	7439-92-1	Lead	4.7		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-1-B-501A	5-8	03/23/92	Yes	12-1-B-501A-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-B-501A	5-8	03/23/92	Yes	12-1-B-501A-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-B-501A	5-8	03/23/92	Yes	12-1-B-501A-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-1-B-501A	10-13	03/23/92	Yes	12-1-B-501A-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-B-501A	10-13	03/23/92	Yes	12-1-B-501A-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-B-501A	10-13	03/23/92	Yes	12-1-B-501A-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-1-B-501A	20-23	03/23/92	Yes	12-1-B-501A-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-B-501A	20-23	03/23/92	Yes	12-1-B-501A-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-B-501A	20-23	03/23/92	Yes	12-1-B-501A-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	7440-38-2	Arsenic	2.0		mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	7440-50-8	Copper	13.0	J	mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	7439-92-1	Lead	5.4	U	mg/kg
12-1-TP-501	3-6	04/15/92	Yes	12-1-TP-501-S-2	7439-97-6	Mercury	0.08	U	mg/kg
12-1-TP-504	3-6	04/15/92	Yes	12-1-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-TP-504	3-6	04/15/92	Yes	12-1-TP-504-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-TP-504	3-6	04/15/92	Yes	12-1-TP-504-S-2	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
12-4-TP-2	0-3	11/11/86	Yes	12-4-TP-2,S-1	118-96-7	2,4,6-Trinitrotoluene	0.1	U	mg/kg
12-4-TP-2	0-3	11/11/86	Yes	12-4-TP-2,S-1	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
12-4-TP-2	0-3	11/11/86	Yes	12-4-TP-2,S-1	7439-92-1	Lead	10.0		mg/kg
12-5-TP-3	0-3	04/27/87	Yes	12-5-TP-3,S-1	7439-92-1	Lead	24.0		mg/kg
12-5-TP-3	3-6	04/27/87	Yes	12-5-TP-3,S-2	7439-92-1	Lead	21.0		mg/kg
12-5-TP-501	3-6	04/17/92	Yes	12-5-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-5-TP-501	3-6	04/17/92	Yes	12-5-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-5-TP-501	3-6	04/17/92	Yes	12-5-TP-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-5-TP-501	3-6	04/17/92	Yes	12-5-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-5-TP-501	3-6	04/17/92	Yes	12-5-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-5-TP-501	3-6	04/17/92	Yes	12-5-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-5-TP-502	3-5.5	04/17/92	Yes	12-5-TP-502-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
12-5-TP-502	3-5.5	04/17/92	Yes	12-5-TP-502-S-2-DAVG	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
12-5-TP-502	3-5.5	04/17/92	Yes	12-5-TP-502-S-2-DAVG	98-95-3	Nitrobenzene	0.3	U	mg/kg
12-5-TP-502	8-10	04/17/92	Yes	12-5-TP-502-S-3-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-5-TP-502	8-10	04/17/92	Yes	12-5-TP-502-S-3-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-5-TP-502	8-10	04/17/92	Yes	12-5-TP-502-S-3-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-5-TP-503	2-4	04/17/92	Yes	12-5-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
12-5-TP-503	2-4	04/17/92	Yes	12-5-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-5-TP-503	2-4	04/17/92	Yes	12-5-TP-503-S-2	98-95-3	Nitrobenzene	0.08	U	mg/kg
12-5-TP-503	4-6	04/17/92	Yes	12-5-TP-503-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-5-TP-503	4-6	04/17/92	Yes	12-5-TP-503-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-5-TP-503	4-6	04/17/92	Yes	12-5-TP-503-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-5-TP-503	8-10	04/17/92	Yes	12-5-TP-503-S-4	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-5-TP-503	8-10	04/17/92	Yes	12-5-TP-503-S-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-5-TP-503	8-10	04/17/92	Yes	12-5-TP-503-S-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	7440-38-2	Arsenic	2.7		mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	7440-50-8	Copper	27.0		mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	7439-92-1	Lead	9.4		mg/kg
12-6-B-501	5-8	03/25/92	Yes	12-6-B-501-S-2	7439-97-6	Mercury	0.1	UJ	mg/kg
12-6-B-501	10-13	03/25/92	Yes	12-6-B-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-B-501	10-13	03/25/92	Yes	12-6-B-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-B-501	10-13	03/25/92	Yes	12-6-B-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-6-B-501	20-23	03/25/92	Yes	12-6-B-501-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-B-501	20-23	03/25/92	Yes	12-6-B-501-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-B-501	20-23	03/25/92	Yes	12-6-B-501-S-5	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-6-TP-3	0-3	04/27/87	Yes	12-6-TP-3,S-1	7439-92-1	Lead	18.0		mg/kg
12-6-TP-3	3-6	04/27/87	Yes	12-6-TP-3,S-2-DAVG	7439-92-1	Lead	35.0		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-6-TP-501	3-6	04/17/92	Yes	12-6-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-TP-501	3-6	04/17/92	Yes	12-6-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-TP-501	3-6	04/17/92	Yes	12-6-TP-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-6-TP-501	8-10	04/17/92	Yes	12-6-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-TP-501	8-10	04/17/92	Yes	12-6-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-TP-501	8-10	04/17/92	Yes	12-6-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	7440-38-2	Arsenic	23.0	J	mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	7440-50-8	Copper	15.0		mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	7439-92-1	Lead	15.0		mg/kg
12-6-TP-502	3-6	04/17/92	Yes	12-6-TP-502-S-2	7439-97-6	Mercury	0.1	U	mg/kg
12-6-TP-502	8-10	04/17/92	Yes	12-6-TP-502-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-6-TP-502	8-10	04/17/92	Yes	12-6-TP-502-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-6-TP-502	8-10	04/17/92	Yes	12-6-TP-502-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	7440-38-2	Arsenic	3.2		mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	7440-50-8	Copper	29.0		mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	7439-92-1	Lead	12.0		mg/kg
12-7-B-501	5-8	03/25/92	Yes	12-7-B-501-S-2	7439-97-6	Mercury	0.09	UJ	mg/kg
12-7-B-501	10-13	03/25/92	Yes	12-7-B-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-7-B-501	10-13	03/25/92	Yes	12-7-B-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-7-B-501	10-13	03/25/92	Yes	12-7-B-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-7-B-501	15-18	03/25/92	Yes	12-7-B-501-S-4	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-7-B-501	15-18	03/25/92	Yes	12-7-B-501-S-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-7-B-501	15-18	03/25/92	Yes	12-7-B-501-S-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-7-B-501	20-22.4	03/25/92	Yes	12-7-B-501-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-7-B-501	20-22.4	03/25/92	Yes	12-7-B-501-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-7-B-501	20-22.4	03/25/92	Yes	12-7-B-501-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-7-TP-501	3-6	04/17/92	Yes	12-7-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-7-TP-501	3-6	04/17/92	Yes	12-7-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-7-TP-501	3-6	04/17/92	Yes	12-7-TP-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-7-TP-501	8-10	04/17/92	Yes	12-7-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-7-TP-501	8-10	04/17/92	Yes	12-7-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-7-TP-501	8-10	04/17/92	Yes	12-7-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-SS-409	0-0.5	11/18/93	Yes	12-SS-409	7440-38-2	Arsenic	9.3		mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	98-95-3	Nitrobenzene	0.08	U	mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	7440-38-2	Arsenic	4.5	J	mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	7440-50-8	Copper	16.0		mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	7439-92-1	Lead	6.6	U	mg/kg
12-TP-504	0-1	04/17/92	Yes	12-TP-504-S-1-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	7440-38-2	Arsenic	1.7	J	mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	7440-50-8	Copper	11.0		mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	7439-92-1	Lead	5.0	U	mg/kg
12-TP-504	3-6	04/17/92	Yes	12-TP-504-S-2-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	7440-38-2	Arsenic	15.0	J	mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	7440-50-8	Copper	19.0		mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	7439-92-1	Lead	17.0		mg/kg
12-TP-505	0-1	04/17/92	Yes	12-TP-505-S-1-DAVG	7439-97-6	Mercury	0.1	U	mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	7440-38-2	Arsenic	17.0	J	mg/kg
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	7440-50-8	Copper	13.0		mg/kg
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	7439-92-1	Lead	22.0		mg/kg
12-TP-505	3-6	04/17/92	Yes	12-TP-505-S-2-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
BUFF-16	1-1.5	01/29/04	Yes	01-SS-[Buff-16]-D1_01/29/04_1	7440-38-2	Arsenic	54.2		mg/kg
BUFF-16	1-1.5	01/29/04	Yes	01-SS-[Buff-16]-D1_01/29/04_1	7439-92-1	Lead	74.4		mg/kg
BUFF-17	1-1.5	01/29/04	Yes	01-SS-[Buff-17]-D1_01/29/04_1	7440-38-2	Arsenic	30.8		mg/kg
BUFF-17	1-1.5	01/29/04	Yes	01-SS-[Buff-17]-D1_01/29/04_1	7439-92-1	Lead	44.9		mg/kg
BUFF-18	2-2.5	03/16/04	Yes	2-BUFF-18_03/16/04_2	7440-38-2	Arsenic	8.3		mg/kg
BUFF-18	2-2.5	03/16/04	Yes	2-BUFF-18_03/16/04_2	7439-92-1	Lead	6.8		mg/kg
BUFF-19	2-2.5	03/16/04	Yes	2-BUFF-19_03/16/04_2	7440-38-2	Arsenic	5.0		mg/kg
BUFF-19	2-2.5	03/16/04	Yes	2-BUFF-19_03/16/04_2	7439-92-1	Lead	6.5		mg/kg
BUFF-20	1-1.5	01/29/04	Yes	01-SS-[Buff-20]-D1_01/29/04_1	7440-38-2	Arsenic	35.9		mg/kg
BUFF-20	1-1.5	01/29/04	Yes	01-SS-[Buff-20]-D1_01/29/04_1	7439-92-1	Lead	56.7		mg/kg
BUFF-21	1-1.5	01/29/04	No	01-SS-[Buff-21]-D1_01/29/04_1	7439-92-1	Lead	71.7		mg/kg
BUFF-21	2-2.5	09/27/04	Yes	2-BUFF-21_09/27/04_2	7440-38-2	Arsenic	21.7		mg/kg
BUFF-22	1-1.5	01/29/04	Yes	01-SS-[Buff-22]-D1_01/29/04_1	7440-38-2	Arsenic	54.1		mg/kg
BUFF-22	1-1.5	01/29/04	Yes	01-SS-[Buff-22]-D1_01/29/04_1	7439-92-1	Lead	100.0		mg/kg
BUFF-23	1-1.5	01/29/04	No	01-SS-[Buff-23]-D1_01/29/04_1	7439-92-1	Lead	79.0		mg/kg
BUFF-23	2-2.5	03/16/04	Yes	2-BUFF-23_03/16/04_2	7440-38-2	Arsenic	7.4		mg/kg
BUFF-24	1-1.5	01/29/04	Yes	01-SS-[Buff-24]-D1_01/29/04_1	7440-38-2	Arsenic	32.1		mg/kg
BUFF-24	1-1.5	01/29/04	Yes	01-SS-[Buff-24]-D1_01/29/04_1	7439-92-1	Lead	16.2		mg/kg
BUFF-25	2-2.5	03/16/04	Yes	2-BUFF-25_03/16/04_2	7440-38-2	Arsenic	6.4		mg/kg
BUFF-25	2-2.5	03/16/04	Yes	2-BUFF-25_03/16/04_2	7439-92-1	Lead	4.5		mg/kg
BUFF-26	1-1.5	01/29/04	Yes	01-SS-[Buff-26]-D1_01/29/04_1	7440-38-2	Arsenic	35.3		mg/kg
BUFF-26	1-1.5	01/29/04	Yes	01-SS-[Buff-26]-D1_01/29/04_1	7439-92-1	Lead	22.2		mg/kg
BUFF-27	1-1.5	01/29/04	Yes	01-SS-[Buff-27]-D1_01/29/04_1	7440-38-2	Arsenic	43.9		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
BUFF-27	1-1.5	01/29/04	Yes	01-SS-[Buff-27]-D1_01/29/04_1	7439-92-1	Lead	65.1		mg/kg
BUFF-28	1-1.5	01/29/04	Yes	01-SS-[Buff-28]-D1_01/29/04_1	7440-38-2	Arsenic	56.1		mg/kg
BUFF-28	1-1.5	01/29/04	Yes	01-SS-[Buff-28]-D1_01/29/04_1	7439-92-1	Lead	114.0		mg/kg
BUFF-29	1-1.5	01/29/04	Yes	01-SS-[Buff-29]-D1_01/29/04_1	7440-38-2	Arsenic	47.4		mg/kg
BUFF-29	1-1.5	01/29/04	Yes	01-SS-[Buff-29]-D1_01/29/04_1	7439-92-1	Lead	49.4		mg/kg
BUFF-30	1-1.5	01/29/04	No	01-SS-[Buff-30]-D1_01/29/04_1	7439-92-1	Lead	59.6		mg/kg
BUFF-30	2-2.5	03/16/04	Yes	2-BUFF-30_03/16/04_2	7440-38-2	Arsenic	10.4		mg/kg
BUFF-31	1-1.5	01/29/04	Yes	01-SS-[Buff-31]-D1_01/29/04_1	7440-38-2	Arsenic	48.0		mg/kg
BUFF-31	1-1.5	01/29/04	Yes	01-SS-[Buff-31]-D1_01/29/04_1	7439-92-1	Lead	40.0		mg/kg
BUFF-32	1-1.5	01/29/04	Yes	01-SS-[Buff-32]-D1_01/29/04_1	7440-38-2	Arsenic	45.5		mg/kg
BUFF-32	1-1.5	01/29/04	Yes	01-SS-[Buff-32]-D1_01/29/04_1	7439-92-1	Lead	49.5		mg/kg
BUFF-33	1-1.5	01/29/04	Yes	01-SS-[Buff-33]-D1_01/29/04_1	7440-38-2	Arsenic	13.1		mg/kg
BUFF-33	1-1.5	01/29/04	Yes	01-SS-[Buff-33]-D1_01/29/04_1	7439-92-1	Lead	6.8		mg/kg
BUFF-34	2-2.5	03/16/04	Yes	2-BUFF-34_03/16/04_2	7440-38-2	Arsenic	7.4		mg/kg
BUFF-34	2-2.5	03/16/04	Yes	2-BUFF-34_03/16/04_2	7439-92-1	Lead	4.4		mg/kg
F-172	2-2.5	07/18/01	Yes	01-F24-SS[F-172]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-172	2-2.5	07/18/01	Yes	01-F24-SS[F-172]C2-005	7439-92-1	Lead	2.0		mg/kg
F-173	2-2.5	07/18/01	Yes	01-F24-SS[F-173]C2-005	7440-38-2	Arsenic	3.3		mg/kg
F-173	2-2.5	07/18/01	Yes	01-F24-SS[F-173]C2-005	7439-92-1	Lead	2.5		mg/kg
F-174	2-2.5	07/18/01	Yes	01-F24-SS[F-174]C2-005	7440-38-2	Arsenic	4.4		mg/kg
F-174	2-2.5	07/18/01	Yes	01-F24-SS[F-174]C2-005	7439-92-1	Lead	3.6		mg/kg
F-175	2-2.5	07/18/01	Yes	01-F24-SS[F-175]C2-005	7440-38-2	Arsenic	2.5		mg/kg
F-175	2-2.5	07/18/01	Yes	01-F24-SS[F-175]C2-005	7439-92-1	Lead	1.9	U	mg/kg
F-176	2-2.5	07/18/01	Yes	01-F24-SS[F-176]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-176	2-2.5	07/18/01	Yes	01-F24-SS[F-176]C2-005	7439-92-1	Lead	4.0		mg/kg
MSU-NGRR-23	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-23-1]-C1_05/07/03_1.5	7440-38-2	Arsenic	9.7		mg/kg
MSU-NGRR-23	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-23-1]-C1_05/07/03_1.5	7439-92-1	Lead	6.3		mg/kg
NEW-23	1-1.5	11/12/03	Yes	01-SS-[NEW23]-C2_11/12/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
NEW-23	1-1.5	11/12/03	Yes	01-SS-[NEW23]-C2_11/12/03_1	7439-92-1	Lead	3.1		mg/kg
NGRR-103	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-103]C2-005-DAVG	7440-38-2	Arsenic	6.4		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-103	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-103]C2-005-DAVG	7439-92-1	Lead	8.7		mg/kg
NGRR-105	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-105]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-105	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-105]C2-005	7439-92-1	Lead	4.4		mg/kg
NGRR-106	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-106]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-106	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-106]C2-005	7439-92-1	Lead	3.6		mg/kg
NGRR-107	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-107]C2-005	7440-38-2	Arsenic	5.0		mg/kg
NGRR-107	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-107]C2-005	7439-92-1	Lead	14.0		mg/kg
NGRR-108	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-108]C2-005	7440-38-2	Arsenic	5.3		mg/kg
NGRR-108	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-108]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-109	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-109]C2-005	7440-38-2	Arsenic	9.3		mg/kg
NGRR-109	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-109]C2-005	7439-92-1	Lead	18.0		mg/kg
NGRR-110	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-110]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-110	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-110]C2-005	7439-92-1	Lead	24.0		mg/kg
NGRR-111	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-111]C2-005	7440-38-2	Arsenic	5.7		mg/kg
NGRR-111	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-111]C2-005	7439-92-1	Lead	3.7		mg/kg
NGRR-112	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-112]C2-005	7440-38-2	Arsenic	6.9		mg/kg
NGRR-112	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-112]C2-005	7439-92-1	Lead	5.8		mg/kg
NGRR-113	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-113]C2-005	7440-38-2	Arsenic	55.0		mg/kg
NGRR-113	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-113]C2-005	7439-92-1	Lead	26.0		mg/kg
NGRR-114	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-114]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-114	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-114]C2-005	7439-92-1	Lead	29.0		mg/kg
NGRR-115	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-115]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-115	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-115]C2-005	7439-92-1	Lead	5.2		mg/kg
NGRR-116	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-116]C2-005	7440-38-2	Arsenic	19.0		mg/kg
NGRR-116	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-116]C2-005	7439-92-1	Lead	9.0		mg/kg
NGRR-117	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-117]C2-005	7440-38-2	Arsenic	7.6		mg/kg
NGRR-117	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-117]C2-005	7439-92-1	Lead	3.7		mg/kg
NGRR-118	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-118]C2-005	7440-38-2	Arsenic	6.9		mg/kg
NGRR-118	1.5-2	07/23/01	Yes	01-N01-SS[NGRR-118]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-70	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-70]C2-005	7440-38-2	Arsenic	6.5		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-70	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-70]C2-005	7439-92-1	Lead	2.8	J	mg/kg
NGRR-71	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-71]C2-005	7440-38-2	Arsenic	9.9		mg/kg
NGRR-71	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-71]C2-005	7439-92-1	Lead	2.0	UJ	mg/kg
NGRR-72	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-72]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-72	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-72]C2-005	7439-92-1	Lead	2.6	J	mg/kg
NGRR-73	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-73]C2-005	7440-38-2	Arsenic	3.7		mg/kg
NGRR-73	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-73]C2-005	7439-92-1	Lead	1.8	UJ	mg/kg
NGRR-74	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-74]C2-005-DAVG	7440-38-2	Arsenic	6.4		mg/kg
NGRR-74	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-74]C2-005-DAVG	7439-92-1	Lead	3.6		mg/kg
NGRR-76	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-76]C2-005	7440-38-2	Arsenic	3.6		mg/kg
NGRR-76	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-76]C2-005	7439-92-1	Lead	3.3		mg/kg
NGRR-77	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-77]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-77	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-77]C2-005	7439-92-1	Lead	3.1		mg/kg
NGRR-78	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-78]C2-005	7440-38-2	Arsenic	15.0		mg/kg
NGRR-78	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-78]C2-005	7439-92-1	Lead	3.5		mg/kg
NGRR-79	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-79]C2-005	7440-38-2	Arsenic	15.0		mg/kg
NGRR-79	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-79]C2-005	7439-92-1	Lead	3.7		mg/kg
NGRR-80	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-80]C2-005	7440-38-2	Arsenic	27.0		mg/kg
NGRR-80	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-80]C2-005	7439-92-1	Lead	6.0		mg/kg
NGRR-81-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-81-2]C2-025	7440-38-2	Arsenic	6.9		mg/kg
NGRR-81-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-81-2]C2-025	7439-92-1	Lead	3.5		mg/kg
NGRR-82	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-82]C2-005	7440-38-2	Arsenic	9.7		mg/kg
NGRR-82	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-82]C2-005	7439-92-1	Lead	6.5		mg/kg
NGRR-83	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-83]C2-005	7440-38-2	Arsenic	3.0		mg/kg
NGRR-83	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-83]C2-005	7439-92-1	Lead	3.1		mg/kg
NGRR-84	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-84]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-84	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-84]C2-005	7439-92-1	Lead	4.5		mg/kg
NGRR-85	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-85]C2-005	7440-38-2	Arsenic	4.2		mg/kg
NGRR-85	1.5-2	07/18/01	Yes	01-N01-SS[NGRR-85]C2-005	7439-92-1	Lead	3.2		mg/kg
R53C61	1-1.5	04/06/04	Yes	01-R53C61_04/06/04_1	7440-38-2	Arsenic	11.5		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R53C61	1-1.5	04/06/04	Yes	01-R53C61_04/06/04_1	7439-92-1	Lead	8.1		mg/kg
R53C62	1-1.5	04/06/04	Yes	01-R53C62_04/06/04_1	7440-38-2	Arsenic	44.3		mg/kg
R53C62	1-1.5	04/06/04	Yes	01-R53C62_04/06/04_1	7439-92-1	Lead	25.8		mg/kg
R54C60	1-1.5	02/12/04	Yes	1-R54C60_02/12/04_1	7440-38-2	Arsenic	12.0		mg/kg
R54C60	1-1.5	02/12/04	Yes	1-R54C60_02/12/04_1	7439-92-1	Lead	9.4		mg/kg
R54C61	1-1.5	02/12/04	Yes	1-R54C61_02/12/04_1	7440-38-2	Arsenic	7.6		mg/kg
R54C61	1-1.5	02/12/04	Yes	1-R54C61_02/12/04_1	7439-92-1	Lead	6.3		mg/kg
R54C62	1-1.5	02/12/04	Yes	1-R54C62_02/12/04_1	7440-38-2	Arsenic	7.2		mg/kg
R54C62	1-1.5	02/12/04	Yes	1-R54C62_02/12/04_1	7439-92-1	Lead	5.7		mg/kg
R54C63	1-1.5	04/06/04	Yes	01-R54C63_04/06/04_1	7440-38-2	Arsenic	15.8		mg/kg
R54C63	1-1.5	04/06/04	Yes	01-R54C63_04/06/04_1	7439-92-1	Lead	16.5		mg/kg
R54C64	1-1.5	04/06/04	Yes	01-R54C64_04/06/04_1	7440-38-2	Arsenic	8.2		mg/kg
R54C64	1-1.5	04/06/04	Yes	01-R54C64_04/06/04_1	7439-92-1	Lead	7.9		mg/kg
R55C57	1-1.5	02/12/04	Yes	1-R55C57_02/12/04_1	7440-38-2	Arsenic	9.6		mg/kg
R55C57	1-1.5	02/12/04	Yes	1-R55C57_02/12/04_1	7439-92-1	Lead	5.7		mg/kg
R55C58	1-1.5	02/12/04	Yes	1-R55C58_AVG_02/12/04_1	7440-38-2	Arsenic	7.3		mg/kg
R55C58	1-1.5	02/12/04	Yes	1-R55C58_AVG_02/12/04_1	7439-92-1	Lead	6.1		mg/kg
R55C59	1-1.5	02/12/04	Yes	1-R55C59_02/12/04_1	7440-38-2	Arsenic	7.1		mg/kg
R55C59	1-1.5	02/12/04	Yes	1-R55C59_02/12/04_1	7439-92-1	Lead	4.9		mg/kg
R55C60	1-1.5	02/12/04	Yes	1-R55C60_02/12/04_1	7440-38-2	Arsenic	8.0		mg/kg
R55C60	1-1.5	02/12/04	Yes	1-R55C60_02/12/04_1	7439-92-1	Lead	6.0		mg/kg
R55C61	1-1.5	02/12/04	Yes	1-R55C61_02/12/04_1	7440-38-2	Arsenic	8.1		mg/kg
R55C61	1-1.5	02/12/04	Yes	1-R55C61_02/12/04_1	7439-92-1	Lead	7.3		mg/kg
R55C62	1-1.5	02/12/04	Yes	1-R55C62_02/12/04_1	7440-38-2	Arsenic	10.9		mg/kg
R55C62	1-1.5	02/12/04	Yes	1-R55C62_02/12/04_1	7439-92-1	Lead	7.1		mg/kg
R55C63	1-1.5	02/16/04	Yes	1-R55C63_02/16/04_1	7440-38-2	Arsenic	8.1		mg/kg
R55C63	1-1.5	02/16/04	Yes	1-R55C63_02/16/04_1	7439-92-1	Lead	5.5		mg/kg
R55C64	1-1.5	02/16/04	Yes	1-R55C64_02/16/04_1	7440-38-2	Arsenic	8.8		mg/kg
R55C64	1-1.5	02/16/04	Yes	1-R55C64_02/16/04_1	7439-92-1	Lead	6.4		mg/kg
R55C65	1-1.5	04/06/04	Yes	01-R55C65_04/06/04_1	7440-38-2	Arsenic	12.7		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R55C65	1-1.5	04/06/04	Yes	01-R55C65_04/06/04_1	7439-92-1	Lead	8.8		mg/kg
R56C59	1-1.5	02/12/04	Yes	1-R56C59_02/12/04_1	7440-38-2	Arsenic	6.1		mg/kg
R56C59	1-1.5	02/12/04	Yes	1-R56C59_02/12/04_1	7439-92-1	Lead	3.6		mg/kg
R56C60	1-1.5	02/12/04	Yes	1-R56C60_02/12/04_1	7440-38-2	Arsenic	9.6		mg/kg
R56C60	1-1.5	02/12/04	Yes	1-R56C60_02/12/04_1	7439-92-1	Lead	9.3		mg/kg
R56C61	1-1.5	02/12/04	Yes	1-R56C61_02/12/04_1	7440-38-2	Arsenic	6.9		mg/kg
R56C61	1-1.5	02/12/04	Yes	1-R56C61_02/12/04_1	7439-92-1	Lead	5.9		mg/kg
R56C62	1-1.5	02/12/04	Yes	1-R56C62_02/12/04_1	7440-38-2	Arsenic	9.2		mg/kg
R56C62	1-1.5	02/12/04	Yes	1-R56C62_02/12/04_1	7439-92-1	Lead	8.0		mg/kg
R56C63	1-1.5	02/16/04	Yes	1-R56C63_02/16/04_1	7440-38-2	Arsenic	10.3		mg/kg
R56C63	1-1.5	02/16/04	Yes	1-R56C63_02/16/04_1	7439-92-1	Lead	7.1		mg/kg
R56C64	1-1.5	02/16/04	Yes	1-R56C64_02/16/04_1	7440-38-2	Arsenic	16.9		mg/kg
R56C64	1-1.5	02/16/04	Yes	1-R56C64_02/16/04_1	7439-92-1	Lead	6.6		mg/kg
R56C65	1-1.5	02/16/04	Yes	1-R56C65_02/16/04_1	7440-38-2	Arsenic	10.3		mg/kg
R56C65	1-1.5	02/16/04	Yes	1-R56C65_02/16/04_1	7439-92-1	Lead	6.6		mg/kg
R56C66	1-1.5	02/16/04	Yes	1-R56C66_02/16/04_1	7440-38-2	Arsenic	14.1		mg/kg
R56C66	1-1.5	02/16/04	Yes	1-R56C66_02/16/04_1	7439-92-1	Lead	13.5		mg/kg
R57C60	1-1.5	02/12/04	Yes	1-R57C60_02/12/04_1	7440-38-2	Arsenic	9.0		mg/kg
R57C60	1-1.5	02/12/04	Yes	1-R57C60_02/12/04_1	7439-92-1	Lead	8.7		mg/kg
R57C61	1-1.5	02/12/04	Yes	1-R57C61_AVG_02/12/04_1	7440-38-2	Arsenic	9.0		mg/kg
R57C61	1-1.5	02/12/04	Yes	1-R57C61_AVG_02/12/04_1	7439-92-1	Lead	5.7		mg/kg
R57C62	1-1.5	03/25/04	Yes	01-R57C62_03/25/04_1	7440-38-2	Arsenic	13.1		mg/kg
R57C62	1-1.5	03/25/04	Yes	01-R57C62_03/25/04_1	7439-92-1	Lead	12.6		mg/kg
R57C62	1-1.5	02/12/04	Yes	1-R57C62_02/12/04_1	7440-38-2	Arsenic	8.0		mg/kg
R57C62	1-1.5	02/12/04	Yes	1-R57C62_02/12/04_1	7439-92-1	Lead	8.9		mg/kg
R57C62	1-1.5	02/16/04	Yes	1-R57C62_02/16/04_1	7440-38-2	Arsenic	9.0		mg/kg
R57C62	1-1.5	02/16/04	Yes	1-R57C62_02/16/04_1	7439-92-1	Lead	7.1		mg/kg
R57C63	1-1.5	02/16/04	Yes	1-R57C63_02/16/04_1	7440-38-2	Arsenic	9.3		mg/kg
R57C63	1-1.5	02/16/04	Yes	1-R57C63_02/16/04_1	7439-92-1	Lead	9.0		mg/kg
R57C64	1-1.5	02/16/04	Yes	1-R57C64_02/16/04_1	7440-38-2	Arsenic	8.0		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R57C64	1-1.5	02/16/04	Yes	1-R57C64_02/16/04_1	7439-92-1	Lead	5.5		mg/kg
R57C65	1-1.5	02/17/04	Yes	1-R57C65_02/17/04_1	7440-38-2	Arsenic	10.9		mg/kg
R57C65	1-1.5	02/17/04	Yes	1-R57C65_02/17/04_1	7439-92-1	Lead	8.9		mg/kg
R57C66	1-1.5	03/23/04	Yes	01-R57C66_03/23/04_1	7440-38-2	Arsenic	12.0		mg/kg
R57C66	1-1.5	03/23/04	Yes	01-R57C66_03/23/04_1	7439-92-1	Lead	12.3		mg/kg
R57C67	1-1.5	02/17/04	Yes	1-R57C67_02/17/04_1	7440-38-2	Arsenic	9.7		mg/kg
R57C67	1-1.5	02/17/04	Yes	1-R57C67_02/17/04_1	7439-92-1	Lead	5.2		mg/kg
R57C68	1-1.5	02/10/04	Yes	1-R57C68_02/10/04_1	7440-38-2	Arsenic	12.5		mg/kg
R57C68	1-1.5	02/10/04	Yes	1-R57C68_02/10/04_1	7439-92-1	Lead	16.5		mg/kg
R58C60	1-1.5	02/12/04	Yes	1-R58C60_02/12/04_1	7440-38-2	Arsenic	7.2		mg/kg
R58C60	1-1.5	02/12/04	Yes	1-R58C60_02/12/04_1	7439-92-1	Lead	6.4		mg/kg
R58C61	1-1.5	02/12/04	Yes	1-R58C61_02/12/04_1	7440-38-2	Arsenic	7.8		mg/kg
R58C61	1-1.5	02/12/04	Yes	1-R58C61_02/12/04_1	7439-92-1	Lead	6.7		mg/kg
R58C63	1-1.5	02/16/04	Yes	1-R58C63_AVG_02/16/04_1	7440-38-2	Arsenic	9.7		mg/kg
R58C63	1-1.5	02/16/04	Yes	1-R58C63_AVG_02/16/04_1	7439-92-1	Lead	8.4		mg/kg
R58C64	1-1.5	02/16/04	Yes	1-R58C64_02/16/04_1	7440-38-2	Arsenic	8.9		mg/kg
R58C64	1-1.5	02/16/04	Yes	1-R58C64_02/16/04_1	7439-92-1	Lead	6.6		mg/kg
R58C65	1-1.5	02/17/04	Yes	1-R58C65_02/17/04_1	7440-38-2	Arsenic	7.1		mg/kg
R58C65	1-1.5	02/17/04	Yes	1-R58C65_02/17/04_1	7439-92-1	Lead	4.8		mg/kg
R58C67	1-1.5	02/17/04	Yes	1-R58C67_02/17/04_1	7440-38-2	Arsenic	12.0		mg/kg
R58C67	1-1.5	02/17/04	Yes	1-R58C67_02/17/04_1	7439-92-1	Lead	7.8		mg/kg
R58C68	1-1.5	02/10/04	Yes	1-R58C68_02/10/04_1	7440-38-2	Arsenic	10.2		mg/kg
R58C68	1-1.5	02/10/04	Yes	1-R58C68_02/10/04_1	7439-92-1	Lead	12.1		mg/kg
R58C69	1-1.5	03/04/04	Yes	01-R58C69_03/04/04_1	7440-38-2	Arsenic	8.3		mg/kg
R58C69	1-1.5	03/04/04	Yes	01-R58C69_03/04/04_1	7439-92-1	Lead	6.8		mg/kg
R58C70	1-1.5	03/04/04	Yes	01-R58C70_03/04/04_1	7440-38-2	Arsenic	8.7		mg/kg
R58C70	1-1.5	03/04/04	Yes	01-R58C70_03/04/04_1	7439-92-1	Lead	8.1		mg/kg
R59C60	1-1.5	02/12/04	Yes	1-R59C60_02/12/04_1	7440-38-2	Arsenic	8.3		mg/kg
R59C60	1-1.5	02/12/04	Yes	1-R59C60_02/12/04_1	7439-92-1	Lead	9.1		mg/kg
R59C61	1-1.5	02/12/04	Yes	1-R59C61_02/12/04_1	7440-38-2	Arsenic	7.6		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R59C61	1-1.5	02/12/04	Yes	1-R59C61_02/12/04_1	7439-92-1	Lead	5.7		mg/kg
R59C62	1-1.5	02/16/04	Yes	1-R59C62_02/16/04_1	7440-38-2	Arsenic	7.8		mg/kg
R59C62	1-1.5	02/16/04	Yes	1-R59C62_02/16/04_1	7439-92-1	Lead	5.7		mg/kg
R59C63	1-1.5	02/16/04	Yes	1-R59C63_02/16/04_1	7440-38-2	Arsenic	11.1		mg/kg
R59C63	1-1.5	02/16/04	Yes	1-R59C63_02/16/04_1	7439-92-1	Lead	10.5		mg/kg
R59C64	1-1.5	02/16/04	Yes	1-R59C64_02/16/04_1	7440-38-2	Arsenic	7.8		mg/kg
R59C64	1-1.5	02/16/04	Yes	1-R59C64_02/16/04_1	7439-92-1	Lead	4.7		mg/kg
R59C65	1-1.5	02/17/04	Yes	1-R59C65_02/17/04_1	7440-38-2	Arsenic	7.8		mg/kg
R59C65	1-1.5	02/17/04	Yes	1-R59C65_02/17/04_1	7439-92-1	Lead	4.7		mg/kg
R59C67	1-1.5	02/17/04	Yes	1-R59C67_02/17/04_1	7440-38-2	Arsenic	20.2		mg/kg
R59C67	1-1.5	02/17/04	Yes	1-R59C67_02/17/04_1	7439-92-1	Lead	21.9		mg/kg
R59C68	1-1.5	02/10/04	Yes	1-R59C68_AVG_02/10/04_1	7440-38-2	Arsenic	9.3		mg/kg
R59C68	1-1.5	02/10/04	Yes	1-R59C68_AVG_02/10/04_1	7439-92-1	Lead	6.6		mg/kg
R59C69	1-1.5	02/10/04	Yes	1-R59C69_02/10/04_1	7440-38-2	Arsenic	8.6		mg/kg
R59C69	1-1.5	02/10/04	Yes	1-R59C69_02/10/04_1	7439-92-1	Lead	5.7		mg/kg
R59C70	1-1.5	03/04/04	Yes	01-R59C70_03/04/04_1	7440-38-2	Arsenic	8.8		mg/kg
R59C70	1-1.5	03/04/04	Yes	01-R59C70_03/04/04_1	7439-92-1	Lead	7.1		mg/kg
R59C71	1-1.5	03/04/04	Yes	01-R59C71_AVG_03/04/04_1	7440-38-2	Arsenic	8.7		mg/kg
R59C71	1-1.5	03/04/04	Yes	01-R59C71_AVG_03/04/04_1	7439-92-1	Lead	7.5		mg/kg
R59C72	1-1.5	03/04/04	Yes	01-R59C72_03/04/04_1	7440-38-2	Arsenic	14.1		mg/kg
R59C72	1-1.5	03/04/04	Yes	01-R59C72_03/04/04_1	7439-92-1	Lead	12.9		mg/kg
R60C59	1-1.5	02/13/04	Yes	1-R60C59_02/13/04_1	7440-38-2	Arsenic	7.5		mg/kg
R60C59	1-1.5	02/13/04	Yes	1-R60C59_02/13/04_1	7439-92-1	Lead	6.2		mg/kg
R60C60	1-1.5	02/13/04	Yes	1-R60C60_02/13/04_1	7440-38-2	Arsenic	10.3		mg/kg
R60C60	1-1.5	02/13/04	Yes	1-R60C60_02/13/04_1	7439-92-1	Lead	11.1		mg/kg
R60C61	1-1.5	02/13/04	Yes	1-R60C61_02/13/04_1	7440-38-2	Arsenic	6.9		mg/kg
R60C61	1-1.5	02/13/04	Yes	1-R60C61_02/13/04_1	7439-92-1	Lead	5.0		mg/kg
R60C62	1-1.5	02/16/04	Yes	1-R60C62_02/16/04_1	7440-38-2	Arsenic	7.1		mg/kg
R60C62	1-1.5	02/16/04	Yes	1-R60C62_02/16/04_1	7439-92-1	Lead	4.7		mg/kg
R60C63	1-1.5	02/16/04	Yes	1-R60C63_02/16/04_1	7440-38-2	Arsenic	7.8		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R60C63	1-1.5	02/16/04	Yes	1-R60C63_02/16/04_1	7439-92-1	Lead	5.8		mg/kg
R60C64	1-1.5	02/16/04	Yes	1-R60C64_02/16/04_1	7440-38-2	Arsenic	9.5		mg/kg
R60C64	1-1.5	02/16/04	Yes	1-R60C64_02/16/04_1	7439-92-1	Lead	5.9		mg/kg
R60C65	1-1.5	02/17/04	Yes	1-R60C65_02/17/04_1	7440-38-2	Arsenic	37.4		mg/kg
R60C65	1-1.5	02/17/04	Yes	1-R60C65_02/17/04_1	7439-92-1	Lead	14.2		mg/kg
R60C66	1-1.5	02/17/04	Yes	1-R60C66_02/17/04_1	7440-38-2	Arsenic	7.7		mg/kg
R60C66	1-1.5	02/17/04	Yes	1-R60C66_02/17/04_1	7439-92-1	Lead	4.6		mg/kg
R60C67	1-1.5	03/05/04	Yes	01-R60C67_03/05/04_1	7440-38-2	Arsenic	7.4		mg/kg
R60C67	1-1.5	03/05/04	Yes	01-R60C67_03/05/04_1	7439-92-1	Lead	6.3		mg/kg
R60C68	1-1.5	02/10/04	Yes	1-R60C68_02/10/04_1	7440-38-2	Arsenic	24.7		mg/kg
R60C68	1-1.5	02/10/04	Yes	1-R60C68_02/10/04_1	7439-92-1	Lead	12.8		mg/kg
R60C69	1-1.5	02/12/04	Yes	1-R60C69_02/12/04_1	7440-38-2	Arsenic	7.5		mg/kg
R60C69	1-1.5	02/12/04	Yes	1-R60C69_02/12/04_1	7439-92-1	Lead	5.6		mg/kg
R60C70	1-1.5	02/10/04	Yes	1-R60C70_02/10/04_1	7440-38-2	Arsenic	8.7		mg/kg
R60C70	1-1.5	02/10/04	Yes	1-R60C70_02/10/04_1	7439-92-1	Lead	8.5		mg/kg
R60C71	1-1.5	02/10/04	Yes	1-R60C71_02/10/04_1	7440-38-2	Arsenic	12.2		mg/kg
R60C71	1-1.5	02/10/04	Yes	1-R60C71_02/10/04_1	7439-92-1	Lead	12.5		mg/kg
R60C72	1-1.5	03/04/04	Yes	01-R60C72_03/04/04_1	7440-38-2	Arsenic	10.7		mg/kg
R60C72	1-1.5	03/04/04	Yes	01-R60C72_03/04/04_1	7439-92-1	Lead	8.2		mg/kg
R60C73	1-1.5	03/04/04	Yes	01-R60C73_03/04/04_1	7440-38-2	Arsenic	6.7		mg/kg
R60C73	1-1.5	03/04/04	Yes	01-R60C73_03/04/04_1	7439-92-1	Lead	5.4		mg/kg
R60C74	1-1.5	03/04/04	Yes	01-R60C74_03/04/04_1	7440-38-2	Arsenic	7.6		mg/kg
R60C74	1-1.5	03/04/04	Yes	01-R60C74_03/04/04_1	7439-92-1	Lead	5.3		mg/kg
R60C75	1-1.5	03/04/04	Yes	01-R60C75_03/04/04_1	7440-38-2	Arsenic	8.2		mg/kg
R60C75	1-1.5	03/04/04	Yes	01-R60C75_03/04/04_1	7439-92-1	Lead	9.7		mg/kg
R60C76	1-1.5	04/08/04	Yes	1-R60C76_AVG_04/08/04_1	7440-38-2	Arsenic	6.9		mg/kg
R60C76	1-1.5	04/08/04	Yes	1-R60C76_AVG_04/08/04_1	7439-92-1	Lead	8.0		mg/kg
R60C77	1-1.5	04/08/04	Yes	1-R60C77_04/08/04_1	7440-38-2	Arsenic	32.8		mg/kg
R60C77	1-1.5	04/08/04	Yes	1-R60C77_04/08/04_1	7439-92-1	Lead	19.4		mg/kg
R60C78	1-1.5	04/08/04	Yes	1-R60C78_04/08/04_1	7440-38-2	Arsenic	32.9		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R60C78	1-1.5	04/08/04	Yes	1-R60C78_04/08/04_1	7439-92-1	Lead	10.8		mg/kg
R61C59	1-1.5	02/13/04	Yes	1-R61C59_02/13/04_1	7440-38-2	Arsenic	7.5		mg/kg
R61C59	1-1.5	02/13/04	Yes	1-R61C59_02/13/04_1	7439-92-1	Lead	4.6		mg/kg
R61C60	1-1.5	02/13/04	Yes	1-R61C60_02/13/04_1	7440-38-2	Arsenic	7.3		mg/kg
R61C60	1-1.5	02/13/04	Yes	1-R61C60_02/13/04_1	7439-92-1	Lead	4.1		mg/kg
R61C61	1-1.5	02/13/04	Yes	1-R61C61_02/13/04_1	7440-38-2	Arsenic	6.7		mg/kg
R61C61	1-1.5	02/13/04	Yes	1-R61C61_02/13/04_1	7439-92-1	Lead	5.3		mg/kg
R61C62	1-1.5	02/16/04	Yes	1-R61C62_02/16/04_1	7440-38-2	Arsenic	10.6		mg/kg
R61C62	1-1.5	02/16/04	Yes	1-R61C62_02/16/04_1	7439-92-1	Lead	8.5		mg/kg
R61C63	1-1.5	02/16/04	Yes	1-R61C63_AVG_02/16/04_1	7440-38-2	Arsenic	12.3		mg/kg
R61C63	1-1.5	02/16/04	Yes	1-R61C63_AVG_02/16/04_1	7439-92-1	Lead	8.2		mg/kg
R61C64	1-1.5	02/16/04	Yes	1-R61C64_02/16/04_1	7440-38-2	Arsenic	9.6		mg/kg
R61C64	1-1.5	02/16/04	Yes	1-R61C64_02/16/04_1	7439-92-1	Lead	8.4		mg/kg
R61C66	1-1.5	03/05/04	Yes	01-R61C66_03/05/04_1	7440-38-2	Arsenic	5.2		mg/kg
R61C66	1-1.5	03/05/04	Yes	01-R61C66_03/05/04_1	7439-92-1	Lead	3.4		mg/kg
R61C67	1-1.5	03/05/04	Yes	01-R61C67_03/05/04_1	7440-38-2	Arsenic	5.4		mg/kg
R61C67	1-1.5	03/05/04	Yes	01-R61C67_03/05/04_1	7439-92-1	Lead	4.5		mg/kg
R61C68	1-1.5	02/12/04	Yes	1-R61C68_02/12/04_1	7440-38-2	Arsenic	10.1		mg/kg
R61C68	1-1.5	02/12/04	Yes	1-R61C68_02/12/04_1	7439-92-1	Lead	10.7		mg/kg
R61C69	1-1.5	02/12/04	Yes	1-R61C69_02/12/04_1	7440-38-2	Arsenic	8.2		mg/kg
R61C69	1-1.5	02/12/04	Yes	1-R61C69_02/12/04_1	7439-92-1	Lead	7.1		mg/kg
R61C70	1-1.5	02/10/04	Yes	1-R61C70_02/10/04_1	7440-38-2	Arsenic	7.2		mg/kg
R61C70	1-1.5	02/10/04	Yes	1-R61C70_02/10/04_1	7439-92-1	Lead	5.8		mg/kg
R61C71	1-1.5	02/10/04	Yes	1-R61C71_02/10/04_1	7440-38-2	Arsenic	5.9		mg/kg
R61C71	1-1.5	02/10/04	Yes	1-R61C71_02/10/04_1	7439-92-1	Lead	4.6		mg/kg
R61C72	1-1.5	02/10/04	Yes	1-R61C72_02/10/04_1	7440-38-2	Arsenic	8.3		mg/kg
R61C72	1-1.5	02/10/04	Yes	1-R61C72_02/10/04_1	7439-92-1	Lead	7.5		mg/kg
R62C59	1-1.5	02/13/04	Yes	1-R62C59_02/13/04_1	7440-38-2	Arsenic	7.8		mg/kg
R62C59	1-1.5	02/13/04	Yes	1-R62C59_02/13/04_1	7439-92-1	Lead	6.5		mg/kg
R62C60	1-1.5	02/13/04	Yes	1-R62C60_AVG_02/13/04_1	7440-38-2	Arsenic	6.1		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R62C60	1-1.5	02/13/04	Yes	1-R62C60_AVG_02/13/04_1	7439-92-1	Lead	4.8		mg/kg
R62C61	1-1.5	02/13/04	Yes	1-R62C61_02/13/04_1	7440-38-2	Arsenic	4.9		mg/kg
R62C61	1-1.5	02/13/04	Yes	1-R62C61_02/13/04_1	7439-92-1	Lead	4.3		mg/kg
R62C62	1-1.5	02/16/04	Yes	1-R62C62_02/16/04_1	7440-38-2	Arsenic	8.4		mg/kg
R62C62	1-1.5	02/16/04	Yes	1-R62C62_02/16/04_1	7439-92-1	Lead	4.3		mg/kg
R62C63	1-1.5	02/16/04	Yes	1-R62C63_02/16/04_1	7440-38-2	Arsenic	36.6		mg/kg
R62C63	1-1.5	02/16/04	Yes	1-R62C63_02/16/04_1	7439-92-1	Lead	10.4		mg/kg
R62C64	1-1.5	02/16/04	Yes	1-R62C64_02/16/04_1	7440-38-2	Arsenic	15.6		mg/kg
R62C64	1-1.5	02/16/04	Yes	1-R62C64_02/16/04_1	7439-92-1	Lead	15.2		mg/kg
R62C65	1-1.5	02/16/04	Yes	1-R62C65_02/16/04_1	7440-38-2	Arsenic	12.1		mg/kg
R62C65	1-1.5	02/16/04	Yes	1-R62C65_02/16/04_1	7439-92-1	Lead	9.2		mg/kg
R62C66	1-1.5	03/05/04	Yes	01-R62C66_03/05/04_1	7440-38-2	Arsenic	5.1		mg/kg
R62C66	1-1.5	03/05/04	Yes	01-R62C66_03/05/04_1	7439-92-1	Lead	3.9		mg/kg
R62C67	1-1.5	03/05/04	Yes	01-R62C67_03/05/04_1	7440-38-2	Arsenic	5.7		mg/kg
R62C67	1-1.5	03/05/04	Yes	01-R62C67_03/05/04_1	7439-92-1	Lead	6.0		mg/kg
R62C68	1-1.5	02/12/04	Yes	1-R62C68_02/12/04_1	7440-38-2	Arsenic	9.0		mg/kg
R62C68	1-1.5	02/12/04	Yes	1-R62C68_02/12/04_1	7439-92-1	Lead	8.7		mg/kg
R62C69	1-1.5	02/12/04	Yes	1-R62C69_AVG_02/12/04_1	7440-38-2	Arsenic	7.3		mg/kg
R62C69	1-1.5	02/12/04	Yes	1-R62C69_AVG_02/12/04_1	7439-92-1	Lead	4.5		mg/kg
R62C70	1-1.5	02/10/04	Yes	1-R62C70_02/10/04_1	7440-38-2	Arsenic	6.1		mg/kg
R62C70	1-1.5	02/10/04	Yes	1-R62C70_02/10/04_1	7439-92-1	Lead	6.1		mg/kg
R62C71	1-1.5	02/10/04	Yes	1-R62C71_02/10/04_1	7440-38-2	Arsenic	7.4		mg/kg
R62C71	1-1.5	02/10/04	Yes	1-R62C71_02/10/04_1	7439-92-1	Lead	6.4		mg/kg
R62C72	1-1.5	02/10/04	Yes	1-R62C72_02/10/04_1	7440-38-2	Arsenic	7.0		mg/kg
R62C72	1-1.5	02/10/04	Yes	1-R62C72_02/10/04_1	7439-92-1	Lead	6.2		mg/kg
R63C58	1-1.5	02/04/04	Yes	1-R63C58_02/04/04_1	7440-38-2	Arsenic	4.9		mg/kg
R63C58	1-1.5	02/04/04	Yes	1-R63C58_02/04/04_1	7439-92-1	Lead	3.5		mg/kg
R63C59	1-1.5	02/04/04	Yes	1-R63C59_02/04/04_1	7440-38-2	Arsenic	5.8		mg/kg
R63C59	1-1.5	02/04/04	Yes	1-R63C59_02/04/04_1	7439-92-1	Lead	3.9		mg/kg
R63C60	1-1.5	02/13/04	Yes	1-R63C60_02/13/04_1	7440-38-2	Arsenic	7.8		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R63C60	1-1.5	02/13/04	Yes	1-R63C60_02/13/04_1	7439-92-1	Lead	6.6		mg/kg
R63C61	1-1.5	02/13/04	Yes	1-R63C61_02/13/04_1	7440-38-2	Arsenic	6.4		mg/kg
R63C61	1-1.5	02/13/04	Yes	1-R63C61_02/13/04_1	7439-92-1	Lead	4.8		mg/kg
R63C62	1-1.5	02/16/04	Yes	1-R63C62_02/16/04_1	7440-38-2	Arsenic	17.1		mg/kg
R63C62	1-1.5	02/16/04	Yes	1-R63C62_02/16/04_1	7439-92-1	Lead	13.8		mg/kg
R63C63	1-1.5	02/16/04	Yes	1-R63C63_02/16/04_1	7440-38-2	Arsenic	6.9		mg/kg
R63C63	1-1.5	02/16/04	Yes	1-R63C63_02/16/04_1	7439-92-1	Lead	4.4		mg/kg
R63C64	1-1.5	04/06/04	Yes	01-R63C64_04/06/04_1	7440-38-2	Arsenic	22.1		mg/kg
R63C64	1-1.5	04/06/04	Yes	01-R63C64_04/06/04_1	7439-92-1	Lead	26.1		mg/kg
R63C65	1-1.5	03/05/04	Yes	01-R63C65_03/05/04_1	7440-38-2	Arsenic	16.5		mg/kg
R63C65	1-1.5	03/05/04	Yes	01-R63C65_03/05/04_1	7439-92-1	Lead	18.6		mg/kg
R63C66	1-1.5	03/05/04	Yes	01-R63C66_03/05/04_1	7440-38-2	Arsenic	5.6		mg/kg
R63C66	1-1.5	03/05/04	Yes	01-R63C66_03/05/04_1	7439-92-1	Lead	4.8		mg/kg
R63C67	1-1.5	02/12/04	Yes	1-R63C67_02/12/04_1	7440-38-2	Arsenic	7.1		mg/kg
R63C67	1-1.5	02/12/04	Yes	1-R63C67_02/12/04_1	7439-92-1	Lead	5.8		mg/kg
R63C68	1-1.5	02/12/04	Yes	1-R63C68_02/12/04_1	7440-38-2	Arsenic	8.2		mg/kg
R63C68	1-1.5	02/12/04	Yes	1-R63C68_02/12/04_1	7439-92-1	Lead	7.8		mg/kg
R63C69	1-1.5	02/12/04	Yes	1-R63C69_02/12/04_1	7440-38-2	Arsenic	6.3		mg/kg
R63C69	1-1.5	02/12/04	Yes	1-R63C69_02/12/04_1	7439-92-1	Lead	4.4		mg/kg
R63C70	1-1.5	02/10/04	Yes	1-R63C70_02/10/04_1	7440-38-2	Arsenic	6.8		mg/kg
R63C70	1-1.5	02/10/04	Yes	1-R63C70_02/10/04_1	7439-92-1	Lead	6.6		mg/kg
R63C71	1-1.5	02/10/04	Yes	1-R63C71_AVG_02/10/04_1	7440-38-2	Arsenic	14.2		mg/kg
R63C71	1-1.5	02/10/04	Yes	1-R63C71_AVG_02/10/04_1	7439-92-1	Lead	24.4		mg/kg
R63C72	1-1.5	02/10/04	Yes	1-R63C72_02/10/04_1	7440-38-2	Arsenic	6.6		mg/kg
R63C72	1-1.5	02/10/04	Yes	1-R63C72_02/10/04_1	7439-92-1	Lead	5.5		mg/kg
R64C58	1-1.5	02/04/04	Yes	1-R64C58_02/04/04_1	7440-38-2	Arsenic	6.9		mg/kg
R64C58	1-1.5	02/04/04	Yes	1-R64C58_02/04/04_1	7439-92-1	Lead	6.2		mg/kg
R64C59	1-1.5	02/04/04	Yes	1-R64C59_AVG_02/04/04_1	7440-38-2	Arsenic	5.2		mg/kg
R64C59	1-1.5	02/04/04	Yes	1-R64C59_AVG_02/04/04_1	7439-92-1	Lead	3.9		mg/kg
R64C60	1-1.5	02/04/04	Yes	1-R64C60_02/04/04_1	7440-38-2	Arsenic	8.1		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R64C60	1-1.5	02/04/04	Yes	1-R64C60_02/04/04_1	7439-92-1	Lead	6.5		mg/kg
R64C61	1-1.5	02/13/04	Yes	1-R64C61_02/13/04_1	7440-38-2	Arsenic	6.9		mg/kg
R64C61	1-1.5	02/13/04	Yes	1-R64C61_02/13/04_1	7439-92-1	Lead	4.0		mg/kg
R64C62	1-1.5	02/13/04	Yes	1-R64C62_02/13/04_1	7440-38-2	Arsenic	14.6		mg/kg
R64C62	1-1.5	02/13/04	Yes	1-R64C62_02/13/04_1	7439-92-1	Lead	11.2		mg/kg
R64C63	1-1.5	02/16/04	Yes	1-R64C63_02/16/04_1	7440-38-2	Arsenic	27.6		mg/kg
R64C63	1-1.5	02/16/04	Yes	1-R64C63_02/16/04_1	7439-92-1	Lead	6.7		mg/kg
R64C64	1-1.5	02/16/04	Yes	1-R64C64_02/16/04_1	7440-38-2	Arsenic	12.1		mg/kg
R64C64	1-1.5	02/16/04	Yes	1-R64C64_02/16/04_1	7439-92-1	Lead	10.2		mg/kg
R64C65	1-1.5	03/05/04	Yes	01-R64C65_03/05/04_1	7440-38-2	Arsenic	29.0		mg/kg
R64C65	1-1.5	03/05/04	Yes	01-R64C65_03/05/04_1	7439-92-1	Lead	41.0		mg/kg
R64C66	1-1.5	03/05/04	Yes	01-R64C66_03/05/04_1	7440-38-2	Arsenic	5.7		mg/kg
R64C66	1-1.5	03/05/04	Yes	01-R64C66_03/05/04_1	7439-92-1	Lead	5.0		mg/kg
R64C67	1-1.5	02/12/04	Yes	1-R64C67_02/12/04_1	7440-38-2	Arsenic	7.8		mg/kg
R64C67	1-1.5	02/12/04	Yes	1-R64C67_02/12/04_1	7439-92-1	Lead	6.5		mg/kg
R64C68	1-1.5	02/12/04	Yes	1-R64C68_02/12/04_1	7440-38-2	Arsenic	5.7		mg/kg
R64C68	1-1.5	02/12/04	Yes	1-R64C68_02/12/04_1	7439-92-1	Lead	4.7		mg/kg
R64C69	1-1.5	02/12/04	Yes	1-R64C69_02/12/04_1	7440-38-2	Arsenic	8.5		mg/kg
R64C69	1-1.5	02/12/04	Yes	1-R64C69_02/12/04_1	7439-92-1	Lead	6.4		mg/kg
R64C70	1-1.5	02/10/04	Yes	1-R64C70_02/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R64C70	1-1.5	02/10/04	Yes	1-R64C70_02/10/04_1	7439-92-1	Lead	7.3		mg/kg
R64C71	1-1.5	02/10/04	Yes	1-R64C71_02/10/04_1	7440-38-2	Arsenic	6.7		mg/kg
R64C71	1-1.5	02/10/04	Yes	1-R64C71_02/10/04_1	7439-92-1	Lead	6.4		mg/kg
R64C72	1-1.5	02/26/04	Yes	01-R64C72_02/26/04_1	7440-38-2	Arsenic	11.1		mg/kg
R64C72	1-1.5	02/26/04	Yes	01-R64C72_02/26/04_1	7439-92-1	Lead	8.4		mg/kg
R65C57	1-1.5	02/04/04	Yes	1-R65C57_02/04/04_1	7440-38-2	Arsenic	8.9		mg/kg
R65C57	1-1.5	02/04/04	Yes	1-R65C57_02/04/04_1	7439-92-1	Lead	8.6		mg/kg
R65C58	1-1.5	02/04/04	Yes	1-R65C58_02/04/04_1	7440-38-2	Arsenic	5.5		mg/kg
R65C58	1-1.5	02/04/04	Yes	1-R65C58_02/04/04_1	7439-92-1	Lead	4.2		mg/kg
R65C59	1-1.5	02/04/04	Yes	1-R65C59_02/04/04_1	7440-38-2	Arsenic	10.4		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R65C59	1-1.5	02/04/04	Yes	1-R65C59_02/04/04_1	7439-92-1	Lead	8.8		mg/kg
R65C60	1-1.5	02/04/04	Yes	1-R65C60_02/04/04_1	7440-38-2	Arsenic	7.0		mg/kg
R65C60	1-1.5	02/04/04	Yes	1-R65C60_02/04/04_1	7439-92-1	Lead	4.9		mg/kg
R65C61	1-1.5	02/13/04	Yes	1-R65C61_02/13/04_1	7440-38-2	Arsenic	10.4		mg/kg
R65C61	1-1.5	02/13/04	Yes	1-R65C61_02/13/04_1	7439-92-1	Lead	6.4		mg/kg
R65C62	1-1.5	02/13/04	Yes	1-R65C62_02/13/04_1	7440-38-2	Arsenic	11.4		mg/kg
R65C62	1-1.5	02/13/04	Yes	1-R65C62_02/13/04_1	7439-92-1	Lead	8.0		mg/kg
R65C64	1-1.5	03/05/04	Yes	01-R65C64_AVG_03/05/04_1	7440-38-2	Arsenic	12.2		mg/kg
R65C64	1-1.5	03/05/04	Yes	01-R65C64_AVG_03/05/04_1	7439-92-1	Lead	14.7		mg/kg
R65C65	1-1.5	03/05/04	Yes	01-R65C65_03/05/04_1	7440-38-2	Arsenic	9.7		mg/kg
R65C65	1-1.5	03/05/04	Yes	01-R65C65_03/05/04_1	7439-92-1	Lead	9.9		mg/kg
R65C66	1-1.5	03/05/04	Yes	01-R65C66_03/05/04_1	7440-38-2	Arsenic	12.0		mg/kg
R65C66	1-1.5	03/05/04	Yes	01-R65C66_03/05/04_1	7439-92-1	Lead	13.3		mg/kg
R65C67	1-1.5	02/12/04	Yes	1-R65C67_02/12/04_1	7440-38-2	Arsenic	6.8		mg/kg
R65C67	1-1.5	02/12/04	Yes	1-R65C67_02/12/04_1	7439-92-1	Lead	5.7		mg/kg
R65C68	1-1.5	02/12/04	Yes	1-R65C68_02/12/04_1	7440-38-2	Arsenic	16.2		mg/kg
R65C68	1-1.5	02/12/04	Yes	1-R65C68_02/12/04_1	7439-92-1	Lead	17.3		mg/kg
R65C69	1-1.5	02/12/04	Yes	1-R65C69_02/12/04_1	7440-38-2	Arsenic	11.1		mg/kg
R65C69	1-1.5	02/12/04	Yes	1-R65C69_02/12/04_1	7439-92-1	Lead	6.9		mg/kg
R65C70	1-1.5	02/10/04	Yes	1-R65C70_02/10/04_1	7440-38-2	Arsenic	9.1		mg/kg
R65C70	1-1.5	02/10/04	Yes	1-R65C70_02/10/04_1	7439-92-1	Lead	9.9		mg/kg
R65C71	1-1.5	02/10/04	Yes	1-R65C71_02/10/04_1	7440-38-2	Arsenic	11.0		mg/kg
R65C71	1-1.5	02/10/04	Yes	1-R65C71_02/10/04_1	7439-92-1	Lead	9.9		mg/kg
R65C72	1-1.5	02/26/04	Yes	01-R65C72_AVG_02/26/04_1	7440-38-2	Arsenic	7.2		mg/kg
R65C72	1-1.5	02/26/04	Yes	01-R65C72_AVG_02/26/04_1	7439-92-1	Lead	4.7		mg/kg
R66C56	1-1.5	02/04/04	Yes	1-R66C56_02/04/04_1	7440-38-2	Arsenic	12.5		mg/kg
R66C56	1-1.5	02/04/04	Yes	1-R66C56_02/04/04_1	7439-92-1	Lead	21.8		mg/kg
R66C57	1-1.5	02/04/04	Yes	1-R66C57_02/04/04_1	7440-38-2	Arsenic	13.0		mg/kg
R66C57	1-1.5	02/04/04	Yes	1-R66C57_02/04/04_1	7439-92-1	Lead	17.2		mg/kg
R66C58	1-1.5	02/04/04	Yes	1-R66C58_02/04/04_1	7440-38-2	Arsenic	4.6		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R66C58	1-1.5	02/04/04	Yes	1-R66C58_02/04/04_1	7439-92-1	Lead	3.4		mg/kg
R66C59	1-1.5	02/04/04	Yes	1-R66C59_02/04/04_1	7440-38-2	Arsenic	7.6		mg/kg
R66C59	1-1.5	02/04/04	Yes	1-R66C59_02/04/04_1	7439-92-1	Lead	7.8		mg/kg
R66C60	1-1.5	02/04/04	Yes	1-R66C60_02/04/04_1	7440-38-2	Arsenic	8.1		mg/kg
R66C60	1-1.5	02/04/04	Yes	1-R66C60_02/04/04_1	7439-92-1	Lead	6.9		mg/kg
R66C61	1-1.5	03/25/04	Yes	01-R66C61_03/25/04_1	7440-38-2	Arsenic	10.1		mg/kg
R66C61	1-1.5	03/25/04	Yes	01-R66C61_03/25/04_1	7439-92-1	Lead	7.1		mg/kg
R66C62	1-1.5	03/25/04	Yes	01-R66C62_03/25/04_1	7440-38-2	Arsenic	6.0		mg/kg
R66C62	1-1.5	03/25/04	Yes	01-R66C62_03/25/04_1	7439-92-1	Lead	5.5		mg/kg
R66C63	1-1.5	03/25/04	Yes	01-R66C63_03/25/04_1	7440-38-2	Arsenic	10.2		mg/kg
R66C63	1-1.5	03/25/04	Yes	01-R66C63_03/25/04_1	7439-92-1	Lead	7.2		mg/kg
R66C64	1-1.5	03/05/04	Yes	01-R66C64_03/05/04_1	7440-38-2	Arsenic	6.3		mg/kg
R66C64	1-1.5	03/05/04	Yes	01-R66C64_03/05/04_1	7439-92-1	Lead	5.9		mg/kg
R66C65	1-1.5	03/05/04	Yes	01-R66C65_03/05/04_1	7440-38-2	Arsenic	11.0		mg/kg
R66C65	1-1.5	03/05/04	Yes	01-R66C65_03/05/04_1	7439-92-1	Lead	15.1		mg/kg
R66C66	1-1.5	12/04/03	Yes	01-SS-[R66C66]-C2_12/04/03_1	7440-38-2	Arsenic	6.6		mg/kg
R66C66	1-1.5	12/04/03	Yes	01-SS-[R66C66]-C2_12/04/03_1	7439-92-1	Lead	6.1		mg/kg
R66C67	1-1.5	02/05/04	Yes	1-R66C67_02/05/04_1	7440-38-2	Arsenic	8.1		mg/kg
R66C67	1-1.5	02/05/04	Yes	1-R66C67_02/05/04_1	7439-92-1	Lead	6.4		mg/kg
R66C68	1-1.5	02/05/04	Yes	1-R66C68_02/05/04_1	7440-38-2	Arsenic	8.1		mg/kg
R66C68	1-1.5	02/05/04	Yes	1-R66C68_02/05/04_1	7439-92-1	Lead	6.8		mg/kg
R66C69	1-1.5	02/12/04	Yes	1-R66C69_02/12/04_1	7440-38-2	Arsenic	9.1		mg/kg
R66C69	1-1.5	02/12/04	Yes	1-R66C69_02/12/04_1	7439-92-1	Lead	9.7		mg/kg
R66C70	1-1.5	02/10/04	Yes	1-R66C70_02/10/04_1	7440-38-2	Arsenic	12.5		mg/kg
R66C70	1-1.5	02/10/04	Yes	1-R66C70_02/10/04_1	7439-92-1	Lead	10.7		mg/kg
R66C71	1-1.5	02/10/04	Yes	1-R66C71_02/10/04_1	7440-38-2	Arsenic	7.0		mg/kg
R66C71	1-1.5	02/10/04	Yes	1-R66C71_02/10/04_1	7439-92-1	Lead	4.9		mg/kg
R66C72	1-1.5	02/26/04	Yes	01-R66C72_02/26/04_1	7440-38-2	Arsenic	8.5		mg/kg
R66C72	1-1.5	02/26/04	Yes	01-R66C72_02/26/04_1	7439-92-1	Lead	5.8		mg/kg
R67C56	1-1.5	02/04/04	Yes	1-R67C56_02/04/04_1	7440-38-2	Arsenic	9.2		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R67C56	1-1.5	02/04/04	Yes	1-R67C56_02/04/04_1	7439-92-1	Lead	9.3		mg/kg
R67C57	1-1.5	02/04/04	Yes	1-R67C57_02/04/04_1	7440-38-2	Arsenic	7.4		mg/kg
R67C57	1-1.5	02/04/04	Yes	1-R67C57_02/04/04_1	7439-92-1	Lead	7.2		mg/kg
R67C58	1-1.5	02/04/04	Yes	1-R67C58_02/04/04_1	7440-38-2	Arsenic	9.7		mg/kg
R67C58	1-1.5	02/04/04	Yes	1-R67C58_02/04/04_1	7439-92-1	Lead	10.8		mg/kg
R67C59	1-1.5	02/04/04	Yes	1-R67C59_02/04/04_1	7440-38-2	Arsenic	9.3		mg/kg
R67C59	1-1.5	02/04/04	Yes	1-R67C59_02/04/04_1	7439-92-1	Lead	8.1		mg/kg
R67C60	1-1.5	02/04/04	Yes	1-R67C60_02/04/04_1	7440-38-2	Arsenic	9.2		mg/kg
R67C60	1-1.5	02/04/04	Yes	1-R67C60_02/04/04_1	7439-92-1	Lead	7.6		mg/kg
R67C61	1-1.5	02/04/04	Yes	1-R67C61_02/04/04_1	7440-38-2	Arsenic	9.8		mg/kg
R67C61	1-1.5	02/04/04	Yes	1-R67C61_02/04/04_1	7439-92-1	Lead	9.9		mg/kg
R67C63	1-1.5	01/29/04	Yes	01-SS-[R67C63]-C1_AVG_01/29/04_1	7440-38-2	Arsenic	8.8		mg/kg
R67C63	1-1.5	01/29/04	Yes	01-SS-[R67C63]-C1_AVG_01/29/04_1	7439-92-1	Lead	4.3		mg/kg
R67C64	1-1.5	03/05/04	Yes	01-R67C64_03/05/04_1	7440-38-2	Arsenic	7.1		mg/kg
R67C64	1-1.5	03/05/04	Yes	01-R67C64_03/05/04_1	7439-92-1	Lead	5.3		mg/kg
R67C65	1-1.5	03/25/04	Yes	01-R67C65_03/25/04_1	7440-38-2	Arsenic	5.1		mg/kg
R67C65	1-1.5	03/25/04	Yes	01-R67C65_03/25/04_1	7439-92-1	Lead	5.2		mg/kg
R67C65	1-1.5	12/04/03	Yes	01-SS-[R67C65]-C2_12/04/03_1	7440-38-2	Arsenic	11.1		mg/kg
R67C65	1-1.5	12/04/03	Yes	01-SS-[R67C65]-C2_12/04/03_1	7439-92-1	Lead	7.0		mg/kg
R67C66	1-1.5	12/04/03	Yes	01-SS-[R67C66]-C2_12/04/03_1	7440-38-2	Arsenic	2.5	U	mg/kg
R67C66	1-1.5	12/04/03	Yes	01-SS-[R67C66]-C2_12/04/03_1	7439-92-1	Lead	3.4		mg/kg
R67C67	1-1.5	02/05/04	Yes	1-R67C67_02/05/04_1	7440-38-2	Arsenic	6.9		mg/kg
R67C67	1-1.5	02/05/04	Yes	1-R67C67_02/05/04_1	7439-92-1	Lead	5.3		mg/kg
R67C68	1-1.5	02/05/04	Yes	1-R67C68_02/05/04_1	7440-38-2	Arsenic	8.0		mg/kg
R67C68	1-1.5	02/05/04	Yes	1-R67C68_02/05/04_1	7439-92-1	Lead	7.7		mg/kg
R67C69	1-1.5	02/09/04	Yes	1-R67C69_02/09/04_1	7440-38-2	Arsenic	6.9		mg/kg
R67C69	1-1.5	02/09/04	Yes	1-R67C69_02/09/04_1	7439-92-1	Lead	5.6		mg/kg
R67C70	1-1.5	02/09/04	Yes	1-R67C70_02/09/04_1	7440-38-2	Arsenic	6.1		mg/kg
R67C70	1-1.5	02/09/04	Yes	1-R67C70_02/09/04_1	7439-92-1	Lead	5.2		mg/kg
R67C71	1-1.5	02/09/04	Yes	1-R67C71_AVG_02/09/04_1	7440-38-2	Arsenic	7.4		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R67C71	1-1.5	02/09/04	Yes	1-R67C71_AVG_02/09/04_1	7439-92-1	Lead	5.8		mg/kg
R67C72	1-1.5	02/26/04	Yes	01-R67C72_02/26/04_1	7440-38-2	Arsenic	9.4		mg/kg
R67C72	1-1.5	02/26/04	Yes	01-R67C72_02/26/04_1	7439-92-1	Lead	6.0		mg/kg
R68C56	1-1.5	03/16/04	Yes	1-R68C56_03/16/04_1	7440-38-2	Arsenic	7.6		mg/kg
R68C56	1-1.5	03/16/04	Yes	1-R68C56_03/16/04_1	7439-92-1	Lead	7.6		mg/kg
R68C57	1-1.5	02/04/04	Yes	1-R68C57_02/04/04_1	7440-38-2	Arsenic	5.3		mg/kg
R68C57	1-1.5	02/04/04	Yes	1-R68C57_02/04/04_1	7439-92-1	Lead	4.1		mg/kg
R68C58	1-1.5	02/04/04	Yes	1-R68C58_02/04/04_1	7440-38-2	Arsenic	8.0		mg/kg
R68C58	1-1.5	02/04/04	Yes	1-R68C58_02/04/04_1	7439-92-1	Lead	8.2		mg/kg
R68C59	1-1.5	02/04/04	Yes	1-R68C59_02/04/04_1	7440-38-2	Arsenic	10.4		mg/kg
R68C59	1-1.5	02/04/04	Yes	1-R68C59_02/04/04_1	7439-92-1	Lead	5.3		mg/kg
R68C60	1-1.5	02/04/04	Yes	1-R68C60_02/04/04_1	7440-38-2	Arsenic	11.5		mg/kg
R68C60	1-1.5	02/04/04	Yes	1-R68C60_02/04/04_1	7439-92-1	Lead	6.6		mg/kg
R68C63	1-1.5	03/05/04	Yes	01-R68C63_03/05/04_1	7440-38-2	Arsenic	10.4		mg/kg
R68C63	1-1.5	03/05/04	Yes	01-R68C63_03/05/04_1	7439-92-1	Lead	7.7		mg/kg
R68C64	1-1.5	03/05/04	Yes	01-R68C64_03/05/04_1	7440-38-2	Arsenic	7.8		mg/kg
R68C64	1-1.5	03/05/04	Yes	01-R68C64_03/05/04_1	7439-92-1	Lead	8.4		mg/kg
R68C65	1-1.5	03/25/04	Yes	01-R68C65_03/25/04_1	7440-38-2	Arsenic	6.4		mg/kg
R68C65	1-1.5	03/25/04	Yes	01-R68C65_03/25/04_1	7439-92-1	Lead	6.3		mg/kg
R68C65	1-1.5	12/04/03	Yes	01-SS-[R68C65]-C2_12/04/03_1	7440-38-2	Arsenic	5.9		mg/kg
R68C65	1-1.5	12/04/03	Yes	01-SS-[R68C65]-C2_12/04/03_1	7439-92-1	Lead	4.4		mg/kg
R68C66	1-1.5	12/04/03	Yes	01-SS-[R68C66]-C2_12/04/03_1	7440-38-2	Arsenic	3.0		mg/kg
R68C66	1-1.5	12/04/03	Yes	01-SS-[R68C66]-C2_12/04/03_1	7439-92-1	Lead	4.3		mg/kg
R68C67	1-1.5	02/05/04	Yes	1-R68C67_02/05/04_1	7440-38-2	Arsenic	10.4		mg/kg
R68C67	1-1.5	02/05/04	Yes	1-R68C67_02/05/04_1	7439-92-1	Lead	12.8		mg/kg
R68C68	1-1.5	02/05/04	Yes	1-R68C68_02/05/04_1	7440-38-2	Arsenic	13.4		mg/kg
R68C68	1-1.5	02/05/04	Yes	1-R68C68_02/05/04_1	7439-92-1	Lead	17.8		mg/kg
R68C69	1-1.5	02/09/04	Yes	1-R68C69_02/09/04_1	7440-38-2	Arsenic	8.0		mg/kg
R68C69	1-1.5	02/09/04	Yes	1-R68C69_02/09/04_1	7439-92-1	Lead	5.9		mg/kg
R68C70	1-1.5	02/09/04	Yes	1-R68C70_02/09/04_1	7440-38-2	Arsenic	9.0		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R68C70	1-1.5	02/09/04	Yes	1-R68C70_02/09/04_1	7439-92-1	Lead	8.3		mg/kg
R68C71	1-1.5	02/09/04	Yes	1-R68C71_02/09/04_1	7440-38-2	Arsenic	6.7		mg/kg
R68C71	1-1.5	02/09/04	Yes	1-R68C71_02/09/04_1	7439-92-1	Lead	5.8		mg/kg
R68C72	1-1.5	02/26/04	Yes	01-R68C72_02/26/04_1	7440-38-2	Arsenic	9.0		mg/kg
R68C72	1-1.5	02/26/04	Yes	01-R68C72_02/26/04_1	7439-92-1	Lead	7.2		mg/kg
R69C55	1-1.5	02/04/04	Yes	1-R69C55_AVG_02/04/04_1	7440-38-2	Arsenic	9.2		mg/kg
R69C55	1-1.5	02/04/04	Yes	1-R69C55_AVG_02/04/04_1	7439-92-1	Lead	10.7		mg/kg
R69C56	1-1.5	02/04/04	Yes	1-R69C56_AVG_02/04/04_1	7440-38-2	Arsenic	8.0		mg/kg
R69C56	1-1.5	02/04/04	Yes	1-R69C56_AVG_02/04/04_1	7439-92-1	Lead	9.0		mg/kg
R69C57	1-1.5	02/04/04	Yes	1-R69C57_02/04/04_1	7440-38-2	Arsenic	8.9		mg/kg
R69C57	1-1.5	02/04/04	Yes	1-R69C57_02/04/04_1	7439-92-1	Lead	6.2		mg/kg
R69C58	1-1.5	02/04/04	Yes	1-R69C58_02/04/04_1	7440-38-2	Arsenic	11.6		mg/kg
R69C58	1-1.5	02/04/04	Yes	1-R69C58_02/04/04_1	7439-92-1	Lead	11.3		mg/kg
R69C59	1-1.5	02/04/04	Yes	1-R69C59_02/04/04_1	7440-38-2	Arsenic	8.1		mg/kg
R69C59	1-1.5	02/04/04	Yes	1-R69C59_02/04/04_1	7439-92-1	Lead	6.1		mg/kg
R69C60	1-1.5	02/04/04	Yes	1-R69C60_02/04/04_1	7440-38-2	Arsenic	15.1		mg/kg
R69C60	1-1.5	02/04/04	Yes	1-R69C60_02/04/04_1	7439-92-1	Lead	6.7		mg/kg
R69C61	1-1.5	03/25/04	Yes	01-R69C61_03/25/04_1	7440-38-2	Arsenic	7.8		mg/kg
R69C61	1-1.5	03/25/04	Yes	01-R69C61_03/25/04_1	7439-92-1	Lead	6.9		mg/kg
R69C61	1-1.5	01/29/04	Yes	01-SS-[R69C61]-C1_01/29/04_1	7440-38-2	Arsenic	11.3		mg/kg
R69C61	1-1.5	01/29/04	Yes	01-SS-[R69C61]-C1_01/29/04_1	7439-92-1	Lead	10.7		mg/kg
R69C62	1-1.5	01/29/04	Yes	01-SS-[R69C62]-C1_01/29/04_1	7440-38-2	Arsenic	10.0		mg/kg
R69C62	1-1.5	01/29/04	Yes	01-SS-[R69C62]-C1_01/29/04_1	7439-92-1	Lead	5.4		mg/kg
R69C63	1-1.5	03/05/04	Yes	01-R69C63_03/05/04_1	7440-38-2	Arsenic	6.6		mg/kg
R69C63	1-1.5	03/05/04	Yes	01-R69C63_03/05/04_1	7439-92-1	Lead	4.9		mg/kg
R69C64	1-1.5	12/08/03	Yes	01-SS-[R69C64]-C2_12/08/03_1	7440-38-2	Arsenic	5.3		mg/kg
R69C64	1-1.5	12/08/03	Yes	01-SS-[R69C64]-C2_12/08/03_1	7439-92-1	Lead	3.6		mg/kg
R69C65	1-1.5	12/04/03	Yes	01-SS-[R69C65]-C2_12/04/03_1	7440-38-2	Arsenic	15.7		mg/kg
R69C65	1-1.5	12/04/03	Yes	01-SS-[R69C65]-C2_12/04/03_1	7439-92-1	Lead	10.4		mg/kg
R69C66	1-1.5	12/04/03	Yes	01-SS-[R69C66]-C2_12/04/03_1	7440-38-2	Arsenic	9.1		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R69C66	1-1.5	12/04/03	Yes	01-SS-[R69C66]-C2_12/04/03_1	7439-92-1	Lead	12.1		mg/kg
R69C67	1-1.5	02/05/04	Yes	1-R69C67_02/05/04_1	7440-38-2	Arsenic	8.1		mg/kg
R69C67	1-1.5	02/05/04	Yes	1-R69C67_02/05/04_1	7439-92-1	Lead	7.8		mg/kg
R69C68	1-1.5	02/05/04	Yes	1-R69C68_02/05/04_1	7440-38-2	Arsenic	8.4		mg/kg
R69C68	1-1.5	02/05/04	Yes	1-R69C68_02/05/04_1	7439-92-1	Lead	7.5		mg/kg
R69C69	1-1.5	02/05/04	Yes	1-R69C69_02/05/04_1	7440-38-2	Arsenic	8.8		mg/kg
R69C69	1-1.5	02/05/04	Yes	1-R69C69_02/05/04_1	7439-92-1	Lead	5.5		mg/kg
R69C70	1-1.5	02/09/04	Yes	1-R69C70_02/09/04_1	7440-38-2	Arsenic	8.5		mg/kg
R69C70	1-1.5	02/09/04	Yes	1-R69C70_02/09/04_1	7439-92-1	Lead	6.2		mg/kg
R69C71	1-1.5	02/09/04	Yes	1-R69C71_02/09/04_1	7440-38-2	Arsenic	5.8		mg/kg
R69C71	1-1.5	02/09/04	Yes	1-R69C71_02/09/04_1	7439-92-1	Lead	4.5		mg/kg
R69C72	1-1.5	02/09/04	Yes	1-R69C72_02/09/04_1	7440-38-2	Arsenic	8.0		mg/kg
R69C72	1-1.5	02/09/04	Yes	1-R69C72_02/09/04_1	7439-92-1	Lead	7.0		mg/kg
R70C54	1-1.5	01/30/04	Yes	01-SS-[R70C54]-C2_01/30/04_1	7440-38-2	Arsenic	7.3		mg/kg
R70C54	1-1.5	01/30/04	Yes	01-SS-[R70C54]-C2_01/30/04_1	7439-92-1	Lead	4.8		mg/kg
R70C55	1-1.5	01/30/04	Yes	01-SS-[R70C55]-C2_01/30/04_1	7440-38-2	Arsenic	5.7		mg/kg
R70C55	1-1.5	01/30/04	Yes	01-SS-[R70C55]-C2_01/30/04_1	7439-92-1	Lead	2.5		mg/kg
R70C56	1-1.5	02/04/04	Yes	1-R70C56_02/04/04_1	7440-38-2	Arsenic	7.6		mg/kg
R70C56	1-1.5	02/04/04	Yes	1-R70C56_02/04/04_1	7439-92-1	Lead	5.6		mg/kg
R70C57	1-1.5	02/04/04	Yes	1-R70C57_02/04/04_1	7440-38-2	Arsenic	7.7		mg/kg
R70C57	1-1.5	02/04/04	Yes	1-R70C57_02/04/04_1	7439-92-1	Lead	5.9		mg/kg
R70C58	1-1.5	01/30/04	Yes	01-SS-[R70C58]-C2_01/30/04_1	7440-38-2	Arsenic	7.9		mg/kg
R70C58	1-1.5	01/30/04	Yes	01-SS-[R70C58]-C2_01/30/04_1	7439-92-1	Lead	5.1		mg/kg
R70C59	1-1.5	02/04/04	Yes	1-R70C59_02/04/04_1	7440-38-2	Arsenic	29.8		mg/kg
R70C59	1-1.5	02/04/04	Yes	1-R70C59_02/04/04_1	7439-92-1	Lead	9.8		mg/kg
R70C60	1-1.5	01/29/04	Yes	01-SS-[R70C60]-C1_01/29/04_1	7440-38-2	Arsenic	9.5		mg/kg
R70C60	1-1.5	01/29/04	Yes	01-SS-[R70C60]-C1_01/29/04_1	7439-92-1	Lead	5.1		mg/kg
R70C62	1-1.5	03/05/04	Yes	01-R70C62_03/05/04_1	7440-38-2	Arsenic	5.9		mg/kg
R70C62	1-1.5	03/05/04	Yes	01-R70C62_03/05/04_1	7439-92-1	Lead	5.4		mg/kg
R70C63	1-1.5	03/05/04	Yes	01-R70C63_03/05/04_1	7440-38-2	Arsenic	9.3		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R70C63	1-1.5	03/05/04	Yes	01-R70C63_03/05/04_1	7439-92-1	Lead	8.4		mg/kg
R70C64	1-1.5	12/08/03	Yes	01-SS-[R70C64]-C2_12/08/03_1	7440-38-2	Arsenic	6.3		mg/kg
R70C64	1-1.5	12/08/03	Yes	01-SS-[R70C64]-C2_12/08/03_1	7439-92-1	Lead	7.1		mg/kg
R70C65	1-1.5	12/04/03	Yes	01-SS-[R70C65]-C2_12/04/03_1	7440-38-2	Arsenic	5.6		mg/kg
R70C65	1-1.5	12/04/03	Yes	01-SS-[R70C65]-C2_12/04/03_1	7439-92-1	Lead	6.0		mg/kg
R70C66	1-1.5	12/04/03	Yes	01-SS-[R70C66]-C2_AVG_12/04/03_1	7440-38-2	Arsenic	6.7		mg/kg
R70C66	1-1.5	12/04/03	Yes	01-SS-[R70C66]-C2_AVG_12/04/03_1	7439-92-1	Lead	6.8		mg/kg
R70C67	1-1.5	02/05/04	Yes	1-R70C67_02/05/04_1	7440-38-2	Arsenic	11.4		mg/kg
R70C67	1-1.5	02/05/04	Yes	1-R70C67_02/05/04_1	7439-92-1	Lead	14.7		mg/kg
R70C68	1-1.5	02/05/04	Yes	1-R70C68_02/05/04_1	7440-38-2	Arsenic	7.6		mg/kg
R70C68	1-1.5	02/05/04	Yes	1-R70C68_02/05/04_1	7439-92-1	Lead	5.0		mg/kg
R70C69	1-1.5	02/05/04	Yes	1-R70C69_02/05/04_1	7440-38-2	Arsenic	10.7		mg/kg
R70C69	1-1.5	02/05/04	Yes	1-R70C69_02/05/04_1	7439-92-1	Lead	10.8		mg/kg
R70C70	1-1.5	02/05/04	Yes	1-R70C70_02/05/04_1	7440-38-2	Arsenic	7.4		mg/kg
R70C70	1-1.5	02/05/04	Yes	1-R70C70_02/05/04_1	7439-92-1	Lead	6.0		mg/kg
R70C71	1-1.5	02/09/04	Yes	1-R70C71_02/09/04_1	7440-38-2	Arsenic	7.5		mg/kg
R70C71	1-1.5	02/09/04	Yes	1-R70C71_02/09/04_1	7439-92-1	Lead	7.6		mg/kg
R70C72	1-1.5	02/09/04	Yes	1-R70C72_02/09/04_1	7440-38-2	Arsenic	17.8		mg/kg
R70C72	1-1.5	02/09/04	Yes	1-R70C72_02/09/04_1	7439-92-1	Lead	37.3		mg/kg
R71C54	1-1.5	01/30/04	Yes	01-SS-[R71C54]-C2_01/30/04_1	7440-38-2	Arsenic	8.6		mg/kg
R71C54	1-1.5	01/30/04	Yes	01-SS-[R71C54]-C2_01/30/04_1	7439-92-1	Lead	6.5		mg/kg
R71C55	1-1.5	01/30/04	Yes	01-SS-[R71C55]-C2_01/30/04_1	7440-38-2	Arsenic	8.2		mg/kg
R71C55	1-1.5	01/30/04	Yes	01-SS-[R71C55]-C2_01/30/04_1	7439-92-1	Lead	7.5		mg/kg
R71C56	1-1.5	01/30/04	Yes	01-SS-[R71C56]-C2_01/30/04_1	7440-38-2	Arsenic	6.7		mg/kg
R71C56	1-1.5	01/30/04	Yes	01-SS-[R71C56]-C2_01/30/04_1	7439-92-1	Lead	3.5		mg/kg
R71C57	1-1.5	01/30/04	Yes	01-SS-[R71C57]-C2_01/30/04_1	7440-38-2	Arsenic	13.2		mg/kg
R71C57	1-1.5	01/30/04	Yes	01-SS-[R71C57]-C2_01/30/04_1	7439-92-1	Lead	13.1		mg/kg
R71C58	1-1.5	01/30/04	Yes	01-SS-[R71C58]-C2_01/30/04_1	7440-38-2	Arsenic	11.7		mg/kg
R71C58	1-1.5	01/30/04	Yes	01-SS-[R71C58]-C2_01/30/04_1	7439-92-1	Lead	12.2		mg/kg
R71C59	1-1.5	01/29/04	Yes	01-SS-[R71C59]-C1_01/29/04_1	7440-38-2	Arsenic	7.7		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R71C59	1-1.5	01/29/04	Yes	01-SS-[R71C59]-C1_01/29/04_1	7439-92-1	Lead	2.9		mg/kg
R71C60	1-1.5	03/05/04	Yes	01-R71C60_03/05/04_1	7440-38-2	Arsenic	8.6		mg/kg
R71C60	1-1.5	03/05/04	Yes	01-R71C60_03/05/04_1	7439-92-1	Lead	8.1		mg/kg
R71C61	1-1.5	03/05/04	Yes	01-R71C61_AVG_03/05/04_1	7440-38-2	Arsenic	7.9		mg/kg
R71C61	1-1.5	03/05/04	Yes	01-R71C61_AVG_03/05/04_1	7439-92-1	Lead	5.9		mg/kg
R71C62	1-1.5	03/05/04	Yes	01-R71C62_03/05/04_1	7440-38-2	Arsenic	12.5		mg/kg
R71C62	1-1.5	03/05/04	Yes	01-R71C62_03/05/04_1	7439-92-1	Lead	20.1		mg/kg
R71C63	1-1.5	12/08/03	Yes	01-SS-[R71C63]-C2_12/08/03_1	7440-38-2	Arsenic	6.6		mg/kg
R71C63	1-1.5	12/08/03	Yes	01-SS-[R71C63]-C2_12/08/03_1	7439-92-1	Lead	5.5		mg/kg
R71C64	1-1.5	12/08/03	Yes	01-SS-[R71C64]-C2_12/08/03_1	7440-38-2	Arsenic	4.1		mg/kg
R71C64	1-1.5	12/08/03	Yes	01-SS-[R71C64]-C2_12/08/03_1	7439-92-1	Lead	3.7		mg/kg
R71C65	1-1.5	12/04/03	Yes	01-SS-[R71C65]-C2_12/04/03_1	7440-38-2	Arsenic	15.4		mg/kg
R71C65	1-1.5	12/04/03	Yes	01-SS-[R71C65]-C2_12/04/03_1	7439-92-1	Lead	19.5		mg/kg
R71C66	1-1.5	12/04/03	Yes	01-SS-[R71C66]-C2_12/04/03_1	7440-38-2	Arsenic	9.6		mg/kg
R71C66	1-1.5	12/04/03	Yes	01-SS-[R71C66]-C2_12/04/03_1	7439-92-1	Lead	13.2		mg/kg
R71C67	1-1.5	02/05/04	Yes	1-R71C67_AVG_02/05/04_1	7440-38-2	Arsenic	10.0		mg/kg
R71C67	1-1.5	02/05/04	Yes	1-R71C67_AVG_02/05/04_1	7439-92-1	Lead	11.0		mg/kg
R71C68	1-1.5	02/05/04	Yes	1-R71C68_02/05/04_1	7440-38-2	Arsenic	31.1		mg/kg
R71C68	1-1.5	02/05/04	Yes	1-R71C68_02/05/04_1	7439-92-1	Lead	41.8		mg/kg
R71C69	1-1.5	02/05/04	Yes	1-R71C69_02/05/04_1	7440-38-2	Arsenic	6.3		mg/kg
R71C69	1-1.5	02/05/04	Yes	1-R71C69_02/05/04_1	7439-92-1	Lead	5.5		mg/kg
R71C70	1-1.5	02/05/04	Yes	1-R71C70_AVG_02/05/04_1	7440-38-2	Arsenic	10.4		mg/kg
R71C70	1-1.5	02/05/04	Yes	1-R71C70_AVG_02/05/04_1	7439-92-1	Lead	9.7		mg/kg
R71C71	1-1.5	02/09/04	Yes	1-R71C71_02/09/04_1	7440-38-2	Arsenic	7.1		mg/kg
R71C71	1-1.5	02/09/04	Yes	1-R71C71_02/09/04_1	7439-92-1	Lead	5.8		mg/kg
R71C72	1-1.5	02/09/04	Yes	1-R71C72_02/09/04_1	7440-38-2	Arsenic	13.4		mg/kg
R71C72	1-1.5	02/09/04	Yes	1-R71C72_02/09/04_1	7439-92-1	Lead	13.5		mg/kg
R72C53	1-1.5	01/30/04	Yes	01-SS-[R72C53]-C2_01/30/04_1	7440-38-2	Arsenic	8.9		mg/kg
R72C53	1-1.5	01/30/04	Yes	01-SS-[R72C53]-C2_01/30/04_1	7439-92-1	Lead	6.6		mg/kg
R72C54	1-1.5	01/30/04	Yes	01-SS-[R72C54]-C2_01/30/04_1	7440-38-2	Arsenic	6.1		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R72C54	1-1.5	01/30/04	Yes	01-SS-[R72C54]-C2_01/30/04_1	7439-92-1	Lead	3.2		mg/kg
R72C55	1-1.5	01/30/04	Yes	01-SS-[R72C55]-C2_01/30/04_1	7440-38-2	Arsenic	7.5		mg/kg
R72C55	1-1.5	01/30/04	Yes	01-SS-[R72C55]-C2_01/30/04_1	7439-92-1	Lead	3.9		mg/kg
R72C56	1-1.5	01/30/04	Yes	01-SS-[R72C56]-C2_01/30/04_1	7440-38-2	Arsenic	8.7		mg/kg
R72C56	1-1.5	01/30/04	Yes	01-SS-[R72C56]-C2_01/30/04_1	7439-92-1	Lead	7.6		mg/kg
R72C57	1-1.5	01/30/04	Yes	01-SS-[R72C57]-C2_01/30/04_1	7440-38-2	Arsenic	6.1		mg/kg
R72C57	1-1.5	01/30/04	Yes	01-SS-[R72C57]-C2_01/30/04_1	7439-92-1	Lead	3.3		mg/kg
R72C58	1-1.5	03/16/04	Yes	1-R72C58_03/16/04_1	7440-38-2	Arsenic	18.1		mg/kg
R72C58	1-1.5	03/16/04	Yes	1-R72C58_03/16/04_1	7439-92-1	Lead	19.2		mg/kg
R72C59	1-1.5	01/29/04	Yes	01-SS-[R72C59]-C1_01/29/04_1	7440-38-2	Arsenic	9.9		mg/kg
R72C59	1-1.5	01/29/04	Yes	01-SS-[R72C59]-C1_01/29/04_1	7439-92-1	Lead	8.3		mg/kg
R72C61	1-1.5	03/05/04	Yes	01-R72C61_03/05/04_1	7440-38-2	Arsenic	7.0		mg/kg
R72C61	1-1.5	03/05/04	Yes	01-R72C61_03/05/04_1	7439-92-1	Lead	5.0		mg/kg
R72C62	1-1.5	12/05/03	Yes	01-SS-[R72C62]-C2_12/05/03_1	7440-38-2	Arsenic	15.2		mg/kg
R72C62	1-1.5	12/05/03	Yes	01-SS-[R72C62]-C2_12/05/03_1	7439-92-1	Lead	41.7		mg/kg
R72C63	1-1.5	12/08/03	Yes	01-SS-[R72C63]-C2_12/08/03_1	7440-38-2	Arsenic	5.9		mg/kg
R72C63	1-1.5	12/08/03	Yes	01-SS-[R72C63]-C2_12/08/03_1	7439-92-1	Lead	4.9		mg/kg
R72C64	1-1.5	12/05/03	Yes	01-SS-[R72C64]-C2_12/05/03_1	7440-38-2	Arsenic	2.8		mg/kg
R72C64	1-1.5	12/05/03	Yes	01-SS-[R72C64]-C2_12/05/03_1	7439-92-1	Lead	4.2		mg/kg
R72C65	1-1.5	12/04/03	Yes	01-SS-[R72C65]-C2_12/04/03_1	7440-38-2	Arsenic	7.8		mg/kg
R72C65	1-1.5	12/04/03	Yes	01-SS-[R72C65]-C2_12/04/03_1	7439-92-1	Lead	7.3		mg/kg
R72C66	1-1.5	12/04/03	Yes	01-SS-[R72C66]-C2_12/04/03_1	7440-38-2	Arsenic	7.4		mg/kg
R72C66	1-1.5	12/04/03	Yes	01-SS-[R72C66]-C2_12/04/03_1	7439-92-1	Lead	5.1		mg/kg
R72C67	1-1.5	02/05/04	Yes	1-R72C67_02/05/04_1	7440-38-2	Arsenic	10.4		mg/kg
R72C67	1-1.5	02/05/04	Yes	1-R72C67_02/05/04_1	7439-92-1	Lead	14.7		mg/kg
R72C68	1-1.5	02/05/04	Yes	1-R72C68_02/05/04_1	7440-38-2	Arsenic	5.9		mg/kg
R72C68	1-1.5	02/05/04	Yes	1-R72C68_02/05/04_1	7439-92-1	Lead	5.2		mg/kg
R72C69	1-1.5	02/05/04	Yes	1-R72C69_02/05/04_1	7440-38-2	Arsenic	9.5		mg/kg
R72C69	1-1.5	02/05/04	Yes	1-R72C69_02/05/04_1	7439-92-1	Lead	5.2		mg/kg
R72C70	1-1.5	02/05/04	Yes	1-R72C70_02/05/04_1	7440-38-2	Arsenic	8.4		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R72C70	1-1.5	02/05/04	Yes	1-R72C70_02/05/04_1	7439-92-1	Lead	4.8		mg/kg
R72C71	1-1.5	02/09/04	Yes	1-R72C71_02/09/04_1	7440-38-2	Arsenic	7.8		mg/kg
R72C71	1-1.5	02/09/04	Yes	1-R72C71_02/09/04_1	7439-92-1	Lead	6.5		mg/kg
R72C72	1-1.5	02/09/04	Yes	1-R72C72_02/09/04_1	7440-38-2	Arsenic	6.5		mg/kg
R72C72	1-1.5	02/09/04	Yes	1-R72C72_02/09/04_1	7439-92-1	Lead	5.8		mg/kg
R73C52	1-1.5	01/30/04	Yes	01-SS-[R73C52]-C2_01/30/04_1	7440-38-2	Arsenic	5.5		mg/kg
R73C52	1-1.5	01/30/04	Yes	01-SS-[R73C52]-C2_01/30/04_1	7439-92-1	Lead	3.0		mg/kg
R73C53	1-1.5	01/30/04	Yes	01-SS-[R73C53]-C2_01/30/04_1	7440-38-2	Arsenic	10.1		mg/kg
R73C53	1-1.5	01/30/04	Yes	01-SS-[R73C53]-C2_01/30/04_1	7439-92-1	Lead	9.6		mg/kg
R73C54	1-1.5	01/30/04	Yes	01-SS-[R73C54]-C2_01/30/04_1	7440-38-2	Arsenic	6.7		mg/kg
R73C54	1-1.5	01/30/04	Yes	01-SS-[R73C54]-C2_01/30/04_1	7439-92-1	Lead	3.3		mg/kg
R73C55	1-1.5	01/30/04	Yes	01-SS-[R73C55]-C2_01/30/04_1	7440-38-2	Arsenic	6.7		mg/kg
R73C55	1-1.5	01/30/04	Yes	01-SS-[R73C55]-C2_01/30/04_1	7439-92-1	Lead	4.9		mg/kg
R73C56	1-1.5	01/30/04	Yes	01-SS-[R73C56]-C2_01/30/04_1	7440-38-2	Arsenic	6.6		mg/kg
R73C56	1-1.5	01/30/04	Yes	01-SS-[R73C56]-C2_01/30/04_1	7439-92-1	Lead	3.2		mg/kg
R73C57	1-1.5	01/30/04	Yes	01-SS-[R73C57]-C2_01/30/04_1	7440-38-2	Arsenic	6.6		mg/kg
R73C57	1-1.5	01/30/04	Yes	01-SS-[R73C57]-C2_01/30/04_1	7439-92-1	Lead	3.5		mg/kg
R73C58	1-1.5	01/30/04	Yes	01-SS-[R73C58]-C2_01/30/04_1	7440-38-2	Arsenic	8.2		mg/kg
R73C58	1-1.5	01/30/04	Yes	01-SS-[R73C58]-C2_01/30/04_1	7439-92-1	Lead	5.9		mg/kg
R73C60	1-1.5	03/05/04	Yes	01-R73C60_03/05/04_1	7440-38-2	Arsenic	9.2		mg/kg
R73C60	1-1.5	03/05/04	Yes	01-R73C60_03/05/04_1	7439-92-1	Lead	9.8		mg/kg
R73C63	1-1.5	12/05/03	Yes	01-SS-[R73C63]-C2_12/05/03_1	7440-38-2	Arsenic	10.3		mg/kg
R73C63	1-1.5	12/05/03	Yes	01-SS-[R73C63]-C2_12/05/03_1	7439-92-1	Lead	11.4		mg/kg
R73C64	1-1.5	12/05/03	Yes	01-SS-[R73C64]-C2_12/05/03_1	7440-38-2	Arsenic	6.2		mg/kg
R73C64	1-1.5	12/05/03	Yes	01-SS-[R73C64]-C2_12/05/03_1	7439-92-1	Lead	7.1		mg/kg
R73C65	1-1.5	12/05/03	Yes	01-SS-[R73C65]-C2_12/05/03_1	7440-38-2	Arsenic	2.6	U	mg/kg
R73C65	1-1.5	12/05/03	Yes	01-SS-[R73C65]-C2_12/05/03_1	7439-92-1	Lead	4.5		mg/kg
R73C66	1-1.5	12/05/03	Yes	01-SS-[R73C66]-C2_12/05/03_1	7440-38-2	Arsenic	9.3		mg/kg
R73C66	1-1.5	12/05/03	Yes	01-SS-[R73C66]-C2_12/05/03_1	7439-92-1	Lead	15.5		mg/kg
R73C67	1-1.5	02/05/04	Yes	1-R73C67_02/05/04_1	7440-38-2	Arsenic	7.5		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R73C67	1-1.5	02/05/04	Yes	1-R73C67_02/05/04_1	7439-92-1	Lead	7.2		mg/kg
R73C68	1-1.5	02/05/04	Yes	1-R73C68_02/05/04_1	7440-38-2	Arsenic	6.2		mg/kg
R73C68	1-1.5	02/05/04	Yes	1-R73C68_02/05/04_1	7439-92-1	Lead	5.4		mg/kg
R73C69	1-1.5	02/06/04	Yes	1-R73C69_02/06/04_1	7440-38-2	Arsenic	6.8		mg/kg
R73C69	1-1.5	02/06/04	Yes	1-R73C69_02/06/04_1	7439-92-1	Lead	4.8		mg/kg
R73C70	1-1.5	02/06/04	Yes	1-R73C70_02/06/04_1	7440-38-2	Arsenic	10.2		mg/kg
R73C70	1-1.5	02/06/04	Yes	1-R73C70_02/06/04_1	7439-92-1	Lead	8.7		mg/kg
R73C71	1-1.5	02/09/04	Yes	1-R73C71_02/09/04_1	7440-38-2	Arsenic	7.2		mg/kg
R73C71	1-1.5	02/09/04	Yes	1-R73C71_02/09/04_1	7439-92-1	Lead	5.2		mg/kg
R73C72	1-1.5	02/09/04	Yes	1-R73C72_02/09/04_1	7440-38-2	Arsenic	8.6		mg/kg
R73C72	1-1.5	02/09/04	Yes	1-R73C72_02/09/04_1	7439-92-1	Lead	6.3		mg/kg
R74C52	1-1.5	01/30/04	Yes	01-SS-[R74C52]-C2_01/30/04_1	7440-38-2	Arsenic	8.6		mg/kg
R74C52	1-1.5	01/30/04	Yes	01-SS-[R74C52]-C2_01/30/04_1	7439-92-1	Lead	7.4		mg/kg
R74C53	1-1.5	01/30/04	Yes	01-SS-[R74C53]-C2_01/30/04_1	7440-38-2	Arsenic	5.9		mg/kg
R74C53	1-1.5	01/30/04	Yes	01-SS-[R74C53]-C2_01/30/04_1	7439-92-1	Lead	2.7		mg/kg
R74C54	1-1.5	01/30/04	Yes	01-SS-[R74C54]-C2_01/30/04_1	7440-38-2	Arsenic	6.0		mg/kg
R74C54	1-1.5	01/30/04	Yes	01-SS-[R74C54]-C2_01/30/04_1	7439-92-1	Lead	3.1		mg/kg
R74C55	1-1.5	01/30/04	Yes	01-SS-[R74C55]-C2_01/30/04_1	7440-38-2	Arsenic	7.2		mg/kg
R74C55	1-1.5	01/30/04	Yes	01-SS-[R74C55]-C2_01/30/04_1	7439-92-1	Lead	5.4		mg/kg
R74C56	1-1.5	01/30/04	Yes	01-SS-[R74C56]-C2_01/30/04_1	7440-38-2	Arsenic	8.0		mg/kg
R74C56	1-1.5	01/30/04	Yes	01-SS-[R74C56]-C2_01/30/04_1	7439-92-1	Lead	3.8		mg/kg
R74C57	1-1.5	01/30/04	Yes	01-SS-[R74C57]-C2_01/30/04_1	7440-38-2	Arsenic	8.1		mg/kg
R74C57	1-1.5	01/30/04	Yes	01-SS-[R74C57]-C2_01/30/04_1	7439-92-1	Lead	4.5		mg/kg
R74C58	1-1.5	01/30/04	Yes	01-SS-[R74C58]-C2_01/30/04_1	7440-38-2	Arsenic	9.3		mg/kg
R74C58	1-1.5	01/30/04	Yes	01-SS-[R74C58]-C2_01/30/04_1	7439-92-1	Lead	13.2		mg/kg
R74C63	1-1.5	12/05/03	Yes	01-SS-[R74C63]-C2_12/05/03_1	7440-38-2	Arsenic	9.5		mg/kg
R74C63	1-1.5	12/05/03	Yes	01-SS-[R74C63]-C2_12/05/03_1	7439-92-1	Lead	7.9		mg/kg
R74C64	1-1.5	12/05/03	Yes	01-SS-[R74C64]-C2_AVG_12/05/03_1	7440-38-2	Arsenic	3.7		mg/kg
R74C64	1-1.5	12/05/03	Yes	01-SS-[R74C64]-C2_AVG_12/05/03_1	7439-92-1	Lead	3.6		mg/kg
R74C65	1-1.5	12/05/03	Yes	01-SS-[R74C65]-C2_12/05/03_1	7440-38-2	Arsenic	3.6		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R74C65	1-1.5	12/05/03	Yes	01-SS-[R74C65]-C2_12/05/03_1	7439-92-1	Lead	4.9		mg/kg
R74C66	1-1.5	12/05/03	Yes	01-SS-[R74C66]-C2_12/05/03_1	7440-38-2	Arsenic	4.8		mg/kg
R74C66	1-1.5	12/05/03	Yes	01-SS-[R74C66]-C2_12/05/03_1	7439-92-1	Lead	5.2		mg/kg
R74C67	1-1.5	02/05/04	Yes	1-R74C67_02/05/04_1	7440-38-2	Arsenic	7.4		mg/kg
R74C67	1-1.5	02/05/04	Yes	1-R74C67_02/05/04_1	7439-92-1	Lead	5.3		mg/kg
R74C68	1-1.5	02/05/04	Yes	1-R74C68_02/05/04_1	7440-38-2	Arsenic	8.4		mg/kg
R74C68	1-1.5	02/05/04	Yes	1-R74C68_02/05/04_1	7439-92-1	Lead	6.8		mg/kg
R74C69	1-1.5	02/06/04	Yes	1-R74C69_02/06/04_1	7440-38-2	Arsenic	7.6		mg/kg
R74C69	1-1.5	02/06/04	Yes	1-R74C69_02/06/04_1	7439-92-1	Lead	5.7		mg/kg
R74C70	1-1.5	02/06/04	Yes	1-R74C70_AVG_02/06/04_1	7440-38-2	Arsenic	9.3		mg/kg
R74C70	1-1.5	02/06/04	Yes	1-R74C70_AVG_02/06/04_1	7439-92-1	Lead	5.8		mg/kg
R74C71	1-1.5	02/09/04	Yes	1-R74C71_02/09/04_1	7440-38-2	Arsenic	7.3		mg/kg
R74C71	1-1.5	02/09/04	Yes	1-R74C71_02/09/04_1	7439-92-1	Lead	4.5		mg/kg
R74C72	1-1.5	02/09/04	Yes	1-R74C72_02/09/04_1	7440-38-2	Arsenic	8.4		mg/kg
R74C72	1-1.5	02/09/04	Yes	1-R74C72_02/09/04_1	7439-92-1	Lead	5.9		mg/kg
R75C52	1-1.5	01/30/04	Yes	01-SS-[R75C52]-C2_01/30/04_1	7440-38-2	Arsenic	6.9		mg/kg
R75C52	1-1.5	01/30/04	Yes	01-SS-[R75C52]-C2_01/30/04_1	7439-92-1	Lead	4.9		mg/kg
R75C53	1-1.5	01/30/04	Yes	01-SS-[R75C53]-C2_01/30/04_1	7440-38-2	Arsenic	5.8		mg/kg
R75C53	1-1.5	01/30/04	Yes	01-SS-[R75C53]-C2_01/30/04_1	7439-92-1	Lead	2.6		mg/kg
R75C54	1-1.5	01/30/04	Yes	01-SS-[R75C54]-C2_01/30/04_1	7440-38-2	Arsenic	6.0		mg/kg
R75C54	1-1.5	01/30/04	Yes	01-SS-[R75C54]-C2_01/30/04_1	7439-92-1	Lead	2.5		mg/kg
R75C55	1-1.5	01/30/04	Yes	01-SS-[R75C55]-C2_01/30/04_1	7440-38-2	Arsenic	6.0		mg/kg
R75C55	1-1.5	01/30/04	Yes	01-SS-[R75C55]-C2_01/30/04_1	7439-92-1	Lead	3.2		mg/kg
R75C56	1-1.5	01/30/04	Yes	01-SS-[R75C56]-C2_01/30/04_1	7440-38-2	Arsenic	17.5		mg/kg
R75C56	1-1.5	01/30/04	Yes	01-SS-[R75C56]-C2_01/30/04_1	7439-92-1	Lead	8.7		mg/kg
R75C57	1-1.5	01/30/04	Yes	01-SS-[R75C57]-C2_01/30/04_1	7440-38-2	Arsenic	10.8		mg/kg
R75C57	1-1.5	01/30/04	Yes	01-SS-[R75C57]-C2_01/30/04_1	7439-92-1	Lead	8.0		mg/kg
R75C64	1-1.5	12/05/03	Yes	01-SS-[R75C64]-C2_12/05/03_1	7440-38-2	Arsenic	6.1		mg/kg
R75C64	1-1.5	12/05/03	Yes	01-SS-[R75C64]-C2_12/05/03_1	7439-92-1	Lead	4.6		mg/kg
R75C65	1-1.5	12/05/03	Yes	01-SS-[R75C65]-C2_12/05/03_1	7440-38-2	Arsenic	9.8		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R75C65	1-1.5	12/05/03	Yes	01-SS-[R75C65]-C2_12/05/03_1	7439-92-1	Lead	13.5		mg/kg
R75C66	1-1.5	12/05/03	Yes	01-SS-[R75C66]-C2_12/05/03_1	7440-38-2	Arsenic	4.8		mg/kg
R75C66	1-1.5	12/05/03	Yes	01-SS-[R75C66]-C2_12/05/03_1	7439-92-1	Lead	5.1		mg/kg
R75C67	1-1.5	02/05/04	Yes	1-R75C67_02/05/04_1	7440-38-2	Arsenic	11.9		mg/kg
R75C67	1-1.5	02/05/04	Yes	1-R75C67_02/05/04_1	7439-92-1	Lead	12.7		mg/kg
R75C68	1-1.5	02/05/04	Yes	1-R75C68_02/05/04_1	7440-38-2	Arsenic	7.6		mg/kg
R75C68	1-1.5	02/05/04	Yes	1-R75C68_02/05/04_1	7439-92-1	Lead	5.6		mg/kg
R75C69	1-1.5	02/06/04	Yes	1-R75C69_02/06/04_1	7440-38-2	Arsenic	7.4		mg/kg
R75C69	1-1.5	02/06/04	Yes	1-R75C69_02/06/04_1	7439-92-1	Lead	5.7		mg/kg
R75C70	1-1.5	02/06/04	Yes	1-R75C70_02/06/04_1	7440-38-2	Arsenic	9.0		mg/kg
R75C70	1-1.5	02/06/04	Yes	1-R75C70_02/06/04_1	7439-92-1	Lead	7.5		mg/kg
R75C71	1-1.5	02/06/04	Yes	1-R75C71_02/06/04_1	7440-38-2	Arsenic	7.5		mg/kg
R75C71	1-1.5	02/06/04	Yes	1-R75C71_02/06/04_1	7439-92-1	Lead	6.1		mg/kg
R75C71	1-1.5	02/09/04	Yes	1-R75C71_02/09/04_1	7440-38-2	Arsenic	6.0		mg/kg
R75C71	1-1.5	02/09/04	Yes	1-R75C71_02/09/04_1	7439-92-1	Lead	4.8		mg/kg
R75C72	1-1.5	02/09/04	Yes	1-R75C72_02/09/04_1	7440-38-2	Arsenic	8.3		mg/kg
R75C72	1-1.5	02/09/04	Yes	1-R75C72_02/09/04_1	7439-92-1	Lead	7.9		mg/kg
R76C54	1-1.5	01/30/04	Yes	01-SS-[R76C54]-C2_01/30/04_1	7440-38-2	Arsenic	8.0		mg/kg
R76C54	1-1.5	01/30/04	Yes	01-SS-[R76C54]-C2_01/30/04_1	7439-92-1	Lead	4.8		mg/kg
R76C55	1-1.5	01/30/04	Yes	01-SS-[R76C55]-C2_01/30/04_1	7440-38-2	Arsenic	6.3		mg/kg
R76C55	1-1.5	01/30/04	Yes	01-SS-[R76C55]-C2_01/30/04_1	7439-92-1	Lead	3.2		mg/kg
R76C55	1-1.5	12/05/03	Yes	01-SS-[R76C55]-C2_12/05/03_1	7440-38-2	Arsenic	5.3		mg/kg
R76C55	1-1.5	12/05/03	Yes	01-SS-[R76C55]-C2_12/05/03_1	7439-92-1	Lead	4.6		mg/kg
R76C63	1-1.5	12/05/03	Yes	01-SS-[R76C63]-C2_12/05/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R76C63	1-1.5	12/05/03	Yes	01-SS-[R76C63]-C2_12/05/03_1	7439-92-1	Lead	3.9		mg/kg
R76C64	1-1.5	12/05/03	Yes	01-SS-[R76C64]-C2_12/05/03_1	7440-38-2	Arsenic	8.4		mg/kg
R76C64	1-1.5	12/05/03	Yes	01-SS-[R76C64]-C2_12/05/03_1	7439-92-1	Lead	12.4		mg/kg
R76C66	1-1.5	12/05/03	Yes	01-SS-[R76C66]-C2_12/05/03_1	7440-38-2	Arsenic	3.6		mg/kg
R76C66	1-1.5	12/05/03	Yes	01-SS-[R76C66]-C2_12/05/03_1	7439-92-1	Lead	4.2		mg/kg
R76C67	1-1.5	02/05/04	Yes	1-R76C67_02/05/04_1	7440-38-2	Arsenic	6.7		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R76C67	1-1.5	02/05/04	Yes	1-R76C67_02/05/04_1	7439-92-1	Lead	4.9		mg/kg
R76C68	1-1.5	02/05/04	Yes	1-R76C68_02/05/04_1	7440-38-2	Arsenic	6.7		mg/kg
R76C68	1-1.5	02/05/04	Yes	1-R76C68_02/05/04_1	7439-92-1	Lead	5.0		mg/kg
R76C69	1-1.5	02/06/04	Yes	1-R76C69_02/06/04_1	7440-38-2	Arsenic	13.4		mg/kg
R76C69	1-1.5	02/06/04	Yes	1-R76C69_02/06/04_1	7439-92-1	Lead	9.4		mg/kg
R76C70	1-1.5	03/25/04	Yes	01-R76C70_03/25/04_1	7440-38-2	Arsenic	5.8		mg/kg
R76C70	1-1.5	03/25/04	Yes	01-R76C70_03/25/04_1	7439-92-1	Lead	7.3		mg/kg
R76C71	1-1.5	02/09/04	Yes	1-R76C71_02/09/04_1	7440-38-2	Arsenic	5.8		mg/kg
R76C71	1-1.5	02/09/04	Yes	1-R76C71_02/09/04_1	7439-92-1	Lead	5.2		mg/kg
R76C72	1-1.5	02/09/04	Yes	1-R76C72_02/09/04_1	7440-38-2	Arsenic	6.6		mg/kg
R76C72	1-1.5	02/09/04	Yes	1-R76C72_02/09/04_1	7439-92-1	Lead	6.2		mg/kg
R76C73	1-1.5	02/09/04	Yes	1-R76C73_02/09/04_1	7440-38-2	Arsenic	9.1		mg/kg
R76C73	1-1.5	02/09/04	Yes	1-R76C73_02/09/04_1	7439-92-1	Lead	10.4		mg/kg
R76C74	1-1.5	02/09/04	Yes	1-R76C74_02/09/04_1	7440-38-2	Arsenic	6.4		mg/kg
R76C74	1-1.5	02/09/04	Yes	1-R76C74_02/09/04_1	7439-92-1	Lead	5.3		mg/kg
R76C75	1-1.5	02/09/04	Yes	1-R76C75_02/09/04_1	7440-38-2	Arsenic	5.4		mg/kg
R76C75	1-1.5	02/09/04	Yes	1-R76C75_02/09/04_1	7439-92-1	Lead	9.1		mg/kg
R76C76	1-1.5	02/09/04	Yes	1-R76C76_02/09/04_1	7440-38-2	Arsenic	9.7		mg/kg
R76C76	1-1.5	02/09/04	Yes	1-R76C76_02/09/04_1	7439-92-1	Lead	4.3		mg/kg
R76C77	1-1.5	02/09/04	Yes	1-R76C77_02/09/04_1	7440-38-2	Arsenic	12.9		mg/kg
R76C77	1-1.5	02/09/04	Yes	1-R76C77_02/09/04_1	7439-92-1	Lead	7.1		mg/kg
R76C78	1-1.5	02/09/04	Yes	1-R76C78_02/09/04_1	7440-38-2	Arsenic	9.0		mg/kg
R76C78	1-1.5	02/09/04	Yes	1-R76C78_02/09/04_1	7439-92-1	Lead	9.5		mg/kg
R76C79	1-1.5	02/09/04	Yes	1-R76C79_AVG_02/09/04_1	7440-38-2	Arsenic	9.4		mg/kg
R76C79	1-1.5	02/09/04	Yes	1-R76C79_AVG_02/09/04_1	7439-92-1	Lead	6.2		mg/kg
R77C54	1-1.5	01/30/04	Yes	01-SS-[R77C54]-C2_01/30/04_1	7440-38-2	Arsenic	6.5		mg/kg
R77C54	1-1.5	01/30/04	Yes	01-SS-[R77C54]-C2_01/30/04_1	7439-92-1	Lead	3.4		mg/kg
R77C66	1-1.5	12/05/03	Yes	01-SS-[R77C66]-C2_12/05/03_1	7440-38-2	Arsenic	5.1		mg/kg
R77C66	1-1.5	12/05/03	Yes	01-SS-[R77C66]-C2_12/05/03_1	7439-92-1	Lead	4.4		mg/kg
R77C67	1-1.5	02/05/04	Yes	1-R77C67_02/05/04_1	7440-38-2	Arsenic	8.8		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R77C67	1-1.5	02/05/04	Yes	1-R77C67_02/05/04_1	7439-92-1	Lead	7.4		mg/kg
R77C68	1-1.5	02/05/04	Yes	1-R77C68_AVG_02/05/04_1	7440-38-2	Arsenic	8.7		mg/kg
R77C68	1-1.5	02/05/04	Yes	1-R77C68_AVG_02/05/04_1	7439-92-1	Lead	6.4		mg/kg
R77C69	1-1.5	02/06/04	Yes	1-R77C69_02/06/04_1	7440-38-2	Arsenic	6.7		mg/kg
R77C69	1-1.5	02/06/04	Yes	1-R77C69_02/06/04_1	7439-92-1	Lead	5.1		mg/kg
R77C70	1-1.5	02/06/04	Yes	1-R77C70_02/06/04_1	7440-38-2	Arsenic	9.8		mg/kg
R77C70	1-1.5	02/06/04	Yes	1-R77C70_02/06/04_1	7439-92-1	Lead	10.1		mg/kg
R77C71	1-1.5	02/06/04	Yes	1-R77C71_02/06/04_1	7440-38-2	Arsenic	6.6		mg/kg
R77C71	1-1.5	02/06/04	Yes	1-R77C71_02/06/04_1	7439-92-1	Lead	4.6		mg/kg
R77C72	1-1.5	02/06/04	Yes	1-R77C72_02/06/04_1	7440-38-2	Arsenic	8.8		mg/kg
R77C72	1-1.5	02/06/04	Yes	1-R77C72_02/06/04_1	7439-92-1	Lead	8.2		mg/kg
R77C73	1-1.5	02/09/04	Yes	1-R77C73_02/09/04_1	7440-38-2	Arsenic	7.3		mg/kg
R77C73	1-1.5	02/09/04	Yes	1-R77C73_02/09/04_1	7439-92-1	Lead	4.9		mg/kg
R77C74	1-1.5	02/09/04	Yes	1-R77C74_02/09/04_1	7440-38-2	Arsenic	12.7		mg/kg
R77C74	1-1.5	02/09/04	Yes	1-R77C74_02/09/04_1	7439-92-1	Lead	7.0		mg/kg
R77C75	1-1.5	02/09/04	Yes	1-R77C75_02/09/04_1	7440-38-2	Arsenic	6.0		mg/kg
R77C75	1-1.5	02/09/04	Yes	1-R77C75_02/09/04_1	7439-92-1	Lead	3.9		mg/kg
R77C76	1-1.5	02/09/04	Yes	1-R77C76_02/09/04_1	7440-38-2	Arsenic	8.8		mg/kg
R77C76	1-1.5	02/09/04	Yes	1-R77C76_02/09/04_1	7439-92-1	Lead	6.9		mg/kg
R77C77	1-1.5	02/09/04	Yes	1-R77C77_02/09/04_1	7440-38-2	Arsenic	30.1		mg/kg
R77C77	1-1.5	02/09/04	Yes	1-R77C77_02/09/04_1	7439-92-1	Lead	4.5		mg/kg
R78C66	1-1.5	12/05/03	Yes	01-SS-[R78C66]-C2_12/05/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R78C66	1-1.5	12/05/03	Yes	01-SS-[R78C66]-C2_12/05/03_1	7439-92-1	Lead	4.5		mg/kg
R78C67	1-1.5	02/05/04	Yes	1-R78C67_02/05/04_1	7440-38-2	Arsenic	7.4		mg/kg
R78C67	1-1.5	02/05/04	Yes	1-R78C67_02/05/04_1	7439-92-1	Lead	5.3		mg/kg
R78C68	1-1.5	02/05/04	Yes	1-R78C68_02/05/04_1	7440-38-2	Arsenic	7.5		mg/kg
R78C68	1-1.5	02/05/04	Yes	1-R78C68_02/05/04_1	7439-92-1	Lead	5.6		mg/kg
R78C69	1-1.5	02/06/04	Yes	1-R78C69_02/06/04_1	7440-38-2	Arsenic	8.1		mg/kg
R78C69	1-1.5	02/06/04	Yes	1-R78C69_02/06/04_1	7439-92-1	Lead	5.1		mg/kg
R78C70	1-1.5	02/06/04	Yes	1-R78C70_02/06/04_1	7440-38-2	Arsenic	10.9		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R78C70	1-1.5	02/06/04	Yes	1-R78C70_02/06/04_1	7439-92-1	Lead	10.6		mg/kg
R78C71	1-1.5	02/06/04	Yes	1-R78C71_02/06/04_1	7440-38-2	Arsenic	7.1		mg/kg
R78C71	1-1.5	02/06/04	Yes	1-R78C71_02/06/04_1	7439-92-1	Lead	5.7		mg/kg
R78C72	1-1.5	02/06/04	Yes	1-R78C72_02/06/04_1	7440-38-2	Arsenic	7.7		mg/kg
R78C72	1-1.5	02/06/04	Yes	1-R78C72_02/06/04_1	7439-92-1	Lead	5.9		mg/kg
R78C73	1-1.5	02/09/04	Yes	1-R78C73_02/09/04_1	7440-38-2	Arsenic	7.2		mg/kg
R78C73	1-1.5	02/09/04	Yes	1-R78C73_02/09/04_1	7439-92-1	Lead	4.7		mg/kg
R78C74	1-1.5	02/09/04	Yes	1-R78C74_02/09/04_1	7440-38-2	Arsenic	30.1		mg/kg
R78C74	1-1.5	02/09/04	Yes	1-R78C74_02/09/04_1	7439-92-1	Lead	6.7		mg/kg
R78C75	1-1.5	02/09/04	Yes	1-R78C75_02/09/04_1	7440-38-2	Arsenic	8.8		mg/kg
R78C75	1-1.5	02/09/04	Yes	1-R78C75_02/09/04_1	7439-92-1	Lead	6.7		mg/kg
R78C76	1-1.5	02/09/04	Yes	1-R78C76_02/09/04_1	7440-38-2	Arsenic	6.6		mg/kg
R78C76	1-1.5	02/09/04	Yes	1-R78C76_02/09/04_1	7439-92-1	Lead	5.1		mg/kg
R79C65	1-1.5	12/05/03	Yes	01-SS-[R79C65]-C2_12/05/03_1	7440-38-2	Arsenic	6.3		mg/kg
R79C65	1-1.5	12/05/03	Yes	01-SS-[R79C65]-C2_12/05/03_1	7439-92-1	Lead	8.1		mg/kg
R79C66	1-1.5	12/05/03	Yes	01-SS-[R79C66]-C2_12/05/03_1	7440-38-2	Arsenic	11.8		mg/kg
R79C66	1-1.5	12/05/03	Yes	01-SS-[R79C66]-C2_12/05/03_1	7439-92-1	Lead	4.0		mg/kg
R79C67	1-1.5	02/05/04	Yes	1-R79C67_02/05/04_1	7440-38-2	Arsenic	8.2		mg/kg
R79C67	1-1.5	02/05/04	Yes	1-R79C67_02/05/04_1	7439-92-1	Lead	7.4		mg/kg
R79C68	1-1.5	02/05/04	Yes	1-R79C68_02/05/04_1	7440-38-2	Arsenic	7.1		mg/kg
R79C68	1-1.5	02/05/04	Yes	1-R79C68_02/05/04_1	7439-92-1	Lead	5.9		mg/kg
R79C69	1-1.5	02/06/04	Yes	1-R79C69_02/06/04_1	7440-38-2	Arsenic	10.3		mg/kg
R79C69	1-1.5	02/06/04	Yes	1-R79C69_02/06/04_1	7439-92-1	Lead	12.5		mg/kg
R79C70	1-1.5	02/06/04	Yes	1-R79C70_02/06/04_1	7440-38-2	Arsenic	8.5		mg/kg
R79C70	1-1.5	02/06/04	Yes	1-R79C70_02/06/04_1	7439-92-1	Lead	7.7		mg/kg
R79C71	1-1.5	02/06/04	Yes	1-R79C71_02/06/04_1	7440-38-2	Arsenic	7.8		mg/kg
R79C71	1-1.5	02/06/04	Yes	1-R79C71_02/06/04_1	7439-92-1	Lead	5.6		mg/kg
R79C72	1-1.5	02/06/04	Yes	1-R79C72_02/06/04_1	7440-38-2	Arsenic	6.5		mg/kg
R79C72	1-1.5	02/06/04	Yes	1-R79C72_02/06/04_1	7439-92-1	Lead	3.3		mg/kg
R79C73	1-1.5	02/09/04	Yes	1-R79C73_02/09/04_1	7440-38-2	Arsenic	31.6		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R79C73	1-1.5	02/09/04	Yes	1-R79C73_02/09/04_1	7439-92-1	Lead	12.8		mg/kg
R79C74	1-1.5	02/09/04	Yes	1-R79C74_02/09/04_1	7440-38-2	Arsenic	5.7		mg/kg
R79C74	1-1.5	02/09/04	Yes	1-R79C74_02/09/04_1	7439-92-1	Lead	5.3		mg/kg
R80C65	1-1.5	12/05/03	Yes	01-SS-[R80C65]-C2_12/05/03_1	7440-38-2	Arsenic	3.0		mg/kg
R80C65	1-1.5	12/05/03	Yes	01-SS-[R80C65]-C2_12/05/03_1	7439-92-1	Lead	3.1		mg/kg
R80C66	1-1.5	12/05/03	Yes	01-SS-[R80C66]-C2_12/05/03_1	7440-38-2	Arsenic	6.3		mg/kg
R80C66	1-1.5	12/05/03	Yes	01-SS-[R80C66]-C2_12/05/03_1	7439-92-1	Lead	7.7		mg/kg
R80C67	1-1.5	02/05/04	Yes	1-R80C67_02/05/04_1	7440-38-2	Arsenic	5.6		mg/kg
R80C67	1-1.5	02/05/04	Yes	1-R80C67_02/05/04_1	7439-92-1	Lead	4.4		mg/kg
R80C68	1-1.5	02/05/04	Yes	1-R80C68_02/05/04_1	7440-38-2	Arsenic	7.4		mg/kg
R80C68	1-1.5	02/05/04	Yes	1-R80C68_02/05/04_1	7439-92-1	Lead	7.2		mg/kg
R80C69	1-1.5	02/06/04	Yes	1-R80C69_02/06/04_1	7440-38-2	Arsenic	17.1		mg/kg
R80C69	1-1.5	02/06/04	Yes	1-R80C69_02/06/04_1	7439-92-1	Lead	12.7		mg/kg
R80C70	1-1.5	02/06/04	Yes	1-R80C70_02/06/04_1	7440-38-2	Arsenic	17.8		mg/kg
R80C70	1-1.5	02/06/04	Yes	1-R80C70_02/06/04_1	7439-92-1	Lead	12.4		mg/kg
R80C71	1-1.5	02/06/04	Yes	1-R80C71_02/06/04_1	7440-38-2	Arsenic	11.1		mg/kg
R80C71	1-1.5	02/06/04	Yes	1-R80C71_02/06/04_1	7439-92-1	Lead	6.5		mg/kg
R80C72	1-1.5	02/06/04	Yes	1-R80C72_02/06/04_1	7440-38-2	Arsenic	14.8		mg/kg
R80C72	1-1.5	02/06/04	Yes	1-R80C72_02/06/04_1	7439-92-1	Lead	9.5		mg/kg
R80C73	1-1.5	02/09/04	Yes	1-R80C73_02/09/04_1	7440-38-2	Arsenic	11.8		mg/kg
R80C73	1-1.5	02/09/04	Yes	1-R80C73_02/09/04_1	7439-92-1	Lead	6.3		mg/kg
R81C64	1-1.5	12/05/03	Yes	01-SS-[R81C64]-C2_12/05/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R81C64	1-1.5	12/05/03	Yes	01-SS-[R81C64]-C2_12/05/03_1	7439-92-1	Lead	3.1		mg/kg
R81C65	1-1.5	12/05/03	Yes	01-SS-[R81C65]-C2_12/05/03_1	7440-38-2	Arsenic	8.1		mg/kg
R81C65	1-1.5	12/05/03	Yes	01-SS-[R81C65]-C2_12/05/03_1	7439-92-1	Lead	7.8		mg/kg
R81C66	1-1.5	12/05/03	Yes	01-SS-[R81C66]-C2_12/05/03_1	7440-38-2	Arsenic	6.0		mg/kg
R81C66	1-1.5	12/05/03	Yes	01-SS-[R81C66]-C2_12/05/03_1	7439-92-1	Lead	6.0		mg/kg
R81C67	1-1.5	02/05/04	Yes	1-R81C67_02/05/04_1	7440-38-2	Arsenic	7.5		mg/kg
R81C67	1-1.5	02/05/04	Yes	1-R81C67_02/05/04_1	7439-92-1	Lead	7.8		mg/kg
R81C68	1-1.5	02/05/04	Yes	1-R81C68_02/05/04_1	7440-38-2	Arsenic	6.2		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R81C68	1-1.5	02/05/04	Yes	1-R81C68_02/05/04_1	7439-92-1	Lead	3.9		mg/kg
R81C69	1-1.5	02/06/04	Yes	1-R81C69_02/06/04_1	7440-38-2	Arsenic	34.1		mg/kg
R81C69	1-1.5	02/06/04	Yes	1-R81C69_02/06/04_1	7439-92-1	Lead	6.4		mg/kg
R81C70	1-1.5	02/06/04	Yes	1-R81C70_02/06/04_1	7440-38-2	Arsenic	13.5		mg/kg
R81C70	1-1.5	02/06/04	Yes	1-R81C70_02/06/04_1	7439-92-1	Lead	83.8		mg/kg
R81C71	1-1.5	02/06/04	Yes	1-R81C71_02/06/04_1	7440-38-2	Arsenic	5.3		mg/kg
R81C71	1-1.5	02/06/04	Yes	1-R81C71_02/06/04_1	7439-92-1	Lead	3.4		mg/kg
R81C72	1-1.5	02/06/04	Yes	1-R81C72_02/06/04_1	7440-38-2	Arsenic	5.9		mg/kg
R81C72	1-1.5	02/06/04	Yes	1-R81C72_02/06/04_1	7439-92-1	Lead	3.5		mg/kg
R82C64	1-1.5	12/05/03	Yes	01-SS-[R82C64]-C2_12/05/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R82C64	1-1.5	12/05/03	Yes	01-SS-[R82C64]-C2_12/05/03_1	7439-92-1	Lead	3.7		mg/kg
R82C65	1-1.5	12/05/03	Yes	01-SS-[R82C65]-C2_12/05/03_1	7440-38-2	Arsenic	4.8		mg/kg
R82C65	1-1.5	12/05/03	Yes	01-SS-[R82C65]-C2_12/05/03_1	7439-92-1	Lead	5.4		mg/kg
R82C66	1-1.5	12/05/03	Yes	01-SS-[R82C66]-C2_12/05/03_1	7440-38-2	Arsenic	6.1		mg/kg
R82C66	1-1.5	12/05/03	Yes	01-SS-[R82C66]-C2_12/05/03_1	7439-92-1	Lead	4.6		mg/kg
R82C67	1-1.5	02/05/04	Yes	1-R82C67_02/05/04_1	7440-38-2	Arsenic	8.7		mg/kg
R82C67	1-1.5	02/05/04	Yes	1-R82C67_02/05/04_1	7439-92-1	Lead	8.1		mg/kg
R82C68	1-1.5	02/05/04	Yes	1-R82C68_02/05/04_1	7440-38-2	Arsenic	9.5		mg/kg
R82C68	1-1.5	02/05/04	Yes	1-R82C68_02/05/04_1	7439-92-1	Lead	10.1		mg/kg
R82C69	1-1.5	02/06/04	Yes	1-R82C69_02/06/04_1	7440-38-2	Arsenic	7.2		mg/kg
R82C69	1-1.5	02/06/04	Yes	1-R82C69_02/06/04_1	7439-92-1	Lead	5.4		mg/kg
R82C70	1-1.5	02/06/04	Yes	1-R82C70_02/06/04_1	7440-38-2	Arsenic	9.4		mg/kg
R82C70	1-1.5	02/06/04	Yes	1-R82C70_02/06/04_1	7439-92-1	Lead	6.2		mg/kg
R83C63	1-1.5	11/12/03	Yes	01-SS-[R83C63]-C2_11/12/03_1	7440-38-2	Arsenic	5.7		mg/kg
R83C63	1-1.5	11/12/03	Yes	01-SS-[R83C63]-C2_11/12/03_1	7439-92-1	Lead	5.0		mg/kg
R83C64	1-1.5	11/12/03	Yes	01-SS-[R83C64]-C2_11/12/03_1	7440-38-2	Arsenic	11.2		mg/kg
R83C64	1-1.5	11/12/03	Yes	01-SS-[R83C64]-C2_11/12/03_1	7439-92-1	Lead	7.7		mg/kg
R83C65	1-1.5	12/05/03	Yes	01-SS-[R83C65]-C2_12/05/03_1	7440-38-2	Arsenic	15.4		mg/kg
R83C65	1-1.5	12/05/03	Yes	01-SS-[R83C65]-C2_12/05/03_1	7439-92-1	Lead	5.5		mg/kg
R83C66	1-1.5	12/05/03	Yes	01-SS-[R83C66]-C2_AVG_12/05/03_1	7440-38-2	Arsenic	4.5		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R83C66	1-1.5	12/05/03	Yes	01-SS-[R83C66]-C2_AVG_12/05/03_1	7439-92-1	Lead	5.0		mg/kg
R83C67	1-1.5	02/05/04	Yes	1-R83C67_02/05/04_1	7440-38-2	Arsenic	8.9		mg/kg
R83C67	1-1.5	02/05/04	Yes	1-R83C67_02/05/04_1	7439-92-1	Lead	10.1		mg/kg
R83C68	1-1.5	02/05/04	Yes	1-R83C68_02/05/04_1	7440-38-2	Arsenic	6.9		mg/kg
R83C68	1-1.5	02/05/04	Yes	1-R83C68_02/05/04_1	7439-92-1	Lead	6.0		mg/kg
R83C69	1-1.5	02/06/04	Yes	1-R83C69_AVG_02/06/04_1	7440-38-2	Arsenic	10.6		mg/kg
R83C69	1-1.5	02/06/04	Yes	1-R83C69_AVG_02/06/04_1	7439-92-1	Lead	6.9		mg/kg
R84C59	1-1.5	11/10/03	Yes	01-SS-[R84C59]-C2_11/10/03_1	7440-38-2	Arsenic	9.2		mg/kg
R84C59	1-1.5	11/10/03	Yes	01-SS-[R84C59]-C2_11/10/03_1	7439-92-1	Lead	9.1		mg/kg
R84C60	1-1.5	11/10/03	Yes	01-SS-[R84C60]-C2_11/10/03_1	7440-38-2	Arsenic	4.8		mg/kg
R84C60	1-1.5	11/10/03	Yes	01-SS-[R84C60]-C2_11/10/03_1	7439-92-1	Lead	5.2		mg/kg
R84C61	1-1.5	11/12/03	Yes	01-SS-[R84C61]-C2_11/12/03_1	7440-38-2	Arsenic	7.4		mg/kg
R84C61	1-1.5	11/12/03	Yes	01-SS-[R84C61]-C2_11/12/03_1	7439-92-1	Lead	5.1		mg/kg
R84C62	1-1.5	11/12/03	Yes	01-SS-[R84C62]-C2_11/12/03_1	7440-38-2	Arsenic	4.7		mg/kg
R84C62	1-1.5	11/12/03	Yes	01-SS-[R84C62]-C2_11/12/03_1	7439-92-1	Lead	6.9		mg/kg
R84C63	1-1.5	11/12/03	Yes	01-SS-[R84C63]-C2_11/12/03_1	7440-38-2	Arsenic	8.2		mg/kg
R84C63	1-1.5	11/12/03	Yes	01-SS-[R84C63]-C2_11/12/03_1	7439-92-1	Lead	6.4		mg/kg
R84C64	1-1.5	11/12/03	Yes	01-SS-[R84C64]-C2_11/12/03_1	7440-38-2	Arsenic	13.9		mg/kg
R84C64	1-1.5	11/12/03	Yes	01-SS-[R84C64]-C2_11/12/03_1	7439-92-1	Lead	6.9		mg/kg
R84C65	1-1.5	11/12/03	Yes	01-SS-[R84C65]-C2_11/12/03_1	7440-38-2	Arsenic	11.7		mg/kg
R84C65	1-1.5	11/12/03	Yes	01-SS-[R84C65]-C2_11/12/03_1	7439-92-1	Lead	6.4		mg/kg
R84C66	1-1.5	12/05/03	Yes	01-SS-[R84C66]-C2_12/05/03_1	7440-38-2	Arsenic	6.9		mg/kg
R84C66	1-1.5	12/05/03	Yes	01-SS-[R84C66]-C2_12/05/03_1	7439-92-1	Lead	5.1		mg/kg
R84C67	1-1.5	12/05/03	Yes	01-SS-[R84C67]-C2_12/05/03_1	7440-38-2	Arsenic	12.4		mg/kg
R84C67	1-1.5	12/05/03	Yes	01-SS-[R84C67]-C2_12/05/03_1	7439-92-1	Lead	16.2		mg/kg
R85C51	1-1.5	07/16/02	Yes	01-SS-[75-R85C51]-D1-050	7440-38-2	Arsenic	2.9		mg/kg
R85C51	1-1.5	07/16/02	Yes	01-SS-[75-R85C51]-D1-050	7439-92-1	Lead	3.3		mg/kg
R85C52	1-1.5	07/16/02	Yes	01-SS-[75-R85C52]-D1-050	7440-38-2	Arsenic	25.8		mg/kg
R85C52	1-1.5	07/16/02	Yes	01-SS-[75-R85C52]-D1-050	7439-92-1	Lead	32.4		mg/kg
R85C53	1-1.5	07/16/02	Yes	01-SS-[75-R85C53]-D1-050	7440-38-2	Arsenic	3.2		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R85C53	1-1.5	07/16/02	Yes	01-SS-[75-R85C53]-D1-050	7439-92-1	Lead	5.9		mg/kg
R85C54	1-1.5	07/16/02	Yes	01-SS-[75-R85C54]-D1-050	7440-38-2	Arsenic	7.4		mg/kg
R85C54	1-1.5	07/16/02	Yes	01-SS-[75-R85C54]-D1-050	7439-92-1	Lead	4.4		mg/kg
R85C55	1-1.5	07/16/02	Yes	01-SS-[75-R85C55]-D1-050	7440-38-2	Arsenic	53.4		mg/kg
R85C55	1-1.5	07/16/02	Yes	01-SS-[75-R85C55]-D1-050	7439-92-1	Lead	30.1		mg/kg
R85C56	1-1.5	07/16/02	Yes	01-SS-[75-R85C56]-D1-050	7440-38-2	Arsenic	5.0		mg/kg
R85C56	1-1.5	07/16/02	Yes	01-SS-[75-R85C56]-D1-050	7439-92-1	Lead	5.8		mg/kg
R85C57	1-1.5	07/16/02	Yes	01-SS-[75-R85C57]-D1-050	7440-38-2	Arsenic	8.1		mg/kg
R85C57	1-1.5	07/16/02	Yes	01-SS-[75-R85C57]-D1-050	7439-92-1	Lead	8.7		mg/kg
R85C58	1-1.5	07/16/02	Yes	01-SS-[75-R85C58]-D1-050	7440-38-2	Arsenic	5.0		mg/kg
R85C58	1-1.5	07/16/02	Yes	01-SS-[75-R85C58]-D1-050	7439-92-1	Lead	6.0		mg/kg
R85C58	1-1.5	11/10/03	Yes	01-SS-[R85C58]-C2_11/10/03_1	7440-38-2	Arsenic	4.2		mg/kg
R85C58	1-1.5	11/10/03	Yes	01-SS-[R85C58]-C2_11/10/03_1	7439-92-1	Lead	3.9		mg/kg
R85C59	1-1.5	11/10/03	Yes	01-SS-[R85C59]-C2_11/10/03_1	7440-38-2	Arsenic	3.5		mg/kg
R85C59	1-1.5	11/10/03	Yes	01-SS-[R85C59]-C2_11/10/03_1	7439-92-1	Lead	3.5		mg/kg
R85C60	1-1.5	11/10/03	Yes	01-SS-[R85C60]-C2_11/10/03_1	7440-38-2	Arsenic	37.2		mg/kg
R85C60	1-1.5	11/10/03	Yes	01-SS-[R85C60]-C2_11/10/03_1	7439-92-1	Lead	36.2		mg/kg
R85C61	1-1.5	11/12/03	Yes	01-SS-[R85C61]-C2_11/12/03_1	7440-38-2	Arsenic	3.9		mg/kg
R85C61	1-1.5	11/12/03	Yes	01-SS-[R85C61]-C2_11/12/03_1	7439-92-1	Lead	4.7		mg/kg
R85C62	1-1.5	03/25/04	Yes	01-R85C62_03/25/04_1	7440-38-2	Arsenic	4.1		mg/kg
R85C62	1-1.5	03/25/04	Yes	01-R85C62_03/25/04_1	7439-92-1	Lead	4.5		mg/kg
R85C62	1-1.5	11/12/03	Yes	01-SS-[R85C62]-C2_11/12/03_1	7440-38-2	Arsenic	7.4		mg/kg
R85C62	1-1.5	11/12/03	Yes	01-SS-[R85C62]-C2_11/12/03_1	7439-92-1	Lead	9.2		mg/kg
R85C63	1-1.5	11/12/03	Yes	01-SS-[R85C63]-C2_11/12/03_1	7440-38-2	Arsenic	6.8		mg/kg
R85C63	1-1.5	11/12/03	Yes	01-SS-[R85C63]-C2_11/12/03_1	7439-92-1	Lead	9.2		mg/kg
R85C64	1-1.5	11/12/03	Yes	01-SS-[R85C64]-C2_AVG_11/12/03_1	7440-38-2	Arsenic	19.9		mg/kg
R85C64	1-1.5	11/12/03	Yes	01-SS-[R85C64]-C2_AVG_11/12/03_1	7439-92-1	Lead	6.0		mg/kg
R85C65	1-1.5	11/12/03	Yes	01-SS-[R85C65]-C2_11/12/03_1	7440-38-2	Arsenic	8.8		mg/kg
R85C65	1-1.5	11/12/03	Yes	01-SS-[R85C65]-C2_11/12/03_1	7439-92-1	Lead	6.7		mg/kg
R85C66	1-1.5	12/05/03	Yes	01-SS-[R85C66]-C2_12/05/03_1	7440-38-2	Arsenic	4.8		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R85C66	1-1.5	12/05/03	Yes	01-SS-[R85C66]-C2_12/05/03_1	7439-92-1	Lead	5.9		mg/kg
R86C58	1-1.5	07/16/02	Yes	01-SS-[75-R86C58]-D1-050	7440-38-2	Arsenic	2.6		mg/kg
R86C58	1-1.5	07/16/02	Yes	01-SS-[75-R86C58]-D1-050	7439-92-1	Lead	3.7		mg/kg
R86C58M	1-1.5	11/12/03	Yes	01-SS-[R86C58M]-C2_11/12/03_1	7440-38-2	Arsenic	3.7		mg/kg
R86C58M	1-1.5	11/12/03	Yes	01-SS-[R86C58M]-C2_11/12/03_1	7439-92-1	Lead	5.9		mg/kg
R86C59M	1-1.5	11/10/03	Yes	01-SS-[R86C59M]-C2_11/10/03_1	7440-38-2	Arsenic	6.6		mg/kg
R86C59M	1-1.5	11/10/03	Yes	01-SS-[R86C59M]-C2_11/10/03_1	7439-92-1	Lead	8.7		mg/kg
R86C60M	1-1.5	11/10/03	Yes	01-SS-[R86C60]-C2_11/10/03_1	7440-38-2	Arsenic	4.0		mg/kg
R86C60M	1-1.5	11/10/03	Yes	01-SS-[R86C60]-C2_11/10/03_1	7439-92-1	Lead	3.8		mg/kg
R86C61	1-1.5	11/12/03	Yes	01-SS-[R86C61]-C2_11/12/03_1	7440-38-2	Arsenic	3.9		mg/kg
R86C61	1-1.5	11/12/03	Yes	01-SS-[R86C61]-C2_11/12/03_1	7439-92-1	Lead	5.0		mg/kg
R86C63	1-1.5	11/12/03	Yes	01-SS-[R86C63]-C2_11/12/03_1	7440-38-2	Arsenic	10.6		mg/kg
R86C63	1-1.5	11/12/03	Yes	01-SS-[R86C63]-C2_11/12/03_1	7439-92-1	Lead	15.2		mg/kg
R86C64	1-1.5	11/12/03	Yes	01-SS-[R86C64]-C2_11/12/03_1	7440-38-2	Arsenic	8.2		mg/kg
R86C64	1-1.5	11/12/03	Yes	01-SS-[R86C64]-C2_11/12/03_1	7439-92-1	Lead	5.0		mg/kg
R86C65	1-1.5	11/12/03	Yes	01-SS-[R86C65]-C2_11/12/03_1	7440-38-2	Arsenic	5.5		mg/kg
R86C65	1-1.5	11/12/03	Yes	01-SS-[R86C65]-C2_11/12/03_1	7439-92-1	Lead	6.0		mg/kg
SA4-114-95	1.5-2	10/13/99	Yes	SA4-114-95	7440-38-2	Arsenic	4.2		mg/kg
SA4-114-95	1.5-2	10/13/99	Yes	SA4-114-95	7439-92-1	Lead	8.3		mg/kg
SA4-114-96	1.5-2	10/13/99	Yes	SA4-114-96	7440-38-2	Arsenic	2.4		mg/kg
SA4-114-96	1.5-2	10/13/99	Yes	SA4-114-96	7439-92-1	Lead	4.7		mg/kg
SA4-114-97	1.5-2	10/13/99	Yes	SA4-114-97	7440-38-2	Arsenic	3.1		mg/kg
SA4-114-97	1.5-2	10/13/99	Yes	SA4-114-97	7439-92-1	Lead	5.4		mg/kg
SA4-115-94	1.5-2	10/13/99	Yes	SA4-115-94	7440-38-2	Arsenic	4.3		mg/kg
SA4-115-94	1.5-2	10/13/99	Yes	SA4-115-94	7439-92-1	Lead	8.2		mg/kg
SA4-115-95	1.5-2	10/13/99	Yes	SA4-115-95	7440-38-2	Arsenic	2.5	U	mg/kg
SA4-115-95	1.5-2	10/13/99	Yes	SA4-115-95	7439-92-1	Lead	5.2		mg/kg
SA4-115-96	1.5-2	10/13/99	Yes	SA4-115-96	7440-38-2	Arsenic	2.4	U	mg/kg
SA4-115-96	1.5-2	10/13/99	Yes	SA4-115-96	7439-92-1	Lead	5.1		mg/kg
SA4-115-97	1.5-2	10/13/99	Yes	SA4-115-97	7440-38-2	Arsenic	5.7		mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA4-115-97	1.5-2	10/13/99	Yes	SA4-115-97	7439-92-1	Lead	6.2		mg/kg
SA4-115-98	1.5-2	10/13/99	Yes	SA4-115-98	7440-38-2	Arsenic	2.4	U	mg/kg
SA4-115-98	1.5-2	10/13/99	Yes	SA4-115-98	7439-92-1	Lead	5.7		mg/kg
SA4-116-94	1.5-2	10/13/99	Yes	SA4-116-94	7440-38-2	Arsenic	2.3	U	mg/kg
SA4-116-94	1.5-2	10/13/99	Yes	SA4-116-94	7439-92-1	Lead	5.1		mg/kg
SA4-116-95	1.5-2	10/13/99	Yes	SA4-116-95	7440-38-2	Arsenic	2.2	U	mg/kg
SA4-116-95	1.5-2	10/13/99	Yes	SA4-116-95	7439-92-1	Lead	5.1		mg/kg
SA4-116-96	1.5-2	10/13/99	Yes	SA4-116-96	7440-38-2	Arsenic	3.0		mg/kg
SA4-116-96	1.5-2	10/13/99	Yes	SA4-116-96	7439-92-1	Lead	5.3		mg/kg
SA4-116-97	1.5-2	10/13/99	Yes	SA4-116-97	7440-38-2	Arsenic	3.5		mg/kg
SA4-116-97	1.5-2	10/13/99	Yes	SA4-116-97	7439-92-1	Lead	5.5		mg/kg
SA4-116-98	1.5-2	10/13/99	Yes	SA4-116-98	7440-38-2	Arsenic	3.3		mg/kg
SA4-116-98	1.5-2	10/13/99	Yes	SA4-116-98	7439-92-1	Lead	7.3		mg/kg
SA4-117-94	1.5-2	10/13/99	Yes	SA4-117-94	7440-38-2	Arsenic	2.2	U	mg/kg
SA4-117-94	1.5-2	10/13/99	Yes	SA4-117-94	7439-92-1	Lead	4.7		mg/kg
SA4-117-95	1.5-2	10/13/99	Yes	SA4-117-95	7440-38-2	Arsenic	2.5	U	mg/kg
SA4-117-95	1.5-2	10/13/99	Yes	SA4-117-95	7439-92-1	Lead	5.3		mg/kg
SA4-117-96	1.5-2	10/13/99	Yes	SA4-117-96	7440-38-2	Arsenic	2.2	U	mg/kg
SA4-117-96	1.5-2	10/13/99	Yes	SA4-117-96	7439-92-1	Lead	4.4		mg/kg
SA4-117-97	1.5-2	10/13/99	Yes	SA4-117-97	7440-38-2	Arsenic	2.3	U	mg/kg
SA4-117-97	1.5-2	10/13/99	Yes	SA4-117-97	7439-92-1	Lead	4.9		mg/kg
SA4-118-94	1.5-2	10/13/99	Yes	SA4-118-94	7440-38-2	Arsenic	2.4		mg/kg
SA4-118-94	1.5-2	10/13/99	Yes	SA4-118-94	7439-92-1	Lead	5.6		mg/kg
SA4-118-95	1.5-2	10/13/99	Yes	SA4-118-95	7440-38-2	Arsenic	2.3	U	mg/kg
SA4-118-95	1.5-2	10/13/99	Yes	SA4-118-95	7439-92-1	Lead	4.7		mg/kg
SA4-118-96	1.5-2	10/13/99	Yes	SA4-118-96	7440-38-2	Arsenic	2.4	U	mg/kg
SA4-118-96	1.5-2	10/13/99	Yes	SA4-118-96	7439-92-1	Lead	5.0		mg/kg
SA4-118-97	1.5-2	10/13/99	Yes	SA4-118-97	7440-38-2	Arsenic	2.0	U	mg/kg
SA4-118-97	1.5-2	10/13/99	Yes	SA4-118-97	7439-92-1	Lead	4.6		mg/kg
SA4-119-95	1.5-2	10/13/99	Yes	SA4-119-95	7440-38-2	Arsenic	2.2	U	mg/kg

Table B.4
Sample Results for CM-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA4-119-95	1.5-2	10/13/99	Yes	SA4-119-95	7439-92-1	Lead	4.7		mg/kg
SA4-119-96	1.5-2	10/13/99	Yes	SA4-119-96	7440-38-2	Arsenic	2.6		mg/kg
SA4-119-96	1.5-2	10/13/99	Yes	SA4-119-96	7439-92-1	Lead	4.9		mg/kg
T134	0-0.5	04/10/03	Yes	01-SS-[T134]-C1_04/10/03_0	7439-92-1	Lead	117.0		mg/kg
T144	0-0.5	04/10/03	Yes	01-SS-[T144]-C1_04/10/03_0	7439-92-1	Lead	94.5		mg/kg
T245	0-0.5	04/02/03	Yes	01-SS-[T245]-C1_04/02/03_0	7440-38-2	Arsenic	26.3		mg/kg
T245	0-0.5	04/02/03	Yes	01-SS-[T245]-C1_04/02/03_0	7439-92-1	Lead	53.3		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
19-VS-20	2-2.5	09/14/99	Yes	19-VS-20	7440-38-2	Arsenic	3.3		mg/kg
19-VS-20	2-2.5	09/14/99	Yes	19-VS-20	7439-92-1	Lead	17.0	J	mg/kg
19-VS-39	2-2.5	09/14/99	Yes	19-VS-39	7440-38-2	Arsenic	20.0		mg/kg
19-VS-39	2-2.5	09/14/99	Yes	19-VS-39	7439-92-1	Lead	53.0		mg/kg
19-VS-45	2-2.5	09/14/99	Yes	19-VS-45-DAVG	7440-38-2	Arsenic	3.9		mg/kg
19-VS-45	2-2.5	09/14/99	Yes	19-VS-45-DAVG	7439-92-1	Lead	18.5		mg/kg
19-VS-57	2-2.5	10/19/99	Yes	19-VS-57	7440-38-2	Arsenic	2.0	U	mg/kg
19-VS-57	2-2.5	10/19/99	Yes	19-VS-57	7439-92-1	Lead	6.1	U	mg/kg
19-VS-60	2-2.5	10/19/99	Yes	19-VS-60	7440-38-2	Arsenic	2.0	U	mg/kg
19-VS-60	2-2.5	10/19/99	Yes	19-VS-60	7439-92-1	Lead	6.1	U	mg/kg
19-VS-61	2-2.5	10/19/99	Yes	19-VS-61	7440-38-2	Arsenic	1.9	U	mg/kg
19-VS-61	2-2.5	10/19/99	Yes	19-VS-61	7439-92-1	Lead	5.8	U	mg/kg
19B-OI-TP-1 (S-1)	2-2.5	07/31/92	Yes	19B-OI-TP-1 (S-1)	7440-38-2	Arsenic	2.6	J	mg/kg
19B-OI-TP-1 (S-1)	2-2.5	07/31/92	Yes	19B-OI-TP-1 (S-1)	7440-50-8	Copper	11.0		mg/kg
19B-OI-TP-1 (S-1)	2-2.5	07/31/92	Yes	19B-OI-TP-1 (S-1)	7439-92-1	Lead	11.0		mg/kg
19B-OI-TP-1 (S-1)	2-2.5	07/31/92	Yes	19B-OI-TP-1 (S-1)	7439-97-6	Mercury	0.08	U	mg/kg
19B-OI-TP-1 (S-2)	4-4.5	07/31/92	Yes	19B-OI-TP-1 (S-2)	7440-38-2	Arsenic	2.0	J	mg/kg
19B-OI-TP-1 (S-2)	4-4.5	07/31/92	Yes	19B-OI-TP-1 (S-2)	7440-50-8	Copper	4.8		mg/kg
19B-OI-TP-1 (S-2)	4-4.5	07/31/92	Yes	19B-OI-TP-1 (S-2)	7439-92-1	Lead	5.1	U	mg/kg
19B-OI-TP-1 (S-2)	4-4.5	07/31/92	Yes	19B-OI-TP-1 (S-2)	7439-97-6	Mercury	0.08	U	mg/kg
19B-VS-15	5-6	10/19/92	Yes	19B-VS-15	7439-92-1	Lead	5.0	U	mg/kg
19B-VS-16	5-6	10/19/92	Yes	19B-VS-16	7439-92-1	Lead	7.1		mg/kg
19B-VS-17	5-6	10/19/92	Yes	19B-VS-17	7439-92-1	Lead	5.9		mg/kg
19B-VS-18	5-6	10/19/92	Yes	19B-VS-18	7439-92-1	Lead	10.0		mg/kg
38-VS-86	0-0.5	09/28/99	Yes	38-VS-86	7440-38-2	Arsenic	11.0		mg/kg
38-VS-86	0-0.5	09/28/99	Yes	38-VS-86	7439-92-1	Lead	35.0		mg/kg
38-VS-88	0-0.5	09/28/99	Yes	38-VS-88	7440-38-2	Arsenic	16.0		mg/kg
38-VS-88	0-0.5	09/28/99	Yes	38-VS-88	7439-92-1	Lead	21.0		mg/kg
APG-TP-501	0-1	05/26/92	Yes	APG-TP-501-S-1	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
APG-TP-501	0-1	05/26/92	Yes	APG-TP-501-S-1	DNT-TOTAL	DNT - Total	0.07	U	mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
APG-TP-501	0-1	05/26/92	Yes	APG-TP-501-S-1	98-95-3	Nitrobenzene	0.3	U	mg/kg
APG-TP-501	3-5	05/26/92	Yes	APG-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
APG-TP-501	3-5	05/26/92	Yes	APG-TP-501-S-2	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
APG-TP-501	3-5	05/26/92	Yes	APG-TP-501-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
F-128	4-4.5	09/13/01	Yes	03-F15-SS-[F-128-3]-C2-050	7440-38-2	Arsenic	4.4		mg/kg
F-128	4-4.5	09/13/01	Yes	03-F15-SS-[F-128-3]-C2-050	7439-92-1	Lead	2.8		mg/kg
F-129	2-2.5	06/26/01	Yes	01-F15-SS[F-129]C2-005	7440-38-2	Arsenic	2.5		mg/kg
F-129	2-2.5	06/26/01	Yes	01-F15-SS[F-129]C2-005	7439-92-1	Lead	8.4		mg/kg
F-130	2-2.5	06/26/01	Yes	01-F15-SS[F-130]C2-005	7440-38-2	Arsenic	3.2		mg/kg
F-130	2-2.5	06/26/01	Yes	01-F15-SS[F-130]C2-005	7439-92-1	Lead	4.2		mg/kg
F-132	2-2.5	06/26/01	Yes	01-F15-SS[F-132]C2-005	7440-38-2	Arsenic	2.3		mg/kg
F-132	2-2.5	06/26/01	Yes	01-F15-SS[F-132]C2-005	7439-92-1	Lead	2.5		mg/kg
F-133-2	3-3.5	08/30/01	Yes	02-F15-SS[F-133-2]C2-030	7440-38-2	Arsenic	4.1		mg/kg
F-133-2	3-3.5	08/30/01	Yes	02-F15-SS[F-133-2]C2-030	7439-92-1	Lead	55.0	J	mg/kg
F-134	2-2.5	06/26/01	Yes	01-F15-SS[F-134]C2-005	7440-38-2	Arsenic	2.5		mg/kg
F-134	2-2.5	06/26/01	Yes	01-F15-SS[F-134]C2-005	7439-92-1	Lead	27.0		mg/kg
F-135	2-2.5	06/26/01	Yes	01-F15-SS[F-135]C2-005	7440-38-2	Arsenic	1.9	U	mg/kg
F-135	2-2.5	06/26/01	Yes	01-F15-SS[F-135]C2-005	7439-92-1	Lead	4.7		mg/kg
F-136	2-2.5	06/26/01	Yes	01-F19-SS[F-136]C2-005	7440-38-2	Arsenic	3.3		mg/kg
F-136	2-2.5	06/26/01	Yes	01-F19-SS[F-136]C2-005	7439-92-1	Lead	6.1		mg/kg
F-137	2-2.5	06/26/01	Yes	01-F19-SS[F-137]C2-005	7440-38-2	Arsenic	2.0		mg/kg
F-137	2-2.5	06/26/01	Yes	01-F19-SS[F-137]C2-005	7439-92-1	Lead	39.0		mg/kg
F-138	2-2.5	06/27/01	Yes	01-F20-SS[F-138]C2-005	7440-38-2	Arsenic	5.2		mg/kg
F-138	2-2.5	06/27/01	Yes	01-F20-SS[F-138]C2-005	7439-92-1	Lead	9.3		mg/kg
F-139	2-2.5	06/27/01	Yes	01-F20-SS[F-139]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-139	2-2.5	06/27/01	Yes	01-F20-SS[F-139]C2-005	7439-92-1	Lead	2.2	U	mg/kg
F-140	2-2.5	06/27/01	Yes	01-F20-SS[F-140]C2-005	7440-38-2	Arsenic	3.5		mg/kg
F-140	2-2.5	06/27/01	Yes	01-F20-SS[F-140]C2-005	7439-92-1	Lead	3.7		mg/kg
F-141	2-2.5	06/27/01	Yes	01-F20-SS[F-141]C2-005	7440-38-2	Arsenic	4.7		mg/kg
F-141	2-2.5	06/27/01	Yes	01-F20-SS[F-141]C2-005	7439-92-1	Lead	4.9		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-142	2-2.5	06/27/01	Yes	01-F20-SS[F-142]C2-005	7440-38-2	Arsenic	3.9		mg/kg
F-142	2-2.5	06/27/01	Yes	01-F20-SS[F-142]C2-005	7439-92-1	Lead	4.2		mg/kg
F-143	2-2.5	06/27/01	Yes	01-F20-SS[F-143]C2-005	7440-38-2	Arsenic	6.6		mg/kg
F-143	2-2.5	06/27/01	Yes	01-F20-SS[F-143]C2-005	7439-92-1	Lead	10.0		mg/kg
F-145	2-2.5	07/02/01	Yes	01-F22-SS[F-145]C2-005	7440-38-2	Arsenic	4.8		mg/kg
F-145	2-2.5	07/02/01	Yes	01-F22-SS[F-145]C2-005	7439-92-1	Lead	2.7		mg/kg
F-146	2-2.5	07/02/01	Yes	01-F22-SS[F-146]C2-005	7440-38-2	Arsenic	4.5		mg/kg
F-146	2-2.5	07/02/01	Yes	01-F22-SS[F-146]C2-005	7439-92-1	Lead	2.5		mg/kg
F-147	2-2.5	07/02/01	Yes	01-F22-SS[F-147]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-147	2-2.5	07/02/01	Yes	01-F22-SS[F-147]C2-005	7439-92-1	Lead	3.2		mg/kg
F-148	2-2.5	07/02/01	Yes	01-F22-SS[F-148]C2-005	7440-38-2	Arsenic	4.8		mg/kg
F-148	2-2.5	07/02/01	Yes	01-F22-SS[F-148]C2-005	7439-92-1	Lead	3.6		mg/kg
F-149	2-2.5	07/02/01	Yes	01-F22-SS[F-149]C2-005	7440-38-2	Arsenic	3.9		mg/kg
F-149	2-2.5	07/02/01	Yes	01-F22-SS[F-149]C2-005	7439-92-1	Lead	6.2		mg/kg
F-150	2-2.5	07/02/01	Yes	01-F22-SS[F-150]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-150	2-2.5	07/02/01	Yes	01-F22-SS[F-150]C2-005	7439-92-1	Lead	2.0		mg/kg
F-151	2-2.5	07/02/01	Yes	01-F22-SS[F-151]C2-005	7440-38-2	Arsenic	3.2		mg/kg
F-151	2-2.5	07/02/01	Yes	01-F22-SS[F-151]C2-005	7439-92-1	Lead	1.8	U	mg/kg
F-152	2-2.5	07/02/01	Yes	01-F22-SS[F-152]C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-152	2-2.5	07/02/01	Yes	01-F22-SS[F-152]C2-005	7439-92-1	Lead	6.8		mg/kg
F-153	2-2.5	07/02/01	Yes	01-F22-SS[F-153]C2-005	7440-38-2	Arsenic	3.4		mg/kg
F-153	2-2.5	07/02/01	Yes	01-F22-SS[F-153]C2-005	7439-92-1	Lead	3.0		mg/kg
F-154	2-2.5	07/02/01	Yes	01-F22-SS[F-154]C2-005	7440-38-2	Arsenic	2.7		mg/kg
F-154	2-2.5	07/02/01	Yes	01-F22-SS[F-154]C2-005	7439-92-1	Lead	2.8		mg/kg
F-155	2-2.5	07/02/01	Yes	01-F22-SS[F-155]C2-005	7440-38-2	Arsenic	5.9		mg/kg
F-155	2-2.5	07/02/01	Yes	01-F22-SS[F-155]C2-005	7439-92-1	Lead	5.0		mg/kg
F-156	2-2.5	07/02/01	Yes	01-F22-SS[F-156]C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-156	2-2.5	07/02/01	Yes	01-F22-SS[F-156]C2-005	7439-92-1	Lead	7.2		mg/kg
F-157	2-2.5	07/02/01	Yes	01-F22-SS[F-157]C2-005	7440-38-2	Arsenic	3.6		mg/kg
F-157	2-2.5	07/02/01	Yes	01-F22-SS[F-157]C2-005	7439-92-1	Lead	2.6		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-158	2-2.5	07/02/01	Yes	01-F22-SS[F-158]C2-005	7440-38-2	Arsenic	26.0		mg/kg
F-158	2-2.5	07/02/01	Yes	01-F22-SS[F-158]C2-005	7439-92-1	Lead	35.0		mg/kg
F-159	2-2.5	07/02/01	Yes	01-F22-SS[F-159]C2-005	7440-38-2	Arsenic	4.9		mg/kg
F-159	2-2.5	07/02/01	Yes	01-F22-SS[F-159]C2-005	7439-92-1	Lead	2.3		mg/kg
F-161	4-4.5	09/10/01	Yes	03-F23-SS-[F-161-3]-C2-050	7440-38-2	Arsenic	4.0		mg/kg
F-161	4-4.5	09/10/01	Yes	03-F23-SS-[F-161-3]-C2-050	7439-92-1	Lead	10.0		mg/kg
F-162-2	3-3.5	08/29/01	Yes	02-F23-SS[F-162-2]C2-030	7440-38-2	Arsenic	12.0	J	mg/kg
F-162-2	3-3.5	08/29/01	Yes	02-F23-SS[F-162-2]C2-030	7439-92-1	Lead	31.0		mg/kg
F-163	2-2.5	07/08/01	Yes	01-F23-SS[F-163]C2-005	7440-38-2	Arsenic	5.9		mg/kg
F-163	2-2.5	07/08/01	Yes	01-F23-SS[F-163]C2-005	7439-92-1	Lead	9.1		mg/kg
F-164	2-2.5	07/08/01	Yes	01-F23-SS[F-164]C2-005	7440-38-2	Arsenic	8.6		mg/kg
F-164	2-2.5	07/08/01	Yes	01-F23-SS[F-164]C2-005	7439-92-1	Lead	6.9		mg/kg
F-165	2-2.5	07/08/01	Yes	01-F23-SS[F-165]C2-005	7440-38-2	Arsenic	6.7		mg/kg
F-165	2-2.5	07/08/01	Yes	01-F23-SS[F-165]C2-005	7439-92-1	Lead	5.0		mg/kg
F-166	2-2.5	07/08/01	Yes	01-F23-SS[F-166]C2-005	7440-38-2	Arsenic	18.0		mg/kg
F-166	2-2.5	07/08/01	Yes	01-F23-SS[F-166]C2-005	7439-92-1	Lead	15.0		mg/kg
F-167	2-2.5	07/08/01	Yes	01-F23-SS[F-167]C2-005	7440-38-2	Arsenic	60.0		mg/kg
F-167	2-2.5	07/08/01	Yes	01-F23-SS[F-167]C2-005	7439-92-1	Lead	5.6		mg/kg
F-168	2-2.5	07/08/01	Yes	01-F23-SS[F-168]C2-005	7440-38-2	Arsenic	5.5		mg/kg
F-168	2-2.5	07/08/01	Yes	01-F23-SS[F-168]C2-005	7439-92-1	Lead	4.4		mg/kg
F-169	2-2.5	07/08/01	Yes	01-F23-SS[F-169]C2-005	7440-38-2	Arsenic	14.0		mg/kg
F-169	2-2.5	07/08/01	Yes	01-F23-SS[F-169]C2-005	7439-92-1	Lead	6.6		mg/kg
F-170	2-2.5	07/17/01	Yes	01-F34-SS[F-170]C2-005	7440-38-2	Arsenic	3.1		mg/kg
F-170	2-2.5	07/17/01	Yes	01-F34-SS[F-170]C2-005	7439-92-1	Lead	5.5	J	mg/kg
F-171	2-2.5	07/17/01	Yes	01-F34-SS[F-171]C2-005	7440-38-2	Arsenic	3.0		mg/kg
F-171	2-2.5	07/17/01	Yes	01-F34-SS[F-171]C2-005	7439-92-1	Lead	29.0	J	mg/kg
F-283	2-2.5	09/04/01	Yes	01-F20-SS[F-283]-C2-005	7440-38-2	Arsenic	4.1		mg/kg
F-283	2-2.5	09/04/01	Yes	01-F20-SS[F-283]-C2-005	7439-92-1	Lead	5.3		mg/kg
F-284	2-2.5	09/04/01	Yes	01-F20-SS[F-284]-C2-005-DAVG	7440-38-2	Arsenic	5.7		mg/kg
F-284	2-2.5	09/04/01	Yes	01-F20-SS[F-284]-C2-005-DAVG	7439-92-1	Lead	5.8		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-286	2-2.5	09/04/01	Yes	01-F20-SS[F-286]-C2-005	7440-38-2	Arsenic	4.1		mg/kg
F-286	2-2.5	09/04/01	Yes	01-F20-SS[F-286]-C2-005	7439-92-1	Lead	4.3		mg/kg
F-287	2-2.5	09/04/01	Yes	01-F20-SS[F-287]-C2-005	7440-38-2	Arsenic	3.7		mg/kg
F-287	2-2.5	09/04/01	Yes	01-F20-SS[F-287]-C2-005	7439-92-1	Lead	4.3		mg/kg
F-288	2-2.5	09/04/01	Yes	01-F20-SS[F-288]-C2-005	7440-38-2	Arsenic	4.8		mg/kg
F-288	2-2.5	09/04/01	Yes	01-F20-SS[F-288]-C2-005	7439-92-1	Lead	7.3		mg/kg
F-289	2-2.5	09/04/01	Yes	01-F20-SS[F-289]-C2-005	7440-38-2	Arsenic	4.4		mg/kg
F-289	2-2.5	09/04/01	Yes	01-F20-SS[F-289]-C2-005	7439-92-1	Lead	5.2		mg/kg
F-290	2-2.5	09/04/01	Yes	01-F20-SS[F-290]-C2-005	7440-38-2	Arsenic	9.6		mg/kg
F-290	2-2.5	09/04/01	Yes	01-F20-SS[F-290]-C2-005	7439-92-1	Lead	14.0		mg/kg
F-291	2-2.5	09/04/01	Yes	01-F20-SS[F-291]-C2-005	7440-38-2	Arsenic	5.9		mg/kg
F-291	2-2.5	09/04/01	Yes	01-F20-SS[F-291]-C2-005	7439-92-1	Lead	18.0		mg/kg
F-292	2-2.5	09/04/01	Yes	01-F20-SS[F-292]-C2-005	7440-38-2	Arsenic	13.0		mg/kg
F-292	2-2.5	09/04/01	Yes	01-F20-SS[F-292]-C2-005	7439-92-1	Lead	27.0		mg/kg
F-295	2-2.5	09/05/01	Yes	01-F20-SS-[F-295]-C3-005-DAVG	7440-38-2	Arsenic	7.2		mg/kg
F-295	2-2.5	09/05/01	Yes	01-F20-SS-[F-295]-C3-005-DAVG	7439-92-1	Lead	28.5		mg/kg
F-296-2	3-3.5	09/17/01	Yes	02-F20-SS-[F-296-2]C2-030	7440-38-2	Arsenic	7.9		mg/kg
F-296-2	3-3.5	09/17/01	Yes	02-F20-SS-[F-296-2]C2-030	7439-92-1	Lead	7.6		mg/kg
F-297	2-2.5	09/05/01	Yes	01-F20-SS-[F-297]-C2-005	7440-38-2	Arsenic	5.0		mg/kg
F-297	2-2.5	09/05/01	Yes	01-F20-SS-[F-297]-C2-005	7439-92-1	Lead	34.0		mg/kg
F-298	2-2.5	09/05/01	Yes	01-F20-SS-[F-298]-C2-005	7440-38-2	Arsenic	6.9		mg/kg
F-298	2-2.5	09/05/01	Yes	01-F20-SS-[F-298]-C2-005	7439-92-1	Lead	21.0		mg/kg
F-299	2-2.5	09/05/01	Yes	01-F20-SS-[F-299]-C2-005	7440-38-2	Arsenic	25.0		mg/kg
F-299	2-2.5	09/05/01	Yes	01-F20-SS-[F-299]-C2-005	7439-92-1	Lead	29.0		mg/kg
F-300	2-2.5	09/05/01	Yes	01-F20-SS-[F-300]-C2-005	7440-38-2	Arsenic	15.0		mg/kg
F-300	2-2.5	09/05/01	Yes	01-F20-SS-[F-300]-C2-005	7439-92-1	Lead	11.0		mg/kg
F-301	2-2.5	09/05/01	Yes	01-F34-SS-[F-301]-C2-005	7440-38-2	Arsenic	5.8		mg/kg
F-301	2-2.5	09/05/01	Yes	01-F34-SS-[F-301]-C2-005	7439-92-1	Lead	5.0		mg/kg
F-302	2-2.5	09/05/01	Yes	01-F34-SS-[F-302]-C2-005	7440-38-2	Arsenic	6.2		mg/kg
F-302	2-2.5	09/05/01	Yes	01-F34-SS-[F-302]-C2-005	7439-92-1	Lead	14.0		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-303	2-2.5	09/05/01	Yes	01-F34-SS-[F-303]-C2-005	7440-38-2	Arsenic	6.6		mg/kg
F-303	2-2.5	09/05/01	Yes	01-F34-SS-[F-303]-C2-005	7439-92-1	Lead	14.0		mg/kg
F-304	2-2.5	09/05/01	Yes	01-F21-SS-[F-304]-C2-005	7440-38-2	Arsenic	9.1		mg/kg
F-304	2-2.5	09/05/01	Yes	01-F21-SS-[F-304]-C2-005	7439-92-1	Lead	70.0		mg/kg
F-305	2-2.5	09/05/01	Yes	01-F21-SS-[F-305]-C2-005	7440-38-2	Arsenic	5.8		mg/kg
F-305	2-2.5	09/05/01	Yes	01-F21-SS-[F-305]-C2-005	7439-92-1	Lead	30.0		mg/kg
F-306-2	3-3.5	09/17/01	Yes	02-F21-SS-[F-306-2]C2-030	7440-38-2	Arsenic	5.1		mg/kg
F-306-2	3-3.5	09/17/01	Yes	02-F21-SS-[F-306-2]C2-030	7439-92-1	Lead	2.8		mg/kg
F-308	2-2.5	09/12/01	Yes	01-F18-SS-[F-308]-C2-020	7440-38-2	Arsenic	4.8		mg/kg
F-308	2-2.5	09/12/01	Yes	01-F18-SS-[F-308]-C2-020	7439-92-1	Lead	4.6		mg/kg
F-309	2-2.5	09/12/01	Yes	01-F18-SS-[F-309]-C2-020	7440-38-2	Arsenic	5.3		mg/kg
F-309	2-2.5	09/12/01	Yes	01-F18-SS-[F-309]-C2-020	7439-92-1	Lead	3.9		mg/kg
F-310	2-2.5	09/12/01	Yes	01-F18-SS-[F-310]-C2-020	7440-38-2	Arsenic	5.6		mg/kg
F-310	2-2.5	09/12/01	Yes	01-F18-SS-[F-310]-C2-020	7439-92-1	Lead	4.3		mg/kg
F-311	2-2.5	09/12/01	Yes	01-F18-SS-[F-311]-C2-020	7440-38-2	Arsenic	4.7		mg/kg
F-311	2-2.5	09/12/01	Yes	01-F18-SS-[F-311]-C2-020	7439-92-1	Lead	4.9		mg/kg
F-312	2-2.5	09/12/01	Yes	01-F18-SS-[F-312]-C2-020	7440-38-2	Arsenic	15.0		mg/kg
F-312	2-2.5	09/12/01	Yes	01-F18-SS-[F-312]-C2-020	7439-92-1	Lead	2.0		mg/kg
F-313	2-2.5	09/12/01	Yes	01-F18-SS-[F-313]-C2-020	7440-38-2	Arsenic	4.0		mg/kg
F-313	2-2.5	09/12/01	Yes	01-F18-SS-[F-313]-C2-020	7439-92-1	Lead	3.5		mg/kg
F-314	2-2.5	09/12/01	Yes	01-F18-SS-[F-314]-C2-020	7440-38-2	Arsenic	3.5		mg/kg
F-314	2-2.5	09/12/01	Yes	01-F18-SS-[F-314]-C2-020	7439-92-1	Lead	2.7		mg/kg
F-315	2-2.5	09/12/01	Yes	01-F18-SS-[F-315]-C2-020	7440-38-2	Arsenic	5.1		mg/kg
F-315	2-2.5	09/12/01	Yes	01-F18-SS-[F-315]-C2-020	7439-92-1	Lead	4.7		mg/kg
F-316	2-2.5	09/12/01	Yes	01-F18-SS-[F-316]-C2-020	7440-38-2	Arsenic	7.5		mg/kg
F-316	2-2.5	09/12/01	Yes	01-F18-SS-[F-316]-C2-020	7439-92-1	Lead	31.0		mg/kg
F-317	2-2.5	09/12/01	Yes	01-F18-SS-[F-317]-C2-020	7440-38-2	Arsenic	5.7		mg/kg
F-317	2-2.5	09/12/01	Yes	01-F18-SS-[F-317]-C2-020	7439-92-1	Lead	17.0		mg/kg
F-318	2-2.5	09/12/01	Yes	01-F18-SS-[F-318]-C2-020	7440-38-2	Arsenic	4.8		mg/kg
F-318	2-2.5	09/12/01	Yes	01-F18-SS-[F-318]-C2-020	7439-92-1	Lead	13.0		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-320	2-2.5	09/12/01	Yes	01-F18-SS-[F-320]-C2-020	7440-38-2	Arsenic	4.7		mg/kg
F-320	2-2.5	09/12/01	Yes	01-F18-SS-[F-320]-C2-020	7439-92-1	Lead	32.0		mg/kg
F-321	2-2.5	09/12/01	Yes	01-F18-SS-[F-321]-C2-020	7440-38-2	Arsenic	5.4		mg/kg
F-321	2-2.5	09/12/01	Yes	01-F18-SS-[F-321]-C2-020	7439-92-1	Lead	29.0		mg/kg
F-322	2-2.5	09/12/01	Yes	01-F18-SS-[F-322]-C2-020	7440-38-2	Arsenic	53.0		mg/kg
F-322	2-2.5	09/12/01	Yes	01-F18-SS-[F-322]-C2-020	7439-92-1	Lead	7.1		mg/kg
F-323	2-2.5	09/12/01	Yes	01-F18-SS-[F-323]-C2-020	7440-38-2	Arsenic	5.1		mg/kg
F-323	2-2.5	09/12/01	Yes	01-F18-SS-[F-323]-C2-020	7439-92-1	Lead	92.0		mg/kg
F-325	2-2.5	09/17/01	Yes	01-F18-SS-[F-325]C2-015	7440-38-2	Arsenic	4.8		mg/kg
F-325	2-2.5	09/17/01	Yes	01-F18-SS-[F-325]C2-015	7439-92-1	Lead	2.8		mg/kg
F-328	2-2.5	09/19/01	Yes	01-F18-FD-[F-328]-C2-030-DAVG	7440-38-2	Arsenic	4.0		mg/kg
F-328	2-2.5	09/19/01	Yes	01-F18-FD-[F-328]-C2-030-DAVG	7439-92-1	Lead	3.3		mg/kg
MSU-54-VS-B	4-4.5	07/07/03	Yes	01-SS-[MSU-54-VS-B]-C2_07/07/03_4	7440-38-2	Arsenic	3.9		mg/kg
MSU-54-VS-B	4-4.5	07/07/03	Yes	01-SS-[MSU-54-VS-B]-C2_07/07/03_4	7439-92-1	Lead	16.5		mg/kg
MSU-56-E	0-0.5	06/25/03	No	01-SS-[MSU-56-E]-D1_06/25/03_0	7440-38-2	Arsenic	24.7		mg/kg
MSU-56-E	0-0.5	10/16/03	Yes	10-SS-[MSU-56-E]-D1_10/16/03_0	7439-92-1	Lead	10.1		mg/kg
MSU-62-VS-B	5-5.5	07/07/03	No	01-SS-[MSU-62-VS-B]-C2_07/07/03_5	7440-38-2	Arsenic	4.7		mg/kg
MSU-62-VS-B	7.5-8	08/04/03	Yes	03-SS-[MSU-62-VS-B]-C2_08/04/03_7.5	7439-92-1	Lead	3.6		mg/kg
MSU-63-VS-B	5-5.5	07/07/03	No	01-SS-[MSU-63-VS-B]-C2_07/07/03_5	7440-38-2	Arsenic	7.4		mg/kg
MSU-63-VS-B	7-7.5	07/22/03	Yes	02-SS-[MSU-63-VS-B]-C2_07/22/03_7	7439-92-1	Lead	29.3		mg/kg
MSU-64-VS-B	1.5-3.5	07/07/03	Yes	01-SS-[MSU-64-VS-B]-C2_07/07/03_1.5	7440-38-2	Arsenic	4.9		mg/kg
MSU-64-VS-B	1.5-3.5	07/07/03	Yes	01-SS-[MSU-64-VS-B]-C2_07/07/03_1.5	7439-92-1	Lead	19.3		mg/kg
MSU-65-VS-B	4.5-5	07/07/03	Yes	01-SS-[MSU-65-VS-B]-C2_07/07/03_2	7440-38-2	Arsenic	4.3		mg/kg
MSU-65-VS-B	4.5-5	07/07/03	Yes	01-SS-[MSU-65-VS-B]-C2_07/07/03_2	7439-92-1	Lead	17.1		mg/kg
MSU-66-VS-B	4.5-5	07/07/03	Yes	01-SS-[MSU-66-VS-B]-C2_07/07/03_2	7440-38-2	Arsenic	3.2		mg/kg
MSU-66-VS-B	4.5-5	07/07/03	Yes	01-SS-[MSU-66-VS-B]-C2_07/07/03_2	7439-92-1	Lead	15.5		mg/kg
MSU-67-VS-B	4.5-5	07/07/03	Yes	01-SS-[MSU-67-VS-B]-C2_AVG_07/07/03_2	7440-38-2	Arsenic	4.7		mg/kg
MSU-67-VS-B	4.5-5	07/07/03	Yes	01-SS-[MSU-67-VS-B]-C2_AVG_07/07/03_2	7439-92-1	Lead	37.3		mg/kg
MSU-68-VS-B	4.5-4	07/07/03	Yes	01-SS-[MSU-68-VS-B]-C2_07/07/03_1.5	7440-38-2	Arsenic	4.3		mg/kg
MSU-68-VS-B	4.5-4	07/07/03	Yes	01-SS-[MSU-68-VS-B]-C2_07/07/03_1.5	7439-92-1	Lead	16.3		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-40-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-40-2]-C1_05/27/03_2	7440-38-2	Arsenic	3.2		mg/kg
MSU-F-40-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-40-2]-C1_05/27/03_2	7439-92-1	Lead	6.8		mg/kg
MSU-F-40-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-40-3]-C1_05/27/03_2	7440-38-2	Arsenic	2.8		mg/kg
MSU-F-40-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-40-3]-C1_05/27/03_2	7439-92-1	Lead	2.4		mg/kg
MSU-F-40	2-2.5	05/27/03	Yes	01-SS-[MSU-F-40-1]-C1_05/27/03_2	7440-38-2	Arsenic	6.0		mg/kg
MSU-F-40	2-2.5	05/27/03	Yes	01-SS-[MSU-F-40-1]-C1_05/27/03_2	7439-92-1	Lead	7.7		mg/kg
MSU-F-41	2-2.5	05/27/03	Yes	01-SS-[MSU-F-41-1]-C1_05/27/03_2	7440-38-2	Arsenic	7.6		mg/kg
MSU-F-41	2-2.5	05/27/03	Yes	01-SS-[MSU-F-41-1]-C1_05/27/03_2	7439-92-1	Lead	30.2		mg/kg
MSU-F-46-2	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-2]-C1_06/05/03_2	7440-38-2	Arsenic	3.3		mg/kg
MSU-F-46-2	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-2]-C1_06/05/03_2	7439-92-1	Lead	5.3		mg/kg
MSU-F-46-3	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-3]-C1_06/05/03_2	7440-38-2	Arsenic	5.6		mg/kg
MSU-F-46-3	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-3]-C1_06/05/03_2	7439-92-1	Lead	45.0		mg/kg
MSU-F-46	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-1]-C1_06/05/03_2	7440-38-2	Arsenic	3.3		mg/kg
MSU-F-46	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-1]-C1_06/05/03_2	7439-92-1	Lead	7.1		mg/kg
MSU-F-55-E	2-2.5	04/29/04	Yes	01-MSU-F-55-E_AVG_04/29/04_2	7440-38-2	Arsenic	5.8		mg/kg
MSU-F-55-E	2-2.5	04/29/04	Yes	01-MSU-F-55-E_AVG_04/29/04_2	7439-92-1	Lead	13.4		mg/kg
MSU-F-55-N	2-2.5	04/29/04	Yes	01-MSU-F-55-N_04/29/04_2	7440-38-2	Arsenic	5.5		mg/kg
MSU-F-55-N	2-2.5	04/29/04	Yes	01-MSU-F-55-N_04/29/04_2	7439-92-1	Lead	4.4		mg/kg
MSU-F-55-S	2-2.5	04/29/04	Yes	01-MSU-F-55-S_04/29/04_2	7440-38-2	Arsenic	6.0		mg/kg
MSU-F-55-S	2-2.5	04/29/04	Yes	01-MSU-F-55-S_04/29/04_2	7439-92-1	Lead	10.4		mg/kg
MSU-F-55-W	2-2.5	04/29/04	Yes	01-MSU-F-55-W_04/29/04_2	7440-38-2	Arsenic	13.1		mg/kg
MSU-F-55-W	2-2.5	04/29/04	Yes	01-MSU-F-55-W_04/29/04_2	7439-92-1	Lead	4.4		mg/kg
MSU-F-56-E	2-2.5	04/29/04	Yes	01-MSU-F-56-E_04/29/04_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-56-E	2-2.5	04/29/04	Yes	01-MSU-F-56-E_04/29/04_2	7439-92-1	Lead	4.7		mg/kg
MSU-F-56-N	2-2.5	04/29/04	Yes	01-MSU-F-56-N_04/29/04_2	7440-38-2	Arsenic	5.8		mg/kg
MSU-F-56-N	2-2.5	04/29/04	Yes	01-MSU-F-56-N_04/29/04_2	7439-92-1	Lead	9.6		mg/kg
MSU-F-56-S	2-2.5	04/29/04	Yes	01-MSU-F-56-S_04/29/04_2	7440-38-2	Arsenic	6.2		mg/kg
MSU-F-56-S	2-2.5	04/29/04	Yes	01-MSU-F-56-S_04/29/04_2	7439-92-1	Lead	6.3		mg/kg
MSU-F-56-W	2-2.5	04/29/04	Yes	01-MSU-F-56-W_04/29/04_2	7439-92-1	Lead	58.9		mg/kg
MSU-F-56-W	3-3.5	05/11/04	Yes	02-MSU-F-56-W_05/11/04_3	7440-38-2	Arsenic	4.7		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-12B-4	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-4]-C1_05/08/03_1.5	7440-38-2	Arsenic	4.3		mg/kg
MSU-NGRR-12B-4	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-4]-C1_05/08/03_1.5	7439-92-1	Lead	35.9		mg/kg
MSU-NGRR-12B-5	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-5]-C1_05/08/03_1.5	7440-38-2	Arsenic	6.3		mg/kg
MSU-NGRR-12B-5	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-5]-C1_05/08/03_1.5	7439-92-1	Lead	12.3		mg/kg
MSU-NGRR-12B-6	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-6]-C1_05/08/03_1.5	7440-38-2	Arsenic	6.2		mg/kg
MSU-NGRR-12B-6	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-6]-C1_05/08/03_1.5	7439-92-1	Lead	11.1		mg/kg
MSU-NGRR-12B-8	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-8]-C1_AVG_05/08/03_1.5	7440-38-2	Arsenic	7.3		mg/kg
MSU-NGRR-12B-8	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-8]-C1_AVG_05/08/03_1.5	7439-92-1	Lead	8.2		mg/kg
MSU-NGRR-14-N	1.5-2	04/29/04	Yes	01-MSU-NGRR-14-VS-1_04/29/04_1.5	7440-38-2	Arsenic	15.6		mg/kg
MSU-NGRR-14-N	1.5-2	04/29/04	Yes	01-MSU-NGRR-14-VS-1_04/29/04_1.5	7439-92-1	Lead	21.7		mg/kg
MSU-NGRR-15-2	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-15-2]-C1_05/27/03_1.5	7440-38-2	Arsenic	4.8		mg/kg
MSU-NGRR-15-2	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-15-2]-C1_05/27/03_1.5	7439-92-1	Lead	6.5		mg/kg
MSU-NGRR-15	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-15-1]-C1_05/27/03_1.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-NGRR-15	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-15-1]-C1_05/27/03_1.5	7439-92-1	Lead	2.9		mg/kg
MSU-RR-1	1.5-2	05/27/03	Yes	01-SS-[MSU-RR-1-1]-C1_05/27/03_1.5	7440-38-2	Arsenic	3.2		mg/kg
MSU-RR-1	1.5-2	05/27/03	Yes	01-SS-[MSU-RR-1-1]-C1_05/27/03_1.5	7439-92-1	Lead	3.0		mg/kg
NGRR-12-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-12-2]C2-025	7440-38-2	Arsenic	5.1		mg/kg
NGRR-12-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-12-2]C2-025	7439-92-1	Lead	3.2		mg/kg
NGRR-14	1.5-2	06/26/01	Yes	01-N01-SS[NGRR-14]C2-005-DAVG	7440-38-2	Arsenic	4.5		mg/kg
NGRR-14	1.5-2	06/26/01	Yes	01-N01-SS[NGRR-14]C2-005-DAVG	7439-92-1	Lead	7.0		mg/kg
NGRR-16	1.5-2	06/26/01	Yes	01-N01-SS[NGRR-16]C2-005	7440-38-2	Arsenic	3.5		mg/kg
NGRR-16	1.5-2	06/26/01	Yes	01-N01-SS[NGRR-16]C2-005	7439-92-1	Lead	4.9		mg/kg
NGRR-17	1.5-2	06/26/01	Yes	01-N01-SS[NGRR-17]C2-005	7440-38-2	Arsenic	2.9		mg/kg
NGRR-17	1.5-2	06/26/01	Yes	01-N01-SS[NGRR-17]C2-005	7439-92-1	Lead	31.0		mg/kg
NGRR-19	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-19]C2-005-DAVG	7440-38-2	Arsenic	5.1		mg/kg
NGRR-19	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-19]C2-005-DAVG	7439-92-1	Lead	3.1		mg/kg
NGRR-21	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-21]C2-005	7440-38-2	Arsenic	4.2		mg/kg
NGRR-21	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-21]C2-005	7439-92-1	Lead	3.5		mg/kg
NGRR-22	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-22]C2-005	7440-38-2	Arsenic	6.5		mg/kg
NGRR-22	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-22]C2-005	7439-92-1	Lead	4.3		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-23	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-23]C2-005	7440-38-2	Arsenic	4.1		mg/kg
NGRR-23	1.5-2	07/02/01	Yes	01-N01-SS[NGRR-23]C2-005	7439-92-1	Lead	5.1		mg/kg
NGRR-24	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-24]C2-005	7440-38-2	Arsenic	4.9		mg/kg
NGRR-24	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-24]C2-005	7439-92-1	Lead	7.5		mg/kg
NGRR-25	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-25]C2-005	7440-38-2	Arsenic	5.8		mg/kg
NGRR-25	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-25]C2-005	7439-92-1	Lead	10.0		mg/kg
NGRR-26	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-26]C2-005	7440-38-2	Arsenic	19.0		mg/kg
NGRR-26	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-26]C2-005	7439-92-1	Lead	6.4		mg/kg
NGRR-27-2	2.5-3	08/29/01	Yes	02-N01-SS[NGRR-27-2]C2-025	7440-38-2	Arsenic	31.0	J	mg/kg
NGRR-27-2	2.5-3	08/29/01	Yes	02-N01-SS[NGRR-27-2]C2-025	7439-92-1	Lead	14.0		mg/kg
NGRR-424	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-424]C2-005	7440-38-2	Arsenic	4.8		mg/kg
NGRR-424	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-424]C2-005	7439-92-1	Lead	2.1		mg/kg
NGRR-425	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-425]C2-005	7440-38-2	Arsenic	4.4		mg/kg
NGRR-425	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-425]C2-005	7439-92-1	Lead	3.0		mg/kg
NGRR-426	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-426]C2-005	7440-38-2	Arsenic	6.7		mg/kg
NGRR-426	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-426]C2-005	7439-92-1	Lead	3.8		mg/kg
NGRR-428	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-428]C2-005	7440-38-2	Arsenic	6.8		mg/kg
NGRR-428	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-428]C2-005	7439-92-1	Lead	2.7		mg/kg
NGRR-429	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-429]C2-005	7440-38-2	Arsenic	14.0		mg/kg
NGRR-429	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-429]C2-005	7439-92-1	Lead	8.2		mg/kg
NGRR-430	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-430]C2-005	7440-38-2	Arsenic	35.0		mg/kg
NGRR-430	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-430]C2-005	7439-92-1	Lead	7.4		mg/kg
NGRR-431	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-431]C2-005	7440-38-2	Arsenic	25.0		mg/kg
NGRR-431	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-431]C2-005	7439-92-1	Lead	13.0		mg/kg
NGRR-432-2	2.5-3	09/13/01	Yes	02-N01-SS-[NGRR-432-2]-C2-030	7440-38-2	Arsenic	4.1		mg/kg
NGRR-432-2	2.5-3	09/13/01	Yes	02-N01-SS-[NGRR-432-2]-C2-030	7439-92-1	Lead	29.0		mg/kg
NGRR-433	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-433]C2-005	7440-38-2	Arsenic	30.0		mg/kg
NGRR-433	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-433]C2-005	7439-92-1	Lead	62.0		mg/kg
NGRR-434	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-434]C2-005	7440-38-2	Arsenic	21.0		mg/kg
NGRR-434	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-434]C2-005	7439-92-1	Lead	9.9		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-436	1.5-2	09/12/01	Yes	01-N01-SS-[NGRR-436]-C2-020	7440-38-2	Arsenic	3.5		mg/kg
NGRR-436	1.5-2	09/12/01	Yes	01-N01-SS-[NGRR-436]-C2-020	7439-92-1	Lead	2.6		mg/kg
NGRR-437	1.5-2	09/12/01	Yes	01-N01-SS-[NGRR-437]-C2-020	7440-38-2	Arsenic	2.8		mg/kg
NGRR-437	1.5-2	09/12/01	Yes	01-N01-SS-[NGRR-437]-C2-020	7439-92-1	Lead	2.2		mg/kg
NGRR-439	1.5-2	09/17/01	Yes	01-N01-SS-[NGRR-439]C2-015	7440-38-2	Arsenic	5.4		mg/kg
NGRR-439	1.5-2	09/17/01	Yes	01-N01-SS-[NGRR-439]C2-015	7439-92-1	Lead	3.7		mg/kg
NGRR-440	1.5-2	09/17/01	Yes	01-N01-SS-[NGRR-440]C2-015	7440-38-2	Arsenic	13.0		mg/kg
NGRR-440	1.5-2	09/17/01	Yes	01-N01-SS-[NGRR-440]C2-015	7439-92-1	Lead	5.8		mg/kg
NGRR-62	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-62]C2-005	7440-38-2	Arsenic	21.0		mg/kg
NGRR-62	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-62]C2-005	7439-92-1	Lead	6.0	J	mg/kg
NGRR-63	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-63]C2-005	7440-38-2	Arsenic	7.6		mg/kg
NGRR-63	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-63]C2-005	7439-92-1	Lead	3.1	J	mg/kg
NGRR-64	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-64]C2-005	7440-38-2	Arsenic	2.8		mg/kg
NGRR-64	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-64]C2-005	7439-92-1	Lead	1.8	UJ	mg/kg
NGRR-65	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-65]C2-005	7440-38-2	Arsenic	3.8		mg/kg
NGRR-65	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-65]C2-005	7439-92-1	Lead	2.1	UJ	mg/kg
NGRR-66	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-66]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-66	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-66]C2-005	7439-92-1	Lead	5.3	J	mg/kg
NGRR-67	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-67]C2-005	7440-38-2	Arsenic	3.9		mg/kg
NGRR-67	1.5-2	07/17/01	Yes	01-N01-SS[NGRR-67]C2-005	7439-92-1	Lead	7.3	J	mg/kg
R26C43	1-1.5	11/14/03	No	01-SS-[R26C43]-C2_11/14/03_1	7440-38-2	Arsenic	7.4		mg/kg
R26C43	2-2.5	11/20/03	Yes	02-SS-[R26C43]-C2_11/20/03_2	7439-92-1	Lead	2.1	U	mg/kg
R26C44	1-1.5	11/14/03	Yes	01-SS-[R26C44]-C2_11/14/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
R26C44	1-1.5	11/14/03	Yes	01-SS-[R26C44]-C2_11/14/03_1	7439-92-1	Lead	4.2		mg/kg
R26C45	1-1.5	04/13/04	Yes	1-R26C45_04/13/04_1	7440-38-2	Arsenic	5.3		mg/kg
R26C45	1-1.5	04/13/04	Yes	1-R26C45_04/13/04_1	7439-92-1	Lead	4.3		mg/kg
R26C46	1-1.5	04/13/04	Yes	1-R26C46_AVG_04/13/04_1	7440-38-2	Arsenic	6.4		mg/kg
R26C46	1-1.5	04/13/04	Yes	1-R26C46_AVG_04/13/04_1	7439-92-1	Lead	5.8		mg/kg
R26C47	1-1.5	04/13/04	Yes	1-R26C47_04/13/04_1	7440-38-2	Arsenic	7.2		mg/kg
R26C47	1-1.5	04/13/04	Yes	1-R26C47_04/13/04_1	7439-92-1	Lead	10.7		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R27C43	1-1.5	04/13/04	Yes	1-R27C43_04/13/04_1	7440-38-2	Arsenic	7.1		mg/kg
R27C43	1-1.5	04/13/04	Yes	1-R27C43_04/13/04_1	7439-92-1	Lead	19.8		mg/kg
R27C44	1-1.5	04/13/04	Yes	1-R27C44_04/13/04_1	7440-38-2	Arsenic	7.3		mg/kg
R27C44	1-1.5	04/13/04	Yes	1-R27C44_04/13/04_1	7439-92-1	Lead	16.1		mg/kg
R27C45	1-1.5	04/13/04	Yes	1-R27C45_04/13/04_1	7440-38-2	Arsenic	9.2		mg/kg
R27C45	1-1.5	04/13/04	Yes	1-R27C45_04/13/04_1	7439-92-1	Lead	22.6		mg/kg
R28C44	1-1.5	04/13/04	Yes	1-R28C44_04/13/04_1	7440-38-2	Arsenic	9.4		mg/kg
R28C44	1-1.5	04/13/04	Yes	1-R28C44_04/13/04_1	7439-92-1	Lead	30.9		mg/kg
R28C45	1-1.5	04/13/04	Yes	1-R28C45_04/13/04_1	7440-38-2	Arsenic	8.9		mg/kg
R28C45	1-1.5	04/13/04	Yes	1-R28C45_04/13/04_1	7439-92-1	Lead	28.3		mg/kg
R29C43	1-1.5	04/13/04	Yes	1-R29C43_04/13/04_1	7440-38-2	Arsenic	11.2		mg/kg
R29C43	1-1.5	04/13/04	Yes	1-R29C43_04/13/04_1	7439-92-1	Lead	85.0		mg/kg
R29C44	1-1.5	04/13/04	Yes	1-R29C44_04/13/04_1	7440-38-2	Arsenic	12.3		mg/kg
R29C44	1-1.5	04/13/04	Yes	1-R29C44_04/13/04_1	7439-92-1	Lead	66.4		mg/kg
R29C49	1-1.5	12/16/03	Yes	01-SS-[R29C49]-C2_12/16/03_1	7440-38-2	Arsenic	5.0		mg/kg
R29C49	1-1.5	12/16/03	Yes	01-SS-[R29C49]-C2_12/16/03_1	7439-92-1	Lead	4.6		mg/kg
R30C43	1-1.5	04/13/04	Yes	1-R30C43_AVG_04/13/04_1	7440-38-2	Arsenic	21.1		mg/kg
R30C43	1-1.5	04/13/04	Yes	1-R30C43_AVG_04/13/04_1	7439-92-1	Lead	76.1		mg/kg
R30C44	1-1.5	04/13/04	Yes	1-R30C44_04/13/04_1	7440-38-2	Arsenic	11.7		mg/kg
R30C44	1-1.5	04/13/04	Yes	1-R30C44_04/13/04_1	7439-92-1	Lead	50.5		mg/kg
R30C46	1-1.5	04/13/04	Yes	1-R30C46_04/13/04_1	7440-38-2	Arsenic	10.3		mg/kg
R30C46	1-1.5	04/13/04	Yes	1-R30C46_04/13/04_1	7439-92-1	Lead	21.6		mg/kg
R30C47	1-1.5	04/13/04	Yes	1-R30C47_04/13/04_1	7440-38-2	Arsenic	10.5		mg/kg
R30C47	1-1.5	04/13/04	Yes	1-R30C47_04/13/04_1	7439-92-1	Lead	28.6		mg/kg
R30C48	1-1.5	04/13/04	Yes	1-R30C48_04/13/04_1	7440-38-2	Arsenic	8.9		mg/kg
R30C48	1-1.5	04/13/04	Yes	1-R30C48_04/13/04_1	7439-92-1	Lead	25.1		mg/kg
R30C49	1-1.5	04/13/04	Yes	1-R30C49_04/13/04_1	7440-38-2	Arsenic	13.2		mg/kg
R30C49	1-1.5	04/13/04	Yes	1-R30C49_04/13/04_1	7439-92-1	Lead	14.8		mg/kg
R31C47	2-2.5	04/29/04	Yes	02-R31C47_04/29/04_2	7439-92-1	Lead	6.6		mg/kg
R31C47	1-1.5	04/13/04	No	1-R31C47_04/13/04_1	7440-38-2	Arsenic	11.7		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R31C48	2-2.5	04/29/04	Yes	02-R31C48_04/29/04_2	7439-92-1	Lead	4.8		mg/kg
R31C48	1-1.5	04/13/04	No	1-R31C48_04/13/04_1	7440-38-2	Arsenic	27.4		mg/kg
R31C48	1-1.5	04/28/04	No	R31C48_04/28/04_1	127-18-4	Tetrachloroethene	0.0009	J	mg/kg
R31C49	1-1.5	04/13/04	Yes	1-R31C49_04/13/04_1	7440-38-2	Arsenic	12.5		mg/kg
R31C49	1-1.5	04/13/04	Yes	1-R31C49_04/13/04_1	7439-92-1	Lead	12.7		mg/kg
R31C50	1-1.5	12/12/03	Yes	01-SS-[R31C50]-C2_12/12/03_1	7440-38-2	Arsenic	6.0		mg/kg
R31C50	1-1.5	12/12/03	Yes	01-SS-[R31C50]-C2_12/12/03_1	7439-92-1	Lead	5.3		mg/kg
R32C48	2-2.5	04/29/04	Yes	02-R32C48_04/29/04_2	7439-92-1	Lead	3.5		mg/kg
R32C48	1-1.5	04/13/04	No	1-R32C48_04/13/04_1	7440-38-2	Arsenic	57.9		mg/kg
R32C49	1-1.5	04/13/04	Yes	1-R32C49_04/13/04_1	7440-38-2	Arsenic	7.0		mg/kg
R32C49	1-1.5	04/13/04	Yes	1-R32C49_04/13/04_1	7439-92-1	Lead	15.8		mg/kg
R33C48	2-2.5	04/29/04	Yes	02-R33C48_04/29/04_2	7439-92-1	Lead	3.0		mg/kg
R33C48	1-1.5	04/08/04	No	1-R33C48_04/08/04_1	7440-38-2	Arsenic	20.2		mg/kg
R33C49	1-1.5	04/13/04	Yes	1-R33C49_04/13/04_1	7440-38-2	Arsenic	36.6		mg/kg
R33C49	1-1.5	04/13/04	Yes	1-R33C49_04/13/04_1	7439-92-1	Lead	23.7		mg/kg
R33C50	1-1.5	04/13/04	Yes	1-R33C50_04/13/04_1	7440-38-2	Arsenic	14.2		mg/kg
R33C50	1-1.5	04/13/04	Yes	1-R33C50_04/13/04_1	7439-92-1	Lead	14.0		mg/kg
R34C47	2-2.5	04/29/04	Yes	02-R34C47_04/29/04_2	7439-92-1	Lead	70.0		mg/kg
R34C47	1-1.5	04/08/04	No	1-R34C47_04/08/04_1	7440-38-2	Arsenic	11.1		mg/kg
R34C49	2-2.5	04/29/04	Yes	02-R34C49_04/29/04_2	7439-92-1	Lead	5.7		mg/kg
R34C49	1-1.5	04/13/04	No	1-R34C49_04/13/04_1	7440-38-2	Arsenic	30.7		mg/kg
R34C50	1-1.5	04/13/04	Yes	1-R34C50_04/13/04_1	7440-38-2	Arsenic	8.4		mg/kg
R34C50	1-1.5	04/13/04	Yes	1-R34C50_04/13/04_1	7439-92-1	Lead	11.2		mg/kg
R34C51	1-1.5	04/13/04	Yes	1-R34C51_04/13/04_1	7440-38-2	Arsenic	9.4		mg/kg
R34C51	1-1.5	04/13/04	Yes	1-R34C51_04/13/04_1	7439-92-1	Lead	23.0		mg/kg
R35C48	1-1.5	04/13/04	Yes	1-R35C48_04/13/04_1	7440-38-2	Arsenic	47.6		mg/kg
R35C48	1-1.5	04/13/04	Yes	1-R35C48_04/13/04_1	7439-92-1	Lead	68.5		mg/kg
R35C50	1-1.5	03/10/04	Yes	1-R35C50_03/10/04_1	7440-38-2	Arsenic	7.4		mg/kg
R35C50	1-1.5	03/10/04	Yes	1-R35C50_03/10/04_1	7439-92-1	Lead	16.7		mg/kg
R35C51	1-1.5	04/15/04	Yes	1-R35C51_04/15/04_1	7440-38-2	Arsenic	6.2		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R35C51	1-1.5	04/15/04	Yes	1-R35C51_04/15/04_1	7439-92-1	Lead	9.5		mg/kg
R35C52	1-1.5	04/15/04	Yes	1-R35C52_04/15/04_1	7440-38-2	Arsenic	5.5		mg/kg
R35C52	1-1.5	04/15/04	Yes	1-R35C52_04/15/04_1	7439-92-1	Lead	4.9		mg/kg
R36C47	1-1.5	03/09/04	Yes	1-R36C47_03/09/04_1	7440-38-2	Arsenic	26.1		mg/kg
R36C47	1-1.5	03/09/04	Yes	1-R36C47_03/09/04_1	7439-92-1	Lead	35.4		mg/kg
R36C48	1-1.5	04/13/04	Yes	1-R36C48_04/13/04_1	7440-38-2	Arsenic	17.6		mg/kg
R36C48	1-1.5	04/13/04	Yes	1-R36C48_04/13/04_1	7439-92-1	Lead	27.6		mg/kg
R36C51	1-1.5	03/10/04	Yes	1-R36C51_03/10/04_1	7440-38-2	Arsenic	7.4		mg/kg
R36C51	1-1.5	03/10/04	Yes	1-R36C51_03/10/04_1	7439-92-1	Lead	12.5		mg/kg
R36C52	1-1.5	04/15/04	Yes	1-R36C52_04/15/04_1	7440-38-2	Arsenic	6.3		mg/kg
R36C52	1-1.5	04/15/04	Yes	1-R36C52_04/15/04_1	7439-92-1	Lead	18.4		mg/kg
R37C47	1-1.5	03/09/04	Yes	1-R37C47_03/09/04_1	7440-38-2	Arsenic	5.9		mg/kg
R37C47	1-1.5	03/09/04	Yes	1-R37C47_03/09/04_1	7439-92-1	Lead	9.0		mg/kg
R37C48	1-1.5	03/09/04	Yes	1-R37C48_03/09/04_1	7440-38-2	Arsenic	10.0		mg/kg
R37C48	1-1.5	03/09/04	Yes	1-R37C48_03/09/04_1	7439-92-1	Lead	26.1		mg/kg
R37C49	1-1.5	04/30/04	Yes	1-R37C49_04/30/04_1	7439-92-1	Lead	4.4		mg/kg
R37C52	1-1.5	03/10/04	Yes	1-R37C52_03/10/04_1	7440-38-2	Arsenic	9.4		mg/kg
R37C52	1-1.5	03/10/04	Yes	1-R37C52_03/10/04_1	7439-92-1	Lead	34.5		mg/kg
R37C53	2-2.5	05/06/04	Yes	02-R37C53_05/06/04_2	7439-92-1	Lead	11.0		mg/kg
R37C53	1-1.5	04/15/04	No	1-R37C53_04/15/04_1	7440-38-2	Arsenic	6.4		mg/kg
R38C47	1-1.5	03/09/04	Yes	1-R38C47_03/09/04_1	7440-38-2	Arsenic	10.7		mg/kg
R38C47	1-1.5	03/09/04	Yes	1-R38C47_03/09/04_1	7439-92-1	Lead	7.6		mg/kg
R38C47D	1-1.5	03/09/04	Yes	1-R38C47D_03/09/04_1	7440-38-2	Arsenic	10.5		mg/kg
R38C47D	1-1.5	03/09/04	Yes	1-R38C47D_03/09/04_1	7439-92-1	Lead	8.4		mg/kg
R38C48	1-1.5	04/13/04	Yes	1-R38C48_04/13/04_1	7440-38-2	Arsenic	9.1		mg/kg
R38C48	1-1.5	04/13/04	Yes	1-R38C48_04/13/04_1	7439-92-1	Lead	11.2		mg/kg
R38C49	1-1.5	03/10/04	Yes	1-R38C49_03/10/04_1	7440-38-2	Arsenic	4.7		mg/kg
R38C49	1-1.5	03/10/04	Yes	1-R38C49_03/10/04_1	7439-92-1	Lead	3.7		mg/kg
R38C50	1-1.5	03/10/04	Yes	1-R38C50_03/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R38C50	1-1.5	03/10/04	Yes	1-R38C50_03/10/04_1	7439-92-1	Lead	5.3		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R38C53	1-1.5	03/16/04	Yes	1-R38C53_03/16/04_1	7440-38-2	Arsenic	3.8		mg/kg
R38C53	1-1.5	03/16/04	Yes	1-R38C53_03/16/04_1	7439-92-1	Lead	13.6		mg/kg
R38C54	1-1.5	04/15/04	Yes	1-R38C54_04/15/04_1	7440-38-2	Arsenic	5.5		mg/kg
R38C54	1-1.5	04/15/04	Yes	1-R38C54_04/15/04_1	7439-92-1	Lead	8.7		mg/kg
R39C47	1-1.5	04/13/04	Yes	1-R39C47_04/13/04_1	7440-38-2	Arsenic	13.4		mg/kg
R39C47	1-1.5	04/13/04	Yes	1-R39C47_04/13/04_1	7439-92-1	Lead	14.3		mg/kg
R39C48	1-1.5	04/13/04	Yes	1-R39C48_04/13/04_1	7440-38-2	Arsenic	6.9		mg/kg
R39C48	1-1.5	04/13/04	Yes	1-R39C48_04/13/04_1	7439-92-1	Lead	10.3		mg/kg
R39C49	1-1.5	03/10/04	Yes	1-R39C49_03/10/04_1	7440-38-2	Arsenic	9.9		mg/kg
R39C49	1-1.5	03/10/04	Yes	1-R39C49_03/10/04_1	7439-92-1	Lead	13.1		mg/kg
R39C50	1-1.5	04/13/04	Yes	1-R39C50_04/13/04_1	7440-38-2	Arsenic	6.5		mg/kg
R39C50	1-1.5	04/13/04	Yes	1-R39C50_04/13/04_1	7439-92-1	Lead	8.3		mg/kg
R39C51	1-1.5	04/13/04	Yes	1-R39C51_04/13/04_1	7440-38-2	Arsenic	9.0		mg/kg
R39C51	1-1.5	04/13/04	Yes	1-R39C51_04/13/04_1	7439-92-1	Lead	47.4		mg/kg
R39C53	1-1.5	03/16/04	Yes	1-R39C53_03/16/04_1	7440-38-2	Arsenic	29.5		mg/kg
R39C53	1-1.5	03/16/04	Yes	1-R39C53_03/16/04_1	7439-92-1	Lead	26.9		mg/kg
R39C54	1-1.5	03/16/04	Yes	1-R39C54_03/16/04_1	7440-38-2	Arsenic	7.3		mg/kg
R39C54	1-1.5	03/16/04	Yes	1-R39C54_03/16/04_1	7439-92-1	Lead	13.8		mg/kg
R39C55	1-1.5	12/10/03	Yes	01-SS-[R39C55]-C2_12/10/03_1	7440-38-2	Arsenic	13.0		mg/kg
R39C55	1-1.5	12/10/03	Yes	01-SS-[R39C55]-C2_12/10/03_1	7439-92-1	Lead	14.9		mg/kg
R39C56	1-1.5	12/10/03	Yes	01-SS-[R39C56]-C2_12/10/03_1	7440-38-2	Arsenic	16.4		mg/kg
R39C56	1-1.5	12/10/03	Yes	01-SS-[R39C56]-C2_12/10/03_1	7439-92-1	Lead	18.5		mg/kg
R40C46	1-1.5	03/09/04	Yes	1-R40C46_03/09/04_1	7440-38-2	Arsenic	12.7		mg/kg
R40C46	1-1.5	03/09/04	Yes	1-R40C46_03/09/04_1	7439-92-1	Lead	14.7		mg/kg
R40C47	1-1.5	04/13/04	Yes	1-R40C47_04/13/04_1	7440-38-2	Arsenic	8.7		mg/kg
R40C47	1-1.5	04/13/04	Yes	1-R40C47_04/13/04_1	7439-92-1	Lead	9.1		mg/kg
R40C48	1-1.5	04/13/04	Yes	1-R40C48_04/13/04_1	7440-38-2	Arsenic	9.3		mg/kg
R40C48	1-1.5	04/13/04	Yes	1-R40C48_04/13/04_1	7439-92-1	Lead	13.8		mg/kg
R40C49	1-1.5	04/13/04	Yes	1-R40C49_04/13/04_1	7440-38-2	Arsenic	6.8		mg/kg
R40C49	1-1.5	04/13/04	Yes	1-R40C49_04/13/04_1	7439-92-1	Lead	72.4		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R40C50	1-1.5	04/13/04	Yes	1-R40C50_04/13/04_1	7440-38-2	Arsenic	7.6		mg/kg
R40C50	1-1.5	04/13/04	Yes	1-R40C50_04/13/04_1	7439-92-1	Lead	7.4		mg/kg
R40C51	1-1.5	04/13/04	Yes	1-R40C51_04/13/04_1	7440-38-2	Arsenic	9.8		mg/kg
R40C51	1-1.5	04/13/04	Yes	1-R40C51_04/13/04_1	7439-92-1	Lead	5.9		mg/kg
R40C52	1-1.5	04/13/04	Yes	1-R40C52_AVG_04/13/04_1	7440-38-2	Arsenic	6.2		mg/kg
R40C52	1-1.5	04/13/04	Yes	1-R40C52_AVG_04/13/04_1	7439-92-1	Lead	9.5		mg/kg
R40C55	1-1.5	12/08/03	Yes	01-SS-[R40C55]-C2_12/08/03_1	7440-38-2	Arsenic	6.3		mg/kg
R40C55	1-1.5	12/08/03	Yes	01-SS-[R40C55]-C2_12/08/03_1	7439-92-1	Lead	10.4		mg/kg
R40C56	1-1.5	12/08/03	Yes	01-SS-[R40C56]-C2_12/08/03_1	7440-38-2	Arsenic	14.1		mg/kg
R40C56	1-1.5	12/08/03	Yes	01-SS-[R40C56]-C2_12/08/03_1	7439-92-1	Lead	15.6		mg/kg
R40C57	1-1.5	12/08/03	Yes	01-SS-[R40C57]-C2_12/08/03_1	7440-38-2	Arsenic	8.8		mg/kg
R40C57	1-1.5	12/08/03	Yes	01-SS-[R40C57]-C2_12/08/03_1	7439-92-1	Lead	12.7		mg/kg
R41C46	1-1.5	03/09/04	Yes	1-R41C46_03/09/04_1	7440-38-2	Arsenic	12.0		mg/kg
R41C46	1-1.5	03/09/04	Yes	1-R41C46_03/09/04_1	7439-92-1	Lead	12.6		mg/kg
R41C47	1-1.5	04/13/04	Yes	1-R41C47_04/13/04_1	7440-38-2	Arsenic	7.5		mg/kg
R41C47	1-1.5	04/13/04	Yes	1-R41C47_04/13/04_1	7439-92-1	Lead	9.8		mg/kg
R41C48	1-1.5	04/13/04	Yes	1-R41C48_04/13/04_1	7440-38-2	Arsenic	6.6		mg/kg
R41C48	1-1.5	04/13/04	Yes	1-R41C48_04/13/04_1	7439-92-1	Lead	34.2		mg/kg
R41C49	1-1.5	04/13/04	Yes	1-R41C49_04/13/04_1	7440-38-2	Arsenic	12.5		mg/kg
R41C49	1-1.5	04/13/04	Yes	1-R41C49_04/13/04_1	7439-92-1	Lead	38.1		mg/kg
R41C50	1-1.5	04/13/04	Yes	1-R41C50_04/13/04_1	7440-38-2	Arsenic	6.8		mg/kg
R41C50	1-1.5	04/13/04	Yes	1-R41C50_04/13/04_1	7439-92-1	Lead	5.1		mg/kg
R41C51	1-1.5	04/13/04	Yes	1-R41C51_04/13/04_1	7440-38-2	Arsenic	6.9		mg/kg
R41C51	1-1.5	04/13/04	Yes	1-R41C51_04/13/04_1	7439-92-1	Lead	5.7		mg/kg
R41C52	1-1.5	03/03/04	Yes	01-R41C52_03/03/04_1	7440-38-2	Arsenic	10.3		mg/kg
R41C52	1-1.5	03/03/04	Yes	01-R41C52_03/03/04_1	7439-92-1	Lead	11.8		mg/kg
R41C53	1-1.5	04/13/04	Yes	1-R41C53_04/13/04_1	7440-38-2	Arsenic	11.5		mg/kg
R41C53	1-1.5	04/13/04	Yes	1-R41C53_04/13/04_1	7439-92-1	Lead	26.1		mg/kg
R41C56	1-1.5	12/02/03	Yes	01-SS-[R41C56]-C2_12/02/03_1	7440-38-2	Arsenic	2.7	U	mg/kg
R41C56	1-1.5	12/02/03	Yes	01-SS-[R41C56]-C2_12/02/03_1	7439-92-1	Lead	6.1		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R41C57	1-1.5	12/02/03	Yes	01-SS-[R41C57]-C2_12/02/03_1	7440-38-2	Arsenic	11.3		mg/kg
R41C57	1-1.5	12/02/03	Yes	01-SS-[R41C57]-C2_12/02/03_1	7439-92-1	Lead	28.4		mg/kg
R41C58	1-1.5	04/15/04	Yes	1-R41C58_04/15/04_1	7440-38-2	Arsenic	20.4		mg/kg
R41C58	1-1.5	04/15/04	Yes	1-R41C58_04/15/04_1	7439-92-1	Lead	36.4		mg/kg
R42C46	1-1.5	04/13/04	Yes	1-R42C46_04/13/04_1	7440-38-2	Arsenic	6.0		mg/kg
R42C46	1-1.5	04/13/04	Yes	1-R42C46_04/13/04_1	7439-92-1	Lead	6.8		mg/kg
R42C47	1-1.5	04/13/04	Yes	1-R42C47_04/13/04_1	7440-38-2	Arsenic	7.1		mg/kg
R42C47	1-1.5	04/13/04	Yes	1-R42C47_04/13/04_1	7439-92-1	Lead	110.0		mg/kg
R42C48	1-1.5	04/13/04	Yes	1-R42C48_04/13/04_1	7440-38-2	Arsenic	6.1		mg/kg
R42C48	1-1.5	04/13/04	Yes	1-R42C48_04/13/04_1	7439-92-1	Lead	15.7		mg/kg
R42C49	1-1.5	04/13/04	Yes	1-R42C49_04/13/04_1	7440-38-2	Arsenic	6.7		mg/kg
R42C49	1-1.5	04/13/04	Yes	1-R42C49_04/13/04_1	7439-92-1	Lead	5.7		mg/kg
R42C50	1-1.5	04/13/04	Yes	1-R42C50_04/13/04_1	7440-38-2	Arsenic	15.2		mg/kg
R42C50	1-1.5	04/13/04	Yes	1-R42C50_04/13/04_1	7439-92-1	Lead	10.9		mg/kg
R42C51	1-1.5	03/03/04	Yes	01-R42C51_03/03/04_1	7440-38-2	Arsenic	8.5		mg/kg
R42C51	1-1.5	03/03/04	Yes	01-R42C51_03/03/04_1	7439-92-1	Lead	7.4		mg/kg
R42C52	1-1.5	03/03/04	Yes	01-R42C52_03/03/04_1	7440-38-2	Arsenic	9.3		mg/kg
R42C52	1-1.5	03/03/04	Yes	01-R42C52_03/03/04_1	7439-92-1	Lead	11.0		mg/kg
R42C53	1-1.5	04/13/04	Yes	1-R42C53_04/13/04_1	7440-38-2	Arsenic	9.8		mg/kg
R42C53	1-1.5	04/13/04	Yes	1-R42C53_04/13/04_1	7439-92-1	Lead	11.0		mg/kg
R42C54	1-1.5	04/13/04	Yes	1-R42C54_04/13/04_1	7440-38-2	Arsenic	7.0		mg/kg
R42C54	1-1.5	04/13/04	Yes	1-R42C54_04/13/04_1	7439-92-1	Lead	8.2		mg/kg
R42C57	1-1.5	12/02/03	Yes	01-SS-[R42C57]-C2_12/02/03_1	7440-38-2	Arsenic	3.6		mg/kg
R42C57	1-1.5	12/02/03	Yes	01-SS-[R42C57]-C2_12/02/03_1	7439-92-1	Lead	6.7		mg/kg
R42C58	1-1.5	04/15/04	Yes	1-R42C58_04/15/04_1	7440-38-2	Arsenic	6.0		mg/kg
R42C58	1-1.5	04/15/04	Yes	1-R42C58_04/15/04_1	7439-92-1	Lead	7.6		mg/kg
R42C59	1-1.5	04/15/04	Yes	1-R42C59_04/15/04_1	7440-38-2	Arsenic	16.0		mg/kg
R42C59	1-1.5	04/15/04	Yes	1-R42C59_04/15/04_1	7439-92-1	Lead	27.1		mg/kg
R43C45	1-1.5	04/12/04	Yes	1-R43C45_04/12/04_1	7440-38-2	Arsenic	18.8		mg/kg
R43C45	1-1.5	04/12/04	Yes	1-R43C45_04/12/04_1	7439-92-1	Lead	15.7		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R43C46	1-1.5	04/12/04	Yes	1-R43C46_04/12/04_1	7440-38-2	Arsenic	7.9		mg/kg
R43C46	1-1.5	04/12/04	Yes	1-R43C46_04/12/04_1	7439-92-1	Lead	9.3		mg/kg
R43C47	1-1.5	04/12/04	Yes	1-R43C47_04/12/04_1	7440-38-2	Arsenic	5.9		mg/kg
R43C47	1-1.5	04/12/04	Yes	1-R43C47_04/12/04_1	7439-92-1	Lead	10.0		mg/kg
R43C48	1-1.5	04/12/04	Yes	1-R43C48_04/12/04_1	7440-38-2	Arsenic	11.0		mg/kg
R43C48	1-1.5	04/12/04	Yes	1-R43C48_04/12/04_1	7439-92-1	Lead	75.6		mg/kg
R43C49	1-1.5	04/12/04	Yes	1-R43C49_04/12/04_1	7440-38-2	Arsenic	20.5		mg/kg
R43C49	1-1.5	04/12/04	Yes	1-R43C49_04/12/04_1	7439-92-1	Lead	6.9		mg/kg
R43C50	1-1.5	04/12/04	Yes	1-R43C50_04/12/04_1	7440-38-2	Arsenic	6.6		mg/kg
R43C50	1-1.5	04/12/04	Yes	1-R43C50_04/12/04_1	7439-92-1	Lead	6.0		mg/kg
R43C51	1-1.5	04/12/04	Yes	1-R43C51_04/12/04_1	7440-38-2	Arsenic	6.8		mg/kg
R43C51	1-1.5	04/12/04	Yes	1-R43C51_04/12/04_1	7439-92-1	Lead	5.8		mg/kg
R43C52	1-1.5	03/03/04	Yes	01-R43C52_03/03/04_1	7440-38-2	Arsenic	9.8		mg/kg
R43C52	1-1.5	03/03/04	Yes	01-R43C52_03/03/04_1	7439-92-1	Lead	8.7		mg/kg
R43C53	1-1.5	03/03/04	Yes	01-R43C53_03/03/04_1	7440-38-2	Arsenic	4.9		mg/kg
R43C53	1-1.5	03/03/04	Yes	01-R43C53_03/03/04_1	7439-92-1	Lead	4.4		mg/kg
R43C54	1-1.5	03/03/04	Yes	01-R43C54_03/03/04_1	7440-38-2	Arsenic	12.4		mg/kg
R43C54	1-1.5	03/03/04	Yes	01-R43C54_03/03/04_1	7439-92-1	Lead	34.8		mg/kg
R43C55	1-1.5	04/13/04	Yes	1-R43C55_04/13/04_1	7440-38-2	Arsenic	6.9		mg/kg
R43C55	1-1.5	04/13/04	Yes	1-R43C55_04/13/04_1	7439-92-1	Lead	6.4		mg/kg
R43C58	1-1.5	04/15/04	Yes	1-R43C58_04/15/04_1	7440-38-2	Arsenic	14.9		mg/kg
R43C58	1-1.5	04/15/04	Yes	1-R43C58_04/15/04_1	7439-92-1	Lead	31.4		mg/kg
R43C59	1-1.5	11/26/03	Yes	01-SS-[R43C59]-C2_11/26/03_1	7440-38-2	Arsenic	7.2		mg/kg
R43C59	1-1.5	11/26/03	Yes	01-SS-[R43C59]-C2_11/26/03_1	7439-92-1	Lead	9.6		mg/kg
R43C60	1-1.5	11/26/03	Yes	01-SS-[R43C60]-C2_AVG_11/26/03_1	7440-38-2	Arsenic	10.4		mg/kg
R43C60	1-1.5	11/26/03	Yes	01-SS-[R43C60]-C2_AVG_11/26/03_1	7439-92-1	Lead	19.3		mg/kg
R44C45	1-1.5	04/12/04	Yes	1-R44C45_04/12/04_1	7440-38-2	Arsenic	7.4		mg/kg
R44C45	1-1.5	04/12/04	Yes	1-R44C45_04/12/04_1	7439-92-1	Lead	12.4		mg/kg
R44C46	1-1.5	04/12/04	Yes	1-R44C46_04/12/04_1	7440-38-2	Arsenic	7.9		mg/kg
R44C46	1-1.5	04/12/04	Yes	1-R44C46_04/12/04_1	7439-92-1	Lead	13.8		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R44C47	1-1.5	04/12/04	Yes	1-R44C47_04/12/04_1	7440-38-2	Arsenic	9.8		mg/kg
R44C47	1-1.5	04/12/04	Yes	1-R44C47_04/12/04_1	7439-92-1	Lead	40.1		mg/kg
R44C48	1-1.5	04/12/04	Yes	1-R44C48_04/12/04_1	7440-38-2	Arsenic	17.3		mg/kg
R44C48	1-1.5	04/12/04	Yes	1-R44C48_04/12/04_1	7439-92-1	Lead	15.9		mg/kg
R44C49	1-1.5	04/12/04	Yes	1-R44C49_AVG_04/12/04_1	7440-38-2	Arsenic	25.1		mg/kg
R44C49	1-1.5	04/12/04	Yes	1-R44C49_AVG_04/12/04_1	7439-92-1	Lead	14.5		mg/kg
R44C50	1-1.5	04/12/04	Yes	1-R44C50_04/12/04_1	7440-38-2	Arsenic	5.8		mg/kg
R44C50	1-1.5	04/12/04	Yes	1-R44C50_04/12/04_1	7439-92-1	Lead	6.3		mg/kg
R44C51	1-1.5	04/12/04	Yes	1-R44C51_04/12/04_1	7440-38-2	Arsenic	8.9		mg/kg
R44C51	1-1.5	04/12/04	Yes	1-R44C51_04/12/04_1	7439-92-1	Lead	13.9		mg/kg
R44C52	1-1.5	04/12/04	Yes	1-R44C52_04/12/04_1	7440-38-2	Arsenic	7.9		mg/kg
R44C52	1-1.5	04/12/04	Yes	1-R44C52_04/12/04_1	7439-92-1	Lead	10.1		mg/kg
R44C53	1-1.5	03/03/04	Yes	01-R44C53_03/03/04_1	7440-38-2	Arsenic	6.4		mg/kg
R44C53	1-1.5	03/03/04	Yes	01-R44C53_03/03/04_1	7439-92-1	Lead	5.9		mg/kg
R44C54	1-1.5	03/03/04	Yes	01-R44C54_AVG_03/03/04_1	7440-38-2	Arsenic	9.7		mg/kg
R44C54	1-1.5	03/03/04	Yes	01-R44C54_AVG_03/03/04_1	7439-92-1	Lead	10.1		mg/kg
R44C55	1-1.5	04/13/04	Yes	1-R44C55_04/13/04_1	7440-38-2	Arsenic	8.6		mg/kg
R44C55	1-1.5	04/13/04	Yes	1-R44C55_04/13/04_1	7439-92-1	Lead	14.7		mg/kg
R44C56	1-1.5	04/13/04	Yes	1-R44C56_04/13/04_1	7440-38-2	Arsenic	8.8		mg/kg
R44C56	1-1.5	04/13/04	Yes	1-R44C56_04/13/04_1	7439-92-1	Lead	11.2		mg/kg
R44C58	1-1.5	11/26/03	Yes	01-SS-[R44C58]-C2_11/26/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R44C58	1-1.5	11/26/03	Yes	01-SS-[R44C58]-C2_11/26/03_1	7439-92-1	Lead	5.8		mg/kg
R44C59	1-1.5	11/26/03	Yes	01-SS-[R44C59]-C2_11/26/03_1	7440-38-2	Arsenic	35.0		mg/kg
R44C59	1-1.5	11/26/03	Yes	01-SS-[R44C59]-C2_11/26/03_1	7439-92-1	Lead	60.0		mg/kg
R44C60	1-1.5	11/26/03	Yes	01-SS-[R44C60]-C2_11/26/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R44C60	1-1.5	11/26/03	Yes	01-SS-[R44C60]-C2_11/26/03_1	7439-92-1	Lead	5.6		mg/kg
R45C48	2-2.5	05/06/04	Yes	02-R45C48_AVG_05/06/04_2	7439-92-1	Lead	3.6		mg/kg
R45C48	1-1.5	04/12/04	No	1-R45C48_04/12/04_1	7440-38-2	Arsenic	17.3		mg/kg
R45C49	1-1.5	04/12/04	Yes	1-R45C49_04/12/04_1	7440-38-2	Arsenic	9.7		mg/kg
R45C49	1-1.5	04/12/04	Yes	1-R45C49_04/12/04_1	7439-92-1	Lead	22.5		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R45C50	1-1.5	04/12/04	Yes	1-R45C50_04/12/04_1	7440-38-2	Arsenic	14.9		mg/kg
R45C50	1-1.5	04/12/04	Yes	1-R45C50_04/12/04_1	7439-92-1	Lead	31.7		mg/kg
R45C51	1-1.5	11/26/03	Yes	01-SS-[R45C51]-C2_11/26/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R45C51	1-1.5	11/26/03	Yes	01-SS-[R45C51]-C2_11/26/03_1	7439-92-1	Lead	3.7		mg/kg
R45C52	1-1.5	11/26/03	Yes	01-SS-[R45C52]-C2_11/26/03_1	7440-38-2	Arsenic	3.1		mg/kg
R45C52	1-1.5	11/26/03	Yes	01-SS-[R45C52]-C2_11/26/03_1	7439-92-1	Lead	4.9		mg/kg
R45C53	1-1.5	03/03/04	Yes	01-R45C53_03/03/04_1	7440-38-2	Arsenic	11.3		mg/kg
R45C53	1-1.5	03/03/04	Yes	01-R45C53_03/03/04_1	7439-92-1	Lead	9.6		mg/kg
R45C54	1-1.5	04/13/04	Yes	1-R45C54_04/13/04_1	7440-38-2	Arsenic	20.3		mg/kg
R45C54	1-1.5	04/13/04	Yes	1-R45C54_04/13/04_1	7439-92-1	Lead	7.0		mg/kg
R45C55	1-1.5	04/13/04	Yes	1-R45C55_04/13/04_1	7440-38-2	Arsenic	7.7		mg/kg
R45C55	1-1.5	04/13/04	Yes	1-R45C55_04/13/04_1	7439-92-1	Lead	7.2		mg/kg
R45C57	1-1.5	11/26/03	Yes	01-SS-[R45C57]-C2_11/26/03_1	7440-38-2	Arsenic	4.0		mg/kg
R45C57	1-1.5	11/26/03	Yes	01-SS-[R45C57]-C2_11/26/03_1	7439-92-1	Lead	4.3		mg/kg
R45C59	1-1.5	11/26/03	No	01-SS-[R45C59]-C2_11/26/03_1	7440-38-2	Arsenic	38.1		mg/kg
R45C59	2-2.5	02/06/04	Yes	2-R45C59_02/06/04_2	7439-92-1	Lead	8.3		mg/kg
R45C60	1-1.5	11/26/03	Yes	01-SS-[R45C60]-C2_11/26/03_1	7440-38-2	Arsenic	27.6		mg/kg
R45C60	1-1.5	11/26/03	Yes	01-SS-[R45C60]-C2_11/26/03_1	7439-92-1	Lead	35.2		mg/kg
R45C61	1-1.5	11/26/03	Yes	01-SS-[R45C61]-C2_11/26/03_1	7440-38-2	Arsenic	12.2		mg/kg
R45C61	1-1.5	11/26/03	Yes	01-SS-[R45C61]-C2_11/26/03_1	7439-92-1	Lead	13.1		mg/kg
R46C44	1-1.5	03/12/04	No	01-R46C44_03/12/04_1	7439-92-1	Lead	33.9		mg/kg
R46C44	3-3.5	05/06/04	Yes	03-R46C44_05/06/04_3	7440-38-2	Arsenic	4.0		mg/kg
R46C46	1-1.5	04/15/04	Yes	1-R46C46_04/15/04_1	7440-38-2	Arsenic	13.7		mg/kg
R46C46	1-1.5	04/15/04	Yes	1-R46C46_04/15/04_1	7439-92-1	Lead	12.8		mg/kg
R46C47	2-2.5	05/06/04	Yes	02-R46C47_05/06/04_2	7440-38-2	Arsenic	5.7		mg/kg
R46C47	1-1.5	04/15/04	No	1-R46C47_04/15/04_1	7439-92-1	Lead	97.1		mg/kg
R46C48	1-1.5	04/15/04	Yes	1-R46C48_04/15/04_1	7440-38-2	Arsenic	13.8		mg/kg
R46C48	1-1.5	04/15/04	Yes	1-R46C48_04/15/04_1	7439-92-1	Lead	90.7		mg/kg
R46C49	1-1.5	04/15/04	Yes	1-R46C49_04/15/04_1	7440-38-2	Arsenic	5.0		mg/kg
R46C49	1-1.5	04/15/04	Yes	1-R46C49_04/15/04_1	7439-92-1	Lead	2.2		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R46C50	1-1.5	04/15/04	Yes	1-R46C50_04/15/04_1	7440-38-2	Arsenic	7.9		mg/kg
R46C50	1-1.5	04/15/04	Yes	1-R46C50_04/15/04_1	7439-92-1	Lead	15.0		mg/kg
R46C51	1-1.5	04/15/04	Yes	1-R46C51_04/15/04_1	7440-38-2	Arsenic	7.4		mg/kg
R46C51	1-1.5	04/15/04	Yes	1-R46C51_04/15/04_1	7439-92-1	Lead	26.2		mg/kg
R46C56	1-1.5	11/26/03	Yes	01-SS-[R46C56]-C2_11/26/03_1	7440-38-2	Arsenic	5.2		mg/kg
R46C56	1-1.5	11/26/03	Yes	01-SS-[R46C56]-C2_11/26/03_1	7439-92-1	Lead	5.9		mg/kg
R46C57	1-1.5	11/26/03	Yes	01-SS-[R46C57]-C2_AVG_11/26/03_1	7440-38-2	Arsenic	7.5		mg/kg
R46C57	1-1.5	11/26/03	Yes	01-SS-[R46C57]-C2_AVG_11/26/03_1	7439-92-1	Lead	18.0		mg/kg
R46C58	1-1.5	11/26/03	No	01-SS-[R46C58]-C2_11/26/03_1	7440-38-2	Arsenic	12.7		mg/kg
R46C58	2-2.5	02/06/04	Yes	2-R46C58_02/06/04_2	7439-92-1	Lead	13.3		mg/kg
R46C59	1-1.5	11/26/03	Yes	01-SS-[R46C59]-C2_11/26/03_1	7440-38-2	Arsenic	14.8		mg/kg
R46C59	1-1.5	11/26/03	Yes	01-SS-[R46C59]-C2_11/26/03_1	7439-92-1	Lead	8.3		mg/kg
R46C60	1-1.5	11/26/03	Yes	01-SS-[R46C60]-C2_11/26/03_1	7440-38-2	Arsenic	27.1		mg/kg
R46C60	1-1.5	11/26/03	Yes	01-SS-[R46C60]-C2_11/26/03_1	7439-92-1	Lead	23.0		mg/kg
R46C61	1-1.5	11/26/03	Yes	01-SS-[R46C61]-C2_11/26/03_1	7440-38-2	Arsenic	18.1		mg/kg
R46C61	1-1.5	11/26/03	Yes	01-SS-[R46C61]-C2_11/26/03_1	7439-92-1	Lead	35.1		mg/kg
R47C44	1-1.5	03/12/04	Yes	01-R47C44_03/12/04_1	7440-38-2	Arsenic	0.8	U	mg/kg
R47C44	1-1.5	03/12/04	Yes	01-R47C44_03/12/04_1	7439-92-1	Lead	4.9		mg/kg
R47C46	1-1.5	03/04/04	Yes	1-R47C46_03/04/04_1	7440-38-2	Arsenic	10.5		mg/kg
R47C46	1-1.5	03/04/04	Yes	1-R47C46_03/04/04_1	7439-92-1	Lead	8.4		mg/kg
R47C47	1-1.5	03/04/04	Yes	1-R47C47_03/04/04_1	7440-38-2	Arsenic	54.1		mg/kg
R47C47	1-1.5	03/04/04	Yes	1-R47C47_03/04/04_1	7439-92-1	Lead	19.4		mg/kg
R47C48	1-1.5	04/08/04	Yes	1-R47C48_04/08/04_1	7440-38-2	Arsenic	19.2		mg/kg
R47C48	1-1.5	04/08/04	Yes	1-R47C48_04/08/04_1	7439-92-1	Lead	19.5		mg/kg
R47C49	1-1.5	04/08/04	Yes	1-R47C49_AVG_04/08/04_1	7440-38-2	Arsenic	7.4		mg/kg
R47C49	1-1.5	04/08/04	Yes	1-R47C49_AVG_04/08/04_1	7439-92-1	Lead	9.3		mg/kg
R47C50	1-1.5	03/04/04	Yes	1-R47C50_03/04/04_1	7440-38-2	Arsenic	9.4		mg/kg
R47C50	1-1.5	03/04/04	Yes	1-R47C50_03/04/04_1	7439-92-1	Lead	7.0		mg/kg
R47C51	1-1.5	04/06/04	Yes	01-R47C51_04/06/04_1	7440-38-2	Arsenic	12.0		mg/kg
R47C51	1-1.5	04/06/04	Yes	01-R47C51_04/06/04_1	7439-92-1	Lead	47.8		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R47C52	1-1.5	04/06/04	Yes	01-R47C52_04/06/04_1	7440-38-2	Arsenic	6.5		mg/kg
R47C52	1-1.5	04/06/04	Yes	01-R47C52_04/06/04_1	7439-92-1	Lead	13.3		mg/kg
R47C53	1-1.5	04/06/04	Yes	01-R47C53_04/06/04_1	7440-38-2	Arsenic	8.9		mg/kg
R47C53	1-1.5	04/06/04	Yes	01-R47C53_04/06/04_1	7439-92-1	Lead	7.6		mg/kg
R47C54	1-1.5	03/03/04	Yes	01-R47C54_03/03/04_1	7440-38-2	Arsenic	8.7		mg/kg
R47C54	1-1.5	03/03/04	Yes	01-R47C54_03/03/04_1	7439-92-1	Lead	7.6		mg/kg
R47C55	1-1.5	03/03/04	Yes	01-R47C55_03/03/04_1	7440-38-2	Arsenic	13.1		mg/kg
R47C55	1-1.5	03/03/04	Yes	01-R47C55_03/03/04_1	7439-92-1	Lead	19.9		mg/kg
R47C58	1-1.5	11/26/03	Yes	01-SS-[R47C58]-C2_11/26/03_1	7440-38-2	Arsenic	7.2		mg/kg
R47C58	1-1.5	11/26/03	Yes	01-SS-[R47C58]-C2_11/26/03_1	7439-92-1	Lead	30.7		mg/kg
R47C59	1-1.5	04/27/04	Yes	1-R47C59_04/27/04_1	7440-38-2	Arsenic	18.9		mg/kg
R47C59	1-1.5	04/27/04	Yes	1-R47C59_04/27/04_1	7439-92-1	Lead	2.2	U	mg/kg
R47C60	1-1.5	04/27/04	No	1-R47C60_04/27/04_1	7439-92-1	Lead	15.7		mg/kg
R47C60	2-2.5	05/07/04	Yes	2-R47C60_05/07/04_2	7440-38-2	Arsenic	4.4		mg/kg
R47C61	1-1.5	11/26/03	Yes	01-SS-[R47C61]-C2_11/26/03_1	7440-38-2	Arsenic	21.2		mg/kg
R47C61	1-1.5	11/26/03	Yes	01-SS-[R47C61]-C2_11/26/03_1	7439-92-1	Lead	22.2		mg/kg
R48C44	1-1.5	03/12/04	Yes	01-R48C44_03/12/04_1	7440-38-2	Arsenic	0.9	U	mg/kg
R48C44	1-1.5	03/12/04	Yes	01-R48C44_03/12/04_1	7439-92-1	Lead	5.3		mg/kg
R48C46	1-1.5	01/23/04	Yes	01-SS-[R48C46]-C2_01/23/04_1	7440-38-2	Arsenic	23.7		mg/kg
R48C46	1-1.5	01/23/04	Yes	01-SS-[R48C46]-C2_01/23/04_1	7439-92-1	Lead	17.8		mg/kg
R48C46	1-1.5	03/04/04	Yes	1-R48C46_03/04/04_1	7440-38-2	Arsenic	10.6		mg/kg
R48C46	1-1.5	03/04/04	Yes	1-R48C46_03/04/04_1	7439-92-1	Lead	7.6		mg/kg
R48C47	1-1.5	03/04/04	Yes	1-R48C47_AVG_03/04/04_1	7440-38-2	Arsenic	6.8		mg/kg
R48C47	1-1.5	03/04/04	Yes	1-R48C47_AVG_03/04/04_1	7439-92-1	Lead	5.1		mg/kg
R48C48	1-1.5	03/04/04	Yes	1-R48C48_03/04/04_1	7440-38-2	Arsenic	10.0		mg/kg
R48C48	1-1.5	03/04/04	Yes	1-R48C48_03/04/04_1	7439-92-1	Lead	7.8		mg/kg
R48C49	1-1.5	03/04/04	Yes	1-R48C49_03/04/04_1	7440-38-2	Arsenic	20.4		mg/kg
R48C49	1-1.5	03/04/04	Yes	1-R48C49_03/04/04_1	7439-92-1	Lead	19.4		mg/kg
R48C50	1-1.5	03/04/04	Yes	1-R48C50_03/04/04_1	7440-38-2	Arsenic	10.7		mg/kg
R48C50	1-1.5	03/04/04	Yes	1-R48C50_03/04/04_1	7439-92-1	Lead	10.7		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R48C51	1-1.5	03/04/04	Yes	1-R48C51_03/04/04_1	7440-38-2	Arsenic	10.4		mg/kg
R48C51	1-1.5	03/04/04	Yes	1-R48C51_03/04/04_1	7439-92-1	Lead	8.6		mg/kg
R48C52	1-1.5	04/06/04	Yes	01-R48C52_04/06/04_1	7440-38-2	Arsenic	9.5		mg/kg
R48C52	1-1.5	04/06/04	Yes	01-R48C52_04/06/04_1	7439-92-1	Lead	10.2		mg/kg
R48C53	1-1.5	04/06/04	Yes	01-R48C53_04/06/04_1	7440-38-2	Arsenic	9.6		mg/kg
R48C53	1-1.5	04/06/04	Yes	01-R48C53_04/06/04_1	7439-92-1	Lead	21.5		mg/kg
R48C54	1-1.5	04/06/04	Yes	01-R48C54_04/06/04_1	7440-38-2	Arsenic	9.6		mg/kg
R48C54	1-1.5	04/06/04	Yes	01-R48C54_04/06/04_1	7439-92-1	Lead	12.2		mg/kg
R48C55	1-1.5	04/06/04	Yes	01-R48C55_04/06/04_1	7440-38-2	Arsenic	31.0		mg/kg
R48C55	1-1.5	04/06/04	Yes	01-R48C55_04/06/04_1	7439-92-1	Lead	47.2		mg/kg
R48C56	1-1.5	03/03/04	Yes	01-R48C56_03/03/04_1	7440-38-2	Arsenic	15.0		mg/kg
R48C56	1-1.5	03/03/04	Yes	01-R48C56_03/03/04_1	7439-92-1	Lead	21.0		mg/kg
R48C57	1-1.5	03/03/04	Yes	01-R48C57_03/03/04_1	7440-38-2	Arsenic	5.5		mg/kg
R48C57	1-1.5	03/03/04	Yes	01-R48C57_03/03/04_1	7439-92-1	Lead	7.0		mg/kg
R48C58	1-1.5	03/03/04	Yes	01-R48C58_03/03/04_1	7440-38-2	Arsenic	7.5		mg/kg
R48C58	1-1.5	03/03/04	Yes	01-R48C58_03/03/04_1	7439-92-1	Lead	5.4		mg/kg
R48C60	1-1.5	04/27/04	Yes	1-R48C60_04/27/04_1	7440-38-2	Arsenic	11.6		mg/kg
R48C60	1-1.5	04/27/04	Yes	1-R48C60_04/27/04_1	7439-92-1	Lead	2.9		mg/kg
R48C61	1-1.5	04/27/04	Yes	1-R48C61_04/27/04_1	7440-38-2	Arsenic	25.9		mg/kg
R48C61	1-1.5	04/27/04	Yes	1-R48C61_04/27/04_1	7439-92-1	Lead	10.3		mg/kg
R49C44	1-1.5	03/12/04	Yes	01-R49C44_03/12/04_1	7440-38-2	Arsenic	1.5		mg/kg
R49C44	1-1.5	03/12/04	Yes	01-R49C44_03/12/04_1	7439-92-1	Lead	7.1		mg/kg
R49C46	1-1.5	03/04/04	Yes	1-R49C46_03/04/04_1	7440-38-2	Arsenic	14.6		mg/kg
R49C46	1-1.5	03/04/04	Yes	1-R49C46_03/04/04_1	7439-92-1	Lead	7.6		mg/kg
R49C47	1-1.5	03/04/04	Yes	1-R49C47_03/04/04_1	7440-38-2	Arsenic	16.1		mg/kg
R49C47	1-1.5	03/04/04	Yes	1-R49C47_03/04/04_1	7439-92-1	Lead	8.8		mg/kg
R49C48	1-1.5	03/04/04	Yes	1-R49C48_03/04/04_1	7440-38-2	Arsenic	12.8		mg/kg
R49C48	1-1.5	03/04/04	Yes	1-R49C48_03/04/04_1	7439-92-1	Lead	10.8		mg/kg
R49C49	1-1.5	03/04/04	Yes	1-R49C49_03/04/04_1	7440-38-2	Arsenic	10.2		mg/kg
R49C49	1-1.5	03/04/04	Yes	1-R49C49_03/04/04_1	7439-92-1	Lead	8.3		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R49C50	1-1.5	03/04/04	Yes	1-R49C50_03/04/04_1	7440-38-2	Arsenic	9.4		mg/kg
R49C50	1-1.5	03/04/04	Yes	1-R49C50_03/04/04_1	7439-92-1	Lead	7.4		mg/kg
R49C51	1-1.5	03/04/04	Yes	1-R49C51_03/04/04_1	7440-38-2	Arsenic	17.8		mg/kg
R49C51	1-1.5	03/04/04	Yes	1-R49C51_03/04/04_1	7439-92-1	Lead	8.1		mg/kg
R49C52	1-1.5	04/06/04	Yes	01-R49C52_AVG_04/06/04_1	7440-38-2	Arsenic	12.6		mg/kg
R49C52	1-1.5	04/06/04	Yes	01-R49C52_AVG_04/06/04_1	7439-92-1	Lead	13.3		mg/kg
R49C53	1-1.5	04/06/04	Yes	01-R49C53_04/06/04_1	7440-38-2	Arsenic	11.3		mg/kg
R49C53	1-1.5	04/06/04	Yes	01-R49C53_04/06/04_1	7439-92-1	Lead	12.0		mg/kg
R49C54	1-1.5	04/06/04	Yes	01-R49C54_04/06/04_1	7440-38-2	Arsenic	15.0		mg/kg
R49C54	1-1.5	04/06/04	Yes	01-R49C54_04/06/04_1	7439-92-1	Lead	23.8		mg/kg
R49C55	1-1.5	04/06/04	Yes	01-R49C55_04/06/04_1	7440-38-2	Arsenic	9.9		mg/kg
R49C55	1-1.5	04/06/04	Yes	01-R49C55_04/06/04_1	7439-92-1	Lead	13.8		mg/kg
R49C56	1-1.5	04/06/04	Yes	01-R49C56_04/06/04_1	7440-38-2	Arsenic	9.9		mg/kg
R49C56	1-1.5	04/06/04	Yes	01-R49C56_04/06/04_1	7439-92-1	Lead	11.3		mg/kg
R49C57	1-1.5	04/06/04	Yes	01-R49C57_04/06/04_1	7440-38-2	Arsenic	13.4		mg/kg
R49C57	1-1.5	04/06/04	Yes	01-R49C57_04/06/04_1	7439-92-1	Lead	18.1		mg/kg
R49C58	1-1.5	03/03/04	Yes	01-R49C58_03/03/04_1	7440-38-2	Arsenic	15.6		mg/kg
R49C58	1-1.5	03/03/04	Yes	01-R49C58_03/03/04_1	7439-92-1	Lead	13.1		mg/kg
R49C59	1-1.5	03/03/04	Yes	01-R49C59_03/03/04_1	7440-38-2	Arsenic	17.5		mg/kg
R49C59	1-1.5	03/03/04	Yes	01-R49C59_03/03/04_1	7439-92-1	Lead	18.6		mg/kg
R49C62	1-1.5	04/27/04	Yes	1-R49C62_04/27/04_1	7440-38-2	Arsenic	12.5		mg/kg
R49C62	1-1.5	04/27/04	Yes	1-R49C62_04/27/04_1	7439-92-1	Lead	12.7		mg/kg
R50C50	1-1.5	03/04/04	Yes	1-R50C50_03/04/04_1	7440-38-2	Arsenic	9.1		mg/kg
R50C50	1-1.5	03/04/04	Yes	1-R50C50_03/04/04_1	7439-92-1	Lead	4.7		mg/kg
R50C51	1-1.5	03/04/04	Yes	01-R50C51_AVG_03/04/04_1	7440-38-2	Arsenic	32.0		mg/kg
R50C51	1-1.5	03/04/04	Yes	01-R50C51_AVG_03/04/04_1	7439-92-1	Lead	5.9		mg/kg
R50C52	1-1.5	03/04/04	Yes	1-R50C52_03/04/04_1	7440-38-2	Arsenic	14.4		mg/kg
R50C52	1-1.5	03/04/04	Yes	1-R50C52_03/04/04_1	7439-92-1	Lead	4.4		mg/kg
R50C53	1-1.5	10/22/03	Yes	01-SS-[R50C53]-C2_10/22/03_1	7440-38-2	Arsenic	5.1		mg/kg
R50C53	1-1.5	10/22/03	Yes	01-SS-[R50C53]-C2_10/22/03_1	7439-92-1	Lead	9.4		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R50C54	1-1.5	10/22/03	Yes	01-SS-[R50C54]-C2_10/22/03_1	7440-38-2	Arsenic	17.4		mg/kg
R50C54	1-1.5	10/22/03	Yes	01-SS-[R50C54]-C2_10/22/03_1	7439-92-1	Lead	27.4		mg/kg
R50C55	1-1.5	04/06/04	Yes	01-R50C55_04/06/04_1	7440-38-2	Arsenic	17.1		mg/kg
R50C55	1-1.5	04/06/04	Yes	01-R50C55_04/06/04_1	7439-92-1	Lead	20.4		mg/kg
R50C56	1-1.5	04/06/04	Yes	01-R50C56_04/06/04_1	7440-38-2	Arsenic	8.4		mg/kg
R50C56	1-1.5	04/06/04	Yes	01-R50C56_04/06/04_1	7439-92-1	Lead	8.8		mg/kg
R50C57	1-1.5	04/06/04	Yes	01-R50C57_AVG_04/06/04_1	7440-38-2	Arsenic	8.9		mg/kg
R50C57	1-1.5	04/06/04	Yes	01-R50C57_AVG_04/06/04_1	7439-92-1	Lead	16.8		mg/kg
R50C58	1-1.5	04/06/04	Yes	01-R50C58_04/06/04_1	7440-38-2	Arsenic	17.3		mg/kg
R50C58	1-1.5	04/06/04	Yes	01-R50C58_04/06/04_1	7439-92-1	Lead	23.3		mg/kg
R50C59	1-1.5	05/06/04	Yes	01-R50C59_05/06/04_1	7440-38-2	Arsenic	12.3		mg/kg
R50C59	1-1.5	05/06/04	Yes	01-R50C59_05/06/04_1	7439-92-1	Lead	11.4		mg/kg
R50C60	1-1.5	03/03/04	Yes	01-R50C60_03/03/04_1	7440-38-2	Arsenic	10.2		mg/kg
R50C60	1-1.5	03/03/04	Yes	01-R50C60_03/03/04_1	7439-92-1	Lead	15.9		mg/kg
R50C61	1-1.5	03/12/04	Yes	01-R50C61_03/12/04_1	7440-38-2	Arsenic	2.5		mg/kg
R50C61	1-1.5	03/12/04	Yes	01-R50C61_03/12/04_1	7439-92-1	Lead	11.1		mg/kg
R51C54	1-1.5	10/22/03	Yes	01-SS-[R51C54]-C2_10/22/03_1	7440-38-2	Arsenic	4.0		mg/kg
R51C54	1-1.5	10/22/03	Yes	01-SS-[R51C54]-C2_10/22/03_1	7439-92-1	Lead	7.9		mg/kg
R51C55	1-1.5	04/06/04	Yes	01-R51C55_04/06/04_1	7440-38-2	Arsenic	8.3		mg/kg
R51C55	1-1.5	04/06/04	Yes	01-R51C55_04/06/04_1	7439-92-1	Lead	6.6		mg/kg
R51C56	1-1.5	04/06/04	Yes	01-R51C56_04/06/04_1	7440-38-2	Arsenic	12.4		mg/kg
R51C56	1-1.5	04/06/04	Yes	01-R51C56_04/06/04_1	7439-92-1	Lead	13.0		mg/kg
R51C57	1-1.5	04/06/04	Yes	01-R51C57_04/06/04_1	7440-38-2	Arsenic	10.0		mg/kg
R51C57	1-1.5	04/06/04	Yes	01-R51C57_04/06/04_1	7439-92-1	Lead	9.4		mg/kg
R51C58	1-1.5	04/06/04	Yes	01-R51C58_04/06/04_1	7440-38-2	Arsenic	8.9		mg/kg
R51C58	1-1.5	04/06/04	Yes	01-R51C58_04/06/04_1	7439-92-1	Lead	9.1		mg/kg
R51C59	1-1.5	04/06/04	Yes	01-R51C59_04/06/04_1	7440-38-2	Arsenic	9.2		mg/kg
R51C59	1-1.5	04/06/04	Yes	01-R51C59_04/06/04_1	7439-92-1	Lead	17.1		mg/kg
R51C60	1-1.5	04/06/04	Yes	01-R51C60_04/06/04_1	7440-38-2	Arsenic	12.5		mg/kg
R51C60	1-1.5	04/06/04	Yes	01-R51C60_04/06/04_1	7439-92-1	Lead	12.3		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R51C61	1-1.5	04/06/04	Yes	01-R51C61_04/06/04_1	7440-38-2	Arsenic	15.4		mg/kg
R51C61	1-1.5	04/06/04	Yes	01-R51C61_04/06/04_1	7439-92-1	Lead	8.8		mg/kg
R51C62	1-1.5	03/12/04	Yes	01-R51C62_03/12/04_1	7440-38-2	Arsenic	4.2		mg/kg
R51C62	1-1.5	03/12/04	Yes	01-R51C62_03/12/04_1	7439-92-1	Lead	14.9		mg/kg
R52C59	1-1.5	04/06/04	Yes	01-R52C59_04/06/04_1	7440-38-2	Arsenic	8.8		mg/kg
R52C59	1-1.5	04/06/04	Yes	01-R52C59_04/06/04_1	7439-92-1	Lead	7.9		mg/kg
R52C60	1-1.5	04/06/04	Yes	01-R52C60_04/06/04_1	7440-38-2	Arsenic	10.3		mg/kg
R52C60	1-1.5	04/06/04	Yes	01-R52C60_04/06/04_1	7439-92-1	Lead	7.4		mg/kg
R52C61	1-1.5	04/06/04	Yes	01-R52C61_04/06/04_1	7440-38-2	Arsenic	35.2		mg/kg
R52C61	1-1.5	04/06/04	Yes	01-R52C61_04/06/04_1	7439-92-1	Lead	26.7		mg/kg
RR-521-S-3	1-2	12/14/93	Yes	RR-521-S-3	7440-38-2	Arsenic	3.3	J	mg/kg
SA2-39-70	2.5-3	10/14/99	Yes	SA2-39-70	7440-38-2	Arsenic	2.1	U	mg/kg
SA2-39-70	2.5-3	10/14/99	Yes	SA2-39-70	7439-92-1	Lead	2.5		mg/kg
SA2-39-71	2.5-3	10/14/99	Yes	SA2-39-71	7440-38-2	Arsenic	1.8	U	mg/kg
SA2-39-71	2.5-3	10/14/99	Yes	SA2-39-71	7439-92-1	Lead	1.6		mg/kg
SA2-40-69	2.5-3	10/14/99	Yes	SA2-40-69	7440-38-2	Arsenic	2.6		mg/kg
SA2-40-69	2.5-3	10/14/99	Yes	SA2-40-69	7439-92-1	Lead	4.5		mg/kg
SA2-40-70	2.5-3	10/14/99	Yes	SA2-40-70	7440-38-2	Arsenic	3.5		mg/kg
SA2-40-70	2.5-3	10/14/99	Yes	SA2-40-70	7439-92-1	Lead	1.9		mg/kg
SA2-40-71	2.5-3	10/14/99	Yes	SA2-40-71	7440-38-2	Arsenic	2.0	U	mg/kg
SA2-40-71	2.5-3	10/14/99	Yes	SA2-40-71	7439-92-1	Lead	1.6		mg/kg
SA2-40-72	2.5-3	10/14/99	Yes	SA2-40-72	7440-38-2	Arsenic	2.0	U	mg/kg
SA2-40-72	2.5-3	10/14/99	Yes	SA2-40-72	7439-92-1	Lead	1.0		mg/kg
SA2-41-68	2.5-3	10/14/99	Yes	SA2-41-68	7440-38-2	Arsenic	2.4		mg/kg
SA2-41-68	2.5-3	10/14/99	Yes	SA2-41-68	7439-92-1	Lead	5.8		mg/kg
SA2-41-69	2.5-3	10/14/99	Yes	SA2-41-69	7440-38-2	Arsenic	2.1	U	mg/kg
SA2-41-69	2.5-3	10/14/99	Yes	SA2-41-69	7439-92-1	Lead	4.9		mg/kg
SA2-41-70	2.5-3	10/14/99	Yes	SA2-41-70	7440-38-2	Arsenic	2.1	U	mg/kg
SA2-41-70	2.5-3	10/14/99	Yes	SA2-41-70	7439-92-1	Lead	1.9		mg/kg
SA2-41-71	2.5-3	10/14/99	Yes	SA2-41-71	7440-38-2	Arsenic	2.0	U	mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA2-41-71	2.5-3	10/14/99	Yes	SA2-41-71	7439-92-1	Lead	2.2		mg/kg
SA2-41-72	2.5-3	10/14/99	Yes	SA2-41-72	7440-38-2	Arsenic	1.9	U	mg/kg
SA2-41-72	2.5-3	10/14/99	Yes	SA2-41-72	7439-92-1	Lead	1.6		mg/kg
SA2-42-68	2.5-3	10/14/99	Yes	SA2-42-68	7440-38-2	Arsenic	2.2	U	mg/kg
SA2-42-68	2.5-3	10/14/99	Yes	SA2-42-68	7439-92-1	Lead	3.9		mg/kg
SA2-42-69	2.5-3	10/14/99	Yes	SA2-42-69	7440-38-2	Arsenic	3.1		mg/kg
SA2-42-69	2.5-3	10/14/99	Yes	SA2-42-69	7439-92-1	Lead	5.6		mg/kg
SA2-42-70	2.5-3	10/14/99	Yes	SA2-42-70	7440-38-2	Arsenic	2.0	U	mg/kg
SA2-42-70	2.5-3	10/14/99	Yes	SA2-42-70	7439-92-1	Lead	2.9		mg/kg
SA2-42-71	2.5-3	10/14/99	Yes	SA2-42-71	7440-38-2	Arsenic	2.0	U	mg/kg
SA2-42-71	2.5-3	10/14/99	Yes	SA2-42-71	7439-92-1	Lead	2.2		mg/kg
SA2-42-72	2.5-3	10/14/99	Yes	SA2-42-72	7440-38-2	Arsenic	2.2	U	mg/kg
SA2-42-72	2.5-3	10/14/99	Yes	SA2-42-72	7439-92-1	Lead	1.2		mg/kg
SA2-43-67	2.5-3	10/14/99	Yes	SA2-43-67	7440-38-2	Arsenic	3.4		mg/kg
SA2-43-67	2.5-3	10/14/99	Yes	SA2-43-67	7439-92-1	Lead	12.0		mg/kg
SA2-43-68	2.5-3	10/14/99	Yes	SA2-43-68	7440-38-2	Arsenic	2.9		mg/kg
SA2-43-68	2.5-3	10/14/99	Yes	SA2-43-68	7439-92-1	Lead	14.0		mg/kg
SA2-43-69	2.5-3	10/14/99	Yes	SA2-43-69	7440-38-2	Arsenic	3.7		mg/kg
SA2-43-69	2.5-3	10/14/99	Yes	SA2-43-69	7439-92-1	Lead	4.0		mg/kg
SA2-43-70	2.5-3	10/14/99	Yes	SA2-43-70	7440-38-2	Arsenic	4.2		mg/kg
SA2-43-70	2.5-3	10/14/99	Yes	SA2-43-70	7439-92-1	Lead	8.7		mg/kg
SA2-43-71	2.5-3	10/14/99	Yes	SA2-43-71	7440-38-2	Arsenic	2.5		mg/kg
SA2-43-71	2.5-3	10/14/99	Yes	SA2-43-71	7439-92-1	Lead	3.7		mg/kg
SA2-43-72	2.5-3	10/14/99	Yes	SA2-43-72	7440-38-2	Arsenic	2.1	U	mg/kg
SA2-43-72	2.5-3	10/14/99	Yes	SA2-43-72	7439-92-1	Lead	1.7		mg/kg
SA2-44-67	2.5-3	10/14/99	Yes	SA2-44-67	7440-38-2	Arsenic	3.5		mg/kg
SA2-44-67	2.5-3	10/14/99	Yes	SA2-44-67	7439-92-1	Lead	8.8		mg/kg
SA2-44-68	2.5-3	10/14/99	Yes	SA2-44-68	7440-38-2	Arsenic	5.7		mg/kg
SA2-44-68	2.5-3	10/14/99	Yes	SA2-44-68	7439-92-1	Lead	13.0		mg/kg
SA2-44-69	2.5-3	10/14/99	Yes	SA2-44-69	7440-38-2	Arsenic	2.4		mg/kg

Table B.5
Sample Results for CM-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA2-44-69	2.5-3	10/14/99	Yes	SA2-44-69	7439-92-1	Lead	0.9	U	mg/kg
T337	0-0.5	04/17/03	Yes	01-SS-[T337]-C1_04/17/03_0	7439-92-1	Lead	73.3		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
6-TP-501	3-6	04/20/92	Yes	6-TP-501-S-2	7440-38-2	Arsenic	3.6		mg/kg
6-TP-501	3-6	04/20/92	Yes	6-TP-501-S-2	7440-50-8	Copper	18.0		mg/kg
6-TP-501	3-6	04/20/92	Yes	6-TP-501-S-2	7439-92-1	Lead	39.0		mg/kg
6-TP-501	3-6	04/20/92	Yes	6-TP-501-S-2	7439-97-6	Mercury	0.07	U	mg/kg
6-TP-501	8-10	04/20/92	Yes	6-TP-501-S-3	7440-38-2	Arsenic	1.8		mg/kg
6-TP-501	8-10	04/20/92	Yes	6-TP-501-S-3	7440-50-8	Copper	13.0		mg/kg
6-TP-501	8-10	04/20/92	Yes	6-TP-501-S-3	7439-92-1	Lead	16.0		mg/kg
6-TP-501	8-10	04/20/92	Yes	6-TP-501-S-3	7439-97-6	Mercury	0.09	U	mg/kg
6-TP-502	0-1	04/20/92	Yes	6-TP-502-S-1	7440-38-2	Arsenic	1.6		mg/kg
6-TP-502	0-1	04/20/92	Yes	6-TP-502-S-1	7440-50-8	Copper	14.0		mg/kg
6-TP-502	0-1	04/20/92	Yes	6-TP-502-S-1	7439-92-1	Lead	12.0		mg/kg
6-TP-502	0-1	04/20/92	Yes	6-TP-502-S-1	7439-97-6	Mercury	0.08	U	mg/kg
6-TP-502	3-6	04/20/92	Yes	6-TP-502-S-2	7440-38-2	Arsenic	1.2		mg/kg
6-TP-502	3-6	04/20/92	Yes	6-TP-502-S-2	7440-50-8	Copper	13.0		mg/kg
6-TP-502	3-6	04/20/92	Yes	6-TP-502-S-2	7439-92-1	Lead	5.3	U	mg/kg
6-TP-502	3-6	04/20/92	Yes	6-TP-502-S-2	7439-97-6	Mercury	0.08	U	mg/kg
6-TP-502	8-10	04/20/92	Yes	6-TP-502-S-3	7440-38-2	Arsenic	1.5		mg/kg
6-TP-502	8-10	04/20/92	Yes	6-TP-502-S-3	7440-50-8	Copper	15.0		mg/kg
6-TP-502	8-10	04/20/92	Yes	6-TP-502-S-3	7439-92-1	Lead	20.0		mg/kg
6-TP-502	8-10	04/20/92	Yes	6-TP-502-S-3	7439-97-6	Mercury	0.09	U	mg/kg
F-211	2-2.5	08/06/01	Yes	01-F16-SS[F-211]C2-005	7440-38-2	Arsenic	3.8		mg/kg
F-211	2-2.5	08/06/01	Yes	01-F16-SS[F-211]C2-005	7439-92-1	Lead	20.0		mg/kg
F-212	2-2.5	08/06/01	Yes	01-F16-SS[F-212]C2-005	7440-38-2	Arsenic	5.0		mg/kg
F-212	2-2.5	08/06/01	Yes	01-F16-SS[F-212]C2-005	7439-92-1	Lead	40.0		mg/kg
F-213	2-2.5	08/06/01	Yes	01-F16-SS[F-213]C2-005	7440-38-2	Arsenic	4.7		mg/kg
F-213	2-2.5	08/06/01	Yes	01-F16-SS[F-213]C2-005	7439-92-1	Lead	35.0		mg/kg
F-214	2-2.5	08/06/01	Yes	01-F16-SS[F-214]C2-005	7440-38-2	Arsenic	3.5		mg/kg
F-214	2-2.5	08/06/01	Yes	01-F16-SS[F-214]C2-005	7439-92-1	Lead	20.0		mg/kg
F-215	2-2.5	08/06/01	Yes	01-F16-SS[F-215]C2-005	7440-38-2	Arsenic	4.2		mg/kg
F-215	2-2.5	08/06/01	Yes	01-F16-SS[F-215]C2-005	7439-92-1	Lead	45.0		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-216	2-2.5	08/06/01	Yes	01-F16-SS[F-216]C2-005	7440-38-2	Arsenic	25.0		mg/kg
F-216	2-2.5	08/06/01	Yes	01-F16-SS[F-216]C2-005	7439-92-1	Lead	69.0		mg/kg
F-217	2-2.5	08/06/01	Yes	01-F16-SS[F-217]C2-005	7440-38-2	Arsenic	33.0		mg/kg
F-217	2-2.5	08/06/01	Yes	01-F16-SS[F-217]C2-005	7439-92-1	Lead	60.0		mg/kg
F-218	2-2.5	08/06/01	Yes	01-F16-SS[F-218]C2-005	7440-38-2	Arsenic	7.9		mg/kg
F-218	2-2.5	08/06/01	Yes	01-F16-SS[F-218]C2-005	7439-92-1	Lead	49.0		mg/kg
MSU-F-3-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-2]-C1_05/27/03_2	7440-38-2	Arsenic	5.3		mg/kg
MSU-F-3-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-2]-C1_05/27/03_2	7439-92-1	Lead	17.3		mg/kg
MSU-F-3-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-3]-C1_05/27/03_2	7440-38-2	Arsenic	4.1		mg/kg
MSU-F-3-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-3]-C1_05/27/03_2	7439-92-1	Lead	3.9		mg/kg
MSU-F-3-5	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-5]-C1_05/27/03_2	7440-38-2	Arsenic	3.9		mg/kg
MSU-F-3-5	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-5]-C1_05/27/03_2	7439-92-1	Lead	3.0		mg/kg
MSU-F-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-1]-C1_05/27/03_2	7440-38-2	Arsenic	2.7		mg/kg
MSU-F-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-1]-C1_05/27/03_2	7439-92-1	Lead	4.0		mg/kg
NGRR-178	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-178]C2-005	7440-38-2	Arsenic	3.5		mg/kg
NGRR-178	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-178]C2-005	7439-92-1	Lead	37.0		mg/kg
NGRR-180	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-180]C2-005	7440-38-2	Arsenic	18.0		mg/kg
NGRR-180	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-180]C2-005	7439-92-1	Lead	9.9		mg/kg
NGRR-181	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-181]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-181	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-181]C2-005	7439-92-1	Lead	7.6		mg/kg
NGRR-182	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-182]C2-005	7440-38-2	Arsenic	23.0		mg/kg
NGRR-182	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-182]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-183	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-183]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-183	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-183]C2-005	7439-92-1	Lead	13.0		mg/kg
NGRR-184	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-184]C2-005	7440-38-2	Arsenic	5.2		mg/kg
NGRR-184	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-184]C2-005	7439-92-1	Lead	13.0		mg/kg
NGRR-185	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-185]C2-005	7440-38-2	Arsenic	4.7		mg/kg
NGRR-185	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-185]C2-005	7439-92-1	Lead	5.7		mg/kg
NGRR-186	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-186]C2-005	7440-38-2	Arsenic	6.2		mg/kg
NGRR-186	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-186]C2-005	7439-92-1	Lead	8.0		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-187	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-187]C2-005-DAVG	7440-38-2	Arsenic	37.5		mg/kg
NGRR-187	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-187]C2-005-DAVG	7439-92-1	Lead	11.5		mg/kg
NGRR-189	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-189]C2-005	7440-38-2	Arsenic	26.0		mg/kg
NGRR-189	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-189]C2-005	7439-92-1	Lead	21.0		mg/kg
R17C54	1-1.5	12/18/03	Yes	01-SS-[R17C54]-C2_12/18/03_1	7440-38-2	Arsenic	6.5		mg/kg
R17C54	1-1.5	12/18/03	Yes	01-SS-[R17C54]-C2_12/18/03_1	7439-92-1	Lead	62.9		mg/kg
R18C54	1-1.5	12/18/03	Yes	01-SS-[R18C54]-C2_12/18/03_1	7440-38-2	Arsenic	3.4		mg/kg
R18C54	1-1.5	12/18/03	Yes	01-SS-[R18C54]-C2_12/18/03_1	7439-92-1	Lead	14.8		mg/kg
R18C55	1-1.5	12/18/03	Yes	01-SS-[R18C55]-C2_12/18/03_1	7440-38-2	Arsenic	3.5		mg/kg
R18C55	1-1.5	12/18/03	Yes	01-SS-[R18C55]-C2_12/18/03_1	7439-92-1	Lead	2.8		mg/kg
R19C53	1-1.5	12/18/03	Yes	01-SS-[R19C53]-C2_AVG_12/18/03_1	7440-38-2	Arsenic	6.5		mg/kg
R19C53	1-1.5	12/18/03	Yes	01-SS-[R19C53]-C2_AVG_12/18/03_1	7439-92-1	Lead	52.0		mg/kg
R19C54	1-1.5	12/18/03	Yes	01-SS-[R19C54]-C2_12/18/03_1	7440-38-2	Arsenic	4.9		mg/kg
R19C54	1-1.5	12/18/03	Yes	01-SS-[R19C54]-C2_12/18/03_1	7439-92-1	Lead	15.1		mg/kg
R19C55	1-1.5	12/18/03	Yes	01-SS-[R19C55]-C2_12/18/03_1	7440-38-2	Arsenic	4.6		mg/kg
R19C55	1-1.5	12/18/03	Yes	01-SS-[R19C55]-C2_12/18/03_1	7439-92-1	Lead	5.1		mg/kg
R19C56	1-1.5	12/18/03	Yes	01-SS-[R19C56]-C2_12/18/03_1	7440-38-2	Arsenic	7.7		mg/kg
R19C56	1-1.5	12/18/03	Yes	01-SS-[R19C56]-C2_12/18/03_1	7439-92-1	Lead	12.0		mg/kg
R19C57	1-1.5	12/18/03	Yes	01-SS-[R19C57]-C2_12/18/03_1	7440-38-2	Arsenic	11.6		mg/kg
R19C57	1-1.5	12/18/03	Yes	01-SS-[R19C57]-C2_12/18/03_1	7439-92-1	Lead	11.1		mg/kg
R20C53	1-1.5	12/18/03	Yes	01-SS-[R20C53]-C2_12/18/03_1	7440-38-2	Arsenic	5.2		mg/kg
R20C53	1-1.5	12/18/03	Yes	01-SS-[R20C53]-C2_12/18/03_1	7439-92-1	Lead	4.5		mg/kg
R20C54	1-1.5	12/18/03	Yes	01-SS-[R20C54]-C2_12/18/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R20C54	1-1.5	12/18/03	Yes	01-SS-[R20C54]-C2_12/18/03_1	7439-92-1	Lead	3.5		mg/kg
R20C55	1-1.5	12/18/03	Yes	01-SS-[R20C55]-C2_12/18/03_1	7440-38-2	Arsenic	3.1		mg/kg
R20C55	1-1.5	12/18/03	Yes	01-SS-[R20C55]-C2_12/18/03_1	7439-92-1	Lead	3.3		mg/kg
R20C56	1-1.5	12/18/03	Yes	01-SS-[R20C56]-C2_12/18/03_1	7440-38-2	Arsenic	2.2		mg/kg
R20C56	1-1.5	12/18/03	Yes	01-SS-[R20C56]-C2_12/18/03_1	7439-92-1	Lead	4.0		mg/kg
R20C57	1-1.5	12/18/03	Yes	01-SS-[R20C57]-C2_12/18/03_1	7440-38-2	Arsenic	6.9		mg/kg
R20C57	1-1.5	12/18/03	Yes	01-SS-[R20C57]-C2_12/18/03_1	7439-92-1	Lead	5.7		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R20C58	1-1.5	12/18/03	Yes	01-SS-[R20C58]-C2_12/18/03_1	7440-38-2	Arsenic	5.3		mg/kg
R20C58	1-1.5	12/18/03	Yes	01-SS-[R20C58]-C2_12/18/03_1	7439-92-1	Lead	6.0		mg/kg
R21C54	1-1.5	12/18/03	Yes	01-SS-[R21C54]-C2_12/18/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
R21C54	1-1.5	12/18/03	Yes	01-SS-[R21C54]-C2_12/18/03_1	7439-92-1	Lead	3.9		mg/kg
R21C55	1-1.5	12/18/03	Yes	01-SS-[R21C55]-C2_12/18/03_1	7440-38-2	Arsenic	3.8		mg/kg
R21C55	1-1.5	12/18/03	Yes	01-SS-[R21C55]-C2_12/18/03_1	7439-92-1	Lead	4.6		mg/kg
R21C56	1-1.5	12/18/03	Yes	01-SS-[R21C56]-C2_AVG_12/18/03_1	7440-38-2	Arsenic	4.4		mg/kg
R21C56	1-1.5	12/18/03	Yes	01-SS-[R21C56]-C2_AVG_12/18/03_1	7439-92-1	Lead	5.0		mg/kg
R21C57	1-1.5	12/18/03	Yes	01-SS-[R21C57]-C2_12/18/03_1	7440-38-2	Arsenic	4.0		mg/kg
R21C57	1-1.5	12/18/03	Yes	01-SS-[R21C57]-C2_12/18/03_1	7439-92-1	Lead	4.5		mg/kg
R21C58	1-1.5	12/18/03	Yes	01-SS-[R21C58]-C2_12/18/03_1	7440-38-2	Arsenic	2.2		mg/kg
R21C58	1-1.5	12/18/03	Yes	01-SS-[R21C58]-C2_12/18/03_1	7439-92-1	Lead	3.4		mg/kg
R22C53	1-1.5	12/18/03	Yes	01-SS-[R22C53]-C2_12/18/03_1	7440-38-2	Arsenic	4.1		mg/kg
R22C53	1-1.5	12/18/03	Yes	01-SS-[R22C53]-C2_12/18/03_1	7439-92-1	Lead	11.7		mg/kg
R22C54	1-1.5	12/18/03	Yes	01-SS-[R22C54]-C2_12/18/03_1	7440-38-2	Arsenic	6.1		mg/kg
R22C54	1-1.5	12/18/03	Yes	01-SS-[R22C54]-C2_12/18/03_1	7439-92-1	Lead	7.3		mg/kg
R22C55	1-1.5	12/18/03	Yes	01-SS-[R22C55]-C2_12/18/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
R22C55	1-1.5	12/18/03	Yes	01-SS-[R22C55]-C2_12/18/03_1	7439-92-1	Lead	2.6		mg/kg
R22C56	1-1.5	12/18/03	Yes	01-SS-[R22C56]-C2_12/18/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R22C56	1-1.5	12/18/03	Yes	01-SS-[R22C56]-C2_12/18/03_1	7439-92-1	Lead	3.3		mg/kg
R22C57	1-1.5	12/18/03	Yes	01-SS-[R22C57]-C2_12/18/03_1	7440-38-2	Arsenic	8.3		mg/kg
R22C57	1-1.5	12/18/03	Yes	01-SS-[R22C57]-C2_12/18/03_1	7439-92-1	Lead	11.0		mg/kg
R22C58	1-1.5	12/18/03	Yes	01-SS-[R22C58]-C2_12/18/03_1	7440-38-2	Arsenic	2.5		mg/kg
R22C58	1-1.5	12/18/03	Yes	01-SS-[R22C58]-C2_12/18/03_1	7439-92-1	Lead	3.6		mg/kg
R22C59	1-1.5	12/18/03	Yes	01-SS-[R22C59]-C2_12/18/03_1	7440-38-2	Arsenic	8.1		mg/kg
R22C59	1-1.5	12/18/03	Yes	01-SS-[R22C59]-C2_12/18/03_1	7439-92-1	Lead	12.3		mg/kg
R23C52	1-1.5	12/18/03	Yes	01-SS-[R23C52]-C2_12/18/03_1	7440-38-2	Arsenic	10.7		mg/kg
R23C52	1-1.5	12/18/03	Yes	01-SS-[R23C52]-C2_12/18/03_1	7439-92-1	Lead	29.3		mg/kg
R23C53	1-1.5	12/18/03	Yes	01-SS-[R23C53]-C2_12/18/03_1	7440-38-2	Arsenic	5.6		mg/kg
R23C53	1-1.5	12/18/03	Yes	01-SS-[R23C53]-C2_12/18/03_1	7439-92-1	Lead	10.3		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R23C54	1-1.5	12/17/03	Yes	01-SS-[R23C54]-C2_12/17/03_1	7440-38-2	Arsenic	8.7		mg/kg
R23C54	1-1.5	12/17/03	Yes	01-SS-[R23C54]-C2_12/17/03_1	7439-92-1	Lead	12.4		mg/kg
R23C55	1-1.5	12/17/03	Yes	01-SS-[R23C55]-C2_12/17/03_1	7440-38-2	Arsenic	9.3		mg/kg
R23C55	1-1.5	12/17/03	Yes	01-SS-[R23C55]-C2_12/17/03_1	7439-92-1	Lead	12.6		mg/kg
R23C56	1-1.5	12/17/03	Yes	01-SS-[R23C56]-C2_12/17/03_1	7440-38-2	Arsenic	6.2		mg/kg
R23C56	1-1.5	12/17/03	Yes	01-SS-[R23C56]-C2_12/17/03_1	7439-92-1	Lead	7.9		mg/kg
R23C57	1-1.5	12/17/03	Yes	01-SS-[R23C57]-C2_12/17/03_1	7440-38-2	Arsenic	4.6		mg/kg
R23C57	1-1.5	12/17/03	Yes	01-SS-[R23C57]-C2_12/17/03_1	7439-92-1	Lead	4.4		mg/kg
R23C58	1-1.5	12/17/03	Yes	01-SS-[R23C58]-C2_AVG_12/17/03_1	7440-38-2	Arsenic	5.4		mg/kg
R23C58	1-1.5	12/17/03	Yes	01-SS-[R23C58]-C2_AVG_12/17/03_1	7439-92-1	Lead	6.0		mg/kg
R23C59	1-1.5	12/17/03	Yes	01-SS-[R23C59]-C2_12/17/03_1	7440-38-2	Arsenic	11.1		mg/kg
R23C59	1-1.5	12/17/03	Yes	01-SS-[R23C59]-C2_12/17/03_1	7439-92-1	Lead	12.4		mg/kg
R23C60	1-1.5	12/17/03	Yes	01-SS-[R23C60]-C2_12/17/03_1	7440-38-2	Arsenic	4.9		mg/kg
R23C60	1-1.5	12/17/03	Yes	01-SS-[R23C60]-C2_12/17/03_1	7439-92-1	Lead	4.0		mg/kg
R24C53	1-1.5	12/18/03	Yes	01-SS-[R24C53]-C2_12/18/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R24C53	1-1.5	12/18/03	Yes	01-SS-[R24C53]-C2_12/18/03_1	7439-92-1	Lead	3.8		mg/kg
R24C54	1-1.5	12/17/03	Yes	01-SS-[R24C54]-C2_12/17/03_1	7440-38-2	Arsenic	15.6		mg/kg
R24C54	1-1.5	12/17/03	Yes	01-SS-[R24C54]-C2_12/17/03_1	7439-92-1	Lead	25.0		mg/kg
R24C55	1-1.5	12/17/03	Yes	01-SS-[R24C55]-C2_12/17/03_1	7440-38-2	Arsenic	8.1		mg/kg
R24C55	1-1.5	12/17/03	Yes	01-SS-[R24C55]-C2_12/17/03_1	7439-92-1	Lead	7.6		mg/kg
R24C56	1-1.5	12/17/03	Yes	01-SS-[R24C56]-C2_12/17/03_1	7440-38-2	Arsenic	8.9		mg/kg
R24C56	1-1.5	12/17/03	Yes	01-SS-[R24C56]-C2_12/17/03_1	7439-92-1	Lead	8.5		mg/kg
R24C57	1-1.5	12/17/03	Yes	01-SS-[R24C57]-C2_12/17/03_1	7440-38-2	Arsenic	6.4		mg/kg
R24C57	1-1.5	12/17/03	Yes	01-SS-[R24C57]-C2_12/17/03_1	7439-92-1	Lead	7.1		mg/kg
R24C58	1-1.5	12/17/03	Yes	01-SS-[R24C58]-C2_12/17/03_1	7440-38-2	Arsenic	7.9		mg/kg
R24C58	1-1.5	12/17/03	Yes	01-SS-[R24C58]-C2_12/17/03_1	7439-92-1	Lead	8.6		mg/kg
R24C59	1-1.5	12/17/03	Yes	01-SS-[R24C59]-C2_12/17/03_1	7440-38-2	Arsenic	19.6		mg/kg
R24C59	1-1.5	12/17/03	Yes	01-SS-[R24C59]-C2_12/17/03_1	7439-92-1	Lead	29.2		mg/kg
R24C60	1-1.5	12/17/03	Yes	01-SS-[R24C60]-C2_12/17/03_1	7440-38-2	Arsenic	11.6		mg/kg
R24C60	1-1.5	12/17/03	Yes	01-SS-[R24C60]-C2_12/17/03_1	7439-92-1	Lead	20.3		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R24C61	1-1.5	12/17/03	Yes	01-SS-[R24C61]-C2_12/17/03_1	7440-38-2	Arsenic	15.2		mg/kg
R24C61	1-1.5	12/17/03	Yes	01-SS-[R24C61]-C2_12/17/03_1	7439-92-1	Lead	18.7		mg/kg
R25C52	1-1.5	12/17/03	Yes	01-SS-[R25C52]-C2_12/17/03_1	7440-38-2	Arsenic	4.4		mg/kg
R25C52	1-1.5	12/17/03	Yes	01-SS-[R25C52]-C2_12/17/03_1	7439-92-1	Lead	4.4		mg/kg
R25C53	1-1.5	12/17/03	Yes	01-SS-[R25C53]-C2_12/17/03_1	7440-38-2	Arsenic	6.7		mg/kg
R25C53	1-1.5	12/17/03	Yes	01-SS-[R25C53]-C2_12/17/03_1	7439-92-1	Lead	6.5		mg/kg
R25C54	1-1.5	12/17/03	Yes	01-SS-[R25C54]-C2_12/17/03_1	7440-38-2	Arsenic	12.8		mg/kg
R25C54	1-1.5	12/17/03	Yes	01-SS-[R25C54]-C2_12/17/03_1	7439-92-1	Lead	15.5		mg/kg
R25C55	1-1.5	12/17/03	Yes	01-SS-[R25C55]-C2_12/17/03_1	7440-38-2	Arsenic	5.1		mg/kg
R25C55	1-1.5	12/17/03	Yes	01-SS-[R25C55]-C2_12/17/03_1	7439-92-1	Lead	3.7		mg/kg
R25C56	1-1.5	12/17/03	Yes	01-SS-[R25C56]-C2_12/17/03_1	7440-38-2	Arsenic	7.4		mg/kg
R25C56	1-1.5	12/17/03	Yes	01-SS-[R25C56]-C2_12/17/03_1	7439-92-1	Lead	8.1		mg/kg
R25C57	1-1.5	12/17/03	Yes	01-SS[R25C57]-C2_12/17/03_1	7440-38-2	Arsenic	11.2		mg/kg
R25C57	1-1.5	12/17/03	Yes	01-SS[R25C57]-C2_12/17/03_1	7439-92-1	Lead	16.4		mg/kg
R25C58	1-1.5	12/17/03	Yes	01-SS-[R25C58]-C2_12/17/03_1	7440-38-2	Arsenic	7.6		mg/kg
R25C58	1-1.5	12/17/03	Yes	01-SS-[R25C58]-C2_12/17/03_1	7439-92-1	Lead	6.5		mg/kg
R25C59	1-1.5	12/17/03	Yes	01-SS[R25C59]-C2_12/17/03_1	7440-38-2	Arsenic	5.0		mg/kg
R25C59	1-1.5	12/17/03	Yes	01-SS[R25C59]-C2_12/17/03_1	7439-92-1	Lead	4.3		mg/kg
R25C60	1-1.5	12/17/03	Yes	01-SS[R25C60]-C2_12/17/03_1	7440-38-2	Arsenic	7.8		mg/kg
R25C60	1-1.5	12/17/03	Yes	01-SS[R25C60]-C2_12/17/03_1	7439-92-1	Lead	7.1		mg/kg
R25C61	1-1.5	12/17/03	Yes	01-SS-[R25C61]-C2_12/17/03_1	7440-38-2	Arsenic	22.3		mg/kg
R25C61	1-1.5	12/17/03	Yes	01-SS-[R25C61]-C2_12/17/03_1	7439-92-1	Lead	26.0		mg/kg
R26C53	1-1.5	12/17/03	Yes	01-SS[R26C53]-C2_12/17/03_1	7440-38-2	Arsenic	7.6		mg/kg
R26C53	1-1.5	12/17/03	Yes	01-SS[R26C53]-C2_12/17/03_1	7439-92-1	Lead	8.8		mg/kg
R26C54	1-1.5	12/17/03	Yes	01-SS[R26C54]-C2_12/17/03_1	7440-38-2	Arsenic	7.4		mg/kg
R26C54	1-1.5	12/17/03	Yes	01-SS[R26C54]-C2_12/17/03_1	7439-92-1	Lead	8.4		mg/kg
R26C55	1-1.5	12/17/03	Yes	01-SS[R26C55]-C2_12/17/03_1	7440-38-2	Arsenic	14.2		mg/kg
R26C55	1-1.5	12/17/03	Yes	01-SS[R26C55]-C2_12/17/03_1	7439-92-1	Lead	9.9		mg/kg
R26C56	1-1.5	12/17/03	Yes	01-SS-[R26C56]-C2_12/17/03_1	7440-38-2	Arsenic	9.6		mg/kg
R26C56	1-1.5	12/17/03	Yes	01-SS-[R26C56]-C2_12/17/03_1	7439-92-1	Lead	11.2		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R26C57	1-1.5	03/23/04	Yes	01-R26C57_03/23/04_1	7440-38-2	Arsenic	6.6		mg/kg
R26C57	1-1.5	03/23/04	Yes	01-R26C57_03/23/04_1	7439-92-1	Lead	8.1		mg/kg
R26C58	1-1.5	12/17/03	Yes	01-SS[R26C58]-C2_12/17/03_1	7440-38-2	Arsenic	8.9		mg/kg
R26C58	1-1.5	12/17/03	Yes	01-SS[R26C58]-C2_12/17/03_1	7439-92-1	Lead	14.4		mg/kg
R26C59	1-1.5	12/17/03	Yes	01-SS-[R26C59]-C2_12/17/03_1	7440-38-2	Arsenic	9.2		mg/kg
R26C59	1-1.5	12/17/03	Yes	01-SS-[R26C59]-C2_12/17/03_1	7439-92-1	Lead	13.2		mg/kg
R26C60	1-1.5	12/17/03	Yes	01-SS-[R26C60]-C2_12/17/03_1	7440-38-2	Arsenic	10.1		mg/kg
R26C60	1-1.5	12/17/03	Yes	01-SS-[R26C60]-C2_12/17/03_1	7439-92-1	Lead	11.2		mg/kg
R26C61	1-1.5	12/17/03	Yes	01-SS-[R26C61]-C2_12/17/03_1	7440-38-2	Arsenic	8.2		mg/kg
R26C61	1-1.5	12/17/03	Yes	01-SS-[R26C61]-C2_12/17/03_1	7439-92-1	Lead	7.5		mg/kg
R26C62	1-1.5	12/17/03	Yes	01-SS[R26C62]-C2_12/17/03_1	7440-38-2	Arsenic	10.8		mg/kg
R26C62	1-1.5	12/17/03	Yes	01-SS[R26C62]-C2_12/17/03_1	7439-92-1	Lead	6.1		mg/kg
R27C53	1-1.5	12/16/03	Yes	01-SS-[R27C53]-C2_12/16/03_1	7440-38-2	Arsenic	11.1		mg/kg
R27C53	1-1.5	12/16/03	Yes	01-SS-[R27C53]-C2_12/16/03_1	7439-92-1	Lead	13.2		mg/kg
R27C54	1-1.5	12/16/03	Yes	01-SS-[R27C54]-C2_12/16/03_1	7440-38-2	Arsenic	8.4		mg/kg
R27C54	1-1.5	12/16/03	Yes	01-SS-[R27C54]-C2_12/16/03_1	7439-92-1	Lead	5.9		mg/kg
R27C55	1-1.5	12/16/03	Yes	01-SS-[R27C55]-C2_12/16/03_1	7440-38-2	Arsenic	6.7		mg/kg
R27C55	1-1.5	12/16/03	Yes	01-SS-[R27C55]-C2_12/16/03_1	7439-92-1	Lead	8.7		mg/kg
R27C56	1-1.5	12/16/03	Yes	01-SS-[R27C56]-C2_12/16/03_1	7440-38-2	Arsenic	24.2		mg/kg
R27C56	1-1.5	12/16/03	Yes	01-SS-[R27C56]-C2_12/16/03_1	7439-92-1	Lead	41.6		mg/kg
R27C57	1-1.5	03/23/04	Yes	01-R27C57_03/23/04_1	7440-38-2	Arsenic	7.4		mg/kg
R27C57	1-1.5	03/23/04	Yes	01-R27C57_03/23/04_1	7439-92-1	Lead	10.0		mg/kg
R27C58	1-1.5	12/16/03	Yes	01-SS-[R27C58]-C2_12/16/03_1	7440-38-2	Arsenic	5.1		mg/kg
R27C58	1-1.5	12/16/03	Yes	01-SS-[R27C58]-C2_12/16/03_1	7439-92-1	Lead	4.6		mg/kg
R27C59	1-1.5	12/16/03	Yes	01-SS-[R27C59]-C2_12/16/03_1	7440-38-2	Arsenic	6.0		mg/kg
R27C59	1-1.5	12/16/03	Yes	01-SS-[R27C59]-C2_12/16/03_1	7439-92-1	Lead	5.6		mg/kg
R27C60	1-1.5	12/17/03	Yes	01-SS-[R27C60]-C2_12/17/03_1	7440-38-2	Arsenic	11.6		mg/kg
R27C60	1-1.5	12/17/03	Yes	01-SS-[R27C60]-C2_12/17/03_1	7439-92-1	Lead	7.2		mg/kg
R27C61	1-1.5	12/17/03	Yes	01-SS[R27C61]-C2_12/17/03_1	7440-38-2	Arsenic	9.6		mg/kg
R27C61	1-1.5	12/17/03	Yes	01-SS[R27C61]-C2_12/17/03_1	7439-92-1	Lead	15.1		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R27C62	1-1.5	12/17/03	Yes	01-SS-[R27C62]-C2_12/17/03_1	7440-38-2	Arsenic	4.5		mg/kg
R27C62	1-1.5	12/17/03	Yes	01-SS-[R27C62]-C2_12/17/03_1	7439-92-1	Lead	4.3		mg/kg
R28C54	1-1.5	12/16/03	Yes	01-SS-[R28C54]-C2_12/16/03_1	7440-38-2	Arsenic	6.1		mg/kg
R28C54	1-1.5	12/16/03	Yes	01-SS-[R28C54]-C2_12/16/03_1	7439-92-1	Lead	4.9		mg/kg
R28C55	1-1.5	12/16/03	Yes	01-SS-[R28C55]-C2_12/16/03_1	7440-38-2	Arsenic	16.4		mg/kg
R28C55	1-1.5	12/16/03	Yes	01-SS-[R28C55]-C2_12/16/03_1	7439-92-1	Lead	19.6		mg/kg
R28C56	1-1.5	12/16/03	Yes	01-SS-[R28C56]-C2_12/16/03_1	7440-38-2	Arsenic	6.9		mg/kg
R28C56	1-1.5	12/16/03	Yes	01-SS-[R28C56]-C2_12/16/03_1	7439-92-1	Lead	6.1		mg/kg
R28C57	1-1.5	12/16/03	Yes	01-SS-[R28C57]-C2_12/16/03_1	7440-38-2	Arsenic	9.7		mg/kg
R28C57	1-1.5	12/16/03	Yes	01-SS-[R28C57]-C2_12/16/03_1	7439-92-1	Lead	9.8		mg/kg
R28C58	1-1.5	12/16/03	Yes	01-SS-[R28C58]-C2_AVG_12/16/03_1	7440-38-2	Arsenic	6.9		mg/kg
R28C58	1-1.5	12/16/03	Yes	01-SS-[R28C58]-C2_AVG_12/16/03_1	7439-92-1	Lead	5.4		mg/kg
R28C59	1-1.5	12/16/03	Yes	01-SS-[R28C59]-C2_12/16/03_1	7440-38-2	Arsenic	5.8		mg/kg
R28C59	1-1.5	12/16/03	Yes	01-SS-[R28C59]-C2_12/16/03_1	7439-92-1	Lead	4.4		mg/kg
R28C60	1-1.5	12/17/03	Yes	01-SS-[R28C60]-C2_12/17/03_1	7440-38-2	Arsenic	8.7		mg/kg
R28C60	1-1.5	12/17/03	Yes	01-SS-[R28C60]-C2_12/17/03_1	7439-92-1	Lead	9.0		mg/kg
R28C61	1-1.5	12/17/03	Yes	01-SS-[R28C61]-C2_AVG_12/17/03_1	7440-38-2	Arsenic	12.8		mg/kg
R28C61	1-1.5	12/17/03	Yes	01-SS-[R28C61]-C2_AVG_12/17/03_1	7439-92-1	Lead	15.4		mg/kg
R28C62	1-1.5	12/17/03	Yes	01-SS[R28C62]-C2_12/17/03_1	7440-38-2	Arsenic	7.1		mg/kg
R28C62	1-1.5	12/17/03	Yes	01-SS[R28C62]-C2_12/17/03_1	7439-92-1	Lead	6.2		mg/kg
R29C54	1-1.5	12/16/03	Yes	01-SS-[R29C54]-C2_12/16/03_1	7440-38-2	Arsenic	9.2		mg/kg
R29C54	1-1.5	12/16/03	Yes	01-SS-[R29C54]-C2_12/16/03_1	7439-92-1	Lead	10.2		mg/kg
R29C55	1-1.5	12/16/03	Yes	01-SS-[R29C55]-C2_AVG_12/16/03_1	7440-38-2	Arsenic	8.6		mg/kg
R29C55	1-1.5	12/16/03	Yes	01-SS-[R29C55]-C2_AVG_12/16/03_1	7439-92-1	Lead	7.6		mg/kg
R29C56	1-1.5	12/16/03	Yes	01-SS-[R29C56]-C2_12/16/03_1	7440-38-2	Arsenic	18.6		mg/kg
R29C56	1-1.5	12/16/03	Yes	01-SS-[R29C56]-C2_12/16/03_1	7439-92-1	Lead	11.1		mg/kg
R29C57	1-1.5	12/15/03	Yes	01-SS-[R29C57]-C2_12/15/03_1	7440-38-2	Arsenic	17.2		mg/kg
R29C57	1-1.5	12/15/03	Yes	01-SS-[R29C57]-C2_12/15/03_1	7439-92-1	Lead	20.2		mg/kg
R29C58	1-1.5	12/15/03	Yes	01-SS-[R29C58]-C2_12/15/03_1	7440-38-2	Arsenic	4.7		mg/kg
R29C58	1-1.5	12/15/03	Yes	01-SS-[R29C58]-C2_12/15/03_1	7439-92-1	Lead	8.7		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R29C59	1-1.5	12/15/03	Yes	01-SS-[R29C59]-C2_12/15/03_1	7440-38-2	Arsenic	2.6		mg/kg
R29C59	1-1.5	12/15/03	Yes	01-SS-[R29C59]-C2_12/15/03_1	7439-92-1	Lead	4.0		mg/kg
R29C60	1-1.5	12/15/03	Yes	01-SS-[R29C60]-C2_12/15/03_1	7440-38-2	Arsenic	8.7		mg/kg
R29C60	1-1.5	12/15/03	Yes	01-SS-[R29C60]-C2_12/15/03_1	7439-92-1	Lead	15.0		mg/kg
R29C61	1-1.5	12/15/03	Yes	01-SS-[R29C61]-C2_12/15/03_1	7440-38-2	Arsenic	5.4		mg/kg
R29C61	1-1.5	12/15/03	Yes	01-SS-[R29C61]-C2_12/15/03_1	7439-92-1	Lead	5.8		mg/kg
R29C62	1-1.5	12/15/03	Yes	01-SS-[R29C62]-C2_12/15/03_1	7440-38-2	Arsenic	2.5		mg/kg
R29C62	1-1.5	12/15/03	Yes	01-SS-[R29C62]-C2_12/15/03_1	7439-92-1	Lead	3.6		mg/kg
R30C55	1-1.5	12/16/03	Yes	01-SS-[R30C55]-C2_12/16/03_1	7440-38-2	Arsenic	7.7		mg/kg
R30C55	1-1.5	12/16/03	Yes	01-SS-[R30C55]-C2_12/16/03_1	7439-92-1	Lead	7.2		mg/kg
R30C56	1-1.5	12/16/03	Yes	01-SS-[R30C56]-C2_12/16/03_1	7440-38-2	Arsenic	6.0		mg/kg
R30C56	1-1.5	12/16/03	Yes	01-SS-[R30C56]-C2_12/16/03_1	7439-92-1	Lead	3.5		mg/kg
R30C57	1-1.5	12/15/03	Yes	01-SS-[R30C57]-C2_12/15/03_1	7440-38-2	Arsenic	6.7		mg/kg
R30C57	1-1.5	12/15/03	Yes	01-SS-[R30C57]-C2_12/15/03_1	7439-92-1	Lead	12.6		mg/kg
R30C58	1-1.5	12/15/03	Yes	01-SS-[R30C58]-C2_12/15/03_1	7440-38-2	Arsenic	4.2		mg/kg
R30C58	1-1.5	12/15/03	Yes	01-SS-[R30C58]-C2_12/15/03_1	7439-92-1	Lead	7.8		mg/kg
R30C59	1-1.5	12/15/03	Yes	01-SS-[R30C59]-C2_12/15/03_1	7440-38-2	Arsenic	7.6		mg/kg
R30C59	1-1.5	12/15/03	Yes	01-SS-[R30C59]-C2_12/15/03_1	7439-92-1	Lead	11.5		mg/kg
R30C60	1-1.5	12/15/03	Yes	01-SS-[R30C60]-C2_12/15/03_1	7440-38-2	Arsenic	5.2		mg/kg
R30C60	1-1.5	12/15/03	Yes	01-SS-[R30C60]-C2_12/15/03_1	7439-92-1	Lead	4.8		mg/kg
R30C61	1-1.5	12/15/03	Yes	01-SS-[R30C61]-C2_12/15/03_1	7440-38-2	Arsenic	4.7		mg/kg
R30C61	1-1.5	12/15/03	Yes	01-SS-[R30C61]-C2_12/15/03_1	7439-92-1	Lead	11.0		mg/kg
R30C62	1-1.5	12/15/03	Yes	01-SS-[R30C62]-C2_12/15/03_1	7440-38-2	Arsenic	6.2		mg/kg
R30C62	1-1.5	12/15/03	Yes	01-SS-[R30C62]-C2_12/15/03_1	7439-92-1	Lead	7.8		mg/kg
R30C63	1-1.5	12/15/03	Yes	01-SS-[R30C63]-C2_12/15/03_1	7440-38-2	Arsenic	16.1		mg/kg
R30C63	1-1.5	12/15/03	Yes	01-SS-[R30C63]-C2_12/15/03_1	7439-92-1	Lead	17.7		mg/kg
R31C55	1-1.5	12/12/03	Yes	01-SS-[R31C55]-C2_12/12/03_1	7440-38-2	Arsenic	3.6		mg/kg
R31C55	1-1.5	12/12/03	Yes	01-SS-[R31C55]-C2_12/12/03_1	7439-92-1	Lead	5.7		mg/kg
R31C56	1-1.5	04/15/04	Yes	1-R31C56_04/15/04_1	7440-38-2	Arsenic	7.6		mg/kg
R31C56	1-1.5	04/15/04	Yes	1-R31C56_04/15/04_1	7439-92-1	Lead	8.3		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R31C57	1-1.5	04/15/04	Yes	1-R31C57_04/15/04_1	7440-38-2	Arsenic	10.6		mg/kg
R31C57	1-1.5	04/15/04	Yes	1-R31C57_04/15/04_1	7439-92-1	Lead	18.2		mg/kg
R31C58	1-1.5	12/12/03	Yes	01-SS-[R31C58]-C2_12/12/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R31C58	1-1.5	12/12/03	Yes	01-SS-[R31C58]-C2_12/12/03_1	7439-92-1	Lead	4.1		mg/kg
R31C59	1-1.5	12/12/03	Yes	01-SS-[R31C59]-C2_12/12/03_1	7440-38-2	Arsenic	5.7		mg/kg
R31C59	1-1.5	12/12/03	Yes	01-SS-[R31C59]-C2_12/12/03_1	7439-92-1	Lead	15.4		mg/kg
R31C60	1-1.5	12/12/03	Yes	01-SS-[R31C60]-C2_12/12/03_1	7440-38-2	Arsenic	7.6		mg/kg
R31C60	1-1.5	12/12/03	Yes	01-SS-[R31C60]-C2_12/12/03_1	7439-92-1	Lead	13.1		mg/kg
R31C61	1-1.5	12/12/03	Yes	01-SS-[R31C61]-C2_12/12/03_1	7440-38-2	Arsenic	2.4		mg/kg
R31C61	1-1.5	12/12/03	Yes	01-SS-[R31C61]-C2_12/12/03_1	7439-92-1	Lead	3.2		mg/kg
R31C62	1-1.5	12/15/03	Yes	01-SS-[R31C62]-C2_12/15/03_1	7440-38-2	Arsenic	5.3		mg/kg
R31C62	1-1.5	12/15/03	Yes	01-SS-[R31C62]-C2_12/15/03_1	7439-92-1	Lead	4.9		mg/kg
R31C63	1-1.5	12/15/03	Yes	01-SS-[R31C63]-C2_12/15/03_1	7440-38-2	Arsenic	3.0		mg/kg
R31C63	1-1.5	12/15/03	Yes	01-SS-[R31C63]-C2_12/15/03_1	7439-92-1	Lead	4.7		mg/kg
R32C56	1-1.5	04/15/04	Yes	1-R32C56_04/15/04_1	7440-38-2	Arsenic	8.8		mg/kg
R32C56	1-1.5	04/15/04	Yes	1-R32C56_04/15/04_1	7439-92-1	Lead	9.0		mg/kg
R32C57	1-1.5	04/15/04	Yes	1-R32C57_04/15/04_1	7440-38-2	Arsenic	6.0		mg/kg
R32C57	1-1.5	04/15/04	Yes	1-R32C57_04/15/04_1	7439-92-1	Lead	4.7		mg/kg
R32C58	1-1.5	12/12/03	Yes	01-SS-[R32C58]-C2_12/12/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R32C58	1-1.5	12/12/03	Yes	01-SS-[R32C58]-C2_12/12/03_1	7439-92-1	Lead	3.5		mg/kg
R32C59	1-1.5	12/12/03	Yes	01-SS-[R32C59]-C2_12/12/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R32C59	1-1.5	12/12/03	Yes	01-SS-[R32C59]-C2_12/12/03_1	7439-92-1	Lead	4.7		mg/kg
R32C60	1-1.5	12/12/03	Yes	01-SS-[R32C60]-C2_12/12/03_1	7440-38-2	Arsenic	4.2		mg/kg
R32C60	1-1.5	12/12/03	Yes	01-SS-[R32C60]-C2_12/12/03_1	7439-92-1	Lead	4.2		mg/kg
R32C61	1-1.5	12/12/03	Yes	01-SS-[R32C61]-C2_12/12/03_1	7440-38-2	Arsenic	6.3		mg/kg
R32C61	1-1.5	12/12/03	Yes	01-SS-[R32C61]-C2_12/12/03_1	7439-92-1	Lead	8.9		mg/kg
R32C62	1-1.5	12/12/03	Yes	01-SS-[R32C62]-C2_12/12/03_1	7440-38-2	Arsenic	3.5		mg/kg
R32C62	1-1.5	12/12/03	Yes	01-SS-[R32C62]-C2_12/12/03_1	7439-92-1	Lead	5.6		mg/kg
R32C63	1-1.5	12/15/03	Yes	01-SS-[R32C63]-C2_AVG_12/15/03_1	7440-38-2	Arsenic	5.5		mg/kg
R32C63	1-1.5	12/15/03	Yes	01-SS-[R32C63]-C2_AVG_12/15/03_1	7439-92-1	Lead	7.4		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R32C64	1-1.5	12/15/03	Yes	01-SS-[R32C64]-C2_12/15/03_1	7440-38-2	Arsenic	2.5		mg/kg
R32C64	1-1.5	12/15/03	Yes	01-SS-[R32C64]-C2_12/15/03_1	7439-92-1	Lead	3.5		mg/kg
R33C56	1-1.5	04/15/04	Yes	1-R33C56_04/15/04_1	7440-38-2	Arsenic	8.3		mg/kg
R33C56	1-1.5	04/15/04	Yes	1-R33C56_04/15/04_1	7439-92-1	Lead	9.6		mg/kg
R33C57	1-1.5	04/15/04	Yes	1-R33C57_AVG_04/15/04_1	7440-38-2	Arsenic	5.5		mg/kg
R33C57	1-1.5	04/15/04	Yes	1-R33C57_AVG_04/15/04_1	7439-92-1	Lead	6.9		mg/kg
R33C58	1-1.5	12/11/03	Yes	01-SS-[R33C58]-C2_12/11/03_1	7440-38-2	Arsenic	4.3		mg/kg
R33C58	1-1.5	12/11/03	Yes	01-SS-[R33C58]-C2_12/11/03_1	7439-92-1	Lead	3.2		mg/kg
R33C59	1-1.5	04/15/04	Yes	1-R33C59_04/15/04_1	7440-38-2	Arsenic	4.9		mg/kg
R33C59	1-1.5	04/15/04	Yes	1-R33C59_04/15/04_1	7439-92-1	Lead	3.9		mg/kg
R33C60	1-1.5	12/11/03	Yes	01-SS-[R33C60]-C2_12/11/03_1	7440-38-2	Arsenic	10.3		mg/kg
R33C60	1-1.5	12/11/03	Yes	01-SS-[R33C60]-C2_12/11/03_1	7439-92-1	Lead	20.3		mg/kg
R33C61	1-1.5	12/11/03	Yes	01-SS-[R33C61]-C2_12/11/03_1	7440-38-2	Arsenic	7.9		mg/kg
R33C61	1-1.5	12/11/03	Yes	01-SS-[R33C61]-C2_12/11/03_1	7439-92-1	Lead	6.1		mg/kg
R33C62	1-1.5	12/11/03	Yes	01-SS-[R33C62]-C2_12/11/03_1	7440-38-2	Arsenic	5.1		mg/kg
R33C62	1-1.5	12/11/03	Yes	01-SS-[R33C62]-C2_12/11/03_1	7439-92-1	Lead	4.5		mg/kg
R33C63	1-1.5	12/11/03	Yes	01-SS-[R33C63]-C2_12/11/03_1	7440-38-2	Arsenic	7.6		mg/kg
R33C63	1-1.5	12/11/03	Yes	01-SS-[R33C63]-C2_12/11/03_1	7439-92-1	Lead	7.2		mg/kg
R33C64	1-1.5	12/11/03	Yes	01-SS-[R33C64]-C2_12/11/03_1	7440-38-2	Arsenic	6.4		mg/kg
R33C64	1-1.5	12/11/03	Yes	01-SS-[R33C64]-C2_12/11/03_1	7439-92-1	Lead	7.2		mg/kg
R33C65	1-1.5	12/11/03	Yes	01-SS-[R33C65]-C2_12/11/03_1	7440-38-2	Arsenic	5.4		mg/kg
R33C65	1-1.5	12/11/03	Yes	01-SS-[R33C65]-C2_12/11/03_1	7439-92-1	Lead	3.5		mg/kg
R34C57	1-1.5	04/15/04	Yes	1-R34C57_04/15/04_1	7440-38-2	Arsenic	7.4		mg/kg
R34C57	1-1.5	04/15/04	Yes	1-R34C57_04/15/04_1	7439-92-1	Lead	6.2		mg/kg
R34C58	1-1.5	04/15/04	Yes	1-R34C58_04/15/04_1	7440-38-2	Arsenic	7.4		mg/kg
R34C58	1-1.5	04/15/04	Yes	1-R34C58_04/15/04_1	7439-92-1	Lead	7.2		mg/kg
R34C59	1-1.5	04/15/04	Yes	1-R34C59_04/15/04_1	7440-38-2	Arsenic	11.4		mg/kg
R34C59	1-1.5	04/15/04	Yes	1-R34C59_04/15/04_1	7439-92-1	Lead	8.9		mg/kg
R34C60	1-1.5	12/11/03	Yes	01-SS-[R34C60]-C2_12/11/03_1	7440-38-2	Arsenic	4.4		mg/kg
R34C60	1-1.5	12/11/03	Yes	01-SS-[R34C60]-C2_12/11/03_1	7439-92-1	Lead	3.2		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R34C61	1-1.5	12/11/03	Yes	01-SS-[R34C61]-C2_12/11/03_1	7440-38-2	Arsenic	13.7		mg/kg
R34C61	1-1.5	12/11/03	Yes	01-SS-[R34C61]-C2_12/11/03_1	7439-92-1	Lead	7.0		mg/kg
R34C62	1-1.5	12/11/03	Yes	01-SS-[R34C62]-C2_12/11/03_1	7440-38-2	Arsenic	9.9		mg/kg
R34C62	1-1.5	12/11/03	Yes	01-SS-[R34C62]-C2_12/11/03_1	7439-92-1	Lead	5.3		mg/kg
R34C63	1-1.5	12/11/03	Yes	01-SS-[R34C63]-C2_12/11/03_1	7440-38-2	Arsenic	5.9		mg/kg
R34C63	1-1.5	12/11/03	Yes	01-SS-[R34C63]-C2_12/11/03_1	7439-92-1	Lead	6.7		mg/kg
R34C64	1-1.5	12/11/03	Yes	01-SS-[R34C64]-C2_12/11/03_1	7440-38-2	Arsenic	7.4		mg/kg
R34C64	1-1.5	12/11/03	Yes	01-SS-[R34C64]-C2_12/11/03_1	7439-92-1	Lead	4.6		mg/kg
R35C58	1-1.5	05/06/04	Yes	01-R35C58_05/06/04_1	7440-38-2	Arsenic	6.9		mg/kg
R35C58	1-1.5	05/06/04	Yes	01-R35C58_05/06/04_1	7439-92-1	Lead	5.5		mg/kg
R35C59	1-1.5	03/16/04	Yes	1-R35C59_03/16/04_1	7440-38-2	Arsenic	4.7		mg/kg
R35C59	1-1.5	03/16/04	Yes	1-R35C59_03/16/04_1	7439-92-1	Lead	6.3		mg/kg
R35C60	1-1.5	03/16/04	Yes	1-R35C60_03/16/04_1	7440-38-2	Arsenic	5.1		mg/kg
R35C60	1-1.5	03/16/04	Yes	1-R35C60_03/16/04_1	7439-92-1	Lead	5.6		mg/kg
R35C61	1-1.5	03/18/04	Yes	01-R35C61_03/18/04_1	7440-38-2	Arsenic	14.8		mg/kg
R35C61	1-1.5	03/18/04	Yes	01-R35C61_03/18/04_1	7439-92-1	Lead	15.0		mg/kg
R35C62	1-1.5	03/18/04	Yes	01-R35C62_03/18/04_1	7440-38-2	Arsenic	17.9		mg/kg
R35C62	1-1.5	03/18/04	Yes	01-R35C62_03/18/04_1	7439-92-1	Lead	15.1		mg/kg
R35C63	1-1.5	03/16/04	Yes	1-R35C63_03/16/04_1	7440-38-2	Arsenic	12.4		mg/kg
R35C63	1-1.5	03/16/04	Yes	1-R35C63_03/16/04_1	7439-92-1	Lead	20.9		mg/kg
R35C64	1-1.5	03/16/04	Yes	1-R35C64_03/16/04_1	7440-38-2	Arsenic	11.1		mg/kg
R35C64	1-1.5	03/16/04	Yes	1-R35C64_03/16/04_1	7439-92-1	Lead	15.7		mg/kg
R36C60	1-1.5	12/10/03	Yes	01-SS-[R36C60]-C2_12/10/03_1	7440-38-2	Arsenic	19.2		mg/kg
R36C60	1-1.5	12/10/03	Yes	01-SS-[R36C60]-C2_12/10/03_1	7439-92-1	Lead	32.3		mg/kg
R36C61	1-1.5	12/10/03	Yes	01-SS-[R36C61]-C2_12/10/03_1	7440-38-2	Arsenic	12.0		mg/kg
R36C61	1-1.5	12/10/03	Yes	01-SS-[R36C61]-C2_12/10/03_1	7439-92-1	Lead	8.6		mg/kg
R36C62	1-1.5	12/10/03	Yes	01-SS-[R36C62]-C2_12/10/03_1	7440-38-2	Arsenic	2.8		mg/kg
R36C62	1-1.5	12/10/03	Yes	01-SS-[R36C62]-C2_12/10/03_1	7439-92-1	Lead	4.3		mg/kg
R36C63	1-1.5	12/10/03	Yes	01-SS-[R36C63]-C2_12/10/03_1	7440-38-2	Arsenic	12.3		mg/kg
R36C63	1-1.5	12/10/03	Yes	01-SS-[R36C63]-C2_12/10/03_1	7439-92-1	Lead	13.7		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R36C64	1-1.5	12/10/03	Yes	01-SS-[R36C64]-C2_12/10/03_1	7440-38-2	Arsenic	8.1		mg/kg
R36C64	1-1.5	12/10/03	Yes	01-SS-[R36C64]-C2_12/10/03_1	7439-92-1	Lead	7.0		mg/kg
R36C65	1-1.5	12/10/03	Yes	01-SS-[R36C65]-C2_12/10/03_1	7440-38-2	Arsenic	5.0		mg/kg
R36C65	1-1.5	12/10/03	Yes	01-SS-[R36C65]-C2_12/10/03_1	7439-92-1	Lead	7.3		mg/kg
R36C65	1-1.5	03/16/04	Yes	1-R36C65_03/16/04_1	7440-38-2	Arsenic	4.9		mg/kg
R36C65	1-1.5	03/16/04	Yes	1-R36C65_03/16/04_1	7439-92-1	Lead	6.6		mg/kg
R37C61	1-1.5	12/10/03	Yes	01-SS-[R37C61]-C2_12/10/03_1	7440-38-2	Arsenic	5.5		mg/kg
R37C61	1-1.5	12/10/03	Yes	01-SS-[R37C61]-C2_12/10/03_1	7439-92-1	Lead	5.3		mg/kg
R37C62	1-1.5	12/10/03	Yes	01-SS-[R37C62]-C2_12/10/03_1	7440-38-2	Arsenic	7.0		mg/kg
R37C62	1-1.5	12/10/03	Yes	01-SS-[R37C62]-C2_12/10/03_1	7439-92-1	Lead	4.1		mg/kg
R37C63	1-1.5	03/18/04	Yes	01-R37C63_03/18/04_1	7440-38-2	Arsenic	15.3		mg/kg
R37C63	1-1.5	03/18/04	Yes	01-R37C63_03/18/04_1	7439-92-1	Lead	16.7		mg/kg
R37C64	1-1.5	03/18/04	Yes	01-R37C64_03/18/04_1	7440-38-2	Arsenic	9.6		mg/kg
R37C64	1-1.5	03/18/04	Yes	01-R37C64_03/18/04_1	7439-92-1	Lead	11.6		mg/kg
R37C65	1-1.5	12/10/03	Yes	01-SS-[R37C65]-C2_12/10/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
R37C65	1-1.5	12/10/03	Yes	01-SS-[R37C65]-C2_12/10/03_1	7439-92-1	Lead	2.0	U	mg/kg
R38C62	1-1.5	12/09/03	Yes	01-SS-[R38C62]-C2_12/09/03_1	7440-38-2	Arsenic	5.5		mg/kg
R38C62	1-1.5	12/09/03	Yes	01-SS-[R38C62]-C2_12/09/03_1	7439-92-1	Lead	3.4		mg/kg
R38C63	1-1.5	12/09/03	Yes	01-SS-[R38C63]-C2_12/09/03_1	7440-38-2	Arsenic	5.6		mg/kg
R38C63	1-1.5	12/09/03	Yes	01-SS-[R38C63]-C2_12/09/03_1	7439-92-1	Lead	3.7		mg/kg
R38C64	1-1.5	03/18/04	Yes	01-R38C64_03/18/04_1	7440-38-2	Arsenic	5.7		mg/kg
R38C64	1-1.5	03/18/04	Yes	01-R38C64_03/18/04_1	7439-92-1	Lead	6.0		mg/kg
R38C65	1-1.5	03/18/04	Yes	01-R38C65_03/18/04_1	7440-38-2	Arsenic	19.5		mg/kg
R38C65	1-1.5	03/18/04	Yes	01-R38C65_03/18/04_1	7439-92-1	Lead	22.5		mg/kg
R39C63	1-1.5	12/08/03	Yes	01-SS-[R39C63]-C2_AVG_12/08/03_1	7440-38-2	Arsenic	10.1		mg/kg
R39C63	1-1.5	12/08/03	Yes	01-SS-[R39C63]-C2_AVG_12/08/03_1	7439-92-1	Lead	17.8		mg/kg
R39C64	1-1.5	03/18/04	Yes	01-R39C64_03/18/04_1	7440-38-2	Arsenic	5.6		mg/kg
R39C64	1-1.5	03/18/04	Yes	01-R39C64_03/18/04_1	7439-92-1	Lead	5.7		mg/kg
R39C65	1-1.5	03/18/04	Yes	01-R39C65_AVG_03/18/04_1	7440-38-2	Arsenic	15.8		mg/kg
R39C65	1-1.5	03/18/04	Yes	01-R39C65_AVG_03/18/04_1	7439-92-1	Lead	19.0		mg/kg

Table B.6
Sample Results for CM-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R40C63	1-1.5	12/06/03	Yes	01-SS-[R40C63]-C2_12/06/03_1	7440-38-2	Arsenic	4.2	U	mg/kg
R40C63	1-1.5	12/06/03	Yes	01-SS-[R40C63]-C2_12/06/03_1	7439-92-1	Lead	3.2		mg/kg
R40C64	1-1.5	12/06/03	Yes	01-SS-[R40C64]-C2_12/06/03_1	7440-38-2	Arsenic	4.2	U	mg/kg
R40C64	1-1.5	12/06/03	Yes	01-SS-[R40C64]-C2_12/06/03_1	7439-92-1	Lead	2.9		mg/kg
R40C65	1-1.5	12/08/03	Yes	01-SS-[R40C65]-C2_12/08/03_1	7440-38-2	Arsenic	9.8		mg/kg
R40C65	1-1.5	12/08/03	Yes	01-SS-[R40C65]-C2_12/08/03_1	7439-92-1	Lead	10.4		mg/kg
R40C66	1-1.5	12/08/03	Yes	01-SS-[R40C66]-C2_12/08/03_1	7440-38-2	Arsenic	8.3		mg/kg
R40C66	1-1.5	12/08/03	Yes	01-SS-[R40C66]-C2_12/08/03_1	7439-92-1	Lead	5.9		mg/kg
R41C64	1-1.5	12/06/03	Yes	01-SS-[R41C64]-C2_12/06/03_1	7440-38-2	Arsenic	4.6	U	mg/kg
R41C64	1-1.5	12/06/03	Yes	01-SS-[R41C64]-C2_12/06/03_1	7439-92-1	Lead	4.6		mg/kg
R41C65	1-1.5	12/06/03	Yes	01-SS-[R41C65]-C2_12/06/03_1	7440-38-2	Arsenic	4.6	U	mg/kg
R41C65	1-1.5	12/06/03	Yes	01-SS-[R41C65]-C2_12/06/03_1	7439-92-1	Lead	6.8		mg/kg
R41C66	1-1.5	12/06/03	Yes	01-SS-[R41C66]-C2_12/06/03_1	7440-38-2	Arsenic	6.6		mg/kg
R41C66	1-1.5	12/06/03	Yes	01-SS-[R41C66]-C2_12/06/03_1	7439-92-1	Lead	12.6		mg/kg
R42C64	1-1.5	12/08/03	Yes	01-SS-[R42C64]-C2_12/08/03_1	7440-38-2	Arsenic	11.1		mg/kg
R42C64	1-1.5	12/08/03	Yes	01-SS-[R42C64]-C2_12/08/03_1	7439-92-1	Lead	19.5		mg/kg
R42C65	1-1.5	12/06/03	Yes	01-SS-[R42C65]-C2_12/06/03_1	7440-38-2	Arsenic	11.8		mg/kg
R42C65	1-1.5	12/06/03	Yes	01-SS-[R42C65]-C2_12/06/03_1	7439-92-1	Lead	20.0		mg/kg
R42C66	1-1.5	12/06/03	Yes	01-SS-[R42C66]-C2_12/06/03_1	7440-38-2	Arsenic	5.3	U	mg/kg
R42C66	1-1.5	12/06/03	Yes	01-SS-[R42C66]-C2_12/06/03_1	7439-92-1	Lead	4.4		mg/kg
R43C64	1-1.5	12/01/03	Yes	01-SS-[R43C64]-C2_12/01/03_1	7440-38-2	Arsenic	4.4		mg/kg
R43C64	1-1.5	12/01/03	Yes	01-SS-[R43C64]-C2_12/01/03_1	7439-92-1	Lead	14.9		mg/kg
R43C65	1-1.5	12/01/03	Yes	01-SS-[R43C65]-C2_12/01/03_1	7440-38-2	Arsenic	22.9		mg/kg
R43C65	1-1.5	12/01/03	Yes	01-SS-[R43C65]-C2_12/01/03_1	7439-92-1	Lead	46.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-VS-12	0-0.5	09/27/99	Yes	38-VS-12	7440-38-2	Arsenic	29.0		mg/kg
38-VS-12	0-0.5	09/27/99	Yes	38-VS-12	7439-92-1	Lead	38.0		mg/kg
38-VS-133	1.5-2	05/24/00	Yes	38-VS-133	7440-38-2	Arsenic	8.1		mg/kg
38-VS-133	1.5-2	05/24/00	Yes	38-VS-133	7439-92-1	Lead	26.0		mg/kg
38-VS-135	1.5-2	05/24/00	No	38-VS-135	7440-38-2	Arsenic	15.0		mg/kg
38-VS-135	1.5-2	05/24/00	No	38-VS-135	7439-92-1	Lead	590.0		mg/kg
38-VS-18	0-0.5	09/27/99	Yes	38-VS-18	7440-38-2	Arsenic	13.0		mg/kg
38-VS-18	0-0.5	09/27/99	Yes	38-VS-18	7439-92-1	Lead	20.0		mg/kg
BUFF-01	1-1.5	01/26/04	Yes	01-SS-[Buff-01]-D1_01/26/04_1	7440-38-2	Arsenic	36.7		mg/kg
BUFF-01	1-1.5	01/26/04	Yes	01-SS-[Buff-01]-D1_01/26/04_1	7439-92-1	Lead	29.8		mg/kg
BUFF-02	1-1.5	01/26/04	Yes	01-SS-[Buff-02]-D1_01/26/04_1	7440-38-2	Arsenic	6.7		mg/kg
BUFF-02	1-1.5	01/26/04	Yes	01-SS-[Buff-02]-D1_01/26/04_1	7439-92-1	Lead	2.5		mg/kg
BUFF-03	1-1.5	01/26/04	Yes	01-SS-[Buff-03]-D1_01/26/04_1	7440-38-2	Arsenic	27.0		mg/kg
BUFF-03	1-1.5	01/26/04	Yes	01-SS-[Buff-03]-D1_01/26/04_1	7439-92-1	Lead	16.5		mg/kg
BUFF-04	1-1.5	01/26/04	No	01-SS-[Buff-04]-D1_01/26/04_1	7439-92-1	Lead	83.7		mg/kg
BUFF-04	2-2.5	03/11/04	Yes	2-BUFF-4_03/11/04_2	7440-38-2	Arsenic	6.8		mg/kg
BUFF-05	1-1.5	01/26/04	No	01-SS-[Buff-05]-D1_01/26/04_1	7439-92-1	Lead	118.0		mg/kg
BUFF-05	2-2.5	03/11/04	Yes	2-BUFF-5_03/11/04_2	7440-38-2	Arsenic	37.6		mg/kg
BUFF-06	2-2.5	03/11/04	Yes	2-BUFF-6_03/11/04_2	7440-38-2	Arsenic	9.6		mg/kg
BUFF-06	2-2.5	03/11/04	Yes	2-BUFF-6_03/11/04_2	7439-92-1	Lead	6.2		mg/kg
BUFF-07	1-1.5	01/26/04	Yes	01-SS-[Buff-07]-D1_01/26/04_1	7440-38-2	Arsenic	46.8		mg/kg
BUFF-07	1-1.5	01/26/04	Yes	01-SS-[Buff-07]-D1_01/26/04_1	7439-92-1	Lead	53.1		mg/kg
BUFF-08	1-1.5	01/26/04	No	01-SS-[Buff-08]-D1_01/26/04_1	7439-92-1	Lead	108.0		mg/kg
BUFF-08	2-2.5	03/11/04	Yes	2-BUFF-8_03/11/04_2	7440-38-2	Arsenic	6.2		mg/kg
BUFF-09	1-1.5	01/26/04	Yes	01-SS-[Buff-09]-D1_01/26/04_1	7440-38-2	Arsenic	29.1		mg/kg
BUFF-09	1-1.5	01/26/04	Yes	01-SS-[Buff-09]-D1_01/26/04_1	7439-92-1	Lead	48.7		mg/kg
BUFF-10	1-1.5	01/26/04	Yes	01-SS-[Buff-10]-D1_01/26/04_1	7440-38-2	Arsenic	29.0		mg/kg
BUFF-10	1-1.5	01/26/04	Yes	01-SS-[Buff-10]-D1_01/26/04_1	7439-92-1	Lead	34.3		mg/kg
BUFF-11	1-1.5	01/26/04	Yes	01-SS-[Buff-11]-D1_01/26/04_1	7440-38-2	Arsenic	56.3		mg/kg
BUFF-11	1-1.5	01/26/04	Yes	01-SS-[Buff-11]-D1_01/26/04_1	7439-92-1	Lead	54.7		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
BUFF-12	1-1.5	01/26/04	No	01-SS-[Buff-12]-D1_01/26/04_1	7439-92-1	Lead	76.2		mg/kg
BUFF-12	2-2.5	03/11/04	Yes	2-BUFF-12_03/11/04_2	7440-38-2	Arsenic	19.6		mg/kg
BUFF-13	1-1.5	01/26/04	Yes	01-SS-[Buff-13]-D1_01/26/04_1	7440-38-2	Arsenic	54.5		mg/kg
BUFF-13	1-1.5	01/26/04	Yes	01-SS-[Buff-13]-D1_01/26/04_1	7439-92-1	Lead	100.0		mg/kg
BUFF-14	1-1.5	01/26/04	No	01-SS-[Buff-14]-D1_01/26/04_1	7440-38-2	Arsenic	34.8		mg/kg
BUFF-14	2-2.5	03/11/04	Yes	2-BUFF-14_03/11/04_2	7439-92-1	Lead	8.7		mg/kg
BUFF-15	1-1.5	01/26/04	Yes	01-SS-[Buff-15]-D1_01/26/04_1	7440-38-2	Arsenic	10.8		mg/kg
BUFF-15	1-1.5	01/26/04	Yes	01-SS-[Buff-15]-D1_01/26/04_1	7439-92-1	Lead	52.1		mg/kg
F-193	2-2.5	08/01/01	Yes	01-F36-SS[F-193]C2-005	7440-38-2	Arsenic	25.0		mg/kg
F-193	2-2.5	08/01/01	Yes	01-F36-SS[F-193]C2-005	7439-92-1	Lead	16.0		mg/kg
F-194	2-2.5	08/01/01	Yes	01-F36-SS[F-194]C2-005	7440-38-2	Arsenic	5.0		mg/kg
F-194	2-2.5	08/01/01	Yes	01-F36-SS[F-194]C2-005	7439-92-1	Lead	8.5		mg/kg
F-195	2-2.5	08/01/01	Yes	01-F36-SS[F-195]C2-005	7440-38-2	Arsenic	5.1		mg/kg
F-195	2-2.5	08/01/01	Yes	01-F36-SS[F-195]C2-005	7439-92-1	Lead	7.3		mg/kg
F-196	2-2.5	08/01/01	Yes	01-F36-SS[F-196]C2-005	7440-38-2	Arsenic	4.0		mg/kg
F-196	2-2.5	08/01/01	Yes	01-F36-SS[F-196]C2-005	7439-92-1	Lead	5.7		mg/kg
F-197	2-2.5	08/01/01	Yes	01-F36-SS[F-197]C2-005	7440-38-2	Arsenic	4.8		mg/kg
F-197	2-2.5	08/01/01	Yes	01-F36-SS[F-197]C2-005	7439-92-1	Lead	6.0		mg/kg
LR-117-S-2	0.5-1	12/16/93	Yes	LR-117-S-2	7440-38-2	Arsenic	4.3	J	mg/kg
LR-117-S-3	1-2	12/16/93	Yes	LR-117-S-3	7440-38-2	Arsenic	3.8	J	mg/kg
LR-133-S-2	0.5-1	12/10/93	Yes	LR-133-S-2	7440-38-2	Arsenic	27.0		mg/kg
LR-133-S-3	1-2	12/10/93	Yes	LR-133-S-3	7440-38-2	Arsenic	28.0		mg/kg
LR-181-S-3	1-2	12/16/93	Yes	LR-181-S-3	7440-38-2	Arsenic	6.3	J	mg/kg
LR181-VS-3	0-0.5	09/23/99	Yes	LR181-VS-3	7440-38-2	Arsenic	29.0		mg/kg
LR181-VS-3	0-0.5	09/23/99	Yes	LR181-VS-3	7439-92-1	Lead	38.0		mg/kg
LR181-VS-4	0-0.5	09/23/99	Yes	LR181-VS-4	7440-38-2	Arsenic	28.0		mg/kg
LR181-VS-4	0-0.5	09/23/99	Yes	LR181-VS-4	7439-92-1	Lead	42.0		mg/kg
LR181-VS-5	1-1.5	09/23/99	Yes	LR181-VS-5	7440-38-2	Arsenic	10.0		mg/kg
LR181-VS-5	1-1.5	09/23/99	Yes	LR181-VS-5	7439-92-1	Lead	8.3		mg/kg
LR181-VS-6	1-1.5	09/23/99	Yes	LR181-VS-6	7440-38-2	Arsenic	10.0		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR181-VS-6	1-1.5	09/23/99	Yes	LR181-VS-6	7439-92-1	Lead	6.1		mg/kg
LR181-VS-7	1-1.5	09/23/99	Yes	LR181-VS-7	7440-38-2	Arsenic	5.8		mg/kg
LR181-VS-7	1-1.5	09/23/99	Yes	LR181-VS-7	7439-92-1	Lead	5.8		mg/kg
LR181-VS-8	1-1.5	09/23/99	Yes	LR181-VS-8	7440-38-2	Arsenic	9.8		mg/kg
LR181-VS-8	1-1.5	09/23/99	Yes	LR181-VS-8	7439-92-1	Lead	9.2		mg/kg
LR181-VS-9	0-0.5	09/23/99	Yes	LR181-VS-9-DAVG	7440-38-2	Arsenic	54.0		mg/kg
LR181-VS-9	0-0.5	09/23/99	Yes	LR181-VS-9-DAVG	7439-92-1	Lead	65.0		mg/kg
MSU-101-E	0-1.5	07/01/03	No	01-SS[MSU-101-E]-D1_07/01/03_0	7439-92-1	Lead	60.2		mg/kg
MSU-101-E	0-1.5	11/24/03	No	03-SS-[MSU-101-E]-D1_11/24/03_0	7440-38-2	Arsenic	8.3		mg/kg
MSU-101-N	0-1.5	07/01/03	No	01-SS[MSU-101-N]-D1_07/01/03_0	7440-38-2	Arsenic	50.2		mg/kg
MSU-101-N	0-1.5	07/01/03	No	01-SS[MSU-101-N]-D1_07/01/03_0	7439-92-1	Lead	19.9		mg/kg
MSU-101-S	0-1.5	08/06/03	Yes	02-SS-[MSU-101-S]-D1_08/06/03_0	7439-92-1	Lead	112.0		mg/kg
MSU-101-VS-B	1.5-2	10/08/03	Yes	01-SS-[MSU-101-VS-B]-C2_10/08/03_1.5	7440-38-2	Arsenic	6.2		mg/kg
MSU-101-W	0-0.5	07/01/03	No	01-SS[MSU-101-W]-D1_07/01/03_0	7440-38-2	Arsenic	48.1		mg/kg
MSU-101-W	0-0.5	07/01/03	No	01-SS[MSU-101-W]-D1_07/01/03_0	7439-92-1	Lead	47.9		mg/kg
MSU-90-VS-B	2-2.5	08/05/03	Yes	01-SS-[MSU-90-VS-B]-C2_AVG_08/05/03_2	7439-92-1	Lead	3.3		mg/kg
MSU-90-VS-E	0-2	03/24/06	Yes	03-MSU-90-VS-E-0-2.0	7439-92-1	Lead	2.9		mg/Kg
MSU-90-VS-N	0-2	03/24/06	Yes	03-MSU-90-VS-N-0-2.0	7439-92-1	Lead	2.0		mg/Kg
MSU-90-VS-S	0-2	03/24/06	Yes	03-MSU-90-VS-S-0-2.0	7439-92-1	Lead	1.6		mg/Kg
MSU-90-VS-W	0-2	03/24/06	Yes	03-MSU-90-VS-W-0-2.0	7439-92-1	Lead	3.2		mg/Kg
MSU-94-VS-B	2-3	07/01/03	Yes	01-SS[MSU-94-VS-B]-C2_07/01/03_2	7440-38-2	Arsenic	4.0		mg/kg
MSU-94-VS-B	2-3	07/01/03	Yes	01-SS[MSU-94-VS-B]-C2_07/01/03_2	7439-92-1	Lead	10.6		mg/kg
MSU-F-54-2	2-2.5	12/11/03	Yes	01-SS-[MSU-F-54-2]-C2_12/11/03_2	7440-38-2	Arsenic	33.5		mg/kg
MSU-F-54-2	2-2.5	12/11/03	Yes	01-SS-[MSU-F-54-2]-C2_12/11/03_2	7439-92-1	Lead	15.1		mg/kg
MSU-F-54	2-2.5	12/11/03	Yes	01-SS-[MSU-F-54-1]-C2_12/11/03_2	7440-38-2	Arsenic	13.9		mg/kg
MSU-F-54	2-2.5	12/11/03	Yes	01-SS-[MSU-F-54-1]-C2_12/11/03_2	7439-92-1	Lead	17.0		mg/kg
NGRR-35	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-35]C2-005	7440-38-2	Arsenic	17.0		mg/kg
NGRR-35	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-35]C2-005	7439-92-1	Lead	9.4		mg/kg
NGRR-36	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-36]C2-005-DAVG	7440-38-2	Arsenic	6.0		mg/kg
NGRR-36	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-36]C2-005-DAVG	7439-92-1	Lead	24.5		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-38	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-38]C2-005	7440-38-2	Arsenic	3.3		mg/kg
NGRR-38	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-38]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-39	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-39]C2-005	7440-38-2	Arsenic	4.7		mg/kg
NGRR-39	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-39]C2-005	7439-92-1	Lead	5.4		mg/kg
NGRR-40	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-40]C2-005	7440-38-2	Arsenic	7.3		mg/kg
NGRR-40	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-40]C2-005	7439-92-1	Lead	6.8		mg/kg
NGRR-43	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-43]C2-005	7440-38-2	Arsenic	5.3		mg/kg
NGRR-43	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-43]C2-005	7439-92-1	Lead	4.4		mg/kg
NGRR-44	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-44]C2-005	7440-38-2	Arsenic	4.2		mg/kg
NGRR-44	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-44]C2-005	7439-92-1	Lead	4.6		mg/kg
NGRR-45	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-45]C2-005	7440-38-2	Arsenic	4.5		mg/kg
NGRR-45	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-45]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-46	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-46]C2-005	7440-38-2	Arsenic	3.3		mg/kg
NGRR-46	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-46]C2-005	7439-92-1	Lead	3.2		mg/kg
NGRR-47	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-47]C2-005	7440-38-2	Arsenic	5.0		mg/kg
NGRR-47	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-47]C2-005	7439-92-1	Lead	4.3		mg/kg
NGRR-48	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-48]C2-005	7440-38-2	Arsenic	5.0		mg/kg
NGRR-48	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-48]C2-005	7439-92-1	Lead	3.4		mg/kg
NGRR-49	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-49]C2-005	7440-38-2	Arsenic	7.7		mg/kg
NGRR-49	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-49]C2-005	7439-92-1	Lead	4.3		mg/kg
NGRR-50	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-50]C2-005	7440-38-2	Arsenic	2.6		mg/kg
NGRR-50	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-50]C2-005	7439-92-1	Lead	2.6		mg/kg
NGRR-52	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-52]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-52	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-52]C2-005	7439-92-1	Lead	40.0		mg/kg
NGRR-53	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-53]C2-005	7440-38-2	Arsenic	6.6		mg/kg
NGRR-53	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-53]C2-005	7439-92-1	Lead	7.6		mg/kg
NGRR-54	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-54]C2-005-DAVG	7440-38-2	Arsenic	5.9		mg/kg
NGRR-54	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-54]C2-005-DAVG	7439-92-1	Lead	6.7		mg/kg
NGRR-56	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-56]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-56	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-56]C2-005	7439-92-1	Lead	3.5		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-57	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-57]C2-005	7440-38-2	Arsenic	16.0		mg/kg
NGRR-57	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-57]C2-005	7439-92-1	Lead	3.7		mg/kg
NGRR-58	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-58]C2-005	7440-38-2	Arsenic	2.9		mg/kg
NGRR-58	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-58]C2-005	7439-92-1	Lead	2.6		mg/kg
NGRR-59	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-59]C2-005	7440-38-2	Arsenic	3.6		mg/kg
NGRR-59	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-59]C2-005	7439-92-1	Lead	3.5		mg/kg
R43C66	1-1.5	12/01/03	Yes	01-SS-[R43C66]-C2_12/01/03_1	7440-38-2	Arsenic	22.7		mg/kg
R43C66	1-1.5	12/01/03	Yes	01-SS-[R43C66]-C2_12/01/03_1	7439-92-1	Lead	69.1		mg/kg
R43C67	1-1.5	12/01/03	Yes	01-SS-[R43C67]-C2_12/01/03_1	7440-38-2	Arsenic	8.4		mg/kg
R43C67	1-1.5	12/01/03	Yes	01-SS-[R43C67]-C2_12/01/03_1	7439-92-1	Lead	12.3		mg/kg
R44C65	1-1.5	12/01/03	Yes	01-SS-[R44C65]-C2_AVG_12/01/03_1	7440-38-2	Arsenic	20.7		mg/kg
R44C65	1-1.5	12/01/03	Yes	01-SS-[R44C65]-C2_AVG_12/01/03_1	7439-92-1	Lead	35.4		mg/kg
R44C66	1-1.5	12/01/03	Yes	01-SS-[R44C66]-C2_12/01/03_1	7440-38-2	Arsenic	13.9		mg/kg
R44C66	1-1.5	12/01/03	Yes	01-SS-[R44C66]-C2_12/01/03_1	7439-92-1	Lead	13.9		mg/kg
R44C67	1-1.5	12/01/03	Yes	01-SS-[R44C67]-C2_12/01/03_1	7440-38-2	Arsenic	12.1		mg/kg
R44C67	1-1.5	12/01/03	Yes	01-SS-[R44C67]-C2_12/01/03_1	7439-92-1	Lead	26.8		mg/kg
R44C68	1-1.5	12/01/03	Yes	01-SS-[R44C68]-C2_12/01/03_1	7440-38-2	Arsenic	13.9		mg/kg
R44C68	1-1.5	12/01/03	Yes	01-SS-[R44C68]-C2_12/01/03_1	7439-92-1	Lead	16.6		mg/kg
R45C65	1-1.5	11/26/03	Yes	01-SS-[R45C65]-C2_11/26/03_1	7440-38-2	Arsenic	6.2		mg/kg
R45C65	1-1.5	11/26/03	Yes	01-SS-[R45C65]-C2_11/26/03_1	7439-92-1	Lead	4.5		mg/kg
R45C66	1-1.5	11/26/03	Yes	01-SS-[R45C66]-C2_11/26/03_1	7440-38-2	Arsenic	10.9		mg/kg
R45C66	1-1.5	11/26/03	Yes	01-SS-[R45C66]-C2_11/26/03_1	7439-92-1	Lead	16.1		mg/kg
R45C67	1-1.5	11/26/03	Yes	01-SS-[R45C67]-C2_11/26/03_1	7440-38-2	Arsenic	8.1		mg/kg
R45C67	1-1.5	11/26/03	Yes	01-SS-[R45C67]-C2_11/26/03_1	7439-92-1	Lead	4.6		mg/kg
R45C68	1-1.5	11/26/03	Yes	01-SS-[R45C68]-C2_11/26/03_1	7440-38-2	Arsenic	12.5		mg/kg
R45C68	1-1.5	11/26/03	Yes	01-SS-[R45C68]-C2_11/26/03_1	7439-92-1	Lead	4.6		mg/kg
R45C69	1-1.5	11/26/03	Yes	01-SS-[R45C69]-C2_11/26/03_1	7440-38-2	Arsenic	9.2		mg/kg
R45C69	1-1.5	11/26/03	Yes	01-SS-[R45C69]-C2_11/26/03_1	7439-92-1	Lead	9.7		mg/kg
R45C70	0-0.5	02/15/01	Yes	01-C011-SS-[R45C70]-D1-000	7440-38-2	Arsenic	18.0		mg/kg
R45C70	0-0.5	02/15/01	Yes	01-C011-SS-[R45C70]-D1-000	7439-92-1	Lead	20.0		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R45C70	1-1.5	11/26/03	Yes	01-SS-[R45C70]-C2_11/26/03_1	7440-38-2	Arsenic	9.9		mg/kg
R45C70	1-1.5	11/26/03	Yes	01-SS-[R45C70]-C2_11/26/03_1	7439-92-1	Lead	8.4		mg/kg
R46C66	1-1.5	11/24/03	Yes	01-SS-[R46C66]-C2_11/24/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R46C66	1-1.5	11/24/03	Yes	01-SS-[R46C66]-C2_11/24/03_1	7439-92-1	Lead	2.4		mg/kg
R46C67	1-1.5	11/24/03	Yes	01-SS-[R46C67]-C2_11/24/03_1	7440-38-2	Arsenic	9.0		mg/kg
R46C67	1-1.5	11/24/03	Yes	01-SS-[R46C67]-C2_11/24/03_1	7439-92-1	Lead	11.2		mg/kg
R46C68	1-1.5	11/24/03	Yes	01-SS-[R46C68]-C2_11/24/03_1	7440-38-2	Arsenic	11.1		mg/kg
R46C68	1-1.5	11/24/03	Yes	01-SS-[R46C68]-C2_11/24/03_1	7439-92-1	Lead	12.5		mg/kg
R46C69	1-1.5	11/26/03	Yes	01-SS-[R46C69]-C2_11/26/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R46C69	1-1.5	11/26/03	Yes	01-SS-[R46C69]-C2_11/26/03_1	7439-92-1	Lead	5.2		mg/kg
R46C70	1-1.5	11/21/03	Yes	01-SS-[R46C70]-C2_11/21/03_1	7440-38-2	Arsenic	7.0		mg/kg
R46C70	1-1.5	11/21/03	Yes	01-SS-[R46C70]-C2_11/21/03_1	7439-92-1	Lead	6.6		mg/kg
R46C71	1-1.5	04/27/04	Yes	1-R46C71_AVG_04/27/04_1	7440-38-2	Arsenic	7.4		mg/kg
R46C71	1-1.5	04/27/04	Yes	1-R46C71_AVG_04/27/04_1	7439-92-1	Lead	2.0		mg/kg
R47C67	1-1.5	11/24/03	Yes	01-SS-[R47C67]-C2_11/24/03_1	7440-38-2	Arsenic	8.3		mg/kg
R47C67	1-1.5	11/24/03	Yes	01-SS-[R47C67]-C2_11/24/03_1	7439-92-1	Lead	6.1		mg/kg
R47C68	1-1.5	11/21/03	Yes	01-SS-[R47C68]-C2_11/21/03_1	7440-38-2	Arsenic	7.1		mg/kg
R47C68	1-1.5	11/21/03	Yes	01-SS-[R47C68]-C2_11/21/03_1	7439-92-1	Lead	6.1		mg/kg
R47C69	1-1.5	11/21/03	Yes	01-SS-[R47C69]-C2_11/21/03_1	7440-38-2	Arsenic	6.2		mg/kg
R47C69	1-1.5	11/21/03	Yes	01-SS-[R47C69]-C2_11/21/03_1	7439-92-1	Lead	6.5		mg/kg
R47C70	1-1.5	11/21/03	Yes	01-SS-[R47C70]-C2_11/21/03_1	7440-38-2	Arsenic	17.6		mg/kg
R47C70	1-1.5	11/21/03	Yes	01-SS-[R47C70]-C2_11/21/03_1	7439-92-1	Lead	12.6		mg/kg
R47C71	1.5-2	02/15/01	No	01-C011-SS-[R47C71]-D1-000	7440-38-2	Arsenic	89.0		mg/kg
R47C71	1.5-2	02/15/01	No	01-C011-SS-[R47C71]-D1-000	7439-92-1	Lead	24.0		mg/kg
R47C72	1-1.5	04/29/04	Yes	1-R47C72_04/29/04_1	7440-38-2	Arsenic	5.9		mg/kg
R47C72	1-1.5	04/29/04	Yes	1-R47C72_04/29/04_1	7439-92-1	Lead	4.6		mg/kg
R47C73	1-1.5	04/29/04	Yes	1-R47C73_04/29/04_1	7440-38-2	Arsenic	9.0		mg/kg
R47C73	1-1.5	04/29/04	Yes	1-R47C73_04/29/04_1	7439-92-1	Lead	7.9		mg/kg
R48C69	0-0.5	02/15/01	Yes	01-C011-SS-[R48C69]-D1-000	7440-38-2	Arsenic	3.3		mg/kg
R48C69	0-0.5	02/15/01	Yes	01-C011-SS-[R48C69]-D1-000	7439-92-1	Lead	4.7		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R48C70	1-1.5	11/21/03	No	01-SS-[R48C70]-C2_11/21/03_1	7439-92-1	Lead	19.4		mg/kg
R48C70	2-2.5	12/09/03	Yes	02-SS-[R48C70]-C2_12/09/03_2	7440-38-2	Arsenic	5.0		mg/kg
R48C71	1-1.5	04/29/04	Yes	1-R48C71_04/29/04_1	7440-38-2	Arsenic	17.1		mg/kg
R48C71	1-1.5	04/29/04	Yes	1-R48C71_04/29/04_1	7439-92-1	Lead	15.0		mg/kg
R48C72	1-1.5	04/29/04	Yes	1-R48C72_04/29/04_1	7440-38-2	Arsenic	18.2		mg/kg
R48C72	1-1.5	04/29/04	Yes	1-R48C72_04/29/04_1	7439-92-1	Lead	16.3		mg/kg
R48C73	1-1.5	04/29/04	Yes	1-R48C73_04/29/04_1	7440-38-2	Arsenic	14.5		mg/kg
R48C73	1-1.5	04/29/04	Yes	1-R48C73_04/29/04_1	7439-92-1	Lead	11.8		mg/kg
R48C74	1-1.5	04/29/04	Yes	1-R48C74_04/29/04_1	7440-38-2	Arsenic	8.4		mg/kg
R48C74	1-1.5	04/29/04	Yes	1-R48C74_04/29/04_1	7439-92-1	Lead	4.7		mg/kg
R48C75	1-1.5	04/29/04	Yes	1-R48C75_04/29/04_1	7440-38-2	Arsenic	6.7		mg/kg
R48C75	1-1.5	04/29/04	Yes	1-R48C75_04/29/04_1	7439-92-1	Lead	3.8		mg/kg
R49C72	1-1.5	04/27/04	Yes	1-R49C72_04/27/04_1	7440-38-2	Arsenic	17.7		mg/kg
R49C72	1-1.5	04/27/04	Yes	1-R49C72_04/27/04_1	7439-92-1	Lead	6.4		mg/kg
R49C73	1-1.5	04/29/04	Yes	1-R49C73_04/29/04_1	7440-38-2	Arsenic	15.7		mg/kg
R49C73	1-1.5	04/29/04	Yes	1-R49C73_04/29/04_1	7439-92-1	Lead	10.9		mg/kg
R49C74	1-1.5	04/29/04	Yes	1-R49C74_04/29/04_1	7440-38-2	Arsenic	12.3		mg/kg
R49C74	1-1.5	04/29/04	Yes	1-R49C74_04/29/04_1	7439-92-1	Lead	7.3		mg/kg
R49C75	1-1.5	04/29/04	Yes	1-R49C75_04/29/04_1	7440-38-2	Arsenic	18.7		mg/kg
R49C75	1-1.5	04/29/04	Yes	1-R49C75_04/29/04_1	7439-92-1	Lead	9.6		mg/kg
R49C76	1-1.5	04/29/04	Yes	1-R49C76_AVG_04/29/04_1	7440-38-2	Arsenic	8.2		mg/kg
R49C76	1-1.5	04/29/04	Yes	1-R49C76_AVG_04/29/04_1	7439-92-1	Lead	6.8		mg/kg
R49C77	1-1.5	04/27/04	Yes	1-R49C77_04/27/04_1	7440-38-2	Arsenic	7.6		mg/kg
R49C77	1-1.5	04/27/04	Yes	1-R49C77_04/27/04_1	7439-92-1	Lead	2.1	U	mg/kg
R49C78	1-1.5	04/27/04	Yes	1-R49C78_04/27/04_1	7440-38-2	Arsenic	6.5		mg/kg
R49C78	1-1.5	04/27/04	Yes	1-R49C78_04/27/04_1	7439-92-1	Lead	2.3	U	mg/kg
R49C79	1-1.5	03/11/04	Yes	1-R49C79_03/11/04_1	7440-38-2	Arsenic	6.8		mg/kg
R49C79	1-1.5	03/11/04	Yes	1-R49C79_03/11/04_1	7439-92-1	Lead	19.0		mg/kg
R49C80	1-1.5	03/11/04	Yes	1-R49C80_03/11/04_1	7440-38-2	Arsenic	41.0		mg/kg
R49C80	1-1.5	03/11/04	Yes	1-R49C80_03/11/04_1	7439-92-1	Lead	67.9		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R50C74	1-1.5	04/27/04	Yes	1-R50C74_04/27/04_1	7440-38-2	Arsenic	13.5		mg/kg
R50C74	1-1.5	04/27/04	Yes	1-R50C74_04/27/04_1	7439-92-1	Lead	3.2		mg/kg
R50C75	1-1.5	04/27/04	Yes	1-R50C75_04/27/04_1	7440-38-2	Arsenic	19.8		mg/kg
R50C75	1-1.5	04/27/04	Yes	1-R50C75_04/27/04_1	7439-92-1	Lead	2.3	U	mg/kg
R50C76	1-1.5	04/29/04	Yes	1-R50C76_04/29/04_1	7440-38-2	Arsenic	53.5		mg/kg
R50C76	1-1.5	04/29/04	Yes	1-R50C76_04/29/04_1	7439-92-1	Lead	7.4		mg/kg
R50C77	1-1.5	04/29/04	Yes	01-R50C77_AVG_04/29/04_1	7440-38-2	Arsenic	16.5		mg/kg
R50C77	1-1.5	04/29/04	Yes	01-R50C77_AVG_04/29/04_1	7439-92-1	Lead	6.4		mg/kg
R50C78	1-1.5	04/27/04	Yes	1-R50C78_04/27/04_1	7440-38-2	Arsenic	7.3		mg/kg
R50C78	1-1.5	04/27/04	Yes	1-R50C78_04/27/04_1	7439-92-1	Lead	2.2	U	mg/kg
R50C79	1-1.5	04/27/04	Yes	1-R50C79_04/27/04_1	7440-38-2	Arsenic	6.9		mg/kg
R50C79	1-1.5	04/27/04	Yes	1-R50C79_04/27/04_1	7439-92-1	Lead	2.1	U	mg/kg
R50C80	1-1.5	04/27/04	Yes	1-R50C80_04/27/04_1	7440-38-2	Arsenic	18.0		mg/kg
R50C80	1-1.5	04/27/04	Yes	1-R50C80_04/27/04_1	7439-92-1	Lead	2.5		mg/kg
R50C81	2-2.5	04/22/04	Yes	2-R50C81_04/22/04_2	7440-38-2	Arsenic	5.7		mg/kg
R50C81	2-2.5	04/22/04	Yes	2-R50C81_04/22/04_2	7439-92-1	Lead	3.9		mg/kg
R50C82	2-2.5	04/22/04	Yes	2-R50C82_04/22/04_2	7440-38-2	Arsenic	5.6		mg/kg
R50C82	2-2.5	04/22/04	Yes	2-R50C82_04/22/04_2	7439-92-1	Lead	4.3		mg/kg
R50C83	2-2.5	04/22/04	Yes	2-R50C83_04/22/04_2	7440-38-2	Arsenic	8.1		mg/kg
R50C83	2-2.5	04/22/04	Yes	2-R50C83_04/22/04_2	7439-92-1	Lead	5.8		mg/kg
R50C84	1-1.5	03/11/04	Yes	1-R50C84_03/11/04_1	7440-38-2	Arsenic	31.7		mg/kg
R50C84	1-1.5	03/11/04	Yes	1-R50C84_03/11/04_1	7439-92-1	Lead	39.1		mg/kg
R50C85	2-2.5	04/22/04	Yes	2-R50C85_04/22/04_2	7440-38-2	Arsenic	6.6		mg/kg
R51C76	1-1.5	04/29/04	Yes	1-R51C76_04/29/04_1	7440-38-2	Arsenic	32.5		mg/kg
R51C76	1-1.5	04/29/04	Yes	1-R51C76_04/29/04_1	7439-92-1	Lead	9.2		mg/kg
R51C77	1-1.5	04/29/04	Yes	1-R51C77_04/29/04_1	7440-38-2	Arsenic	29.6		mg/kg
R51C77	1-1.5	04/29/04	Yes	1-R51C77_04/29/04_1	7439-92-1	Lead	5.5		mg/kg
R51C78	1-1.5	04/29/04	Yes	01-R51C78_04/29/04_1	7440-38-2	Arsenic	31.6		mg/kg
R51C78	1-1.5	04/29/04	Yes	01-R51C78_04/29/04_1	7439-92-1	Lead	15.2		mg/kg
R51C79	1-1.5	04/27/04	Yes	1-R51C79_04/27/04_1	7440-38-2	Arsenic	26.4		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R51C79	1-1.5	04/27/04	Yes	1-R51C79_04/27/04_1	7439-92-1	Lead	3.2		mg/kg
R51C80	1-1.5	04/27/04	Yes	1-R51C80_04/27/04_1	7440-38-2	Arsenic	12.5		mg/kg
R51C80	1-1.5	04/27/04	Yes	1-R51C80_04/27/04_1	7439-92-1	Lead	2.0	U	mg/kg
R51C81	1-1.5	04/27/04	Yes	1-R51C81_04/27/04_1	7440-38-2	Arsenic	11.5		mg/kg
R51C81	1-1.5	04/27/04	Yes	1-R51C81_04/27/04_1	7439-92-1	Lead	2.1	U	mg/kg
R51C82	1-1.5	04/27/04	Yes	1-R51C82_04/27/04_1	7440-38-2	Arsenic	9.9		mg/kg
R51C82	1-1.5	04/27/04	Yes	1-R51C82_04/27/04_1	7439-92-1	Lead	2.3	U	mg/kg
R51C83	1-1.5	04/27/04	Yes	1-R51C83_04/27/04_1	7440-38-2	Arsenic	9.8		mg/kg
R51C83	1-1.5	04/27/04	Yes	1-R51C83_04/27/04_1	7439-92-1	Lead	2.1	U	mg/kg
R51C84	1-1.5	04/27/04	Yes	1-R51C84_04/27/04_1	7440-38-2	Arsenic	5.5		mg/kg
R51C84	1-1.5	04/27/04	Yes	1-R51C84_04/27/04_1	7439-92-1	Lead	2.2	U	mg/kg
R51C85	1-1.5	03/11/04	Yes	1-R51C85_03/11/04_1	7440-38-2	Arsenic	30.0		mg/kg
R51C85	1-1.5	03/11/04	Yes	1-R51C85_03/11/04_1	7439-92-1	Lead	28.8		mg/kg
R52C78	1-1.5	03/05/04	Yes	01-R52C78_03/05/04_1	7440-38-2	Arsenic	13.4		mg/kg
R52C78	1-1.5	03/05/04	Yes	01-R52C78_03/05/04_1	7439-92-1	Lead	16.8		mg/kg
R52C79	1-1.5	03/23/04	Yes	01-R52C79_03/23/04_1	7440-38-2	Arsenic	12.1		mg/kg
R52C79	1-1.5	03/23/04	Yes	01-R52C79_03/23/04_1	7439-92-1	Lead	25.3		mg/kg
R52C80	1-1.5	03/05/04	Yes	01-R52C80_03/05/04_1	7440-38-2	Arsenic	12.9		mg/kg
R52C80	1-1.5	03/05/04	Yes	01-R52C80_03/05/04_1	7439-92-1	Lead	14.4		mg/kg
R52C88	1-1.5	02/19/04	Yes	1-R52C88_02/19/04_1	7440-38-2	Arsenic	8.0		mg/kg
R52C88	1-1.5	02/19/04	Yes	1-R52C88_02/19/04_1	7439-92-1	Lead	5.0		mg/kg
R52C89	1-1.5	02/19/04	Yes	1-R52C89_02/19/04_1	7440-38-2	Arsenic	7.3		mg/kg
R52C89	1-1.5	02/19/04	Yes	1-R52C89_02/19/04_1	7439-92-1	Lead	3.4		mg/kg
R52C90	1-1.5	02/19/04	Yes	1-R52C90_02/19/04_1	7440-38-2	Arsenic	31.9		mg/kg
R52C90	1-1.5	02/19/04	Yes	1-R52C90_02/19/04_1	7439-92-1	Lead	13.1		mg/kg
R52C91	1-1.5	02/19/04	Yes	1-R52C91_02/19/04_1	7440-38-2	Arsenic	15.2		mg/kg
R52C91	1-1.5	02/19/04	Yes	1-R52C91_02/19/04_1	7439-92-1	Lead	7.6		mg/kg
R52C92	1-1.5	02/19/04	Yes	1-R52C92_02/19/04_1	7440-38-2	Arsenic	8.4		mg/kg
R52C92	1-1.5	02/19/04	Yes	1-R52C92_02/19/04_1	7439-92-1	Lead	5.4		mg/kg
R52C93	1-1.5	02/19/04	Yes	1-R52C93_02/19/04_1	7440-38-2	Arsenic	11.8		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R52C93	1-1.5	02/19/04	Yes	1-R52C93_02/19/04_1	7439-92-1	Lead	8.2		mg/kg
R52C94	1-1.5	02/19/04	Yes	1-R52C94_02/19/04_1	7440-38-2	Arsenic	12.9		mg/kg
R52C94	1-1.5	02/19/04	Yes	1-R52C94_02/19/04_1	7439-92-1	Lead	11.0		mg/kg
R52C95	1-1.5	02/19/04	Yes	1-R52C95_AVG_02/19/04_1	7440-38-2	Arsenic	13.9		mg/kg
R52C95	1-1.5	02/19/04	Yes	1-R52C95_AVG_02/19/04_1	7439-92-1	Lead	10.7		mg/kg
R52C96	1-1.5	02/19/04	Yes	1-R52C96_02/19/04_1	7440-38-2	Arsenic	13.4		mg/kg
R52C96	1-1.5	02/19/04	Yes	1-R52C96_02/19/04_1	7439-92-1	Lead	7.1		mg/kg
R53C89	1-1.5	04/29/04	Yes	01-R53C89_04/29/04_1	7440-38-2	Arsenic	8.5		mg/kg
R53C89	1-1.5	04/29/04	Yes	01-R53C89_04/29/04_1	7439-92-1	Lead	9.1		mg/kg
R53C90	1-1.5	04/29/04	Yes	01-R53C90_04/29/04_1	7440-38-2	Arsenic	7.5		mg/kg
R53C90	1-1.5	04/29/04	Yes	01-R53C90_04/29/04_1	7439-92-1	Lead	6.8		mg/kg
R53C91	1-1.5	02/19/04	Yes	1-R53C91_02/19/04_1	7440-38-2	Arsenic	8.1		mg/kg
R53C91	1-1.5	02/19/04	Yes	1-R53C91_02/19/04_1	7439-92-1	Lead	7.0		mg/kg
R53C92	1-1.5	02/19/04	Yes	1-R53C92_02/19/04_1	7440-38-2	Arsenic	11.4		mg/kg
R53C92	1-1.5	02/19/04	Yes	1-R53C92_02/19/04_1	7439-92-1	Lead	7.8		mg/kg
R53C93	1-1.5	02/19/04	Yes	1-R53C93_02/19/04_1	7440-38-2	Arsenic	11.7		mg/kg
R53C93	1-1.5	02/19/04	Yes	1-R53C93_02/19/04_1	7439-92-1	Lead	9.3		mg/kg
R53C94	1-1.5	02/19/04	Yes	1-R53C94_02/19/04_1	7440-38-2	Arsenic	7.8		mg/kg
R53C94	1-1.5	02/19/04	Yes	1-R53C94_02/19/04_1	7439-92-1	Lead	5.4		mg/kg
R53C95	1-1.5	02/26/04	Yes	01-R53C95_02/26/04_1	7440-38-2	Arsenic	13.6		mg/kg
R53C95	1-1.5	02/26/04	Yes	01-R53C95_02/26/04_1	7439-92-1	Lead	12.2		mg/kg
R53C96	1-1.5	02/26/04	Yes	01-R53C96_02/26/04_1	7440-38-2	Arsenic	8.8		mg/kg
R53C96	1-1.5	02/26/04	Yes	01-R53C96_02/26/04_1	7439-92-1	Lead	7.7		mg/kg
R54C82	1-1.5	04/22/04	Yes	1-R54C82_04/22/04_1	7440-38-2	Arsenic	11.1		mg/kg
R54C82	1-1.5	04/22/04	Yes	1-R54C82_04/22/04_1	7439-92-1	Lead	12.1		mg/kg
R54C83	1-1.5	04/29/04	Yes	01-R54C83_04/29/04_1	7440-38-2	Arsenic	11.4		mg/kg
R54C83	1-1.5	04/29/04	Yes	01-R54C83_04/29/04_1	7439-92-1	Lead	7.0		mg/kg
R54C84	1-1.5	04/29/04	Yes	01-R54C84_04/29/04_1	7440-38-2	Arsenic	9.3		mg/kg
R54C84	1-1.5	04/29/04	Yes	01-R54C84_04/29/04_1	7439-92-1	Lead	8.4		mg/kg
R54C85	1-1.5	04/29/04	Yes	01-R54C85_04/29/04_1	7440-38-2	Arsenic	8.7		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R54C85	1-1.5	04/29/04	Yes	01-R54C85_04/29/04_1	7439-92-1	Lead	11.0		mg/kg
R54C86	1-1.5	04/29/04	Yes	01-R54C86_04/29/04_1	7440-38-2	Arsenic	8.6		mg/kg
R54C86	1-1.5	04/29/04	Yes	01-R54C86_04/29/04_1	7439-92-1	Lead	9.3		mg/kg
R54C87	1-1.5	04/29/04	Yes	01-R54C87_04/29/04_1	7440-38-2	Arsenic	7.7		mg/kg
R54C87	1-1.5	04/29/04	Yes	01-R54C87_04/29/04_1	7439-92-1	Lead	8.1		mg/kg
R54C88	1-1.5	04/29/04	Yes	01-R54C88_04/29/04_1	7440-38-2	Arsenic	6.4		mg/kg
R54C88	1-1.5	04/29/04	Yes	01-R54C88_04/29/04_1	7439-92-1	Lead	5.2		mg/kg
R54C89	1-1.5	04/29/04	Yes	01-R54C89_04/29/04_1	7440-38-2	Arsenic	7.6		mg/kg
R54C89	1-1.5	04/29/04	Yes	01-R54C89_04/29/04_1	7439-92-1	Lead	7.2		mg/kg
R54C90	1-1.5	04/29/04	Yes	01-R54C90_04/29/04_1	7440-38-2	Arsenic	7.4		mg/kg
R54C90	1-1.5	04/29/04	Yes	01-R54C90_04/29/04_1	7439-92-1	Lead	9.6		mg/kg
R54C91	1-1.5	04/29/04	Yes	01-R54C91_04/29/04_1	7440-38-2	Arsenic	11.0		mg/kg
R54C91	1-1.5	04/29/04	Yes	01-R54C91_04/29/04_1	7439-92-1	Lead	12.2		mg/kg
R54C92	1-1.5	02/19/04	Yes	1-R54C92_02/19/04_1	7440-38-2	Arsenic	9.7		mg/kg
R54C92	1-1.5	02/19/04	Yes	1-R54C92_02/19/04_1	7439-92-1	Lead	4.9		mg/kg
R54C93	1-1.5	02/19/04	Yes	1-R54C93_02/19/04_1	7440-38-2	Arsenic	11.7		mg/kg
R54C93	1-1.5	02/19/04	Yes	1-R54C93_02/19/04_1	7439-92-1	Lead	7.8		mg/kg
R54C94	1-1.5	02/19/04	Yes	1-R54C94_02/19/04_1	7440-38-2	Arsenic	6.4		mg/kg
R54C94	1-1.5	02/19/04	Yes	1-R54C94_02/19/04_1	7439-92-1	Lead	3.3		mg/kg
R54C95	1-1.5	02/19/04	Yes	1-R54C95_02/19/04_1	7440-38-2	Arsenic	12.3		mg/kg
R54C95	1-1.5	02/19/04	Yes	1-R54C95_02/19/04_1	7439-92-1	Lead	14.7		mg/kg
R54C96	1-1.5	02/26/04	Yes	01-R54C96_02/26/04_1	7440-38-2	Arsenic	10.8		mg/kg
R54C96	1-1.5	02/26/04	Yes	01-R54C96_02/26/04_1	7439-92-1	Lead	8.4		mg/kg
R55C83	1-1.5	04/29/04	Yes	01-R55C83_04/29/04_1	7440-38-2	Arsenic	8.3		mg/kg
R55C83	1-1.5	04/29/04	Yes	01-R55C83_04/29/04_1	7439-92-1	Lead	12.9		mg/kg
R55C84	1-1.5	04/29/04	Yes	01-R55C84_04/29/04_1	7440-38-2	Arsenic	16.7		mg/kg
R55C84	1-1.5	04/29/04	Yes	01-R55C84_04/29/04_1	7439-92-1	Lead	17.8		mg/kg
R55C85	1-1.5	04/29/04	Yes	01-R55C85_04/29/04_1	7440-38-2	Arsenic	11.2		mg/kg
R55C85	1-1.5	04/29/04	Yes	01-R55C85_04/29/04_1	7439-92-1	Lead	12.5		mg/kg
R55C86	1-1.5	04/29/04	Yes	01-R55C86_04/29/04_1	7440-38-2	Arsenic	10.9		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R55C86	1-1.5	04/29/04	Yes	01-R55C86_04/29/04_1	7439-92-1	Lead	14.6		mg/kg
R55C87	1-1.5	04/29/04	Yes	01-R55C87_04/29/04_1	7440-38-2	Arsenic	8.7		mg/kg
R55C87	1-1.5	04/29/04	Yes	01-R55C87_04/29/04_1	7439-92-1	Lead	7.2		mg/kg
R55C88	1-1.5	04/29/04	Yes	01-R55C88_04/29/04_1	7440-38-2	Arsenic	8.0		mg/kg
R55C88	1-1.5	04/29/04	Yes	01-R55C88_04/29/04_1	7439-92-1	Lead	6.2		mg/kg
R55C89	1-1.5	04/29/04	Yes	01-R55C89_04/29/04_1	7440-38-2	Arsenic	14.0		mg/kg
R55C89	1-1.5	04/29/04	Yes	01-R55C89_04/29/04_1	7439-92-1	Lead	14.3		mg/kg
R55C90	1-1.5	04/29/04	Yes	01-R55C90_04/29/04_1	7440-38-2	Arsenic	10.9		mg/kg
R55C90	1-1.5	04/29/04	Yes	01-R55C90_04/29/04_1	7439-92-1	Lead	30.0		mg/kg
R55C91	1-1.5	02/19/04	Yes	1-R55C91_02/19/04_1	7440-38-2	Arsenic	8.0		mg/kg
R55C91	1-1.5	02/19/04	Yes	1-R55C91_02/19/04_1	7439-92-1	Lead	8.5		mg/kg
R55C92	1-1.5	02/19/04	Yes	1-R55C92_02/19/04_1	7440-38-2	Arsenic	7.5		mg/kg
R55C92	1-1.5	02/19/04	Yes	1-R55C92_02/19/04_1	7439-92-1	Lead	4.6		mg/kg
R55C93	1-1.5	02/19/04	Yes	1-R55C93_02/19/04_1	7440-38-2	Arsenic	9.2		mg/kg
R55C93	1-1.5	02/19/04	Yes	1-R55C93_02/19/04_1	7439-92-1	Lead	4.9		mg/kg
R55C94	1-1.5	02/19/04	Yes	1-R55C94_02/19/04_1	7440-38-2	Arsenic	15.6		mg/kg
R55C94	1-1.5	02/19/04	Yes	1-R55C94_02/19/04_1	7439-92-1	Lead	8.4		mg/kg
R55C95	1-1.5	02/19/04	Yes	1-R55C95_02/19/04_1	7440-38-2	Arsenic	8.2		mg/kg
R55C95	1-1.5	02/19/04	Yes	1-R55C95_02/19/04_1	7439-92-1	Lead	7.3		mg/kg
R55C96	1-1.5	02/26/04	Yes	01-R55C96_02/26/04_1	7440-38-2	Arsenic	6.7		mg/kg
R55C96	1-1.5	02/26/04	Yes	01-R55C96_02/26/04_1	7439-92-1	Lead	3.3		mg/kg
R56C83	1-1.5	04/29/04	Yes	01-R56C83_04/29/04_1	7440-38-2	Arsenic	9.7		mg/kg
R56C83	1-1.5	04/29/04	Yes	01-R56C83_04/29/04_1	7439-92-1	Lead	14.1		mg/kg
R56C84	1-1.5	04/29/04	Yes	01-R56C84_04/29/04_1	7440-38-2	Arsenic	8.8		mg/kg
R56C84	1-1.5	04/29/04	Yes	01-R56C84_04/29/04_1	7439-92-1	Lead	16.0		mg/kg
R56C85	1-1.5	04/29/04	Yes	01-R56C85_04/29/04_1	7440-38-2	Arsenic	18.0		mg/kg
R56C85	1-1.5	04/29/04	Yes	01-R56C85_04/29/04_1	7439-92-1	Lead	30.1		mg/kg
R56C86	1-1.5	04/29/04	Yes	01-R56C86_04/29/04_1	7440-38-2	Arsenic	19.7		mg/kg
R56C86	1-1.5	04/29/04	Yes	01-R56C86_04/29/04_1	7439-92-1	Lead	17.1		mg/kg
R56C87	1-1.5	04/29/04	Yes	01-R56C87_04/29/04_1	7440-38-2	Arsenic	17.9		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R56C87	1-1.5	04/29/04	Yes	01-R56C87_04/29/04_1	7439-92-1	Lead	23.8		mg/kg
R56C88	1-1.5	04/29/04	Yes	01-R56C88_04/29/04_1	7440-38-2	Arsenic	14.4		mg/kg
R56C88	1-1.5	04/29/04	Yes	01-R56C88_04/29/04_1	7439-92-1	Lead	12.9		mg/kg
R56C89	1-1.5	04/29/04	Yes	01-R56C89_04/29/04_1	7440-38-2	Arsenic	25.1		mg/kg
R56C89	1-1.5	04/29/04	Yes	01-R56C89_04/29/04_1	7439-92-1	Lead	16.6		mg/kg
R56C90	1-1.5	04/29/04	Yes	01-R56C90_04/29/04_1	7440-38-2	Arsenic	14.1		mg/kg
R56C90	1-1.5	04/29/04	Yes	01-R56C90_04/29/04_1	7439-92-1	Lead	18.0		mg/kg
R56C91	1-1.5	02/19/04	Yes	1-R56C91_02/19/04_1	7440-38-2	Arsenic	9.4		mg/kg
R56C91	1-1.5	02/19/04	Yes	1-R56C91_02/19/04_1	7439-92-1	Lead	12.3		mg/kg
R56C92	1-1.5	02/19/04	Yes	1-R56C92_02/19/04_1	7440-38-2	Arsenic	9.5		mg/kg
R56C92	1-1.5	02/19/04	Yes	1-R56C92_02/19/04_1	7439-92-1	Lead	6.8		mg/kg
R56C93	1-1.5	02/19/04	Yes	1-R56C93_AVG_02/19/04_1	7440-38-2	Arsenic	10.0		mg/kg
R56C93	1-1.5	02/19/04	Yes	1-R56C93_AVG_02/19/04_1	7439-92-1	Lead	8.4		mg/kg
R56C94	1-1.5	02/19/04	Yes	1-R56C94_02/19/04_1	7440-38-2	Arsenic	7.7		mg/kg
R56C94	1-1.5	02/19/04	Yes	1-R56C94_02/19/04_1	7439-92-1	Lead	5.7		mg/kg
R56C95	1-1.5	02/19/04	Yes	1-R56C95_02/19/04_1	7440-38-2	Arsenic	7.8		mg/kg
R56C95	1-1.5	02/19/04	Yes	1-R56C95_02/19/04_1	7439-92-1	Lead	4.8		mg/kg
R56C96	1-1.5	02/19/04	Yes	1-R56C96_02/19/04_1	7440-38-2	Arsenic	12.0		mg/kg
R56C96	1-1.5	02/19/04	Yes	1-R56C96_02/19/04_1	7439-92-1	Lead	10.3		mg/kg
R57C84	1-1.5	04/29/04	Yes	01-R57C84_04/29/04_1	7440-38-2	Arsenic	4.7		mg/kg
R57C84	1-1.5	04/29/04	Yes	01-R57C84_04/29/04_1	7439-92-1	Lead	5.4		mg/kg
R57C85	1-1.5	04/29/04	Yes	01-R57C85_04/29/04_1	7440-38-2	Arsenic	12.2		mg/kg
R57C85	1-1.5	04/29/04	Yes	01-R57C85_04/29/04_1	7439-92-1	Lead	9.4		mg/kg
R57C86	1-1.5	04/29/04	Yes	01-R57C86_04/29/04_1	7440-38-2	Arsenic	8.7		mg/kg
R57C86	1-1.5	04/29/04	Yes	01-R57C86_04/29/04_1	7439-92-1	Lead	9.3		mg/kg
R57C87	1-1.5	04/29/04	Yes	01-R57C87_04/29/04_1	7440-38-2	Arsenic	8.5		mg/kg
R57C87	1-1.5	04/29/04	Yes	01-R57C87_04/29/04_1	7439-92-1	Lead	7.5		mg/kg
R57C88	1-1.5	04/29/04	Yes	01-R57C88_04/29/04_1	7440-38-2	Arsenic	9.6		mg/kg
R57C88	1-1.5	04/29/04	Yes	01-R57C88_04/29/04_1	7439-92-1	Lead	17.2		mg/kg
R57C89	1-1.5	04/29/04	Yes	01-R57C89_04/29/04_1	7440-38-2	Arsenic	14.1		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R57C89	1-1.5	04/29/04	Yes	01-R57C89_04/29/04_1	7439-92-1	Lead	19.4		mg/kg
R57C90	1-1.5	04/29/04	Yes	01-R57C90_04/29/04_1	7440-38-2	Arsenic	9.1		mg/kg
R57C90	1-1.5	04/29/04	Yes	01-R57C90_04/29/04_1	7439-92-1	Lead	10.9		mg/kg
R57C91	1-1.5	02/19/04	Yes	1-R57C91_02/19/04_1	7440-38-2	Arsenic	6.4		mg/kg
R57C91	1-1.5	02/19/04	Yes	1-R57C91_02/19/04_1	7439-92-1	Lead	4.3		mg/kg
R57C92	1-1.5	02/19/04	Yes	1-R57C92_02/19/04_1	7440-38-2	Arsenic	9.4		mg/kg
R57C92	1-1.5	02/19/04	Yes	1-R57C92_02/19/04_1	7439-92-1	Lead	9.1		mg/kg
R57C93	1-1.5	02/19/04	Yes	1-R57C93_02/19/04_1	7440-38-2	Arsenic	9.0		mg/kg
R57C93	1-1.5	02/19/04	Yes	1-R57C93_02/19/04_1	7439-92-1	Lead	13.4		mg/kg
R57C94	1-1.5	02/19/04	Yes	1-R57C94_02/19/04_1	7440-38-2	Arsenic	10.9		mg/kg
R57C94	1-1.5	02/19/04	Yes	1-R57C94_02/19/04_1	7439-92-1	Lead	7.7		mg/kg
R57C95	1-1.5	02/19/04	Yes	1-R57C95_02/19/04_1	7440-38-2	Arsenic	7.0		mg/kg
R57C95	1-1.5	02/19/04	Yes	1-R57C95_02/19/04_1	7439-92-1	Lead	3.8		mg/kg
R58C84	1-1.5	04/29/04	Yes	01-R58C84_04/29/04_1	7440-38-2	Arsenic	9.0		mg/kg
R58C84	1-1.5	04/29/04	Yes	01-R58C84_04/29/04_1	7439-92-1	Lead	7.7		mg/kg
R58C85	1-1.5	04/27/04	Yes	1-R58C85_04/27/04_1	7440-38-2	Arsenic	6.0		mg/kg
R58C85	1-1.5	04/27/04	Yes	1-R58C85_04/27/04_1	7439-92-1	Lead	2.3	U	mg/kg
R58C86	1-1.5	04/29/04	Yes	01-R58C86_AVG_04/29/04_1	7440-38-2	Arsenic	7.9		mg/kg
R58C86	1-1.5	04/29/04	Yes	01-R58C86_AVG_04/29/04_1	7439-92-1	Lead	8.2		mg/kg
R58C87	1-1.5	04/29/04	Yes	01-R58C87_04/29/04_1	7440-38-2	Arsenic	4.7		mg/kg
R58C87	1-1.5	04/29/04	Yes	01-R58C87_04/29/04_1	7439-92-1	Lead	4.1		mg/kg
R58C88	1-1.5	04/29/04	Yes	01-R58C88_04/29/04_1	7440-38-2	Arsenic	5.2		mg/kg
R58C88	1-1.5	04/29/04	Yes	01-R58C88_04/29/04_1	7439-92-1	Lead	4.5		mg/kg
R58C89	1-1.5	04/29/04	Yes	01-R58C89_AVG_04/29/04_1	7440-38-2	Arsenic	6.2		mg/kg
R58C89	1-1.5	04/29/04	Yes	01-R58C89_AVG_04/29/04_1	7439-92-1	Lead	5.9		mg/kg
R58C90	1-1.5	04/29/04	Yes	01-R58C90_04/29/04_1	7440-38-2	Arsenic	6.7		mg/kg
R58C90	1-1.5	04/29/04	Yes	01-R58C90_04/29/04_1	7439-92-1	Lead	6.5		mg/kg
R58C91	1-1.5	02/19/04	Yes	1-R58C91_02/19/04_1	7440-38-2	Arsenic	7.6		mg/kg
R58C91	1-1.5	02/19/04	Yes	1-R58C91_02/19/04_1	7439-92-1	Lead	5.3		mg/kg
R58C92	1-1.5	02/19/04	Yes	1-R58C92_02/19/04_1	7440-38-2	Arsenic	7.3		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R58C92	1-1.5	02/19/04	Yes	1-R58C92_02/19/04_1	7439-92-1	Lead	6.5		mg/kg
R58C93	1-1.5	02/19/04	Yes	1-R58C93_02/19/04_1	7440-38-2	Arsenic	7.9		mg/kg
R58C93	1-1.5	02/19/04	Yes	1-R58C93_02/19/04_1	7439-92-1	Lead	6.8		mg/kg
R58C94	1-1.5	02/19/04	Yes	1-R58C94_02/19/04_1	7440-38-2	Arsenic	6.0		mg/kg
R58C94	1-1.5	02/19/04	Yes	1-R58C94_02/19/04_1	7439-92-1	Lead	4.4		mg/kg
R58C95	1-1.5	02/19/04	Yes	1-R58C95_02/19/04_1	7440-38-2	Arsenic	6.5		mg/kg
R58C95	1-1.5	02/19/04	Yes	1-R58C95_02/19/04_1	7439-92-1	Lead	3.7		mg/kg
R59C86	1-1.5	02/19/04	Yes	1-R59C86_02/19/04_1	7440-38-2	Arsenic	13.8		mg/kg
R59C86	1-1.5	02/19/04	Yes	1-R59C86_02/19/04_1	7439-92-1	Lead	9.4		mg/kg
R59C87	1-1.5	02/19/04	Yes	1-R59C87_02/19/04_1	7440-38-2	Arsenic	10.5		mg/kg
R59C87	1-1.5	02/19/04	Yes	1-R59C87_02/19/04_1	7439-92-1	Lead	8.5		mg/kg
R59C88	1-1.5	02/17/04	Yes	1-R59C88_02/17/04_1	7440-38-2	Arsenic	7.5		mg/kg
R59C88	1-1.5	02/17/04	Yes	1-R59C88_02/17/04_1	7439-92-1	Lead	6.7		mg/kg
R59C89	1-1.5	02/17/04	Yes	1-R59C89_02/17/04_1	7440-38-2	Arsenic	5.7		mg/kg
R59C89	1-1.5	02/17/04	Yes	1-R59C89_02/17/04_1	7439-92-1	Lead	4.5		mg/kg
R59C90	1-1.5	02/19/04	Yes	1-R59C90_02/19/04_1	7440-38-2	Arsenic	10.8		mg/kg
R59C90	1-1.5	02/19/04	Yes	1-R59C90_02/19/04_1	7439-92-1	Lead	9.5		mg/kg
R59C91	1-1.5	02/19/04	Yes	1-R59C91_02/19/04_1	7440-38-2	Arsenic	8.4		mg/kg
R59C91	1-1.5	02/19/04	Yes	1-R59C91_02/19/04_1	7439-92-1	Lead	7.5		mg/kg
R59C92	1-1.5	02/19/04	Yes	1-R59C92_02/19/04_1	7440-38-2	Arsenic	11.4		mg/kg
R59C92	1-1.5	02/19/04	Yes	1-R59C92_02/19/04_1	7439-92-1	Lead	10.5		mg/kg
R59C93	1-1.5	02/26/04	Yes	01-R59C93_02/26/04_1	7440-38-2	Arsenic	13.4		mg/kg
R59C93	1-1.5	02/26/04	Yes	01-R59C93_02/26/04_1	7439-92-1	Lead	15.9		mg/kg
R59C94	1-1.5	02/19/04	Yes	1-R59C94_02/19/04_1	7440-38-2	Arsenic	10.5		mg/kg
R59C94	1-1.5	02/19/04	Yes	1-R59C94_02/19/04_1	7439-92-1	Lead	8.6		mg/kg
R60C86	1-1.5	02/19/04	Yes	1-R60C86_02/19/04_1	7440-38-2	Arsenic	10.7		mg/kg
R60C86	1-1.5	02/19/04	Yes	1-R60C86_02/19/04_1	7439-92-1	Lead	6.7		mg/kg
R60C87	1-1.5	02/17/04	Yes	1-R60C87_02/17/04_1	7440-38-2	Arsenic	9.8		mg/kg
R60C87	1-1.5	02/17/04	Yes	1-R60C87_02/17/04_1	7439-92-1	Lead	9.2		mg/kg
R60C88	1-1.5	02/17/04	Yes	1-R60C88_02/17/04_1	7440-38-2	Arsenic	8.6		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R60C88	1-1.5	02/17/04	Yes	1-R60C88_02/17/04_1	7439-92-1	Lead	6.3		mg/kg
R60C89	1-1.5	02/17/04	Yes	1-R60C89_02/17/04_1	7440-38-2	Arsenic	6.6		mg/kg
R60C89	1-1.5	02/17/04	Yes	1-R60C89_02/17/04_1	7439-92-1	Lead	5.3		mg/kg
R60C90	1-1.5	02/19/04	Yes	1-R60C90_02/19/04_1	7440-38-2	Arsenic	9.3		mg/kg
R60C90	1-1.5	02/19/04	Yes	1-R60C90_02/19/04_1	7439-92-1	Lead	7.0		mg/kg
R60C91	1-1.5	02/19/04	Yes	1-R60C91_02/19/04_1	7440-38-2	Arsenic	6.5		mg/kg
R60C91	1-1.5	02/19/04	Yes	1-R60C91_02/19/04_1	7439-92-1	Lead	4.3		mg/kg
R60C92	1-1.5	02/19/04	Yes	1-R60C92_02/19/04_1	7440-38-2	Arsenic	9.3		mg/kg
R60C92	1-1.5	02/19/04	Yes	1-R60C92_02/19/04_1	7439-92-1	Lead	6.6		mg/kg
R60C93	1-1.5	02/19/04	Yes	1-R60C93_02/19/04_1	7440-38-2	Arsenic	11.3		mg/kg
R60C93	1-1.5	02/19/04	Yes	1-R60C93_02/19/04_1	7439-92-1	Lead	9.4		mg/kg
R60C94	1-1.5	02/19/04	Yes	1-R60C94_AVG_02/19/04_1	7440-38-2	Arsenic	10.5		mg/kg
R60C94	1-1.5	02/19/04	Yes	1-R60C94_AVG_02/19/04_1	7439-92-1	Lead	8.7		mg/kg
R61C83	1-1.5	04/22/04	Yes	1-R61C83_04/22/04_1	7440-38-2	Arsenic	6.1		mg/kg
R61C83	1-1.5	04/22/04	Yes	1-R61C83_04/22/04_1	7439-92-1	Lead	5.5		mg/kg
R61C84	1-1.5	04/27/04	Yes	1-R61C84_04/27/04_1	7440-38-2	Arsenic	6.4		mg/kg
R61C84	1-1.5	04/27/04	Yes	1-R61C84_04/27/04_1	7439-92-1	Lead	2.3	U	mg/kg
R61C85	1-1.5	04/27/04	Yes	1-R61C85_04/27/04_1	7440-38-2	Arsenic	7.1		mg/kg
R61C85	1-1.5	04/27/04	Yes	1-R61C85_04/27/04_1	7439-92-1	Lead	2.4	U	mg/kg
R61C86	1-1.5	02/17/04	Yes	1-R61C86_02/17/04_1	7440-38-2	Arsenic	11.4		mg/kg
R61C86	1-1.5	02/17/04	Yes	1-R61C86_02/17/04_1	7439-92-1	Lead	10.6		mg/kg
R61C87	1-1.5	02/17/04	Yes	1-R61C87_02/17/04_1	7440-38-2	Arsenic	8.3		mg/kg
R61C87	1-1.5	02/17/04	Yes	1-R61C87_02/17/04_1	7439-92-1	Lead	6.1		mg/kg
R61C88	1-1.5	02/17/04	Yes	1-R61C88_02/17/04_1	7440-38-2	Arsenic	7.2		mg/kg
R61C88	1-1.5	02/17/04	Yes	1-R61C88_02/17/04_1	7439-92-1	Lead	5.2		mg/kg
R61C89	1-1.5	04/29/04	Yes	01-R61C89_04/29/04_1	7440-38-2	Arsenic	9.3		mg/kg
R61C89	1-1.5	04/29/04	Yes	01-R61C89_04/29/04_1	7439-92-1	Lead	9.0		mg/kg
R61C90	1-1.5	04/29/04	Yes	01-R61C90_04/29/04_1	7440-38-2	Arsenic	11.3		mg/kg
R61C90	1-1.5	04/29/04	Yes	01-R61C90_04/29/04_1	7439-92-1	Lead	13.5		mg/kg
R61C91	1-1.5	02/19/04	Yes	1-R61C91_02/19/04_1	7440-38-2	Arsenic	8.6		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R61C91	1-1.5	02/19/04	Yes	1-R61C91_02/19/04_1	7439-92-1	Lead	6.4		mg/kg
R61C92	1-1.5	02/19/04	Yes	1-R61C92_02/19/04_1	7440-38-2	Arsenic	9.1		mg/kg
R61C92	1-1.5	02/19/04	Yes	1-R61C92_02/19/04_1	7439-92-1	Lead	6.1		mg/kg
R61C93	1-1.5	02/19/04	Yes	1-R61C93_02/19/04_1	7440-38-2	Arsenic	13.7		mg/kg
R61C93	1-1.5	02/19/04	Yes	1-R61C93_02/19/04_1	7439-92-1	Lead	25.4		mg/kg
R62C85	1-1.5	04/27/04	Yes	1-R62C85_04/27/04_1	7440-38-2	Arsenic	6.6		mg/kg
R62C85	1-1.5	04/27/04	Yes	1-R62C85_04/27/04_1	7439-92-1	Lead	2.1	U	mg/kg
R62C86	1-1.5	02/17/04	Yes	1-R62C86_02/17/04_1	7440-38-2	Arsenic	7.5		mg/kg
R62C86	1-1.5	02/17/04	Yes	1-R62C86_02/17/04_1	7439-92-1	Lead	6.2		mg/kg
R62C87	1-1.5	02/17/04	Yes	1-R62C87_02/17/04_1	7440-38-2	Arsenic	7.1		mg/kg
R62C87	1-1.5	02/17/04	Yes	1-R62C87_02/17/04_1	7439-92-1	Lead	5.0		mg/kg
R62C88	1-1.5	02/17/04	Yes	1-R62C88_02/17/04_1	7440-38-2	Arsenic	5.3		mg/kg
R62C88	1-1.5	02/17/04	Yes	1-R62C88_02/17/04_1	7439-92-1	Lead	3.4		mg/kg
R62C89	1-1.5	04/29/04	Yes	1-R62C89_04/29/04_1	7440-38-2	Arsenic	5.8		mg/kg
R62C89	1-1.5	04/29/04	Yes	1-R62C89_04/29/04_1	7439-92-1	Lead	4.7		mg/kg
R62C90	1-1.5	04/29/04	Yes	1-R62C90_04/29/04_1	7440-38-2	Arsenic	5.4		mg/kg
R62C90	1-1.5	04/29/04	Yes	1-R62C90_04/29/04_1	7439-92-1	Lead	4.0		mg/kg
R62C91	1-1.5	04/29/04	Yes	1-R62C91_04/29/04_1	7440-38-2	Arsenic	6.5		mg/kg
R62C91	1-1.5	04/29/04	Yes	1-R62C91_04/29/04_1	7439-92-1	Lead	4.4		mg/kg
R62C92	1-1.5	04/29/04	Yes	1-R62C92_AVG_04/29/04_1	7440-38-2	Arsenic	9.4		mg/kg
R62C92	1-1.5	04/29/04	Yes	1-R62C92_AVG_04/29/04_1	7439-92-1	Lead	5.9		mg/kg
R62C93	1-1.5	02/19/04	Yes	1-R62C93_02/19/04_1	7440-38-2	Arsenic	18.7		mg/kg
R62C93	1-1.5	02/19/04	Yes	1-R62C93_02/19/04_1	7439-92-1	Lead	17.3		mg/kg
R63C87	1-1.5	02/17/04	Yes	1-R63C87_AVG_02/17/04_1	7440-38-2	Arsenic	8.2		mg/kg
R63C87	1-1.5	02/17/04	Yes	1-R63C87_AVG_02/17/04_1	7439-92-1	Lead	5.6		mg/kg
R63C88	1-1.5	04/29/04	Yes	1-R63C88_04/29/04_1	7440-38-2	Arsenic	9.2		mg/kg
R63C88	1-1.5	04/29/04	Yes	1-R63C88_04/29/04_1	7439-92-1	Lead	9.5		mg/kg
R63C89	1-1.5	04/29/04	Yes	1-R63C89_04/29/04_1	7440-38-2	Arsenic	6.3		mg/kg
R63C89	1-1.5	04/29/04	Yes	1-R63C89_04/29/04_1	7439-92-1	Lead	4.4		mg/kg
R63C91	1-1.5	04/29/04	Yes	1-R63C91_04/29/04_1	7440-38-2	Arsenic	6.5		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R63C91	1-1.5	04/29/04	Yes	1-R63C91_04/29/04_1	7439-92-1	Lead	4.7		mg/kg
R63C92	1-1.5	04/29/04	Yes	1-R63C92_04/29/04_1	7440-38-2	Arsenic	9.7		mg/kg
R63C92	1-1.5	04/29/04	Yes	1-R63C92_04/29/04_1	7439-92-1	Lead	5.2		mg/kg
R64C88	1-1.5	04/29/04	Yes	1-R64C88_04/29/04_1	7440-38-2	Arsenic	6.6		mg/kg
R64C88	1-1.5	04/29/04	Yes	1-R64C88_04/29/04_1	7439-92-1	Lead	4.4		mg/kg
RR-548-B1	0-0.5	12/17/93	Yes	RR-548-B1	7440-38-2	Arsenic	13.0		mg/kg
SA3-77-120	1.5-2	10/13/99	Yes	SA3-77-120	7440-38-2	Arsenic	3.3		mg/kg
SA3-77-120	1.5-2	10/13/99	Yes	SA3-77-120	7439-92-1	Lead	5.5		mg/kg
SA3-77-121	1.5-2	10/13/99	Yes	SA3-77-121	7440-38-2	Arsenic	6.3		mg/kg
SA3-77-121	1.5-2	10/13/99	Yes	SA3-77-121	7439-92-1	Lead	17.0		mg/kg
SA3-77-122	1.5-2	10/13/99	Yes	SA3-77-122	7440-38-2	Arsenic	2.0	U	mg/kg
SA3-77-122	1.5-2	10/13/99	Yes	SA3-77-122	7439-92-1	Lead	6.5		mg/kg
SA3-77-123	1.5-2	10/13/99	Yes	SA3-77-123	7440-38-2	Arsenic	9.8		mg/kg
SA3-77-123	1.5-2	10/13/99	Yes	SA3-77-123	7439-92-1	Lead	9.8		mg/kg
SA3-77-124	1.5-2	10/13/99	Yes	SA3-77-124	7440-38-2	Arsenic	54.0		mg/kg
SA3-77-124	1.5-2	10/13/99	Yes	SA3-77-124	7439-92-1	Lead	47.0		mg/kg
SA3-77-125	1.5-2	10/13/99	Yes	SA3-77-125	7440-38-2	Arsenic	17.0		mg/kg
SA3-77-125	1.5-2	10/13/99	Yes	SA3-77-125	7439-92-1	Lead	11.0		mg/kg
SA3-77-126	1.5-2	10/13/99	Yes	SA3-77-126	7440-38-2	Arsenic	30.0		mg/kg
SA3-77-126	1.5-2	10/13/99	Yes	SA3-77-126	7439-92-1	Lead	33.0		mg/kg
SA3-77-127	1.5-2	10/13/99	Yes	SA3-77-127	7440-38-2	Arsenic	9.9		mg/kg
SA3-77-127	1.5-2	10/13/99	Yes	SA3-77-127	7439-92-1	Lead	15.0		mg/kg
SA3-78-120	1.5-2	10/13/99	Yes	SA3-78-120	7440-38-2	Arsenic	16.0		mg/kg
SA3-78-120	1.5-2	10/13/99	Yes	SA3-78-120	7439-92-1	Lead	5.6		mg/kg
SA3-78-121	1.5-2	10/13/99	Yes	SA3-78-121	7440-38-2	Arsenic	31.0		mg/kg
SA3-78-121	1.5-2	10/13/99	Yes	SA3-78-121	7439-92-1	Lead	39.0		mg/kg
SA3-78-122	1.5-2	10/13/99	Yes	SA3-78-122	7440-38-2	Arsenic	2.3		mg/kg
SA3-78-122	1.5-2	10/13/99	Yes	SA3-78-122	7439-92-1	Lead	4.8		mg/kg
SA3-78-123	1.5-2	10/13/99	Yes	SA3-78-123	7440-38-2	Arsenic	3.3		mg/kg
SA3-78-123	1.5-2	10/13/99	Yes	SA3-78-123	7439-92-1	Lead	5.1		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA3-78-124	1.5-2	10/13/99	Yes	SA3-78-124	7440-38-2	Arsenic	4.7		mg/kg
SA3-78-124	1.5-2	10/13/99	Yes	SA3-78-124	7439-92-1	Lead	5.5		mg/kg
SA3-78-125	1.5-2	10/13/99	Yes	SA3-78-125	7440-38-2	Arsenic	3.6		mg/kg
SA3-78-125	1.5-2	10/13/99	Yes	SA3-78-125	7439-92-1	Lead	6.2		mg/kg
SA3-78-126	1.5-2	10/13/99	Yes	SA3-78-126	7440-38-2	Arsenic	3.1		mg/kg
SA3-78-126	1.5-2	10/13/99	Yes	SA3-78-126	7439-92-1	Lead	5.2		mg/kg
SA3-78-127	1.5-2	10/13/99	Yes	SA3-78-127	7440-38-2	Arsenic	7.6		mg/kg
SA3-78-127	1.5-2	10/13/99	Yes	SA3-78-127	7439-92-1	Lead	14.0		mg/kg
SA3-78-128	1.5-2	10/13/99	Yes	SA3-78-128	7440-38-2	Arsenic	3.1		mg/kg
SA3-78-128	1.5-2	10/13/99	Yes	SA3-78-128	7439-92-1	Lead	6.1		mg/kg
SA3-78-129	1.5-2	10/13/99	Yes	SA3-78-129	7440-38-2	Arsenic	13.0		mg/kg
SA3-78-129	1.5-2	10/13/99	Yes	SA3-78-129	7439-92-1	Lead	25.0		mg/kg
SA3-78-130	1.5-2	10/13/99	Yes	SA3-78-130	7440-38-2	Arsenic	7.8		mg/kg
SA3-78-130	1.5-2	10/13/99	Yes	SA3-78-130	7439-92-1	Lead	6.3		mg/kg
SA3-78-131	1.5-2	10/13/99	Yes	SA3-78-131	7440-38-2	Arsenic	9.2		mg/kg
SA3-78-131	1.5-2	10/13/99	Yes	SA3-78-131	7439-92-1	Lead	13.0		mg/kg
SA3-79-119	1.5-2	10/13/99	Yes	SA3-79-119	7440-38-2	Arsenic	25.0		mg/kg
SA3-79-119	1.5-2	10/13/99	Yes	SA3-79-119	7439-92-1	Lead	41.0		mg/kg
SA3-79-120	1.5-2	10/13/99	Yes	SA3-79-120	7440-38-2	Arsenic	17.0		mg/kg
SA3-79-120	1.5-2	10/13/99	Yes	SA3-79-120	7439-92-1	Lead	21.0		mg/kg
SA3-79-122	1.5-2	10/13/99	Yes	SA3-79-122	7440-38-2	Arsenic	11.0		mg/kg
SA3-79-122	1.5-2	10/13/99	Yes	SA3-79-122	7439-92-1	Lead	17.0		mg/kg
SA3-79-123	1.5-2	10/13/99	Yes	SA3-79-123	7440-38-2	Arsenic	28.0		mg/kg
SA3-79-123	1.5-2	10/13/99	Yes	SA3-79-123	7439-92-1	Lead	51.0		mg/kg
SA3-79-124	1.5-2	10/13/99	Yes	SA3-79-124	7440-38-2	Arsenic	15.0		mg/kg
SA3-79-124	1.5-2	10/13/99	Yes	SA3-79-124	7439-92-1	Lead	30.0		mg/kg
SA3-79-125	1.5-2	10/13/99	Yes	SA3-79-125	7440-38-2	Arsenic	3.3		mg/kg
SA3-79-125	1.5-2	10/13/99	Yes	SA3-79-125	7439-92-1	Lead	4.5		mg/kg
SA3-79-126	1.5-2	10/13/99	Yes	SA3-79-126	7440-38-2	Arsenic	6.8		mg/kg
SA3-79-126	1.5-2	10/13/99	Yes	SA3-79-126	7439-92-1	Lead	15.0		mg/kg

Table B.7
Sample Results for CM-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA3-79-127	1.5-2	10/14/99	Yes	SA3-79-127	7440-38-2	Arsenic	8.5		mg/kg
SA3-79-127	1.5-2	10/14/99	Yes	SA3-79-127	7439-92-1	Lead	14.0		mg/kg
SA3-79-128	1.5-2	10/14/99	Yes	SA3-79-128	7440-38-2	Arsenic	8.9		mg/kg
SA3-79-128	1.5-2	10/14/99	Yes	SA3-79-128	7439-92-1	Lead	16.0		mg/kg
SA3-79-129	1.5-2	10/14/99	Yes	SA3-79-129	7440-38-2	Arsenic	8.5		mg/kg
SA3-79-129	1.5-2	10/14/99	Yes	SA3-79-129	7439-92-1	Lead	7.6		mg/kg
SA3-79-130	1.5-2	10/14/99	Yes	SA3-79-130	7440-38-2	Arsenic	19.0		mg/kg
SA3-79-130	1.5-2	10/14/99	Yes	SA3-79-130	7439-92-1	Lead	25.0		mg/kg
SA3-79-131	1.5-2	10/14/99	Yes	SA3-79-131	7440-38-2	Arsenic	12.0		mg/kg
SA3-79-131	1.5-2	10/14/99	Yes	SA3-79-131	7439-92-1	Lead	5.3		mg/kg
SA3-79-132	1.5-2	10/14/99	Yes	SA3-79-132	7440-38-2	Arsenic	4.0		mg/kg
SA3-79-132	1.5-2	10/14/99	Yes	SA3-79-132	7439-92-1	Lead	4.9		mg/kg
SA3-79-133	1.5-2	10/14/99	Yes	SA3-79-133	7440-38-2	Arsenic	4.9		mg/kg
SA3-79-133	1.5-2	10/14/99	Yes	SA3-79-133	7439-92-1	Lead	13.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-175	0-0.5	11/09/93	Yes	LR-175	7440-38-2	Arsenic	28.0		mg/kg
LR-176	0-0.5	11/09/93	Yes	LR-176	7440-38-2	Arsenic	34.0		mg/kg
LR-177	0-0.5	11/09/93	Yes	LR-177	7440-38-2	Arsenic	20.0		mg/kg
LR-189	0-0.5	11/18/93	Yes	LR-189	7440-38-2	Arsenic	37.0		mg/kg
LR-190	0-0.5	03/25/93	Yes	LR-190	7440-38-2	Arsenic	17.0		mg/kg
LR-190	0-0.5	03/25/93	Yes	LR-190	7439-92-1	Lead	87.0		mg/kg
LR-191	0-0.5	11/09/93	Yes	LR-191	7440-38-2	Arsenic	24.0		mg/kg
LR-192	0-0.5	03/25/93	Yes	LR-192	7440-38-2	Arsenic	3.0		mg/kg
LR-192	0-0.5	03/25/93	Yes	LR-192	7439-92-1	Lead	27.0		mg/kg
LR-193	0-0.5	11/09/93	Yes	LR-193	7440-38-2	Arsenic	18.0		mg/kg
LR-203	0-0.5	11/18/93	Yes	LR-203	7440-38-2	Arsenic	25.0		mg/kg
LR-204	0-0.5	11/18/93	Yes	LR-204	7440-38-2	Arsenic	14.0		mg/kg
LR-205	0-0.5	11/18/93	Yes	LR-205	7440-38-2	Arsenic	46.0		mg/kg
LR-206	0-0.5	11/18/93	Yes	LR-206	7440-38-2	Arsenic	19.0		mg/kg
LR-207-S-2	0.5-1	07/02/93	Yes	LR-207-S-2	7440-38-2	Arsenic	22.0		mg/kg
LR-207-S-3	1-2	12/10/93	Yes	LR-207-S-3	7440-38-2	Arsenic	13.0		mg/kg
LR-207	0-0.5	11/10/93	No	LR-207	7440-38-2	Arsenic	140.0		mg/kg
LR-221	0-0.5	03/25/93	Yes	LR-221	7440-38-2	Arsenic	21.0		mg/kg
LR-221	0-0.5	03/25/93	Yes	LR-221	7439-92-1	Lead	35.0		mg/kg
LR-222	0-0.5	11/18/93	Yes	LR-222	7440-38-2	Arsenic	6.9		mg/kg
LR-223	0-0.5	03/25/93	Yes	LR-223	7440-38-2	Arsenic	70.0		mg/kg
LR-223	0-0.5	03/25/93	Yes	LR-223	7439-92-1	Lead	62.0		mg/kg
LR-224	0-0.5	11/18/93	Yes	LR-224	7440-38-2	Arsenic	31.0		mg/kg
LR-238	0-0.5	11/18/93	Yes	LR-238	7440-38-2	Arsenic	13.0		mg/kg
LR-239	0-0.5	11/18/93	Yes	LR-239	7440-38-2	Arsenic	52.0		mg/kg
LR-240	0-0.5	11/18/93	Yes	LR-240	7440-38-2	Arsenic	44.0		mg/kg
MSU-29-E	0-0.5	06/19/03	No	01-SS-[MSU-29-E]-D1_06/19/03_0	7439-92-1	Lead	21.2		mg/kg
MSU-29-E	0-0.5	07/16/03	Yes	02-SS-[MSU-29-E]-D1_07/16/03_0	7440-38-2	Arsenic	38.8		mg/kg
MSU-29-N	0-0.5	06/19/03	Yes	01-SS-[MSU-29-N]-D1_06/19/03_0	7440-38-2	Arsenic	54.1		mg/kg
MSU-29-N	0-0.5	06/19/03	Yes	01-SS-[MSU-29-N]-D1_06/19/03_0	7439-92-1	Lead	48.4		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-29-S	0-0.5	06/19/03	No	01-SS-[MSU-29-S]-D1_06/19/03_0	7439-92-1	Lead	39.8		mg/kg
MSU-29-S	0-0.5	07/16/03	Yes	02-SS-[MSU-29-S]-D1_07/16/03_0	7440-38-2	Arsenic	21.8		mg/kg
MSU-29-VS-B	1.5-2	08/04/03	Yes	01-SS-[MSU-29-VS-B]-C2_08/04/03_1.5	7440-38-2	Arsenic	10.6		mg/kg
MSU-29-W	0-0.5	06/19/03	No	01-SS-[MSU-29-W]-D1_AVG_06/19/03_0	7439-92-1	Lead	25.4		mg/kg
MSU-29-W	0-0.5	07/16/03	Yes	02-SS-[MSU-29-W]-D1_07/16/03_0	7440-38-2	Arsenic	43.9		mg/kg
MSU-30-E	0-0.5	06/26/03	Yes	01-SS-[MSU-30-E]-D1_06/26/03_0	7440-38-2	Arsenic	53.1		mg/kg
MSU-30-E	0-0.5	06/26/03	Yes	01-SS-[MSU-30-E]-D1_06/26/03_0	7439-92-1	Lead	75.3		mg/kg
MSU-30-N	0-0.5	07/16/03	Yes	02-SS-[MSU-30-N]-D1_07/16/03_0	7440-38-2	Arsenic	54.3		mg/kg
MSU-30-N	0-0.5	07/16/03	Yes	02-SS-[MSU-30-N]-D1_07/16/03_0	7439-92-1	Lead	61.7		mg/kg
MSU-30-S	0-0.5	06/26/03	Yes	01-SS-[MSU-30-S]-D1_06/26/03_0	7440-38-2	Arsenic	56.1		mg/kg
MSU-30-S	0-0.5	06/26/03	Yes	01-SS-[MSU-30-S]-D1_06/26/03_0	7439-92-1	Lead	56.3		mg/kg
MSU-30-W	0-0.5	06/26/03	No	01-SS-[MSU-30-W]-D1_06/26/03_0	7439-92-1	Lead	54.1		mg/kg
MSU-30-W	0-0.5	07/16/03	Yes	02-SS-[MSU-30-W]-D1_07/16/03_0	7440-38-2	Arsenic	28.4		mg/kg
R61C73	0-0.5	02/05/01	Yes	01-C012-SS-[R61C73]-D1-000	7440-38-2	Arsenic	60.0		mg/kg
R61C73	0-0.5	02/05/01	Yes	01-C012-SS-[R61C73]-D1-000	7439-92-1	Lead	130.0		mg/kg
R61C74	0-0.5	02/05/01	Yes	01-C012-SS-[R61C74]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
R61C74	0-0.5	02/05/01	Yes	01-C012-SS-[R61C74]-D1-000	7439-92-1	Lead	37.0		mg/kg
R61C75	0-0.5	02/07/01	Yes	01-C013-SS-[R61C75]-D1-000	7440-38-2	Arsenic	11.0		mg/kg
R61C75	0-0.5	02/07/01	Yes	01-C013-SS-[R61C75]-D1-000	7439-92-1	Lead	20.0		mg/kg
R61C76	0-0.5	02/07/01	Yes	01-C013-SS-[R61C76]-D1-000	7440-38-2	Arsenic	19.0		mg/kg
R61C76	0-0.5	02/07/01	Yes	01-C013-SS-[R61C76]-D1-000	7439-92-1	Lead	24.0		mg/kg
R61C77	0-0.5	02/08/01	Yes	01-C013-SS-[R61C77]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R61C77	0-0.5	02/08/01	Yes	01-C013-SS-[R61C77]-D1-000	7439-92-1	Lead	28.0		mg/kg
R61C79	0-0.5	02/12/01	Yes	01-C013-SS-[R61C79]-D1-000	7440-38-2	Arsenic	28.0		mg/kg
R61C79	0-0.5	02/12/01	Yes	01-C013-SS-[R61C79]-D1-000	7439-92-1	Lead	34.0		mg/kg
R61C80	0-0.5	02/12/01	Yes	01-C013-SS-[R61C80]-D1-000	7440-38-2	Arsenic	10.0		mg/kg
R61C80	0-0.5	02/12/01	Yes	01-C013-SS-[R61C80]-D1-000	7439-92-1	Lead	17.0		mg/kg
R61C81	0-0.5	02/12/01	Yes	01-C013-SS-[R61C81]-D1-000	7440-38-2	Arsenic	23.0		mg/kg
R61C81	0-0.5	02/12/01	Yes	01-C013-SS-[R61C81]-D1-000	7439-92-1	Lead	38.0		mg/kg
R61C82	0-0.5	02/12/01	Yes	01-C013-SS-[R61C82]-D1-000	7440-38-2	Arsenic	25.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R61C82	0-0.5	02/12/01	Yes	01-C013-SS-[R61C82]-D1-000	7439-92-1	Lead	30.0		mg/kg
R62C73	0-0.5	02/05/01	Yes	01-C012-SS-[R62C73]-D1-000	7440-38-2	Arsenic	32.0		mg/kg
R62C73	0-0.5	02/05/01	Yes	01-C012-SS-[R62C73]-D1-000	7439-92-1	Lead	32.0		mg/kg
R62C74	0-0.5	02/05/01	Yes	01-C012-SS-[R62C74]-D1-000	7440-38-2	Arsenic	110.0		mg/kg
R62C74	0-0.5	02/05/01	Yes	01-C012-SS-[R62C74]-D1-000	7439-92-1	Lead	98.0		mg/kg
R62C75	0-0.5	02/07/01	Yes	01-C013-SS-[R62C75]-D1-000	7440-38-2	Arsenic	74.0		mg/kg
R62C75	0-0.5	02/07/01	Yes	01-C013-SS-[R62C75]-D1-000	7439-92-1	Lead	150.0		mg/kg
R62C76	0-0.5	02/07/01	Yes	01-C013-SS-[R62C76]-D1-000-DAVG	7440-38-2	Arsenic	24.5		mg/kg
R62C76	0-0.5	02/07/01	Yes	01-C013-SS-[R62C76]-D1-000-DAVG	7439-92-1	Lead	76.0		mg/kg
R62C77	0-0.5	02/08/01	Yes	01-C013-SS-[R62C77]-D1-000	7440-38-2	Arsenic	32.0		mg/kg
R62C77	0-0.5	02/08/01	Yes	01-C013-SS-[R62C77]-D1-000	7439-92-1	Lead	21.0		mg/kg
R62C78	0-0.5	02/08/01	Yes	01-C013-SS-[R62C78]-D1-000	7440-38-2	Arsenic	64.0		mg/kg
R62C78	0-0.5	02/08/01	Yes	01-C013-SS-[R62C78]-D1-000	7439-92-1	Lead	98.0		mg/kg
R62C79	0-0.5	02/08/01	Yes	01-C013-SS-[R62C79]-D1-000	7440-38-2	Arsenic	26.0		mg/kg
R62C79	0-0.5	02/08/01	Yes	01-C013-SS-[R62C79]-D1-000	7439-92-1	Lead	36.0		mg/kg
R62C81	0-0.5	02/12/01	Yes	01-C013-SS-[R62C81]-D1-000	7440-38-2	Arsenic	47.0		mg/kg
R62C81	0-0.5	02/12/01	Yes	01-C013-SS-[R62C81]-D1-000	7439-92-1	Lead	53.0		mg/kg
R62C82	0-0.5	02/12/01	Yes	01-C013-SS-[R62C82]-D1-000	7440-38-2	Arsenic	4.9		mg/kg
R62C82	0-0.5	02/12/01	Yes	01-C013-SS-[R62C82]-D1-000	7439-92-1	Lead	12.0		mg/kg
R62C83	0-0.5	02/12/01	Yes	01-C013-SS-[R62C83]-D1-000	7440-38-2	Arsenic	43.0		mg/kg
R62C83	0-0.5	02/12/01	Yes	01-C013-SS-[R62C83]-D1-000	7439-92-1	Lead	52.0		mg/kg
R62C84	0-0.5	02/15/01	Yes	01-C013-SS-[R62C84]-D1-000	7440-38-2	Arsenic	20.0		mg/kg
R62C84	0-0.5	02/15/01	Yes	01-C013-SS-[R62C84]-D1-000	7439-92-1	Lead	16.0		mg/kg
R63C73	0-0.5	02/06/01	Yes	01-C012-SS-[R63C73]-D1-000	7440-38-2	Arsenic	76.0		mg/kg
R63C73	0-0.5	02/06/01	Yes	01-C012-SS-[R63C73]-D1-000	7439-92-1	Lead	46.0		mg/kg
R63C74	0-0.5	02/02/01	Yes	01-C012-SS-[R63C74]-D1-000-DAVG	7440-38-2	Arsenic	60.0		mg/kg
R63C74	0-0.5	02/02/01	Yes	01-C012-SS-[R63C74]-D1-000-DAVG	7439-92-1	Lead	70.5		mg/kg
R63C75	0-0.5	02/07/01	Yes	01-C013-SS-[R63C75]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
R63C75	0-0.5	02/07/01	Yes	01-C013-SS-[R63C75]-D1-000	7439-92-1	Lead	46.0		mg/kg
R63C76	0-0.5	02/07/01	Yes	01-C013-SS-[R63C76]-D1-000	7440-38-2	Arsenic	63.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R63C76	0-0.5	02/07/01	Yes	01-C013-SS-[R63C76]-D1-000	7439-92-1	Lead	120.0		mg/kg
R63C77	0-0.5	02/08/01	Yes	01-C013-SS-[R63C77]-D1-000	7440-38-2	Arsenic	46.0		mg/kg
R63C77	0-0.5	02/08/01	Yes	01-C013-SS-[R63C77]-D1-000	7439-92-1	Lead	80.0		mg/kg
R63C78	0-0.5	02/08/01	Yes	01-C013-SS-[R63C78]-D1-000	7440-38-2	Arsenic	18.0		mg/kg
R63C78	0-0.5	02/08/01	Yes	01-C013-SS-[R63C78]-D1-000	7439-92-1	Lead	18.0		mg/kg
R63C79	0-0.5	02/08/01	Yes	01-C013-SS-[R63C79]-D1-000	7440-38-2	Arsenic	28.0		mg/kg
R63C79	0-0.5	02/08/01	Yes	01-C013-SS-[R63C79]-D1-000	7439-92-1	Lead	28.0		mg/kg
R63C80	0-0.5	02/12/01	Yes	01-C013-SS-[R63C80]-D1-000	7440-38-2	Arsenic	21.0		mg/kg
R63C80	0-0.5	02/12/01	Yes	01-C013-SS-[R63C80]-D1-000	7439-92-1	Lead	20.0		mg/kg
R63C81	0-0.5	02/12/01	Yes	01-C013-SS-[R63C81]-D1-000	7440-38-2	Arsenic	66.0		mg/kg
R63C81	0-0.5	02/12/01	Yes	01-C013-SS-[R63C81]-D1-000	7439-92-1	Lead	86.0		mg/kg
R63C83	0-0.5	02/12/01	Yes	01-C013-SS-[R63C83]-D1-000	7440-38-2	Arsenic	57.0		mg/kg
R63C83	0-0.5	02/12/01	Yes	01-C013-SS-[R63C83]-D1-000	7439-92-1	Lead	100.0		mg/kg
R63C84	0-0.5	02/15/01	Yes	01-C013-SS-[R63C84]-D1-000	7440-38-2	Arsenic	29.0		mg/kg
R63C84	0-0.5	02/15/01	Yes	01-C013-SS-[R63C84]-D1-000	7439-92-1	Lead	53.0		mg/kg
R63C85	0-0.5	02/15/01	Yes	01-C013-SS-[R63C85]-D1-000	7440-38-2	Arsenic	44.0		mg/kg
R63C85	0-0.5	02/15/01	Yes	01-C013-SS-[R63C85]-D1-000	7439-92-1	Lead	62.0		mg/kg
R63C86	0-0.5	02/15/01	Yes	01-C013-SS-[R63C86]-D1-000-DAVG	7440-38-2	Arsenic	24.0		mg/kg
R63C86	0-0.5	02/15/01	Yes	01-C013-SS-[R63C86]-D1-000-DAVG	7439-92-1	Lead	48.0		mg/kg
R64C73	0-0.5	02/02/01	Yes	01-C012-SS-[R64C73]-D1-000	7440-38-2	Arsenic	48.0		mg/kg
R64C73	0-0.5	02/02/01	Yes	01-C012-SS-[R64C73]-D1-000	7439-92-1	Lead	57.0		mg/kg
R64C74	0-0.5	02/02/01	Yes	01-C012-SS-[R64C74]-D1-000	7440-38-2	Arsenic	28.0		mg/kg
R64C74	0-0.5	02/02/01	Yes	01-C012-SS-[R64C74]-D1-000	7439-92-1	Lead	28.0		mg/kg
R64C75	0-0.5	02/07/01	Yes	01-C013-SS-[R64C75]-D1-000	7440-38-2	Arsenic	19.0		mg/kg
R64C75	0-0.5	02/07/01	Yes	01-C013-SS-[R64C75]-D1-000	7439-92-1	Lead	22.0		mg/kg
R64C76	0-0.5	02/07/01	Yes	01-C013-SS-[R64C76]-D1-000	7440-38-2	Arsenic	16.0		mg/kg
R64C76	0-0.5	02/07/01	Yes	01-C013-SS-[R64C76]-D1-000	7439-92-1	Lead	31.0		mg/kg
R64C77	0-0.5	02/08/01	Yes	01-C013-SS-[R64C77]-D1-000	7440-38-2	Arsenic	35.0		mg/kg
R64C77	0-0.5	02/08/01	Yes	01-C013-SS-[R64C77]-D1-000	7439-92-1	Lead	81.0		mg/kg
R64C78	0-0.5	02/08/01	Yes	01-C013-SS-[R64C78]-D1-000	7440-38-2	Arsenic	25.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R64C78	0-0.5	02/08/01	Yes	01-C013-SS-[R64C78]-D1-000	7439-92-1	Lead	40.0		mg/kg
R64C79	0-0.5	02/08/01	Yes	01-C013-SS-[R64C79]-D1-000	7440-38-2	Arsenic	44.0		mg/kg
R64C79	0-0.5	02/08/01	Yes	01-C013-SS-[R64C79]-D1-000	7439-92-1	Lead	59.0		mg/kg
R64C80	0-0.5	02/12/01	Yes	01-C013-SS-[R64C80]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
R64C80	0-0.5	02/12/01	Yes	01-C013-SS-[R64C80]-D1-000	7439-92-1	Lead	42.0		mg/kg
R64C81	0-0.5	02/12/01	Yes	01-C013-SS-[R64C81]-D1-000	7440-38-2	Arsenic	9.9		mg/kg
R64C81	0-0.5	02/12/01	Yes	01-C013-SS-[R64C81]-D1-000	7439-92-1	Lead	24.0		mg/kg
R64C82	0-0.5	02/12/01	Yes	01-C013-SS-[R64C82]-D1-000	7440-38-2	Arsenic	35.0		mg/kg
R64C82	0-0.5	02/12/01	Yes	01-C013-SS-[R64C82]-D1-000	7439-92-1	Lead	62.0		mg/kg
R64C83	0-0.5	02/12/01	Yes	01-C013-SS-[R64C83]-D1-000	7440-38-2	Arsenic	5.7		mg/kg
R64C83	0-0.5	02/12/01	Yes	01-C013-SS-[R64C83]-D1-000	7439-92-1	Lead	11.0		mg/kg
R64C84	0-0.5	02/15/01	Yes	01-C013-SS-[R64C84]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R64C84	0-0.5	02/15/01	Yes	01-C013-SS-[R64C84]-D1-000	7439-92-1	Lead	43.0		mg/kg
R64C86	0-0.5	02/15/01	Yes	01-C013-SS-[R64C86]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R64C86	0-0.5	02/15/01	Yes	01-C013-SS-[R64C86]-D1-000	7439-92-1	Lead	33.0		mg/kg
R64C87	0-0.5	02/15/01	Yes	01-C013-SS-[R64C87]-D1-000-DAVG	7440-38-2	Arsenic	11.5		mg/kg
R64C87	0-0.5	02/15/01	Yes	01-C013-SS-[R64C87]-D1-000-DAVG	7439-92-1	Lead	19.5		mg/kg
R64C88_CM_08	0-0.5	02/15/01	Yes	01-C013-SS-[R64C88]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
R64C88_CM_08	0-0.5	02/15/01	Yes	01-C013-SS-[R64C88]-D1-000	7439-92-1	Lead	59.0		mg/kg
R65C73	0-0.5	02/02/01	Yes	01-C012-SS-[R65C73]-D1-000	7440-38-2	Arsenic	46.0		mg/kg
R65C73	0-0.5	02/02/01	Yes	01-C012-SS-[R65C73]-D1-000	7439-92-1	Lead	65.0		mg/kg
R65C74	0-0.5	02/02/01	Yes	01-C012-SS-[R65C74]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R65C74	0-0.5	02/02/01	Yes	01-C012-SS-[R65C74]-D1-000	7439-92-1	Lead	25.0		mg/kg
R65C75	0-0.5	02/07/01	Yes	01-C013-SS-[R65C75]-D1-000	7440-38-2	Arsenic	62.0		mg/kg
R65C75	0-0.5	02/07/01	Yes	01-C013-SS-[R65C75]-D1-000	7439-92-1	Lead	110.0		mg/kg
R65C76	0-0.5	02/07/01	Yes	01-C013-SS-[R65C76]-D1-000	7440-38-2	Arsenic	30.0		mg/kg
R65C76	0-0.5	02/07/01	Yes	01-C013-SS-[R65C76]-D1-000	7439-92-1	Lead	67.0		mg/kg
R65C77	0-0.5	02/08/01	Yes	01-C013-SS-[R65C77]-D1-000	7440-38-2	Arsenic	6.5		mg/kg
R65C77	0-0.5	02/08/01	Yes	01-C013-SS-[R65C77]-D1-000	7439-92-1	Lead	7.6		mg/kg
R65C78	0-0.5	02/08/01	Yes	01-C013-SS-[R65C78]-D1-000	7440-38-2	Arsenic	5.1		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R65C78	0-0.5	02/08/01	Yes	01-C013-SS-[R65C78]-D1-000	7439-92-1	Lead	9.8		mg/kg
R65C79	0-0.5	02/08/01	Yes	01-C013-SS-[R65C79]-D1-000	7440-38-2	Arsenic	24.0		mg/kg
R65C79	0-0.5	02/08/01	Yes	01-C013-SS-[R65C79]-D1-000	7439-92-1	Lead	26.0		mg/kg
R65C80	0-0.5	02/12/01	Yes	01-C013-SS-[R65C80]-D1-000	7440-38-2	Arsenic	12.0		mg/kg
R65C80	0-0.5	02/12/01	Yes	01-C013-SS-[R65C80]-D1-000	7439-92-1	Lead	14.0		mg/kg
R65C81	0-0.5	02/12/01	Yes	01-C013-SS-[R65C81]-D1-000-DAVG	7440-38-2	Arsenic	7.0		mg/kg
R65C81	0-0.5	02/12/01	Yes	01-C013-SS-[R65C81]-D1-000-DAVG	7439-92-1	Lead	14.5		mg/kg
R65C82	0-0.5	02/12/01	Yes	01-C013-SS-[R65C82]-D1-000	7440-38-2	Arsenic	30.0		mg/kg
R65C82	0-0.5	02/12/01	Yes	01-C013-SS-[R65C82]-D1-000	7439-92-1	Lead	53.0		mg/kg
R65C83	0-0.5	02/12/01	Yes	01-C013-SS-[R65C83]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R65C83	0-0.5	02/12/01	Yes	01-C013-SS-[R65C83]-D1-000	7439-92-1	Lead	29.0		mg/kg
R65C84	0-0.5	02/15/01	Yes	01-C013-SS-[R65C84]-D1-000	7440-38-2	Arsenic	22.0		mg/kg
R65C84	0-0.5	02/15/01	Yes	01-C013-SS-[R65C84]-D1-000	7439-92-1	Lead	38.0		mg/kg
R65C85	0-0.5	02/15/01	Yes	01-C013-SS-[R65C85]-D1-000	7440-38-2	Arsenic	7.7		mg/kg
R65C85	0-0.5	02/15/01	Yes	01-C013-SS-[R65C85]-D1-000	7439-92-1	Lead	15.0		mg/kg
R65C86	0-0.5	02/15/01	Yes	01-C013-SS-[R65C86]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R65C86	0-0.5	02/15/01	Yes	01-C013-SS-[R65C86]-D1-000	7439-92-1	Lead	55.0		mg/kg
R65C88	0-0.5	02/15/01	Yes	01-C013-SS-[R65C88]-D1-000	7440-38-2	Arsenic	24.0		mg/kg
R65C88	0-0.5	02/15/01	Yes	01-C013-SS-[R65C88]-D1-000	7439-92-1	Lead	55.0		mg/kg
R65C89	0-0.5	04/03/01	Yes	01-C013-SS-[R65C89]-D1-000-DAVG	7440-38-2	Arsenic	21.0		mg/kg
R65C89	0-0.5	04/03/01	Yes	01-C013-SS-[R65C89]-D1-000-DAVG	7439-92-1	Lead	38.5		mg/kg
R66C73	0-0.5	02/02/01	Yes	01-C012-SS-[R66C73]-D1-000	7440-38-2	Arsenic	69.0		mg/kg
R66C73	0-0.5	02/02/01	Yes	01-C012-SS-[R66C73]-D1-000	7439-92-1	Lead	80.0		mg/kg
R66C74	0-0.5	02/02/01	Yes	01-C012-SS-[R66C74]-D1-000	7440-38-2	Arsenic	24.0		mg/kg
R66C74	0-0.5	02/02/01	Yes	01-C012-SS-[R66C74]-D1-000	7439-92-1	Lead	41.0		mg/kg
R66C75	0-0.5	02/07/01	Yes	01-C013-SS-[R66C75]-D1-000	7440-38-2	Arsenic	9.1		mg/kg
R66C75	0-0.5	02/07/01	Yes	01-C013-SS-[R66C75]-D1-000	7439-92-1	Lead	14.0		mg/kg
R66C76	0-0.5	02/07/01	Yes	01-C013-SS-[R66C76]-D1-000	7440-38-2	Arsenic	28.0		mg/kg
R66C76	0-0.5	02/07/01	Yes	01-C013-SS-[R66C76]-D1-000	7439-92-1	Lead	43.0		mg/kg
R66C77	0-0.5	02/08/01	Yes	01-C013-SS-[R66C77]-D1-000	7440-38-2	Arsenic	42.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R66C77	0-0.5	02/08/01	Yes	01-C013-SS-[R66C77]-D1-000	7439-92-1	Lead	59.0		mg/kg
R66C78	0-0.5	02/08/01	Yes	01-C013-SS-[R66C78]-D1-000	7440-38-2	Arsenic	14.0		mg/kg
R66C78	0-0.5	02/08/01	Yes	01-C013-SS-[R66C78]-D1-000	7439-92-1	Lead	29.0		mg/kg
R66C79	0-0.5	02/08/01	Yes	01-C013-SS-[R66C79]-D1-000	7440-38-2	Arsenic	12.0		mg/kg
R66C79	0-0.5	02/08/01	Yes	01-C013-SS-[R66C79]-D1-000	7439-92-1	Lead	23.0		mg/kg
R66C80	0-0.5	02/12/01	Yes	01-C013-SS-[R66C80]-D1-000	7440-38-2	Arsenic	8.8		mg/kg
R66C80	0-0.5	02/12/01	Yes	01-C013-SS-[R66C80]-D1-000	7439-92-1	Lead	9.8		mg/kg
R66C81	0-0.5	02/12/01	Yes	01-C013-SS-[R66C81]-D1-000	7440-38-2	Arsenic	12.0		mg/kg
R66C81	0-0.5	02/12/01	Yes	01-C013-SS-[R66C81]-D1-000	7439-92-1	Lead	14.0		mg/kg
R66C82	0-0.5	02/12/01	Yes	01-C013-SS-[R66C82]-D1-000	7440-38-2	Arsenic	18.0		mg/kg
R66C82	0-0.5	02/12/01	Yes	01-C013-SS-[R66C82]-D1-000	7439-92-1	Lead	40.0		mg/kg
R66C83	0-0.5	02/12/01	Yes	01-C013-SS-[R66C83]-D1-000	7440-38-2	Arsenic	26.0		mg/kg
R66C83	0-0.5	02/12/01	Yes	01-C013-SS-[R66C83]-D1-000	7439-92-1	Lead	17.0		mg/kg
R66C84	0-0.5	02/15/01	Yes	01-C013-SS-[R66C84]-D1-000	7440-38-2	Arsenic	20.0		mg/kg
R66C84	0-0.5	02/15/01	Yes	01-C013-SS-[R66C84]-D1-000	7439-92-1	Lead	43.0		mg/kg
R66C85	0-0.5	02/15/01	Yes	01-C013-SS-[R66C85]-D1-000	7440-38-2	Arsenic	18.0		mg/kg
R66C85	0-0.5	02/15/01	Yes	01-C013-SS-[R66C85]-D1-000	7439-92-1	Lead	38.0		mg/kg
R66C86	0-0.5	02/15/01	Yes	01-C013-SS-[R66C86]-D1-000	7440-38-2	Arsenic	46.0		mg/kg
R66C86	0-0.5	02/15/01	Yes	01-C013-SS-[R66C86]-D1-000	7439-92-1	Lead	84.0		mg/kg
R66C87	0-0.5	02/15/01	Yes	01-C013-SS-[R66C87]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R66C87	0-0.5	02/15/01	Yes	01-C013-SS-[R66C87]-D1-000	7439-92-1	Lead	38.0		mg/kg
R66C88	0-0.5	02/15/01	No	01-C013-SS-[R66C88]-D1-000	7440-38-2	Arsenic	160.0		mg/kg
R66C88	0-0.5	02/15/01	No	01-C013-SS-[R66C88]-D1-000	7439-92-1	Lead	13.0		mg/kg
R66C89	0-0.5	04/03/01	Yes	01-C013-SS-[R66C89]-D1-000-DAVG	7440-38-2	Arsenic	12.0		mg/kg
R66C89	0-0.5	04/03/01	Yes	01-C013-SS-[R66C89]-D1-000-DAVG	7439-92-1	Lead	27.0		mg/kg
R67C73	0-0.5	02/02/01	Yes	01-C012-SS-[R67C73]-D1-000	7440-38-2	Arsenic	47.0		mg/kg
R67C73	0-0.5	02/02/01	Yes	01-C012-SS-[R67C73]-D1-000	7439-92-1	Lead	29.0		mg/kg
R67C74	0-0.5	02/02/01	Yes	01-C012-SS-[R67C74]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R67C74	0-0.5	02/02/01	Yes	01-C012-SS-[R67C74]-D1-000	7439-92-1	Lead	20.0		mg/kg
R67C75	0-0.5	02/07/01	Yes	01-C013-SS-[R67C75]-D1-000	7440-38-2	Arsenic	55.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R67C75	0-0.5	02/07/01	Yes	01-C013-SS-[R67C75]-D1-000	7439-92-1	Lead	84.0		mg/kg
R67C76	0-0.5	02/08/01	Yes	01-C013-SS-[R67C76]-D1-000	7440-38-2	Arsenic	35.0		mg/kg
R67C76	0-0.5	02/08/01	Yes	01-C013-SS-[R67C76]-D1-000	7439-92-1	Lead	59.0		mg/kg
R67C77	0-0.5	02/08/01	Yes	01-C013-SS-[R67C77]-D1-000	7440-38-2	Arsenic	61.0		mg/kg
R67C77	0-0.5	02/08/01	Yes	01-C013-SS-[R67C77]-D1-000	7439-92-1	Lead	190.0		mg/kg
R67C78	0-0.5	02/08/01	Yes	01-C013-SS-[R67C78]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R67C78	0-0.5	02/08/01	Yes	01-C013-SS-[R67C78]-D1-000	7439-92-1	Lead	36.0		mg/kg
R67C79	0-0.5	02/08/01	Yes	01-C013-SS-[R67C79]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R67C79	0-0.5	02/08/01	Yes	01-C013-SS-[R67C79]-D1-000	7439-92-1	Lead	29.0		mg/kg
R67C80	0-0.5	02/12/01	Yes	01-C013-SS-[R67C80]-D1-000	7440-38-2	Arsenic	6.9		mg/kg
R67C80	0-0.5	02/12/01	Yes	01-C013-SS-[R67C80]-D1-000	7439-92-1	Lead	14.0		mg/kg
R67C81	0-0.5	02/12/01	Yes	01-C013-SS-[R67C81]-D1-000	7440-38-2	Arsenic	18.0		mg/kg
R67C81	0-0.5	02/12/01	Yes	01-C013-SS-[R67C81]-D1-000	7439-92-1	Lead	39.0		mg/kg
R67C82	0-0.5	02/12/01	Yes	01-C013-SS-[R67C82]-D1-000	7440-38-2	Arsenic	18.0		mg/kg
R67C82	0-0.5	02/12/01	Yes	01-C013-SS-[R67C82]-D1-000	7439-92-1	Lead	30.0		mg/kg
R67C83	0-0.5	02/12/01	Yes	01-C013-SS-[R67C83]-D1-000	7440-38-2	Arsenic	9.1		mg/kg
R67C83	0-0.5	02/12/01	Yes	01-C013-SS-[R67C83]-D1-000	7439-92-1	Lead	25.0		mg/kg
R67C84	0-0.5	02/15/01	Yes	01-C013-SS-[R67C84]-D1-000	7440-38-2	Arsenic	11.0		mg/kg
R67C84	0-0.5	02/15/01	Yes	01-C013-SS-[R67C84]-D1-000	7439-92-1	Lead	28.0		mg/kg
R67C85	0-0.5	02/15/01	Yes	01-C013-SS-[R67C85]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R67C85	0-0.5	02/15/01	Yes	01-C013-SS-[R67C85]-D1-000	7439-92-1	Lead	31.0		mg/kg
R67C86	0-0.5	02/15/01	Yes	01-C013-SS-[R67C86]-D1-000	7440-38-2	Arsenic	20.0		mg/kg
R67C86	0-0.5	02/15/01	Yes	01-C013-SS-[R67C86]-D1-000	7439-92-1	Lead	15.0		mg/kg
R67C87	0-0.5	02/15/01	Yes	01-C013-SS-[R67C87]-D1-000	7440-38-2	Arsenic	53.0		mg/kg
R67C87	0-0.5	02/15/01	Yes	01-C013-SS-[R67C87]-D1-000	7439-92-1	Lead	71.0		mg/kg
R67C88	0-0.5	02/15/01	Yes	01-C013-SS-[R67C88]-D1-000	7440-38-2	Arsenic	2.4	U	mg/kg
R67C88	0-0.5	02/15/01	Yes	01-C013-SS-[R67C88]-D1-000	7439-92-1	Lead	7.8		mg/kg
R68C73	0-0.5	02/02/01	Yes	01-C012-SS-[R68C73]-D1-000	7440-38-2	Arsenic	69.0		mg/kg
R68C73	0-0.5	02/02/01	Yes	01-C012-SS-[R68C73]-D1-000	7439-92-1	Lead	120.0		mg/kg
R68C74	0-0.5	02/02/01	Yes	01-C012-SS-[R68C74]-D1-000	7440-38-2	Arsenic	47.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R68C74	0-0.5	02/02/01	Yes	01-C012-SS-[R68C74]-D1-000	7439-92-1	Lead	110.0		mg/kg
R68C75	0-0.5	02/07/01	Yes	01-C013-SS-[R68C75]-D1-000	7440-38-2	Arsenic	54.0		mg/kg
R68C75	0-0.5	02/07/01	Yes	01-C013-SS-[R68C75]-D1-000	7439-92-1	Lead	80.0		mg/kg
R68C76	0-0.5	02/08/01	Yes	01-C013-SS-[R68C76]-D1-000	7440-38-2	Arsenic	35.0		mg/kg
R68C76	0-0.5	02/08/01	Yes	01-C013-SS-[R68C76]-D1-000	7439-92-1	Lead	28.0		mg/kg
R68C77	0-0.5	02/08/01	Yes	01-C013-SS-[R68C77]-D1-000	7440-38-2	Arsenic	77.0		mg/kg
R68C77	0-0.5	02/08/01	Yes	01-C013-SS-[R68C77]-D1-000	7439-92-1	Lead	97.0		mg/kg
R68C78	0-0.5	02/08/01	Yes	01-C013-SS-[R68C78]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R68C78	0-0.5	02/08/01	Yes	01-C013-SS-[R68C78]-D1-000	7439-92-1	Lead	42.0		mg/kg
R68C79	0-0.5	02/08/01	Yes	01-C013-SS-[R68C79]-D1-000	7440-38-2	Arsenic	49.0		mg/kg
R68C79	0-0.5	02/08/01	Yes	01-C013-SS-[R68C79]-D1-000	7439-92-1	Lead	88.0		mg/kg
R68C80	0-0.5	02/12/01	Yes	01-C013-SS-[R68C80]-D1-000	7440-38-2	Arsenic	11.0		mg/kg
R68C80	0-0.5	02/12/01	Yes	01-C013-SS-[R68C80]-D1-000	7439-92-1	Lead	28.0		mg/kg
R68C81	0-0.5	02/12/01	Yes	01-C013-SS-[R68C81]-D1-000	7440-38-2	Arsenic	7.4		mg/kg
R68C81	0-0.5	02/12/01	Yes	01-C013-SS-[R68C81]-D1-000	7439-92-1	Lead	21.0		mg/kg
R68C82	0-0.5	02/12/01	Yes	01-C013-SS-[R68C82]-D1-000	7440-38-2	Arsenic	53.0		mg/kg
R68C82	0-0.5	02/12/01	Yes	01-C013-SS-[R68C82]-D1-000	7439-92-1	Lead	120.0		mg/kg
R68C83	0-0.5	02/12/01	Yes	01-C013-SS-[R68C83]-D1-000	7440-38-2	Arsenic	37.0		mg/kg
R68C83	0-0.5	02/12/01	Yes	01-C013-SS-[R68C83]-D1-000	7439-92-1	Lead	80.0		mg/kg
R68C84	0-0.5	02/12/01	Yes	01-C013-SS-[R68C84]-D1-000	7440-38-2	Arsenic	11.0		mg/kg
R68C84	0-0.5	02/12/01	Yes	01-C013-SS-[R68C84]-D1-000	7439-92-1	Lead	25.0		mg/kg
R68C85	0-0.5	02/15/01	Yes	01-C013-SS-[R68C85]-D1-000	7440-38-2	Arsenic	28.0		mg/kg
R68C85	0-0.5	02/15/01	Yes	01-C013-SS-[R68C85]-D1-000	7439-92-1	Lead	37.0		mg/kg
R68C86	0-0.5	02/15/01	Yes	01-C013-SS-[R68C86]-D1-000	7440-38-2	Arsenic	35.0		mg/kg
R68C86	0-0.5	02/15/01	Yes	01-C013-SS-[R68C86]-D1-000	7439-92-1	Lead	66.0		mg/kg
R68C87	0-0.5	02/15/01	Yes	01-C013-SS-[R68C87]-D1-000	7440-38-2	Arsenic	110.0		mg/kg
R68C87	0-0.5	02/15/01	Yes	01-C013-SS-[R68C87]-D1-000	7439-92-1	Lead	40.0		mg/kg
R68C88	0-0.5	02/15/01	Yes	01-C013-SS-[R68C88]-D1-000-DAVG	7440-38-2	Arsenic	29.0		mg/kg
R68C88	0-0.5	02/15/01	Yes	01-C013-SS-[R68C88]-D1-000-DAVG	7439-92-1	Lead	38.0		mg/kg
R69C73	0-0.5	02/02/01	Yes	01-C012-SS-[R69C73]-D1-000	7440-38-2	Arsenic	20.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R69C73	0-0.5	02/02/01	Yes	01-C012-SS-[R69C73]-D1-000	7439-92-1	Lead	20.0		mg/kg
R69C74	0-0.5	02/02/01	Yes	01-C012-SS-[R69C74]-D1-000	7440-38-2	Arsenic	27.0		mg/kg
R69C74	0-0.5	02/02/01	Yes	01-C012-SS-[R69C74]-D1-000	7439-92-1	Lead	23.0		mg/kg
R69C75	0-0.5	02/07/01	Yes	01-C013-SS-[R69C75]-D1-000	7440-38-2	Arsenic	14.0		mg/kg
R69C75	0-0.5	02/07/01	Yes	01-C013-SS-[R69C75]-D1-000	7439-92-1	Lead	21.0		mg/kg
R69C76	0-0.5	02/08/01	Yes	01-C013-SS-[R69C76]-D1-000	7440-38-2	Arsenic	61.0		mg/kg
R69C76	0-0.5	02/08/01	Yes	01-C013-SS-[R69C76]-D1-000	7439-92-1	Lead	110.0		mg/kg
R69C77	0-0.5	02/08/01	Yes	01-C013-SS-[R69C77]-D1-000	7440-38-2	Arsenic	42.0		mg/kg
R69C77	0-0.5	02/08/01	Yes	01-C013-SS-[R69C77]-D1-000	7439-92-1	Lead	56.0		mg/kg
R69C78	0-0.5	02/08/01	Yes	01-C013-SS-[R69C78]-D1-000	7440-38-2	Arsenic	13.0		mg/kg
R69C78	0-0.5	02/08/01	Yes	01-C013-SS-[R69C78]-D1-000	7439-92-1	Lead	17.0		mg/kg
R69C79	0-0.5	02/12/01	Yes	01-C013-SS-[R69C79]-D1-000	7440-38-2	Arsenic	13.0		mg/kg
R69C79	0-0.5	02/12/01	Yes	01-C013-SS-[R69C79]-D1-000	7439-92-1	Lead	29.0		mg/kg
R69C80	0-0.5	02/12/01	Yes	01-C013-SS-[R69C80]-D1-000	7440-38-2	Arsenic	19.0		mg/kg
R69C80	0-0.5	02/12/01	Yes	01-C013-SS-[R69C80]-D1-000	7439-92-1	Lead	39.0		mg/kg
R69C81	0-0.5	02/12/01	Yes	01-C013-SS-[R69C81]-D1-000	7440-38-2	Arsenic	28.0		mg/kg
R69C81	0-0.5	02/12/01	Yes	01-C013-SS-[R69C81]-D1-000	7439-92-1	Lead	37.0		mg/kg
R69C82	0-0.5	02/12/01	Yes	01-C013-SS-[R69C82]-D1-000	7440-38-2	Arsenic	39.0		mg/kg
R69C82	0-0.5	02/12/01	Yes	01-C013-SS-[R69C82]-D1-000	7439-92-1	Lead	39.0		mg/kg
R69C83	0-0.5	02/12/01	Yes	01-C013-SS-[R69C83]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R69C83	0-0.5	02/12/01	Yes	01-C013-SS-[R69C83]-D1-000	7439-92-1	Lead	31.0		mg/kg
R69C84	0-0.5	02/12/01	Yes	01-C013-SS-[R69C84]-D1-000	7440-38-2	Arsenic	26.0		mg/kg
R69C84	0-0.5	02/12/01	Yes	01-C013-SS-[R69C84]-D1-000	7439-92-1	Lead	42.0		mg/kg
R69C85	0-0.5	02/15/01	Yes	01-C013-SS-[R69C85]-D1-000	7440-38-2	Arsenic	72.0		mg/kg
R69C85	0-0.5	02/15/01	Yes	01-C013-SS-[R69C85]-D1-000	7439-92-1	Lead	95.0		mg/kg
R69C86	0-0.5	02/15/01	Yes	01-C013-SS-[R69C86]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R69C86	0-0.5	02/15/01	Yes	01-C013-SS-[R69C86]-D1-000	7439-92-1	Lead	27.0		mg/kg
R69C87	0-0.5	02/15/01	Yes	01-C013-SS-[R69C87]-D1-000	7440-38-2	Arsenic	29.0		mg/kg
R69C87	0-0.5	02/15/01	Yes	01-C013-SS-[R69C87]-D1-000	7439-92-1	Lead	53.0		mg/kg
R70C73	0-0.5	02/02/01	Yes	01-C012-SS-[R70C73]-D1-000	7440-38-2	Arsenic	68.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R70C73	0-0.5	02/02/01	Yes	01-C012-SS-[R70C73]-D1-000	7439-92-1	Lead	54.0		mg/kg
R70C74	0-0.5	02/02/01	Yes	01-C012-SS-[R70C74]-D1-000	7440-38-2	Arsenic	44.0		mg/kg
R70C74	0-0.5	02/02/01	Yes	01-C012-SS-[R70C74]-D1-000	7439-92-1	Lead	42.0		mg/kg
R70C75	0-0.5	02/07/01	Yes	01-C013-SS-[R70C75]-D1-000	7440-38-2	Arsenic	30.0		mg/kg
R70C75	0-0.5	02/07/01	Yes	01-C013-SS-[R70C75]-D1-000	7439-92-1	Lead	75.0		mg/kg
R70C76	0-0.5	02/08/01	Yes	01-C013-SS-[R70C76]-D1-000	7440-38-2	Arsenic	38.0		mg/kg
R70C76	0-0.5	02/08/01	Yes	01-C013-SS-[R70C76]-D1-000	7439-92-1	Lead	66.0		mg/kg
R70C77	0-0.5	02/08/01	Yes	01-C013-SS-[R70C77]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R70C77	0-0.5	02/08/01	Yes	01-C013-SS-[R70C77]-D1-000	7439-92-1	Lead	41.0		mg/kg
R70C78	0-0.5	02/08/01	Yes	01-C013-SS-[R70C78]-D1-000	7440-38-2	Arsenic	11.0		mg/kg
R70C78	0-0.5	02/08/01	Yes	01-C013-SS-[R70C78]-D1-000	7439-92-1	Lead	15.0		mg/kg
R70C79	0-0.5	02/08/01	Yes	01-C013-SS-[R70C79]-D1-000	7440-38-2	Arsenic	11.0		mg/kg
R70C79	0-0.5	02/08/01	Yes	01-C013-SS-[R70C79]-D1-000	7439-92-1	Lead	20.0		mg/kg
R70C80	0-0.5	02/12/01	Yes	01-C013-SS-[R70C80]-D1-000	7440-38-2	Arsenic	8.2		mg/kg
R70C80	0-0.5	02/12/01	Yes	01-C013-SS-[R70C80]-D1-000	7439-92-1	Lead	15.0		mg/kg
R70C81	0-0.5	02/12/01	Yes	01-C013-SS-[R70C81]-D1-000	7440-38-2	Arsenic	26.0		mg/kg
R70C81	0-0.5	02/12/01	Yes	01-C013-SS-[R70C81]-D1-000	7439-92-1	Lead	54.0		mg/kg
R70C82	0-0.5	02/12/01	Yes	01-C013-SS-[R70C82]-D1-000	7440-38-2	Arsenic	20.0		mg/kg
R70C82	0-0.5	02/12/01	Yes	01-C013-SS-[R70C82]-D1-000	7439-92-1	Lead	41.0		mg/kg
R70C83	0-0.5	02/12/01	Yes	01-C013-SS-[R70C83]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R70C83	0-0.5	02/12/01	Yes	01-C013-SS-[R70C83]-D1-000	7439-92-1	Lead	34.0		mg/kg
R70C84	0-0.5	02/12/01	Yes	01-C013-SS-[R70C84]-D1-000	7440-38-2	Arsenic	45.0		mg/kg
R70C84	0-0.5	02/12/01	Yes	01-C013-SS-[R70C84]-D1-000	7439-92-1	Lead	36.0		mg/kg
R70C85	0-0.5	02/15/01	Yes	01-C013-SS-[R70C85]-D1-000	7440-38-2	Arsenic	49.0		mg/kg
R70C85	0-0.5	02/15/01	Yes	01-C013-SS-[R70C85]-D1-000	7439-92-1	Lead	44.0		mg/kg
R70C86	0-0.5	02/15/01	Yes	01-C013-SS-[R70C86]-D1-000	7440-38-2	Arsenic	8.1		mg/kg
R70C86	0-0.5	02/15/01	Yes	01-C013-SS-[R70C86]-D1-000	7439-92-1	Lead	17.0		mg/kg
R71C73	0-0.5	02/02/01	Yes	01-C012-SS-[R71C73]-D1-000	7440-38-2	Arsenic	44.0		mg/kg
R71C73	0-0.5	02/02/01	Yes	01-C012-SS-[R71C73]-D1-000	7439-92-1	Lead	81.0		mg/kg
R71C74	0-0.5	02/02/01	Yes	01-C012-SS-[R71C74]-D1-000	7440-38-2	Arsenic	43.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R71C74	0-0.5	02/02/01	Yes	01-C012-SS-[R71C74]-D1-000	7439-92-1	Lead	90.0		mg/kg
R71C75	0-0.5	02/07/01	Yes	01-C013-SS-[R71C75]-D1-000	7440-38-2	Arsenic	26.0		mg/kg
R71C75	0-0.5	02/07/01	Yes	01-C013-SS-[R71C75]-D1-000	7439-92-1	Lead	46.0		mg/kg
R71C76	0-0.5	02/08/01	Yes	01-C013-SS-[R71C76]-D1-000	7440-38-2	Arsenic	47.0		mg/kg
R71C76	0-0.5	02/08/01	Yes	01-C013-SS-[R71C76]-D1-000	7439-92-1	Lead	85.0		mg/kg
R71C77	0-0.5	02/08/01	Yes	01-C013-SS-[R71C77]-D1-000	7440-38-2	Arsenic	15.0		mg/kg
R71C77	0-0.5	02/08/01	Yes	01-C013-SS-[R71C77]-D1-000	7439-92-1	Lead	21.0		mg/kg
R71C78	0-0.5	02/08/01	Yes	01-C013-SS-[R71C78]-D1-000	7440-38-2	Arsenic	8.8		mg/kg
R71C78	0-0.5	02/08/01	Yes	01-C013-SS-[R71C78]-D1-000	7439-92-1	Lead	10.0		mg/kg
R71C79	0-0.5	02/08/01	Yes	01-C013-SS-[R71C79]-D1-000	7440-38-2	Arsenic	50.0		mg/kg
R71C79	0-0.5	02/08/01	Yes	01-C013-SS-[R71C79]-D1-000	7439-92-1	Lead	28.0		mg/kg
R71C80	0-0.5	02/12/01	Yes	01-C013-SS-[R71C80]-D1-000	7440-38-2	Arsenic	29.0		mg/kg
R71C80	0-0.5	02/12/01	Yes	01-C013-SS-[R71C80]-D1-000	7439-92-1	Lead	40.0		mg/kg
R71C81	0-0.5	02/12/01	Yes	01-C013-SS-[R71C81]-D1-000	7440-38-2	Arsenic	7.4		mg/kg
R71C81	0-0.5	02/12/01	Yes	01-C013-SS-[R71C81]-D1-000	7439-92-1	Lead	17.0		mg/kg
R71C82	0-0.5	02/12/01	Yes	01-C013-SS-[R71C82]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
R71C82	0-0.5	02/12/01	Yes	01-C013-SS-[R71C82]-D1-000	7439-92-1	Lead	38.0		mg/kg
R71C83	0-0.5	02/12/01	Yes	01-C013-SS-[R71C83]-D1-000	7440-38-2	Arsenic	53.0		mg/kg
R71C83	0-0.5	02/12/01	Yes	01-C013-SS-[R71C83]-D1-000	7439-92-1	Lead	69.0		mg/kg
R71C84	0-0.5	02/12/01	Yes	01-C013-SS-[R71C84]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R71C84	0-0.5	02/12/01	Yes	01-C013-SS-[R71C84]-D1-000	7439-92-1	Lead	31.0		mg/kg
R71C85-02	1.5-2	07/31/01	Yes	02-C013-SS[R71C85-02]C2-1.0	7440-38-2	Arsenic	19.0		mg/kg
R71C85-02	1.5-2	07/31/01	Yes	02-C013-SS[R71C85-02]C2-1.0	7439-92-1	Lead	4.0		mg/kg
R71C85-03	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-03]D1-000	7440-38-2	Arsenic	46.0		mg/kg
R71C85-03	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-03]D1-000	7439-92-1	Lead	90.0		mg/kg
R71C85-04	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-04]D1-000	7440-38-2	Arsenic	38.0		mg/kg
R71C85-04	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-04]D1-000	7439-92-1	Lead	70.0		mg/kg
R71C85-05	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-05]D1-000	7440-38-2	Arsenic	49.0		mg/kg
R71C85-05	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-05]D1-000	7439-92-1	Lead	80.0		mg/kg
R71C85-06	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-06]D1-000	7440-38-2	Arsenic	55.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R71C85-06	0-0.5	07/31/01	Yes	02-C013-SS[R71C85-06]D1-000	7439-92-1	Lead	99.0		mg/kg
R72C73	0-0.5	01/30/01	Yes	01-C012-SS-[R72C73]-D1-000	7440-38-2	Arsenic	40.0		mg/kg
R72C73	0-0.5	01/30/01	Yes	01-C012-SS-[R72C73]-D1-000	7439-92-1	Lead	45.0		mg/kg
R72C74	0-0.5	01/30/01	Yes	01-C012-SS-[R72C74]-D1-000-DAVG	7440-38-2	Arsenic	45.0		mg/kg
R72C74	0-0.5	01/30/01	Yes	01-C012-SS-[R72C74]-D1-000-DAVG	7439-92-1	Lead	62.5		mg/kg
R72C75	0-0.5	02/07/01	Yes	01-C013-SS-[R72C75]-D1-000	7440-38-2	Arsenic	29.0		mg/kg
R72C75	0-0.5	02/07/01	Yes	01-C013-SS-[R72C75]-D1-000	7439-92-1	Lead	67.0		mg/kg
R72C76	0-0.5	02/08/01	Yes	01-C013-SS-[R72C76]-D1-000	7440-38-2	Arsenic	96.0		mg/kg
R72C76	0-0.5	02/08/01	Yes	01-C013-SS-[R72C76]-D1-000	7439-92-1	Lead	69.0		mg/kg
R72C77	0-0.5	02/08/01	Yes	01-C013-SS-[R72C77]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R72C77	0-0.5	02/08/01	Yes	01-C013-SS-[R72C77]-D1-000	7439-92-1	Lead	32.0		mg/kg
R72C78	0-0.5	02/08/01	Yes	01-C013-SS-[R72C78]-D1-000	7440-38-2	Arsenic	9.4		mg/kg
R72C78	0-0.5	02/08/01	Yes	01-C013-SS-[R72C78]-D1-000	7439-92-1	Lead	14.0		mg/kg
R72C79	0-0.5	02/08/01	Yes	01-C013-SS-[R72C79]-D1-000	7440-38-2	Arsenic	13.0		mg/kg
R72C79	0-0.5	02/08/01	Yes	01-C013-SS-[R72C79]-D1-000	7439-92-1	Lead	16.0		mg/kg
R72C80	0-0.5	02/12/01	Yes	01-C013-SS-[R72C80]-D1-000	7440-38-2	Arsenic	17.0		mg/kg
R72C80	0-0.5	02/12/01	Yes	01-C013-SS-[R72C80]-D1-000	7439-92-1	Lead	37.0		mg/kg
R72C81	0-0.5	02/12/01	Yes	01-C013-SS-[R72C81]-D1-000	7440-38-2	Arsenic	7.7		mg/kg
R72C81	0-0.5	02/12/01	Yes	01-C013-SS-[R72C81]-D1-000	7439-92-1	Lead	16.0		mg/kg
R72C82	0-0.5	02/12/01	Yes	01-C013-SS-[R72C82]-D1-000	7440-38-2	Arsenic	12.0		mg/kg
R72C82	0-0.5	02/12/01	Yes	01-C013-SS-[R72C82]-D1-000	7439-92-1	Lead	19.0		mg/kg
R72C83	0-0.5	02/12/01	Yes	01-C013-SS-[R72C83]-D1-000	7440-38-2	Arsenic	19.0		mg/kg
R72C83	0-0.5	02/12/01	Yes	01-C013-SS-[R72C83]-D1-000	7439-92-1	Lead	31.0		mg/kg
R72C84	0-0.5	02/12/01	Yes	01-C013-SS-[R72C84]-D1-000-DAVG	7440-38-2	Arsenic	4.3		mg/kg
R72C84	0-0.5	02/12/01	Yes	01-C013-SS-[R72C84]-D1-000-DAVG	7439-92-1	Lead	9.4		mg/kg
R73C73	0-0.5	01/30/01	Yes	01-C012-SS-[R73C73]-D1-000	7440-38-2	Arsenic	8.1		mg/kg
R73C73	0-0.5	01/30/01	Yes	01-C012-SS-[R73C73]-D1-000	7439-92-1	Lead	11.0		mg/kg
R73C74	0-0.5	01/30/01	Yes	01-C012-SS-[R73C74]-D1-000	7440-38-2	Arsenic	30.0		mg/kg
R73C74	0-0.5	01/30/01	Yes	01-C012-SS-[R73C74]-D1-000	7439-92-1	Lead	53.0		mg/kg
R73C75	0-0.5	02/07/01	Yes	01-C013-SS-[R73C75]-D1-000	7440-38-2	Arsenic	17.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R73C75	0-0.5	02/07/01	Yes	01-C013-SS-[R73C75]-D1-000	7439-92-1	Lead	22.0		mg/kg
R73C76	0-0.5	02/07/01	Yes	01-C013-SS-[R73C76]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R73C76	0-0.5	02/07/01	Yes	01-C013-SS-[R73C76]-D1-000	7439-92-1	Lead	39.0		mg/kg
R73C77	0-0.5	02/08/01	Yes	01-C013-SS-[R73C77]-D1-000	7440-38-2	Arsenic	29.0		mg/kg
R73C77	0-0.5	02/08/01	Yes	01-C013-SS-[R73C77]-D1-000	7439-92-1	Lead	51.0		mg/kg
R73C78	0-0.5	02/08/01	Yes	01-C013-SS-[R73C78]-D1-000	7440-38-2	Arsenic	22.0		mg/kg
R73C78	0-0.5	02/08/01	Yes	01-C013-SS-[R73C78]-D1-000	7439-92-1	Lead	13.0		mg/kg
R73C79	0-0.5	02/08/01	Yes	01-C013-SS-[R73C79]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R73C79	0-0.5	02/08/01	Yes	01-C013-SS-[R73C79]-D1-000	7439-92-1	Lead	33.0		mg/kg
R73C80	0-0.5	02/12/01	Yes	01-C013-SS-[R73C80]-D1-000	7440-38-2	Arsenic	31.0		mg/kg
R73C80	0-0.5	02/12/01	Yes	01-C013-SS-[R73C80]-D1-000	7439-92-1	Lead	35.0		mg/kg
R73C81	0-0.5	02/12/01	Yes	01-C013-SS-[R73C81]-D1-000	7440-38-2	Arsenic	27.0		mg/kg
R73C81	0-0.5	02/12/01	Yes	01-C013-SS-[R73C81]-D1-000	7439-92-1	Lead	38.0		mg/kg
R73C82	0-0.5	02/12/01	Yes	01-C013-SS-[R73C82]-D1-000	7440-38-2	Arsenic	56.0		mg/kg
R73C82	0-0.5	02/12/01	Yes	01-C013-SS-[R73C82]-D1-000	7439-92-1	Lead	39.0		mg/kg
R73C83	0-0.5	02/12/01	Yes	01-C013-SS-[R73C83]-D1-000-DAVG	7440-38-2	Arsenic	25.0		mg/kg
R73C83	0-0.5	02/12/01	Yes	01-C013-SS-[R73C83]-D1-000-DAVG	7439-92-1	Lead	36.5		mg/kg
R74C73	0-0.5	01/30/01	Yes	01-C012-SS-[R74C73]-D1-000	7440-38-2	Arsenic	59.0		mg/kg
R74C73	0-0.5	01/30/01	Yes	01-C012-SS-[R74C73]-D1-000	7439-92-1	Lead	84.0		mg/kg
R74C74	0-0.5	01/30/01	Yes	01-C012-SS-[R74C74]-D1-000	7440-38-2	Arsenic	35.0		mg/kg
R74C74	0-0.5	01/30/01	Yes	01-C012-SS-[R74C74]-D1-000	7439-92-1	Lead	55.0		mg/kg
R74C75	0-0.5	02/07/01	Yes	01-C013-SS-[R74C75]-D1-000	7440-38-2	Arsenic	27.0		mg/kg
R74C75	0-0.5	02/07/01	Yes	01-C013-SS-[R74C75]-D1-000	7439-92-1	Lead	37.0		mg/kg
R74C76	0-0.5	02/07/01	Yes	01-C013-SS-[R74C76]-D1-000	7440-38-2	Arsenic	25.0		mg/kg
R74C76	0-0.5	02/07/01	Yes	01-C013-SS-[R74C76]-D1-000	7439-92-1	Lead	35.0		mg/kg
R74C77	0-0.5	02/08/01	Yes	01-C013-SS-[R74C77]-D1-000	7440-38-2	Arsenic	52.0		mg/kg
R74C77	0-0.5	02/08/01	Yes	01-C013-SS-[R74C77]-D1-000	7439-92-1	Lead	49.0		mg/kg
R74C78	0-0.5	02/08/01	Yes	01-C013-SS-[R74C78]-D1-000	7440-38-2	Arsenic	31.0		mg/kg
R74C78	0-0.5	02/08/01	Yes	01-C013-SS-[R74C78]-D1-000	7439-92-1	Lead	24.0		mg/kg
R74C79	0-0.5	02/08/01	Yes	01-C013-SS-[R74C79]-D1-000	7440-38-2	Arsenic	23.0		mg/kg

Table B.8
Sample Results for CM-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R74C79	0-0.5	02/08/01	Yes	01-C013-SS-[R74C79]-D1-000	7439-92-1	Lead	27.0		mg/kg
R74C80	0-0.5	02/12/01	Yes	01-C013-SS-[R74C80]-D1-000	7440-38-2	Arsenic	39.0		mg/kg
R74C80	0-0.5	02/12/01	Yes	01-C013-SS-[R74C80]-D1-000	7439-92-1	Lead	40.0		mg/kg
R74C81	0-0.5	02/12/01	Yes	01-C013-SS-[R74C81]-D1-000	7440-38-2	Arsenic	23.0		mg/kg
R74C81	0-0.5	02/12/01	Yes	01-C013-SS-[R74C81]-D1-000	7439-92-1	Lead	41.0		mg/kg
R75C73	0-0.5	01/30/01	Yes	01-C012-SS-[R75C73]-D1-000	7440-38-2	Arsenic	20.0		mg/kg
R75C73	0-0.5	01/30/01	Yes	01-C012-SS-[R75C73]-D1-000	7439-92-1	Lead	27.0		mg/kg
R75C74	0-0.5	01/30/01	Yes	01-C012-SS-[R75C74]-D1-000	7440-38-2	Arsenic	31.0		mg/kg
R75C74	0-0.5	01/30/01	Yes	01-C012-SS-[R75C74]-D1-000	7439-92-1	Lead	46.0		mg/kg
R75C75	0-0.5	02/07/01	Yes	01-C013-SS-[R75C75]-D1-000	7440-38-2	Arsenic	20.0		mg/kg
R75C75	0-0.5	02/07/01	Yes	01-C013-SS-[R75C75]-D1-000	7439-92-1	Lead	38.0		mg/kg
R75C76	0-0.5	02/07/01	Yes	01-C013-SS-[R75C76]-D1-000	7440-38-2	Arsenic	67.0		mg/kg
R75C76	0-0.5	02/07/01	Yes	01-C013-SS-[R75C76]-D1-000	7439-92-1	Lead	100.0		mg/kg
R75C77	0-0.5	02/08/01	Yes	01-C013-SS-[R75C77]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
R75C77	0-0.5	02/08/01	Yes	01-C013-SS-[R75C77]-D1-000	7439-92-1	Lead	52.0		mg/kg
R75C78	0-0.5	02/08/01	Yes	01-C013-SS-[R75C78]-D1-000	7440-38-2	Arsenic	21.0		mg/kg
R75C78	0-0.5	02/08/01	Yes	01-C013-SS-[R75C78]-D1-000	7439-92-1	Lead	29.0		mg/kg
R75C79	0-0.5	02/08/01	Yes	01-C013-SS-[R75C79]-D1-000	7440-38-2	Arsenic	74.0		mg/kg
R75C79	0-0.5	02/08/01	Yes	01-C013-SS-[R75C79]-D1-000	7439-92-1	Lead	140.0		mg/kg
R75C80	0-0.5	02/12/01	Yes	01-C013-SS-[R75C80]-D1-000	7440-38-2	Arsenic	51.0		mg/kg
R75C80	0-0.5	02/12/01	Yes	01-C013-SS-[R75C80]-D1-000	7439-92-1	Lead	69.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
25-B-501	7.5-9	11/05/92	Yes	25-B-501-S-4-DAVG	7440-38-2	Arsenic	4.5		mg/kg
25-B-501	7.5-9	11/05/92	Yes	25-B-501-S-4-DAVG	7439-92-1	Lead	7.3		mg/kg
25-B-501	7.5-9	11/05/92	Yes	25-B-501-S-4-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
25-B-501	15-16.5	11/05/92	Yes	25-B-501-S-7	7440-38-2	Arsenic	3.7	J	mg/kg
25-B-501	15-16.5	11/05/92	Yes	25-B-501-S-7	7439-92-1	Lead	5.3	U	mg/kg
25-B-501	15-16.5	11/05/92	Yes	25-B-501-S-7	7439-97-6	Mercury	0.1	U	mg/kg
25-TP-524	3-6	11/02/92	Yes	25-TP-524-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-TP-524	3-6	11/02/92	Yes	25-TP-524-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-TP-524	3-6	11/02/92	Yes	25-TP-524-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-TP-524	8-10	11/02/92	Yes	25-TP-524-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-TP-524	8-10	11/02/92	Yes	25-TP-524-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-TP-524	8-10	11/02/92	Yes	25-TP-524-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-512	3-6	03/25/92	Yes	26-TP-512-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-512	3-6	03/25/92	Yes	26-TP-512-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-512	3-6	03/25/92	Yes	26-TP-512-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-512	3-6	03/25/92	Yes	26-TP-512-S-2	7439-92-1	Lead	5.0	U	mg/kg
26-TP-512	8-10	03/25/92	Yes	26-TP-512-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-512	8-10	03/25/92	Yes	26-TP-512-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-512	8-10	03/25/92	Yes	26-TP-512-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-512	8-10	03/25/92	Yes	26-TP-512-S-3	7439-92-1	Lead	10.0	U	mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	7440-38-2	Arsenic	3.8		mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	7440-50-8	Copper	6.5		mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	7439-92-1	Lead	5.1	U	mg/kg
26-TP-513	3-6	03/25/92	Yes	26-TP-513-S-2	7439-97-6	Mercury	0.08	U	mg/kg
26-TP-513	8-10	03/25/92	Yes	26-TP-513-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-513	8-10	03/25/92	Yes	26-TP-513-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-513	8-10	03/25/92	Yes	26-TP-513-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-TP-513	8-10	03/25/92	Yes	26-TP-513-S-3	7439-92-1	Lead	4.7	U	mg/kg
26-TP-514	3-6	03/25/92	Yes	26-TP-514-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-514	3-6	03/25/92	Yes	26-TP-514-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-514	3-6	03/25/92	Yes	26-TP-514-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-514	3-6	03/25/92	Yes	26-TP-514-S-2	7439-92-1	Lead	85.0		mg/kg
26-TP-514	6-7	03/25/92	Yes	26-TP-514-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-514	6-7	03/25/92	Yes	26-TP-514-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-514	6-7	03/25/92	Yes	26-TP-514-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-514	6-7	03/25/92	Yes	26-TP-514-S-3	7439-92-1	Lead	48.0		mg/kg
26-TP-515	3-6	03/25/92	Yes	26-TP-515-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-515	3-6	03/25/92	Yes	26-TP-515-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-515	3-6	03/25/92	Yes	26-TP-515-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-515	3-6	03/25/92	Yes	26-TP-515-S-2	7439-92-1	Lead	7.1		mg/kg
26-TP-515	8-10	03/25/92	Yes	26-TP-515-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-515	8-10	03/25/92	Yes	26-TP-515-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-515	8-10	03/25/92	Yes	26-TP-515-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-515	8-10	03/25/92	Yes	26-TP-515-S-3	7439-92-1	Lead	90.0		mg/kg
26-TP-519	0-1	06/30/92	Yes	26-TP-519-S-1	7439-92-1	Lead	48.0		mg/kg
26-TP-519	1-2	06/30/92	Yes	26-TP-519-S-2	7439-92-1	Lead	5.5	U	mg/kg
26-TP-521	1-2	06/30/92	Yes	26-TP-521-S-2	7439-92-1	Lead	11.0		mg/kg
26-TP-522	0-1	06/30/92	Yes	26-TP-522-S-1-DAVG	7439-92-1	Lead	21.0		mg/kg
26-TP-522	1-2	06/30/92	Yes	26-TP-522-S-2	7439-92-1	Lead	5.3	U	mg/kg
26-VS-31A	1-1.5	09/30/99	Yes	26-VS-31A	7440-38-2	Arsenic	4.7		mg/kg
26-VS-31A	1-1.5	09/30/99	Yes	26-VS-31A	7439-92-1	Lead	110.0		mg/kg
26-VS-5	1-1.5	09/15/99	Yes	26-VS-5	7440-38-2	Arsenic	3.7		mg/kg
26-VS-5	1-1.5	09/15/99	Yes	26-VS-5	7439-92-1	Lead	37.0	J	mg/kg
26-VS-54	2-2.5	04/19/00	No	26-VS-54	7440-38-2	Arsenic	2.5	U	mg/kg
26-VS-54	2-2.5	04/19/00	No	26-VS-54	7439-92-1	Lead	2600.0		mg/kg
26-VS-9A	2-2.5	09/30/99	Yes	26-VS-9A	7440-38-2	Arsenic	3.8		mg/kg
26-VS-9A	2-2.5	09/30/99	Yes	26-VS-9A	7439-92-1	Lead	100.0		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
39-VS-16-HG-3	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-16-Hg-3]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.2		mg/kg
39-VS-22	2-12	04/21/92	Yes	39-VS-22	7440-38-2	Arsenic	1.7		mg/kg
39-VS-22	2-12	04/21/92	Yes	39-VS-22	7440-50-8	Copper	12.0		mg/kg
39-VS-22	2-12	04/21/92	Yes	39-VS-22	7439-92-1	Lead	60.0		mg/kg
39-VS-22	2-12	04/21/92	Yes	39-VS-22	7439-97-6	Mercury	3.3	J	mg/kg
39-VS-24	2-12	04/21/92	Yes	39-VS-24	7440-38-2	Arsenic	1.6		mg/kg
39-VS-24	2-12	04/21/92	Yes	39-VS-24	7440-50-8	Copper	12.0		mg/kg
39-VS-24	2-12	04/21/92	Yes	39-VS-24	7439-92-1	Lead	23.0		mg/kg
39-VS-24	2-12	04/21/92	Yes	39-VS-24	7439-97-6	Mercury	4.7	J	mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	7440-38-2	Arsenic	5.0		mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	7440-50-8	Copper	16.0		mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	7439-92-1	Lead	46.0		mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	7439-97-6	Mercury	4.9	J	mg/kg
39-VS-26	12-12.5	04/21/92	Yes	39-VS-26	127-18-4	Tetrachloroethene	0.05	U	mg/kg
39-VS-30	21-21.5	05/07/92	Yes	39-VS-30	7440-38-2	Arsenic	3.9	J	mg/kg
39-VS-30	21-21.5	05/07/92	Yes	39-VS-30	7440-50-8	Copper	17.8		mg/kg
39-VS-30	21-21.5	05/07/92	Yes	39-VS-30	7439-92-1	Lead	5.3	U	mg/kg
39-VS-30	21-21.5	05/07/92	Yes	39-VS-30	7439-97-6	Mercury	0.1	U	mg/kg
39-VS-31	2-6	05/07/92	Yes	39-VS-31	7440-38-2	Arsenic	3.4	J	mg/kg
39-VS-31	2-6	05/07/92	Yes	39-VS-31	7440-50-8	Copper	16.1		mg/kg
39-VS-31	2-6	05/07/92	Yes	39-VS-31	7439-92-1	Lead	5.4	U	mg/kg
39-VS-31	2-6	05/07/92	Yes	39-VS-31	7439-97-6	Mercury	0.1	U	mg/kg
39-VS-32	2-6	05/07/92	Yes	39-VS-32	7440-38-2	Arsenic	2.1	J	mg/kg
39-VS-32	2-6	05/07/92	Yes	39-VS-32	7440-50-8	Copper	22.6		mg/kg
39-VS-32	2-6	05/07/92	Yes	39-VS-32	7439-92-1	Lead	5.3	U	mg/kg
39-VS-32	2-6	05/07/92	Yes	39-VS-32	7439-97-6	Mercury	0.1	U	mg/kg
39-VS-33	6-6.5	05/07/92	Yes	39-VS-33	7440-38-2	Arsenic	3.2	J	mg/kg
39-VS-33	6-6.5	05/07/92	Yes	39-VS-33	7440-50-8	Copper	15.5		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
39-VS-33	6-6.5	05/07/92	Yes	39-VS-33	7439-92-1	Lead	5.7	U	mg/kg
39-VS-33	6-6.5	05/07/92	Yes	39-VS-33	7439-97-6	Mercury	0.1	U	mg/kg
39-VS-39	4-5	08/14/92	Yes	39-VS-39	7440-38-2	Arsenic	2.3		mg/kg
39-VS-39	4-5	08/14/92	Yes	39-VS-39	7439-97-6	Mercury	0.1		mg/kg
39-VS-41	4-5	08/14/92	Yes	39-VS-41	7440-38-2	Arsenic	1.3		mg/kg
39-VS-41	4-5	08/14/92	Yes	39-VS-41	7439-97-6	Mercury	0.08	U	mg/kg
39-VS-42	4-5	08/14/92	Yes	39-VS-42	7440-38-2	Arsenic	5.8		mg/kg
39-VS-42	4-5	08/14/92	Yes	39-VS-42	7439-97-6	Mercury	0.9		mg/kg
8-BS-1	32.5-34	06/09/92	Yes	8-BS-1-S-7	DNT-TOTAL	DNT - Total	3.4	U	mg/kg
8-BS-1	32.5-34	06/09/92	Yes	8-BS-1-S-7	98-95-3	Nitrobenzene	1.7	U	mg/kg
8-BS-1	32.5-34	06/09/92	Yes	8-BS-1-S-7	MOTOROIL	Motor Oil	880.0		mg/kg
APD-TP-501	3-5	05/27/92	Yes	APD-TP-501-S-2	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
APD-TP-501	3-5	05/27/92	Yes	APD-TP-501-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
APD-TP-501	3-5	05/27/92	Yes	APD-TP-501-S-2	7440-38-2	Arsenic	3.4		mg/kg
APD-TP-501	3-5	05/27/92	Yes	APD-TP-501-S-2	7440-50-8	Copper	21.9		mg/kg
APD-TP-501	3-5	05/27/92	Yes	APD-TP-501-S-2	7439-92-1	Lead	6.5		mg/kg
APD-TP-501	3-5	05/27/92	Yes	APD-TP-501-S-2	7439-97-6	Mercury	0.1	U	mg/kg
APH-SS-516	0-0.5	11/12/92	Yes	APH-SS-516	7439-92-1	Lead	6.2	U	mg/kg
F-115	2-2.5	06/20/01	Yes	01-F04-SS[F-115]C2-005	7440-38-2	Arsenic	7.1		mg/kg
F-115	2-2.5	06/20/01	Yes	01-F04-SS[F-115]C2-005	7439-92-1	Lead	5.2		mg/kg
F-116	2-2.5	06/20/01	Yes	01-F04-SS[F-116]C2-005-DAVG	7440-38-2	Arsenic	7.9		mg/kg
F-116	2-2.5	06/20/01	Yes	01-F04-SS[F-116]C2-005-DAVG	7439-92-1	Lead	16.0		mg/kg
F-118-2	3-3.5	08/28/01	Yes	02-F04-SS[F-118-2]C2-030	7440-38-2	Arsenic	14.0		mg/kg
F-118-2	3-3.5	08/28/01	Yes	02-F04-SS[F-118-2]C2-030	7439-92-1	Lead	3.9		mg/kg
F-119-2	3-3.5	08/28/01	Yes	02-F04-SS[F-119-2]C2-030	7440-38-2	Arsenic	31.0		mg/kg
F-119-2	3-3.5	08/28/01	Yes	02-F04-SS[F-119-2]C2-030	7439-92-1	Lead	25.0		mg/kg
F-120	2-2.5	06/20/01	Yes	01-F04-SS[F-120]C2-005	7440-38-2	Arsenic	11.0		mg/kg
F-120	2-2.5	06/20/01	Yes	01-F04-SS[F-120]C2-005	7439-92-1	Lead	2.6		mg/kg
F-121-2	3-3.5	08/28/01	Yes	02-F04-SS[F-121-2]C2-030	7440-38-2	Arsenic	34.0		mg/kg
F-121-2	3-3.5	08/28/01	Yes	02-F04-SS[F-121-2]C2-030	7439-92-1	Lead	21.0		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-122	2-2.5	06/21/01	Yes	01-F04-SS[F-122]C2-005	7440-38-2	Arsenic	7.8		mg/kg
F-122	2-2.5	06/21/01	Yes	01-F04-SS[F-122]C2-005	7439-92-1	Lead	3.1		mg/kg
F-123	2-2.5	06/21/01	Yes	01-F04-SS[F-123]C2-005	7440-38-2	Arsenic	39.0		mg/kg
F-123	2-2.5	06/21/01	Yes	01-F04-SS[F-123]C2-005	7439-92-1	Lead	22.0		mg/kg
F-125	2-2.5	06/21/01	Yes	01-F04-SS[F-125]C2-005	7440-38-2	Arsenic	6.4		mg/kg
F-125	2-2.5	06/21/01	Yes	01-F04-SS[F-125]C2-005	7439-92-1	Lead	43.0		mg/kg
F-245	4-4.5	09/10/01	Yes	03-F11-SS-[F-245-3]-C2-050	7440-38-2	Arsenic	5.6		mg/kg
F-245	4-4.5	09/10/01	Yes	03-F11-SS-[F-245-3]-C2-050	7439-92-1	Lead	8.5		mg/kg
F-246-2	3-3.5	08/29/01	Yes	02-F11-SS[F-246-2]C2-030	7440-38-2	Arsenic	6.4	J	mg/kg
F-246-2	3-3.5	08/29/01	Yes	02-F11-SS[F-246-2]C2-030	7439-92-1	Lead	38.0		mg/kg
F-247	2-2.5	08/14/01	Yes	01-F11-SS[F-247]C2-005	7440-38-2	Arsenic	15.0		mg/kg
F-247	2-2.5	08/14/01	Yes	01-F11-SS[F-247]C2-005	7439-92-1	Lead	93.0		mg/kg
F-248-2	3-3.5	08/29/01	Yes	02-F11-SS[F-248-2]C2-030	7440-38-2	Arsenic	4.8	J	mg/kg
F-248-2	3-3.5	08/29/01	Yes	02-F11-SS[F-248-2]C2-030	7439-92-1	Lead	96.0		mg/kg
F-25	2-2.5	06/07/01	Yes	01-F06-SS[F-25]C2-005	7440-38-2	Arsenic	2.5		mg/kg
F-25	2-2.5	06/07/01	Yes	01-F06-SS[F-25]C2-005	7439-92-1	Lead	2.3		mg/kg
F-251	4-4.5	09/10/01	Yes	03-F11-SS-[F-251-3]-C2-050	7440-38-2	Arsenic	3.9		mg/kg
F-251	4-4.5	09/10/01	Yes	03-F11-SS-[F-251-3]-C2-050	7439-92-1	Lead	51.0		mg/kg
F-253-2	3-3.5	08/29/01	Yes	02-F11-SS[F-253-2]C2-030	7440-38-2	Arsenic	24.0	J	mg/kg
F-253-2	3-3.5	08/29/01	Yes	02-F11-SS[F-253-2]C2-030	7439-92-1	Lead	65.0		mg/kg
F-255-2	3-3.5	08/29/01	Yes	02-F11-SS[F-255-2]C2-030	7440-38-2	Arsenic	11.0	J	mg/kg
F-255-2	3-3.5	08/29/01	Yes	02-F11-SS[F-255-2]C2-030	7439-92-1	Lead	47.0		mg/kg
F-256-2	3-3.5	08/29/01	Yes	02-F11-SS[F-256-2]C2-030	7440-38-2	Arsenic	4.9		mg/kg
F-256-2	3-3.5	08/29/01	Yes	02-F11-SS[F-256-2]C2-030	7439-92-1	Lead	9.5		mg/kg
F-257-2	3-3.5	08/29/01	Yes	02-F11-SS[F-257-2]C2-030	7440-38-2	Arsenic	4.3		mg/kg
F-257-2	3-3.5	08/29/01	Yes	02-F11-SS[F-257-2]C2-030	7439-92-1	Lead	60.0		mg/kg
F-26	2-2.5	06/07/01	Yes	01-F06-SS[F-26]C2-005	7440-38-2	Arsenic	3.8		mg/kg
F-26	2-2.5	06/07/01	Yes	01-F06-SS[F-26]C2-005	7439-92-1	Lead	8.2		mg/kg
F-27	2-2.5	06/07/01	Yes	01-F06-SS[F-27]C2-005	7440-38-2	Arsenic	4.1		mg/kg
F-27	2-2.5	06/07/01	Yes	01-F06-SS[F-27]C2-005	7439-92-1	Lead	3.0		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-28	2-2.5	06/07/01	Yes	01-F06-SS[F-28]C2-005	7440-38-2	Arsenic	2.4		mg/kg
F-28	2-2.5	06/07/01	Yes	01-F06-SS[F-28]C2-005	7439-92-1	Lead	24.0		mg/kg
LR-019S	0-0.5	11/04/92	Yes	LR-019S	7439-92-1	Lead	54.0		mg/kg
MSU-49-VS-B	4.5-5	06/23/03	Yes	01-SS-[MSU-49-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	3.3		mg/kg
MSU-49-VS-B	4.5-5	06/23/03	Yes	01-SS-[MSU-49-VS-B]-C2_06/23/03_4.5	7439-92-1	Lead	15.1		mg/kg
MSU-50-VS-B	4.5-5	06/23/03	Yes	01-SS-[MSU-50-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	3.2		mg/kg
MSU-50-VS-B	4.5-5	06/23/03	Yes	01-SS-[MSU-50-VS-B]-C2_06/23/03_4.5	7439-92-1	Lead	29.7		mg/kg
MSU-51-VS-B	4.5-5	06/23/03	Yes	01-SS-[MSU-51-VS-B]-C2_06/23/03_4.5	7440-38-2	Arsenic	4.0		mg/kg
MSU-51-VS-B	4.5-5	06/23/03	Yes	01-SS-[MSU-51-VS-B]-C2_06/23/03_4.5	7439-92-1	Lead	62.4		mg/kg
MSU-55-VS-B	5.5-6	07/07/03	Yes	01-SS-[MSU-55-VS-B]-C2_07/07/03_5.5	7440-38-2	Arsenic	37.7		mg/kg
MSU-55-VS-B	5.5-6	07/07/03	Yes	01-SS-[MSU-55-VS-B]-C2_07/07/03_5.5	7439-92-1	Lead	72.8		mg/kg
MSU-56-1-VS-B	4.5-5	12/08/03	Yes	02-SS-[MSU-56-1-VS-B]-C2_AVG_12/08/03_4.5	7439-92-1	Lead	2.2		mg/kg
MSU-56-2-VS-B	4.5-5	12/08/03	Yes	02-SS-[MSU-56-2-VS-B]-C2_12/08/03_4.5	7439-92-1	Lead	2.1	U	mg/kg
MSU-56-3-VS-B	3.5-4	11/20/03	Yes	01-SS-[MSU-56-3-VS-B]-C2_11/20/03_3.5	7439-92-1	Lead	4.0		mg/kg
MSU-56-4-VS-B	6.5-7	12/08/03	Yes	02-SS-[MSU-56-4-VS-B]-C2_12/08/03_4.5	7439-92-1	Lead	2.0	U	mg/kg
MSU-56-N	0-0.5	06/25/03	No	01-SS-[MSU-56-N]-D1_06/25/03_0	7440-38-2	Arsenic	8.1		mg/kg
MSU-56-S	0-0.5	06/25/03	No	01-SS-[MSU-56-S]-D1_06/25/03_0	7440-38-2	Arsenic	8.3		mg/kg
MSU-56-W	0-0.5	06/25/03	No	01-SS-[MSU-56-W]-D1_06/25/03_0	7440-38-2	Arsenic	12.6		mg/kg
MSU-57-VS-B	5.5-6	07/07/03	Yes	01-SS-[MSU-57-VS-B]-C2_07/07/03_5.5	7440-38-2	Arsenic	3.7		mg/kg
MSU-57-VS-B	5.5-6	07/07/03	Yes	01-SS-[MSU-57-VS-B]-C2_07/07/03_5.5	7439-92-1	Lead	80.2		mg/kg
MSU-58-VS-B	7.5-8	07/07/03	No	01-SS-[MSU-58-VS-B]-C2_07/07/03_7.5	7440-38-2	Arsenic	5.7		mg/kg
MSU-58-VS-B	11.5-12	08/11/03	Yes	04-SS-[MSU-58-VS-B]-C2_08/11/03_11.5	7439-92-1	Lead	106.0		mg/kg
MSU-59-VS-B	5.5-6	07/07/03	No	01-SS-[MSU-59-VS-B]-C2_07/07/03_5.5	7440-38-2	Arsenic	7.5		mg/kg
MSU-59-VS-B	7.5-8	07/22/03	Yes	02-SS-[MSU-59-VS-B]-C2_07/22/03_7.5	7439-92-1	Lead	4.5		mg/kg
MSU-59-VS-S	0-3.5	03/24/06	Yes	03-MSU-59-VS-S-0-3.5	7440-38-2	Arsenic	7.7		mg/Kg
MSU-59-VS-S	0-3.5	03/24/06	Yes	03-MSU-59-VS-S-0-3.5	7439-92-1	Lead	14.0		mg/Kg
MSU-60-VS-B	8-10.5	07/07/03	No	01-SS-[MSU-60-VS-B]-C2_07/07/03_8	7440-38-2	Arsenic	9.1		mg/kg
MSU-60-VS-B	8-8.5	08/04/03	Yes	03-SS-[MSU-60-VS-B]-C2_08/04/03_8	7439-92-1	Lead	59.1		mg/kg
MSU-61-VS-B	1.5-2	07/07/03	Yes	01-SS-[MSU-61-VS-B]-C2_07/07/03_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-61-VS-B	1.5-2	07/07/03	Yes	01-SS-[MSU-61-VS-B]-C2_07/07/03_1.5	7439-92-1	Lead	46.0		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-04	2-2.5	06/09/03	Yes	01-SS[MSU-F-04-1]C1_06/09/03_2	7440-38-2	Arsenic	4.3		mg/kg
MSU-F-04	2-2.5	06/09/03	Yes	01-SS[MSU-F-04-1]C1_06/09/03_2	7439-92-1	Lead	14.9		mg/kg
MSU-F-4-2	2-2.5	06/09/03	Yes	01-SS[MSU-F-04-2]-C1_06/09/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-4-2	2-2.5	06/09/03	Yes	01-SS[MSU-F-04-2]-C1_06/09/03_2	7439-92-1	Lead	6.1		mg/kg
MSU-F-46-4	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-4]-C1_06/05/03_2	7440-38-2	Arsenic	5.6		mg/kg
MSU-F-46-4	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-4]-C1_06/05/03_2	7439-92-1	Lead	37.9		mg/kg
MSU-F-46-5	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-5]-C1_06/05/03_2	7440-38-2	Arsenic	2.5		mg/kg
MSU-F-46-5	2-2.5	06/05/03	Yes	01-SS-[MSU-F-46-5]-C1_06/05/03_2	7439-92-1	Lead	5.7		mg/kg
MSU-F-51-2	2-2.5	06/17/03	Yes	01-SS-[MSU-F-51-2]-C1_06/17/03_2	7440-38-2	Arsenic	4.8		mg/kg
MSU-F-51-2	2-2.5	06/17/03	Yes	01-SS-[MSU-F-51-2]-C1_06/17/03_2	7439-92-1	Lead	8.8		mg/kg
MSU-F-51	2-2.5	06/17/03	Yes	01-SS-[MSU-F-51-1]-C1_06/17/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-51	2-2.5	06/17/03	Yes	01-SS-[MSU-F-51-1]-C1_06/17/03_2	7439-92-1	Lead	8.8		mg/kg
MSU-F-52-2	2-2.5	06/17/03	Yes	01-SS-[MSU-F-52-2]-C1_AVG_06/17/03_2	7440-38-2	Arsenic	2.1	U	mg/kg
MSU-F-52-2	2-2.5	06/17/03	Yes	01-SS-[MSU-F-52-2]-C1_AVG_06/17/03_2	7439-92-1	Lead	3.7		mg/kg
MSU-F-52	2-2.5	06/17/03	Yes	01-SS-[MSU-F-52-1]-C1_06/17/03_2	7440-38-2	Arsenic	2.8		mg/kg
MSU-F-52	2-2.5	06/17/03	Yes	01-SS-[MSU-F-52-1]-C1_06/17/03_2	7439-92-1	Lead	3.6		mg/kg
MSU-F-53-2	2-2.5	06/17/03	Yes	01-SS-[MSU-F-53-2]-C1_06/17/03_2	7440-38-2	Arsenic	2.5		mg/kg
MSU-F-53-2	2-2.5	06/17/03	Yes	01-SS-[MSU-F-53-2]-C1_06/17/03_2	7439-92-1	Lead	4.9		mg/kg
MSU-F-53	2-2.5	06/17/03	Yes	01-SS-[MSU-F-53-1]-C1_06/17/03_2	7440-38-2	Arsenic	2.8		mg/kg
MSU-F-53	2-2.5	06/17/03	Yes	01-SS-[MSU-F-53-1]-C1_06/17/03_2	7439-92-1	Lead	4.4		mg/kg
MSU-NGRR-05	1.5-2	06/09/03	No	01-SS[MSU-NGRR-05-1]C1_06/09/03_1.5	7440-38-2	Arsenic	34.2		mg/kg
MSU-NGRR-05	6.5-7	06/16/03	Yes	02-SS-[MSU-NGRR-05-1]-C2_06/16/03_2.5	7439-92-1	Lead	49.5		mg/kg
MSU-NGRR-08	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-1]-C1_06/09/03_1.5	7440-38-2	Arsenic	3.9		mg/kg
MSU-NGRR-08	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-1]-C1_06/09/03_1.5	7439-92-1	Lead	4.7		mg/kg
MSU-NGRR-41	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-41-1]C1_06/09/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-NGRR-41	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-41-1]C1_06/09/03_1.5	7439-92-1	Lead	16.0		mg/kg
MSU-NGRR-43	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-43-1]-C1_04/23/03_1.5	7440-38-2	Arsenic	7.5		mg/kg
MSU-NGRR-43	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-43-1]-C1_04/23/03_1.5	7439-92-1	Lead	6.0		mg/kg
MSU-NGRR-8-2	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-2]-C1_06/09/03_1.5	7440-38-2	Arsenic	2.9		mg/kg
MSU-NGRR-8-2	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-08-2]-C1_06/09/03_1.5	7439-92-1	Lead	3.5		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-09	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-09]C2-005	7440-38-2	Arsenic	33.0		mg/kg
NGRR-09	1.5-2	06/07/01	Yes	01-N01-SS[NGRR-09]C2-005	7439-92-1	Lead	11.0		mg/kg
NGRR-203-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-203-2]C2-025	7440-38-2	Arsenic	16.0		mg/kg
NGRR-203-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-203-2]C2-025	7439-92-1	Lead	37.0		mg/kg
NGRR-204	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-204]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-204	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-204]C2-005	7439-92-1	Lead	55.0		mg/kg
NGRR-269	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-269]C2-005	7440-38-2	Arsenic	6.7		mg/kg
NGRR-269	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-269]C2-005	7439-92-1	Lead	7.0		mg/kg
NGRR-270	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-270]C2-005	7440-38-2	Arsenic	8.2		mg/kg
NGRR-270	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-270]C2-005	7439-92-1	Lead	9.1		mg/kg
NGRR-271	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-271]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-271	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-271]C2-005	7439-92-1	Lead	7.8		mg/kg
NGRR-272	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-272]C2-005	7440-38-2	Arsenic	11.0		mg/kg
NGRR-272	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-272]C2-005	7439-92-1	Lead	6.6		mg/kg
NGRR-273	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-273]C2-005	7440-38-2	Arsenic	8.9		mg/kg
NGRR-273	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-273]C2-005	7439-92-1	Lead	7.9		mg/kg
NGRR-274	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-274]C2-005	7440-38-2	Arsenic	8.5		mg/kg
NGRR-274	1.5-2	08/13/01	Yes	01-N01-SS[NGRR-274]C2-005	7439-92-1	Lead	7.9		mg/kg
NGRR-276-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-276-2]C2-025	7440-38-2	Arsenic	7.2		mg/kg
NGRR-276-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-276-2]C2-025	7439-92-1	Lead	97.0		mg/kg
NGRR-277	1.5-2	08/14/01	Yes	01-N01-SS[NGRR-277]C2-005	7440-38-2	Arsenic	20.0		mg/kg
NGRR-277	1.5-2	08/14/01	Yes	01-N01-SS[NGRR-277]C2-005	7439-92-1	Lead	15.0		mg/kg
NGRR-278	1.5-2	08/14/01	Yes	01-N01-SS[NGRR-278]C2-005	7440-38-2	Arsenic	34.0		mg/kg
NGRR-278	1.5-2	08/14/01	Yes	01-N01-SS[NGRR-278]C2-005	7439-92-1	Lead	110.0		mg/kg
NGRR-279-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-279-2]C2-025-DAVG	7440-38-2	Arsenic	12.5		mg/kg
NGRR-279-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-279-2]C2-025-DAVG	7439-92-1	Lead	26.5		mg/kg
NGRR-281-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-281-2]C2-025	7440-38-2	Arsenic	35.0		mg/kg
NGRR-281-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-281-2]C2-025	7439-92-1	Lead	40.0	J	mg/kg
NGRR-282-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-282-2]C2-025	7440-38-2	Arsenic	7.3		mg/kg
NGRR-282-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-282-2]C2-025	7439-92-1	Lead	29.0	J	mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-288	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-288]C2-005	7440-38-2	Arsenic	7.4		mg/kg
NGRR-288	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-288]C2-005	7439-92-1	Lead	5.9		mg/kg
NGRR-289	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-289]C2-005	7440-38-2	Arsenic	6.2		mg/kg
NGRR-289	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-289]C2-005	7439-92-1	Lead	4.3		mg/kg
NGRR-290	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-290]C2-005	7440-38-2	Arsenic	8.2		mg/kg
NGRR-290	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-290]C2-005	7439-92-1	Lead	5.1		mg/kg
NGRR-291	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-291]C2-005	7440-38-2	Arsenic	8.4		mg/kg
NGRR-291	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-291]C2-005	7439-92-1	Lead	8.2		mg/kg
NGRR-292	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-292]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-292	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-292]C2-005	7439-92-1	Lead	12.0		mg/kg
NGRR-293	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-293]C2-005	7440-38-2	Arsenic	6.6		mg/kg
NGRR-293	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-293]C2-005	7439-92-1	Lead	5.5		mg/kg
NGRR-294	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-294]C2-005	7440-38-2	Arsenic	6.8		mg/kg
NGRR-294	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-294]C2-005	7439-92-1	Lead	7.3		mg/kg
NGRR-295	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-295]C2-005	7440-38-2	Arsenic	7.1		mg/kg
NGRR-295	1.5-2	08/15/01	Yes	01-N01-SS[NGRR-295]C2-005	7439-92-1	Lead	4.9		mg/kg
NGRR-87	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-87]C2-005	7440-38-2	Arsenic	3.4		mg/kg
NGRR-87	1.5-2	07/19/01	Yes	01-N01-SS[NGRR-87]C2-005	7439-92-1	Lead	5.1		mg/kg
R20C27	1-1.5	03/10/04	Yes	1-R20C27_03/10/04_1	7440-38-2	Arsenic	13.2		mg/kg
R20C27	1-1.5	03/10/04	Yes	1-R20C27_03/10/04_1	7439-92-1	Lead	9.9		mg/kg
R21C27	1-1.5	03/10/04	Yes	1-R21C27_03/10/04_1	7440-38-2	Arsenic	10.3		mg/kg
R21C27	1-1.5	03/10/04	Yes	1-R21C27_03/10/04_1	7439-92-1	Lead	11.8		mg/kg
R21C28	1-1.5	03/10/04	Yes	1-R21C28_03/10/04_1	7440-38-2	Arsenic	9.2		mg/kg
R21C28	1-1.5	03/10/04	Yes	1-R21C28_03/10/04_1	7439-92-1	Lead	11.1		mg/kg
R21C29	1-1.5	03/10/04	Yes	1-R21C29_03/10/04_1	7440-38-2	Arsenic	7.7		mg/kg
R21C29	1-1.5	03/10/04	Yes	1-R21C29_03/10/04_1	7439-92-1	Lead	8.0		mg/kg
R22C24	1-1.5	04/05/04	Yes	01-R22C24_04/05/04_1	7440-38-2	Arsenic	5.3		mg/kg
R22C24	1-1.5	04/05/04	Yes	01-R22C24_04/05/04_1	7439-92-1	Lead	4.7		mg/kg
R22C26	1-1.5	03/10/04	Yes	1-R22C26_03/10/04_1	7440-38-2	Arsenic	6.5		mg/kg
R22C26	1-1.5	03/10/04	Yes	1-R22C26_03/10/04_1	7439-92-1	Lead	4.2		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R22C27	1-1.5	03/10/04	Yes	1-R22C27_03/10/04_1	7440-38-2	Arsenic	8.6		mg/kg
R22C27	1-1.5	03/10/04	Yes	1-R22C27_03/10/04_1	7439-92-1	Lead	15.6		mg/kg
R22C28	1-1.5	03/10/04	Yes	1-R22C28_03/10/04_1	7440-38-2	Arsenic	19.8		mg/kg
R22C28	1-1.5	03/10/04	Yes	1-R22C28_03/10/04_1	7439-92-1	Lead	9.1		mg/kg
R22C29	1-1.5	03/10/04	Yes	1-R22C29_03/10/04_1	7440-38-2	Arsenic	5.7		mg/kg
R22C29	1-1.5	03/10/04	Yes	1-R22C29_03/10/04_1	7439-92-1	Lead	7.3		mg/kg
R22C31	1-1.5	03/19/04	Yes	01-R22C31_03/19/04_1	7440-38-2	Arsenic	4.4		mg/kg
R22C31	1-1.5	03/19/04	Yes	01-R22C31_03/19/04_1	7439-92-1	Lead	7.9		mg/kg
R22C38	1-1.5	11/26/03	Yes	01-SS-[R22C38]-C2_11/26/03_1	7440-38-2	Arsenic	15.7		mg/kg
R22C38	1-1.5	11/26/03	Yes	01-SS-[R22C38]-C2_11/26/03_1	7439-92-1	Lead	95.9		mg/kg
R23C23	1-1.5	03/25/04	Yes	1-R23C23_03/25/04_1	7440-38-2	Arsenic	8.8		mg/kg
R23C23	1-1.5	03/25/04	Yes	1-R23C23_03/25/04_1	7439-92-1	Lead	5.7		mg/kg
R23C26	1-1.5	03/10/04	Yes	1-R23C26_03/10/04_1	7440-38-2	Arsenic	8.5		mg/kg
R23C26	1-1.5	03/10/04	Yes	1-R23C26_03/10/04_1	7439-92-1	Lead	7.6		mg/kg
R23C27	1-1.5	03/30/04	Yes	01-R23C27_03/30/04_1	7440-38-2	Arsenic	2.6		mg/kg
R23C27	1-1.5	03/30/04	Yes	01-R23C27_03/30/04_1	7439-92-1	Lead	11.6		mg/kg
R23C28	1-1.5	03/30/04	Yes	01-R23C28_03/30/04_1	7440-38-2	Arsenic	4.8		mg/kg
R23C28	1-1.5	03/30/04	Yes	01-R23C28_03/30/04_1	7439-92-1	Lead	7.7		mg/kg
R23C31	1-1.5	03/19/04	Yes	01-R23C31_03/19/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R23C31	1-1.5	03/19/04	Yes	01-R23C31_03/19/04_1	7439-92-1	Lead	10.2		mg/kg
R23C37	2-2.5	12/12/03	No	02-SS-[R23C37]-C2_12/12/03_2	7439-92-1	Lead	8.4		mg/kg
R23C37	3-3.5	02/06/04	Yes	3-R23C37_02/06/04_3	7440-38-2	Arsenic	10.6		mg/kg
R23C38	1-1.5	11/26/03	No	01-SS-[R23C38]-C2_11/26/03_1	7440-38-2	Arsenic	24.9		mg/kg
R23C38	2-2.5	12/12/03	Yes	02-SS-[R23C38]-C2_12/12/03_2	7439-92-1	Lead	28.1		mg/kg
R23C40	1-1.5	11/14/03	Yes	01-SS-[R23C40]-C2_11/14/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R23C40	1-1.5	11/14/03	Yes	01-SS-[R23C40]-C2_11/14/03_1	7439-92-1	Lead	4.6		mg/kg
R24C24	1-1.5	03/25/04	Yes	1-R24C24_03/25/04_1	7440-38-2	Arsenic	6.3		mg/kg
R24C24	1-1.5	03/25/04	Yes	1-R24C24_03/25/04_1	7439-92-1	Lead	6.3		mg/kg
R24C26	1-1.5	03/10/04	Yes	1-R24C26_03/10/04_1	7440-38-2	Arsenic	5.2		mg/kg
R24C26	1-1.5	03/10/04	Yes	1-R24C26_03/10/04_1	7439-92-1	Lead	3.6		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R24C27	1-1.5	03/10/04	Yes	1-R24C27_03/10/04_1	7440-38-2	Arsenic	8.9		mg/kg
R24C27	1-1.5	03/10/04	Yes	1-R24C27_03/10/04_1	7439-92-1	Lead	6.9		mg/kg
R24C28	1-1.5	03/10/04	Yes	1-R24C28_03/10/04_1	7440-38-2	Arsenic	8.2		mg/kg
R24C28	1-1.5	03/10/04	Yes	1-R24C28_03/10/04_1	7439-92-1	Lead	26.8		mg/kg
R24C29	1-1.5	03/30/04	Yes	01-R24C29_03/30/04_1	7440-38-2	Arsenic	2.2		mg/kg
R24C29	1-1.5	03/30/04	Yes	01-R24C29_03/30/04_1	7439-92-1	Lead	17.0		mg/kg
R24C31	1-1.5	03/19/04	Yes	01-R24C31_03/19/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R24C31	1-1.5	03/19/04	Yes	01-R24C31_03/19/04_1	7439-92-1	Lead	11.4		mg/kg
R24C41	1-1.5	11/14/03	Yes	01-SS-[R24C41]-C2_11/14/03_1	7440-38-2	Arsenic	4.0		mg/kg
R24C41	1-1.5	11/14/03	Yes	01-SS-[R24C41]-C2_11/14/03_1	7439-92-1	Lead	65.5		mg/kg
R25C27	1-1.5	03/10/04	Yes	1-R25C27_03/10/04_1	7440-38-2	Arsenic	9.3		mg/kg
R25C27	1-1.5	03/10/04	Yes	1-R25C27_03/10/04_1	7439-92-1	Lead	54.9		mg/kg
R25C28	1-1.5	03/30/04	Yes	01-R25C28_03/30/04_1	7440-38-2	Arsenic	1.7		mg/kg
R25C28	1-1.5	03/30/04	Yes	01-R25C28_03/30/04_1	7439-92-1	Lead	81.9		mg/kg
R25C29	1-1.5	03/30/04	Yes	01-R25C29_03/30/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R25C29	1-1.5	03/30/04	Yes	01-R25C29_03/30/04_1	7439-92-1	Lead	20.1		mg/kg
R25C42	1-1.5	11/14/03	Yes	01-SS-[R25C42]-C2_11/14/03_1	7440-38-2	Arsenic	2.1		mg/kg
R25C42	1-1.5	11/14/03	Yes	01-SS-[R25C42]-C2_11/14/03_1	7439-92-1	Lead	5.3		mg/kg
R26C42	1-1.5	11/14/03	Yes	01-SS-[R26C42]-C2_11/14/03_1	7440-38-2	Arsenic	4.7		mg/kg
R26C42	1-1.5	11/14/03	Yes	01-SS-[R26C42]-C2_11/14/03_1	7439-92-1	Lead	30.6		mg/kg
R27C42	1-1.5	04/13/04	Yes	1-R27C42_04/13/04_1	7440-38-2	Arsenic	7.3		mg/kg
R27C42	1-1.5	04/13/04	Yes	1-R27C42_04/13/04_1	7439-92-1	Lead	37.4		mg/kg
R28C30	1-1.5	03/09/04	Yes	1-R28C30_03/09/04_1	7440-38-2	Arsenic	16.3		mg/kg
R28C30	1-1.5	03/09/04	Yes	1-R28C30_03/09/04_1	7439-92-1	Lead	16.8		mg/kg
R28C31	1-1.5	03/09/04	Yes	1-R28C31_03/09/04_1	7440-38-2	Arsenic	7.9		mg/kg
R28C31	1-1.5	03/09/04	Yes	1-R28C31_03/09/04_1	7439-92-1	Lead	28.5		mg/kg
R28C37	1-1.5	03/09/04	Yes	1-R28C37_03/09/04_1	7440-38-2	Arsenic	12.2		mg/kg
R28C37	1-1.5	03/09/04	Yes	1-R28C37_03/09/04_1	7439-92-1	Lead	25.4		mg/kg
R28C38	1-1.5	03/09/04	No	1-R28C38_03/09/04_1	7440-38-2	Arsenic	15.4		mg/kg
R28C38	3-3.5	04/30/04	Yes	3-R28C38_04/30/04_3	7439-92-1	Lead	2.5		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R29C34	2-2.5	04/09/04	Yes	2-R29C34_04/09/04_2	7440-38-2	Arsenic	7.9		mg/kg
R29C34	2-2.5	04/09/04	Yes	2-R29C34_04/09/04_2	7439-92-1	Lead	5.0		mg/kg
R29C35	1-1.5	03/09/04	Yes	1-R29C35_03/09/04_1	7440-38-2	Arsenic	12.2		mg/kg
R29C35	1-1.5	03/09/04	Yes	1-R29C35_03/09/04_1	7439-92-1	Lead	8.6		mg/kg
R29C37	1-1.5	03/09/04	Yes	1-R29C37_03/09/04_1	7440-38-2	Arsenic	7.3		mg/kg
R29C37	1-1.5	03/09/04	Yes	1-R29C37_03/09/04_1	7439-92-1	Lead	26.6		mg/kg
R29C38	1-1.5	03/09/04	Yes	1-R29C38_03/09/04_1	7440-38-2	Arsenic	5.8		mg/kg
R29C38	1-1.5	03/09/04	Yes	1-R29C38_03/09/04_1	7439-92-1	Lead	4.4		mg/kg
R29C39	1-1.5	03/09/04	Yes	1-R29C39_AVG_03/09/04_1	7440-38-2	Arsenic	5.2		mg/kg
R29C39	1-1.5	03/09/04	Yes	1-R29C39_AVG_03/09/04_1	7439-92-1	Lead	18.3		mg/kg
R29C40	1-1.5	04/13/04	No	1-R29C40_04/13/04_1	7440-38-2	Arsenic	17.3		mg/kg
R29C40	2-2.5	04/30/04	Yes	2-R29C40_04/30/04_2	7439-92-1	Lead	2.6		mg/kg
R29C41	1-1.5	04/13/04	No	1-R29C41_04/13/04_1	7440-38-2	Arsenic	18.3		mg/kg
R29C41	2-2.5	04/30/04	Yes	2-R29C41_04/30/04_2	7439-92-1	Lead	10.5		mg/kg
R29C42	1-1.5	04/13/04	Yes	1-R29C42_04/13/04_1	7440-38-2	Arsenic	5.4		mg/kg
R29C42	1-1.5	04/13/04	Yes	1-R29C42_04/13/04_1	7439-92-1	Lead	40.3		mg/kg
R30C39	1-1.5	03/09/04	Yes	1-R30C39_03/09/04_1	7440-38-2	Arsenic	6.3		mg/kg
R30C39	1-1.5	03/09/04	Yes	1-R30C39_03/09/04_1	7439-92-1	Lead	4.8		mg/kg
R30C41	1-1.5	04/13/04	No	1-R30C41_04/13/04_1	7440-38-2	Arsenic	8.9		mg/kg
R30C41	2-2.5	04/30/04	Yes	2-R30C41_04/30/04_2	7439-92-1	Lead	111.0		mg/kg
R30C42	1-1.5	04/13/04	Yes	1-R30C42_04/13/04_1	7440-38-2	Arsenic	4.7		mg/kg
R30C42	1-1.5	04/13/04	Yes	1-R30C42_04/13/04_1	7439-92-1	Lead	19.8		mg/kg
SA1-32-48	3-3.5	10/14/99	Yes	SA1-32-48	7440-38-2	Arsenic	9.7		mg/kg
SA1-32-48	3-3.5	10/14/99	Yes	SA1-32-48	7439-92-1	Lead	76.0		mg/kg
SA1-33-48	3-3.5	10/14/99	Yes	SA1-33-48	7440-38-2	Arsenic	3.5		mg/kg
SA1-33-48	3-3.5	10/14/99	Yes	SA1-33-48	7439-92-1	Lead	36.0		mg/kg
SA1-33-49	3-3.5	10/14/99	Yes	SA1-33-49	7440-38-2	Arsenic	2.1	U	mg/kg
SA1-33-49	3-3.5	10/14/99	Yes	SA1-33-49	7439-92-1	Lead	4.8		mg/kg
SA1-34-47	3-3.5	10/14/99	Yes	SA1-34-47	7440-38-2	Arsenic	1.9	U	mg/kg
SA1-34-47	3-3.5	10/14/99	Yes	SA1-34-47	7439-92-1	Lead	3.9		mg/kg

Table B.9
Sample Results for GC-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA1-34-48	3-3.5	10/14/99	Yes	SA1-34-48	7440-38-2	Arsenic	4.0		mg/kg
SA1-34-48	3-3.5	10/14/99	Yes	SA1-34-48	7439-92-1	Lead	47.0		mg/kg
SA1-34-49	3-3.5	10/14/99	Yes	SA1-34-49	7440-38-2	Arsenic	4.6		mg/kg
SA1-34-49	3-3.5	10/14/99	Yes	SA1-34-49	7439-92-1	Lead	100.0		mg/kg
SA1-34-52	3-3.5	10/14/99	Yes	SA1-34-52	7440-38-2	Arsenic	12.0		mg/kg
SA1-34-52	3-3.5	10/14/99	Yes	SA1-34-52	7439-92-1	Lead	51.0		mg/kg
SA1-35-47	3-3.5	10/14/99	Yes	SA1-35-47	7440-38-2	Arsenic	4.4		mg/kg
SA1-35-47	3-3.5	10/14/99	Yes	SA1-35-47	7439-92-1	Lead	26.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-SS-402	0-0.5	11/02/93	Yes	16-SS-402	7440-38-2	Arsenic	29.0		mg/kg
25-TP-517	0-1	11/04/92	Yes	25-TP-517-S-1	7440-38-2	Arsenic	13.0		mg/kg
25-TP-517	0-1	11/04/92	Yes	25-TP-517-S-1	7439-92-1	Lead	95.0		mg/kg
25-TP-517	0-1	11/04/92	Yes	25-TP-517-S-1	7439-97-6	Mercury	0.1	J	mg/kg
25-TP-517	3-6	11/04/92	Yes	25-TP-517-S-2	7440-38-2	Arsenic	2.8	J	mg/kg
25-TP-517	3-6	11/04/92	Yes	25-TP-517-S-2	7439-92-1	Lead	5.8	UJ	mg/kg
25-TP-517	3-6	11/04/92	Yes	25-TP-517-S-2	7439-97-6	Mercury	0.1	UJ	mg/kg
5-HA-516	0-1	03/12/92	Yes	5-HA-516-S-1	7439-92-1	Lead	13.0		mg/kg
5-HA-516	2-3	03/12/92	Yes	5-HA-516-S-2	7439-92-1	Lead	5.5	U	mg/kg
5-HA-517	0-1	03/12/92	Yes	5-HA-517-S-1	7439-92-1	Lead	5.4	U	mg/kg
5-HA-517	2-3	03/12/92	Yes	5-HA-517-S-2	7439-92-1	Lead	5.0	U	mg/kg
5-SS-404	0-0.5	11/11/93	Yes	5-SS-404	7440-38-2	Arsenic	9.6		mg/kg
5D-TPS-15	0-1	10/01/92	Yes	5D-TPS-15-S-2	7440-38-2	Arsenic	2.2		mg/kg
5D-TPS-15	0-1	10/01/92	Yes	5D-TPS-15-S-2	7439-92-1	Lead	5.7	U	mg/kg
5D-TPS-15	0-1	10/01/92	Yes	5D-TPS-15-S-2	7439-97-6	Mercury	0.1	U	mg/kg
5D-TPS-15	4.5-5.5	10/01/92	Yes	5D-TPS-15-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-15	4.5-5.5	10/01/92	Yes	5D-TPS-15-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-15	4.5-5.5	10/01/92	Yes	5D-TPS-15-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-16	2-4	10/01/92	Yes	5D-TPS-16-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-16	2-4	10/01/92	Yes	5D-TPS-16-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-16	2-4	10/01/92	Yes	5D-TPS-16-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-16	2-4	10/01/92	Yes	5D-TPS-16-S-3	7440-38-2	Arsenic	2.0		mg/kg
5D-TPS-16	2-4	10/01/92	Yes	5D-TPS-16-S-3	7439-92-1	Lead	5.3	U	mg/kg
5D-TPS-16	2-4	10/01/92	Yes	5D-TPS-16-S-3	7439-97-6	Mercury	0.09	U	mg/kg
5D-TPS-21	0.5-1.5	10/07/92	Yes	5D-TPS-21-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-21	0.5-1.5	10/07/92	Yes	5D-TPS-21-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-21	0.5-1.5	10/07/92	Yes	5D-TPS-21-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-21	3-4	10/07/92	Yes	5D-TPS-21-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-21	3-4	10/07/92	Yes	5D-TPS-21-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-21	3-4	10/07/92	Yes	5D-TPS-21-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-VS-10	0-0.5	04/13/93	Yes	5D-VS-10	7440-38-2	Arsenic	24.0		mg/kg
5D-VS-10	0-0.5	04/13/93	Yes	5D-VS-10	7439-92-1	Lead	5.6	UJ	mg/kg
5D-VS-10	0-0.5	04/13/93	Yes	5D-VS-10	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-10	0-0.5	04/13/93	Yes	5D-VS-10	127-18-4	Tetrachloroethene	0.01	U	mg/kg
APE-TP-501	3-5	05/26/92	Yes	APE-TP-501-S-2	7440-38-2	Arsenic	2.7		mg/kg
APE-TP-501	3-5	05/26/92	Yes	APE-TP-501-S-2	7440-50-8	Copper	16.0		mg/kg
APE-TP-501	3-5	05/26/92	Yes	APE-TP-501-S-2	7439-92-1	Lead	5.2	U	mg/kg
APE-TP-501	3-5	05/26/92	Yes	APE-TP-501-S-2	7439-97-6	Mercury	0.1	U	mg/kg
APE-TP-502	3-5	11/03/92	Yes	APE-TP-502-S-3	7440-38-2	Arsenic	41.0		mg/kg
APE-TP-502	3-5	11/03/92	Yes	APE-TP-502-S-3	7439-92-1	Lead	6.2	J	mg/kg
APE-TP-502	3-5	11/03/92	Yes	APE-TP-502-S-3	7439-97-6	Mercury	0.09	U	mg/kg
APG-TP-503	3-5	05/26/92	Yes	APG-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
APG-TP-503	3-5	05/26/92	Yes	APG-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
APG-TP-503	3-5	05/26/92	Yes	APG-TP-503-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
APG-TP-504	3-5	05/27/92	Yes	APG-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
APG-TP-504	3-5	05/27/92	Yes	APG-TP-504-S-2	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
APG-TP-504	3-5	05/27/92	Yes	APG-TP-504-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
F-124-2	3-3.5	08/28/01	Yes	02-F04-SS[F-124-2]C2-030	7440-38-2	Arsenic	12.0		mg/kg
F-124-2	3-3.5	08/28/01	Yes	02-F04-SS[F-124-2]C2-030	7439-92-1	Lead	45.0		mg/kg
F-127	2-2.5	06/21/01	Yes	01-F12-SS[F-127]C2-005	7440-38-2	Arsenic	4.4		mg/kg
F-127	2-2.5	06/21/01	Yes	01-F12-SS[F-127]C2-005	7439-92-1	Lead	3.9		mg/kg
F-42-B	2-2.5	05/11/04	Yes	F-42-B_05/11/04_2	7440-38-2	Arsenic	36.1		mg/kg
F-42-B	2-2.5	05/11/04	Yes	F-42-B_05/11/04_2	7439-92-1	Lead	8.8		mg/kg
F-8-B	2-2.5	05/11/04	Yes	F-8-B_05/11/04_2	7440-38-2	Arsenic	5.7		mg/kg
F-8-B	2-2.5	05/11/04	Yes	F-8-B_05/11/04_2	7439-92-1	Lead	7.1		mg/kg
F-9-B	2-2.5	05/11/04	Yes	F-9-B_05/11/04_2	7440-38-2	Arsenic	12.6		mg/kg
F-9-B	2-2.5	05/11/04	Yes	F-9-B_05/11/04_2	7439-92-1	Lead	23.7		mg/kg
LR-020 1'-2'	1-2	07/02/93	Yes	LR-020 1'-2'	7440-38-2	Arsenic	3.0		mg/kg
LR-020 6"-12"	0.5-1	07/02/93	Yes	LR-020 6"-12"	7440-38-2	Arsenic	6.0		mg/kg
LR-020-S-2	0.5-1	07/02/93	Yes	LR-020-S-2	7440-38-2	Arsenic	6.0		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-020-S-3	1-2	07/02/93	Yes	LR-020-S-3	7440-38-2	Arsenic	3.0		mg/kg
MSU-91-VS-B	2.5-3	07/07/03	No	01-SS-[MSU-91-VS-B]-C2_07/07/03_2.5	7439-92-1	Lead	33.4		mg/kg
MSU-91-VS-B	14-14.5	08/05/03	Yes	03-SS-[MSU-91-VS-B]-C2_08/05/03_14	7440-38-2	Arsenic	21.7		mg/kg
MSU-F-02	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-1]-C1_06/11/03_2	7440-38-2	Arsenic	7.7		mg/kg
MSU-F-02	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-1]-C1_06/11/03_2	7439-92-1	Lead	13.9		mg/kg
MSU-F-2-2	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-2]-C1_06/11/03_2	7440-38-2	Arsenic	3.9		mg/kg
MSU-F-2-2	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-2]-C1_06/11/03_2	7439-92-1	Lead	3.8		mg/kg
MSU-F-2-3	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-3]-C1_06/11/03_2	7440-38-2	Arsenic	7.8		mg/kg
MSU-F-2-3	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-3]-C1_06/11/03_2	7439-92-1	Lead	11.9		mg/kg
MSU-F-2-4	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-4]-C1_06/11/03_2	7440-38-2	Arsenic	4.1		mg/kg
MSU-F-2-4	2-2.5	06/11/03	Yes	01-SS-[MSU-F-02-4]-C1_06/11/03_2	7439-92-1	Lead	5.9		mg/kg
MSU-F-3-4	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-4]-C1_05/27/03_2	7440-38-2	Arsenic	5.7		mg/kg
MSU-F-3-4	2-2.5	05/27/03	Yes	01-SS-[MSU-F-3-4]-C1_05/27/03_2	7439-92-1	Lead	7.7		mg/kg
MSU-F-42-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-42-2]-C1_05/27/03_2	7440-38-2	Arsenic	4.7		mg/kg
MSU-F-42-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-42-2]-C1_05/27/03_2	7439-92-1	Lead	4.1		mg/kg
MSU-F-42	2-2.5	05/27/03	Yes	01-SS-[MSU-F-42-1]-C1_AVG_05/27/03_2	7440-38-2	Arsenic	4.7		mg/kg
MSU-F-42	2-2.5	05/27/03	Yes	01-SS-[MSU-F-42-1]-C1_AVG_05/27/03_2	7439-92-1	Lead	3.7		mg/kg
MSU-F-44-2	2-2.5	05/29/03	No	01-SS-[MSU-F-44-2]-C1_05/29/03_2	7439-92-1	Lead	74.1		mg/kg
MSU-F-44-2	3-3.5	06/16/03	Yes	02-SS-[MSU-F-44-2]-C2_06/16/03_3	7440-38-2	Arsenic	2.1		mg/kg
MSU-F-44-3	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-3]-C1_05/29/03_2	7440-38-2	Arsenic	7.1		mg/kg
MSU-F-44-3	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-3]-C1_05/29/03_2	7439-92-1	Lead	4.4		mg/kg
MSU-F-44-4	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-4]-C1_05/29/03_2	7440-38-2	Arsenic	5.7		mg/kg
MSU-F-44-4	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-4]-C1_05/29/03_2	7439-92-1	Lead	4.0		mg/kg
MSU-F-44-5	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-5]-C1_AVG_05/29/03_2	7440-38-2	Arsenic	3.0		mg/kg
MSU-F-44-5	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-5]-C1_AVG_05/29/03_2	7439-92-1	Lead	3.0		mg/kg
MSU-F-44	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-1]-C1_05/29/03_2	7440-38-2	Arsenic	2.8		mg/kg
MSU-F-44	2-2.5	05/29/03	Yes	01-SS-[MSU-F-44-1]-C1_05/29/03_2	7439-92-1	Lead	6.1		mg/kg
MSU-F-8-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-8-2]-C1_05/27/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-8-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-8-2]-C1_05/27/03_2	7439-92-1	Lead	5.6		mg/kg
MSU-F-8	2-2.5	05/27/03	Yes	01-SS-[MSU-F-8-1]-C1_05/27/03_2	7440-38-2	Arsenic	3.7		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-8	2-2.5	05/27/03	Yes	01-SS-[MSU-F-8-1]-C1_05/27/03_2	7439-92-1	Lead	3.9		mg/kg
MSU-F-9-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-9-2]-C1_05/27/03_2	7440-38-2	Arsenic	4.3		mg/kg
MSU-F-9-2	2-2.5	05/27/03	Yes	01-SS-[MSU-F-9-2]-C1_05/27/03_2	7439-92-1	Lead	3.1		mg/kg
MSU-F-9-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-9-3]-C1_05/27/03_2	7440-38-2	Arsenic	6.2		mg/kg
MSU-F-9-3	2-2.5	05/27/03	Yes	01-SS-[MSU-F-9-3]-C1_05/27/03_2	7439-92-1	Lead	3.6		mg/kg
MSU-F-9	2-2.5	05/27/03	Yes	01-SS-[MSU-F-9-1]-C1_05/27/03_2	7440-38-2	Arsenic	4.2		mg/kg
MSU-F-9	2-2.5	05/27/03	Yes	01-SS-[MSU-F-9-1]-C1_05/27/03_2	7439-92-1	Lead	3.5		mg/kg
MSU-NGRR-06	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-1]-C1_06/05/03_1.5	7440-38-2	Arsenic	2.5		mg/kg
MSU-NGRR-06	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-1]-C1_06/05/03_1.5	7439-92-1	Lead	4.9		mg/kg
MSU-NGRR-07	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-1]-C1_05/29/03_1.5	7440-38-2	Arsenic	5.8		mg/kg
MSU-NGRR-07	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-1]-C1_05/29/03_1.5	7439-92-1	Lead	5.0		mg/kg
MSU-NGRR-6-2	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-2]-C1_06/05/03_1.5	7440-38-2	Arsenic	8.7		mg/kg
MSU-NGRR-6-2	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-2]-C1_06/05/03_1.5	7439-92-1	Lead	15.8		mg/kg
MSU-NGRR-6-3	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-3]-C1_06/05/03_1.5	7440-38-2	Arsenic	6.9		mg/kg
MSU-NGRR-6-3	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-3]-C1_06/05/03_1.5	7439-92-1	Lead	9.0		mg/kg
MSU-NGRR-6-4	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-4]-C1_06/05/03_1.5	7440-38-2	Arsenic	33.3		mg/kg
MSU-NGRR-6-4	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-4]-C1_06/05/03_1.5	7439-92-1	Lead	12.0		mg/kg
MSU-NGRR-6-5	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-5]-C1_06/05/03_1.5	7440-38-2	Arsenic	10.2		mg/kg
MSU-NGRR-6-5	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-5]-C1_06/05/03_1.5	7439-92-1	Lead	3.7		mg/kg
MSU-NGRR-6-6	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-6]-C1_AVG_06/05/03_1.5	7440-38-2	Arsenic	2.0	U	mg/kg
MSU-NGRR-6-6	1.5-2	06/05/03	Yes	01-SS-[MSU-NGRR-06-6]-C1_AVG_06/05/03_1.5	7439-92-1	Lead	3.9		mg/kg
MSU-NGRR-7-2	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-2]-C1_05/29/03_1.5	7440-38-2	Arsenic	2.3		mg/kg
MSU-NGRR-7-2	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-2]-C1_05/29/03_1.5	7439-92-1	Lead	2.2		mg/kg
MSU-NGRR-7-3	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-3]-C1_05/29/03_1.5	7440-38-2	Arsenic	2.4		mg/kg
MSU-NGRR-7-3	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-3]-C1_05/29/03_1.5	7439-92-1	Lead	2.2		mg/kg
MSU-NGRR-7-4	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-4]-C1_05/29/03_1.5	7440-38-2	Arsenic	5.9		mg/kg
MSU-NGRR-7-4	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-4]-C1_05/29/03_1.5	7439-92-1	Lead	4.6		mg/kg
MSU-NGRR-7-5	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-5]-C1_05/29/03_1.5	7440-38-2	Arsenic	8.0		mg/kg
MSU-NGRR-7-5	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-07-5]-C1_05/29/03_1.5	7439-92-1	Lead	7.8		mg/kg
NGRR-11-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-11-2]C2-025	7440-38-2	Arsenic	2.8		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-11-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-11-2]C2-025	7439-92-1	Lead	2.7		mg/kg
NGRR-13-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-13-2]C2-025	7440-38-2	Arsenic	4.6		mg/kg
NGRR-13-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-13-2]C2-025	7439-92-1	Lead	3.6		mg/kg
NGRR-190	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-190]C2-005	7440-38-2	Arsenic	13.0		mg/kg
NGRR-190	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-190]C2-005	7439-92-1	Lead	9.2		mg/kg
NGRR-191	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-191]C2-005	7440-38-2	Arsenic	15.0		mg/kg
NGRR-191	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-191]C2-005	7439-92-1	Lead	8.8		mg/kg
NGRR-192	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-192]C2-005	7440-38-2	Arsenic	31.0		mg/kg
NGRR-192	1.5-2	08/06/01	Yes	01-N01-SS[NGRR-192]C2-005	7439-92-1	Lead	17.0		mg/kg
NGRR-193	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-193]C2-005-DAVG	7440-38-2	Arsenic	11.0		mg/kg
NGRR-193	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-193]C2-005-DAVG	7439-92-1	Lead	59.0		mg/kg
NGRR-195	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-195]C2-005	7440-38-2	Arsenic	18.0		mg/kg
NGRR-195	1.5-2	08/07/01	Yes	01-N01-SS[NGRR-195]C2-005	7439-92-1	Lead	53.0		mg/kg
NGRR-196-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-196-2]C2-025	7440-38-2	Arsenic	16.0		mg/kg
NGRR-196-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-196-2]C2-025	7439-92-1	Lead	81.0		mg/kg
NGRR-197-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-197-2]C2-025	7440-38-2	Arsenic	5.1		mg/kg
NGRR-197-2	2.5-3	08/28/01	Yes	02-N01-SS[NGRR-197-2]C2-025	7439-92-1	Lead	10.0		mg/kg
R15C45	1-1.5	04/09/04	Yes	1-R15C45_04/09/04_1	7440-38-2	Arsenic	13.0		mg/kg
R15C45	1-1.5	04/09/04	Yes	1-R15C45_04/09/04_1	7439-92-1	Lead	9.1		mg/kg
R15C46	1-1.5	04/09/04	Yes	1-R15C46_04/09/04_1	7440-38-2	Arsenic	7.0		mg/kg
R15C46	1-1.5	04/09/04	Yes	1-R15C46_04/09/04_1	7439-92-1	Lead	18.7		mg/kg
R15C47	1-1.5	12/18/03	Yes	01-SS-[R15C47]-C2_12/18/03_1	7440-38-2	Arsenic	10.2		mg/kg
R15C47	1-1.5	12/18/03	Yes	01-SS-[R15C47]-C2_12/18/03_1	7439-92-1	Lead	10.1		mg/kg
R16C43	1-1.5	03/10/04	Yes	1-R16C43_03/10/04_1	7440-38-2	Arsenic	8.3		mg/kg
R16C43	1-1.5	03/10/04	Yes	1-R16C43_03/10/04_1	7439-92-1	Lead	10.3		mg/kg
R16C46	1-1.5	04/09/04	Yes	1-R16C46_04/09/04_1	7440-38-2	Arsenic	6.7		mg/kg
R16C46	1-1.5	04/09/04	Yes	1-R16C46_04/09/04_1	7439-92-1	Lead	7.0		mg/kg
R16C47	1-1.5	12/18/03	Yes	01-SS-[R16C47]-C2_12/18/03_1	7440-38-2	Arsenic	4.1		mg/kg
R16C47	1-1.5	12/18/03	Yes	01-SS-[R16C47]-C2_12/18/03_1	7439-92-1	Lead	4.4		mg/kg
R16C48	1-1.5	12/18/03	Yes	01-SS-[R16C48]-C2_12/18/03_1	7440-38-2	Arsenic	4.7		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R16C48	1-1.5	12/18/03	Yes	01-SS-[R16C48]-C2_12/18/03_1	7439-92-1	Lead	5.8		mg/kg
R17C42	1-1.5	03/25/04	Yes	1-R17C42_03/25/04_1	7440-38-2	Arsenic	5.4		mg/kg
R17C42	1-1.5	03/25/04	Yes	1-R17C42_03/25/04_1	7439-92-1	Lead	9.2		mg/kg
R17C43	1-1.5	03/10/04	Yes	1-R17C43_03/10/04_1	7440-38-2	Arsenic	7.1		mg/kg
R17C43	1-1.5	03/10/04	Yes	1-R17C43_03/10/04_1	7439-92-1	Lead	8.4		mg/kg
R17C47	1-1.5	12/18/03	Yes	01-SS-[R17C47]-C2_12/18/03_1	7440-38-2	Arsenic	8.5		mg/kg
R17C47	1-1.5	12/18/03	Yes	01-SS-[R17C47]-C2_12/18/03_1	7439-92-1	Lead	11.8		mg/kg
R17C48	1-1.5	04/09/04	Yes	1-R17C48_04/09/04_1	7440-38-2	Arsenic	8.8		mg/kg
R17C48	1-1.5	04/09/04	Yes	1-R17C48_04/09/04_1	7439-92-1	Lead	11.1		mg/kg
R17C49	1-1.5	12/18/03	Yes	01-SS-[R17C49]-C2_12/18/03_1	7440-38-2	Arsenic	5.3		mg/kg
R17C49	1-1.5	12/18/03	Yes	01-SS-[R17C49]-C2_12/18/03_1	7439-92-1	Lead	7.2		mg/kg
R18C42	1-1.5	03/10/04	Yes	1-R18C42_AVG_03/10/04_1	7440-38-2	Arsenic	5.3		mg/kg
R18C42	1-1.5	03/10/04	Yes	1-R18C42_AVG_03/10/04_1	7439-92-1	Lead	11.6		mg/kg
R18C47	1-1.5	04/09/04	Yes	1-R18C47_04/09/04_1	7440-38-2	Arsenic	11.8		mg/kg
R18C47	1-1.5	04/09/04	Yes	1-R18C47_04/09/04_1	7439-92-1	Lead	16.6		mg/kg
R18C48	1-1.5	04/09/04	Yes	1-R18C48_04/09/04_1	7440-38-2	Arsenic	6.4		mg/kg
R18C48	1-1.5	04/09/04	Yes	1-R18C48_04/09/04_1	7439-92-1	Lead	8.2		mg/kg
R18C49	1-1.5	12/18/03	Yes	01-SS-[R18C49]-C2_12/18/03_1	7440-38-2	Arsenic	3.7		mg/kg
R18C49	1-1.5	12/18/03	Yes	01-SS-[R18C49]-C2_12/18/03_1	7439-92-1	Lead	3.8		mg/kg
R19C41	1-1.5	11/14/03	Yes	01-SS-[R19C41]-C2_11/14/03_1	7440-38-2	Arsenic	21.9		mg/kg
R19C41	1-1.5	11/14/03	Yes	01-SS-[R19C41]-C2_11/14/03_1	7439-92-1	Lead	98.5		mg/kg
R19C42	1-1.5	03/10/04	Yes	1-R19C42_03/10/04_1	7440-38-2	Arsenic	9.1		mg/kg
R19C42	1-1.5	03/10/04	Yes	1-R19C42_03/10/04_1	7439-92-1	Lead	24.4		mg/kg
R19C48	1-1.5	12/18/03	Yes	01-SS-[R19C48]-C2_12/18/03_1	7440-38-2	Arsenic	3.6		mg/kg
R19C48	1-1.5	12/18/03	Yes	01-SS-[R19C48]-C2_12/18/03_1	7439-92-1	Lead	2.9		mg/kg
R19C49	1-1.5	12/18/03	Yes	01-SS-[R19C49]-C2_12/18/03_1	7440-38-2	Arsenic	16.3		mg/kg
R19C49	1-1.5	12/18/03	Yes	01-SS-[R19C49]-C2_12/18/03_1	7439-92-1	Lead	10.7		mg/kg
R20C48	1-1.5	12/08/03	Yes	01-SS-[R20C48]-C2_12/08/03_1	7440-38-2	Arsenic	15.2		mg/kg
R20C48	1-1.5	12/08/03	Yes	01-SS-[R20C48]-C2_12/08/03_1	7439-92-1	Lead	18.3		mg/kg
R20C49	1-1.5	12/08/03	Yes	01-SS-[R20C49]-C2_12/08/03_1	7440-38-2	Arsenic	8.6		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R20C49	1-1.5	12/08/03	Yes	01-SS-[R20C49]-C2_12/08/03_1	7439-92-1	Lead	7.9		mg/kg
R21C40	1-1.5	11/14/03	Yes	01-SS-[R21C40]-C2_11/14/03_1	7440-38-2	Arsenic	15.1		mg/kg
R21C40	1-1.5	11/14/03	Yes	01-SS-[R21C40]-C2_11/14/03_1	7439-92-1	Lead	44.6		mg/kg
R21C41	2-2.5	11/20/03	Yes	02-SS-[R21C41]-C2_11/20/03_2	7440-38-2	Arsenic	2.2	U	mg/kg
R21C41	2-2.5	11/20/03	Yes	02-SS-[R21C41]-C2_11/20/03_2	7439-92-1	Lead	5.2		mg/kg
R21C48	1-1.5	12/08/03	Yes	01-SS-[R21C48]-C2_12/08/03_1	7440-38-2	Arsenic	8.1		mg/kg
R21C48	1-1.5	12/08/03	Yes	01-SS-[R21C48]-C2_12/08/03_1	7439-92-1	Lead	11.3		mg/kg
R21C49	1-1.5	12/08/03	Yes	01-SS-[R21C49]-C2_12/08/03_1	7440-38-2	Arsenic	6.9		mg/kg
R21C49	1-1.5	12/08/03	Yes	01-SS-[R21C49]-C2_12/08/03_1	7439-92-1	Lead	9.5		mg/kg
R21C50	1-1.5	04/09/04	Yes	1-R21C50_04/09/04_1	7440-38-2	Arsenic	8.2		mg/kg
R21C50	1-1.5	04/09/04	Yes	1-R21C50_04/09/04_1	7439-92-1	Lead	10.5		mg/kg
R22C40	1-1.5	11/14/03	Yes	01-SS-[R22C40]-C2_11/14/03_1	7440-38-2	Arsenic	4.1		mg/kg
R22C40	1-1.5	11/14/03	Yes	01-SS-[R22C40]-C2_11/14/03_1	7439-92-1	Lead	6.0		mg/kg
R22C41	1-1.5	11/14/03	Yes	01-SS-[R22C41]-C2_11/14/03_1	7440-38-2	Arsenic	7.9		mg/kg
R22C41	1-1.5	11/14/03	Yes	01-SS-[R22C41]-C2_11/14/03_1	7439-92-1	Lead	27.1		mg/kg
R22C48	1-1.5	12/08/03	Yes	01-SS-[R22C48]-C2_12/08/03_1	7440-38-2	Arsenic	8.1		mg/kg
R22C48	1-1.5	12/08/03	Yes	01-SS-[R22C48]-C2_12/08/03_1	7439-92-1	Lead	18.6		mg/kg
R22C49	1-1.5	12/08/03	Yes	01-SS-[R22C49]-C2_12/08/03_1	7440-38-2	Arsenic	13.2		mg/kg
R22C49	1-1.5	12/08/03	Yes	01-SS-[R22C49]-C2_12/08/03_1	7439-92-1	Lead	16.5		mg/kg
R22C50	1-1.5	04/27/04	Yes	1-R22C50_04/27/04_1	7440-38-2	Arsenic	4.9		mg/kg
R22C50	1-1.5	04/27/04	Yes	1-R22C50_04/27/04_1	7439-92-1	Lead	1.9	U	mg/kg
R23C41	1-1.5	11/14/03	Yes	01-SS-[R23C41]-C2_11/14/03_1	7440-38-2	Arsenic	11.9		mg/kg
R23C41	1-1.5	11/14/03	Yes	01-SS-[R23C41]-C2_11/14/03_1	7439-92-1	Lead	72.9		mg/kg
R23C42	1-1.5	11/14/03	Yes	01-SS-[R23C42]-C2_AVG_11/14/03_1	7440-38-2	Arsenic	3.4		mg/kg
R23C42	1-1.5	11/14/03	Yes	01-SS-[R23C42]-C2_AVG_11/14/03_1	7439-92-1	Lead	38.4		mg/kg
R23C48	1-1.5	12/08/03	Yes	01-SS-[R23C48]-C2_12/08/03_1	7440-38-2	Arsenic	11.6		mg/kg
R23C48	1-1.5	12/08/03	Yes	01-SS-[R23C48]-C2_12/08/03_1	7439-92-1	Lead	13.9		mg/kg
R23C49	1-1.5	12/08/03	Yes	01-SS-[R23C49]-C2_12/08/03_1	7440-38-2	Arsenic	9.9		mg/kg
R23C49	1-1.5	12/08/03	Yes	01-SS-[R23C49]-C2_12/08/03_1	7439-92-1	Lead	11.5		mg/kg
R23C50	1-1.5	12/08/03	Yes	01-SS-[R23C50]-C2_12/08/03_1	7440-38-2	Arsenic	5.9		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R23C50	1-1.5	12/08/03	Yes	01-SS-[R23C50]-C2_12/08/03_1	7439-92-1	Lead	8.6		mg/kg
R24C42	1-1.5	11/14/03	Yes	01-SS-[R24C42]-C2_11/14/03_1	7440-38-2	Arsenic	5.5		mg/kg
R24C42	1-1.5	11/14/03	Yes	01-SS-[R24C42]-C2_11/14/03_1	7439-92-1	Lead	33.3		mg/kg
R24C48	1-1.5	12/08/03	Yes	01-SS-[R24C48]-C2_12/08/03_1	7440-38-2	Arsenic	6.0		mg/kg
R24C48	1-1.5	12/08/03	Yes	01-SS-[R24C48]-C2_12/08/03_1	7439-92-1	Lead	6.4		mg/kg
R24C51	1-1.5	12/18/03	Yes	01-SS-[R24C51]-C2_12/18/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
R24C51	1-1.5	12/18/03	Yes	01-SS-[R24C51]-C2_12/18/03_1	7439-92-1	Lead	4.4		mg/kg
R25C43	1-1.5	11/14/03	Yes	01-SS-[R25C43]-C2_11/14/03_1	7440-38-2	Arsenic	7.1		mg/kg
R25C43	1-1.5	11/14/03	Yes	01-SS-[R25C43]-C2_11/14/03_1	7439-92-1	Lead	38.7		mg/kg
R25C44	1-1.5	11/14/03	Yes	01-SS-[R25C44]-C2_11/14/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R25C44	1-1.5	11/14/03	Yes	01-SS-[R25C44]-C2_11/14/03_1	7439-92-1	Lead	3.0		mg/kg
R25C49	1-1.5	12/17/03	Yes	01-SS-[R25C49]-C2_12/17/03_1	7440-38-2	Arsenic	2.6		mg/kg
R25C49	1-1.5	12/17/03	Yes	01-SS-[R25C49]-C2_12/17/03_1	7439-92-1	Lead	3.4		mg/kg
R25C50	1-1.5	12/17/03	Yes	01-SS-[R25C50]-C2_12/17/03_1	7440-38-2	Arsenic	2.3		mg/kg
R25C50	1-1.5	12/17/03	Yes	01-SS-[R25C50]-C2_12/17/03_1	7439-92-1	Lead	3.0		mg/kg
R26C48	1-1.5	04/13/04	Yes	1-R26C48_04/13/04_1	7440-38-2	Arsenic	6.0		mg/kg
R26C48	1-1.5	04/13/04	Yes	1-R26C48_04/13/04_1	7439-92-1	Lead	5.5		mg/kg
R26C49	1-1.5	12/17/03	Yes	01-SS-[R26C49]-C2_12/17/03_1	7440-38-2	Arsenic	9.6		mg/kg
R26C49	1-1.5	12/17/03	Yes	01-SS-[R26C49]-C2_12/17/03_1	7439-92-1	Lead	11.9		mg/kg
R26C50	1-1.5	12/17/03	Yes	01-SS-[R26C50]-C2_12/17/03_1	7440-38-2	Arsenic	5.0		mg/kg
R26C50	1-1.5	12/17/03	Yes	01-SS-[R26C50]-C2_12/17/03_1	7439-92-1	Lead	5.6		mg/kg
R26C51	1-1.5	12/17/03	Yes	01-SS-[R26C51]-C2_12/17/03_1	7440-38-2	Arsenic	2.2		mg/kg
R26C51	1-1.5	12/17/03	Yes	01-SS-[R26C51]-C2_12/17/03_1	7439-92-1	Lead	2.9		mg/kg
R26C52	1-1.5	12/17/03	Yes	01-SS-[R26C52]-C2_12/17/03_1	7440-38-2	Arsenic	4.3		mg/kg
R26C52	1-1.5	12/17/03	Yes	01-SS-[R26C52]-C2_12/17/03_1	7439-92-1	Lead	5.6		mg/kg
R27C48	1-1.5	04/13/04	Yes	1-R27C48_04/13/04_1	7440-38-2	Arsenic	7.1		mg/kg
R27C48	1-1.5	04/13/04	Yes	1-R27C48_04/13/04_1	7439-92-1	Lead	7.6		mg/kg
R27C49	1-1.5	12/16/03	Yes	01-SS-[R27C49]-C2_12/16/03_1	7440-38-2	Arsenic	8.7		mg/kg
R27C49	1-1.5	12/16/03	Yes	01-SS-[R27C49]-C2_12/16/03_1	7439-92-1	Lead	5.3		mg/kg
R27C50	1-1.5	12/16/03	Yes	01-SS-[R27C50]-C2_12/16/03_1	7440-38-2	Arsenic	7.4		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R27C50	1-1.5	12/16/03	Yes	01-SS-[R27C50]-C2_12/16/03_1	7439-92-1	Lead	6.5		mg/kg
R27C51	1-1.5	12/16/03	Yes	01-SS-[R27C51]-C2_12/16/03_1	7440-38-2	Arsenic	16.4		mg/kg
R27C51	1-1.5	12/16/03	Yes	01-SS-[R27C51]-C2_12/16/03_1	7439-92-1	Lead	20.2		mg/kg
R27C52	1-1.5	12/16/03	Yes	01-SS-[R27C52]-C2_12/16/03_1	7440-38-2	Arsenic	9.5		mg/kg
R27C52	1-1.5	12/16/03	Yes	01-SS-[R27C52]-C2_12/16/03_1	7439-92-1	Lead	8.5		mg/kg
R28C49	1-1.5	12/16/03	Yes	01-SS-[R28C49]-C2_12/16/03_1	7440-38-2	Arsenic	8.1		mg/kg
R28C49	1-1.5	12/16/03	Yes	01-SS-[R28C49]-C2_12/16/03_1	7439-92-1	Lead	10.9		mg/kg
R28C50	1-1.5	12/16/03	Yes	01-SS-[R28C50]-C2_12/16/03_1	7440-38-2	Arsenic	4.9		mg/kg
R28C50	1-1.5	12/16/03	Yes	01-SS-[R28C50]-C2_12/16/03_1	7439-92-1	Lead	4.1		mg/kg
R28C51	1-1.5	12/16/03	Yes	01-SS-[R28C51]-C2_12/16/03_1	7440-38-2	Arsenic	5.6		mg/kg
R28C51	1-1.5	12/16/03	Yes	01-SS-[R28C51]-C2_12/16/03_1	7439-92-1	Lead	3.8		mg/kg
R28C52	1-1.5	12/16/03	Yes	01-SS-[R28C52]-C2_12/16/03_1	7440-38-2	Arsenic	5.4		mg/kg
R28C52	1-1.5	12/16/03	Yes	01-SS-[R28C52]-C2_12/16/03_1	7439-92-1	Lead	4.1		mg/kg
R29C50	1-1.5	12/16/03	Yes	01-SS-[R29C50]-C2_12/16/03_1	7440-38-2	Arsenic	9.7		mg/kg
R29C50	1-1.5	12/16/03	Yes	01-SS-[R29C50]-C2_12/16/03_1	7439-92-1	Lead	10.5		mg/kg
R29C51	1-1.5	12/16/03	Yes	01-SS-[R29C51]-C2_12/16/03_1	7440-38-2	Arsenic	14.2		mg/kg
R29C51	1-1.5	12/16/03	Yes	01-SS-[R29C51]-C2_12/16/03_1	7439-92-1	Lead	11.0		mg/kg
R29C52	1-1.5	12/16/03	Yes	01-SS-[R29C52]-C2_12/16/03_1	7440-38-2	Arsenic	11.9		mg/kg
R29C52	1-1.5	12/16/03	Yes	01-SS-[R29C52]-C2_12/16/03_1	7439-92-1	Lead	11.3		mg/kg
R29C53	1-1.5	12/16/03	No	01-SS-[R29C53]-C2_12/16/03_1	7439-92-1	Lead	13.8		mg/kg
R29C53	2-2.5	02/06/04	Yes	2-R29C53_02/06/04_2	7440-38-2	Arsenic	4.8		mg/kg
R30C50	1-1.5	12/16/03	Yes	01-SS-[R30C50]-C2_12/16/03_1	7440-38-2	Arsenic	11.7		mg/kg
R30C50	1-1.5	12/16/03	Yes	01-SS-[R30C50]-C2_12/16/03_1	7439-92-1	Lead	11.9		mg/kg
R30C51	1-1.5	12/16/03	Yes	01-SS-[R30C51]-C2_12/16/03_1	7440-38-2	Arsenic	10.3		mg/kg
R30C51	1-1.5	12/16/03	Yes	01-SS-[R30C51]-C2_12/16/03_1	7439-92-1	Lead	9.3		mg/kg
R30C52	1-1.5	12/16/03	Yes	01-SS-[R30C52]-C2_12/16/03_1	7440-38-2	Arsenic	12.2		mg/kg
R30C52	1-1.5	12/16/03	Yes	01-SS-[R30C52]-C2_12/16/03_1	7439-92-1	Lead	8.0		mg/kg
R30C53	1-1.5	03/23/04	Yes	01-R30C53_03/23/04_1	7440-38-2	Arsenic	11.3		mg/kg
R30C53	1-1.5	03/23/04	Yes	01-R30C53_03/23/04_1	7439-92-1	Lead	12.7		mg/kg
R30C54	1-1.5	12/16/03	Yes	01-SS-[R30C54]-C2_12/16/03_1	7440-38-2	Arsenic	11.4		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R30C54	1-1.5	12/16/03	Yes	01-SS-[R30C54]-C2_12/16/03_1	7439-92-1	Lead	13.1		mg/kg
R31C51	1-1.5	12/12/03	Yes	01-SS-[R31C51]-C2_12/12/03_1	7440-38-2	Arsenic	27.3		mg/kg
R31C51	1-1.5	12/12/03	Yes	01-SS-[R31C51]-C2_12/12/03_1	7439-92-1	Lead	8.2		mg/kg
R31C52	1-1.5	12/12/03	Yes	01-SS-[R31C52]-C2_AVG_12/12/03_1	7440-38-2	Arsenic	17.0		mg/kg
R31C52	1-1.5	12/12/03	Yes	01-SS-[R31C52]-C2_AVG_12/12/03_1	7439-92-1	Lead	17.1		mg/kg
R31C53	1-1.5	12/12/03	Yes	01-SS-[R31C53]-C2_12/12/03_1	7440-38-2	Arsenic	4.9		mg/kg
R31C53	1-1.5	12/12/03	Yes	01-SS-[R31C53]-C2_12/12/03_1	7439-92-1	Lead	6.9		mg/kg
R31C54	1-1.5	12/12/03	Yes	01-SS-[R31C54]-C2_12/12/03_1	7440-38-2	Arsenic	13.5		mg/kg
R31C54	1-1.5	12/12/03	Yes	01-SS-[R31C54]-C2_12/12/03_1	7439-92-1	Lead	14.9		mg/kg
R32C50	1-1.5	04/13/04	Yes	1-R32C50_04/13/04_1	7440-38-2	Arsenic	7.4		mg/kg
R32C50	1-1.5	04/13/04	Yes	1-R32C50_04/13/04_1	7439-92-1	Lead	4.4		mg/kg
R32C51	1-1.5	12/12/03	Yes	01-SS-[R32C51]-C2_12/12/03_1	7440-38-2	Arsenic	12.8		mg/kg
R32C51	1-1.5	12/12/03	Yes	01-SS-[R32C51]-C2_12/12/03_1	7439-92-1	Lead	18.1		mg/kg
R32C53	1-1.5	04/15/04	Yes	1-R32C53_04/15/04_1	7440-38-2	Arsenic	8.6		mg/kg
R32C53	1-1.5	04/15/04	Yes	1-R32C53_04/15/04_1	7439-92-1	Lead	8.5		mg/kg
R32C54	1-1.5	12/12/03	Yes	01-SS-[R32C54]-C2_12/12/03_1	7440-38-2	Arsenic	2.2		mg/kg
R32C54	1-1.5	12/12/03	Yes	01-SS-[R32C54]-C2_12/12/03_1	7439-92-1	Lead	3.8		mg/kg
R32C55	1-1.5	04/15/04	Yes	1-R32C55_04/15/04_1	7440-38-2	Arsenic	7.7		mg/kg
R32C55	1-1.5	04/15/04	Yes	1-R32C55_04/15/04_1	7439-92-1	Lead	7.2		mg/kg
R33C51	1-1.5	12/11/03	Yes	01-SS-[R33C51]-C2_12/11/03_1	7440-38-2	Arsenic	7.7		mg/kg
R33C51	1-1.5	12/11/03	Yes	01-SS-[R33C51]-C2_12/11/03_1	7439-92-1	Lead	9.1		mg/kg
R33C53	1-1.5	04/15/04	Yes	1-R33C53_04/15/04_1	7440-38-2	Arsenic	17.9		mg/kg
R33C53	1-1.5	04/15/04	Yes	1-R33C53_04/15/04_1	7439-92-1	Lead	17.0		mg/kg
R33C54	1-1.5	04/15/04	Yes	1-R33C54_04/15/04_1	7440-38-2	Arsenic	8.4		mg/kg
R33C54	1-1.5	04/15/04	Yes	1-R33C54_04/15/04_1	7439-92-1	Lead	6.9		mg/kg
R33C55	1-1.5	12/11/03	Yes	01-SS-[R33C55]-C2_AVG_12/11/03_1	7440-38-2	Arsenic	8.1		mg/kg
R33C55	1-1.5	12/11/03	Yes	01-SS-[R33C55]-C2_AVG_12/11/03_1	7439-92-1	Lead	6.3		mg/kg
R34C52	1-1.5	12/11/03	Yes	01-SS-[R34C52]-C2_12/11/03_1	7440-38-2	Arsenic	4.2		mg/kg
R34C52	1-1.5	12/11/03	Yes	01-SS-[R34C52]-C2_12/11/03_1	7439-92-1	Lead	3.4		mg/kg
R34C53	1-1.5	04/15/04	Yes	1-R34C53_04/15/04_1	7440-38-2	Arsenic	9.1		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R34C53	1-1.5	04/15/04	Yes	1-R34C53_04/15/04_1	7439-92-1	Lead	11.7		mg/kg
R34C54	1-1.5	04/15/04	Yes	1-R34C54_04/15/04_1	7440-38-2	Arsenic	7.3		mg/kg
R34C54	1-1.5	04/15/04	Yes	1-R34C54_04/15/04_1	7439-92-1	Lead	6.7		mg/kg
R34C55	1-1.5	12/11/03	Yes	01-SS-[R34C55]-C2_12/11/03_1	7440-38-2	Arsenic	8.2		mg/kg
R34C55	1-1.5	12/11/03	Yes	01-SS-[R34C55]-C2_12/11/03_1	7439-92-1	Lead	6.3		mg/kg
R34C56	1-1.5	12/11/03	Yes	01-SS-[R34C56]-C2_12/11/03_1	7440-38-2	Arsenic	8.5		mg/kg
R34C56	1-1.5	12/11/03	Yes	01-SS-[R34C56]-C2_12/11/03_1	7439-92-1	Lead	5.1		mg/kg
R35C53	1-1.5	04/15/04	Yes	1-R35C53_04/15/04_1	7440-38-2	Arsenic	9.6		mg/kg
R35C53	1-1.5	04/15/04	Yes	1-R35C53_04/15/04_1	7439-92-1	Lead	19.1		mg/kg
R35C55	1-1.5	04/15/04	Yes	1-R35C55_04/15/04_1	7440-38-2	Arsenic	11.8		mg/kg
R35C55	1-1.5	04/15/04	Yes	1-R35C55_04/15/04_1	7439-92-1	Lead	13.0		mg/kg
R35C56	1-1.5	04/15/04	Yes	1-R35C56_04/15/04_1	7440-38-2	Arsenic	8.7		mg/kg
R35C56	1-1.5	04/15/04	Yes	1-R35C56_04/15/04_1	7439-92-1	Lead	9.8		mg/kg
R36C53	1-1.5	04/15/04	Yes	1-R36C53_04/15/04_1	7440-38-2	Arsenic	4.4		mg/kg
R36C53	1-1.5	04/15/04	Yes	1-R36C53_04/15/04_1	7439-92-1	Lead	2.8		mg/kg
R36C54	1-1.5	12/10/03	Yes	01-SS-[R36C54]-C2_12/10/03_1	7440-38-2	Arsenic	16.3		mg/kg
R36C54	1-1.5	12/10/03	Yes	01-SS-[R36C54]-C2_12/10/03_1	7439-92-1	Lead	39.1		mg/kg
R36C55	1-1.5	12/10/03	No	01-SS-[R36C55]-C2_12/10/03_1	7440-38-2	Arsenic	29.9		mg/kg
R36C55	2-2.5	02/06/04	Yes	2-R36C55_02/06/04_2	7439-92-1	Lead	2.0		mg/kg
R36C56	1-1.5	04/15/04	Yes	1-R36C56_04/15/04_1	7440-38-2	Arsenic	10.3		mg/kg
R36C56	1-1.5	04/15/04	Yes	1-R36C56_04/15/04_1	7439-92-1	Lead	9.2		mg/kg
R36C58	1-1.5	12/10/03	Yes	01-SS-[R36C58]-C2_12/10/03_1	7440-38-2	Arsenic	4.7		mg/kg
R36C58	1-1.5	12/10/03	Yes	01-SS-[R36C58]-C2_12/10/03_1	7439-92-1	Lead	4.0		mg/kg
R36C59	1-1.5	12/10/03	Yes	01-SS-[R36C59]-C2_12/10/03_1	7440-38-2	Arsenic	6.4		mg/kg
R36C59	1-1.5	12/10/03	Yes	01-SS-[R36C59]-C2_12/10/03_1	7439-92-1	Lead	6.3		mg/kg
R37C54	2-2.5	05/06/04	Yes	02-R37C54_05/06/04_2	7439-92-1	Lead	5.1		mg/kg
R37C54	1-1.5	04/15/04	No	1-R37C54_04/15/04_1	7440-38-2	Arsenic	13.4		mg/kg
R37C55	1-1.5	12/10/03	Yes	01-SS-[R37C55]-C2_12/10/03_1	7440-38-2	Arsenic	5.3		mg/kg
R37C55	1-1.5	12/10/03	Yes	01-SS-[R37C55]-C2_12/10/03_1	7439-92-1	Lead	4.7		mg/kg
R37C56	1-1.5	12/10/03	Yes	01-SS-[R37C56]-C2_12/10/03_1	7440-38-2	Arsenic	5.1		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R37C56	1-1.5	12/10/03	Yes	01-SS-[R37C56]-C2_12/10/03_1	7439-92-1	Lead	6.0		mg/kg
R37C57	1-1.5	12/10/03	Yes	01-SS-[R37C57]-C2_12/10/03_1	7440-38-2	Arsenic	37.2		mg/kg
R37C57	1-1.5	12/10/03	Yes	01-SS-[R37C57]-C2_12/10/03_1	7439-92-1	Lead	5.2		mg/kg
R37C58	1-1.5	12/10/03	Yes	01-SS-[R37C58]-C2_12/10/03_1	7440-38-2	Arsenic	6.8		mg/kg
R37C58	1-1.5	12/10/03	Yes	01-SS-[R37C58]-C2_12/10/03_1	7439-92-1	Lead	5.4		mg/kg
R37C59	1-1.5	12/10/03	Yes	01-SS-[R37C59]-C2_12/10/03_1	7440-38-2	Arsenic	5.9		mg/kg
R37C59	1-1.5	12/10/03	Yes	01-SS-[R37C59]-C2_12/10/03_1	7439-92-1	Lead	4.3		mg/kg
R38C55	1-1.5	12/10/03	Yes	01-SS-[R38C55]-C2_AVG_12/10/03_1	7440-38-2	Arsenic	5.4		mg/kg
R38C55	1-1.5	12/10/03	Yes	01-SS-[R38C55]-C2_AVG_12/10/03_1	7439-92-1	Lead	4.3		mg/kg
R38C56	1-1.5	12/10/03	Yes	01-SS-[R38C56]-C2_12/10/03_1	7440-38-2	Arsenic	11.2		mg/kg
R38C56	1-1.5	12/10/03	Yes	01-SS-[R38C56]-C2_12/10/03_1	7439-92-1	Lead	7.1		mg/kg
R38C57	1-1.5	12/09/03	Yes	01-SS-[R38C57]-C2_12/09/03_1	7440-38-2	Arsenic	8.8		mg/kg
R38C57	1-1.5	12/09/03	Yes	01-SS-[R38C57]-C2_12/09/03_1	7439-92-1	Lead	7.8		mg/kg
R38C58	1-1.5	12/09/03	Yes	01-SS-[R38C58]-C2_12/09/03_1	7440-38-2	Arsenic	8.9		mg/kg
R38C58	1-1.5	12/09/03	Yes	01-SS-[R38C58]-C2_12/09/03_1	7439-92-1	Lead	7.9		mg/kg
R39C57	1-1.5	12/09/03	Yes	01-SS-[R39C57]-C2_12/09/03_1	7440-38-2	Arsenic	9.7		mg/kg
R39C57	1-1.5	12/09/03	Yes	01-SS-[R39C57]-C2_12/09/03_1	7439-92-1	Lead	7.3		mg/kg
SA2-38-71	2.5-3	10/14/99	Yes	SA2-38-71	7440-38-2	Arsenic	2.0	U	mg/kg
SA2-38-71	2.5-3	10/14/99	Yes	SA2-38-71	7439-92-1	Lead	1.5		mg/kg
T-60	0-0.5	04/09/03	Yes	01-SS-[T60]-C1_04/09/03_0	7439-92-1	Lead	89.0		mg/kg
T-60	1-1.5	08/14/03	Yes	02-SS-[T-60]-C2_AVG_08/14/03_1	7440-38-2	Arsenic	6.3		mg/kg
T001,002	0-0.5	04/08/03	Yes	01-SS-[T001,002]-C1_04/08/03_0	7440-38-2	Arsenic	33.1		mg/kg
T001,002	0-0.5	04/08/03	Yes	01-SS-[T001,002]-C1_04/08/03_0	7439-92-1	Lead	72.8		mg/kg
T003	0-0.5	04/08/03	Yes	01-SS-[T003]-C1_04/08/03_0	7440-38-2	Arsenic	54.3		mg/kg
T003	0-0.5	04/08/03	Yes	01-SS-[T003]-C1_04/08/03_0	7439-92-1	Lead	80.1		mg/kg
T005,006,007	0-0.5	04/08/03	Yes	01-SS-[T005,006,007]-C1_04/08/03_0	7440-38-2	Arsenic	51.2		mg/kg
T005,006,007	0-0.5	04/08/03	Yes	01-SS-[T005,006,007]-C1_04/08/03_0	7439-92-1	Lead	81.9		mg/kg
T011	1-1.5	08/18/03	Yes	02-SS-[T-11]-C2_08/18/03_1	7440-38-2	Arsenic	3.2		mg/kg
T011	1-1.5	08/18/03	Yes	02-SS-[T-11]-C2_08/18/03_1	7439-92-1	Lead	5.6		mg/kg
T012	0-0.5	04/08/03	Yes	01-SS-[T012]-C1_04/08/03_0	7440-38-2	Arsenic	42.6		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T012	0-0.5	04/08/03	Yes	01-SS-[T012]-C1_04/08/03_0	7439-92-1	Lead	117.0		mg/kg
T013,014,015	0-0.5	04/08/03	Yes	01-SS-[T013,014,015]-C1_04/08/03_0	7440-38-2	Arsenic	48.8		mg/kg
T013,014,015	0-0.5	04/08/03	Yes	01-SS-[T013,014,015]-C1_04/08/03_0	7439-92-1	Lead	106.0		mg/kg
T016,017,018N	0-0.5	04/08/03	Yes	01-SS-[T016,017,018N]-C1_04/08/03_0	7440-38-2	Arsenic	55.2		mg/kg
T016,017,018N	0-0.5	04/08/03	Yes	01-SS-[T016,017,018N]-C1_04/08/03_0	7439-92-1	Lead	88.4		mg/kg
T016,017,018S	0-0.5	04/08/03	Yes	01-SS-[T016,017,018S]-C1_04/08/03_0	7440-38-2	Arsenic	47.5		mg/kg
T016,017,018S	0-0.5	04/08/03	Yes	01-SS-[T016,017,018S]-C1_04/08/03_0	7439-92-1	Lead	87.0		mg/kg
T019,020	0-0.5	04/08/03	Yes	01-SS-[T019,020]-C1_04/08/03_0	7440-38-2	Arsenic	39.4		mg/kg
T019,020	0-0.5	04/08/03	Yes	01-SS-[T019,020]-C1_04/08/03_0	7439-92-1	Lead	52.5		mg/kg
T021,022	0-0.5	04/08/03	Yes	01-SS-[T21,22]-C1_04/08/03_0	7440-38-2	Arsenic	36.2		mg/kg
T021,022	0-0.5	04/08/03	Yes	01-SS-[T21,22]-C1_04/08/03_0	7439-92-1	Lead	75.2		mg/kg
T022B,023	0-0.5	04/08/03	Yes	01-SS-[T22b,23]-C1_04/08/03_0	7440-38-2	Arsenic	37.8		mg/kg
T022B,023	0-0.5	04/08/03	Yes	01-SS-[T22b,23]-C1_04/08/03_0	7439-92-1	Lead	48.0		mg/kg
T024N	0-0.5	04/08/03	Yes	01-SS-[T24N]-C1_04/08/03_0	7440-38-2	Arsenic	38.7		mg/kg
T024N	0-0.5	04/08/03	Yes	01-SS-[T24N]-C1_04/08/03_0	7439-92-1	Lead	79.5		mg/kg
T024S	0-0.5	04/08/03	Yes	01-SS-[T24S]-C1_04/08/03_0	7440-38-2	Arsenic	28.7		mg/kg
T024S	0-0.5	04/08/03	Yes	01-SS-[T24S]-C1_04/08/03_0	7439-92-1	Lead	53.1		mg/kg
T049	0-0.5	04/08/03	Yes	01-SS-[T49]-C1_04/08/03_0	7440-38-2	Arsenic	26.6		mg/kg
T049	0-0.5	04/08/03	Yes	01-SS-[T49]-C1_04/08/03_0	7439-92-1	Lead	42.9		mg/kg
T050,051,052	0-0.5	04/08/03	Yes	01-SS-[T50,51,52]-C1_04/08/03_0	7440-38-2	Arsenic	50.1		mg/kg
T050,051,052	0-0.5	04/08/03	Yes	01-SS-[T50,51,52]-C1_04/08/03_0	7439-92-1	Lead	76.0		mg/kg
T056,057,058	0-0.5	04/09/03	Yes	01-SS-[T56,57,58]-C1_04/09/03_0	7439-92-1	Lead	28.7		mg/kg
T056	1-1.5	08/14/03	Yes	02-SS-[T-56]-C2_08/14/03_1	7440-38-2	Arsenic	6.0		mg/kg
T061,062	0-0.5	04/09/03	No	01-SS-[T61,62]-C1_04/09/03_0	7440-38-2	Arsenic	59.2		mg/kg
T061,062	1-1.5	08/14/03	Yes	02-SS-[T-61-62]-C2_08/14/03_1	7439-92-1	Lead	77.0		mg/kg
T063	0-0.5	04/08/03	No	01-SS-[T063]-C1_04/08/03_0	7439-92-1	Lead	92.2		mg/kg
T063	1-1.5	08/18/03	Yes	02-SS-[T-63]-C2_08/18/03_1	7440-38-2	Arsenic	42.5		mg/kg
T064	1-1.5	08/18/03	Yes	02-SS-[T-64]-C2_08/18/03_1	7440-38-2	Arsenic	8.7		mg/kg
T064	1-1.5	08/18/03	Yes	02-SS-[T-64]-C2_08/18/03_1	7439-92-1	Lead	8.9		mg/kg
T165N	0-0.5	04/03/03	Yes	01-SS-[T165N]-C1_04/03/03_0	7440-38-2	Arsenic	19.9		mg/kg

Table B.10
Sample Results for GC-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T165N	0-0.5	04/03/03	Yes	01-SS-[T165N]-C1_04/03/03_0	7439-92-1	Lead	25.2		mg/kg
T165S	0-0.5	04/03/03	Yes	01-SS-[T165S]-C1_04/03/03_0	7440-38-2	Arsenic	31.4		mg/kg
T165S	0-0.5	04/03/03	Yes	01-SS-[T165S]-C1_04/03/03_0	7439-92-1	Lead	51.8		mg/kg
T166,167,168,169,1	0-0.5	04/08/03	Yes	01-SS-[T166,167,168,169,170,171_04/08/03_0	7440-38-2	Arsenic	36.4		mg/kg
T166,167,168,169,1	0-0.5	04/08/03	Yes	01-SS-[T166,167,168,169,170,171_04/08/03_0	7439-92-1	Lead	30.7		mg/kg
T172,173	0-0.5	04/03/03	Yes	01-SS-[T172,173]-C1_AVG_04/03/03_0	7440-38-2	Arsenic	41.0		mg/kg
T172,173	0-0.5	04/03/03	Yes	01-SS-[T172,173]-C1_AVG_04/03/03_0	7439-92-1	Lead	33.2		mg/kg
T174	0-0.5	04/03/03	Yes	01-SS-[T174]-C1_04/03/03_0	7440-38-2	Arsenic	32.3		mg/kg
T174	0-0.5	04/03/03	Yes	01-SS-[T174]-C1_04/03/03_0	7439-92-1	Lead	23.7		mg/kg
T175	0-0.5	04/08/03	Yes	01-SS-[T175]-C1_04/08/03_0	7440-38-2	Arsenic	39.6		mg/kg
T175	0-0.5	04/08/03	Yes	01-SS-[T175]-C1_04/08/03_0	7439-92-1	Lead	17.2		mg/kg
T176,177	0-0.5	04/08/03	Yes	01-SS-[T176,177]-C1_04/08/03_0	7440-38-2	Arsenic	29.0		mg/kg
T176,177	0-0.5	04/08/03	Yes	01-SS-[T176,177]-C1_04/08/03_0	7439-92-1	Lead	25.1		mg/kg
T178	0-0.5	04/08/03	Yes	01-SS-[T178]-C1_04/08/03_0	7440-38-2	Arsenic	41.0		mg/kg
T178	0-0.5	04/08/03	Yes	01-SS-[T178]-C1_04/08/03_0	7439-92-1	Lead	101.0		mg/kg
T179	0-0.5	04/08/03	Yes	01-SS-[T179]-C1_04/08/03_0	7440-38-2	Arsenic	31.0		mg/kg
T179	0-0.5	04/08/03	Yes	01-SS-[T179]-C1_04/08/03_0	7439-92-1	Lead	116.0		mg/kg
T180,181,182	0-0.5	04/08/03	Yes	01-SS-[T180,181,182]-C1_04/08/03_0	7440-38-2	Arsenic	32.7		mg/kg
T180,181,182	0-0.5	04/08/03	Yes	01-SS-[T180,181,182]-C1_04/08/03_0	7439-92-1	Lead	111.0		mg/kg
T53	0-0.5	04/08/03	Yes	01-SS-[T53]-C1_04/08/03_0	7440-38-2	Arsenic	53.5		mg/kg
T53	0-0.5	04/08/03	Yes	01-SS-[T53]-C1_04/08/03_0	7439-92-1	Lead	97.8		mg/kg
T54	0-0.5	04/08/03	Yes	01-SS-[T54]-C1_04/08/03_0	7440-38-2	Arsenic	35.1		mg/kg
T54	0-0.5	04/08/03	Yes	01-SS-[T54]-C1_04/08/03_0	7439-92-1	Lead	45.7		mg/kg
T55	0-0.5	04/08/03	Yes	01-SS-[T55]-C1_04/08/03_0	7439-92-1	Lead	54.8		mg/kg
T59	0-0.5	04/08/03	Yes	01-SS-[T59]-C1_04/08/03_0	7439-92-1	Lead	42.2		mg/kg
WR-LD-1	1-1.5	04/23/03	Yes	01-SS-[WR-LD-1]-C1_04/23/03_1	7440-38-2	Arsenic	14.8		mg/kg
WR-LD-1	1-1.5	04/23/03	Yes	01-SS-[WR-LD-1]-C1_04/23/03_1	7439-92-1	Lead	60.2		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-VS-127	1-1.5	10/11/99	Yes	38-VS-127	7440-38-2	Arsenic	21.0		mg/kg
38-VS-127	1-1.5	10/11/99	Yes	38-VS-127	7439-92-1	Lead	13.0		mg/kg
38-VS-129	1-1.5	10/11/99	Yes	38-VS-129	7440-38-2	Arsenic	6.3		mg/kg
38-VS-129	1-1.5	10/11/99	Yes	38-VS-129	7439-92-1	Lead	6.5		mg/kg
38-VS-28	1-1.5	09/27/99	Yes	38-VS-28	7440-38-2	Arsenic	8.0		mg/kg
38-VS-28	1-1.5	09/27/99	Yes	38-VS-28	7439-92-1	Lead	6.1		mg/kg
38-VS-31	1-1.5	09/27/99	Yes	38-VS-31	7440-38-2	Arsenic	7.2		mg/kg
38-VS-31	1-1.5	09/27/99	Yes	38-VS-31	7439-92-1	Lead	4.4		mg/kg
38-VS-58	1-1.5	09/28/99	Yes	38-VS-58	7440-38-2	Arsenic	19.0		mg/kg
38-VS-58	1-1.5	09/28/99	Yes	38-VS-58	7439-92-1	Lead	18.0		mg/kg
38-VS-59	1-1.5	09/28/99	Yes	38-VS-59	7440-38-2	Arsenic	35.0		mg/kg
38-VS-59	1-1.5	09/28/99	Yes	38-VS-59	7439-92-1	Lead	19.0		mg/kg
38-VS-62	1-1.5	09/28/99	Yes	38-VS-62	7440-38-2	Arsenic	8.9		mg/kg
38-VS-62	1-1.5	09/28/99	Yes	38-VS-62	7439-92-1	Lead	11.0		mg/kg
38-VS-63	1-1.5	09/28/99	Yes	38-VS-63	7440-38-2	Arsenic	21.0		mg/kg
38-VS-63	1-1.5	09/28/99	Yes	38-VS-63	7439-92-1	Lead	12.0		mg/kg
LR-163	0-0.5	11/09/93	Yes	LR-163	7440-38-2	Arsenic	23.0		mg/kg
MSU-93-VS-B	3-3.5	08/06/03	Yes	01-SS-[MSU-93-VS-B]-C2_08/06/03_3	7440-38-2	Arsenic	2.0	U	mg/kg
MSU-NGRR-16	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-16-1]-C1_05/27/03_1.5	7440-38-2	Arsenic	5.4		mg/kg
MSU-NGRR-16	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-16-1]-C1_05/27/03_1.5	7439-92-1	Lead	2.6		mg/kg
NGRR-29-2	2.5-3	08/29/01	Yes	02-N01-SS[NGRR-29-2]C2-025	7440-38-2	Arsenic	17.0	J	mg/kg
NGRR-29-2	2.5-3	08/29/01	Yes	02-N01-SS[NGRR-29-2]C2-025	7439-92-1	Lead	16.0		mg/kg
NGRR-30-2	2.5-3	08/29/01	Yes	02-N01-SS[NGRR-30-2]C2-025	7440-38-2	Arsenic	6.0	J	mg/kg
NGRR-30-2	2.5-3	08/29/01	Yes	02-N01-SS[NGRR-30-2]C2-025	7439-92-1	Lead	4.8		mg/kg
NGRR-60	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-60]C2-005	7440-38-2	Arsenic	2.4		mg/kg
NGRR-60	1.5-2	07/12/01	Yes	01-N01-SS[NGRR-60]C2-005	7439-92-1	Lead	2.0		mg/kg
NGRR-69-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-69-2]C2-025	7440-38-2	Arsenic	14.0		mg/kg
NGRR-69-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-69-2]C2-025	7439-92-1	Lead	5.4		mg/kg
R37C60	1-1.5	12/10/03	Yes	01-SS-[R37C60]-C2_12/10/03_1	7440-38-2	Arsenic	2.1	U	mg/kg
R37C60	1-1.5	12/10/03	Yes	01-SS-[R37C60]-C2_12/10/03_1	7439-92-1	Lead	3.1		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R38C59	1-1.5	12/09/03	Yes	01-SS-[R38C59]-C2_AVG_12/09/03_1	7440-38-2	Arsenic	5.4		mg/kg
R38C59	1-1.5	12/09/03	Yes	01-SS-[R38C59]-C2_AVG_12/09/03_1	7439-92-1	Lead	5.0		mg/kg
R38C60	1-1.5	12/09/03	Yes	01-SS-[R38C60]-C2_12/09/03_1	7440-38-2	Arsenic	4.7		mg/kg
R38C60	1-1.5	12/09/03	Yes	01-SS-[R38C60]-C2_12/09/03_1	7439-92-1	Lead	4.6		mg/kg
R38C61	1-1.5	12/09/03	Yes	01-SS-[R38C61]-C2_12/09/03_1	7440-38-2	Arsenic	18.0		mg/kg
R38C61	1-1.5	12/09/03	Yes	01-SS-[R38C61]-C2_12/09/03_1	7439-92-1	Lead	21.4		mg/kg
R39C58	1-1.5	12/09/03	Yes	01-SS-[R39C58]-C2_12/09/03_1	7440-38-2	Arsenic	17.1		mg/kg
R39C58	1-1.5	12/09/03	Yes	01-SS-[R39C58]-C2_12/09/03_1	7439-92-1	Lead	24.9		mg/kg
R39C59	1-1.5	03/16/04	Yes	1-R39C59_03/16/04_1	7440-38-2	Arsenic	12.9		mg/kg
R39C59	1-1.5	03/16/04	Yes	1-R39C59_03/16/04_1	7439-92-1	Lead	14.2		mg/kg
R39C60	1-1.5	03/16/04	Yes	1-R39C60_03/16/04_1	7440-38-2	Arsenic	4.3		mg/kg
R39C60	1-1.5	03/16/04	Yes	1-R39C60_03/16/04_1	7439-92-1	Lead	5.4		mg/kg
R39C61	1-1.5	12/09/03	Yes	01-SS-[R39C61]-C2_12/09/03_1	7440-38-2	Arsenic	4.6		mg/kg
R39C61	1-1.5	12/09/03	Yes	01-SS-[R39C61]-C2_12/09/03_1	7439-92-1	Lead	2.8		mg/kg
R39C62	1-1.5	12/06/03	Yes	01-SS-[R39C62]-C2_12/06/03_1	7440-38-2	Arsenic	14.1		mg/kg
R39C62	1-1.5	12/06/03	Yes	01-SS-[R39C62]-C2_12/06/03_1	7439-92-1	Lead	11.6		mg/kg
R40C58	1-1.5	12/08/03	Yes	01-SS-[R40C58]-C2_12/08/03_1	7440-38-2	Arsenic	14.1		mg/kg
R40C58	1-1.5	12/08/03	Yes	01-SS-[R40C58]-C2_12/08/03_1	7439-92-1	Lead	24.0		mg/kg
R40C59	1-1.5	12/08/03	Yes	01-SS-[R40C59]-C2_12/08/03_1	7440-38-2	Arsenic	10.0		mg/kg
R40C59	1-1.5	12/08/03	Yes	01-SS-[R40C59]-C2_12/08/03_1	7439-92-1	Lead	9.3		mg/kg
R40C60	1-1.5	12/08/03	Yes	01-SS-[R40C60]-C2_12/08/03_1	7440-38-2	Arsenic	5.0		mg/kg
R40C60	1-1.5	12/08/03	Yes	01-SS-[R40C60]-C2_12/08/03_1	7439-92-1	Lead	4.0		mg/kg
R40C61	1-1.5	12/09/03	Yes	01-SS-[R40C61]-C2_12/09/03_1	7440-38-2	Arsenic	9.2		mg/kg
R40C61	1-1.5	12/09/03	Yes	01-SS-[R40C61]-C2_12/09/03_1	7439-92-1	Lead	8.4		mg/kg
R40C62	1-1.5	12/08/03	Yes	01-SS-[R40C62]-C2_12/08/03_1	7440-38-2	Arsenic	7.2		mg/kg
R40C62	1-1.5	12/08/03	Yes	01-SS-[R40C62]-C2_12/08/03_1	7439-92-1	Lead	28.9		mg/kg
R41C59	1-1.5	12/02/03	Yes	01-SS-[R41C59]-C2_12/02/03_1	7440-38-2	Arsenic	11.7		mg/kg
R41C59	1-1.5	12/02/03	Yes	01-SS-[R41C59]-C2_12/02/03_1	7439-92-1	Lead	16.4		mg/kg
R41C60	1-1.5	12/02/03	Yes	01-SS-[R41C60]-C2_12/02/03_1	7440-38-2	Arsenic	10.1		mg/kg
R41C60	1-1.5	12/02/03	Yes	01-SS-[R41C60]-C2_12/02/03_1	7439-92-1	Lead	15.1		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R41C61	1-1.5	12/02/03	Yes	01-SS-[R41C61]-C2_12/02/03_1	7440-38-2	Arsenic	7.8		mg/kg
R41C61	1-1.5	12/02/03	Yes	01-SS-[R41C61]-C2_12/02/03_1	7439-92-1	Lead	12.2		mg/kg
R41C62	1-1.5	12/06/03	Yes	01-SS-[R41C62]-C2_12/06/03_1	7440-38-2	Arsenic	7.8		mg/kg
R41C62	1-1.5	12/06/03	Yes	01-SS-[R41C62]-C2_12/06/03_1	7439-92-1	Lead	9.5		mg/kg
R41C63	1-1.5	03/18/04	Yes	01-R41C63_03/18/04_1	7440-38-2	Arsenic	6.6		mg/kg
R41C63	1-1.5	03/18/04	Yes	01-R41C63_03/18/04_1	7439-92-1	Lead	6.4		mg/kg
R42C60	1-1.5	12/02/03	Yes	01-SS-[R42C60]-C2_12/02/03_1	7440-38-2	Arsenic	8.2		mg/kg
R42C60	1-1.5	12/02/03	Yes	01-SS-[R42C60]-C2_12/02/03_1	7439-92-1	Lead	11.6		mg/kg
R42C61	1-1.5	12/02/03	Yes	01-SS-[R42C61]-C2_12/02/03_1	7440-38-2	Arsenic	10.6		mg/kg
R42C61	1-1.5	12/02/03	Yes	01-SS-[R42C61]-C2_12/02/03_1	7439-92-1	Lead	10.2		mg/kg
R42C62	1-1.5	12/08/03	Yes	01-SS-[R42C62]-C2_12/08/03_1	7440-38-2	Arsenic	10.6		mg/kg
R42C62	1-1.5	12/08/03	Yes	01-SS-[R42C62]-C2_12/08/03_1	7439-92-1	Lead	16.6		mg/kg
R42C63	1-1.5	03/18/04	Yes	01-R42C63_03/18/04_1	7440-38-2	Arsenic	6.6		mg/kg
R42C63	1-1.5	03/18/04	Yes	01-R42C63_03/18/04_1	7439-92-1	Lead	8.5		mg/kg
R43C61	1-1.5	11/26/03	Yes	01-SS-[R43C61]-C2_11/26/03_1	7440-38-2	Arsenic	11.7		mg/kg
R43C61	1-1.5	11/26/03	Yes	01-SS-[R43C61]-C2_11/26/03_1	7439-92-1	Lead	18.4		mg/kg
R43C62	1-1.5	11/26/03	Yes	01-SS-[R43C62]-C2_11/26/03_1	7440-38-2	Arsenic	23.0		mg/kg
R43C62	1-1.5	11/26/03	Yes	01-SS-[R43C62]-C2_11/26/03_1	7439-92-1	Lead	22.0		mg/kg
R43C63	1-1.5	11/26/03	Yes	01-SS-[R43C63]-C2_11/26/03_1	7440-38-2	Arsenic	7.1		mg/kg
R43C63	1-1.5	11/26/03	Yes	01-SS-[R43C63]-C2_11/26/03_1	7439-92-1	Lead	9.4		mg/kg
R44C61	1-1.5	03/18/04	Yes	01-R44C61_03/18/04_1	7440-38-2	Arsenic	11.8		mg/kg
R44C61	1-1.5	03/18/04	Yes	01-R44C61_03/18/04_1	7439-92-1	Lead	13.7		mg/kg
R44C62	1-1.5	03/18/04	Yes	01-R44C62_03/18/04_1	7440-38-2	Arsenic	10.2		mg/kg
R44C62	1-1.5	03/18/04	Yes	01-R44C62_03/18/04_1	7439-92-1	Lead	11.8		mg/kg
R44C63	1-1.5	11/26/03	Yes	01-SS-[R44C63]-C2_11/26/03_1	7440-38-2	Arsenic	8.0		mg/kg
R44C63	1-1.5	11/26/03	Yes	01-SS-[R44C63]-C2_11/26/03_1	7439-92-1	Lead	12.3		mg/kg
R44C64	1-1.5	12/01/03	Yes	01-SS-[R44C64]-C2_12/01/03_1	7440-38-2	Arsenic	9.6		mg/kg
R44C64	1-1.5	12/01/03	Yes	01-SS-[R44C64]-C2_12/01/03_1	7439-92-1	Lead	20.5		mg/kg
R45C62	1-1.5	03/18/04	Yes	01-R45C62_AVG_03/18/04_1	7440-38-2	Arsenic	10.4		mg/kg
R45C62	1-1.5	03/18/04	Yes	01-R45C62_AVG_03/18/04_1	7439-92-1	Lead	13.2		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R45C63	1-1.5	11/26/03	Yes	01-SS-[R45C63]-C2_11/26/03_1	7440-38-2	Arsenic	18.3		mg/kg
R45C63	1-1.5	11/26/03	Yes	01-SS-[R45C63]-C2_11/26/03_1	7439-92-1	Lead	23.5		mg/kg
R45C64	1-1.5	11/26/03	Yes	01-SS-[R45C64]-C2_11/26/03_1	7440-38-2	Arsenic	6.5		mg/kg
R45C64	1-1.5	11/26/03	Yes	01-SS-[R45C64]-C2_11/26/03_1	7439-92-1	Lead	10.6		mg/kg
R46C62	1-1.5	03/18/04	Yes	01-R46C62_03/18/04_1	7440-38-2	Arsenic	15.5		mg/kg
R46C62	1-1.5	03/18/04	Yes	01-R46C62_03/18/04_1	7439-92-1	Lead	16.5		mg/kg
R46C64	1-1.5	11/26/03	Yes	01-SS-[R46C64]-C2_AVG_11/26/03_1	7440-38-2	Arsenic	8.0		mg/kg
R46C64	1-1.5	11/26/03	Yes	01-SS-[R46C64]-C2_AVG_11/26/03_1	7439-92-1	Lead	9.7		mg/kg
R46C65	1-1.5	11/26/03	Yes	01-SS-[R46C65]-C2_11/26/03_1	7440-38-2	Arsenic	9.5		mg/kg
R46C65	1-1.5	11/26/03	Yes	01-SS-[R46C65]-C2_11/26/03_1	7439-92-1	Lead	6.2		mg/kg
R47C62	1-1.5	11/26/03	Yes	01-SS-[R47C62]-C2_11/26/03_1	7440-38-2	Arsenic	5.7		mg/kg
R47C62	1-1.5	11/26/03	Yes	01-SS-[R47C62]-C2_11/26/03_1	7439-92-1	Lead	8.0		mg/kg
R47C63	1-1.5	11/26/03	Yes	01-SS-[R47C63]-C2_11/26/03_1	7440-38-2	Arsenic	7.3		mg/kg
R47C63	1-1.5	11/26/03	Yes	01-SS-[R47C63]-C2_11/26/03_1	7439-92-1	Lead	6.2		mg/kg
R47C64	1-1.5	03/18/04	Yes	01-R47C64_03/18/04_1	7440-38-2	Arsenic	17.0		mg/kg
R47C64	1-1.5	03/18/04	Yes	01-R47C64_03/18/04_1	7439-92-1	Lead	13.6		mg/kg
R47C65	1-1.5	03/18/04	Yes	01-R47C65_03/18/04_1	7440-38-2	Arsenic	14.4		mg/kg
R47C65	1-1.5	03/18/04	Yes	01-R47C65_03/18/04_1	7439-92-1	Lead	14.4		mg/kg
R47C66	1-1.5	11/24/03	Yes	01-SS-[R47C66]-C2_11/24/03_1	7440-38-2	Arsenic	10.0		mg/kg
R47C66	1-1.5	11/24/03	Yes	01-SS-[R47C66]-C2_11/24/03_1	7439-92-1	Lead	5.6		mg/kg
R48C62	1-1.5	11/26/03	Yes	01-SS-[R48C62]-C2_11/26/03_1	7440-38-2	Arsenic	10.2		mg/kg
R48C62	1-1.5	11/26/03	Yes	01-SS-[R48C62]-C2_11/26/03_1	7439-92-1	Lead	8.0		mg/kg
R48C63	1-1.5	11/26/03	Yes	01-SS-[R48C63]-C2_11/26/03_1	7440-38-2	Arsenic	21.5		mg/kg
R48C63	1-1.5	11/26/03	Yes	01-SS-[R48C63]-C2_11/26/03_1	7439-92-1	Lead	29.4		mg/kg
R48C64	1-1.5	11/26/03	Yes	01-SS-[R48C64]-C2_11/26/03_1	7440-38-2	Arsenic	7.6		mg/kg
R48C64	1-1.5	11/26/03	Yes	01-SS-[R48C64]-C2_11/26/03_1	7439-92-1	Lead	4.6		mg/kg
R48C68	1-1.5	11/21/03	Yes	01-SS-[R48C68]-C2_11/21/03_1	7440-38-2	Arsenic	13.4		mg/kg
R48C68	1-1.5	11/21/03	Yes	01-SS-[R48C68]-C2_11/21/03_1	7439-92-1	Lead	15.3		mg/kg
R49C63	1-1.5	04/27/04	Yes	1-R49C63_04/27/04_1	7440-38-2	Arsenic	25.6		mg/kg
R49C63	1-1.5	04/27/04	Yes	1-R49C63_04/27/04_1	7439-92-1	Lead	18.4		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R49C69	1-1.5	04/27/04	Yes	1-R49C69_04/27/04_1	7440-38-2	Arsenic	17.4		mg/kg
R49C69	1-1.5	04/27/04	Yes	1-R49C69_04/27/04_1	7439-92-1	Lead	21.2		mg/kg
R49C70	1-1.5	04/27/04	Yes	1-R49C70_04/27/04_1	7440-38-2	Arsenic	17.1		mg/kg
R49C70	1-1.5	04/27/04	Yes	1-R49C70_04/27/04_1	7439-92-1	Lead	7.1		mg/kg
R49C71	1-1.5	04/27/04	Yes	1-R49C71_04/27/04_1	7440-38-2	Arsenic	20.0		mg/kg
R49C71	1-1.5	04/27/04	Yes	1-R49C71_04/27/04_1	7439-92-1	Lead	21.9		mg/kg
R50C71	1-1.5	04/27/04	Yes	1-R50C71_04/27/04_1	7440-38-2	Arsenic	16.1		mg/kg
R50C71	1-1.5	04/27/04	Yes	1-R50C71_04/27/04_1	7439-92-1	Lead	8.8		mg/kg
R50C72	1-1.5	04/27/04	Yes	1-R50C72_04/27/04_1	7440-38-2	Arsenic	26.7		mg/kg
R50C72	1-1.5	04/27/04	Yes	1-R50C72_04/27/04_1	7439-92-1	Lead	10.1		mg/kg
R50C73	1-1.5	04/27/04	Yes	1-R50C73_04/27/04_1	7440-38-2	Arsenic	46.1		mg/kg
R50C73	1-1.5	04/27/04	Yes	1-R50C73_04/27/04_1	7439-92-1	Lead	4.1		mg/kg
R51C63	1-1.5	03/12/04	Yes	01-R51C63_AVG_03/12/04_1	7440-38-2	Arsenic	7.2		mg/kg
R51C63	1-1.5	03/12/04	Yes	01-R51C63_AVG_03/12/04_1	7439-92-1	Lead	17.7		mg/kg
R51C73	1-1.5	04/27/04	Yes	1-R51C73_04/27/04_1	7440-38-2	Arsenic	24.8		mg/kg
R51C73	1-1.5	04/27/04	Yes	1-R51C73_04/27/04_1	7439-92-1	Lead	8.3		mg/kg
R51C74	1-1.5	04/27/04	No	1-R51C74_04/27/04_1	7439-92-1	Lead	9.8		mg/kg
R51C74	2-2.5	05/07/04	Yes	2-R51C74_05/07/04_2	7440-38-2	Arsenic	8.0		mg/kg
R51C75	1-1.5	04/27/04	Yes	1-R51C75_04/27/04_1	7440-38-2	Arsenic	44.5		mg/kg
R51C75	1-1.5	04/27/04	Yes	1-R51C75_04/27/04_1	7439-92-1	Lead	7.2		mg/kg
R52C63	1-1.5	04/06/04	Yes	01-R52C63_04/06/04_1	7440-38-2	Arsenic	13.5		mg/kg
R52C63	1-1.5	04/06/04	Yes	01-R52C63_04/06/04_1	7439-92-1	Lead	11.4		mg/kg
R52C64	1-1.5	03/12/04	Yes	01-R52C64_03/12/04_1	7440-38-2	Arsenic	11.9		mg/kg
R52C64	1-1.5	03/12/04	Yes	01-R52C64_03/12/04_1	7439-92-1	Lead	11.6		mg/kg
R52C76	1-1.5	04/27/04	Yes	1-R52C76_04/27/04_1	7440-38-2	Arsenic	15.1		mg/kg
R52C76	1-1.5	04/27/04	Yes	1-R52C76_04/27/04_1	7439-92-1	Lead	5.0		mg/kg
R52C77	1-1.5	04/27/04	Yes	1-R52C77_AVG_04/27/04_1	7440-38-2	Arsenic	10.3		mg/kg
R52C77	1-1.5	04/27/04	Yes	1-R52C77_AVG_04/27/04_1	7439-92-1	Lead	10.3		mg/kg
R53C63	1-1.5	04/06/04	Yes	01-R53C63_04/06/04_1	7440-38-2	Arsenic	12.3		mg/kg
R53C63	1-1.5	04/06/04	Yes	01-R53C63_04/06/04_1	7439-92-1	Lead	10.2		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R53C77	1-1.5	03/18/04	Yes	01-R53C77_03/18/04_1	7440-38-2	Arsenic	16.0		mg/kg
R53C77	1-1.5	03/18/04	Yes	01-R53C77_03/18/04_1	7439-92-1	Lead	23.3		mg/kg
R53C78	1-1.5	03/18/04	Yes	01-R53C78_AVG_03/18/04_1	7440-38-2	Arsenic	8.3		mg/kg
R53C78	1-1.5	03/18/04	Yes	01-R53C78_AVG_03/18/04_1	7439-92-1	Lead	9.5		mg/kg
R53C79	1-1.5	03/18/04	Yes	01-R53C79_03/18/04_1	7440-38-2	Arsenic	6.1		mg/kg
R53C79	1-1.5	03/18/04	Yes	01-R53C79_03/18/04_1	7439-92-1	Lead	5.3		mg/kg
R54C65	1-1.5	04/06/04	Yes	01-R54C65_04/06/04_1	7440-38-2	Arsenic	12.2		mg/kg
R54C65	1-1.5	04/06/04	Yes	01-R54C65_04/06/04_1	7439-92-1	Lead	17.5		mg/kg
R54C66	1-1.5	04/06/04	Yes	01-R54C66_04/06/04_1	7440-38-2	Arsenic	16.6		mg/kg
R54C66	1-1.5	04/06/04	Yes	01-R54C66_04/06/04_1	7439-92-1	Lead	13.5		mg/kg
R54C77	1-1.5	03/18/04	Yes	01-R54C77_03/18/04_1	7440-38-2	Arsenic	15.8		mg/kg
R54C77	1-1.5	03/18/04	Yes	01-R54C77_03/18/04_1	7439-92-1	Lead	23.9		mg/kg
R54C78	1-1.5	03/18/04	Yes	01-R54C78_03/18/04_1	7440-38-2	Arsenic	6.2		mg/kg
R54C78	1-1.5	03/18/04	Yes	01-R54C78_03/18/04_1	7439-92-1	Lead	6.6		mg/kg
R54C79	1-1.5	04/22/04	Yes	1-R54C79_04/22/04_1	7440-38-2	Arsenic	16.6		mg/kg
R54C79	1-1.5	04/22/04	Yes	1-R54C79_04/22/04_1	7439-92-1	Lead	42.7		mg/kg
R54C80	1-1.5	04/22/04	Yes	1-R54C80_04/22/04_1	7440-38-2	Arsenic	9.4		mg/kg
R54C80	1-1.5	04/22/04	Yes	1-R54C80_04/22/04_1	7439-92-1	Lead	11.2		mg/kg
R54C81	1-1.5	04/22/04	Yes	1-R54C81_04/22/04_1	7440-38-2	Arsenic	5.4		mg/kg
R54C81	1-1.5	04/22/04	Yes	1-R54C81_04/22/04_1	7439-92-1	Lead	3.7		mg/kg
R55C66	1-1.5	04/06/04	Yes	01-R55C66_AVG_04/06/04_1	7440-38-2	Arsenic	10.7		mg/kg
R55C66	1-1.5	04/06/04	Yes	01-R55C66_AVG_04/06/04_1	7439-92-1	Lead	9.2		mg/kg
R55C67	1-1.5	04/06/04	Yes	01-R55C67_04/06/04_1	7440-38-2	Arsenic	17.2		mg/kg
R55C67	1-1.5	04/06/04	Yes	01-R55C67_04/06/04_1	7439-92-1	Lead	17.1		mg/kg
R55C77	1-1.5	03/18/04	Yes	01-R55C77_03/18/04_1	7440-38-2	Arsenic	14.1		mg/kg
R55C77	1-1.5	03/18/04	Yes	01-R55C77_03/18/04_1	7439-92-1	Lead	25.9		mg/kg
R55C78	1-1.5	03/18/04	Yes	01-R55C78_03/18/04_1	7440-38-2	Arsenic	8.4		mg/kg
R55C78	1-1.5	03/18/04	Yes	01-R55C78_03/18/04_1	7439-92-1	Lead	13.9		mg/kg
R55C79	1-1.5	04/22/04	Yes	1-R55C79_04/22/04_1	7440-38-2	Arsenic	11.0		mg/kg
R55C79	1-1.5	04/22/04	Yes	1-R55C79_04/22/04_1	7439-92-1	Lead	37.5		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R55C80	1-1.5	04/22/04	Yes	1-R55C80_04/22/04_1	7440-38-2	Arsenic	15.7		mg/kg
R55C80	1-1.5	04/22/04	Yes	1-R55C80_04/22/04_1	7439-92-1	Lead	28.1		mg/kg
R55C81	1-1.5	04/22/04	Yes	1-R55C81_04/22/04_1	7440-38-2	Arsenic	11.8		mg/kg
R55C81	1-1.5	04/22/04	Yes	1-R55C81_04/22/04_1	7439-92-1	Lead	16.2		mg/kg
R55C82	1-1.5	04/22/04	Yes	1-R55C82_04/22/04_1	7440-38-2	Arsenic	12.2		mg/kg
R55C82	1-1.5	04/22/04	Yes	1-R55C82_04/22/04_1	7439-92-1	Lead	18.4		mg/kg
R56C68	1-1.5	04/08/04	Yes	1-R56C68_04/08/04_1	7440-38-2	Arsenic	14.8		mg/kg
R56C68	1-1.5	04/08/04	Yes	1-R56C68_04/08/04_1	7439-92-1	Lead	20.5		mg/kg
R56C69	1-1.5	04/08/04	Yes	1-R56C69_04/08/04_1	7440-38-2	Arsenic	11.5		mg/kg
R56C69	1-1.5	04/08/04	Yes	1-R56C69_04/08/04_1	7439-92-1	Lead	14.2		mg/kg
R56C78	1-1.5	03/18/04	Yes	01-R56C78_03/18/04_1	7440-38-2	Arsenic	15.2		mg/kg
R56C78	1-1.5	03/18/04	Yes	01-R56C78_03/18/04_1	7439-92-1	Lead	28.7		mg/kg
R56C79	1-1.5	04/22/04	Yes	1-R56C79_04/22/04_1	7440-38-2	Arsenic	5.4		mg/kg
R56C79	1-1.5	04/22/04	Yes	1-R56C79_04/22/04_1	7439-92-1	Lead	5.2		mg/kg
R56C80	1-1.5	04/22/04	Yes	1-R56C80_04/22/04_1	7440-38-2	Arsenic	8.5		mg/kg
R56C80	1-1.5	04/22/04	Yes	1-R56C80_04/22/04_1	7439-92-1	Lead	9.4		mg/kg
R56C81	1-1.5	04/22/04	Yes	1-R56C81_04/22/04_1	7440-38-2	Arsenic	7.6		mg/kg
R56C81	1-1.5	04/22/04	Yes	1-R56C81_04/22/04_1	7439-92-1	Lead	7.2		mg/kg
R56C82	1-1.5	04/22/04	Yes	1-R56C82_AVG_04/22/04_1	7440-38-2	Arsenic	15.0		mg/kg
R56C82	1-1.5	04/22/04	Yes	1-R56C82_AVG_04/22/04_1	7439-92-1	Lead	12.2		mg/kg
R57C69	1-1.5	04/08/04	Yes	1-R57C69_04/08/04_1	7440-38-2	Arsenic	20.7		mg/kg
R57C69	1-1.5	04/08/04	Yes	1-R57C69_04/08/04_1	7439-92-1	Lead	41.0		mg/kg
R57C70	1-1.5	04/08/04	Yes	1-R57C70_04/08/04_1	7440-38-2	Arsenic	10.6		mg/kg
R57C70	1-1.5	04/08/04	Yes	1-R57C70_04/08/04_1	7439-92-1	Lead	15.1		mg/kg
R57C78	1-1.5	03/18/04	Yes	01-R57C78_03/18/04_1	7440-38-2	Arsenic	10.3		mg/kg
R57C78	1-1.5	03/18/04	Yes	01-R57C78_03/18/04_1	7439-92-1	Lead	19.2		mg/kg
R57C79	1-1.5	04/22/04	Yes	1-R57C79_04/22/04_1	7440-38-2	Arsenic	9.1		mg/kg
R57C79	1-1.5	04/22/04	Yes	1-R57C79_04/22/04_1	7439-92-1	Lead	28.9		mg/kg
R57C80	1-1.5	04/22/04	Yes	1-R57C80_04/22/04_1	7440-38-2	Arsenic	5.6		mg/kg
R57C80	1-1.5	04/22/04	Yes	1-R57C80_04/22/04_1	7439-92-1	Lead	5.6		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R57C81	1-1.5	04/22/04	Yes	1-R57C81_04/22/04_1	7440-38-2	Arsenic	8.2		mg/kg
R57C81	1-1.5	04/22/04	Yes	1-R57C81_04/22/04_1	7439-92-1	Lead	9.5		mg/kg
R57C82	1-1.5	04/22/04	Yes	1-R57C82_04/22/04_1	7440-38-2	Arsenic	7.3		mg/kg
R57C82	1-1.5	04/22/04	Yes	1-R57C82_04/22/04_1	7439-92-1	Lead	7.6		mg/kg
R57C83	1-1.5	04/22/04	Yes	1-R57C83_04/22/04_1	7440-38-2	Arsenic	8.2		mg/kg
R57C83	1-1.5	04/22/04	Yes	1-R57C83_04/22/04_1	7439-92-1	Lead	8.8		mg/kg
R58C71	1-1.5	03/04/04	Yes	01-R58C71_03/04/04_1	7440-38-2	Arsenic	10.3		mg/kg
R58C71	1-1.5	03/04/04	Yes	01-R58C71_03/04/04_1	7439-92-1	Lead	14.8		mg/kg
R58C72	1-1.5	04/08/04	Yes	1-R58C72_04/08/04_1	7440-38-2	Arsenic	12.2		mg/kg
R58C72	1-1.5	04/08/04	Yes	1-R58C72_04/08/04_1	7439-92-1	Lead	24.9		mg/kg
R58C78	1-1.5	03/18/04	Yes	01-R58C78_03/18/04_1	7440-38-2	Arsenic	11.1		mg/kg
R58C78	1-1.5	03/18/04	Yes	01-R58C78_03/18/04_1	7439-92-1	Lead	11.0		mg/kg
R58C79	1-1.5	04/22/04	Yes	1-R58C79_04/22/04_1	7440-38-2	Arsenic	9.7		mg/kg
R58C79	1-1.5	04/22/04	Yes	1-R58C79_04/22/04_1	7439-92-1	Lead	12.2		mg/kg
R58C80	1-1.5	04/22/04	Yes	1-R58C80_04/22/04_1	7440-38-2	Arsenic	10.1		mg/kg
R58C80	1-1.5	04/22/04	Yes	1-R58C80_04/22/04_1	7439-92-1	Lead	11.7		mg/kg
R58C81	1-1.5	04/22/04	Yes	1-R58C81_04/22/04_1	7440-38-2	Arsenic	13.9		mg/kg
R58C81	1-1.5	04/22/04	Yes	1-R58C81_04/22/04_1	7439-92-1	Lead	17.9		mg/kg
R58C82	1-1.5	04/22/04	Yes	1-R58C82_04/22/04_1	7440-38-2	Arsenic	6.5		mg/kg
R58C82	1-1.5	04/22/04	Yes	1-R58C82_04/22/04_1	7439-92-1	Lead	6.7		mg/kg
R58C83	1-1.5	04/22/04	Yes	1-R58C83_04/22/04_1	7440-38-2	Arsenic	9.2		mg/kg
R58C83	1-1.5	04/22/04	Yes	1-R58C83_04/22/04_1	7439-92-1	Lead	9.3		mg/kg
R59C73	1-1.5	03/04/04	Yes	01-R59C73_03/04/04_1	7440-38-2	Arsenic	8.9		mg/kg
R59C73	1-1.5	03/04/04	Yes	01-R59C73_03/04/04_1	7439-92-1	Lead	6.3		mg/kg
R59C74	1-1.5	03/04/04	Yes	01-R59C74_03/04/04_1	7440-38-2	Arsenic	12.1		mg/kg
R59C74	1-1.5	03/04/04	Yes	01-R59C74_03/04/04_1	7439-92-1	Lead	16.2		mg/kg
R59C78	1-1.5	03/18/04	Yes	01-R59C78_03/18/04_1	7440-38-2	Arsenic	18.6		mg/kg
R59C78	1-1.5	03/18/04	Yes	01-R59C78_03/18/04_1	7439-92-1	Lead	13.8		mg/kg
R59C79	1-1.5	03/18/04	Yes	01-R59C79_03/18/04_1	7440-38-2	Arsenic	10.1		mg/kg
R59C79	1-1.5	03/18/04	Yes	01-R59C79_03/18/04_1	7439-92-1	Lead	7.3		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R59C80	1-1.5	04/22/04	Yes	1-R59C80_04/22/04_1	7440-38-2	Arsenic	8.0		mg/kg
R59C80	1-1.5	04/22/04	Yes	1-R59C80_04/22/04_1	7439-92-1	Lead	6.7		mg/kg
R59C81	1-1.5	04/22/04	Yes	1-R59C81_04/22/04_1	7440-38-2	Arsenic	6.0		mg/kg
R59C81	1-1.5	04/22/04	Yes	1-R59C81_04/22/04_1	7439-92-1	Lead	6.7		mg/kg
R59C82	1-1.5	04/22/04	Yes	1-R59C82_04/22/04_1	7440-38-2	Arsenic	5.8		mg/kg
R59C82	1-1.5	04/22/04	Yes	1-R59C82_04/22/04_1	7439-92-1	Lead	5.1		mg/kg
R59C83	1-1.5	04/22/04	Yes	1-R59C83_04/22/04_1	7440-38-2	Arsenic	7.5		mg/kg
R59C83	1-1.5	04/22/04	Yes	1-R59C83_04/22/04_1	7439-92-1	Lead	7.8		mg/kg
R59C85	1-1.5	04/27/04	Yes	1-R59C85_AVG_04/27/04_1	7440-38-2	Arsenic	7.1		mg/kg
R59C85	1-1.5	04/27/04	Yes	1-R59C85_AVG_04/27/04_1	7439-92-1	Lead	2.4		mg/kg
R60C79	1-1.5	03/18/04	Yes	01-R60C79_03/18/04_1	7440-38-2	Arsenic	10.4		mg/kg
R60C79	1-1.5	03/18/04	Yes	01-R60C79_03/18/04_1	7439-92-1	Lead	4.9		mg/kg
R60C80	1-1.5	03/18/04	Yes	01-R60C80_03/18/04_1	7440-38-2	Arsenic	6.9		mg/kg
R60C80	1-1.5	03/18/04	Yes	01-R60C80_03/18/04_1	7439-92-1	Lead	6.3		mg/kg
R60C81	1-1.5	04/22/04	Yes	1-R60C81_04/22/04_1	7440-38-2	Arsenic	6.3		mg/kg
R60C81	1-1.5	04/22/04	Yes	1-R60C81_04/22/04_1	7439-92-1	Lead	5.2		mg/kg
R60C82	1-1.5	04/22/04	Yes	1-R60C82_04/22/04_1	7440-38-2	Arsenic	6.1		mg/kg
R60C82	1-1.5	04/22/04	Yes	1-R60C82_04/22/04_1	7439-92-1	Lead	5.1		mg/kg
R60C83	1-1.5	04/22/04	Yes	1-R60C83_04/22/04_1	7440-38-2	Arsenic	5.8		mg/kg
R60C83	1-1.5	04/22/04	Yes	1-R60C83_04/22/04_1	7439-92-1	Lead	5.1		mg/kg
R60C84	1-1.5	04/27/04	Yes	1-R60C84_04/27/04_1	7440-38-2	Arsenic	8.8		mg/kg
R60C84	1-1.5	04/27/04	Yes	1-R60C84_04/27/04_1	7439-92-1	Lead	2.3		mg/kg
R60C85	1-1.5	04/27/04	Yes	1-R60C85_04/27/04_1	7440-38-2	Arsenic	7.4		mg/kg
R60C85	1-1.5	04/27/04	Yes	1-R60C85_04/27/04_1	7439-92-1	Lead	2.4	U	mg/kg
T-112	0-0.5	04/09/03	Yes	01-SS-[T112]-C1_04/09/03_0	7440-38-2	Arsenic	43.1		mg/kg
T-112	1-1.5	08/13/03	Yes	02-SS-[T-112]-C2_AVG_08/13/03_1	7439-92-1	Lead	7.2		mg/kg
T-118	1-1.5	08/14/03	Yes	02-SS-[T-118]-C2_08/14/03_1	7440-38-2	Arsenic	3.9		mg/kg
T-118	1-1.5	08/14/03	Yes	02-SS-[T-118]-C2_08/14/03_1	7439-92-1	Lead	5.3		mg/kg
T-45	0-0.5	04/08/03	Yes	01-SS-[T45]-C1_04/08/03_0	7440-38-2	Arsenic	59.9		mg/kg
T-45	1-1.5	08/14/03	Yes	02-SS-[T-45]-C2_08/14/03_1	7439-92-1	Lead	5.2		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T025	0-0.5	04/08/03	Yes	01-SS-[T25]-C1_04/08/03_0	7440-38-2	Arsenic	31.2		mg/kg
T025	0-0.5	04/08/03	Yes	01-SS-[T25]-C1_04/08/03_0	7439-92-1	Lead	49.1		mg/kg
T026	0-0.5	04/08/03	Yes	01-SS-[T26]-C1_04/08/03_0	7440-38-2	Arsenic	27.0		mg/kg
T026	0-0.5	04/08/03	Yes	01-SS-[T26]-C1_04/08/03_0	7439-92-1	Lead	47.6		mg/kg
T027	0-0.5	04/08/03	Yes	01-SS-[T27]-C1_04/08/03_0	7440-38-2	Arsenic	54.3		mg/kg
T027	0-0.5	04/08/03	Yes	01-SS-[T27]-C1_04/08/03_0	7439-92-1	Lead	90.5		mg/kg
T028,029	0-0.5	04/08/03	Yes	01-SS-[T28,29]-C1_04/08/03_0	7440-38-2	Arsenic	35.3		mg/kg
T028,029	0-0.5	04/08/03	Yes	01-SS-[T28,29]-C1_04/08/03_0	7439-92-1	Lead	64.3		mg/kg
T030,031	0-0.5	04/08/03	Yes	01-SS-[T30,31]-C1_04/08/03_0	7439-92-1	Lead	86.1		mg/kg
T032	0-0.5	04/08/03	Yes	01-SS-[T32]-C1_04/08/03_0	7440-38-2	Arsenic	32.2		mg/kg
T032	0-0.5	04/08/03	Yes	01-SS-[T32]-C1_04/08/03_0	7439-92-1	Lead	51.9		mg/kg
T033	0-0.5	04/08/03	Yes	01-SS-[T33]-C1_04/08/03_0	7440-38-2	Arsenic	39.4		mg/kg
T033	0-0.5	04/08/03	Yes	01-SS-[T33]-C1_04/08/03_0	7439-92-1	Lead	72.6		mg/kg
T034	0-0.5	04/08/03	Yes	01-SS-[T34]-C1_04/08/03_0	7440-38-2	Arsenic	35.0		mg/kg
T034	0-0.5	04/08/03	Yes	01-SS-[T34]-C1_04/08/03_0	7439-92-1	Lead	48.4		mg/kg
T035	0-0.5	04/08/03	Yes	01-SS-[T35]-C1_04/08/03_0	7440-38-2	Arsenic	37.1		mg/kg
T035	0-0.5	04/08/03	Yes	01-SS-[T35]-C1_04/08/03_0	7439-92-1	Lead	58.3		mg/kg
T036,037,042,043	0-0.5	04/08/03	Yes	01-SS-[T36,37,42,43]-C1_04/08/03_0	7440-38-2	Arsenic	40.0		mg/kg
T038	0-0.5	04/08/03	Yes	01-SS-[T38]-C1_04/08/03_0	7440-38-2	Arsenic	16.0		mg/kg
T038	0-0.5	04/08/03	Yes	01-SS-[T38]-C1_04/08/03_0	7439-92-1	Lead	28.8		mg/kg
T039	0-0.5	04/08/03	Yes	01-SS-[T39]-C1_04/08/03_0	7440-38-2	Arsenic	51.0		mg/kg
T039	0-0.5	04/08/03	Yes	01-SS-[T39]-C1_04/08/03_0	7439-92-1	Lead	61.0		mg/kg
T040	0-0.5	04/08/03	No	01-SS-[T40]-C1_04/08/03_0	7439-92-1	Lead	89.4		mg/kg
T040	1-1.5	08/14/03	Yes	02-SS-[T-40]-C2_08/14/03_1	7440-38-2	Arsenic	3.9		mg/kg
T041	0-0.5	04/08/03	Yes	01-SS-[T41]-C1_AVG_04/08/03_0	7440-38-2	Arsenic	34.3		mg/kg
T041	0-0.5	04/08/03	Yes	01-SS-[T41]-C1_AVG_04/08/03_0	7439-92-1	Lead	61.9		mg/kg
T044	0-0.5	04/08/03	Yes	01-SS-[T44]-C1_04/08/03_0	7440-38-2	Arsenic	32.1		mg/kg
T044	0-0.5	04/08/03	Yes	01-SS-[T44]-C1_04/08/03_0	7439-92-1	Lead	36.6		mg/kg
T046	0-0.5	04/08/03	Yes	01-SS-[T46]-C1_04/08/03_0	7440-38-2	Arsenic	19.4		mg/kg
T046	0-0.5	04/08/03	Yes	01-SS-[T46]-C1_04/08/03_0	7439-92-1	Lead	39.9		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T047	0-0.5	04/08/03	Yes	01-SS-[T47]-C1_04/08/03_0	7440-38-2	Arsenic	55.5		mg/kg
T047	0-0.5	04/08/03	Yes	01-SS-[T47]-C1_04/08/03_0	7439-92-1	Lead	77.3		mg/kg
T048	0-0.5	04/08/03	Yes	01-SS-[T48]-C1_04/08/03_0	7440-38-2	Arsenic	34.2		mg/kg
T048	0-0.5	04/08/03	Yes	01-SS-[T48]-C1_04/08/03_0	7439-92-1	Lead	105.0		mg/kg
T113	0-0.5	04/09/03	Yes	01-SS-[T113]-C1_04/09/03_0	7440-38-2	Arsenic	44.8		mg/kg
T113	0-0.5	04/09/03	Yes	01-SS-[T113]-C1_04/09/03_0	7439-92-1	Lead	75.5		mg/kg
T114,115	0-0.5	04/09/03	Yes	01-SS-[T114,115]-C1_AVG_04/09/03_0	7440-38-2	Arsenic	52.7		mg/kg
T114-115-116-117	1-1.5	08/13/03	Yes	02-SS-[T-114-115-116-117]-C2_08/13/03_1	7439-92-1	Lead	13.7		mg/kg
T116,117	0-0.5	04/09/03	Yes	01-SS-[T116,117]-C1_04/09/03_0	7440-38-2	Arsenic	50.1		mg/kg
T119	0-0.5	04/09/03	Yes	01-SS-[T119]-C1_04/09/03_0	7440-38-2	Arsenic	59.4		mg/kg
T119	0-0.5	04/09/03	Yes	01-SS-[T119]-C1_04/09/03_0	7439-92-1	Lead	106.0		mg/kg
T120	0-0.5	04/10/03	Yes	01-SS-[T120]-C1_04/10/03_0	7440-38-2	Arsenic	57.6		mg/kg
T120	0-0.5	04/10/03	Yes	01-SS-[T120]-C1_04/10/03_0	7439-92-1	Lead	113.0		mg/kg
T124	0-0.5	04/10/03	Yes	01-SS-[T124]-C1_04/10/03_0	7440-38-2	Arsenic	36.2		mg/kg
T124	0-0.5	04/10/03	Yes	01-SS-[T124]-C1_04/10/03_0	7439-92-1	Lead	61.9		mg/kg
T125	0-0.5	04/10/03	Yes	01-SS-[T125]-C1_04/10/03_0	7440-38-2	Arsenic	36.7		mg/kg
T130,131	0-0.5	04/10/03	Yes	01-SS-[T130,131]-C1_AVG_04/10/03_0	7439-92-1	Lead	88.1		mg/kg
T132	0-0.5	04/10/03	Yes	01-SS-[T132]-C1_04/10/03_0	7439-92-1	Lead	49.0		mg/kg
T136	0-0.5	04/10/03	Yes	01-SS-[T136]-C1_04/10/03_0	7439-92-1	Lead	110.0		mg/kg
T138,139	0-0.5	04/10/03	Yes	01-SS-[T138,139]-C1_04/10/03_0	7439-92-1	Lead	50.2		mg/kg
T140	0-0.5	04/10/03	Yes	01-SS-[T140]-C1_04/10/03_0	7440-38-2	Arsenic	23.8		mg/kg
T140	0-0.5	04/10/03	Yes	01-SS-[T140]-C1_04/10/03_0	7439-92-1	Lead	39.0		mg/kg
T141,142,143	0-0.5	04/10/03	Yes	01-SS-[T141,142,143]-C1_AVG_04/10/03_0	7439-92-1	Lead	103.5		mg/kg
T145	0-0.5	04/10/03	Yes	01-SS-[T145]-C1_04/10/03_0	7440-38-2	Arsenic	35.9		mg/kg
T145	0-0.5	04/10/03	Yes	01-SS-[T145]-C1_04/10/03_0	7439-92-1	Lead	66.9		mg/kg
T146,147,148	0-0.5	04/10/03	Yes	01-SS-[T146,147,148]-C1_04/10/03_0	7440-38-2	Arsenic	33.2		mg/kg
T146,147,148	0-0.5	04/10/03	Yes	01-SS-[T146,147,148]-C1_04/10/03_0	7439-92-1	Lead	81.5		mg/kg
T149,150	0-0.5	04/10/03	Yes	01-SS-[T149,150]-C1_04/10/03_0	7440-38-2	Arsenic	26.3		mg/kg
T149,150	0-0.5	04/10/03	Yes	01-SS-[T149,150]-C1_04/10/03_0	7439-92-1	Lead	47.5		mg/kg
T155,156	0-0.5	04/10/03	Yes	01-SS-[T155,156]-C1_04/10/03_0	7440-38-2	Arsenic	45.5		mg/kg

Table B.11
Sample Results for GC-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T157,158	0-0.5	04/10/03	Yes	01-SS-[T157,158]-C1_04/10/03_0	7440-38-2	Arsenic	42.5		mg/kg
T159	0-0.5	04/10/03	Yes	01-SS-[T159]-C1_AVG_04/10/03_0	7440-38-2	Arsenic	32.7		mg/kg
T159	0-0.5	04/10/03	Yes	01-SS-[T159]-C1_AVG_04/10/03_0	7439-92-1	Lead	59.9		mg/kg
T160	0-0.5	04/10/03	Yes	01-SS-[T160]-C1_04/10/03_0	7440-38-2	Arsenic	44.2		mg/kg
T160	0-0.5	04/10/03	Yes	01-SS-[T160]-C1_04/10/03_0	7439-92-1	Lead	91.9		mg/kg
T161	0-0.5	04/10/03	Yes	01-SS-[T161]-C1_04/10/03_0	7440-38-2	Arsenic	41.5		mg/kg
T161	0-0.5	04/10/03	Yes	01-SS-[T161]-C1_04/10/03_0	7439-92-1	Lead	86.6		mg/kg
T162	0-0.5	04/10/03	Yes	01-SS-[T162]-C1_04/10/03_0	7440-38-2	Arsenic	49.1		mg/kg
T162	0-0.5	04/10/03	Yes	01-SS-[T162]-C1_04/10/03_0	7439-92-1	Lead	78.0		mg/kg
T163,164	0-0.5	04/10/03	Yes	01-SS-[T163,164]-C1_04/10/03_0	7440-38-2	Arsenic	41.0		mg/kg
T163,164	0-0.5	04/10/03	Yes	01-SS-[T163,164]-C1_04/10/03_0	7439-92-1	Lead	93.6		mg/kg
T51,52,53,54	0-0.5	04/10/03	Yes	01-SS-[T51,52,53,54]-C1_04/10/03_0	7440-38-2	Arsenic	36.7		mg/kg
T51,52,53,54	0-0.5	04/10/03	Yes	01-SS-[T51,52,53,54]-C1_04/10/03_0	7439-92-1	Lead	50.8		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-594	0-0.5	05/06/92	Yes	18-SS-594-DAVG	7439-92-1	Lead	84.0		mg/kg
18-SS-GS-67	0-0.5	07/07/93	Yes	18-SS-GS-67	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-SS-GS-67	0-0.5	07/07/93	Yes	18-SS-GS-67	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
18-SS-GS-67	0-0.5	07/07/93	Yes	18-SS-GS-67	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-VS-102	2-2.5	08/26/93	Yes	18-VS-102	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-102	2-2.5	08/26/93	Yes	18-VS-102	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-102	2-2.5	08/26/93	Yes	18-VS-102	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-104	2-2.5	08/26/93	Yes	18-VS-104	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-104	2-2.5	08/26/93	Yes	18-VS-104	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-104	2-2.5	08/26/93	Yes	18-VS-104	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-104	2-2.5	08/26/93	Yes	18-VS-104	7439-92-1	Lead	7.4		mg/kg
18-VS-129	0-1	08/26/93	Yes	18-VS-129	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-129	0-1	08/26/93	Yes	18-VS-129	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-129	0-1	08/26/93	Yes	18-VS-129	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-130	0-2	08/26/93	Yes	18-VS-130-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-130	0-2	08/26/93	Yes	18-VS-130-DAVG	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-130	0-2	08/26/93	Yes	18-VS-130-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-132	1-2	08/26/93	Yes	18-VS-132	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-132	1-2	08/26/93	Yes	18-VS-132	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-132	1-2	08/26/93	Yes	18-VS-132	98-95-3	Nitrobenzene	0.06	U	mg/kg
APF-HA-501	2-3	10/30/92	Yes	APF-HA-501-S-3	7440-38-2	Arsenic	44.0		mg/kg
APF-HA-501	2-3	10/30/92	Yes	APF-HA-501-S-3	7439-92-1	Lead	64.0		mg/kg
APF-TP-501	3-5	05/27/92	Yes	APF-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
APF-TP-501	3-5	05/27/92	Yes	APF-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
APF-TP-501	3-5	05/27/92	Yes	APF-TP-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
APF-TP-501	3-5	05/27/92	Yes	APF-TP-501-S-2	7439-92-1	Lead	5.0	U	mg/kg
APF-VS-13	1-1.5	09/22/99	Yes	APF-VS-13	7440-38-2	Arsenic	29.0		mg/kg
APF-VS-13	1-1.5	09/22/99	Yes	APF-VS-13	7439-92-1	Lead	9.1		mg/kg
APF-VS-14	1-1.5	09/22/99	Yes	APF-VS-14	7440-38-2	Arsenic	6.4		mg/kg
APF-VS-14	1-1.5	09/22/99	Yes	APF-VS-14	7439-92-1	Lead	2.2		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
APF-VS-15	1-1.5	09/22/99	Yes	APF-VS-15	7440-38-2	Arsenic	2.2		mg/kg
APF-VS-15	1-1.5	09/22/99	Yes	APF-VS-15	7439-92-1	Lead	2.8		mg/kg
APF-VS-16	1-1.5	09/22/99	Yes	APF-VS-16	7440-38-2	Arsenic	3.7		mg/kg
APF-VS-16	1-1.5	09/22/99	Yes	APF-VS-16	7439-92-1	Lead	3.6		mg/kg
F-259-2	3-3.5	08/30/01	Yes	02-F38-SS[F-259-2]C2-030	7440-38-2	Arsenic	5.2		mg/kg
F-259-2	3-3.5	08/30/01	Yes	02-F38-SS[F-259-2]C2-030	7439-92-1	Lead	57.0	J	mg/kg
F-275	2-2.5	08/28/01	Yes	01-F33-SS[F-275]C2-005	7440-38-2	Arsenic	5.8		mg/kg
F-275	2-2.5	08/28/01	Yes	01-F33-SS[F-275]C2-005	7439-92-1	Lead	7.8		mg/kg
F-276	2-2.5	08/28/01	Yes	01-F33-SS[F-276]C2-005	7440-38-2	Arsenic	20.0		mg/kg
F-276	2-2.5	08/28/01	Yes	01-F33-SS[F-276]C2-005	7439-92-1	Lead	45.0		mg/kg
LR-125E-S-2	0.5-1	12/13/93	Yes	LR-125E-S-2-DAVG	7440-38-2	Arsenic	12.0	J	mg/kg
LR-125E-S-3	1-2	12/13/93	Yes	LR-125E-S-3	7440-38-2	Arsenic	3.8	J	mg/kg
LR-311-100W	0-0.5	12/06/93	Yes	LR-311-100W	7440-38-2	Arsenic	13.0		mg/kg
MSU-F-19-2	2-2.5	05/21/03	Yes	01-SS-[MSU-F-19-2]-C1_05/21/03_2	7440-38-2	Arsenic	2.7		mg/kg
MSU-F-19-2	2-2.5	05/21/03	Yes	01-SS-[MSU-F-19-2]-C1_05/21/03_2	7439-92-1	Lead	2.1	U	mg/kg
MSU-F-19-3	2-2.5	05/21/03	Yes	01-SS-[MSU-F-19-3]-C1_AVG_05/21/03_2	7440-38-2	Arsenic	5.5		mg/kg
MSU-F-19-3	2-2.5	05/21/03	Yes	01-SS-[MSU-F-19-3]-C1_AVG_05/21/03_2	7439-92-1	Lead	9.3		mg/kg
MSU-F-19	2-2.5	05/21/03	Yes	01-SS-[MSU-F-19-1]-C1_05/21/03_2	7440-38-2	Arsenic	6.2		mg/kg
MSU-F-19	2-2.5	05/21/03	Yes	01-SS-[MSU-F-19-1]-C1_05/21/03_2	7439-92-1	Lead	8.7		mg/kg
MSU-F-20-2	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-2]-C1_05/21/03_2	7440-38-2	Arsenic	5.8		mg/kg
MSU-F-20-2	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-2]-C1_05/21/03_2	7439-92-1	Lead	4.8		mg/kg
MSU-F-20-3	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-3]-C1_05/21/03_2	7440-38-2	Arsenic	2.9		mg/kg
MSU-F-20-3	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-3]-C1_05/21/03_2	7439-92-1	Lead	3.0		mg/kg
MSU-F-20-4	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-4]-C1_05/21/03_2	7440-38-2	Arsenic	2.8		mg/kg
MSU-F-20-4	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-4]-C1_05/21/03_2	7439-92-1	Lead	3.3		mg/kg
MSU-F-20	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-1]-C1_05/21/03_2	7440-38-2	Arsenic	5.3		mg/kg
MSU-F-20	2-2.5	05/21/03	Yes	01-SS-[MSU-F-20-1]-C1_05/21/03_2	7439-92-1	Lead	11.3		mg/kg
MSU-F-37-1	2-2.5	05/13/03	Yes	02-SS-[MSU-F-37-1]-C1_05/13/03_3	7440-38-2	Arsenic	3.0		mg/kg
MSU-F-37-1	2-2.5	05/13/03	Yes	02-SS-[MSU-F-37-1]-C1_05/13/03_3	7439-92-1	Lead	58.6		mg/kg
MSU-F-37-2	2-2.5	06/24/03	Yes	03-SS-[MSU-F-37-2]-C1_06/24/03_4	7440-38-2	Arsenic (inorganic)	2.2		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-37-2	2-2.5	06/24/03	Yes	03-SS-[MSU-F-37-2]-C1_06/24/03_4	7439-92-1	Lead	83.1		mg/kg
MSU-F-37-3	2-2.5	05/13/03	Yes	01-SS-[MSU-F-37-3]-C1_05/13/03_2	7440-38-2	Arsenic	6.9		mg/kg
MSU-F-37-3	2-2.5	06/16/03	Yes	01-SS-[MSU-F-37-3]-C2_06/16/03_2	7439-92-1	Lead	6.2		mg/kg
MSU-F-39_GC_04	2-2.5	05/19/03	Yes	01-SS-[MSU-F-39-2}-C1_05/19/03_2	7440-38-2	Arsenic	2.1		mg/kg
MSU-F-39_GC_04	2-2.5	05/19/03	Yes	01-SS-[MSU-F-39-2}-C1_05/19/03_2	7439-92-1	Lead	2.1	U	mg/kg
MSU-F-45-2	2-2.5	05/29/03	Yes	01-SS-[MSU-F-45-2]-C1_05/29/03_2	7440-38-2	Arsenic	3.5		mg/kg
MSU-F-45-2	2-2.5	05/29/03	Yes	01-SS-[MSU-F-45-2]-C1_05/29/03_2	7439-92-1	Lead	3.3		mg/kg
MSU-F-45	2-2.5	05/29/03	Yes	01-SS-[MSU-F-45-1]-C1_05/29/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-45	2-2.5	05/29/03	Yes	01-SS-[MSU-F-45-1]-C1_05/29/03_2	7439-92-1	Lead	7.7		mg/kg
MSU-NGRR-12A-1	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-1]-C1_05/19/03_1.5	7440-38-2	Arsenic	3.4		mg/kg
MSU-NGRR-12A-1	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-1]-C1_05/19/03_1.5	7439-92-1	Lead	2.1		mg/kg
MSU-NGRR-12A-2	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-2]-C1_05/19/03_1.5	7440-38-2	Arsenic	5.2		mg/kg
MSU-NGRR-12A-2	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-2]-C1_05/19/03_1.5	7439-92-1	Lead	4.3		mg/kg
MSU-NGRR-12A-3	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-3]-C1_05/19/03_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-NGRR-12A-3	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-3]-C1_05/19/03_1.5	7439-92-1	Lead	2.9		mg/kg
MSU-NGRR-12A-4	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-4]-C1_05/19/03_1.5	7440-38-2	Arsenic	5.8		mg/kg
MSU-NGRR-12A-4	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-4]-C1_05/19/03_1.5	7439-92-1	Lead	6.1		mg/kg
MSU-NGRR-12A	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-5]-C1_AVG_05/19/03_1.5	7440-38-2	Arsenic	25.7		mg/kg
MSU-NGRR-12A	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-12-5]-C1_AVG_05/19/03_1.5	7439-92-1	Lead	7.7		mg/kg
MSU-NGRR-19-2	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-2]-C1_05/21/03_1.5	7440-38-2	Arsenic	5.6		mg/kg
MSU-NGRR-19-2	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-2]-C1_05/21/03_1.5	7439-92-1	Lead	8.0		mg/kg
MSU-NGRR-19-3	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-3]-C1_05/21/03_1.5	7440-38-2	Arsenic	4.6		mg/kg
MSU-NGRR-19-3	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-3]-C1_05/21/03_1.5	7439-92-1	Lead	4.2		mg/kg
MSU-NGRR-19-4	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-4]-C1_05/21/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-NGRR-19-4	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-4]-C1_05/21/03_1.5	7439-92-1	Lead	3.9		mg/kg
MSU-NGRR-19-5	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-5]-C1_05/21/03_1.5	7440-38-2	Arsenic	3.2		mg/kg
MSU-NGRR-19-5	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-5]-C1_05/21/03_1.5	7439-92-1	Lead	3.8		mg/kg
MSU-NGRR-19-6	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-6]-C1_05/21/03_1.5	7440-38-2	Arsenic	6.0		mg/kg
MSU-NGRR-19-6	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-6]-C1_05/21/03_1.5	7439-92-1	Lead	2.4		mg/kg
MSU-NGRR-19	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-1]-C1_05/21/03_1.5	7440-38-2	Arsenic	4.3		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-19	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-19-1]-C1_05/21/03_1.5	7439-92-1	Lead	4.4		mg/kg
MSU-NGRR-20-2	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-2]-C1_05/21/03_1.5	7440-38-2	Arsenic	7.5		mg/kg
MSU-NGRR-20-2	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-2]-C1_05/21/03_1.5	7439-92-1	Lead	6.4		mg/kg
MSU-NGRR-20-3	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-3]-C1_05/21/03_1.5	7440-38-2	Arsenic	3.4		mg/kg
MSU-NGRR-20-3	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-3]-C1_05/21/03_1.5	7439-92-1	Lead	3.2		mg/kg
MSU-NGRR-20-4	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-4]-C1_05/21/03_1.5	7440-38-2	Arsenic	4.0		mg/kg
MSU-NGRR-20-4	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-4]-C1_05/21/03_1.5	7439-92-1	Lead	15.5		mg/kg
MSU-NGRR-20	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-1]-C1_05/21/03_1.5	7440-38-2	Arsenic	5.0		mg/kg
MSU-NGRR-20	1.5-2	05/21/03	Yes	01-SS-[MSU-NGRR-20-1]-C1_05/21/03_1.5	7439-92-1	Lead	3.1		mg/kg
MSU-NGRR-35-14	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-14]-C1_05/13/03_1.5	7440-38-2	Arsenic	4.7		mg/kg
MSU-NGRR-35-14	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-14]-C1_05/13/03_1.5	7439-92-1	Lead	29.5		mg/kg
MSU-NGRR-35-9	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-9]-C1_05/13/03_1.5	7440-38-2	Arsenic	4.5		mg/kg
MSU-NGRR-35-9	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-9]-C1_05/13/03_1.5	7439-92-1	Lead	61.1		mg/kg
NGRR-313	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-313]C2-005	7440-38-2	Arsenic	12.0		mg/kg
NGRR-313	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-313]C2-005	7439-92-1	Lead	13.0		mg/kg
NGRR-314	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-314]C2-005	7440-38-2	Arsenic	14.0		mg/kg
NGRR-314	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-314]C2-005	7439-92-1	Lead	20.0		mg/kg
NGRR-315	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-315]C2-005	7440-38-2	Arsenic	5.5		mg/kg
NGRR-315	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-315]C2-005	7439-92-1	Lead	5.7		mg/kg
NGRR-316	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-316]C2-005	7440-38-2	Arsenic	5.9		mg/kg
NGRR-316	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-316]C2-005	7439-92-1	Lead	15.0		mg/kg
NGRR-317	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-317]C2-005	7440-38-2	Arsenic	4.9		mg/kg
NGRR-317	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-317]C2-005	7439-92-1	Lead	8.2		mg/kg
NGRR-318	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-318]C2-005	7440-38-2	Arsenic	24.0		mg/kg
NGRR-318	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-318]C2-005	7439-92-1	Lead	16.0		mg/kg
NGRR-422	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-422]C2-005	7440-38-2	Arsenic	52.0		mg/kg
NGRR-422	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-422]C2-005	7439-92-1	Lead	8.6		mg/kg
NGRR-423	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-423]C2-005	7440-38-2	Arsenic	19.0		mg/kg
NGRR-423	1.5-2	08/27/01	Yes	01-N01-SS[NGRR-423]C2-005	7439-92-1	Lead	2.4		mg/kg
R32C43	1-1.5	03/09/04	Yes	1-R32C43_03/09/04_1	7440-38-2	Arsenic	8.3		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R32C43	1-1.5	03/09/04	Yes	1-R32C43_03/09/04_1	7439-92-1	Lead	11.0		mg/kg
R33C39	1-1.5	04/08/04	Yes	1-R33C39_04/08/04_1	7440-38-2	Arsenic	9.9		mg/kg
R33C39	1-1.5	04/08/04	Yes	1-R33C39_04/08/04_1	7439-92-1	Lead	8.4		mg/kg
R33C40	1-1.5	03/09/04	Yes	1-R33C40_03/09/04_1	7440-38-2	Arsenic	13.8		mg/kg
R33C40	1-1.5	03/09/04	Yes	1-R33C40_03/09/04_1	7439-92-1	Lead	24.6		mg/kg
R33C44	1-1.5	03/09/04	Yes	1-R33C44_03/09/04_1	7440-38-2	Arsenic	5.3		mg/kg
R33C44	1-1.5	03/09/04	Yes	1-R33C44_03/09/04_1	7439-92-1	Lead	6.8		mg/kg
R33C45	1-1.5	03/09/04	Yes	1-R33C45_03/09/04_1	7440-38-2	Arsenic	5.8		mg/kg
R33C45	1-1.5	03/09/04	Yes	1-R33C45_03/09/04_1	7439-92-1	Lead	6.1		mg/kg
R34C40	1-1.5	04/30/04	Yes	1-R34C40_04/30/04_1	7440-38-2	Arsenic	4.9		mg/kg
R34C40	1-1.5	04/30/04	Yes	1-R34C40_04/30/04_1	7439-92-1	Lead	4.4		mg/kg
R34C45	1-1.5	03/09/04	Yes	1-R34C45_03/09/04_1	7440-38-2	Arsenic	5.2		mg/kg
R34C45	1-1.5	03/09/04	Yes	1-R34C45_03/09/04_1	7439-92-1	Lead	6.1		mg/kg
R34C46	1-1.5	03/09/04	Yes	1-R34C46_03/09/04_1	7440-38-2	Arsenic	10.6		mg/kg
R34C46	1-1.5	03/09/04	Yes	1-R34C46_03/09/04_1	7439-92-1	Lead	19.1		mg/kg
R35C40	1-1.5	04/08/04	Yes	1-R35C40_04/08/04_1	7440-38-2	Arsenic	6.1		mg/kg
R35C40	1-1.5	04/08/04	Yes	1-R35C40_04/08/04_1	7439-92-1	Lead	6.0		mg/kg
R35C47	1-1.5	04/13/04	Yes	1-R35C47_04/13/04_1	7440-38-2	Arsenic	32.3		mg/kg
R35C47	1-1.5	04/13/04	Yes	1-R35C47_04/13/04_1	7439-92-1	Lead	113.0		mg/kg
R36C41	1-1.5	05/06/04	Yes	01-R36C41_05/06/04_1	7440-38-2	Arsenic	15.2		mg/kg
R36C41	1-1.5	05/06/04	Yes	01-R36C41_05/06/04_1	7439-92-1	Lead	17.0		mg/kg
R36C46	1-1.5	03/09/04	Yes	1-R36C46_03/09/04_1	7440-38-2	Arsenic	22.0		mg/kg
R36C46	1-1.5	03/09/04	Yes	1-R36C46_03/09/04_1	7439-92-1	Lead	8.3		mg/kg
R37C41	1-1.5	03/09/04	Yes	1-R37C41_03/09/04_1	7440-38-2	Arsenic	10.6		mg/kg
R37C41	1-1.5	03/09/04	Yes	1-R37C41_03/09/04_1	7439-92-1	Lead	19.6		mg/kg
R37C46	1-1.5	03/09/04	Yes	1-R37C46_03/09/04_1	7440-38-2	Arsenic	10.3		mg/kg
R37C46	1-1.5	03/09/04	Yes	1-R37C46_03/09/04_1	7439-92-1	Lead	20.6		mg/kg
R38C46	2-2.5	04/02/04	Yes	02-R38C46_04/02/04_2	7440-38-2	Arsenic	5.2		mg/kg
R38C46	1-1.5	03/09/04	No	1-R38C46_03/09/04_1	7439-92-1	Lead	5.7		mg/kg
R39C42	1-1.5	03/09/04	Yes	1-R39C42_03/09/04_1	7440-38-2	Arsenic	15.5		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R39C42	1-1.5	03/09/04	Yes	1-R39C42_03/09/04_1	7439-92-1	Lead	27.8		mg/kg
R39C46	1-1.5	03/09/04	Yes	1-R39C46_03/09/04_1	7440-38-2	Arsenic	6.5		mg/kg
R39C46	1-1.5	03/09/04	Yes	1-R39C46_03/09/04_1	7439-92-1	Lead	15.2		mg/kg
R40C42	1-1.5	03/09/04	Yes	1-R40C42_03/09/04_1	7440-38-2	Arsenic	10.2		mg/kg
R40C42	1-1.5	03/09/04	Yes	1-R40C42_03/09/04_1	7439-92-1	Lead	11.0		mg/kg
R41C45	2-2.5	04/02/04	Yes	02-R41C45_04/02/04_2	7440-38-2	Arsenic	5.1		mg/kg
R41C45	1-1.5	03/09/04	No	1-R41C45_03/09/04_1	7439-92-1	Lead	33.8		mg/kg
R42C42	1-1.5	03/09/04	Yes	1-R42C42_03/09/04_1	7440-38-2	Arsenic	17.1		mg/kg
R42C42	1-1.5	03/09/04	Yes	1-R42C42_03/09/04_1	7439-92-1	Lead	44.7		mg/kg
R42C43	1-1.5	03/09/04	No	1-R42C43_03/09/04_1	7439-92-1	Lead	26.0		mg/kg
R42C43	2-2.5	04/09/04	Yes	2-R42C43_04/09/04_2	7440-38-2	Arsenic	15.9		mg/kg
R42C45	1-1.5	04/13/04	Yes	1-R42C45_04/13/04_1	7440-38-2	Arsenic	12.5		mg/kg
R42C45	1-1.5	04/13/04	Yes	1-R42C45_04/13/04_1	7439-92-1	Lead	18.8		mg/kg
R43C41	1-1.5	03/31/04	Yes	01-R43C41_03/31/04_1	7440-38-2	Arsenic	1.7		mg/kg
R43C41	1-1.5	03/31/04	Yes	01-R43C41_03/31/04_1	7439-92-1	Lead	7.0		mg/kg
R43C42	1-1.5	03/09/04	Yes	1-R43C42_03/09/04_1	7440-38-2	Arsenic	46.9		mg/kg
R43C42	1-1.5	03/09/04	Yes	1-R43C42_03/09/04_1	7439-92-1	Lead	11.2		mg/kg
R43C43	1-1.5	03/09/04	Yes	1-R43C43_03/09/04_1	7440-38-2	Arsenic	23.1		mg/kg
R43C43	1-1.5	03/09/04	Yes	1-R43C43_03/09/04_1	7439-92-1	Lead	12.2		mg/kg
R43C44	1-1.5	01/23/04	Yes	01-SS-[R43C44]-C2_01/23/04_1	7440-38-2	Arsenic	11.1		mg/kg
R43C44	1-1.5	01/23/04	Yes	01-SS-[R43C44]-C2_01/23/04_1	7439-92-1	Lead	6.1		mg/kg
R44C41	1-1.5	03/31/04	Yes	01-R44C41_03/31/04_1	7440-38-2	Arsenic	5.8		mg/kg
R44C41	1-1.5	03/31/04	Yes	01-R44C41_03/31/04_1	7439-92-1	Lead	15.6		mg/kg
R44C42	1-1.5	01/23/04	Yes	01-SS-[R44C42]-C2_01/23/04_1	7440-38-2	Arsenic	7.0		mg/kg
R44C42	1-1.5	01/23/04	Yes	01-SS-[R44C42]-C2_01/23/04_1	7439-92-1	Lead	3.2		mg/kg
R44C43	1-1.5	01/23/04	Yes	01-SS-[R44C43]-C2_01/23/04_1	7440-38-2	Arsenic	5.3		mg/kg
R44C43	1-1.5	01/23/04	Yes	01-SS-[R44C43]-C2_01/23/04_1	7439-92-1	Lead	2.3		mg/kg
R44C44	1-1.5	01/23/04	Yes	01-SS-[R44C44]-C2_01/23/04_1	7440-38-2	Arsenic	9.9		mg/kg
R44C44	1-1.5	01/23/04	Yes	01-SS-[R44C44]-C2_01/23/04_1	7439-92-1	Lead	25.7		mg/kg
R46C41	1-1.5	01/23/04	Yes	01-SS-[R46C41]-C2_AVG_01/23/04_1	7440-38-2	Arsenic	26.8		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R46C41	1-1.5	01/23/04	Yes	01-SS-[R46C41]-C2_AVG_01/23/04_1	7439-92-1	Lead	19.1		mg/kg
R46C42	1-1.5	01/23/04	Yes	01-SS-[R46C42]-C2_01/23/04_1	7440-38-2	Arsenic	14.1		mg/kg
R46C42	1-1.5	01/23/04	Yes	01-SS-[R46C42]-C2_01/23/04_1	7439-92-1	Lead	15.8		mg/kg
R46C43	1-1.5	03/12/04	Yes	01-R46C43_03/12/04_1	7440-38-2	Arsenic	0.9	U	mg/kg
R46C43	1-1.5	03/12/04	Yes	01-R46C43_03/12/04_1	7439-92-1	Lead	7.1		mg/kg
R46C43	1-1.5	03/18/04	Yes	01-R46C43_03/18/04_1	7440-38-2	Arsenic	9.8		mg/kg
R46C43	1-1.5	03/18/04	Yes	01-R46C43_03/18/04_1	7439-92-1	Lead	9.7		mg/kg
R47C40	1-1.5	03/12/04	Yes	01-R47C40_03/12/04_1	7440-38-2	Arsenic	5.6		mg/kg
R47C40	1-1.5	03/12/04	Yes	01-R47C40_03/12/04_1	7439-92-1	Lead	14.5		mg/kg
R47C42	1-1.5	03/12/04	Yes	01-R47C42_03/12/04_1	7440-38-2	Arsenic	1.8		mg/kg
R47C42	1-1.5	03/12/04	Yes	01-R47C42_03/12/04_1	7439-92-1	Lead	11.7		mg/kg
R48C40	1-1.5	03/12/04	Yes	01-R48C40_03/12/04_1	7440-38-2	Arsenic	6.9		mg/kg
R48C40	1-1.5	03/12/04	Yes	01-R48C40_03/12/04_1	7439-92-1	Lead	33.4		mg/kg
R48C41	1-1.5	03/12/04	Yes	01-R48C41_03/12/04_1	7440-38-2	Arsenic	0.9	U	mg/kg
R48C41	1-1.5	03/12/04	Yes	01-R48C41_03/12/04_1	7439-92-1	Lead	6.5		mg/kg
R48C42	1-1.5	03/12/04	Yes	01-R48C42_03/12/04_1	7440-38-2	Arsenic	3.4		mg/kg
R48C42	1-1.5	03/12/04	Yes	01-R48C42_03/12/04_1	7439-92-1	Lead	25.5		mg/kg
R49C43	1-1.5	03/12/04	Yes	01-R49C43_03/12/04_1	7440-38-2	Arsenic	2.9		mg/kg
R49C43	1-1.5	03/12/04	Yes	01-R49C43_03/12/04_1	7439-92-1	Lead	50.4		mg/kg
R50C40	1-1.5	03/10/04	Yes	1-R50C40_03/10/04_1	7440-38-2	Arsenic	16.1		mg/kg
R50C40	1-1.5	03/10/04	Yes	1-R50C40_03/10/04_1	7439-92-1	Lead	36.8		mg/kg
R50C41	1-1.5	03/12/04	Yes	01-R50C41_03/12/04_1	7440-38-2	Arsenic	4.1		mg/kg
R50C41	1-1.5	03/12/04	Yes	01-R50C41_03/12/04_1	7439-92-1	Lead	10.2		mg/kg
R50C42	1-1.5	03/12/04	No	01-R50C42_03/12/04_1	7440-38-2	Arsenic	9.3		mg/kg
R50C42	2-2.5	04/29/04	Yes	02-R50C42_04/29/04_2	7439-92-1	Lead	4.9		mg/kg
R50C43	1-1.5	03/12/04	Yes	01-R50C43_AVG_03/12/04_1	7440-38-2	Arsenic	0.9	U	mg/kg
R50C43	1-1.5	03/12/04	Yes	01-R50C43_AVG_03/12/04_1	7439-92-1	Lead	20.6		mg/kg
R50C45	1-1.5	03/23/04	Yes	01-R50C45_03/23/04_1	7440-38-2	Arsenic	7.9		mg/kg
R50C45	1-1.5	03/23/04	Yes	01-R50C45_03/23/04_1	7439-92-1	Lead	8.5		mg/kg
R50C46	1-1.5	03/04/04	Yes	1-R50C46_03/04/04_1	7440-38-2	Arsenic	22.2		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R50C46	1-1.5	03/04/04	Yes	1-R50C46_03/04/04_1	7439-92-1	Lead	7.3		mg/kg
R50C47	1-1.5	03/04/04	Yes	01-R50C47_03/04/04_1	7440-38-2	Arsenic	23.5		mg/kg
R50C47	1-1.5	03/04/04	Yes	01-R50C47_03/04/04_1	7439-92-1	Lead	7.5		mg/kg
R50C48	1-1.5	03/04/04	Yes	01-R50C48_03/04/04_1	7440-38-2	Arsenic	10.5		mg/kg
R50C48	1-1.5	03/04/04	Yes	01-R50C48_03/04/04_1	7439-92-1	Lead	8.6		mg/kg
R50C49	1-1.5	03/04/04	Yes	1-R50C49_03/04/04_1	7440-38-2	Arsenic	7.1		mg/kg
R50C49	1-1.5	03/04/04	Yes	1-R50C49_03/04/04_1	7439-92-1	Lead	4.5		mg/kg
R51C40	1-1.5	03/10/04	Yes	1-R51C40_03/10/04_1	7440-38-2	Arsenic	10.1		mg/kg
R51C40	1-1.5	03/10/04	Yes	1-R51C40_03/10/04_1	7439-92-1	Lead	17.4		mg/kg
R51C42	1-1.5	03/12/04	Yes	01-R51C42_03/12/04_1	7440-38-2	Arsenic	2.1		mg/kg
R51C42	1-1.5	03/12/04	Yes	01-R51C42_03/12/04_1	7439-92-1	Lead	24.3		mg/kg
R51C43	1-1.5	03/12/04	No	01-R51C43_03/12/04_1	7440-38-2	Arsenic	12.0		mg/kg
R51C43	2-2.5	04/29/04	Yes	02-R51C43_AVG_04/29/04_2	7439-92-1	Lead	5.7		mg/kg
R51C44	1-1.5	03/23/04	Yes	01-R51C44_03/23/04_1	7440-38-2	Arsenic	4.2		mg/kg
R51C44	1-1.5	03/23/04	Yes	01-R51C44_03/23/04_1	7439-92-1	Lead	5.5		mg/kg
R51C45	1-1.5	03/23/04	Yes	01-R51C45_03/23/04_1	7440-38-2	Arsenic	5.3		mg/kg
R51C45	1-1.5	03/23/04	Yes	01-R51C45_03/23/04_1	7439-92-1	Lead	6.5		mg/kg
R51C47	1-1.5	03/04/04	Yes	01-R51C47_03/04/04_1	7440-38-2	Arsenic	10.1		mg/kg
R51C47	1-1.5	03/04/04	Yes	01-R51C47_03/04/04_1	7439-92-1	Lead	6.1		mg/kg
R51C48	1-1.5	03/04/04	Yes	01-R51C48_03/04/04_1	7440-38-2	Arsenic	5.5		mg/kg
R51C48	1-1.5	03/04/04	Yes	01-R51C48_03/04/04_1	7439-92-1	Lead	4.0		mg/kg
R51C50	1-1.5	03/23/04	Yes	01-R51C50_03/23/04_1	7440-38-2	Arsenic	9.2		mg/kg
R51C50	1-1.5	03/23/04	Yes	01-R51C50_03/23/04_1	7439-92-1	Lead	6.1		mg/kg
R51C51	1-1.5	03/04/04	Yes	01-R51C51_03/04/04_1	7440-38-2	Arsenic	26.1		mg/kg
R51C51	1-1.5	03/04/04	Yes	01-R51C51_03/04/04_1	7439-92-1	Lead	17.9		mg/kg
R51C52	1-1.5	03/04/04	Yes	01-R51C52_03/04/04_1	7440-38-2	Arsenic	6.9		mg/kg
R51C52	1-1.5	03/04/04	Yes	01-R51C52_03/04/04_1	7439-92-1	Lead	4.7		mg/kg
R51C53	1-1.5	10/22/03	Yes	01-SS-[R51C53]-C2_10/22/03_1	7440-38-2	Arsenic	7.3		mg/kg
R51C53	1-1.5	10/22/03	Yes	01-SS-[R51C53]-C2_10/22/03_1	7439-92-1	Lead	10.1		mg/kg
R52C40	1-1.5	03/10/04	Yes	1-R52C40_03/10/04_1	7440-38-2	Arsenic	8.3		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R52C40	1-1.5	03/10/04	Yes	1-R52C40_03/10/04_1	7439-92-1	Lead	10.1		mg/kg
R52C41	1-1.5	03/10/04	Yes	1-R52C41_03/10/04_1	7440-38-2	Arsenic	12.4		mg/kg
R52C41	1-1.5	03/10/04	Yes	1-R52C41_03/10/04_1	7439-92-1	Lead	13.1		mg/kg
R52C42	1-1.5	03/10/04	Yes	1-R52C42_03/10/04_1	7440-38-2	Arsenic	12.6		mg/kg
R52C42	1-1.5	03/10/04	Yes	1-R52C42_03/10/04_1	7439-92-1	Lead	18.3		mg/kg
R52C43	1-1.5	03/10/04	Yes	1-R52C43_03/10/04_1	7440-38-2	Arsenic	7.7		mg/kg
R52C43	1-1.5	03/10/04	Yes	1-R52C43_03/10/04_1	7439-92-1	Lead	8.3		mg/kg
R52C44	1-1.5	03/10/04	Yes	1-R52C44_03/10/04_1	7440-38-2	Arsenic	10.1		mg/kg
R52C44	1-1.5	03/10/04	Yes	1-R52C44_03/10/04_1	7439-92-1	Lead	11.7		mg/kg
R52C45	1-1.5	03/10/04	Yes	1-R52C45_03/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R52C45	1-1.5	03/10/04	Yes	1-R52C45_03/10/04_1	7439-92-1	Lead	4.6		mg/kg
R52C48	1-1.5	03/23/04	Yes	01-R52C48_03/23/04_1	7440-38-2	Arsenic	25.0		mg/kg
R52C48	1-1.5	03/23/04	Yes	01-R52C48_03/23/04_1	7439-92-1	Lead	10.6		mg/kg
R52C49	1-1.5	03/23/04	Yes	01-R52C49_03/23/04_1	7440-38-2	Arsenic	12.9		mg/kg
R52C49	1-1.5	03/23/04	Yes	01-R52C49_03/23/04_1	7439-92-1	Lead	7.1		mg/kg
R52C50	1-1.5	03/23/04	Yes	01-R52C50_03/23/04_1	7440-38-2	Arsenic	9.5		mg/kg
R52C50	1-1.5	03/23/04	Yes	01-R52C50_03/23/04_1	7439-92-1	Lead	6.6		mg/kg
R52C51	1-1.5	03/04/04	Yes	01-R52C51_03/04/04_1	7440-38-2	Arsenic	8.2		mg/kg
R52C51	1-1.5	03/04/04	Yes	01-R52C51_03/04/04_1	7439-92-1	Lead	6.9		mg/kg
R52C52	1-1.5	03/04/04	Yes	01-R52C52_03/04/04_1	7440-38-2	Arsenic	11.9		mg/kg
R52C52	1-1.5	03/04/04	Yes	01-R52C52_03/04/04_1	7439-92-1	Lead	8.2		mg/kg
R52C53	1-1.5	10/22/03	Yes	01-SS-[R52C53]-C2_10/22/03_1	7440-38-2	Arsenic	3.9		mg/kg
R52C53	1-1.5	10/22/03	Yes	01-SS-[R52C53]-C2_10/22/03_1	7439-92-1	Lead	8.2		mg/kg
R52C54	1-1.5	10/22/03	Yes	01-SS-[R52C54]-C2_10/22/03_1	7440-38-2	Arsenic	2.5	U	mg/kg
R52C54	1-1.5	10/22/03	Yes	01-SS-[R52C54]-C2_10/22/03_1	7439-92-1	Lead	5.0		mg/kg
R52C55	1-1.5	04/06/04	Yes	01-R52C55_04/06/04_1	7440-38-2	Arsenic	8.8		mg/kg
R52C55	1-1.5	04/06/04	Yes	01-R52C55_04/06/04_1	7439-92-1	Lead	8.3		mg/kg
R52C56	1-1.5	04/06/04	Yes	01-R52C56_04/06/04_1	7440-38-2	Arsenic	8.5		mg/kg
R52C56	1-1.5	04/06/04	Yes	01-R52C56_04/06/04_1	7439-92-1	Lead	5.6		mg/kg
R52C57	1-1.5	02/12/04	Yes	1-R52C57_02/12/04_1	7440-38-2	Arsenic	9.1		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R52C57	1-1.5	02/12/04	Yes	1-R52C57_02/12/04_1	7439-92-1	Lead	7.0		mg/kg
R52C58	1-1.5	02/12/04	Yes	1-R52C58_02/12/04_1	7440-38-2	Arsenic	13.6		mg/kg
R52C58	1-1.5	02/12/04	Yes	1-R52C58_02/12/04_1	7439-92-1	Lead	10.0		mg/kg
R52C62	1-1.5	04/06/04	Yes	01-R52C62_04/06/04_1	7440-38-2	Arsenic	32.6		mg/kg
R52C62	1-1.5	04/06/04	Yes	01-R52C62_04/06/04_1	7439-92-1	Lead	12.6		mg/kg
R53C41	1-1.5	03/10/04	Yes	1-R53C41_03/10/04_1	7440-38-2	Arsenic	7.6		mg/kg
R53C41	1-1.5	03/10/04	Yes	1-R53C41_03/10/04_1	7439-92-1	Lead	5.6		mg/kg
R53C42	1-1.5	03/10/04	Yes	1-R53C42_AVG_03/10/04_1	7440-38-2	Arsenic	15.4		mg/kg
R53C42	1-1.5	03/10/04	Yes	1-R53C42_AVG_03/10/04_1	7439-92-1	Lead	13.4		mg/kg
R53C43	1-1.5	03/10/04	Yes	1-R53C43_03/10/04_1	7440-38-2	Arsenic	8.5		mg/kg
R53C43	1-1.5	03/10/04	Yes	1-R53C43_03/10/04_1	7439-92-1	Lead	5.5		mg/kg
R53C44	1-1.5	03/10/04	Yes	1-R53C44_03/10/04_1	7440-38-2	Arsenic	10.2		mg/kg
R53C44	1-1.5	03/10/04	Yes	1-R53C44_03/10/04_1	7439-92-1	Lead	12.1		mg/kg
R53C45	1-1.5	03/10/04	Yes	1-R53C45_03/10/04_1	7440-38-2	Arsenic	8.4		mg/kg
R53C45	1-1.5	03/10/04	Yes	1-R53C45_03/10/04_1	7439-92-1	Lead	5.2		mg/kg
R53C46	1-1.5	03/10/04	Yes	1-R53C46_03/10/04_1	7440-38-2	Arsenic	5.9		mg/kg
R53C46	1-1.5	03/10/04	Yes	1-R53C46_03/10/04_1	7439-92-1	Lead	5.0		mg/kg
R53C51	1-1.5	03/04/04	Yes	01-R53C51_03/04/04_1	7440-38-2	Arsenic	9.3		mg/kg
R53C51	1-1.5	03/04/04	Yes	01-R53C51_03/04/04_1	7439-92-1	Lead	6.3		mg/kg
R53C52	1-1.5	03/04/04	Yes	01-R53C52_03/04/04_1	7440-38-2	Arsenic	10.0		mg/kg
R53C52	1-1.5	03/04/04	Yes	01-R53C52_03/04/04_1	7439-92-1	Lead	7.9		mg/kg
R53C53	1-1.5	04/06/04	Yes	01-R53C53_04/06/04_1	7440-38-2	Arsenic	12.1		mg/kg
R53C53	1-1.5	04/06/04	Yes	01-R53C53_04/06/04_1	7439-92-1	Lead	11.7		mg/kg
R53C54	1-1.5	04/06/04	Yes	01-R53C54_04/06/04_1	7440-38-2	Arsenic	21.0		mg/kg
R53C54	1-1.5	04/06/04	Yes	01-R53C54_04/06/04_1	7439-92-1	Lead	13.7		mg/kg
R53C55	1-1.5	04/06/04	Yes	01-R53C55_04/06/04_1	7440-38-2	Arsenic	7.8		mg/kg
R53C55	1-1.5	04/06/04	Yes	01-R53C55_04/06/04_1	7439-92-1	Lead	7.5		mg/kg
R53C56	1-1.5	04/06/04	Yes	01-R53C56_04/06/04_1	7440-38-2	Arsenic	7.5		mg/kg
R53C56	1-1.5	04/06/04	Yes	01-R53C56_04/06/04_1	7439-92-1	Lead	13.0		mg/kg
R53C57	1-1.5	02/12/04	Yes	1-R53C57_02/12/04_1	7440-38-2	Arsenic	14.4		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R53C57	1-1.5	02/12/04	Yes	1-R53C57_02/12/04_1	7439-92-1	Lead	14.2		mg/kg
R53C58	1-1.5	02/12/04	Yes	1-R53C58_02/12/04_1	7440-38-2	Arsenic	34.5		mg/kg
R53C58	1-1.5	02/12/04	Yes	1-R53C58_02/12/04_1	7439-92-1	Lead	10.9		mg/kg
R53C59	1-1.5	02/12/04	Yes	1-R53C59_02/12/04_1	7440-38-2	Arsenic	10.2		mg/kg
R53C59	1-1.5	02/12/04	Yes	1-R53C59_02/12/04_1	7439-92-1	Lead	8.0		mg/kg
R53C60	1-1.5	04/06/04	Yes	01-R53C60_04/06/04_1	7440-38-2	Arsenic	10.0		mg/kg
R53C60	1-1.5	04/06/04	Yes	01-R53C60_04/06/04_1	7439-92-1	Lead	8.6		mg/kg
R54C45	1-1.5	03/10/04	Yes	1-R54C45_03/10/04_1	7440-38-2	Arsenic	7.1		mg/kg
R54C45	1-1.5	03/10/04	Yes	1-R54C45_03/10/04_1	7439-92-1	Lead	4.8		mg/kg
R54C46	1-1.5	03/10/04	Yes	1-R54C46_03/10/04_1	7440-38-2	Arsenic	6.6		mg/kg
R54C46	1-1.5	03/10/04	Yes	1-R54C46_03/10/04_1	7439-92-1	Lead	5.4		mg/kg
R54C47	1-1.5	03/10/04	Yes	1-R54C47_03/10/04_1	7440-38-2	Arsenic	14.3		mg/kg
R54C47	1-1.5	03/10/04	Yes	1-R54C47_03/10/04_1	7439-92-1	Lead	12.4		mg/kg
R54C50	1-1.5	03/04/04	Yes	01-R54C50_03/04/04_1	7440-38-2	Arsenic	6.8		mg/kg
R54C50	1-1.5	03/04/04	Yes	01-R54C50_03/04/04_1	7439-92-1	Lead	6.0		mg/kg
R54C51	1-1.5	03/04/04	Yes	01-R54C51_03/04/04_1	7440-38-2	Arsenic	5.9		mg/kg
R54C51	1-1.5	03/04/04	Yes	01-R54C51_03/04/04_1	7439-92-1	Lead	4.2		mg/kg
R54C55	1-1.5	04/06/04	Yes	01-R54C55_04/06/04_1	7440-38-2	Arsenic	6.8		mg/kg
R54C55	1-1.5	04/06/04	Yes	01-R54C55_04/06/04_1	7439-92-1	Lead	5.9		mg/kg
R54C56	1-1.5	04/06/04	Yes	01-R54C56_04/06/04_1	7440-38-2	Arsenic	9.9		mg/kg
R54C56	1-1.5	04/06/04	Yes	01-R54C56_04/06/04_1	7439-92-1	Lead	12.6		mg/kg
R54C57	1-1.5	02/12/04	Yes	1-R54C57_02/12/04_1	7440-38-2	Arsenic	8.4		mg/kg
R54C57	1-1.5	02/12/04	Yes	1-R54C57_02/12/04_1	7439-92-1	Lead	8.2		mg/kg
R54C58	1-1.5	02/12/04	Yes	1-R54C58_02/12/04_1	7440-38-2	Arsenic	10.2		mg/kg
R54C58	1-1.5	02/12/04	Yes	1-R54C58_02/12/04_1	7439-92-1	Lead	12.9		mg/kg
R54C59	1-1.5	02/12/04	Yes	1-R54C59_02/12/04_1	7440-38-2	Arsenic	9.2		mg/kg
R54C59	1-1.5	02/12/04	Yes	1-R54C59_02/12/04_1	7439-92-1	Lead	10.2		mg/kg
T-111	1-1.5	08/11/03	Yes	02-SS-[T-111]-C2_AVG_08/11/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
T-111	1-1.5	08/11/03	Yes	02-SS-[T-111]-C2_AVG_08/11/03_1	7439-92-1	Lead	5.0		mg/kg
T-266	0-0.5	04/15/03	Yes	01-SS-[T266]-C1_AVG_04/15/03_0	7439-92-1	Lead	80.9		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T-266	1-1.5	08/07/03	Yes	02-SS-[T-266]-C2_08/07/03_1	7440-38-2	Arsenic	2.9		mg/kg
T-270	1-1.5	08/07/03	Yes	02-SS-[T-270]-C2_08/07/03_1	7440-38-2	Arsenic	10.7		mg/kg
T-287	0-0.5	04/15/03	Yes	01-SS-[T287]-C1_AVG_04/15/03_0	7440-38-2	Arsenic	41.0		mg/kg
T-287	1-1.5	08/11/03	Yes	02-SS-[T-287]-C2_08/11/03_1	7439-92-1	Lead	36.0		mg/kg
T-290	0-0.5	04/16/03	Yes	01-SS-[T290]-C1_04/16/03_0	7440-38-2	Arsenic	38.3		mg/kg
T-290	1-1.5	08/11/03	Yes	02-SS-[T-290]-C2_08/11/03_1	7439-92-1	Lead	39.4		mg/kg
T-307	0-0.5	04/16/03	Yes	01-SS-[T307]-C1_04/16/03_0	7439-92-1	Lead	76.9		mg/kg
T-307	1-1.5	08/07/03	Yes	02-SS-[T-307]-C2_AVG_08/07/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
T-315	1-1.5	08/07/03	Yes	02-SS-[T-315]-C2_08/07/03_1	7440-38-2	Arsenic	2.0	U	mg/kg
T-330	1-1.5	08/14/03	Yes	03-SS-[T-330]-C2_08/14/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
T-330	1-1.5	08/14/03	Yes	03-SS-[T-330]-C2_08/14/03_1	7439-92-1	Lead	25.9		mg/kg
T-331	0-0.5	04/17/03	Yes	01-SS-[T331]-C1_04/17/03_0	7440-38-2	Arsenic	49.9		mg/kg
T-331	1-1.5	08/05/03	Yes	02-SS-[T-331]-C2_08/05/03_1	7439-92-1	Lead	43.0		mg/kg
T-332/333	1-1.5	08/05/03	Yes	02-SS-[T-332/333]-C2_08/05/03_1	7440-38-2	Arsenic	12.3		mg/kg
T-334	1-1.5	08/05/03	Yes	02-SS-[T-334]-C2_08/05/03_1	7440-38-2	Arsenic	50.4		mg/kg
T-334	1-1.5	08/05/03	Yes	02-SS-[T-334]-C2_08/05/03_1	7439-92-1	Lead	46.4		mg/kg
T-335	0-0.5	04/17/03	Yes	01-SS-[T335]-C1_04/17/03_0	7439-92-1	Lead	98.7		mg/kg
T-335	1-1.5	08/05/03	Yes	02-SS-[T-335]-C2_08/05/03_1	7440-38-2	Arsenic	15.4		mg/kg
T-339	1-1.5	08/04/03	Yes	02-SS-[T-339]-C2_08/04/03_1	7440-38-2	Arsenic	35.8		mg/kg
T-339	1-1.5	08/04/03	Yes	02-SS-[T-339]-C2_08/04/03_1	7439-92-1	Lead	10.8		mg/kg
T-342	1-1.5	08/04/03	Yes	02-SS-[T-342]-C2_08/04/03_1	7440-38-2	Arsenic	56.8		mg/kg
T-342	1-1.5	08/04/03	Yes	02-SS-[T-342]-C2_08/04/03_1	7439-92-1	Lead	18.8		mg/kg
T-349	1-1.5	07/31/03	Yes	02-SS-[T-349]-C2_07/31/03_1	7440-38-2	Arsenic	23.9		mg/kg
T-353	0-0.5	04/17/03	Yes	01-SS-[T353]-C1_04/17/03_0	7439-92-1	Lead	78.7		mg/kg
T-353	1-1.5	07/31/03	Yes	02-SS-[T-353]-C2_07/31/03_1	7440-38-2	Arsenic	13.1		mg/kg
T-353	1-1.5	07/31/03	Yes	02-SS-[T-353]-C2_07/31/03_1	7440-50-8	Copper	17.0		mg/kg
T-353	1-1.5	07/31/03	Yes	02-SS-[T-353]-C2_07/31/03_1	7439-92-1	Lead	17.7		mg/kg
T084	0-0.5	04/14/03	Yes	01-SS-[T084]-C1_04/14/03_0	7439-92-1	Lead	116.0		mg/kg
T085N	0-0.5	04/14/03	Yes	01-SS-[T085N]-C1_04/14/03_0	7440-38-2	Arsenic	52.7		mg/kg
T085N	0-0.5	04/14/03	Yes	01-SS-[T085N]-C1_04/14/03_0	7439-92-1	Lead	109.0		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T085S	0-0.5	04/14/03	Yes	01-SS-[T085S]-C1_04/14/03_0	7440-38-2	Arsenic	49.6		mg/kg
T085S	0-0.5	04/14/03	Yes	01-SS-[T085S]-C1_04/14/03_0	7439-92-1	Lead	115.0		mg/kg
T088	0-0.5	04/14/03	Yes	01-SS-[T088]-C1_04/14/03_0	7440-38-2	Arsenic	59.2		mg/kg
T088	0-0.5	04/14/03	Yes	01-SS-[T088]-C1_04/14/03_0	7439-92-1	Lead	99.9		mg/kg
T089	0-0.5	04/14/03	No	01-SS-[T089]-C1_04/14/03_0	7439-92-1	Lead	81.5		mg/kg
T089	1-1.5	08/14/03	Yes	02-SS-[T-89]-C2_08/14/03_1	7440-38-2	Arsenic	9.1		mg/kg
T090	0-0.5	04/14/03	Yes	01-SS-[T090]-C1_04/14/03_0	7440-38-2	Arsenic	45.8		mg/kg
T090	0-0.5	04/14/03	Yes	01-SS-[T090]-C1_04/14/03_0	7439-92-1	Lead	90.3		mg/kg
T091	0-0.5	04/14/03	Yes	01-SS-[T091]-C1_04/14/03_0	7439-92-1	Lead	99.4		mg/kg
T092	0-0.5	04/14/03	Yes	01-SS-[T092]-C1_04/14/03_0	7440-38-2	Arsenic	56.6		mg/kg
T092	0-0.5	04/14/03	Yes	01-SS-[T092]-C1_04/14/03_0	7439-92-1	Lead	76.5		mg/kg
T093	0-0.5	04/14/03	Yes	01-SS-[T093]-C1_04/14/03_0	7440-38-2	Arsenic	44.9		mg/kg
T093	0-0.5	04/14/03	Yes	01-SS-[T093]-C1_04/14/03_0	7439-92-1	Lead	53.1		mg/kg
T094	0-0.5	04/14/03	No	01-SS-[T094]-C1_04/14/03_0	7439-92-1	Lead	70.4		mg/kg
T094	1-1.5	08/14/03	Yes	02-SS-[T-94]-C2_08/14/03_1	7440-38-2	Arsenic	18.0		mg/kg
T096,097	0-0.5	04/14/03	Yes	01-SS-[T096,097]-C1_04/14/03_0	7440-38-2	Arsenic	38.7		mg/kg
T096,097	0-0.5	04/14/03	Yes	01-SS-[T096,097]-C1_04/14/03_0	7439-92-1	Lead	66.2		mg/kg
T096	0-0.5	04/14/03	Yes	01-SS-[T096]-C1_04/14/03_0	7440-38-2	Arsenic	36.8		mg/kg
T096	0-0.5	04/14/03	Yes	01-SS-[T096]-C1_04/14/03_0	7439-92-1	Lead	75.9		mg/kg
T098	0-0.5	04/14/03	Yes	01-SS-[T098]-C1_04/14/03_0	7440-38-2	Arsenic	36.7		mg/kg
T098	0-0.5	04/14/03	Yes	01-SS-[T098]-C1_04/14/03_0	7439-92-1	Lead	42.7		mg/kg
T099	0-0.5	04/14/03	Yes	01-SS-[T099]-C1_04/14/03_0	7440-38-2	Arsenic	30.7		mg/kg
T099	0-0.5	04/14/03	Yes	01-SS-[T099]-C1_04/14/03_0	7439-92-1	Lead	44.6		mg/kg
T100	0-0.5	04/14/03	Yes	01-SS-[T100]-C1_04/14/03_0	7440-38-2	Arsenic	49.6		mg/kg
T100	0-0.5	04/14/03	Yes	01-SS-[T100]-C1_04/14/03_0	7439-92-1	Lead	88.6		mg/kg
T101,102	0-0.5	04/14/03	Yes	01-SS-[T101,102]-C1_04/14/03_0	7440-38-2	Arsenic	47.6		mg/kg
T101,102	0-0.5	04/14/03	Yes	01-SS-[T101,102]-C1_04/14/03_0	7439-92-1	Lead	88.8		mg/kg
T103	0-0.5	04/14/03	Yes	01-SS-[T103]-C1_04/14/03_0	7440-38-2	Arsenic	50.7		mg/kg
T103	0-0.5	04/14/03	Yes	01-SS-[T103]-C1_04/14/03_0	7439-92-1	Lead	105.0		mg/kg
T105,106,107	0-0.5	04/14/03	Yes	01-SS-[T105,106,107]-C1_04/14/03_0	7440-38-2	Arsenic	30.8		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T105,106,107	0-0.5	04/14/03	Yes	01-SS-[T105,106,107]-C1_04/14/03_0	7439-92-1	Lead	82.6		mg/kg
T108	0-0.5	04/14/03	Yes	01-SS-[T108]-C1_04/14/03_0	7440-38-2	Arsenic	53.0		mg/kg
T108	0-0.5	04/14/03	Yes	01-SS-[T108]-C1_04/14/03_0	7439-92-1	Lead	103.0		mg/kg
T109,110	0-0.5	04/15/03	Yes	01-SS-[T109,110]-C1_04/15/03_0	7440-38-2	Arsenic	46.4		mg/kg
T109,110	0-0.5	04/15/03	Yes	01-SS-[T109,110]-C1_04/15/03_0	7439-92-1	Lead	66.0		mg/kg
T254,255	0-0.5	04/15/03	Yes	01-SS-[T254,255]-C1_04/15/03_0	7439-92-1	Lead	47.5		mg/kg
T256	0-0.5	04/15/03	Yes	01-SS-[T256]-C1_04/15/03_0	7440-38-2	Arsenic	40.3		mg/kg
T256	0-0.5	04/15/03	Yes	01-SS-[T256]-C1_04/15/03_0	7439-92-1	Lead	86.0		mg/kg
T257	0-0.5	04/15/03	Yes	01-SS-[T257]-C1_04/15/03_0	7440-38-2	Arsenic	26.5		mg/kg
T257	0-0.5	04/15/03	Yes	01-SS-[T257]-C1_04/15/03_0	7439-92-1	Lead	76.3		mg/kg
T258,259,260	0-0.5	04/15/03	Yes	01-SS-[T258,259,260]-C1_04/15/03_0	7440-38-2	Arsenic	43.4		mg/kg
T258,259,260	0-0.5	04/15/03	Yes	01-SS-[T258,259,260]-C1_04/15/03_0	7439-92-1	Lead	103.0		mg/kg
T261,262	0-0.5	04/15/03	Yes	01-SS-[T261,262]-C1_04/15/03_0	7440-38-2	Arsenic	28.2		mg/kg
T263	0-0.5	04/15/03	Yes	01-SS-[T263]-C1_04/15/03_0	7440-38-2	Arsenic	35.6		mg/kg
T263	0-0.5	04/15/03	Yes	01-SS-[T263]-C1_04/15/03_0	7439-92-1	Lead	40.7		mg/kg
T264	0-0.5	04/15/03	Yes	01-SS-[T264]-C1_04/15/03_0	7439-92-1	Lead	47.7		mg/kg
T265	0-0.5	04/15/03	Yes	01-SS-[T265]-C1_04/15/03_0	7440-38-2	Arsenic	56.5		mg/kg
T265	0-0.5	04/15/03	Yes	01-SS-[T265]-C1_04/15/03_0	7439-92-1	Lead	85.3		mg/kg
T267,268	0-0.5	04/15/03	Yes	01-SS-[T267,268]-C1_04/15/03_0	7440-38-2	Arsenic	28.0		mg/kg
T267,268	0-0.5	04/15/03	Yes	01-SS-[T267,268]-C1_04/15/03_0	7439-92-1	Lead	69.0		mg/kg
T269	0-0.5	04/15/03	Yes	01-SS-[T269]-C1_04/15/03_0	7439-92-1	Lead	36.7		mg/kg
T270	0-0.5	04/15/03	Yes	01-SS-[T270]-C1_04/15/03_0	7439-92-1	Lead	94.2		mg/kg
T271	0-0.5	04/15/03	Yes	01-SS-[T271]-C1_04/15/03_0	7440-38-2	Arsenic	43.8		mg/kg
T271	0-0.5	04/15/03	Yes	01-SS-[T271]-C1_04/15/03_0	7439-92-1	Lead	65.5		mg/kg
T272	0-0.5	04/15/03	Yes	01-SS-[T272]-C1_04/15/03_0	7440-38-2	Arsenic	38.8		mg/kg
T272	0-0.5	04/15/03	Yes	01-SS-[T272]-C1_04/15/03_0	7439-92-1	Lead	58.4		mg/kg
T273	0-0.5	04/15/03	Yes	01-SS-[T273]-C1_04/15/03_0	7440-38-2	Arsenic	31.4		mg/kg
T273	0-0.5	04/15/03	Yes	01-SS-[T273]-C1_04/15/03_0	7439-92-1	Lead	68.9		mg/kg
T274,275	0-0.5	04/15/03	Yes	01-SS-[T274,275]-C1_04/15/03_0	7440-38-2	Arsenic	48.3		mg/kg
T274,275	0-0.5	04/15/03	Yes	01-SS-[T274,275]-C1_04/15/03_0	7439-92-1	Lead	72.5		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T276,277,278,279	0-0.5	04/15/03	Yes	01-SS-[T276,277,278,279]-C1_04/15/03_0	7440-38-2	Arsenic	24.4		mg/kg
T276,277,278,279	0-0.5	04/15/03	Yes	01-SS-[T276,277,278,279]-C1_04/15/03_0	7439-92-1	Lead	38.4		mg/kg
T280,281	0-0.5	04/15/03	Yes	01-SS-[T280,281]-C1_04/15/03_0	7440-38-2	Arsenic	39.0		mg/kg
T280,281	0-0.5	04/15/03	Yes	01-SS-[T280,281]-C1_04/15/03_0	7439-92-1	Lead	101.0		mg/kg
T282,283,284	0-0.5	04/15/03	Yes	01-SS-[T282,283,284]-C1_04/15/03_0	7440-38-2	Arsenic	25.8		mg/kg
T282,283,284	0-0.5	04/15/03	Yes	01-SS-[T282,283,284]-C1_04/15/03_0	7439-92-1	Lead	70.9		mg/kg
T288,289,291,292,3	0-0.5	04/16/03	Yes	01-SS-[T288,289,291,292,302]-C1_04/16/03_0	7440-38-2	Arsenic	46.8		mg/kg
T291	1-1.5	08/11/03	Yes	02-SS-[T-291]-C2_08/11/03_1	7439-92-1	Lead	12.2		mg/kg
T294,293	0-0.5	04/16/03	Yes	01-SS-[T294,293]-C1_04/16/03_0	7440-38-2	Arsenic	25.2		mg/kg
T294,295	0-0.5	04/16/03	Yes	01-SS-[T294,295]-C1_04/16/03_0	7440-38-2	Arsenic	50.1		mg/kg
T294,295	0-0.5	04/16/03	Yes	01-SS-[T294,295]-C1_04/16/03_0	7439-92-1	Lead	102.0		mg/kg
T295,297,298,299	0-0.5	04/16/03	Yes	01-SS-[T295,297,298,299]-C1_04/16/03_0	7440-38-2	Arsenic	29.8		mg/kg
T295,297,298,299	0-0.5	04/16/03	Yes	01-SS-[T295,297,298,299]-C1_04/16/03_0	7439-92-1	Lead	94.2		mg/kg
T300	0-0.5	04/16/03	Yes	01-SS-[T300]-C1_04/16/03_0	7440-38-2	Arsenic	32.7		mg/kg
T300	0-0.5	04/16/03	Yes	01-SS-[T300]-C1_04/16/03_0	7439-92-1	Lead	62.3		mg/kg
T301,302,288,289,2	1-1.5	08/11/03	Yes	02-SS-[T-301-302-288-289-292]-C_08/11/03_1	7440-38-2	Arsenic	11.6		mg/kg
T301,302,288,289,2	1-1.5	08/11/03	Yes	02-SS-[T-301-302-288-289-292]-C_08/11/03_1	7439-92-1	Lead	17.3		mg/kg
T303,304	0-0.5	04/16/03	Yes	01-SS-[T303,304]-C1_04/16/03_0	7440-38-2	Arsenic	44.2		mg/kg
T303,304	0-0.5	04/16/03	Yes	01-SS-[T303,304]-C1_04/16/03_0	7439-92-1	Lead	78.5		mg/kg
T305,306	0-0.5	04/16/03	Yes	01-SS-[T305,306]-C1_04/16/03_0	7440-38-2	Arsenic	43.6		mg/kg
T305,306	0-0.5	04/16/03	Yes	01-SS-[T305,306]-C1_04/16/03_0	7439-92-1	Lead	56.9		mg/kg
T308	0-0.5	04/16/03	Yes	01-SS-[T308]-C1_AVG_04/16/03_0	7440-38-2	Arsenic	31.5		mg/kg
T308	0-0.5	04/16/03	Yes	01-SS-[T308]-C1_AVG_04/16/03_0	7439-92-1	Lead	50.5		mg/kg
T309	0-0.5	04/16/03	Yes	01-SS-[T309]-C1_04/16/03_0	7440-38-2	Arsenic	41.9		mg/kg
T309	0-0.5	04/16/03	Yes	01-SS-[T309]-C1_04/16/03_0	7439-92-1	Lead	75.4		mg/kg
T310	0-0.5	04/16/03	Yes	01-SS-[T310]-C1_04/16/03_0	7440-38-2	Arsenic	52.6		mg/kg
T310	0-0.5	04/16/03	Yes	01-SS-[T310]-C1_04/16/03_0	7439-92-1	Lead	61.4		mg/kg
T311	0-0.5	04/16/03	Yes	01-SS-[T311]-C1_04/16/03_0	7440-38-2	Arsenic	49.0		mg/kg
T311	0-0.5	04/16/03	Yes	01-SS-[T311]-C1_04/16/03_0	7439-92-1	Lead	68.6		mg/kg
T312,316	0-0.5	04/16/03	Yes	01-SS-[T312,316]-C1_04/16/03_0	7440-38-2	Arsenic	35.2		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T312,316	0-0.5	04/16/03	Yes	01-SS-[T312,316]-C1_04/16/03_0	7439-92-1	Lead	53.0		mg/kg
T313,314,315	0-0.5	04/16/03	Yes	01-SS-[T313,314,315]-C1_04/16/03_0	7439-92-1	Lead	85.0		mg/kg
T313/314	1-1.5	08/07/03	Yes	02-SS-[T-313/314]-C2_08/07/03_1	7440-38-2	Arsenic	14.8		mg/kg
T318	0-0.5	04/16/03	Yes	01-SS-[T318]-C1_04/16/03_0	7440-38-2	Arsenic	23.5		mg/kg
T318	0-0.5	04/16/03	Yes	01-SS-[T318]-C1_04/16/03_0	7439-92-1	Lead	52.7		mg/kg
T320	0-0.5	04/17/03	Yes	01-SS-[T320]-C1_04/17/03_0	7440-38-2	Arsenic	41.6		mg/kg
T320	0-0.5	04/17/03	Yes	01-SS-[T320]-C1_04/17/03_0	7439-92-1	Lead	50.2		mg/kg
T321	0-0.5	04/17/03	Yes	01-SS-[T321]-C1_04/17/03_0	7440-38-2	Arsenic	45.7		mg/kg
T321	0-0.5	04/17/03	Yes	01-SS-[T321]-C1_04/17/03_0	7439-92-1	Lead	99.7		mg/kg
T322,323,324	0-0.5	04/17/03	Yes	01-SS-[T322,323,324]-C1_04/17/03_0	7440-38-2	Arsenic	39.1		mg/kg
T322,323,324	0-0.5	04/17/03	Yes	01-SS-[T322,323,324]-C1_04/17/03_0	7439-92-1	Lead	55.3		mg/kg
T325	1-1.5	08/06/03	Yes	02-SS-[T-325]-C2_08/06/03_1	7440-38-2	Arsenic	4.1		mg/kg
T325	1-1.5	08/06/03	Yes	02-SS-[T-325]-C2_08/06/03_1	7439-92-1	Lead	5.7		mg/kg
T326	1-1.5	08/06/03	Yes	02-SS-[T-326]-C2_08/06/03_1	7440-38-2	Arsenic	4.7		mg/kg
T326	1-1.5	08/06/03	Yes	02-SS-[T-326]-C2_08/06/03_1	7439-92-1	Lead	5.6		mg/kg
T327	1-1.5	08/06/03	Yes	02-SS-[T-327]-C2_08/06/03_1	7440-38-2	Arsenic	13.1		mg/kg
T327	1-1.5	08/06/03	Yes	02-SS-[T-327]-C2_08/06/03_1	7439-92-1	Lead	18.6		mg/kg
T328	1-1.5	08/06/03	Yes	02-SS-[T-328]-C2_08/06/03_1	7440-38-2	Arsenic	11.5		mg/kg
T328	1-1.5	08/06/03	Yes	02-SS-[T-328]-C2_08/06/03_1	7439-92-1	Lead	14.5		mg/kg
T329	0-0.5	04/17/03	No	01-SS-[T329]-C1_04/17/03_0	7439-92-1	Lead	75.3		mg/kg
T329	1-1.5	08/06/03	Yes	02-SS-[T-329]-C2_08/06/03_1	7440-38-2	Arsenic	18.3		mg/kg
T330-VS-1-2-E	1-1.5	08/25/03	Yes	02-SB-[T-330-VS-1-2-E]-C2_08/25/03_1	7439-92-1	Lead	5.4		mg/kg
T330-VS-1-2-N	1-1.5	08/25/03	Yes	02-SB-[T-330-VS-1-2-N]-C2_AVG_08/25/03_1	7439-92-1	Lead	4.3		mg/kg
T330-VS-1-2-S	1-1.5	08/25/03	Yes	02-SB-[T-330-VS-1-2-S]-C2_08/25/03_1	7439-92-1	Lead	13.1		mg/kg
T330-VS-1-2-W	1-1.5	08/25/03	Yes	02-SB-[T-330-VS-1-2-W]-C2_08/25/03_1	7439-92-1	Lead	13.7		mg/kg
T332,333	0-0.5	04/17/03	Yes	01-SS-[T332,333]-C1_04/17/03_0	7439-92-1	Lead	91.7		mg/kg
T336	0-0.5	04/17/03	Yes	01-SS-[T336]-C1_04/17/03_0	7440-38-2	Arsenic	45.9		mg/kg
T336	0-0.5	04/17/03	Yes	01-SS-[T336]-C1_04/17/03_0	7439-92-1	Lead	66.1		mg/kg
T338	0-0.5	04/17/03	Yes	01-SS-[T338]-C1_AVG_04/17/03_0	7440-38-2	Arsenic	22.5		mg/kg
T338	0-0.5	04/17/03	Yes	01-SS-[T338]-C1_AVG_04/17/03_0	7439-92-1	Lead	46.7		mg/kg

Table B.12
Sample Results for GC-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T340	0-0.5	04/16/03	Yes	01-SS-[T340]-C1_04/16/03_0	7440-38-2	Arsenic	57.7		mg/kg
T340	0-0.5	04/16/03	Yes	01-SS-[T340]-C1_04/16/03_0	7439-92-1	Lead	67.1		mg/kg
T341	0-0.5	04/16/03	Yes	01-SS-[T341]-C1_04/16/03_0	7439-92-1	Lead	89.8		mg/kg
T343,344,345	0-0.5	04/16/03	Yes	01-SS-[T343,344,345]-C1_AVG_04/16/03_0	7440-38-2	Arsenic	52.5		mg/kg
T343,344,345	0-0.5	04/16/03	Yes	01-SS-[T343,344,345]-C1_AVG_04/16/03_0	7439-92-1	Lead	93.1		mg/kg
T346	0-0.5	04/16/03	Yes	01-SS-[T346]-C1_04/16/03_0	7439-92-1	Lead	96.6		mg/kg
T347,350	0-0.5	04/16/03	Yes	01-SS-[T347,350]-C1_04/16/03_0	7439-92-1	Lead	88.0		mg/kg
T347	1-1.5	08/04/03	Yes	02-SS-[T-347]-C2_08/04/03_1	7440-38-2	Arsenic	37.9		mg/kg
T348,349	0-0.5	04/17/03	Yes	01-SS-[T348,349]-C1_04/17/03_0	7439-92-1	Lead	67.8		mg/kg
T351	0-0.5	04/17/03	Yes	01-SS-[T351]-C1_04/17/03_0	7439-92-1	Lead	49.1		mg/kg
T352	0-0.5	04/17/03	No	01-SS-[T352]-C1_04/17/03_0	7439-92-1	Lead	63.5		mg/kg
T352	1-1.5	07/31/03	Yes	02-SS-[T-352]-C2_AVG_07/31/03_1	7440-38-2	Arsenic	19.8		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1-TP-15	0-3	04/22/87	Yes	1-TP-15,S-1	118-96-7	2,4,6-Trinitrotoluene	0.08	U	mg/kg
1-TP-15	0-3	04/22/87	Yes	1-TP-15,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
1-TP-15	3-6	04/22/87	Yes	1-TP-15,S-2	118-96-7	2,4,6-Trinitrotoluene	0.08	U	mg/kg
1-TP-15	3-6	04/22/87	Yes	1-TP-15,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
1234-TP-516	0-1	05/20/92	Yes	1234-TP-516-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
1234-TP-516	0-1	05/20/92	Yes	1234-TP-516-S-1-DAVG	DNT-TOTAL	DNT - Total	0.2	U	mg/kg
1234-TP-516	0-1	05/20/92	Yes	1234-TP-516-S-1-DAVG	98-95-3	Nitrobenzene	1.4	U	mg/kg
1234-TP-516	0-1	05/20/92	Yes	1234-TP-516-S-1-DAVG	7439-92-1	Lead	52.0		mg/kg
1234-TP-516	3-6	05/20/92	Yes	1234-TP-516-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-516	3-6	05/20/92	Yes	1234-TP-516-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-516	3-6	05/20/92	Yes	1234-TP-516-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-516	3-6	05/20/92	Yes	1234-TP-516-S-2	7439-92-1	Lead	20.0		mg/kg
1234-TP-516	8-10	05/20/92	Yes	1234-TP-516-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-516	8-10	05/20/92	Yes	1234-TP-516-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-516	8-10	05/20/92	Yes	1234-TP-516-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-517	3-6	05/20/92	Yes	1234-TP-517-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-517	3-6	05/20/92	Yes	1234-TP-517-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-517	3-6	05/20/92	Yes	1234-TP-517-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-517	3-6	05/20/92	Yes	1234-TP-517-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-517	8-10	05/20/92	Yes	1234-TP-517-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-517	8-10	05/20/92	Yes	1234-TP-517-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-517	8-10	05/20/92	Yes	1234-TP-517-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-521	0-1	05/18/92	Yes	1234-TP-521-S-1	7439-92-1	Lead	11.0		mg/kg
1234-TP-521	3-6	05/18/92	Yes	1234-TP-521-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-521	3-6	05/18/92	Yes	1234-TP-521-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-521	3-6	05/18/92	Yes	1234-TP-521-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-521	3-6	05/18/92	Yes	1234-TP-521-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-521	8-10	05/18/92	Yes	1234-TP-521-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-521	8-10	05/18/92	Yes	1234-TP-521-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-521	8-10	05/18/92	Yes	1234-TP-521-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-TP-523	0-1	05/20/92	Yes	1234-TP-523-S-1	7439-92-1	Lead	77.0		mg/kg
1234-TP-523	8-10	05/20/92	Yes	1234-TP-523-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-523	8-10	05/20/92	Yes	1234-TP-523-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-523	8-10	05/20/92	Yes	1234-TP-523-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-524	3-6	05/18/92	Yes	1234-TP-524-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
1234-TP-524	3-6	05/18/92	Yes	1234-TP-524-S-2	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
1234-TP-524	3-6	05/18/92	Yes	1234-TP-524-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
1234-TP-524	3-6	05/18/92	Yes	1234-TP-524-S-2	7439-92-1	Lead	32.0		mg/kg
1234-TP-524	8-10	05/18/92	Yes	1234-TP-524-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-524	8-10	05/18/92	Yes	1234-TP-524-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-524	8-10	05/18/92	Yes	1234-TP-524-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-501	0-1	05/11/92	Yes	18-TP-501-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
18-TP-501	0-1	05/11/92	Yes	18-TP-501-S-1-DAVG	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-TP-501	0-1	05/11/92	Yes	18-TP-501-S-1-DAVG	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-501	0-1	05/11/92	Yes	18-TP-501-S-1-DAVG	7439-92-1	Lead	55.0		mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	7440-38-2	Arsenic	3.6	J	mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	7440-50-8	Copper	15.0		mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	7439-92-1	Lead	5.2	U	mg/kg
18-TP-501	3-6	05/11/92	Yes	18-TP-501-S-2-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-501	8-10	05/11/92	Yes	18-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-501	8-10	05/11/92	Yes	18-TP-501-S-3	DNT-TOTAL	DNT - Total	0.04		mg/kg
18-TP-501	8-10	05/11/92	Yes	18-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-501	8-10	05/11/92	Yes	18-TP-501-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	7440-38-2	Arsenic	2.4		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	7440-50-8	Copper	14.0		mg/kg
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	7439-92-1	Lead	5.3	U	mg/kg
18-TP-503	3-6	05/01/92	Yes	18-TP-503-S-2	7439-97-6	Mercury	0.07	U	mg/kg
18-TP-503	8-10	05/01/92	Yes	18-TP-503-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-503	8-10	05/01/92	Yes	18-TP-503-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-503	8-10	05/01/92	Yes	18-TP-503-S-3	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-503	8-10	05/01/92	Yes	18-TP-503-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-521	8-10	05/12/92	Yes	18-TP-521-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-521	8-10	05/12/92	Yes	18-TP-521-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-521	8-10	05/12/92	Yes	18-TP-521-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-521	8-10	05/12/92	Yes	18-TP-521-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-522	8-10	05/13/92	Yes	18-TP-522-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-523	3-6	05/13/92	Yes	18-TP-523-S-2	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TP-523	3-6	05/13/92	Yes	18-TP-523-S-2	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
18-TP-523	3-6	05/13/92	Yes	18-TP-523-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-523	3-6	05/13/92	Yes	18-TP-523-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-523	8-10	05/13/92	Yes	18-TP-523-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-524	3-6	05/12/92	Yes	18-TP-524-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-524	8-10	05/12/92	Yes	18-TP-524-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	DNT-TOTAL	DNT - Total	0.8		mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	98-95-3	Nitrobenzene	1.3	U	mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	7440-38-2	Arsenic	4.6	J	mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	7440-50-8	Copper	18.6		mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-525	3-6	05/12/92	Yes	18-TP-525-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-525	8-10	05/12/92	Yes	18-TP-525-S-3	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
18-TP-525	8-10	05/12/92	Yes	18-TP-525-S-3	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-525	8-10	05/12/92	Yes	18-TP-525-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-525	8-10	05/12/92	Yes	18-TP-525-S-3	7439-92-1	Lead	5.0	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	7440-38-2	Arsenic	4.4		mg/kg
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	7440-50-8	Copper	28.5		mg/kg
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	7439-92-1	Lead	5.2	U	mg/kg
18-TP-526	3-6	04/30/92	Yes	18-TP-526-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-526	8-10	04/30/92	Yes	18-TP-526-S-3	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-TP-526	8-10	04/30/92	Yes	18-TP-526-S-3	DNT-TOTAL	DNT - Total	0.05		mg/kg
18-TP-526	8-10	04/30/92	Yes	18-TP-526-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-526	8-10	04/30/92	Yes	18-TP-526-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-527	0-1	05/13/92	Yes	18-TP-527-S-1-DAVG	7439-92-1	Lead	5.0	U	mg/kg
18-TP-527	3-6	05/13/92	Yes	18-TP-527-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-527	3-6	05/13/92	Yes	18-TP-527-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-527	3-6	05/13/92	Yes	18-TP-527-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-527	3-6	05/13/92	Yes	18-TP-527-S-2-DAVG	7439-92-1	Lead	5.0	U	mg/kg
18-TP-527	8-10	05/13/92	Yes	18-TP-527-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-528	3-6	05/13/92	Yes	18-TP-528-S-2	7439-92-1	Lead	6.0		mg/kg
18-TP-528	8-10	05/13/92	Yes	18-TP-528-S-3	7439-92-1	Lead	6.0		mg/kg
18-TP-529	0-1	05/13/92	Yes	18-TP-529-S-1	7439-92-1	Lead	5.0	U	mg/kg
18-TP-529	3-6	05/13/92	Yes	18-TP-529-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-529	3-6	05/13/92	Yes	18-TP-529-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-529	3-6	05/13/92	Yes	18-TP-529-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-529	3-6	05/13/92	Yes	18-TP-529-S-2	7439-92-1	Lead	7.0		mg/kg
18-TP-529	8-10	05/13/92	Yes	18-TP-529-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-530	0-1	05/13/92	Yes	18-TP-530-S-1	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TP-530	0-1	05/13/92	Yes	18-TP-530-S-1	DNT-TOTAL	DNT - Total	0.03	U	mg/kg
18-TP-530	0-1	05/13/92	Yes	18-TP-530-S-1	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-530	0-1	05/13/92	Yes	18-TP-530-S-1	7439-92-1	Lead	5.0	U	mg/kg
18-TP-530	3-6	05/13/92	Yes	18-TP-530-S-2	7439-92-1	Lead	5.0	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-530	8-10	05/13/92	Yes	18-TP-530-S-3	7439-92-1	Lead	5.0		mg/kg
18-TP-53	0-1	07/06/93	Yes	18-TP-53-S-1	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
18-TP-53	0-1	07/06/93	Yes	18-TP-53-S-1	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
18-TP-53	0-1	07/06/93	Yes	18-TP-53-S-1	98-95-3	Nitrobenzene	0.1	UJ	mg/kg
18-TP-549	0-1	05/01/92	Yes	18-TP-549-S-1	118-96-7	2,4,6-Trinitrotoluene	0.4	J	mg/kg
18-TP-549	0-1	05/01/92	Yes	18-TP-549-S-1	DNT-TOTAL	DNT - Total	0.09		mg/kg
18-TP-549	0-1	05/01/92	Yes	18-TP-549-S-1	98-95-3	Nitrobenzene	1.3	UJ	mg/kg
18-TP-549	0-1	05/01/92	Yes	18-TP-549-S-1	7439-92-1	Lead	85.0		mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	7440-38-2	Arsenic	1.8		mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	7440-50-8	Copper	11.0		mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-549	3-6	05/01/92	Yes	18-TP-549-S-2	7439-97-6	Mercury	0.08	U	mg/kg
18-TP-549	8-10	05/01/92	Yes	18-TP-549-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-549	8-10	05/01/92	Yes	18-TP-549-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-549	8-10	05/01/92	Yes	18-TP-549-S-3	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-549	8-10	05/01/92	Yes	18-TP-549-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-600	8-10	11/05/92	Yes	18-TP-600-S-2	118-96-7	2,4,6-Trinitrotoluene	0.7		mg/kg
18-TP-600	8-10	11/05/92	Yes	18-TP-600-S-2	DNT-TOTAL	DNT - Total	0.09		mg/kg
18-TP-600	8-10	11/05/92	Yes	18-TP-600-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-604	3-6	11/05/92	Yes	18-TP-604-S-1	118-96-7	2,4,6-Trinitrotoluene	0.005		mg/kg
18-TP-604	3-6	11/05/92	Yes	18-TP-604-S-1	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-604	3-6	11/05/92	Yes	18-TP-604-S-1	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-604	8-10	11/05/92	Yes	18-TP-604-S-2	118-96-7	2,4,6-Trinitrotoluene	0.03		mg/kg
18-TP-604	8-10	11/05/92	Yes	18-TP-604-S-2	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-604	8-10	11/05/92	Yes	18-TP-604-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-GS-22	3-4	07/02/93	Yes	18-TP-GS-22-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-25	0-1	07/02/93	Yes	18-TP-GS-25-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-GS-25	3-4	07/02/93	Yes	18-TP-GS-25-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-38	0-1	07/02/93	Yes	18-TP-GS-38-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-38	3-4	07/02/93	Yes	18-TP-GS-38-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-40	0-1	07/02/93	Yes	18-TP-GS-40-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-40	3-4	07/02/93	Yes	18-TP-GS-40-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-41	0-1	07/02/93	Yes	18-TP-GS-41-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-41	3-4	07/02/93	Yes	18-TP-GS-41-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-42	0-1	07/02/93	Yes	18-TP-GS-42-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-42	3-4	07/02/93	Yes	18-TP-GS-42-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-53	0-1	07/02/93	Yes	18-TP-GS-53-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-53	3-4	07/02/93	Yes	18-TP-GS-53-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-54	0-1	07/02/93	Yes	18-TP-GS-54-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-54	3-4	07/02/93	Yes	18-TP-GS-54-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-59	0-1	07/02/93	Yes	18-TP-GS-59-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-59	3-4	07/02/93	Yes	18-TP-GS-59-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-62	0-1	07/02/93	Yes	18-TP-GS-62-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-62	3-4	07/02/93	Yes	18-TP-GS-62-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-70	0-1	07/02/93	Yes	18-TP-GS-70-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-70	3-4	07/02/93	Yes	18-TP-GS-70-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-72	0-1	07/02/93	Yes	18-TP-GS-72-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-72	3-4	07/02/93	Yes	18-TP-GS-72-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-81	0-1	07/02/93	Yes	18-TP-GS-81-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-81	3-4	07/02/93	Yes	18-TP-GS-81-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-101N	0-1	07/02/93	Yes	18-TR-101N,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-101N	3-4	07/02/93	Yes	18-TR-101N,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-102E	3-4	06/28/93	Yes	18-TR-102E,S-2	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TR-102E	3-4	06/28/93	Yes	18-TR-102E,S-2	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
18-TR-102E	3-4	06/28/93	Yes	18-TR-102E,S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TR-102W	3-4	07/02/93	Yes	18-TR-102W,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-103S	3-4	07/02/93	Yes	18-TR-103S,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TR-109E	3-4	07/02/93	Yes	18-TR-109E,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-109W	3-4	07/02/93	Yes	18-TR-109W,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-110N	3-4	07/02/93	Yes	18-TR-110N,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-110S	3-4	07/02/93	Yes	18-TR-110S,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-111E	3-4	07/02/93	Yes	18-TR-111E,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-111W	3-4	07/02/93	Yes	18-TR-111W,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-112N	3-4	07/02/93	Yes	18-TR-112N,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-112S	3-4	07/02/93	Yes	18-TR-112S,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-113N	3-4	07/02/93	Yes	18-TR-113N,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-114	3-4	07/01/93	Yes	18-TR-114-S-2	118-96-7	2,4,6-Trinitrotoluene	0.3	UJ	mg/kg
18-TR-114	3-4	07/01/93	Yes	18-TR-114-S-2	DNT-TOTAL	DNT - Total	1.3	U	mg/kg
18-TR-114	3-4	07/01/93	Yes	18-TR-114-S-2	98-95-3	Nitrobenzene	6.5	UJ	mg/kg
18-TR-114W	0-1	07/02/93	Yes	18-TR-114W,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-114W	3-4	07/02/93	Yes	18-TR-114W,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-115N	0-1	07/02/93	Yes	18-TR-115N,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-115N	3-4	07/02/93	Yes	18-TR-115N,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-115S	0-1	07/02/93	Yes	18-TR-115S,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-115S	3-4	07/02/93	Yes	18-TR-115S,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-116E	0-1	07/02/93	Yes	18-TR-116E,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-116E	3-4	07/02/93	Yes	18-TR-116E,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-116W	0-1	07/02/93	Yes	18-TR-116W,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-116W	3-4	07/02/93	Yes	18-TR-116W,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-101	1-1.5	08/26/93	Yes	18-VS-101	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
18-VS-101	1-1.5	08/26/93	Yes	18-VS-101	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-101	1-1.5	08/26/93	Yes	18-VS-101	98-95-3	Nitrobenzene	0.7	U	mg/kg
18-VS-103	6-6.5	08/26/93	Yes	18-VS-103	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-103	6-6.5	08/26/93	Yes	18-VS-103	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-103	6-6.5	08/26/93	Yes	18-VS-103	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-105	15-15.5	08/26/93	Yes	18-VS-105	118-96-7	2,4,6-Trinitrotoluene	1.0		mg/kg
18-VS-105	15-15.5	08/26/93	Yes	18-VS-105	DNT-TOTAL	DNT - Total	0.6	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-105	15-15.5	08/26/93	Yes	18-VS-105	98-95-3	Nitrobenzene	3.1	U	mg/kg
18-VS-107	1-2	08/26/93	Yes	18-VS-107	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-107	1-2	08/26/93	Yes	18-VS-107	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-107	1-2	08/26/93	Yes	18-VS-107	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-108	3-4	08/26/93	Yes	18-VS-108	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-108	3-4	08/26/93	Yes	18-VS-108	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-108	3-4	08/26/93	Yes	18-VS-108	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-109	4-6	08/26/93	Yes	18-VS-109	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-109	4-6	08/26/93	Yes	18-VS-109	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-109	4-6	08/26/93	Yes	18-VS-109	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-110	2-4	08/26/93	Yes	18-VS-110	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-110	2-4	08/26/93	Yes	18-VS-110	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-110	2-4	08/26/93	Yes	18-VS-110	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-VS-112	1-3	08/26/93	Yes	18-VS-112	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-112	1-3	08/26/93	Yes	18-VS-112	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-112	1-3	08/26/93	Yes	18-VS-112	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-113	4-5	08/26/93	Yes	18-VS-113	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-113	4-5	08/26/93	Yes	18-VS-113	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-113	4-5	08/26/93	Yes	18-VS-113	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-114	0-1	08/26/93	Yes	18-VS-114	118-96-7	2,4,6-Trinitrotoluene	0.007		mg/kg
18-VS-114	0-1	08/26/93	Yes	18-VS-114	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-114	0-1	08/26/93	Yes	18-VS-114	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-116	2-4	08/26/93	Yes	18-VS-116	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-116	2-4	08/26/93	Yes	18-VS-116	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-VS-116	2-4	08/26/93	Yes	18-VS-116	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-118	4-7	08/26/93	Yes	18-VS-118	118-96-7	2,4,6-Trinitrotoluene	0.003		mg/kg
18-VS-118	4-7	08/26/93	Yes	18-VS-118	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-118	4-7	08/26/93	Yes	18-VS-118	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-119	1-2	08/26/93	Yes	18-VS-119	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-119	1-2	08/26/93	Yes	18-VS-119	DNT-TOTAL	DNT - Total	0.03		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-119	1-2	08/26/93	Yes	18-VS-119	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-120	0-1	08/26/93	Yes	18-VS-120-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-120	0-1	08/26/93	Yes	18-VS-120-DAVG	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-120	0-1	08/26/93	Yes	18-VS-120-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-122	0-2	08/26/93	Yes	18-VS-122	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-122	0-2	08/26/93	Yes	18-VS-122	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-122	0-2	08/26/93	Yes	18-VS-122	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-124	1-2	08/26/93	Yes	18-VS-124	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-124	1-2	08/26/93	Yes	18-VS-124	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-124	1-2	08/26/93	Yes	18-VS-124	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-125	1-2	08/26/93	Yes	18-VS-125	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-VS-125	1-2	08/26/93	Yes	18-VS-125	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-125	1-2	08/26/93	Yes	18-VS-125	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-126	3-4	08/26/93	Yes	18-VS-126	118-96-7	2,4,6-Trinitrotoluene	0.05		mg/kg
18-VS-126	3-4	08/26/93	Yes	18-VS-126	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-126	3-4	08/26/93	Yes	18-VS-126	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-127	1-2	08/26/93	Yes	18-VS-127	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-127	1-2	08/26/93	Yes	18-VS-127	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-127	1-2	08/26/93	Yes	18-VS-127	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-128	4-5	08/26/93	Yes	18-VS-128	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-128	4-5	08/26/93	Yes	18-VS-128	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-128	4-5	08/26/93	Yes	18-VS-128	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-136	7-9	08/26/93	Yes	18-VS-136	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-136	7-9	08/26/93	Yes	18-VS-136	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-136	7-9	08/26/93	Yes	18-VS-136	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-137	10-12	08/26/93	Yes	18-VS-137	118-96-7	2,4,6-Trinitrotoluene	0.006		mg/kg
18-VS-137	10-12	08/26/93	Yes	18-VS-137	DNT-TOTAL	DNT - Total	0.07		mg/kg
18-VS-137	10-12	08/26/93	Yes	18-VS-137	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-138	11-14	08/26/93	Yes	18-VS-138	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-138	11-14	08/26/93	Yes	18-VS-138	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-138	11-14	08/26/93	Yes	18-VS-138	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-139	5-7	08/26/93	Yes	18-VS-139	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-139	5-7	08/26/93	Yes	18-VS-139	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-139	5-7	08/26/93	Yes	18-VS-139	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-13B	3-6	12/09/92	Yes	18-VS-13B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-140	3-6	08/26/93	Yes	18-VS-140	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-140	3-6	08/26/93	Yes	18-VS-140	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-140	3-6	08/26/93	Yes	18-VS-140	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-141	3-3.5	08/26/93	Yes	18-VS-141	118-96-7	2,4,6-Trinitrotoluene	0.006		mg/kg
18-VS-141	3-3.5	08/26/93	Yes	18-VS-141	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-141	3-3.5	08/26/93	Yes	18-VS-141	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-142	2-2.5	08/26/93	Yes	18-VS-142	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-142	2-2.5	08/26/93	Yes	18-VS-142	DNT-TOTAL	DNT - Total	0.009		mg/kg
18-VS-142	2-2.5	08/26/93	Yes	18-VS-142	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-149	0-1	08/26/93	Yes	18-VS-149	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-149	0-1	08/26/93	Yes	18-VS-149	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-149	0-1	08/26/93	Yes	18-VS-149	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-14B	3-6	12/09/92	Yes	18-VS-14B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-151	2-3	08/26/93	Yes	18-VS-151	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-151	2-3	08/26/93	Yes	18-VS-151	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-151	2-3	08/26/93	Yes	18-VS-151	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-163	2-2.5	08/26/93	Yes	18-VS-163	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-163	2-2.5	08/26/93	Yes	18-VS-163	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-163	2-2.5	08/26/93	Yes	18-VS-163	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-164	15-15.5	08/26/93	Yes	18-VS-164	118-96-7	2,4,6-Trinitrotoluene	0.6		mg/kg
18-VS-164	15-15.5	08/26/93	Yes	18-VS-164	DNT-TOTAL	DNT - Total	0.3		mg/kg
18-VS-164	15-15.5	08/26/93	Yes	18-VS-164	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-VS-165	1-1.5	08/26/93	Yes	18-VS-165	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-165	1-1.5	08/26/93	Yes	18-VS-165	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-165	1-1.5	08/26/93	Yes	18-VS-165	98-95-3	Nitrobenzene	0.07	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-165	1-1.5	08/26/93	Yes	18-VS-165	7439-92-1	Lead	6.0	U	mg/kg
18-VS-167	0-1	08/26/93	Yes	18-VS-167	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-167	0-1	08/26/93	Yes	18-VS-167	DNT-TOTAL	DNT - Total	0.04		mg/kg
18-VS-167	0-1	08/26/93	Yes	18-VS-167	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-168	1-2	08/26/93	Yes	18-VS-168	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-168	1-2	08/26/93	Yes	18-VS-168	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-168	1-2	08/26/93	Yes	18-VS-168	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-170	0-1	08/26/93	Yes	18-VS-170-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-170	0-1	08/26/93	Yes	18-VS-170-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-170	0-1	08/26/93	Yes	18-VS-170-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-171	2-4	08/26/93	Yes	18-VS-171	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-171	2-4	08/26/93	Yes	18-VS-171	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-171	2-4	08/26/93	Yes	18-VS-171	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-172	12-14	08/26/93	Yes	18-VS-172	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-172	12-14	08/26/93	Yes	18-VS-172	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-172	12-14	08/26/93	Yes	18-VS-172	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-173	5-7	08/26/93	Yes	18-VS-173	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-173	5-7	08/26/93	Yes	18-VS-173	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-173	5-7	08/26/93	Yes	18-VS-173	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-174	8-10	08/26/93	Yes	18-VS-174	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-174	8-10	08/26/93	Yes	18-VS-174	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-174	8-10	08/26/93	Yes	18-VS-174	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-176	1-2	10/07/93	Yes	18-VS-176	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-VS-176	1-2	10/07/93	Yes	18-VS-176	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-176	1-2	10/07/93	Yes	18-VS-176	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-177	5-5.5	10/07/93	Yes	18-VS-177	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-177	5-5.5	10/07/93	Yes	18-VS-177	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-177	5-5.5	10/07/93	Yes	18-VS-177	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-212	1-1.5	09/21/99	Yes	18-VS-212	7440-38-2	Arsenic	2.0	U	mg/kg
18-VS-212	1-1.5	09/21/99	Yes	18-VS-212	7439-92-1	Lead	16.0		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-213	1-1.5	09/21/99	Yes	18-VS-213	7440-38-2	Arsenic	5.8		mg/kg
18-VS-213	1-1.5	09/21/99	Yes	18-VS-213	7439-92-1	Lead	61.0		mg/kg
18-VS-214	1-1.5	09/21/99	Yes	18-VS-214	7440-38-2	Arsenic	2.2		mg/kg
18-VS-214	1-1.5	09/21/99	Yes	18-VS-214	7439-92-1	Lead	62.0		mg/kg
18-VS-215	1-1.5	09/21/99	Yes	18-VS-215	7440-38-2	Arsenic	2.0	U	mg/kg
18-VS-215	1-1.5	09/21/99	Yes	18-VS-215	7439-92-1	Lead	42.0		mg/kg
18-VS-261	1-1.5	09/23/99	Yes	18-VS-261	7440-38-2	Arsenic	60.0		mg/kg
18-VS-261	1-1.5	09/23/99	Yes	18-VS-261	7439-92-1	Lead	37.0		mg/kg
18-VS-262	1-1.5	09/23/99	Yes	18-VS-262	7440-38-2	Arsenic	29.0		mg/kg
18-VS-262	1-1.5	09/23/99	Yes	18-VS-262	7439-92-1	Lead	12.0		mg/kg
18-VS-43	1-2	04/12/93	Yes	18-VS-43	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
18-VS-43	1-2	04/12/93	Yes	18-VS-43	DNT-TOTAL	DNT - Total	0.07		mg/kg
18-VS-43	1-2	04/12/93	Yes	18-VS-43	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-69	2-2.5	08/26/93	Yes	18-VS-69	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-69	2-2.5	08/26/93	Yes	18-VS-69	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-69	2-2.5	08/26/93	Yes	18-VS-69	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-69	2-2.5	08/26/93	Yes	18-VS-69	7439-92-1	Lead	5.3	U	mg/kg
18-VS-79	0-1	08/26/93	Yes	18-VS-79	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-79	0-1	08/26/93	Yes	18-VS-79	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-79	0-1	08/26/93	Yes	18-VS-79	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-80	1-2	08/26/93	Yes	18-VS-80-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.008		mg/kg
18-VS-80	1-2	08/26/93	Yes	18-VS-80-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-80	1-2	08/26/93	Yes	18-VS-80-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-81	1-2	08/26/93	Yes	18-VS-81	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-81	1-2	08/26/93	Yes	18-VS-81	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-81	1-2	08/26/93	Yes	18-VS-81	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-89	6-6.5	08/26/93	Yes	18-VS-89	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-89	6-6.5	08/26/93	Yes	18-VS-89	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-89	6-6.5	08/26/93	Yes	18-VS-89	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-8A	0-1	12/08/92	Yes	18-VS-8A	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-8A	0-1	12/08/92	Yes	18-VS-8A	7439-92-1	Lead	8.1		mg/kg
18-VS-8B	3-6	12/08/92	Yes	18-VS-8B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-91	7-7.5	08/26/93	Yes	18-VS-91	118-96-7	2,4,6-Trinitrotoluene	0.09		mg/kg
18-VS-91	7-7.5	08/26/93	Yes	18-VS-91	DNT-TOTAL	DNT - Total	0.07		mg/kg
18-VS-91	7-7.5	08/26/93	Yes	18-VS-91	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-93	7-7.5	08/26/93	Yes	18-VS-93	118-96-7	2,4,6-Trinitrotoluene	0.4		mg/kg
18-VS-93	7-7.5	08/26/93	Yes	18-VS-93	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-93	7-7.5	08/26/93	Yes	18-VS-93	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-VS-94	7-7.5	08/26/93	Yes	18-VS-94	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-94	7-7.5	08/26/93	Yes	18-VS-94	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-94	7-7.5	08/26/93	Yes	18-VS-94	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-95	2-2.5	08/26/93	Yes	18-VS-95	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
18-VS-95	2-2.5	08/26/93	Yes	18-VS-95	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-95	2-2.5	08/26/93	Yes	18-VS-95	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-VS-96	1-1.5	08/26/93	Yes	18-VS-96	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
18-VS-96	1-1.5	08/26/93	Yes	18-VS-96	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-96	1-1.5	08/26/93	Yes	18-VS-96	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-VS-97	1-1.5	08/26/93	Yes	18-VS-97	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-97	1-1.5	08/26/93	Yes	18-VS-97	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-97	1-1.5	08/26/93	Yes	18-VS-97	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-98	3-3.5	08/26/93	Yes	18-VS-98	118-96-7	2,4,6-Trinitrotoluene	0.008		mg/kg
18-VS-98	3-3.5	08/26/93	Yes	18-VS-98	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-98	3-3.5	08/26/93	Yes	18-VS-98	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-99	3-3.5	08/26/93	Yes	18-VS-99	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-99	3-3.5	08/26/93	Yes	18-VS-99	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-99	3-3.5	08/26/93	Yes	18-VS-99	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-9B	3-6	12/08/92	Yes	18-VS-9B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18R-112-100E	0-0.5	12/08/93	Yes	18R-112-100E	7440-38-2	Arsenic	18.0		mg/kg
F-277	2-2.5	08/28/01	Yes	01-F33-SS[F-277]C2-005	7440-38-2	Arsenic	4.7		mg/kg
F-277	2-2.5	08/28/01	Yes	01-F33-SS[F-277]C2-005	7439-92-1	Lead	3.0		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-278	2-2.5	08/28/01	Yes	01-F33-SS[F-278]C2-005	7440-38-2	Arsenic	6.5		mg/kg
F-278	2-2.5	08/28/01	Yes	01-F33-SS[F-278]C2-005	7439-92-1	Lead	4.0		mg/kg
F-279	2-2.5	08/28/01	Yes	01-F33-SS[F-279]C2-005	7440-38-2	Arsenic	8.6		mg/kg
F-279	2-2.5	08/28/01	Yes	01-F33-SS[F-279]C2-005	7439-92-1	Lead	12.0		mg/kg
F-280	2-2.5	08/28/01	Yes	01-F33-SS[F-280]C2-005	7440-38-2	Arsenic	4.9		mg/kg
F-280	2-2.5	08/28/01	Yes	01-F33-SS[F-280]C2-005	7439-92-1	Lead	5.1		mg/kg
LR-106-S-2	0.5-1	12/16/93	Yes	LR-106-S-2	7440-38-2	Arsenic	22.0		mg/kg
LR-106-S-3	1-2	12/16/93	Yes	LR-106-S-3	7440-38-2	Arsenic	5.2		mg/kg
MSU-26-VS-29A	4.5-5	05/07/04	Yes	3-MSU-26-VS-29A_05/07/04_4.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-26-VS-3-8-E	3-8	07/01/03	Yes	01-SS-[MSU-26-VS-3-8-E]-C2_07/01/03_8	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-26-VS-3-8-N	3-8	07/01/03	Yes	01-SS-[MSU-26-VS-3-8-N]-C2_07/01/03_8	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-26-VS-3-8-S	3-8	07/01/03	Yes	01-SS-[MSU-26-VS-3-8-S]-C2_07/01/03_8	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-26-VS-3-8-W	3-8	07/01/03	Yes	01-SS-[MSU-26-VS-3-8-W]-C2_07/01/03_8	118-96-7	2,4,6-Trinitrotoluene	0.1	1.75	mg/kg
MSU-26-VS-6/2	0-1.5	04/29/04	Yes	MSU-26-VS-6/2_04/29/04_1.5	7439-92-1	Lead	2.4		mg/kg
MSU-27-VS-3-4-E	3-4	07/08/03	Yes	01-SB-[MSU-27-VS-3-4-E]-C2_07/08/03_4	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-27-VS-3-4-N	3-4	07/08/03	Yes	01-SB-[MSU-27-VS-3-4-N]-C2_07/08/03_4	118-96-7	2,4,6-Trinitrotoluene	0.1	J	mg/kg
MSU-27-VS-3-4-S	3-4	07/08/03	Yes	01-SB-[MSU-27-VS-3-4-S]-C2_07/08/03_4	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-27-VS-3-4-W	3-4	07/08/03	Yes	01-SB-[MSU-27-VS-3-4-W]-C2_07/08/03_4	118-96-7	2,4,6-Trinitrotoluene	0.1	J	mg/kg
MSU-27-VS-B	4-4.5	07/08/03	Yes	01-SB-[MSU-27-VS-B]-C2_07/08/03_4	118-96-7	2,4,6-Trinitrotoluene	0.08	J	mg/kg
MSU-28-B	17-17.5	07/08/03	Yes	01-SB-[MSU-28-VS-B]-C2_07/08/03_17	118-96-7	2,4,6-Trinitrotoluene	0.3		mg/kg
MSU-28-E	6-6.5	07/08/03	Yes	01-SB-[MSU-28-E]-D1_07/08/03_6	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-28-N	6-6.5	07/08/03	Yes	01-SB-[MSU-28-N]-D1_07/08/03_6	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-28-S	6-6.5	07/08/03	Yes	01-SB-[MSU-28-S]-D1_07/08/03_6	118-96-7	2,4,6-Trinitrotoluene	0.8		mg/kg
MSU-28-VS-0-17-E	0-17	07/08/03	Yes	01-SB-[MSU-28-VS-0-17-E]-C2_07/08/03_17	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-28-VS-0-17-N	0-17	07/08/03	Yes	01-SB-[MSU-28-VS-0-17-N]-C2_07/08/03_17	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-28-VS-0-17-S	17-17.5	09/23/03	Yes	02-SS-[MSU-28-VS-0-17-S]-C2_09/23/03_17	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-28-VS-0-17-W	0-17	07/08/03	Yes	01-SB-[MSU-28-VS-0-17-W]-C2_07/08/03_17	118-96-7	2,4,6-Trinitrotoluene	0.4		mg/kg
MSU-28-W	6-6.5	07/08/03	Yes	01-SB-[MSU-28-W]-D1_07/08/03_6	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-70-E	2-2.5	06/25/03	Yes	01-SS-[MSU-70-E]-D1_06/25/03_0	7440-38-2	Arsenic	23.3		mg/kg
MSU-70-N	2-2.5	06/25/03	Yes	01-SS-[MSU-70-N]-D1_06/25/03_0	7440-38-2	Arsenic	33.4		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-70-S	2-2.5	06/25/03	Yes	01-SS-[MSU-70-S]-D1_06/25/03_0	7440-38-2	Arsenic	3.5		mg/kg
MSU-70-S	2-2.5	06/25/03	Yes	01-SS-[MSU-70-S]-D1_06/25/03_0	7439-92-1	Lead	4.7		mg/kg
MSU-70-VS-B	4-4.5	07/22/03	Yes	01-SS-[MSU-70-VS-B]-C2_07/22/03_4	7440-38-2	Arsenic	3.2		mg/kg
MSU-70-VS-B	4-4.5	07/22/03	Yes	01-SS-[MSU-70-VS-B]-C2_07/22/03_4	7439-92-1	Lead	15.4		mg/kg
MSU-70-W	2-2.5	06/25/03	Yes	01-SS-[MSU-70-W]-D1_06/25/03_0	7440-38-2	Arsenic	28.5		mg/kg
MSU-71-E	1.5-2	06/25/03	Yes	01-SS-[MSU-71-E]-D1_06/25/03_1.5	7440-38-2	Arsenic	5.3		mg/kg
MSU-71-E	1.5-2	06/25/03	Yes	01-SS-[MSU-71-E]-D1_06/25/03_1.5	7439-92-1	Lead	9.7		mg/kg
MSU-71-N	1.5-2	06/25/03	Yes	01-SS-[MSU-71-N]-D1_AVG_06/25/03_1.5	7440-38-2	Arsenic	5.6		mg/kg
MSU-71-N	1.5-2	06/25/03	Yes	01-SS-[MSU-71-N]-D1_AVG_06/25/03_1.5	7439-92-1	Lead	14.7		mg/kg
MSU-71-S	1.5-2	06/25/03	Yes	01-SS-[MSU-71-S]-D1_06/25/03_1.5	7440-38-2	Arsenic	11.7		mg/kg
MSU-71-S	1.5-2	06/25/03	Yes	01-SS-[MSU-71-S]-D1_06/25/03_1.5	7439-92-1	Lead	40.5		mg/kg
MSU-71-VS-B	3.5-4	07/31/03	Yes	01-SB-[MSU-71-VS-B]-C2_07/31/03_3.5	7439-92-1	Lead	3.8		mg/kg
MSU-71-W	1.5-2	06/25/03	Yes	01-SS-[MSU-71-W]-D1_06/25/03_1.5	7440-38-2	Arsenic	12.4		mg/kg
MSU-71-W	1.5-2	06/25/03	Yes	01-SS-[MSU-71-W]-D1_06/25/03_1.5	7439-92-1	Lead	30.9		mg/kg
MSU-72-E	1-4.5	06/26/03	No	01-SS-[MSU-72-E]-D1_06/26/03_0	7440-38-2	Arsenic	13.0		mg/kg
MSU-72-E	1-4.5	12/12/03	Yes	07-SS-[MSU-72-E]-C2_12/12/03_0	7439-92-1	Lead	21.6		mg/kg
MSU-72-N	1-4.5	06/26/03	Yes	01-SS-[MSU-72-N]-D1_06/26/03_0	7440-38-2	Arsenic	11.5		mg/kg
MSU-72-N	1-4.5	06/26/03	Yes	01-SS-[MSU-72-N]-D1_06/26/03_0	7439-92-1	Lead	53.9		mg/kg
MSU-72-S	1-4.5	06/26/03	Yes	01-SS-[MSU-72-S]-D1_06/26/03_0	7440-38-2	Arsenic	7.5		mg/kg
MSU-72-S	1-4.5	06/26/03	Yes	01-SS-[MSU-72-S]-D1_06/26/03_0	7439-92-1	Lead	118.0		mg/kg
MSU-72-VS-B	4.5-5	12/12/03	Yes	02-SS-[MSU-72-VS-B]-C2_12/12/03_4.5	7440-38-2	Arsenic	1.9	U	mg/kg
MSU-72-VS-B	4.5-5	12/12/03	Yes	02-SS-[MSU-72-VS-B]-C2_12/12/03_4.5	7439-92-1	Lead	11.5		mg/kg
MSU-72-W	1-4.5	06/26/03	Yes	01-SS-[MSU-72-W]-D1_06/26/03_0	7440-38-2	Arsenic	9.7		mg/kg
MSU-72-W	1-4.5	06/26/03	Yes	01-SS-[MSU-72-W]-D1_06/26/03_0	7439-92-1	Lead	56.8		mg/kg
MSU-78-VS-B	1.5-3	07/02/03	Yes	01-SS-[MSU-78-VS-B]-C2_07/02/03_1.5	7440-38-2	Arsenic	9.7		mg/kg
MSU-78-VS-B	1.5-3	07/02/03	Yes	01-SS-[MSU-78-VS-B]-C2_07/02/03_1.5	7439-92-1	Lead	21.7		mg/kg
MSU-79-VS-B	1.5-3	07/02/03	Yes	01-SS-[MSU-79-VS-B]-C2_07/02/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-79-VS-B	1.5-3	07/02/03	Yes	01-SS-[MSU-79-VS-B]-C2_07/02/03_1.5	7439-92-1	Lead	10.0		mg/kg
MSU-80-VS-B	1.5-3	07/02/03	Yes	01-SS-[MSU-80-VS-B]-C2_07/02/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-80-VS-B	1.5-3	07/02/03	Yes	01-SS-[MSU-80-VS-B]-C2_07/02/03_1.5	7439-92-1	Lead	11.9		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-81-VS-B	3.5-4	07/02/03	No	01-SS-[MSU-81-VS-B]-C2_07/02/03_3.5	7440-38-2	Arsenic	10.7		mg/kg
MSU-81-VS-B	4.5-4	07/28/03	Yes	02-SS-[MSU-81-VS-B]-C2_07/28/03_4.5	7439-92-1	Lead	8.6		mg/kg
MSU-F-38-2	2-2.5	05/19/03	Yes	01-SS-[MSU-F-38-2]-C1_05/19/03_2	7440-38-2	Arsenic	4.8		mg/kg
MSU-F-38-2	2-2.5	05/19/03	Yes	01-SS-[MSU-F-38-2]-C1_05/19/03_2	7439-92-1	Lead	3.6		mg/kg
MSU-F-38-3	2-2.5	05/19/03	Yes	01-SS-[MSU-F-38-3]-C1_05/19/03_2	7440-38-2	Arsenic	3.6		mg/kg
MSU-F-38-3	2-2.5	05/19/03	Yes	01-SS-[MSU-F-38-3]-C1_05/19/03_2	7439-92-1	Lead	2.6		mg/kg
MSU-F-CU-4A1	2-2.5	04/29/03	Yes	01-SS-[MSU-F-CU-4A1]-C1_04/29/03_2	7440-38-2	Arsenic	14.9		mg/kg
MSU-F-CU-4A1	2-2.5	04/29/03	Yes	01-SS-[MSU-F-CU-4A1]-C1_04/29/03_2	7439-92-1	Lead	65.9		mg/kg
MSU-F-CU-4A2	2-2.5	04/29/03	Yes	01-SS-[MSU-F-CU-4A2]-C1_04/29/03_2	7440-38-2	Arsenic	12.2		mg/kg
MSU-F-CU-4A2	2-2.5	04/29/03	Yes	01-SS-[MSU-F-CU-4A2]-C1_04/29/03_2	7439-92-1	Lead	35.6		mg/kg
MSU-F-CU-4A3	2-2.5	04/29/03	Yes	01-SS-[MSU-F-CU-4A3]-C1_04/29/03_2	7440-38-2	Arsenic	4.2		mg/kg
MSU-F-CU-4A3	2-2.5	04/29/03	Yes	01-SS-[MSU-F-CU-4A3]-C1_04/29/03_2	7439-92-1	Lead	8.4		mg/kg
MSU-NGRR-11-2	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-2]C1_05/13/03_1.5	7440-38-2	Arsenic	9.8		mg/kg
MSU-NGRR-11-2	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-2]C1_05/13/03_1.5	7439-92-1	Lead	3.9		mg/kg
MSU-NGRR-11-3	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-3]C1_05/13/03_1.5	7440-38-2	Arsenic	8.7		mg/kg
MSU-NGRR-11-3	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-3]C1_05/13/03_1.5	7439-92-1	Lead	2.2		mg/kg
MSU-NGRR-11-4	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-4]C1_05/13/03_1.5	7440-38-2	Arsenic	2.9		mg/kg
MSU-NGRR-11-4	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-4]C1_05/13/03_1.5	7439-92-1	Lead	2.4		mg/kg
MSU-NGRR-11-5	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-5]C1_05/13/03_1.5	7440-38-2	Arsenic	3.1		mg/kg
MSU-NGRR-11-5	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-5]C1_05/13/03_1.5	7439-92-1	Lead	3.2		mg/kg
MSU-NGRR-11-6	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-6]C1_05/13/03_1.5	7440-38-2	Arsenic	36.8		mg/kg
MSU-NGRR-11-6	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-6]C1_05/13/03_1.5	7439-92-1	Lead	6.0		mg/kg
MSU-NGRR-11	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-1]C1_05/13/03_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-NGRR-11	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-11-1]C1_05/13/03_1.5	7439-92-1	Lead	4.2		mg/kg
MSU-NGRR-33-4	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-4]-C1_04/23/03_1.5	7440-38-2	Arsenic	8.5		mg/kg
MSU-NGRR-33-4	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-4]-C1_04/23/03_1.5	7439-92-1	Lead	62.9		mg/kg
MSU-NGRR-33-5	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-5]-C1_04/23/03_1.5	7440-38-2	Arsenic	16.2		mg/kg
MSU-NGRR-33-5	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-5]-C1_04/23/03_1.5	7439-92-1	Lead	97.6		mg/kg
MSU-NGRR-33-6	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-6]-C1_04/23/03_1.5	7440-38-2	Arsenic	3.1		mg/kg
MSU-NGRR-33-6	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-6]-C1_04/23/03_1.5	7439-92-1	Lead	3.6		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-33-7	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-7]-C1_04/24/03_1.5	7440-38-2	Arsenic	53.5		mg/kg
MSU-NGRR-33-7	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-7]-C1_04/24/03_1.5	7439-92-1	Lead	118.0		mg/kg
MSU-NGRR-33-8	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-8]-C1_04/24/03_1.5	7440-38-2	Arsenic	8.5		mg/kg
MSU-NGRR-33-8	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-8]-C1_04/24/03_1.5	7439-92-1	Lead	102.0		mg/kg
MSU-NGRR-34	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-34-1}-C1_05/19/03_1.5	7440-38-2	Arsenic	2.8		mg/kg
MSU-NGRR-34	1.5-2	05/19/03	Yes	01-SS-[MSU-NGRR-34-1}-C1_05/19/03_1.5	7439-92-1	Lead	2.5		mg/kg
MSU-NGRR-35-10	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-10]-C1_05/13/03_1.5	7440-38-2	Arsenic	3.2		mg/kg
MSU-NGRR-35-10	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-10]-C1_05/13/03_1.5	7439-92-1	Lead	2.5		mg/kg
MSU-NGRR-35-11	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-11]-C1_05/13/03_1.5	7440-38-2	Arsenic	3.7		mg/kg
MSU-NGRR-35-11	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-11]-C1_05/13/03_1.5	7439-92-1	Lead	10.1		mg/kg
MSU-NGRR-35-12	1.5-2	06/16/03	Yes	01-SS-[MSU-NGRR-35-12]-C2_06/16/03_1.5	7440-38-2	Arsenic	2.2	U	mg/kg
MSU-NGRR-35-12	1.5-2	06/16/03	Yes	01-SS-[MSU-NGRR-35-12]-C2_06/16/03_1.5	7439-92-1	Lead	4.7		mg/kg
MSU-NGRR-35-13	1.5-2	06/16/03	Yes	01-SS-[MSU-NGRR-35-13]-C2_06/16/03_1.5	7440-38-2	Arsenic	2.3		mg/kg
MSU-NGRR-35-13	1.5-2	06/16/03	Yes	01-SS-[MSU-NGRR-35-13]-C2_06/16/03_1.5	7439-92-1	Lead	10.6		mg/kg
MSU-NGRR-35-2	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-35-2]-C3_05/27/03_1.5	7440-38-2	Arsenic	21.9		mg/kg
MSU-NGRR-35-2	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-35-2]-C3_05/27/03_1.5	7439-92-1	Lead	61.5		mg/kg
MSU-NGRR-35-3	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-3]-C1_04/29/03_1.5	7440-38-2	Arsenic	5.5		mg/kg
MSU-NGRR-35-3	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-3]-C1_04/29/03_1.5	7439-92-1	Lead	5.4		mg/kg
MSU-NGRR-35-4	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-4]-C1_04/29/03_1.5	7440-38-2	Arsenic	4.5		mg/kg
MSU-NGRR-35-4	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-4]-C1_04/29/03_1.5	7439-92-1	Lead	6.0		mg/kg
MSU-NGRR-35-5	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-5]-C1_04/29/03_1.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-NGRR-35-5	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-5]-C1_04/29/03_1.5	7439-92-1	Lead	3.4		mg/kg
MSU-NGRR-35-6	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-6]-C1_04/29/03_1.5	7440-38-2	Arsenic	5.4		mg/kg
MSU-NGRR-35-6	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-6]-C1_04/29/03_1.5	7439-92-1	Lead	5.4		mg/kg
MSU-NGRR-35-8	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-8]-C1_05/13/03_1.5	7440-38-2	Arsenic	5.0		mg/kg
MSU-NGRR-35-8	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-35-8]-C1_05/13/03_1.5	7439-92-1	Lead	39.1		mg/kg
MSU-NGRR-35	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-1]-C1_04/29/03_1.5	7440-38-2	Arsenic	4.0		mg/kg
MSU-NGRR-35	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-35-1]-C1_04/29/03_1.5	7439-92-1	Lead	3.9		mg/kg
MSU-NGRR-37-2	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-2]-C1_06/09/03_1.5	7440-38-2	Arsenic	6.3		mg/kg
MSU-NGRR-37-2	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-2]-C1_06/09/03_1.5	7439-92-1	Lead	41.5		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-37-3	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-3]-C1_06/09/03_1.5	7440-38-2	Arsenic	2.8		mg/kg
MSU-NGRR-37-3	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-3]-C1_06/09/03_1.5	7439-92-1	Lead	3.2		mg/kg
MSU-NGRR-37-4	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-4]-C1_06/09/03_1.5	7440-38-2	Arsenic	6.5		mg/kg
MSU-NGRR-37-4	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-4]-C1_06/09/03_1.5	7439-92-1	Lead	7.9		mg/kg
MSU-NGRR-37	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-1]-C1_06/09/03_1.5	7440-38-2	Arsenic	18.6		mg/kg
MSU-NGRR-37	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-37-1]-C1_06/09/03_1.5	7439-92-1	Lead	28.1		mg/kg
MSU-NGRR-39-2	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-2]-C1_06/09/03_1.5	7440-38-2	Arsenic	8.9		mg/kg
MSU-NGRR-39-2	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-2]-C1_06/09/03_1.5	7439-92-1	Lead	17.5		mg/kg
MSU-NGRR-39-3	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-3]-C1_06/09/03_1.5	7440-38-2	Arsenic	5.2		mg/kg
MSU-NGRR-39-3	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-3]-C1_06/09/03_1.5	7439-92-1	Lead	5.3		mg/kg
MSU-NGRR-39-4	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-4]-C1_06/09/03_1.5	7440-38-2	Arsenic	7.8		mg/kg
MSU-NGRR-39-4	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-4]-C1_06/09/03_1.5	7439-92-1	Lead	12.5		mg/kg
MSU-NGRR-39-5	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-5]-C1_06/09/03_1.5	7440-38-2	Arsenic	5.8		mg/kg
MSU-NGRR-39-5	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-5]-C1_06/09/03_1.5	7439-92-1	Lead	9.7		mg/kg
MSU-NGRR-39	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-1]-C1_06/09/03_1.5	7440-38-2	Arsenic	4.1		mg/kg
MSU-NGRR-39	1.5-2	06/09/03	Yes	01-SS-[MSU-NGRR-39-1]-C1_06/09/03_1.5	7439-92-1	Lead	5.4		mg/kg
MSU-NGRR-40-2	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-40-2]-C1_06/09/03_1.5	7440-38-2	Arsenic	11.4		mg/kg
MSU-NGRR-40-2	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-40-2]-C1_06/09/03_1.5	7439-92-1	Lead	19.8		mg/kg
MSU-NGRR-40-3	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-40-3]-C1_06/09/03_1.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-NGRR-40-3	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-40-3]-C1_06/09/03_1.5	7439-92-1	Lead	4.1		mg/kg
MSU-NGRR-40	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-40-1]-C1_06/09/03_1.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-NGRR-40	1.5-2	06/09/03	Yes	01-SS[MSU-NGRR-40-1]-C1_06/09/03_1.5	7439-92-1	Lead	4.6		mg/kg
NGRR-135	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-135]C2-005	7440-38-2	Arsenic	3.9		mg/kg
NGRR-135	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-135]C2-005	7439-92-1	Lead	3.3		mg/kg
NGRR-136	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-136]C2-005	7440-38-2	Arsenic	24.0		mg/kg
NGRR-136	1.5-2	07/24/01	Yes	01-N01-SS[NGRR-136]C2-005	7439-92-1	Lead	14.0		mg/kg
NGRR-301-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-301-2]C2-025-DAVG	7440-38-2	Arsenic	5.7		mg/kg
NGRR-301-2	2.5-3	08/30/01	Yes	02-N01-SS[NGRR-301-2]C2-025-DAVG	7439-92-1	Lead	11.3		mg/kg
NGRR-312	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-312]C2-005	7440-38-2	Arsenic	8.0		mg/kg
NGRR-312	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-312]C2-005	7439-92-1	Lead	10.0		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-319	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-319]C2-005	7440-38-2	Arsenic	8.9		mg/kg
NGRR-319	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-319]C2-005	7439-92-1	Lead	76.0		mg/kg
NGRR-320	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-320]C2-005	7440-38-2	Arsenic	6.1		mg/kg
NGRR-320	1.5-2	08/16/01	Yes	01-N01-SS[NGRR-320]C2-005	7439-92-1	Lead	9.5		mg/kg
R32C26	1-1.5	03/10/04	Yes	1-R32C26_03/10/04_1	7440-38-2	Arsenic	13.6		mg/kg
R32C26	1-1.5	03/10/04	Yes	1-R32C26_03/10/04_1	7439-92-1	Lead	11.8		mg/kg
R32C27	1-1.5	03/10/04	Yes	1-R32C27_03/10/04_1	7440-38-2	Arsenic	15.0		mg/kg
R32C27	1-1.5	03/10/04	Yes	1-R32C27_03/10/04_1	7439-92-1	Lead	17.6		mg/kg
R32C28	1-1.5	03/09/04	Yes	1-R32C28_03/09/04_1	7440-38-2	Arsenic	11.2		mg/kg
R32C28	1-1.5	03/09/04	Yes	1-R32C28_03/09/04_1	7439-92-1	Lead	8.2		mg/kg
R33C24	1-1.5	03/16/04	Yes	1-R33C24_AVG_03/16/04_1	7440-38-2	Arsenic	11.9		mg/kg
R33C24	1-1.5	03/16/04	Yes	1-R33C24_AVG_03/16/04_1	7439-92-1	Lead	15.8		mg/kg
R33C25	1-1.5	03/16/04	Yes	1-R33C25_03/16/04_1	7440-38-2	Arsenic	47.5		mg/kg
R33C25	1-1.5	03/16/04	Yes	1-R33C25_03/16/04_1	7439-92-1	Lead	14.7		mg/kg
R33C26	1-1.5	03/16/04	Yes	1-R33C26_03/16/04_1	7440-38-2	Arsenic	5.7		mg/kg
R33C26	1-1.5	03/16/04	Yes	1-R33C26_03/16/04_1	7439-92-1	Lead	6.5		mg/kg
R33C27	1-1.5	03/16/04	Yes	1-R33C27_03/16/04_1	7440-38-2	Arsenic	4.3		mg/kg
R33C27	1-1.5	03/16/04	Yes	1-R33C27_03/16/04_1	7439-92-1	Lead	5.4		mg/kg
R33C28	1-1.5	03/16/04	Yes	1-R33C28_03/16/04_1	7440-38-2	Arsenic	5.8		mg/kg
R33C28	1-1.5	03/16/04	Yes	1-R33C28_03/16/04_1	7439-92-1	Lead	9.6		mg/kg
R33C29	1-1.5	03/16/04	Yes	1-R33C29_03/16/04_1	7440-38-2	Arsenic	11.5		mg/kg
R33C29	1-1.5	03/16/04	Yes	1-R33C29_03/16/04_1	7439-92-1	Lead	9.4		mg/kg
R34C22	1-1.5	03/25/04	Yes	1-R34C22_03/25/04_1	7440-38-2	Arsenic	4.6		mg/kg
R34C22	1-1.5	03/25/04	Yes	1-R34C22_03/25/04_1	7439-92-1	Lead	4.6		mg/kg
R34C28	1-1.5	03/16/04	Yes	1-R34C28_03/16/04_1	7440-38-2	Arsenic	6.3		mg/kg
R34C28	1-1.5	03/16/04	Yes	1-R34C28_03/16/04_1	7439-92-1	Lead	10.1		mg/kg
R34C29	1-1.5	03/16/04	Yes	1-R34C29_03/16/04_1	7440-38-2	Arsenic	32.6		mg/kg
R34C29	1-1.5	03/16/04	Yes	1-R34C29_03/16/04_1	7439-92-1	Lead	61.3		mg/kg
R34C30	1-1.5	03/09/04	Yes	1-R34C30_03/09/04_1	7440-38-2	Arsenic	17.5		mg/kg
R34C30	1-1.5	03/09/04	Yes	1-R34C30_03/09/04_1	7439-92-1	Lead	24.0		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R35C20	1-1.5	04/09/04	Yes	1-R35C20_04/09/04_1	7440-38-2	Arsenic	7.5		mg/kg
R35C20	1-1.5	04/09/04	Yes	1-R35C20_04/09/04_1	7439-92-1	Lead	11.4		mg/kg
R35C21	1-1.5	04/09/04	Yes	1-R35C21_04/09/04_1	7440-38-2	Arsenic	5.4		mg/kg
R35C21	1-1.5	04/09/04	Yes	1-R35C21_04/09/04_1	7439-92-1	Lead	4.5		mg/kg
R35C29	1-1.5	03/16/04	Yes	1-R35C29_03/16/04_1	7440-38-2	Arsenic	14.1		mg/kg
R35C29	1-1.5	03/16/04	Yes	1-R35C29_03/16/04_1	7439-92-1	Lead	17.8		mg/kg
R35C30	1-1.5	03/16/04	Yes	1-R35C30_03/16/04_1	7440-38-2	Arsenic	8.0		mg/kg
R35C30	1-1.5	03/16/04	Yes	1-R35C30_03/16/04_1	7439-92-1	Lead	13.7		mg/kg
R35C31	1-1.5	03/30/04	Yes	01-R35C31_03/30/04_1	7440-38-2	Arsenic	2.0		mg/kg
R35C31	1-1.5	03/30/04	Yes	01-R35C31_03/30/04_1	7439-92-1	Lead	15.2		mg/kg
R36C19	1-1.5	04/08/04	Yes	1-R36C19_04/08/04_1	7440-38-2	Arsenic	9.1		mg/kg
R36C19	1-1.5	04/08/04	Yes	1-R36C19_04/08/04_1	7439-92-1	Lead	11.6		mg/kg
R36C20	1-1.5	04/09/04	Yes	1-R36C20_04/09/04_1	7440-38-2	Arsenic	6.5		mg/kg
R36C20	1-1.5	04/09/04	Yes	1-R36C20_04/09/04_1	7439-92-1	Lead	9.2		mg/kg
R36C21	1-1.5	04/09/04	Yes	1-R36C21_04/09/04_1	7440-38-2	Arsenic	6.8		mg/kg
R36C21	1-1.5	04/09/04	Yes	1-R36C21_04/09/04_1	7439-92-1	Lead	24.8		mg/kg
R36C30	1-1.5	03/16/04	Yes	1-R36C30_03/16/04_1	7440-38-2	Arsenic	6.6		mg/kg
R36C30	1-1.5	03/16/04	Yes	1-R36C30_03/16/04_1	7439-92-1	Lead	9.5		mg/kg
R36C31	1-1.5	03/16/04	Yes	1-R36C31_03/16/04_1	7440-38-2	Arsenic	4.9		mg/kg
R36C31	1-1.5	03/16/04	Yes	1-R36C31_03/16/04_1	7439-92-1	Lead	12.1		mg/kg
R36C32	1-1.5	03/30/04	Yes	01-R36C32_03/30/04_1	7440-38-2	Arsenic	4.0		mg/kg
R36C32	1-1.5	03/30/04	Yes	01-R36C32_03/30/04_1	7439-92-1	Lead	11.3		mg/kg
R37C19	1-1.5	04/08/04	Yes	1-R37C19_04/08/04_1	7440-38-2	Arsenic	5.9		mg/kg
R37C19	1-1.5	04/08/04	Yes	1-R37C19_04/08/04_1	7439-92-1	Lead	8.9		mg/kg
R37C20	1-1.5	03/10/04	Yes	1-R37C20_AVG_03/10/04_1	7440-38-2	Arsenic	6.2		mg/kg
R37C20	1-1.5	03/10/04	Yes	1-R37C20_AVG_03/10/04_1	7439-92-1	Lead	38.0		mg/kg
R37C21	1-1.5	03/10/04	Yes	1-R37C21_03/10/04_1	7440-38-2	Arsenic	6.8		mg/kg
R37C21	1-1.5	03/10/04	Yes	1-R37C21_03/10/04_1	7439-92-1	Lead	14.4		mg/kg
R37C31	1-1.5	03/16/04	Yes	1-R37C31_03/16/04_1	7440-38-2	Arsenic	6.8		mg/kg
R37C31	1-1.5	03/16/04	Yes	1-R37C31_03/16/04_1	7439-92-1	Lead	11.7		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R37C32	1-1.5	03/16/04	Yes	1-R37C32_03/16/04_1	7440-38-2	Arsenic	9.8		mg/kg
R37C32	1-1.5	03/16/04	Yes	1-R37C32_03/16/04_1	7439-92-1	Lead	14.8		mg/kg
R37C33	1-1.5	03/30/04	Yes	01-R37C33_03/30/04_1	7440-38-2	Arsenic	1.2		mg/kg
R37C33	1-1.5	03/30/04	Yes	01-R37C33_03/30/04_1	7439-92-1	Lead	13.0		mg/kg
R38C20	2-2.5	04/02/04	Yes	02-R38C20_04/02/04_2	7439-92-1	Lead	77.1		mg/kg
R38C20	1-1.5	03/10/04	No	1-R38C20_03/10/04_1	7440-38-2	Arsenic	6.2		mg/kg
R38C21	1-1.5	03/10/04	Yes	1-R38C21_03/10/04_1	7440-38-2	Arsenic	8.8		mg/kg
R38C21	1-1.5	03/10/04	Yes	1-R38C21_03/10/04_1	7439-92-1	Lead	59.4		mg/kg
R38C32	1-1.5	03/16/04	Yes	1-R38C32_AVG_03/16/04_1	7440-38-2	Arsenic	12.6		mg/kg
R38C32	1-1.5	03/16/04	Yes	1-R38C32_AVG_03/16/04_1	7439-92-1	Lead	37.4		mg/kg
R38C33	1-1.5	03/16/04	Yes	1-R38C33_03/16/04_1	7440-38-2	Arsenic	8.0		mg/kg
R38C33	1-1.5	03/16/04	Yes	1-R38C33_03/16/04_1	7439-92-1	Lead	12.8		mg/kg
R38C34	1-1.5	03/26/04	Yes	01-R38C34_03/26/04_1	7440-38-2	Arsenic	6.6		mg/kg
R38C34	1-1.5	03/26/04	Yes	01-R38C34_03/26/04_1	7439-92-1	Lead	40.9		mg/kg
R39C20	2-2.5	04/02/04	Yes	02-R39C20_04/02/04_2	7439-92-1	Lead	28.5		mg/kg
R39C20	1-1.5	03/10/04	No	1-R39C20_03/10/04_1	7440-38-2	Arsenic	7.1		mg/kg
R39C21	1-1.5	03/10/04	Yes	1-R39C21_03/10/04_1	7440-38-2	Arsenic	6.9		mg/kg
R39C21	1-1.5	03/10/04	Yes	1-R39C21_03/10/04_1	7439-92-1	Lead	74.0		mg/kg
R39C22	1-1.5	03/16/04	No	1-R39C22_03/16/04_1	7440-38-2	Arsenic	7.2		mg/kg
R39C22	2-2.5	04/09/04	Yes	2-R39C22_04/09/04_2	7439-92-1	Lead	43.9		mg/kg
R39C33	1-1.5	03/16/04	Yes	1-R39C33_03/16/04_1	7440-38-2	Arsenic	7.4		mg/kg
R39C33	1-1.5	03/16/04	Yes	1-R39C33_03/16/04_1	7439-92-1	Lead	104.0		mg/kg
R39C34	1-1.5	03/16/04	No	1-R39C34_03/16/04_1	7440-38-2	Arsenic	22.8		mg/kg
R39C34	2-2.5	04/09/04	Yes	2-R39C34_04/09/04_2	7439-92-1	Lead	35.7		mg/kg
R40C21	1-1.5	03/10/04	Yes	1-R40C21_03/10/04_1	7440-38-2	Arsenic	6.1		mg/kg
R40C21	1-1.5	03/10/04	Yes	1-R40C21_03/10/04_1	7439-92-1	Lead	5.4		mg/kg
R40C22	1-1.5	03/16/04	Yes	1-R40C22_03/16/04_1	7440-38-2	Arsenic	7.3		mg/kg
R40C22	1-1.5	03/16/04	Yes	1-R40C22_03/16/04_1	7439-92-1	Lead	11.6		mg/kg
R40C23	1-1.5	03/16/04	Yes	1-R40C23_03/16/04_1	7440-38-2	Arsenic	7.5		mg/kg
R40C23	1-1.5	03/16/04	Yes	1-R40C23_03/16/04_1	7439-92-1	Lead	22.9		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R40C35	1-1.5	03/16/04	Yes	1-R40C35_03/16/04_1	7440-38-2	Arsenic	7.8		mg/kg
R40C35	1-1.5	03/16/04	Yes	1-R40C35_03/16/04_1	7439-92-1	Lead	47.8		mg/kg
R41C21	1-1.5	03/10/04	Yes	1-R41C21_03/10/04_1	7440-38-2	Arsenic	6.9		mg/kg
R41C21	1-1.5	03/10/04	Yes	1-R41C21_03/10/04_1	7439-92-1	Lead	5.7		mg/kg
R41C22	1-1.5	03/16/04	Yes	1-R41C22_03/16/04_1	7440-38-2	Arsenic	8.1		mg/kg
R41C22	1-1.5	03/16/04	Yes	1-R41C22_03/16/04_1	7439-92-1	Lead	25.5		mg/kg
R41C23	1-1.5	03/16/04	Yes	1-R41C23_03/16/04_1	7440-38-2	Arsenic	9.2		mg/kg
R41C23	1-1.5	03/16/04	Yes	1-R41C23_03/16/04_1	7439-92-1	Lead	11.0		mg/kg
R42C22	1-1.5	03/10/04	Yes	1-R42C22_03/10/04_1	7440-38-2	Arsenic	12.8		mg/kg
R42C22	1-1.5	03/10/04	Yes	1-R42C22_03/10/04_1	7439-92-1	Lead	20.1		mg/kg
R42C23	1-1.5	03/16/04	Yes	1-R42C23_03/16/04_1	7440-38-2	Arsenic	7.1		mg/kg
R42C23	1-1.5	03/16/04	Yes	1-R42C23_03/16/04_1	7439-92-1	Lead	6.7		mg/kg
R43C22	1-1.5	03/16/04	Yes	1-R43C22_03/16/04_1	7440-38-2	Arsenic	5.1		mg/kg
R43C22	1-1.5	03/16/04	Yes	1-R43C22_03/16/04_1	7439-92-1	Lead	8.4		mg/kg
R43C23	1-1.5	03/16/04	Yes	1-R43C23_03/16/04_1	7440-38-2	Arsenic	8.2		mg/kg
R43C23	1-1.5	03/16/04	Yes	1-R43C23_03/16/04_1	7439-92-1	Lead	23.4		mg/kg
R43C24	1-1.5	03/16/04	Yes	1-R43C24_03/16/04_1	7440-38-2	Arsenic	6.2		mg/kg
R43C24	1-1.5	03/16/04	Yes	1-R43C24_03/16/04_1	7439-92-1	Lead	8.5		mg/kg
R43C37	1-1.5	03/09/04	Yes	1-R43C37_03/09/04_1	7440-38-2	Arsenic	9.0		mg/kg
R43C37	1-1.5	03/09/04	Yes	1-R43C37_03/09/04_1	7439-92-1	Lead	7.3		mg/kg
R44C23	1-1.5	03/16/04	Yes	1-R44C23_03/16/04_1	7440-38-2	Arsenic	6.8		mg/kg
R44C23	1-1.5	03/16/04	Yes	1-R44C23_03/16/04_1	7439-92-1	Lead	15.8		mg/kg
R44C24	1-1.5	03/16/04	Yes	1-R44C24_03/16/04_1	7440-38-2	Arsenic	7.8		mg/kg
R44C24	1-1.5	03/16/04	Yes	1-R44C24_03/16/04_1	7439-92-1	Lead	21.3		mg/kg
R44C37	1-1.5	03/09/04	Yes	1-R44C37_03/09/04_1	7440-38-2	Arsenic	9.8		mg/kg
R44C37	1-1.5	03/09/04	Yes	1-R44C37_03/09/04_1	7439-92-1	Lead	5.7		mg/kg
R45C24	1-1.5	03/16/04	Yes	1-R45C24_03/16/04_1	7440-38-2	Arsenic	3.7		mg/kg
R45C24	1-1.5	03/16/04	Yes	1-R45C24_03/16/04_1	7439-92-1	Lead	11.7		mg/kg
R45C25	1-1.5	03/16/04	Yes	1-R45C25_03/16/04_1	7440-38-2	Arsenic	7.0		mg/kg
R45C25	1-1.5	03/16/04	Yes	1-R45C25_03/16/04_1	7439-92-1	Lead	13.6		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R45C36	1-1.5	03/30/04	Yes	01-R45C36_03/30/04_1	7440-38-2	Arsenic	1.4		mg/kg
R45C36	1-1.5	03/30/04	Yes	01-R45C36_03/30/04_1	7439-92-1	Lead	6.2		mg/kg
R45C36	1-1.5	04/09/04	Yes	1-R45C36_04/09/04_1	7440-38-2	Arsenic	7.1		mg/kg
R45C36	1-1.5	04/09/04	Yes	1-R45C36_04/09/04_1	7439-92-1	Lead	6.2		mg/kg
R45C37	1-1.5	03/26/04	Yes	01-R45C37_03/26/04_1	7440-38-2	Arsenic	10.3		mg/kg
R45C37	1-1.5	03/26/04	Yes	01-R45C37_03/26/04_1	7439-92-1	Lead	18.3		mg/kg
R46C25	1-1.5	03/16/04	Yes	1-R46C25_03/16/04_1	7440-38-2	Arsenic	13.1		mg/kg
R46C25	1-1.5	03/16/04	Yes	1-R46C25_03/16/04_1	7439-92-1	Lead	58.0		mg/kg
R46C29	1-1.5	03/26/04	Yes	01-R46C29_03/26/04_1	7440-38-2	Arsenic	1.6		mg/kg
R46C29	1-1.5	03/26/04	Yes	01-R46C29_03/26/04_1	7439-92-1	Lead	9.8		mg/kg
R46C30	1-1.5	03/26/04	Yes	01-R46C30_03/26/04_1	7440-38-2	Arsenic	1.1	U	mg/kg
R46C30	1-1.5	03/26/04	Yes	01-R46C30_03/26/04_1	7439-92-1	Lead	6.9		mg/kg
R46C35	1-1.5	04/09/04	Yes	1-R46C35_04/09/04_1	7440-38-2	Arsenic	8.5		mg/kg
R46C35	1-1.5	04/09/04	Yes	1-R46C35_04/09/04_1	7439-92-1	Lead	13.6		mg/kg
R46C36	1-1.5	04/09/04	Yes	1-R46C36_04/09/04_1	7440-38-2	Arsenic	11.3		mg/kg
R46C36	1-1.5	04/09/04	Yes	1-R46C36_04/09/04_1	7439-92-1	Lead	9.5		mg/kg
R46C37	1-1.5	03/30/04	Yes	01-R46C37_03/30/04_1	7440-38-2	Arsenic	56.9		mg/kg
R46C37	1-1.5	03/30/04	Yes	01-R46C37_03/30/04_1	7439-92-1	Lead	38.0		mg/kg
R46C37	1-1.5	04/09/04	Yes	1-R46C37_04/09/04_1	7440-38-2	Arsenic	16.6		mg/kg
R46C37	1-1.5	04/09/04	Yes	1-R46C37_04/09/04_1	7439-92-1	Lead	21.7		mg/kg
R46C38	1-1.5	01/23/04	Yes	01-SS-[R46C38]-C2_01/23/04_1	7440-38-2	Arsenic	14.0		mg/kg
R46C38	1-1.5	01/23/04	Yes	01-SS-[R46C38]-C2_01/23/04_1	7439-92-1	Lead	18.6		mg/kg
R47C25	1-1.5	03/16/04	Yes	1-R47C25_03/16/04_1	7440-38-2	Arsenic	11.0		mg/kg
R47C25	1-1.5	03/16/04	Yes	1-R47C25_03/16/04_1	7439-92-1	Lead	47.5		mg/kg
R47C29	1-1.5	03/26/04	Yes	01-R47C29_03/26/04_1	7440-38-2	Arsenic	1.2		mg/kg
R47C29	1-1.5	03/26/04	Yes	01-R47C29_03/26/04_1	7439-92-1	Lead	14.5		mg/kg
R47C30	1-1.5	03/26/04	Yes	01-R47C30_03/26/04_1	7440-38-2	Arsenic	3.0		mg/kg
R47C30	1-1.5	03/26/04	Yes	01-R47C30_03/26/04_1	7439-92-1	Lead	19.0		mg/kg
R47C31	1-1.5	03/26/04	Yes	01-R47C31_03/26/04_1	7440-38-2	Arsenic	2.5		mg/kg
R47C31	1-1.5	03/26/04	Yes	01-R47C31_03/26/04_1	7439-92-1	Lead	20.4		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R47C32	1-1.5	03/26/04	Yes	01-R47C32_AVG_03/26/04_1	7440-38-2	Arsenic	2.5		mg/kg
R47C32	1-1.5	03/26/04	Yes	01-R47C32_AVG_03/26/04_1	7439-92-1	Lead	7.3		mg/kg
R47C33	1-1.5	03/26/04	Yes	01-R47C33_03/26/04_1	7440-38-2	Arsenic	22.2		mg/kg
R47C33	1-1.5	03/26/04	Yes	01-R47C33_03/26/04_1	7439-92-1	Lead	34.6		mg/kg
R47C34	1-1.5	03/26/04	Yes	01-R47C34_03/26/04_1	7440-38-2	Arsenic	7.9		mg/kg
R47C34	1-1.5	03/26/04	Yes	01-R47C34_03/26/04_1	7439-92-1	Lead	19.7		mg/kg
R47C35	1-1.5	03/26/04	Yes	01-R47C35_03/26/04_1	7440-38-2	Arsenic	2.0		mg/kg
R47C35	1-1.5	03/26/04	Yes	01-R47C35_03/26/04_1	7439-92-1	Lead	5.4		mg/kg
R47C36	1-1.5	03/26/04	Yes	01-R47C36_03/26/04_1	7440-38-2	Arsenic	4.0		mg/kg
R47C36	1-1.5	03/26/04	Yes	01-R47C36_03/26/04_1	7439-92-1	Lead	5.8		mg/kg
R47C37	1-1.5	01/23/04	Yes	01-SS-[R47C37]-C2_01/23/04_1	7440-38-2	Arsenic	5.6		mg/kg
R47C37	1-1.5	01/23/04	Yes	01-SS-[R47C37]-C2_01/23/04_1	7439-92-1	Lead	1.6		mg/kg
R47C38	1-1.5	01/23/04	Yes	01-SS-[R47C38]-C2_01/23/04_1	7440-38-2	Arsenic	7.0		mg/kg
R47C38	1-1.5	01/23/04	Yes	01-SS-[R47C38]-C2_01/23/04_1	7439-92-1	Lead	5.8		mg/kg
R48C30	1-1.5	01/19/04	Yes	01-SS-[R48C30]-C2_01/19/04_1	7440-38-2	Arsenic	5.5		mg/kg
R48C30	1-1.5	01/19/04	Yes	01-SS-[R48C30]-C2_01/19/04_1	7439-92-1	Lead	14.3		mg/kg
R48C31	1-1.5	03/26/04	Yes	01-R48C31_03/26/04_1	7440-38-2	Arsenic	1.2	U	mg/kg
R48C31	1-1.5	03/26/04	Yes	01-R48C31_03/26/04_1	7439-92-1	Lead	8.5		mg/kg
R48C32	1-1.5	03/26/04	Yes	01-R48C32_03/26/04_1	7440-38-2	Arsenic	2.2		mg/kg
R48C32	1-1.5	03/26/04	Yes	01-R48C32_03/26/04_1	7439-92-1	Lead	8.3		mg/kg
R48C33	1-1.5	03/26/04	Yes	01-R48C33_03/26/04_1	7440-38-2	Arsenic	26.4		mg/kg
R48C33	1-1.5	03/26/04	Yes	01-R48C33_03/26/04_1	7439-92-1	Lead	49.2		mg/kg
R48C34	1-1.5	03/26/04	Yes	01-R48C34_03/26/04_1	7440-38-2	Arsenic	6.2		mg/kg
R48C34	1-1.5	03/26/04	Yes	01-R48C34_03/26/04_1	7439-92-1	Lead	28.8		mg/kg
R48C35	1-1.5	03/26/04	Yes	01-R48C35_03/26/04_1	7440-38-2	Arsenic	14.0		mg/kg
R48C35	1-1.5	03/26/04	Yes	01-R48C35_03/26/04_1	7439-92-1	Lead	26.4		mg/kg
R48C36	1-1.5	03/26/04	Yes	01-R48C36_03/26/04_1	7440-38-2	Arsenic	7.3		mg/kg
R48C36	1-1.5	03/26/04	Yes	01-R48C36_03/26/04_1	7439-92-1	Lead	13.5		mg/kg
R48C37	1-1.5	01/23/04	Yes	01-SS-[R48C37]-C2_01/23/04_1	7440-38-2	Arsenic	11.1		mg/kg
R48C37	1-1.5	01/23/04	Yes	01-SS-[R48C37]-C2_01/23/04_1	7439-92-1	Lead	21.5		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R48C38	1-1.5	01/23/04	Yes	01-SS-[R48C38]-C2_01/23/04_1	7440-38-2	Arsenic	6.2		mg/kg
R48C38	1-1.5	01/23/04	Yes	01-SS-[R48C38]-C2_01/23/04_1	7439-92-1	Lead	5.0		mg/kg
R49C27	1-1.5	01/19/04	Yes	01-SS-[R49C27]-C2_01/19/04_1	7440-38-2	Arsenic	10.9		mg/kg
R49C27	1-1.5	01/19/04	Yes	01-SS-[R49C27]-C2_01/19/04_1	7439-92-1	Lead	11.2		mg/kg
R49C30	1-1.5	03/26/04	Yes	01-R49C30_03/26/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R49C30	1-1.5	03/26/04	Yes	01-R49C30_03/26/04_1	7439-92-1	Lead	2.7		mg/kg
R49C31	1-1.5	03/26/04	No	01-R49C31_03/26/04_1	7440-38-2	Arsenic	2.9		mg/kg
R49C31	2-2.5	04/09/04	Yes	2-R49C31_04/09/04_2	7439-92-1	Lead	116.0		mg/kg
R49C32	1-1.5	03/26/04	Yes	01-R49C32_03/26/04_1	7440-38-2	Arsenic	10.4		mg/kg
R49C32	1-1.5	03/26/04	Yes	01-R49C32_03/26/04_1	7439-92-1	Lead	41.0		mg/kg
R49C33	1-1.5	03/26/04	Yes	01-R49C33_03/26/04_1	7440-38-2	Arsenic	9.0		mg/kg
R49C33	1-1.5	03/26/04	Yes	01-R49C33_03/26/04_1	7439-92-1	Lead	49.1		mg/kg
R49C34	1-1.5	03/26/04	Yes	01-R49C34_AVG_03/26/04_1	7440-38-2	Arsenic	10.7		mg/kg
R49C34	1-1.5	03/26/04	Yes	01-R49C34_AVG_03/26/04_1	7439-92-1	Lead	5.3		mg/kg
R49C35	1-1.5	01/23/04	Yes	01-SS-[R49C35]-C2_01/23/04_1	7440-38-2	Arsenic	6.1		mg/kg
R49C35	1-1.5	01/23/04	Yes	01-SS-[R49C35]-C2_01/23/04_1	7439-92-1	Lead	4.2		mg/kg
R49C36	1-1.5	01/23/04	Yes	01-SS-[R49C36]-C2_01/23/04_1	7440-38-2	Arsenic	6.4		mg/kg
R49C36	1-1.5	01/23/04	Yes	01-SS-[R49C36]-C2_01/23/04_1	7439-92-1	Lead	7.3		mg/kg
R49C37	1-1.5	01/23/04	Yes	01-SS-[R49C37]-C2_01/23/04_1	7440-38-2	Arsenic	5.4		mg/kg
R49C37	1-1.5	01/23/04	Yes	01-SS-[R49C37]-C2_01/23/04_1	7439-92-1	Lead	32.4		mg/kg
R50C30	1-1.5	01/19/04	Yes	01-SS-[R50C30]-C2_01/19/04_1	7440-38-2	Arsenic	5.4		mg/kg
R50C30	1-1.5	01/19/04	Yes	01-SS-[R50C30]-C2_01/19/04_1	7439-92-1	Lead	3.5		mg/kg
R50C31	1-1.5	01/19/04	Yes	01-SS-[R50C31]-C2_01/19/04_1	7440-38-2	Arsenic	5.1		mg/kg
R50C31	1-1.5	01/19/04	Yes	01-SS-[R50C31]-C2_01/19/04_1	7439-92-1	Lead	41.9		mg/kg
R50C32	1-1.5	01/19/04	Yes	01-SS-[R50C32]-C2_01/19/04_1	7440-38-2	Arsenic	5.7		mg/kg
R50C32	1-1.5	01/19/04	Yes	01-SS-[R50C32]-C2_01/19/04_1	7439-92-1	Lead	6.9		mg/kg
R50C33	1-1.5	01/19/04	Yes	01-SS-[R50C33]-C2_01/19/04_1	7440-38-2	Arsenic	11.2		mg/kg
R50C33	1-1.5	01/19/04	Yes	01-SS-[R50C33]-C2_01/19/04_1	7439-92-1	Lead	10.0		mg/kg
R50C34	1-1.5	01/22/04	Yes	01-SS-[R50C34]-C2_01/22/04_1	7440-38-2	Arsenic	10.5		mg/kg
R50C34	1-1.5	01/22/04	Yes	01-SS-[R50C34]-C2_01/22/04_1	7439-92-1	Lead	5.0		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R50C35	1-1.5	01/22/04	Yes	01-SS-[R50C35]-C2_01/22/04_1	7440-38-2	Arsenic	13.1		mg/kg
R50C35	1-1.5	01/22/04	Yes	01-SS-[R50C35]-C2_01/22/04_1	7439-92-1	Lead	14.3		mg/kg
R50C36	1-1.5	01/23/04	Yes	01-SS-[R50C36]-C2_01/23/04_1	7440-38-2	Arsenic	13.5		mg/kg
R50C36	1-1.5	01/23/04	Yes	01-SS-[R50C36]-C2_01/23/04_1	7439-92-1	Lead	6.5		mg/kg
R50C37	1-1.5	03/12/04	Yes	01-R50C37_03/12/04_1	7440-38-2	Arsenic	1.0	U	mg/kg
R50C37	1-1.5	03/12/04	Yes	01-R50C37_03/12/04_1	7439-92-1	Lead	5.8		mg/kg
R51C30	1-1.5	01/19/04	Yes	01-SS-[R51C30]-C2_01/19/04_1	7440-38-2	Arsenic	7.7		mg/kg
R51C30	1-1.5	01/19/04	Yes	01-SS-[R51C30]-C2_01/19/04_1	7439-92-1	Lead	3.6		mg/kg
R51C31	1-1.5	01/19/04	No	01-SS-[R51C31]-C2_01/19/04_1	7440-38-2	Arsenic	17.0		mg/kg
R51C31	1-1.5	01/19/04	No	01-SS-[R51C31]-C2_01/19/04_1	7439-92-1	Lead	110.0		mg/kg
R51C32	1-1.5	01/19/04	Yes	01-SS-[R51C32]-C2_01/19/04_1	7440-38-2	Arsenic	19.7		mg/kg
R51C32	1-1.5	01/19/04	Yes	01-SS-[R51C32]-C2_01/19/04_1	7439-92-1	Lead	25.9		mg/kg
R51C33	1-1.5	01/19/04	Yes	01-SS-[R51C33]-C2_01/19/04_1	7440-38-2	Arsenic	14.1		mg/kg
R51C33	1-1.5	01/19/04	Yes	01-SS-[R51C33]-C2_01/19/04_1	7439-92-1	Lead	14.7		mg/kg
R51C34	1-1.5	01/22/04	Yes	01-SS-[R51C34]-C2_01/22/04_1	7440-38-2	Arsenic	15.7		mg/kg
R51C34	1-1.5	01/22/04	Yes	01-SS-[R51C34]-C2_01/22/04_1	7439-92-1	Lead	23.8		mg/kg
R51C35	1-1.5	01/22/04	Yes	01-SS-[R51C35]-C2_01/22/04_1	7440-38-2	Arsenic	9.4		mg/kg
R51C35	1-1.5	01/22/04	Yes	01-SS-[R51C35]-C2_01/22/04_1	7439-92-1	Lead	8.4		mg/kg
R51C36	1-1.5	01/22/04	Yes	01-SS-[R51C36]-C2_01/22/04_1	7440-38-2	Arsenic	5.7		mg/kg
R51C36	1-1.5	01/22/04	Yes	01-SS-[R51C36]-C2_01/22/04_1	7439-92-1	Lead	2.4		mg/kg
R51C37	1-1.5	01/23/04	Yes	01-SS-[R51C37]-C2_01/23/04_1	7440-38-2	Arsenic	8.6		mg/kg
R51C37	1-1.5	01/23/04	Yes	01-SS-[R51C37]-C2_01/23/04_1	7439-92-1	Lead	25.9		mg/kg
R51C38	1-1.5	01/22/04	Yes	01-SS-[R51C38]-C2_01/22/04_1	7440-38-2	Arsenic	4.4		mg/kg
R51C38	1-1.5	01/22/04	Yes	01-SS-[R51C38]-C2_01/22/04_1	7439-92-1	Lead	2.0		mg/kg
R51C39	1-1.5	01/22/04	Yes	01-SS-[R51C39]-C2_01/22/04_1	7440-38-2	Arsenic	5.5		mg/kg
R51C39	1-1.5	01/22/04	Yes	01-SS-[R51C39]-C2_01/22/04_1	7439-92-1	Lead	3.6		mg/kg
R52C31	1-1.5	01/19/04	Yes	01-SS-[R52C31]-C2_01/19/04_1	7440-38-2	Arsenic	15.9		mg/kg
R52C31	1-1.5	01/19/04	Yes	01-SS-[R52C31]-C2_01/19/04_1	7439-92-1	Lead	15.2		mg/kg
R52C32	1-1.5	01/19/04	Yes	01-SS-[R52C32]-C2_01/19/04_1	7440-38-2	Arsenic	17.1		mg/kg
R52C32	1-1.5	01/19/04	Yes	01-SS-[R52C32]-C2_01/19/04_1	7439-92-1	Lead	19.7		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R52C33	1-1.5	01/22/04	Yes	01-SS-[R52C33]-C2_01/22/04_1	7440-38-2	Arsenic	10.0		mg/kg
R52C33	1-1.5	01/22/04	Yes	01-SS-[R52C33]-C2_01/22/04_1	7439-92-1	Lead	8.9		mg/kg
R52C34	1-1.5	01/22/04	Yes	01-SS-[R52C34]-C2_01/22/04_1	7440-38-2	Arsenic	14.1		mg/kg
R52C34	1-1.5	01/22/04	Yes	01-SS-[R52C34]-C2_01/22/04_1	7439-92-1	Lead	14.3		mg/kg
R52C35	1-1.5	01/22/04	Yes	01-SS-[R52C35]-C2_01/22/04_1	7440-38-2	Arsenic	11.4		mg/kg
R52C35	1-1.5	01/22/04	Yes	01-SS-[R52C35]-C2_01/22/04_1	7439-92-1	Lead	13.2		mg/kg
R52C36	1-1.5	01/22/04	Yes	01-SS-[R52C36]-C2_01/22/04_1	7440-38-2	Arsenic	6.6		mg/kg
R52C36	1-1.5	01/22/04	Yes	01-SS-[R52C36]-C2_01/22/04_1	7439-92-1	Lead	2.7		mg/kg
R52C38	1-1.5	01/22/04	Yes	01-SS-[R52C38]-C2_01/22/04_1	7440-38-2	Arsenic	7.5		mg/kg
R52C38	1-1.5	01/22/04	Yes	01-SS-[R52C38]-C2_01/22/04_1	7439-92-1	Lead	6.0		mg/kg
R52C39	1-1.5	01/22/04	Yes	01-SS-[R52C39]-C2_01/22/04_1	7440-38-2	Arsenic	6.2		mg/kg
R52C39	1-1.5	01/22/04	Yes	01-SS-[R52C39]-C2_01/22/04_1	7439-92-1	Lead	2.3		mg/kg
R53C33	1-1.5	01/22/04	Yes	01-SS-[R53C33]-C2_01/22/04_1	7440-38-2	Arsenic	5.9		mg/kg
R53C33	1-1.5	01/22/04	Yes	01-SS-[R53C33]-C2_01/22/04_1	7439-92-1	Lead	1.8		mg/kg
R53C34	1-1.5	01/22/04	Yes	01-SS-[R53C34]-C2_01/22/04_1	7440-38-2	Arsenic	5.8		mg/kg
R53C34	1-1.5	01/22/04	Yes	01-SS-[R53C34]-C2_01/22/04_1	7439-92-1	Lead	1.9		mg/kg
R53C35	1-1.5	01/22/04	Yes	01-SS-[R53C35]-C2_01/22/04_1	7440-38-2	Arsenic	10.8		mg/kg
R53C35	1-1.5	01/22/04	Yes	01-SS-[R53C35]-C2_01/22/04_1	7439-92-1	Lead	8.1		mg/kg
R53C36	1-1.5	01/22/04	Yes	01-SS-[R53C36]-C2_01/22/04_1	7440-38-2	Arsenic	9.7		mg/kg
R53C36	1-1.5	01/22/04	Yes	01-SS-[R53C36]-C2_01/22/04_1	7439-92-1	Lead	14.0		mg/kg
R53C38	1-1.5	01/22/04	Yes	01-SS-[R53C38]-C2_01/22/04_1	7440-38-2	Arsenic	6.8		mg/kg
R53C38	1-1.5	01/22/04	Yes	01-SS-[R53C38]-C2_01/22/04_1	7439-92-1	Lead	7.1		mg/kg
R54C35	1-1.5	01/22/04	Yes	01-SS-[R54C35]-C2_01/22/04_1	7440-38-2	Arsenic	12.9		mg/kg
R54C35	1-1.5	01/22/04	Yes	01-SS-[R54C35]-C2_01/22/04_1	7439-92-1	Lead	11.4		mg/kg
R54C36	1-1.5	01/22/04	Yes	01-SS-[R54C36]-C2_01/22/04_1	7440-38-2	Arsenic	21.7		mg/kg
R54C36	1-1.5	01/22/04	Yes	01-SS-[R54C36]-C2_01/22/04_1	7439-92-1	Lead	10.1		mg/kg
R54C38	1-1.5	01/22/04	Yes	01-SS-[R54C38]-C2_01/22/04_1	7440-38-2	Arsenic	6.1		mg/kg
R54C38	1-1.5	01/22/04	Yes	01-SS-[R54C38]-C2_01/22/04_1	7439-92-1	Lead	6.0		mg/kg
RR-528-S-3	1-2	12/13/93	Yes	RR-528-S-3	7440-38-2	Arsenic	40.0	J	mg/kg
SA6-68-36	1.5-2	10/15/99	Yes	SA6-68-36	7440-38-2	Arsenic	6.3		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA6-68-36	1.5-2	10/15/99	Yes	SA6-68-36	7439-92-1	Lead	11.0		mg/kg
SA6-69-36	1.5-2	10/15/99	Yes	SA6-69-36	7440-38-2	Arsenic	6.1		mg/kg
SA6-69-36	1.5-2	10/15/99	Yes	SA6-69-36	7439-92-1	Lead	6.9		mg/kg
T-075	0-0.5	04/21/03	No	01-SS-[T-075]-C1_04/21/03_0	7440-38-2	Arsenic	49.5		mg/kg
T-075	0-0.5	04/21/03	No	01-SS-[T-075]-C1_04/21/03_0	7439-92-1	Lead	65.0		mg/kg
T-75-VS-1-2-C	0-0.5	09/29/03	Yes	01-SB-[T-75-VS-1-2-C]-C2_09/29/03_0	7440-38-2	Arsenic	3.9		mg/kg
T-75-VS-1-2-E	0-0.5	09/29/03	Yes	01-SB-[T-75-VS-1-2-E]-C2_09/29/03_0	7440-38-2	Arsenic	5.6		mg/kg
T-75-VS-1-2-N	0-0.5	09/29/03	Yes	01-SB-[T-75-VS-1-2-N]-C2_09/29/03_0	7440-38-2	Arsenic	5.5		mg/kg
T-75-VS-1-2-S	0-0.5	09/29/03	Yes	01-SB-[T-75-VS-1-2-S]-C2_09/29/03_0	7440-38-2	Arsenic	12.7		mg/kg
T-75-VS-1-2-W	0-0.5	09/29/03	Yes	01-SB-[T-75-VS-1-2-W]-C2_09/29/03_0	7440-38-2	Arsenic	15.6		mg/kg
T065	0-0.5	04/21/03	Yes	01-SS-[T-065]-C1_04/21/03_0	7440-38-2	Arsenic	51.9		mg/kg
T065	0-0.5	04/21/03	Yes	01-SS-[T-065]-C1_04/21/03_0	7439-92-1	Lead	69.5		mg/kg
T070	0-0.5	04/21/03	Yes	01-SS-[T070]-C1_04/21/03_0	7440-38-2	Arsenic	50.9		mg/kg
T071	0-0.5	04/21/03	Yes	01-SS-[T071]-C1_04/21/03_0	7440-38-2	Arsenic	30.2		mg/kg
T071	0-0.5	04/21/03	Yes	01-SS-[T071]-C1_04/21/03_0	7439-92-1	Lead	33.7		mg/kg
T072	0-0.5	04/21/03	Yes	01-SS-[T072]-C1_04/21/03_0	7439-92-1	Lead	95.3		mg/kg
T073,074	0-0.5	04/21/03	No	01-SS-[T073,074]-C1_04/21/03_0	7440-38-2	Arsenic	59.3		mg/kg
T073,074	1-1.5	08/18/03	Yes	02-SS-[T-73-74]-C2_08/18/03_1	7439-92-1	Lead	10.5		mg/kg
T076	0-0.5	04/21/03	No	01-SS-[T-076]-C1_04/21/03_0	7439-92-1	Lead	54.3		mg/kg
T076	1-1.5	08/18/03	Yes	02-SS-[T-76]-C2_08/18/03_1	7440-38-2	Arsenic	2.6		mg/kg
T077	0-0.5	04/21/03	Yes	01-SS-[T-077]-C1_AVG_04/21/03_0	7440-38-2	Arsenic	43.7		mg/kg
T078	0-0.5	04/21/03	Yes	01-SS-[T078]-C1_04/21/03_0	7439-92-1	Lead	61.8		mg/kg
T079	0-0.5	04/21/03	Yes	01-SS-[T-079]-C1_04/21/03_0	7440-38-2	Arsenic	27.2		mg/kg
T079	0-0.5	04/21/03	Yes	01-SS-[T-079]-C1_04/21/03_0	7439-92-1	Lead	64.9		mg/kg
T080,081	0-0.5	04/21/03	Yes	01-SS-[T080,081]-C1_AVG_04/21/03_0	7440-38-2	Arsenic	37.6		mg/kg
T080,081	0-0.5	04/21/03	Yes	01-SS-[T080,081]-C1_AVG_04/21/03_0	7439-92-1	Lead	55.2		mg/kg
T082,083	0-0.5	04/21/03	Yes	01-SS-[T082,083]-C1_04/21/03_0	7440-38-2	Arsenic	18.4		mg/kg
T082,083	0-0.5	04/21/03	Yes	01-SS-[T082,083]-C1_04/21/03_0	7439-92-1	Lead	29.1		mg/kg
T285	0-0.5	04/15/03	Yes	01-SS-[T285]-C1_04/15/03_0	7440-38-2	Arsenic	24.6		mg/kg
T286	0-0.5	04/15/03	Yes	01-SS-[T286]-C1_04/15/03_0	7440-38-2	Arsenic	25.7		mg/kg

Table B.13
Sample Results for GC-05 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T286	0-0.5	04/15/03	Yes	01-SS-[T286]-C1_04/15/03_0	7439-92-1	Lead	62.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-21	0-4	04/16/87	Yes	18-TP-21,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-21	0-4	04/16/87	Yes	18-TP-21,S-1	7439-92-1	Lead	16.0		mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	7440-38-2	Arsenic	4.5	J	mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	7440-50-8	Copper	16.5		mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	7439-92-1	Lead	5.3	U	mg/kg
18-TP-514	3-6	05/11/92	Yes	18-TP-514-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-514	8-10	05/11/92	Yes	18-TP-514-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-514	8-10	05/11/92	Yes	18-TP-514-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-514	8-10	05/11/92	Yes	18-TP-514-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-514	8-10	05/11/92	Yes	18-TP-514-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-515	3-6	05/14/92	Yes	18-TP-515-S-2	118-96-7	2,4,6-Trinitrotoluene	0.3	U	mg/kg
18-TP-515	3-6	05/14/92	Yes	18-TP-515-S-2	DNT-TOTAL	DNT - Total	1.3		mg/kg
18-TP-515	3-6	05/14/92	Yes	18-TP-515-S-2	98-95-3	Nitrobenzene	6.6	U	mg/kg
18-TP-515	3-6	05/14/92	Yes	18-TP-515-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-515	8-10	05/14/92	Yes	18-TP-515-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-516	3-6	05/14/92	Yes	18-TP-516-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-516	8-10	05/14/92	Yes	18-TP-516-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-518	3-6	05/14/92	Yes	18-TP-518-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-518	8-10	05/14/92	Yes	18-TP-518-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	7440-38-2	Arsenic	1.8		mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	7440-50-8	Copper	13.0		mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	7439-92-1	Lead	5.1	U	mg/kg
18-TP-543	3-6	04/28/92	Yes	18-TP-543-S-2	7439-97-6	Mercury	0.07	U	mg/kg
18-TP-543	8-10	04/28/92	Yes	18-TP-543-S-3	7439-92-1	Lead	5.0	U	mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-550	3-6	05/15/92	Yes	18-TP-550-S-2	7440-38-2	Arsenic	3.2		mg/kg
18-TP-550	3-6	05/15/92	Yes	18-TP-550-S-2	7440-50-8	Copper	18.0		mg/kg
18-TP-550	3-6	05/15/92	Yes	18-TP-550-S-2	7439-92-1	Lead	60.0		mg/kg
18-TP-550	3-6	05/15/92	Yes	18-TP-550-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-550	8-10	05/15/92	Yes	18-TP-550-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-551	0-1	05/15/92	Yes	18-TP-551-S-1	7439-92-1	Lead	33.0		mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	7440-38-2	Arsenic	4.4		mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	7440-50-8	Copper	20.0		mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	7439-92-1	Lead	5.7	U	mg/kg
18-TP-551	3-6	05/15/92	Yes	18-TP-551-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-551	8-10	05/15/92	Yes	18-TP-551-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-552	3-6	04/29/92	Yes	18-TP-552-S-2	7440-38-2	Arsenic	3.5		mg/kg
18-TP-552	3-6	04/29/92	Yes	18-TP-552-S-2	7440-50-8	Copper	17.0		mg/kg
18-TP-552	3-6	04/29/92	Yes	18-TP-552-S-2	7439-92-1	Lead	5.2	U	mg/kg
18-TP-552	3-6	04/29/92	Yes	18-TP-552-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-552	8-10	04/29/92	Yes	18-TP-552-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-603	3-6	11/05/92	Yes	18-TP-603-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.06	J	mg/kg
18-TP-603	3-6	11/05/92	Yes	18-TP-603-S-2-DAVG	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-TP-603	3-6	11/05/92	Yes	18-TP-603-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-603	8-10	11/05/92	Yes	18-TP-603-S-3	118-96-7	2,4,6-Trinitrotoluene	0.004		mg/kg
18-TP-603	8-10	11/05/92	Yes	18-TP-603-S-3	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-603	8-10	11/05/92	Yes	18-TP-603-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-GS-24	3-4	07/02/93	Yes	18-TP-GS-24-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-105N	3-4	07/02/93	Yes	18-TR-105N,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-105S	3-4	07/02/93	Yes	18-TR-105S,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-106E	0-1	06/29/93	Yes	18-TR-106E,S-3	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TR-106E	0-1	06/29/93	Yes	18-TR-106E,S-3	DNT-TOTAL	DNT - Total	0.2		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TR-106E	0-1	06/29/93	Yes	18-TR-106E,S-3	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TR-106E	3-4	06/29/93	Yes	18-TR-106E,S-4	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-TR-106E	3-4	06/29/93	Yes	18-TR-106E,S-4	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
18-TR-106E	3-4	06/29/93	Yes	18-TR-106E,S-4	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TR-106W	3-4	07/02/93	Yes	18-TR-106W,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-107S	0-1	07/02/93	Yes	18-TR-107S,S-3	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TR-107S	3-4	07/02/93	Yes	18-TR-107S,S-4	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-143	4-4.5	08/26/93	Yes	18-VS-143	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-143	4-4.5	08/26/93	Yes	18-VS-143	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-143	4-4.5	08/26/93	Yes	18-VS-143	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-144	1-1.5	08/26/93	Yes	18-VS-144	118-96-7	2,4,6-Trinitrotoluene	0.008		mg/kg
18-VS-144	1-1.5	08/26/93	Yes	18-VS-144	DNT-TOTAL	DNT - Total	0.09		mg/kg
18-VS-144	1-1.5	08/26/93	Yes	18-VS-144	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-144	1-1.5	08/26/93	Yes	18-VS-144	7439-92-1	Lead	55.0		mg/kg
18-VS-145	4-4.5	08/26/93	Yes	18-VS-145	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-145	4-4.5	08/26/93	Yes	18-VS-145	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-145	4-4.5	08/26/93	Yes	18-VS-145	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-146	15-15.5	08/26/93	Yes	18-VS-146	118-96-7	2,4,6-Trinitrotoluene	0.4		mg/kg
18-VS-146	15-15.5	08/26/93	Yes	18-VS-146	DNT-TOTAL	DNT - Total	0.6		mg/kg
18-VS-146	15-15.5	08/26/93	Yes	18-VS-146	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-VS-147	6-6.5	08/26/93	Yes	18-VS-147	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
18-VS-147	6-6.5	08/26/93	Yes	18-VS-147	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-147	6-6.5	08/26/93	Yes	18-VS-147	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-148	7-7.5	08/26/93	Yes	18-VS-148	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-VS-148	7-7.5	08/26/93	Yes	18-VS-148	DNT-TOTAL	DNT - Total	0.08		mg/kg
18-VS-148	7-7.5	08/26/93	Yes	18-VS-148	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-152	4-4.5	09/23/93	Yes	18-VS-152	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-152	4-4.5	09/23/93	Yes	18-VS-152	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-152	4-4.5	09/23/93	Yes	18-VS-152	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-154	3-4	08/26/93	Yes	18-VS-154	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-154	3-4	08/26/93	Yes	18-VS-154	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-154	3-4	08/26/93	Yes	18-VS-154	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-155	4-5	08/26/93	Yes	18-VS-155	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-155	4-5	08/26/93	Yes	18-VS-155	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-155	4-5	08/26/93	Yes	18-VS-155	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-155	4-5	08/26/93	Yes	18-VS-155	7439-92-1	Lead	5.4	U	mg/kg
18-VS-156	10-13	08/26/93	Yes	18-VS-156	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-156	10-13	08/26/93	Yes	18-VS-156	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-156	10-13	08/26/93	Yes	18-VS-156	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-157	7-9	08/26/93	Yes	18-VS-157	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-157	7-9	08/26/93	Yes	18-VS-157	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-157	7-9	08/26/93	Yes	18-VS-157	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-158	4-6	08/26/93	Yes	18-VS-158	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-VS-158	4-6	08/26/93	Yes	18-VS-158	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-158	4-6	08/26/93	Yes	18-VS-158	98-95-3	Nitrobenzene	0.07	UJ	mg/kg
18-VS-159	2-3	08/26/93	Yes	18-VS-159	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-159	2-3	08/26/93	Yes	18-VS-159	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-159	2-3	08/26/93	Yes	18-VS-159	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-160	0-1	08/26/93	Yes	18-VS-160	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
18-VS-160	0-1	08/26/93	Yes	18-VS-160	DNT-TOTAL	DNT - Total	0.09		mg/kg
18-VS-160	0-1	08/26/93	Yes	18-VS-160	98-95-3	Nitrobenzene	0.08	U	mg/kg
18-VS-175	1-2	10/07/93	Yes	18-VS-175	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-175	1-2	10/07/93	Yes	18-VS-175	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-175	1-2	10/07/93	Yes	18-VS-175	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-263	1-1.5	09/23/99	Yes	18-VS-263	7440-38-2	Arsenic	16.0		mg/kg
18-VS-263	1-1.5	09/23/99	Yes	18-VS-263	7439-92-1	Lead	9.1		mg/kg
18-VS-264	1-1.5	09/23/99	Yes	18-VS-264	7440-38-2	Arsenic	6.7		mg/kg
18-VS-264	1-1.5	09/23/99	Yes	18-VS-264	7439-92-1	Lead	4.8		mg/kg
18-VS-6B	3-6	12/08/92	Yes	18-VS-6B	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18R-112-25N	0-0.5	12/08/93	Yes	18R-112-25N	7440-38-2	Arsenic	60.0		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-23-B	2-2.5	05/12/04	Yes	F-23-B_05/12/04_2	7440-38-2	Arsenic	51.8		mg/kg
F-23-B	2-2.5	05/12/04	Yes	F-23-B_05/12/04_2	7439-92-1	Lead	32.9		mg/kg
F-25-B	2-2.5	05/12/04	Yes	F-25-B_05/12/04_2	7440-38-2	Arsenic	21.1		mg/kg
F-25-B	2-2.5	05/12/04	Yes	F-25-B_05/12/04_2	7439-92-1	Lead	54.0		mg/kg
F-26-B	2-2.5	05/12/04	Yes	F-26-B_05/12/04_2	7440-38-2	Arsenic	8.1		mg/kg
F-26-B	2-2.5	05/12/04	Yes	F-26-B_05/12/04_2	7439-92-1	Lead	22.9		mg/kg
F-28-B	2-2.5	05/12/04	Yes	F-28-B_AVG_05/12/04_2	7440-38-2	Arsenic	10.8		mg/kg
MSU-87	3-3.5	04/05/04	Yes	01-SS-[MSU-87-VS]-C1_04/05/04_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-87	3-3.5	04/05/04	Yes	01-SS-[MSU-87-VS]-C1_04/05/04_1.5	7439-92-1	Lead	2.7		mg/kg
MSU-89-E	0-1.5	06/25/03	No	01-SS-[MSU-89-E]-D1_06/25/03_0	7440-38-2	Arsenic	9.7		mg/kg
MSU-89-E	0-1.5	07/16/03	Yes	02-SS-[MSU-89-E]-D1_07/16/03_0	7439-92-1	Lead	5.0		mg/kg
MSU-89-N	0-1.5	06/25/03	Yes	01-SS-[MSU-89-N]-D1_06/25/03_0	7440-38-2	Arsenic	5.0		mg/kg
MSU-89-N	0-1.5	06/25/03	Yes	01-SS-[MSU-89-N]-D1_06/25/03_0	7439-92-1	Lead	22.8		mg/kg
MSU-89-S	0-1.5	06/25/03	Yes	01-SS-[MSU-89-S]-D1_06/25/03_0	7440-38-2	Arsenic	3.8		mg/kg
MSU-89-S	0-1.5	06/25/03	Yes	01-SS-[MSU-89-S]-D1_06/25/03_0	7439-92-1	Lead	3.1		mg/kg
MSU-89-VS-B	2.5-3	08/18/03	Yes	01-SS-[MSU-89-VS-B]-C2_08/18/03_2.5	7439-92-1	Lead	39.9		mg/kg
MSU-89-W	0-1.5	06/25/03	Yes	01-SS-[MSU-89-W]-D1_06/25/03_0	7440-38-2	Arsenic	3.8		mg/kg
MSU-89-W	0-1.5	06/25/03	Yes	01-SS-[MSU-89-W]-D1_06/25/03_0	7439-92-1	Lead	8.2		mg/kg
MSU-F-21-2	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-2]-C1_04/23/03_2	7440-38-2	Arsenic	13.8		mg/kg
MSU-F-21-2	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-2]-C1_04/23/03_2	7439-92-1	Lead	14.2		mg/kg
MSU-F-21-3	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-3]-C1_04/23/03_2	7440-38-2	Arsenic	10.0		mg/kg
MSU-F-21-3	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-3]-C1_04/23/03_2	7439-92-1	Lead	18.0		mg/kg
MSU-F-21-4	2-2.5	04/23/03	No	01-SS-[MSU-F-21-4]-C1_04/23/03_2	7439-92-1	Lead	97.6		mg/kg
MSU-F-21-4	3-3.5	05/08/03	Yes	02-SS-[MSU-F-21-4]C2_05/08/03_3	7440-38-2	Arsenic	4.9		mg/kg
MSU-F-21-5	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-5]-C1_04/23/03_2	7440-38-2	Arsenic	5.1		mg/kg
MSU-F-21-5	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-5]-C1_04/23/03_2	7439-92-1	Lead	18.9		mg/kg
MSU-F-21	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-1]-C1_04/23/03_2	7440-38-2	Arsenic	5.4		mg/kg
MSU-F-21	2-2.5	04/23/03	Yes	01-SS-[MSU-F-21-1]-C1_04/23/03_2	7439-92-1	Lead	45.1		mg/kg
MSU-F-23-2	2-2.5	05/13/03	Yes	01-SS-[MSU-F-23-2]C1_AVG_05/13/03_2	7440-38-2	Arsenic	3.9		mg/kg
MSU-F-23-2	2-2.5	05/13/03	Yes	01-SS-[MSU-F-23-2]C1_AVG_05/13/03_2	7439-92-1	Lead	3.0		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-23	2-2.5	05/13/03	Yes	01-SS-[MSU-F-23-1]C1_05/13/03_2	7440-38-2	Arsenic	2.1	U	mg/kg
MSU-F-23	2-2.5	05/13/03	Yes	01-SS-[MSU-F-23-1]C1_05/13/03_2	7439-92-1	Lead	2.3		mg/kg
MSU-F-24-2	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-2]-C1_05/01/03_2	7440-38-2	Arsenic	4.6		mg/kg
MSU-F-24-2	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-2]-C1_05/01/03_2	7439-92-1	Lead	3.7		mg/kg
MSU-F-25-3	2-2.5	04/05/04	No	01-SS-[MSU-F-25-3]-C1_04/05/04_2	7440-38-2	Arsenic	11.5		mg/kg
MSU-F-25-3	3-3.5	05/05/04	Yes	2-MSU-F-25-3_05/05/04_3	7439-92-1	Lead	3.5		mg/kg
MSU-F-25-4	2-2.5	04/05/04	Yes	01-SS-[MSU-F-25-4]-C1_04/05/04_2	7440-38-2	Arsenic	21.0		mg/kg
MSU-F-25-4	2-2.5	04/05/04	Yes	01-SS-[MSU-F-25-4]-C1_04/05/04_2	7439-92-1	Lead	83.2		mg/kg
MSU-F-26-2	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-2]-C1_05/13/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-26-2	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-2]-C1_05/13/03_2	7439-92-1	Lead	28.6		mg/kg
MSU-F-26-3	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-3]-C1_05/13/03_2	7440-38-2	Arsenic	5.4		mg/kg
MSU-F-26-3	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-3]-C1_05/13/03_2	7439-92-1	Lead	21.9		mg/kg
MSU-F-26-5	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-5]-C1_05/13/03_2	7440-38-2	Arsenic	40.0		mg/kg
MSU-F-26-5	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-5]-C1_05/13/03_2	7439-92-1	Lead	8.6		mg/kg
MSU-F-26-6	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-6]-C1_AVG_05/13/03_2	7440-38-2	Arsenic	11.1		mg/kg
MSU-F-26-6	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-6]-C1_AVG_05/13/03_2	7439-92-1	Lead	5.6		mg/kg
MSU-F-26-7	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-7]-C1_05/13/03_2	7440-38-2	Arsenic	6.3		mg/kg
MSU-F-26-7	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-7]-C1_05/13/03_2	7439-92-1	Lead	9.0		mg/kg
MSU-F-26-8	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-8]-C1_05/13/03_2	7440-38-2	Arsenic	3.6		mg/kg
MSU-F-26-8	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-8]-C1_05/13/03_2	7439-92-1	Lead	3.9		mg/kg
MSU-F-26	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-1]-C1_05/13/03_2	7440-38-2	Arsenic	10.7		mg/kg
MSU-F-26	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-1]-C1_05/13/03_2	7439-92-1	Lead	13.7		mg/kg
MSU-F-28-2	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-2]C1_05/13/03_2	7440-38-2	Arsenic	5.1		mg/kg
MSU-F-28-2	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-2]C1_05/13/03_2	7439-92-1	Lead	7.0		mg/kg
MSU-F-28-3	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-3]C1_05/13/03_2	7440-38-2	Arsenic	4.5		mg/kg
MSU-F-28-3	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-3]C1_05/13/03_2	7439-92-1	Lead	4.2		mg/kg
MSU-F-28-4	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-4]C1_05/13/03_2	7440-38-2	Arsenic	10.8		mg/kg
MSU-F-28-4	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-4]C1_05/13/03_2	7439-92-1	Lead	9.2		mg/kg
MSU-F-28-5	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-5]C1_05/13/03_2	7440-38-2	Arsenic	5.7		mg/kg
MSU-F-28-5	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-5]C1_05/13/03_2	7439-92-1	Lead	3.6		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-28-6	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-6]C1_05/13/03_2	7440-38-2	Arsenic	9.0		mg/kg
MSU-F-28-6	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-6]C1_05/13/03_2	7439-92-1	Lead	3.6		mg/kg
MSU-F-28-B	2-2.5	05/17/04	Yes	2-MSU-F-28-B_05/17/04_3	7439-92-1	Lead	3.6		mg/kg
MSU-F-28	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-1]C1_05/13/03_2	7440-38-2	Arsenic	4.6		mg/kg
MSU-F-28	2-2.5	05/13/03	Yes	01-SS-[MSU-F-28-1]C1_05/13/03_2	7439-92-1	Lead	5.6		mg/kg
MSU-F-29-2	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-2]-C1_04/28/03_2	7440-38-2	Arsenic	2.1	U	mg/kg
MSU-F-29-2	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-2]-C1_04/28/03_2	7439-92-1	Lead	34.4		mg/kg
MSU-F-29-3	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-3]-C1_04/28/03_2	7440-38-2	Arsenic	3.1		mg/kg
MSU-F-29-3	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-3]-C1_04/28/03_2	7439-92-1	Lead	24.6		mg/kg
MSU-F-29-4	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-4]-C1_04/28/03_2	7440-38-2	Arsenic	3.8		mg/kg
MSU-F-29-4	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-4]-C1_04/28/03_2	7439-92-1	Lead	3.8		mg/kg
MSU-F-29-5	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-5]-C1_AVG_04/28/03_2	7440-38-2	Arsenic	2.4		mg/kg
MSU-F-29-5	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-5]-C1_AVG_04/28/03_2	7439-92-1	Lead	2.3		mg/kg
MSU-F-29	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-1]-C1_04/28/03_2	7440-38-2	Arsenic	2.2	U	mg/kg
MSU-F-29	2-2.5	04/28/03	Yes	01-SS-[MSU-F-29-1]-C1_04/28/03_2	7439-92-1	Lead	5.1		mg/kg
MSU-NGRR-25-2	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-25-2]-C1_04/24/03_1.5	7440-38-2	Arsenic	25.6		mg/kg
MSU-NGRR-25-2	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-25-2]-C1_04/24/03_1.5	7439-92-1	Lead	11.8		mg/kg
MSU-NGRR-25-3	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-25-3]C-2_05/13/03_1.5	7440-38-2	Arsenic	27.4		mg/kg
MSU-NGRR-25-3	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-25-3]C-2_05/13/03_1.5	7439-92-1	Lead	16.4		mg/kg
MSU-NGRR-25	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-25-1]-C1_04/24/03_1.5	7440-38-2	Arsenic	46.5		mg/kg
MSU-NGRR-25	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-25-1]-C1_04/24/03_1.5	7439-92-1	Lead	28.2		mg/kg
MSU-NGRR-26	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-26-1]-C1_AVG_04/24/03_1.5	7440-38-2	Arsenic	4.9		mg/kg
MSU-NGRR-26	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-26-1]-C1_AVG_04/24/03_1.5	7439-92-1	Lead	5.1		mg/kg
MSU-NGRR-27-2	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-27-2]C-2_05/13/03_1.5	7440-38-2	Arsenic	4.3		mg/kg
MSU-NGRR-27-2	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-27-2]C-2_05/13/03_1.5	7439-92-1	Lead	6.8		mg/kg
MSU-NGRR-27	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-27-1]-C1_04/29/03_1.5	7440-38-2	Arsenic	50.8		mg/kg
MSU-NGRR-27	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-27-1]-C1_04/29/03_1.5	7439-92-1	Lead	7.9		mg/kg
MSU-NGRR-28-10	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-10]-C1_04/28/03_1.5	7440-38-2	Arsenic	16.4		mg/kg
MSU-NGRR-28-10	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-10]-C1_04/28/03_1.5	7439-92-1	Lead	9.5		mg/kg
MSU-NGRR-28-11	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-11]-C1_AVG_04/28/03_1.5	7440-38-2	Arsenic	4.5		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-28-11	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-11]-C1_AVG_04/28/03_1.5	7439-92-1	Lead	5.7		mg/kg
MSU-NGRR-28-12	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-28-12]-C1_04/29/03_1.5	7440-38-2	Arsenic	4.0		mg/kg
MSU-NGRR-28-12	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-28-12]-C1_04/29/03_1.5	7439-92-1	Lead	4.9		mg/kg
MSU-NGRR-28-2	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-2]-C1_04/28/03_1.5	7440-38-2	Arsenic	11.3		mg/kg
MSU-NGRR-28-2	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-2]-C1_04/28/03_1.5	7439-92-1	Lead	61.0		mg/kg
MSU-NGRR-28-3	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-3]-C1_04/28/03_1.5	7440-38-2	Arsenic	11.1		mg/kg
MSU-NGRR-28-3	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-3]-C1_04/28/03_1.5	7439-92-1	Lead	20.0		mg/kg
MSU-NGRR-28-4	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-4]-C1_04/28/03_1.5	7440-38-2	Arsenic	5.2		mg/kg
MSU-NGRR-28-4	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-4]-C1_04/28/03_1.5	7439-92-1	Lead	4.7		mg/kg
MSU-NGRR-28-5	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-5]-C1_04/28/03_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-NGRR-28-5	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-5]-C1_04/28/03_1.5	7439-92-1	Lead	3.8		mg/kg
MSU-NGRR-28-6	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-6]-C1_04/28/03_1.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-NGRR-28-6	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-6]-C1_04/28/03_1.5	7439-92-1	Lead	2.8		mg/kg
MSU-NGRR-28-7	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-7]-C1_04/28/03_1.5	7440-38-2	Arsenic	31.1		mg/kg
MSU-NGRR-28-7	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-7]-C1_04/28/03_1.5	7439-92-1	Lead	15.4		mg/kg
MSU-NGRR-28-8	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-8]-C1_04/28/03_1.5	7440-38-2	Arsenic	31.2		mg/kg
MSU-NGRR-28-8	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-8]-C1_04/28/03_1.5	7439-92-1	Lead	26.4		mg/kg
MSU-NGRR-28-9	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-9]-C1_04/28/03_1.5	7440-38-2	Arsenic	18.4		mg/kg
MSU-NGRR-28-9	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-9]-C1_04/28/03_1.5	7439-92-1	Lead	13.0		mg/kg
MSU-NGRR-28	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-1]-C1_04/28/03_1.5	7440-38-2	Arsenic	3.9		mg/kg
MSU-NGRR-28	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-28-1]-C1_04/28/03_1.5	7439-92-1	Lead	3.8		mg/kg
MSU-NGRR-31	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-31-1]-C1_05/08/03_1.5	7440-38-2	Arsenic	6.6		mg/kg
MSU-NGRR-31	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-31-1]-C1_05/08/03_1.5	7439-92-1	Lead	6.9		mg/kg
MSU-NGRR-33-1-2	2.5-3	05/08/03	Yes	02-SS-[MSU-NGRR-33-1]C2_05/08/03_2.5	7440-38-2	Arsenic	6.0		mg/kg
MSU-NGRR-33-1-2	2.5-3	05/08/03	Yes	02-SS-[MSU-NGRR-33-1]C2_05/08/03_2.5	7439-92-1	Lead	5.2		mg/kg
MSU-NGRR-33-10	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-10]-C1_04/24/03_1.5	7440-38-2	Arsenic	29.3		mg/kg
MSU-NGRR-33-10	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-10]-C1_04/24/03_1.5	7439-92-1	Lead	69.6		mg/kg
MSU-NGRR-33-1A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-1]-C1A_04/29/03_1.5	7440-38-2	Arsenic	15.8		mg/kg
MSU-NGRR-33-1A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-1]-C1A_04/29/03_1.5	7439-92-1	Lead	65.4		mg/kg
MSU-NGRR-33-2	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-2]-C1_04/23/03_1.5	7440-38-2	Arsenic	19.1		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-33-2	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-2]-C1_04/23/03_1.5	7439-92-1	Lead	7.2		mg/kg
MSU-NGRR-33-21	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-21]-C1_05/13/03_1.5	7440-38-2	Arsenic	17.7		mg/kg
MSU-NGRR-33-21	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-21]-C1_05/13/03_1.5	7439-92-1	Lead	34.9		mg/kg
MSU-NGRR-33-22	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-22]-C1_05/13/03_1.5	7440-38-2	Arsenic	17.2		mg/kg
MSU-NGRR-33-22	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-22]-C1_05/13/03_1.5	7439-92-1	Lead	5.7		mg/kg
MSU-NGRR-33-2A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-2]-C1A_AVG_04/29/03_1.5	7440-38-2	Arsenic	3.2		mg/kg
MSU-NGRR-33-2A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-2]-C1A_AVG_04/29/03_1.5	7439-92-1	Lead	4.1		mg/kg
MSU-NGRR-33-3	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-3]-C1_04/23/03_1.5	7440-38-2	Arsenic	4.6		mg/kg
MSU-NGRR-33-3	1.5-2	04/23/03	Yes	01-SS-[MSU-NGRR-33-3]-C1_04/23/03_1.5	7439-92-1	Lead	3.8		mg/kg
MSU-NGRR-33-3A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-3]-C1A_04/29/03_1.5	7440-38-2	Arsenic	53.2		mg/kg
MSU-NGRR-33-3A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-3]-C1A_04/29/03_1.5	7439-92-1	Lead	10.7		mg/kg
MSU-NGRR-33-4A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-4]-C1A_04/29/03_1.5	7440-38-2	Arsenic	6.9		mg/kg
MSU-NGRR-33-4A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-4]-C1A_04/29/03_1.5	7439-92-1	Lead	4.6		mg/kg
MSU-NGRR-33-5A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-5]-C1A_04/29/03_1.5	7440-38-2	Arsenic	46.9		mg/kg
MSU-NGRR-33-5A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-5]-C1A_04/29/03_1.5	7439-92-1	Lead	5.3		mg/kg
MSU-NGRR-33-6A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-6]-C1A_04/29/03_1.5	7440-38-2	Arsenic	2.8		mg/kg
MSU-NGRR-33-6A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-6]-C1A_04/29/03_1.5	7439-92-1	Lead	2.3		mg/kg
MSU-NGRR-33-7A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-7]-C1A_04/29/03_1.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-NGRR-33-7A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-7]-C1A_04/29/03_1.5	7439-92-1	Lead	5.4		mg/kg
MSU-NGRR-33-8A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-8]-C1A_04/29/03_1.5	7440-38-2	Arsenic	12.5		mg/kg
MSU-NGRR-33-8A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-8]-C1A_04/29/03_1.5	7439-92-1	Lead	4.0		mg/kg
MSU-NGRR-33-9	1.5-2	04/24/03	Yes	01-SS-[MSU-NGRR-33-9]-C1_04/24/03_1.5	7440-38-2	Arsenic	19.9		mg/kg
MSU-NGRR-33-9	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-33-9]C2_05/08/03_1.5	7440-38-2	Arsenic	5.1		mg/kg
MSU-NGRR-33-9	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-33-9]C2_05/08/03_1.5	7439-92-1	Lead	8.2		mg/kg
MSU-NGRR-36-2	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-36-2]-C1_04/28/03_1.5	7440-38-2	Arsenic	6.1		mg/kg
MSU-NGRR-36-2	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-36-2]-C1_04/28/03_1.5	7439-92-1	Lead	9.5		mg/kg
MSU-NGRR-36-3	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-36-3]-C1_04/28/03_1.5	7440-38-2	Arsenic	59.2		mg/kg
MSU-NGRR-36-3	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-36-3]-C1_04/28/03_1.5	7439-92-1	Lead	62.6		mg/kg
MSU-NGRR-36-4	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-36-4]C-2_05/13/03_1.5	7440-38-2	Arsenic	3.5		mg/kg
MSU-NGRR-36-4	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-36-4]C-2_05/13/03_1.5	7439-92-1	Lead	75.4		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-36	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-36-1]-C1_04/28/03_1.5	7440-38-2	Arsenic	3.1		mg/kg
MSU-NGRR-36	1.5-2	04/28/03	Yes	01-SS-[MSU-NGRR-36-1]-C1_04/28/03_1.5	7439-92-1	Lead	4.2		mg/kg
NGRR-161	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-161]C2-005	7440-38-2	Arsenic	4.7		mg/kg
NGRR-161	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-161]C2-005	7439-92-1	Lead	5.5		mg/kg
NGRR-162	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-162]C2-005	7440-38-2	Arsenic	4.3		mg/kg
NGRR-162	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-162]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-163	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-163]C2-005	7440-38-2	Arsenic	10.0		mg/kg
NGRR-163	1.5-2	07/31/01	Yes	01-N01-SS[NGRR-163]C2-005	7439-92-1	Lead	9.0		mg/kg
NGRR-167	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-167]C2-005	7440-38-2	Arsenic	17.0		mg/kg
NGRR-167	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-167]C2-005	7439-92-1	Lead	17.0		mg/kg
NGRR-168	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-168]C2-005	7440-38-2	Arsenic	7.7		mg/kg
NGRR-168	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-168]C2-005	7439-92-1	Lead	13.0		mg/kg
NGRR-169	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-169]C2-005	7440-38-2	Arsenic	4.5		mg/kg
NGRR-169	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-169]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-170	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-170]C2-005	7440-38-2	Arsenic	5.0		mg/kg
NGRR-170	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-170]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-171	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-171]C2-005	7440-38-2	Arsenic	21.0		mg/kg
NGRR-171	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-171]C2-005	7439-92-1	Lead	6.1		mg/kg
NGRR-172	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-172]C2-005	7440-38-2	Arsenic	6.4		mg/kg
NGRR-172	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-172]C2-005	7439-92-1	Lead	7.6		mg/kg
NGRR-173	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-173]C2-005	7440-38-2	Arsenic	5.6		mg/kg
NGRR-173	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-173]C2-005	7439-92-1	Lead	3.1		mg/kg
NGRR-174	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-174]C2-005	7440-38-2	Arsenic	3.5		mg/kg
NGRR-174	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-174]C2-005	7439-92-1	Lead	2.2	U	mg/kg
NGRR-175	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-175]C2-005	7440-38-2	Arsenic	15.0		mg/kg
NGRR-175	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-175]C2-005	7439-92-1	Lead	3.2		mg/kg
NGRR-176	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-176]C2-005	7440-38-2	Arsenic	4.6		mg/kg
NGRR-176	1.5-2	08/02/01	Yes	01-N01-SS[NGRR-176]C2-005	7439-92-1	Lead	2.7		mg/kg
NGRR-209	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-209]C2-005	7440-38-2	Arsenic	8.0		mg/kg
NGRR-209	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-209]C2-005	7439-92-1	Lead	7.5		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
NGRR-230	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-230]C2-005	7440-38-2	Arsenic	16.0		mg/kg
NGRR-230	1.5-2	08/08/01	Yes	01-N01-SS[NGRR-230]C2-005	7439-92-1	Lead	9.4		mg/kg
PW-1	1-1.5	07/11/01	Yes	01-C-SS[PW-1]C2-005	7440-38-2	Arsenic	6.4		mg/kg
PW-1	1-1.5	07/11/01	Yes	01-C-SS[PW-1]C2-005	7439-92-1	Lead	8.6		mg/kg
R48C25	1-1.5	01/19/04	No	01-SS-[R48C25]-C2_01/19/04_1	7440-38-2	Arsenic	16.9		mg/kg
R48C25	2-2.5	02/06/04	Yes	2-R48C25_02/06/04_2	7439-92-1	Lead	19.8		mg/kg
R49C25	1-1.5	01/19/04	Yes	01-SS-[R49C25]-C2_01/19/04_1	7440-38-2	Arsenic	8.5		mg/kg
R49C25	1-1.5	01/19/04	Yes	01-SS-[R49C25]-C2_01/19/04_1	7439-92-1	Lead	96.5		mg/kg
R49C26	1-1.5	01/19/04	No	01-SS-[R49C26]-C2_01/19/04_1	7440-38-2	Arsenic	16.9		mg/kg
R49C26	2-2.5	02/06/04	Yes	2-R49C26_02/06/04_2	7439-92-1	Lead	2.6		mg/kg
R50C25	1-1.5	01/19/04	No	01-SS-[R50C25]-C2_01/19/04_1	7440-38-2	Arsenic	36.8		mg/kg
R50C25	2-2.5	02/06/04	Yes	2-R50C25_02/06/04_2	7439-92-1	Lead	15.9		mg/kg
R50C26	2-2.5	03/25/04	Yes	02-R50C26_03/25/04_2	7439-92-1	Lead	8.2		mg/kg
R50C26	1-1.5	02/12/04	No	1-R50C26_02/12/04_1	7440-38-2	Arsenic	9.3		mg/kg
R50C27	1-1.5	01/19/04	Yes	01-SS-[R50C27]-C2_01/19/04_1	7440-38-2	Arsenic	11.9		mg/kg
R50C27	1-1.5	01/19/04	Yes	01-SS-[R50C27]-C2_01/19/04_1	7439-92-1	Lead	35.3		mg/kg
R51C25	1-1.5	01/19/04	Yes	01-SS-[R51C25]-C2_01/19/04_1	7440-38-2	Arsenic	17.9		mg/kg
R51C25	1-1.5	01/19/04	Yes	01-SS-[R51C25]-C2_01/19/04_1	7439-92-1	Lead	50.9		mg/kg
R51C26	1-1.5	01/19/04	Yes	01-SS-[R51C26]-C2_01/19/04_1	7440-38-2	Arsenic	15.3		mg/kg
R51C26	1-1.5	01/19/04	Yes	01-SS-[R51C26]-C2_01/19/04_1	7439-92-1	Lead	29.0		mg/kg
R51C28	1-1.5	01/19/04	Yes	01-SS-[R51C28]-C2_01/19/04_1	7440-38-2	Arsenic	20.1		mg/kg
R51C28	1-1.5	01/19/04	Yes	01-SS-[R51C28]-C2_01/19/04_1	7439-92-1	Lead	8.0		mg/kg
R51C29	1-1.5	01/19/04	Yes	01-SS-[R51C29]-C2_01/19/04_1	7440-38-2	Arsenic	10.2		mg/kg
R51C29	1-1.5	01/19/04	Yes	01-SS-[R51C29]-C2_01/19/04_1	7439-92-1	Lead	14.1		mg/kg
R52C23	1-1.5	01/19/04	Yes	01-SS-[R52C23]-C2_01/19/04_1	7440-38-2	Arsenic	3.9		mg/kg
R52C23	1-1.5	01/19/04	Yes	01-SS-[R52C23]-C2_01/19/04_1	7439-92-1	Lead	4.3		mg/kg
R52C25	1-1.5	01/19/04	Yes	01-SS-[R52C25]-C2_01/19/04_1	7440-38-2	Arsenic	5.7		mg/kg
R52C25	1-1.5	01/19/04	Yes	01-SS-[R52C25]-C2_01/19/04_1	7439-92-1	Lead	6.2		mg/kg
R52C30	1-1.5	01/19/04	Yes	01-SS-[R52C30]-C2_01/19/04_1	7440-38-2	Arsenic	21.1		mg/kg
R52C30	1-1.5	01/19/04	Yes	01-SS-[R52C30]-C2_01/19/04_1	7439-92-1	Lead	30.9		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R53C23	1-1.5	01/30/04	Yes	01-SS-[R53C23]-C2_01/30/04_1	7440-38-2	Arsenic	11.5		mg/kg
R53C23	1-1.5	01/30/04	Yes	01-SS-[R53C23]-C2_01/30/04_1	7439-92-1	Lead	12.7		mg/kg
R53C30	1-1.5	01/19/04	Yes	01-SS-[R53C30]-C2_01/19/04_1	7440-38-2	Arsenic	5.3		mg/kg
R53C30	1-1.5	01/19/04	Yes	01-SS-[R53C30]-C2_01/19/04_1	7439-92-1	Lead	7.1		mg/kg
R53C32	1-1.5	01/23/04	Yes	01-SS-[R53C32]-C2_01/23/04_1	7440-38-2	Arsenic	16.3		mg/kg
R53C32	1-1.5	01/23/04	Yes	01-SS-[R53C32]-C2_01/23/04_1	7439-92-1	Lead	17.9		mg/kg
R54C22	1-1.5	02/10/04	Yes	1-R54C22_02/10/04_1	7440-38-2	Arsenic	8.9		mg/kg
R54C22	1-1.5	02/10/04	Yes	1-R54C22_02/10/04_1	7439-92-1	Lead	9.3		mg/kg
R54C23	1-1.5	02/10/04	Yes	1-R54C23_02/10/04_1	7440-38-2	Arsenic	22.5		mg/kg
R54C23	1-1.5	02/10/04	Yes	1-R54C23_02/10/04_1	7439-92-1	Lead	16.4		mg/kg
R54C29	1-1.5	01/23/04	Yes	01-SS-[R54C29]-C2_01/23/04_1	7440-38-2	Arsenic	12.5		mg/kg
R54C29	1-1.5	01/23/04	Yes	01-SS-[R54C29]-C2_01/23/04_1	7439-92-1	Lead	49.4		mg/kg
R54C30	1-1.5	01/23/04	Yes	01-SS-[R54C30]-C2_01/23/04_1	7440-38-2	Arsenic	7.8		mg/kg
R54C30	1-1.5	01/23/04	Yes	01-SS-[R54C30]-C2_01/23/04_1	7439-92-1	Lead	12.6		mg/kg
R54C32	1-1.5	01/23/04	Yes	01-SS-[R54C32]-C2_01/23/04_1	7440-38-2	Arsenic	21.9		mg/kg
R54C32	1-1.5	01/23/04	Yes	01-SS-[R54C32]-C2_01/23/04_1	7439-92-1	Lead	68.6		mg/kg
R54C33	1-1.5	01/22/04	Yes	01-SS-[R54C33]-C2_01/22/04_1	7440-38-2	Arsenic	8.8		mg/kg
R54C33	1-1.5	01/22/04	Yes	01-SS-[R54C33]-C2_01/22/04_1	7439-92-1	Lead	8.8		mg/kg
R54C34	1-1.5	01/22/04	Yes	01-SS-[R54C34]-C2_01/22/04_1	7440-38-2	Arsenic	9.9		mg/kg
R54C34	1-1.5	01/22/04	Yes	01-SS-[R54C34]-C2_01/22/04_1	7439-92-1	Lead	6.8		mg/kg
R55C22	1-1.5	02/10/04	Yes	1-R55C22_02/10/04_1	7440-38-2	Arsenic	15.3		mg/kg
R55C22	1-1.5	02/10/04	Yes	1-R55C22_02/10/04_1	7439-92-1	Lead	12.1		mg/kg
R55C29	1-1.5	01/23/04	No	01-SS-[R55C29]-C2_AVG_01/23/04_1	7440-38-2	Arsenic	26.7		mg/kg
R55C29	2-2.5	05/05/04	Yes	2-R55C29_05/05/04_2	7439-92-1	Lead	8.9		mg/kg
R55C30	1-1.5	04/14/04	Yes	1-R55C30_04/14/04_1	7440-38-2	Arsenic	14.0		mg/kg
R55C30	1-1.5	04/14/04	Yes	1-R55C30_04/14/04_1	7439-92-1	Lead	70.2		mg/kg
R55C31	1-1.5	04/14/04	Yes	1-R55C31_04/14/04_1	7440-38-2	Arsenic	3.1		mg/kg
R55C31	1-1.5	04/14/04	Yes	1-R55C31_04/14/04_1	7439-92-1	Lead	2.7		mg/kg
R55C32	1-1.5	01/23/04	Yes	01-SS-[R55C32]-C2_01/23/04_1	7440-38-2	Arsenic	25.6		mg/kg
R55C32	1-1.5	01/23/04	Yes	01-SS-[R55C32]-C2_01/23/04_1	7439-92-1	Lead	69.0		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R55C33	1-1.5	01/22/04	Yes	01-SS-[R55C33]-C2_AVG_01/22/04_1	7440-38-2	Arsenic	8.1		mg/kg
R55C33	1-1.5	01/22/04	Yes	01-SS-[R55C33]-C2_AVG_01/22/04_1	7439-92-1	Lead	9.3		mg/kg
R55C34	1-1.5	01/22/04	Yes	01-SS-[R55C34]-C2_01/22/04_1	7440-38-2	Arsenic	12.8		mg/kg
R55C34	1-1.5	01/22/04	Yes	01-SS-[R55C34]-C2_01/22/04_1	7439-92-1	Lead	13.6		mg/kg
R55C35	1-1.5	01/22/04	Yes	01-SS-[R55C35]-C2_01/22/04_1	7440-38-2	Arsenic	13.1		mg/kg
R55C35	1-1.5	01/22/04	Yes	01-SS-[R55C35]-C2_01/22/04_1	7439-92-1	Lead	13.6		mg/kg
R55C36	1-1.5	01/22/04	Yes	01-SS-[R55C36]-C2_01/22/04_1	7440-38-2	Arsenic	21.3		mg/kg
R55C36	1-1.5	01/22/04	Yes	01-SS-[R55C36]-C2_01/22/04_1	7439-92-1	Lead	16.3		mg/kg
R56C29	1-1.5	04/14/04	No	1-R56C29_04/14/04_1	7440-38-2	Arsenic	6.4		mg/kg
R56C29	3-3.5	05/11/04	Yes	3-R56C29_AVG_05/11/04_3	7439-92-1	Lead	10.3		mg/kg
R56C30	1-1.5	04/14/04	Yes	1-R56C30_04/14/04_1	7440-38-2	Arsenic	6.6		mg/kg
R56C30	1-1.5	04/14/04	Yes	1-R56C30_04/14/04_1	7439-92-1	Lead	111.0		mg/kg
R56C31	1-1.5	04/14/04	Yes	1-R56C31_04/14/04_1	7440-38-2	Arsenic	3.7		mg/kg
R56C31	1-1.5	04/14/04	Yes	1-R56C31_04/14/04_1	7439-92-1	Lead	2.8		mg/kg
R56C32	1-1.5	04/14/04	Yes	1-R56C32_04/14/04_1	7440-38-2	Arsenic	14.1		mg/kg
R56C32	1-1.5	04/14/04	Yes	1-R56C32_04/14/04_1	7439-92-1	Lead	36.5		mg/kg
R56C33	1-1.5	04/14/04	Yes	1-R56C33_04/14/04_1	7440-38-2	Arsenic	8.4		mg/kg
R56C33	1-1.5	04/14/04	Yes	1-R56C33_04/14/04_1	7439-92-1	Lead	22.6		mg/kg
R56C34	1-1.5	01/22/04	Yes	01-SS-[R56C34]-C2_01/22/04_1	7440-38-2	Arsenic	7.4		mg/kg
R56C34	1-1.5	01/22/04	Yes	01-SS-[R56C34]-C2_01/22/04_1	7439-92-1	Lead	3.1		mg/kg
R56C35	1-1.5	01/22/04	Yes	01-SS-[R56C35]-C2_01/22/04_1	7440-38-2	Arsenic	18.7		mg/kg
R56C35	1-1.5	01/22/04	Yes	01-SS-[R56C35]-C2_01/22/04_1	7439-92-1	Lead	10.3		mg/kg
R56C36	1-1.5	01/22/04	Yes	01-SS-[R56C36]-C2_01/22/04_1	7440-38-2	Arsenic	19.1		mg/kg
R56C36	1-1.5	01/22/04	Yes	01-SS-[R56C36]-C2_01/22/04_1	7439-92-1	Lead	16.6		mg/kg
R57C21	1-1.5	01/20/04	Yes	01-SS-[R57C21]-C2_01/20/04_1	7440-38-2	Arsenic	5.8		mg/kg
R57C21	1-1.5	01/20/04	Yes	01-SS-[R57C21]-C2_01/20/04_1	7439-92-1	Lead	3.3		mg/kg
R57C30	1-1.5	04/14/04	Yes	1-R57C30_04/14/04_1	7440-38-2	Arsenic	13.2		mg/kg
R57C30	1-1.5	04/14/04	Yes	1-R57C30_04/14/04_1	7439-92-1	Lead	64.2		mg/kg
R57C31	1-1.5	04/14/04	Yes	1-R57C31_04/14/04_1	7440-38-2	Arsenic	3.6		mg/kg
R57C31	1-1.5	04/14/04	Yes	1-R57C31_04/14/04_1	7439-92-1	Lead	2.8		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R57C32	1-1.5	04/14/04	Yes	1-R57C32_04/14/04_1	7440-38-2	Arsenic	32.9		mg/kg
R57C32	1-1.5	04/14/04	Yes	1-R57C32_04/14/04_1	7439-92-1	Lead	45.4		mg/kg
R57C33	1-1.5	04/14/04	Yes	1-R57C33_04/14/04_1	7440-38-2	Arsenic	25.0		mg/kg
R57C33	1-1.5	04/14/04	Yes	1-R57C33_04/14/04_1	7439-92-1	Lead	47.7		mg/kg
R58C20	1-1.5	01/20/04	Yes	01-SS-[R58C20]-C2_01/20/04_1	7440-38-2	Arsenic	6.1		mg/kg
R58C20	1-1.5	01/20/04	Yes	01-SS-[R58C20]-C2_01/20/04_1	7439-92-1	Lead	4.7		mg/kg
R58C30	1-1.5	04/14/04	Yes	1-R58C30_04/14/04_1	7440-38-2	Arsenic	17.8		mg/kg
R58C30	1-1.5	04/14/04	Yes	1-R58C30_04/14/04_1	7439-92-1	Lead	59.4		mg/kg
R58C31	1-1.5	04/14/04	Yes	1-R58C31_04/14/04_1	7440-38-2	Arsenic	4.4		mg/kg
R58C31	1-1.5	04/14/04	Yes	1-R58C31_04/14/04_1	7439-92-1	Lead	16.7		mg/kg
R58C32	1-1.5	04/14/04	Yes	1-R58C32_04/14/04_1	7440-38-2	Arsenic	9.6		mg/kg
R58C32	1-1.5	04/14/04	Yes	1-R58C32_04/14/04_1	7439-92-1	Lead	30.5		mg/kg
R58C33	1-1.5	04/14/04	Yes	1-R58C33_04/14/04_1	7440-38-2	Arsenic	18.7		mg/kg
R58C33	1-1.5	04/14/04	Yes	1-R58C33_04/14/04_1	7439-92-1	Lead	35.3		mg/kg
R58C34	1-1.5	02/20/04	Yes	1-R58C34_02/20/04_1	7440-38-2	Arsenic	32.1		mg/kg
R58C34	1-1.5	02/20/04	Yes	1-R58C34_02/20/04_1	7439-92-1	Lead	17.5		mg/kg
R58C35	1-1.5	02/20/04	Yes	1-R58C35_02/20/04_1	7440-38-2	Arsenic	13.6		mg/kg
R58C35	1-1.5	02/20/04	Yes	1-R58C35_02/20/04_1	7439-92-1	Lead	45.0		mg/kg
R59C20	1-1.5	01/20/04	Yes	01-SS-[R59C20]-C2_01/20/04_1	7440-38-2	Arsenic	6.0		mg/kg
R59C20	1-1.5	01/20/04	Yes	01-SS-[R59C20]-C2_01/20/04_1	7439-92-1	Lead	4.7		mg/kg
R59C33	1-1.5	04/14/04	Yes	1-R59C33_04/14/04_1	7440-38-2	Arsenic	50.2		mg/kg
R59C33	1-1.5	04/14/04	Yes	1-R59C33_04/14/04_1	7439-92-1	Lead	59.9		mg/kg
R59C34	1-1.5	02/20/04	Yes	1-R59C34_02/20/04_1	7440-38-2	Arsenic	8.4		mg/kg
R59C34	1-1.5	02/20/04	Yes	1-R59C34_02/20/04_1	7439-92-1	Lead	8.0		mg/kg
R60C19	1-1.5	01/20/04	Yes	01-SS-[R60C19]-C2_01/20/04_1	7440-38-2	Arsenic	8.6		mg/kg
R60C19	1-1.5	01/20/04	Yes	01-SS-[R60C19]-C2_01/20/04_1	7439-92-1	Lead	8.2		mg/kg
R60C20	1-1.5	01/20/04	Yes	01-SS-[R60C20]-C2_01/20/04_1	7440-38-2	Arsenic	8.3		mg/kg
R60C20	1-1.5	01/20/04	Yes	01-SS-[R60C20]-C2_01/20/04_1	7439-92-1	Lead	7.8		mg/kg
R60C33	1-1.5	02/20/04	Yes	1-R60C33_02/20/04_1	7440-38-2	Arsenic	55.6		mg/kg
R60C33	1-1.5	02/20/04	Yes	1-R60C33_02/20/04_1	7439-92-1	Lead	19.5		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R61C19	1-1.5	01/20/04	Yes	01-SS-[R61C19]-C2_01/20/04_1	7440-38-2	Arsenic	11.2		mg/kg
R61C19	1-1.5	01/20/04	Yes	01-SS-[R61C19]-C2_01/20/04_1	7439-92-1	Lead	10.8		mg/kg
R61C20	1-1.5	01/20/04	Yes	01-SS-[R61C20]-C2_AVG_01/20/04_1	7440-38-2	Arsenic	12.7		mg/kg
R61C20	1-1.5	01/20/04	Yes	01-SS-[R61C20]-C2_AVG_01/20/04_1	7439-92-1	Lead	13.8		mg/kg
R61C29	1-1.5	02/24/04	Yes	1-R61C29_02/24/04_1	7440-38-2	Arsenic	15.9		mg/kg
R61C29	1-1.5	02/24/04	Yes	1-R61C29_02/24/04_1	7439-92-1	Lead	23.5		mg/kg
R62C18	1-1.5	02/10/04	Yes	1-R62C18_02/10/04_1	7440-38-2	Arsenic	7.9		mg/kg
R62C18	1-1.5	02/10/04	Yes	1-R62C18_02/10/04_1	7439-92-1	Lead	8.3		mg/kg
R62C19	1-1.5	02/10/04	Yes	1-R62C19_02/10/04_1	7440-38-2	Arsenic	8.9		mg/kg
R62C19	1-1.5	02/10/04	Yes	1-R62C19_02/10/04_1	7439-92-1	Lead	18.3		mg/kg
R62C20	1-1.5	01/20/04	Yes	01-SS-[R62C20]-C2_01/20/04_1	7440-38-2	Arsenic	9.6		mg/kg
R62C20	1-1.5	01/20/04	Yes	01-SS-[R62C20]-C2_01/20/04_1	7439-92-1	Lead	9.8		mg/kg
R62C30	1-1.5	02/24/04	Yes	1-R62C30_02/24/04_1	7440-38-2	Arsenic	24.1		mg/kg
R62C30	1-1.5	02/24/04	Yes	1-R62C30_02/24/04_1	7439-92-1	Lead	6.9		mg/kg
R62C31	1-1.5	11/19/03	Yes	01-SS-[R62C31]-C2_11/19/03_1	7440-38-2	Arsenic	13.6		mg/kg
R62C31	1-1.5	11/19/03	Yes	01-SS-[R62C31]-C2_11/19/03_1	7439-92-1	Lead	19.0		mg/kg
R63C18	1-1.5	02/04/04	Yes	1-R63C18_02/04/04_1	7440-38-2	Arsenic	13.2		mg/kg
R63C18	1-1.5	02/04/04	Yes	1-R63C18_02/04/04_1	7439-92-1	Lead	41.2		mg/kg
R63C26	1-1.5	11/17/03	Yes	01-SS-[R63C26]-C2_11/17/03_1	7440-38-2	Arsenic	11.6		mg/kg
R63C26	1-1.5	11/17/03	Yes	01-SS-[R63C26]-C2_11/17/03_1	7439-92-1	Lead	17.7		mg/kg
R63C27	1-1.5	11/17/03	Yes	01-SS-[R63C27]-C2_11/17/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R63C27	1-1.5	11/17/03	Yes	01-SS-[R63C27]-C2_11/17/03_1	7439-92-1	Lead	4.2		mg/kg
R63C30	1-1.5	11/19/03	Yes	01-SS-[R63C30]-C2_AVG_11/19/03_1	7440-38-2	Arsenic	2.5	U	mg/kg
R63C30	1-1.5	11/19/03	Yes	01-SS-[R63C30]-C2_AVG_11/19/03_1	7439-92-1	Lead	4.1		mg/kg
R64C25	1-1.5	11/17/03	Yes	01-SS-[R64C25]-C2_11/17/03_1	7440-38-2	Arsenic	16.1		mg/kg
R64C25	1-1.5	11/17/03	Yes	01-SS-[R64C25]-C2_11/17/03_1	7439-92-1	Lead	24.8		mg/kg
R64C26	1-1.5	11/17/03	Yes	01-SS-[R64C26]-C2_11/17/03_1	7440-38-2	Arsenic	7.7		mg/kg
R64C26	1-1.5	11/17/03	Yes	01-SS-[R64C26]-C2_11/17/03_1	7439-92-1	Lead	8.8		mg/kg
R64C27	1-1.5	11/17/03	Yes	01-SS-[R64C27]-C2_11/17/03_1	7440-38-2	Arsenic	2.6		mg/kg
R64C27	1-1.5	11/17/03	Yes	01-SS-[R64C27]-C2_11/17/03_1	7439-92-1	Lead	4.7		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R64C29	1-1.5	02/24/04	Yes	1-R64C29_02/24/04_1	7440-38-2	Arsenic	6.7		mg/kg
R64C29	1-1.5	02/24/04	Yes	1-R64C29_02/24/04_1	7439-92-1	Lead	4.1		mg/kg
R65C23	1-1.5	02/10/04	Yes	1-R65C23_02/10/04_1	7440-38-2	Arsenic	7.5		mg/kg
R65C23	1-1.5	02/10/04	Yes	1-R65C23_02/10/04_1	7439-92-1	Lead	4.4		mg/kg
R65C24	1-1.5	02/10/04	Yes	1-R65C24_02/10/04_1	7440-38-2	Arsenic	8.5		mg/kg
R65C24	1-1.5	02/10/04	Yes	1-R65C24_02/10/04_1	7439-92-1	Lead	5.5		mg/kg
R65C25	1-1.5	11/17/03	Yes	01-SS-[R65C25]-C2_11/17/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R65C25	1-1.5	11/17/03	Yes	01-SS-[R65C25]-C2_11/17/03_1	7439-92-1	Lead	3.5		mg/kg
R65C26	1-1.5	11/17/03	Yes	01-SS-[R65C26]-C2_11/17/03_1	7440-38-2	Arsenic	13.3		mg/kg
R65C26	1-1.5	11/17/03	Yes	01-SS-[R65C26]-C2_11/17/03_1	7439-92-1	Lead	18.1		mg/kg
R66C18	1-1.5	02/10/04	Yes	1-R66C18_02/10/04_1	7440-38-2	Arsenic	9.2		mg/kg
R66C18	1-1.5	02/10/04	Yes	1-R66C18_02/10/04_1	7439-92-1	Lead	10.7		mg/kg
R66C19	1-1.5	02/10/04	Yes	1-R66C19_02/10/04_1	7440-38-2	Arsenic	16.3		mg/kg
R66C19	1-1.5	02/10/04	Yes	1-R66C19_02/10/04_1	7439-92-1	Lead	12.7		mg/kg
R66C22	1-1.5	02/10/04	Yes	1-R66C22_02/10/04_1	7440-38-2	Arsenic	6.8		mg/kg
R66C22	1-1.5	02/10/04	Yes	1-R66C22_02/10/04_1	7439-92-1	Lead	5.3		mg/kg
R66C24	1-1.5	02/10/04	Yes	1-R66C24_02/10/04_1	7440-38-2	Arsenic	5.4		mg/kg
R66C24	1-1.5	02/10/04	Yes	1-R66C24_02/10/04_1	7439-92-1	Lead	4.3		mg/kg
R66C25	1-1.5	11/17/03	Yes	01-SS-[R66C25]-C2_11/17/03_1	7440-38-2	Arsenic	6.9		mg/kg
R66C25	1-1.5	11/17/03	Yes	01-SS-[R66C25]-C2_11/17/03_1	7439-92-1	Lead	19.5		mg/kg
R67C16	1-1.5	02/02/04	Yes	01-SS-[R67C16]-C2_02/02/04_1	7440-38-2	Arsenic	11.7		mg/kg
R67C16	1-1.5	02/02/04	Yes	01-SS-[R67C16]-C2_02/02/04_1	7439-92-1	Lead	5.8		mg/kg
R67C18	1-1.5	02/02/04	Yes	01-SS-[R67C18]-C2_02/02/04_1	7440-38-2	Arsenic	15.4		mg/kg
R67C18	1-1.5	02/02/04	Yes	01-SS-[R67C18]-C2_02/02/04_1	7439-92-1	Lead	18.8		mg/kg
R67C25	1-1.5	11/17/03	Yes	01-SS-[R67C25]-C2_11/17/03_1	7440-38-2	Arsenic	9.3		mg/kg
R67C25	1-1.5	11/17/03	Yes	01-SS-[R67C25]-C2_11/17/03_1	7439-92-1	Lead	24.5		mg/kg
R68C16	1-1.5	01/29/04	Yes	01-SS-[R68C16]-C1_01/29/04_1	7440-38-2	Arsenic	9.5		mg/kg
R68C16	1-1.5	01/29/04	Yes	01-SS-[R68C16]-C1_01/29/04_1	7439-92-1	Lead	3.6		mg/kg
R68C17	1-1.5	02/02/04	Yes	01-SS-[R68C17]-C2_02/02/04_1	7440-38-2	Arsenic	30.7		mg/kg
R68C17	1-1.5	02/02/04	Yes	01-SS-[R68C17]-C2_02/02/04_1	7439-92-1	Lead	17.8		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R68C21	1-1.5	11/17/03	Yes	01-SS-[R68C21]-C2_11/17/03_1	7440-38-2	Arsenic	8.0		mg/kg
R68C21	1-1.5	11/17/03	Yes	01-SS-[R68C21]-C2_11/17/03_1	7439-92-1	Lead	7.0		mg/kg
R68C22	1-1.5	11/17/03	Yes	01-SS-[R68C22]-C2_11/17/03_1	7440-38-2	Arsenic	4.4		mg/kg
R68C22	1-1.5	11/17/03	Yes	01-SS-[R68C22]-C2_11/17/03_1	7439-92-1	Lead	4.3		mg/kg
R68C23	1-1.5	11/17/03	Yes	01-SS-[R68C23]-C2_11/17/03_1	7440-38-2	Arsenic	3.8		mg/kg
R68C23	1-1.5	11/17/03	Yes	01-SS-[R68C23]-C2_11/17/03_1	7439-92-1	Lead	4.2		mg/kg
R69C16	1-1.5	02/02/04	Yes	01-SS-[R69C16]-C2_02/02/04_1	7440-38-2	Arsenic	24.9		mg/kg
R69C16	1-1.5	02/02/04	Yes	01-SS-[R69C16]-C2_02/02/04_1	7439-92-1	Lead	26.6		mg/kg
R69C17	1-1.5	02/02/04	Yes	01-SS-[R69C17]-C2_02/02/04_1	7440-38-2	Arsenic	33.7		mg/kg
R69C17	1-1.5	02/02/04	Yes	01-SS-[R69C17]-C2_02/02/04_1	7439-92-1	Lead	29.3		mg/kg
R69C18	1-1.5	02/02/04	Yes	01-SS-[R69C18]-C2_02/02/04_1	7440-38-2	Arsenic	9.0		mg/kg
R69C18	1-1.5	02/02/04	Yes	01-SS-[R69C18]-C2_02/02/04_1	7439-92-1	Lead	9.6		mg/kg
R69C21	1-1.5	11/17/03	Yes	01-SS-[R69C21]-C2_11/17/03_1	7440-38-2	Arsenic	12.0		mg/kg
R69C21	1-1.5	11/17/03	Yes	01-SS-[R69C21]-C2_11/17/03_1	7439-92-1	Lead	14.1		mg/kg
R69C22	1-1.5	02/02/04	Yes	01-SS-[R69C22]-C2_02/02/04_1	7440-38-2	Arsenic	19.2		mg/kg
R69C22	1-1.5	02/02/04	Yes	01-SS-[R69C22]-C2_02/02/04_1	7439-92-1	Lead	21.1		mg/kg
R69C23	1-1.5	02/02/04	Yes	01-SS-[R69C23]-C2_02/02/04_1	7440-38-2	Arsenic	6.0		mg/kg
R69C23	1-1.5	02/02/04	Yes	01-SS-[R69C23]-C2_02/02/04_1	7439-92-1	Lead	7.1		mg/kg
R70C16	1-1.5	02/02/04	Yes	01-SS-[R70C16]-C2_02/02/04_1	7440-38-2	Arsenic	14.0		mg/kg
R70C16	1-1.5	02/02/04	Yes	01-SS-[R70C16]-C2_02/02/04_1	7439-92-1	Lead	12.0		mg/kg
R70C17	1-1.5	02/02/04	Yes	01-SS-[R70C17]-C2_02/02/04_1	7440-38-2	Arsenic	4.6		mg/kg
R70C17	1-1.5	02/02/04	Yes	01-SS-[R70C17]-C2_02/02/04_1	7439-92-1	Lead	3.7		mg/kg
R70C18	1-1.5	02/02/04	Yes	01-SS-[R70C18]-C2_02/02/04_1	7440-38-2	Arsenic	10.4		mg/kg
R70C18	1-1.5	02/02/04	Yes	01-SS-[R70C18]-C2_02/02/04_1	7439-92-1	Lead	17.9		mg/kg
R70C19	1-1.5	02/02/04	Yes	01-SS-[R70C19]-C2_02/02/04_1	7440-38-2	Arsenic	20.2		mg/kg
R70C19	1-1.5	02/02/04	Yes	01-SS-[R70C19]-C2_02/02/04_1	7439-92-1	Lead	38.0		mg/kg
R70C20	1-1.5	02/02/04	Yes	01-SS-[R70C20]-C2_02/02/04_1	7440-38-2	Arsenic	17.4		mg/kg
R70C20	1-1.5	02/02/04	Yes	01-SS-[R70C20]-C2_02/02/04_1	7439-92-1	Lead	19.6		mg/kg
R70C22	1-1.5	02/02/04	Yes	01-SS-[R70C22]-C2_02/02/04_1	7440-38-2	Arsenic	12.4		mg/kg
R70C22	1-1.5	02/02/04	Yes	01-SS-[R70C22]-C2_02/02/04_1	7439-92-1	Lead	11.1		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R70C23	1-1.5	02/02/04	Yes	01-SS-[R70C23]-C2_02/02/04_1	7440-38-2	Arsenic	6.7		mg/kg
R70C23	1-1.5	02/02/04	Yes	01-SS-[R70C23]-C2_02/02/04_1	7439-92-1	Lead	6.6		mg/kg
R71C16	1-1.5	07/16/02	Yes	01-SS-[75-R71C16]-D1-050	7440-38-2	Arsenic	7.8		mg/kg
R71C16	1-1.5	07/16/02	Yes	01-SS-[75-R71C16]-D1-050	7439-92-1	Lead	9.0		mg/kg
R71C17	1-1.5	07/16/02	Yes	01-SS-[75-R71C17]-D1-050	7440-38-2	Arsenic	7.3		mg/kg
R71C17	1-1.5	07/16/02	Yes	01-SS-[75-R71C17]-D1-050	7439-92-1	Lead	17.0		mg/kg
R71C21	1-1.5	11/17/03	Yes	01-SS-[R71C21]-C2_11/17/03_1	7440-38-2	Arsenic	2.8		mg/kg
R71C21	1-1.5	11/17/03	Yes	01-SS-[R71C21]-C2_11/17/03_1	7439-92-1	Lead	8.0		mg/kg
R71C22	1-1.5	11/17/03	Yes	01-SS-[R71C22]-C2_11/17/03_1	7440-38-2	Arsenic	4.8		mg/kg
R71C22	1-1.5	11/17/03	Yes	01-SS-[R71C22]-C2_11/17/03_1	7439-92-1	Lead	7.8		mg/kg
R71C23	1-1.5	11/17/03	Yes	01-SS-[R71C23]-C2_11/17/03_1	7440-38-2	Arsenic	8.6		mg/kg
R71C23	1-1.5	11/17/03	Yes	01-SS-[R71C23]-C2_11/17/03_1	7439-92-1	Lead	8.0		mg/kg
R72C22	1-1.5	11/14/03	Yes	01-SS-[R72C22]-C2_11/14/03_1	7440-38-2	Arsenic	6.0		mg/kg
R72C22	1-1.5	11/14/03	Yes	01-SS-[R72C22]-C2_11/14/03_1	7439-92-1	Lead	8.0		mg/kg
SA5-86-42	1.5-2	10/12/99	Yes	SA5-86-42	7440-38-2	Arsenic	9.6		mg/kg
SA5-86-42	1.5-2	10/12/99	Yes	SA5-86-42	7439-92-1	Lead	15.0		mg/kg
SA5-86-43	1.5-2	10/12/99	Yes	SA5-86-43	7440-38-2	Arsenic	13.0		mg/kg
SA5-86-43	1.5-2	10/12/99	Yes	SA5-86-43	7439-92-1	Lead	15.0		mg/kg
SA5-86-44	1.5-2	10/12/99	Yes	SA5-86-44	7440-38-2	Arsenic	8.2		mg/kg
SA5-86-44	1.5-2	10/12/99	Yes	SA5-86-44	7439-92-1	Lead	9.2		mg/kg
SA5-87-42	1.5-2	10/12/99	Yes	SA5-87-42	7440-38-2	Arsenic	19.0		mg/kg
SA5-87-42	1.5-2	10/12/99	Yes	SA5-87-42	7439-92-1	Lead	21.0		mg/kg
SA5-87-43	1.5-2	10/12/99	Yes	SA5-87-43	7440-38-2	Arsenic	5.3		mg/kg
SA5-87-43	1.5-2	10/12/99	Yes	SA5-87-43	7439-92-1	Lead	9.4		mg/kg
SA5-87-44	1.5-2	10/12/99	Yes	SA5-87-44	7440-38-2	Arsenic	5.7		mg/kg
SA5-87-44	1.5-2	10/12/99	Yes	SA5-87-44	7439-92-1	Lead	7.6		mg/kg
SA5-87-45a	1.5-2	10/13/99	Yes	SA5-87-45a	7440-38-2	Arsenic	50.0		mg/kg
SA5-87-45a	1.5-2	10/13/99	Yes	SA5-87-45a	7439-92-1	Lead	16.0		mg/kg
SA5-88-42	1.5-2	10/12/99	Yes	SA5-88-42	7440-38-2	Arsenic	12.0		mg/kg
SA5-88-42	1.5-2	10/12/99	Yes	SA5-88-42	7439-92-1	Lead	18.0		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA5-88-43	1.5-2	10/12/99	Yes	SA5-88-43	7440-38-2	Arsenic	20.0		mg/kg
SA5-88-43	1.5-2	10/12/99	Yes	SA5-88-43	7439-92-1	Lead	13.0		mg/kg
SA5-88-44a	2.5-3	10/18/99	Yes	SA5-88-44a	7440-38-2	Arsenic	3.2		mg/kg
SA5-88-44a	2.5-3	10/18/99	Yes	SA5-88-44a	7439-92-1	Lead	4.3		mg/kg
SA5-88-45a	1.5-2	10/13/99	Yes	SA5-88-45a	7440-38-2	Arsenic	10.0		mg/kg
SA5-88-45a	1.5-2	10/13/99	Yes	SA5-88-45a	7439-92-1	Lead	12.0		mg/kg
SA5-89-40	1.5-2	10/12/99	Yes	SA5-89-40-DAVG	7440-38-2	Arsenic	11.5		mg/kg
SA5-89-40	1.5-2	10/12/99	Yes	SA5-89-40-DAVG	7439-92-1	Lead	15.5		mg/kg
SA5-89-41a	1.5-2	10/13/99	Yes	SA5-89-41a	7440-38-2	Arsenic	44.0		mg/kg
SA5-89-41a	1.5-2	10/13/99	Yes	SA5-89-41a	7439-92-1	Lead	53.0		mg/kg
SA5-89-42	1.5-2	10/12/99	Yes	SA5-89-42	7440-38-2	Arsenic	9.5		mg/kg
SA5-89-42	1.5-2	10/12/99	Yes	SA5-89-42	7439-92-1	Lead	10.0		mg/kg
SA5-89-43	1.5-2	10/12/99	Yes	SA5-89-43	7440-38-2	Arsenic	10.0		mg/kg
SA5-89-43	1.5-2	10/12/99	Yes	SA5-89-43	7439-92-1	Lead	15.0		mg/kg
SA5-89-45a	1.5-2	10/13/99	Yes	SA5-89-45a	7440-38-2	Arsenic	2.9		mg/kg
SA5-89-45a	1.5-2	10/13/99	Yes	SA5-89-45a	7439-92-1	Lead	5.8		mg/kg
SA5-91-41	1.5-2	10/12/99	Yes	SA5-91-41	7440-38-2	Arsenic	7.3		mg/kg
SA5-91-41	1.5-2	10/12/99	Yes	SA5-91-41	7439-92-1	Lead	9.7		mg/kg
SA5-91-42	1.5-2	10/12/99	Yes	SA5-91-42	7440-38-2	Arsenic	58.0		mg/kg
SA5-91-42	1.5-2	10/12/99	Yes	SA5-91-42	7439-92-1	Lead	52.0		mg/kg
SA5-92-41	1.5-2	10/12/99	Yes	SA5-92-41	7440-38-2	Arsenic	4.0		mg/kg
SA5-92-41	1.5-2	10/12/99	Yes	SA5-92-41	7439-92-1	Lead	5.8		mg/kg
SA5-92-42a	1.5-2	10/13/99	Yes	SA5-92-42a	7440-38-2	Arsenic	5.0		mg/kg
SA5-92-42a	1.5-2	10/13/99	Yes	SA5-92-42a	7439-92-1	Lead	6.9		mg/kg
SA5-92-43a	1.5-2	10/13/99	Yes	SA5-92-43a	7440-38-2	Arsenic	24.0		mg/kg
SA5-92-43a	1.5-2	10/13/99	Yes	SA5-92-43a	7439-92-1	Lead	22.0		mg/kg
SA5-93-41	1.5-2	10/12/99	Yes	SA5-93-41	7440-38-2	Arsenic	4.2		mg/kg
SA5-93-41	1.5-2	10/12/99	Yes	SA5-93-41	7439-92-1	Lead	5.2		mg/kg
SA5-93-42	1.5-2	10/12/99	Yes	SA5-93-42	7440-38-2	Arsenic	7.7		mg/kg
SA5-93-42	1.5-2	10/12/99	Yes	SA5-93-42	7439-92-1	Lead	8.4		mg/kg

Table B.14
Sample Results for GC-06 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA5-93-43	1.5-2	10/12/99	Yes	SA5-93-43	7440-38-2	Arsenic	3.4		mg/kg
SA5-93-43	1.5-2	10/12/99	Yes	SA5-93-43	7439-92-1	Lead	5.1		mg/kg
SA5-93-44a	1.5-2	10/13/99	Yes	SA5-93-44a	7440-38-2	Arsenic	2.8		mg/kg
SA5-93-44a	1.5-2	10/13/99	Yes	SA5-93-44a	7439-92-1	Lead	4.9		mg/kg
SA5-94-41	1.5-2	10/12/99	Yes	SA5-94-41	7440-38-2	Arsenic	6.9		mg/kg
SA5-94-41	1.5-2	10/12/99	Yes	SA5-94-41	7439-92-1	Lead	8.8		mg/kg
SA5-94-42	1.5-2	10/12/99	Yes	SA5-94-42	7440-38-2	Arsenic	5.7		mg/kg
SA5-94-42	1.5-2	10/12/99	Yes	SA5-94-42	7439-92-1	Lead	6.0		mg/kg
SA5-94-43	1.5-2	10/12/99	Yes	SA5-94-43	7440-38-2	Arsenic	4.6		mg/kg
SA5-94-43	1.5-2	10/12/99	Yes	SA5-94-43	7439-92-1	Lead	5.6		mg/kg
SA5-94-44a	1.5-2	10/13/99	Yes	SA5-94-44a	7440-38-2	Arsenic	2.6		mg/kg
SA5-94-44a	1.5-2	10/13/99	Yes	SA5-94-44a	7439-92-1	Lead	4.6		mg/kg
SA5-95-41	1.5-2	10/12/99	Yes	SA5-95-41	7440-38-2	Arsenic	4.9		mg/kg
SA5-95-41	1.5-2	10/12/99	Yes	SA5-95-41	7439-92-1	Lead	6.4		mg/kg
SA5-95-42	1.5-2	10/12/99	Yes	SA5-95-42	7440-38-2	Arsenic	4.7		mg/kg
SA5-95-42	1.5-2	10/12/99	Yes	SA5-95-42	7439-92-1	Lead	5.3		mg/kg
SA5-95-43	1.5-2	10/12/99	Yes	SA5-95-43	7440-38-2	Arsenic	4.0		mg/kg
SA5-95-43	1.5-2	10/12/99	Yes	SA5-95-43	7439-92-1	Lead	5.0		mg/kg
WR-W.W.-1	1-1.5	04/24/03	Yes	01-SS-[WR-W.W.-1]-C1_04/24/03_1	7439-92-1	Lead	48.9		mg/kg
WR-W.W.-2	1-1.5	04/24/03	No	01-SS-[WR-W.W.-2]-C1_AVG_04/24/03_1	7439-92-1	Lead	26.9		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-534	3-6	04/30/92	Yes	18-TP-534-S-2	7440-38-2	Arsenic	3.4		mg/kg
18-TP-534	3-6	04/30/92	Yes	18-TP-534-S-2	7440-50-8	Copper	14.5		mg/kg
18-TP-534	3-6	04/30/92	Yes	18-TP-534-S-2	7439-92-1	Lead	5.2	U	mg/kg
18-TP-534	3-6	04/30/92	Yes	18-TP-534-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-534	8-10	04/30/92	Yes	18-TP-534-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-555	8-10	04/30/92	Yes	18-TP-555-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-556	3-6	05/13/92	Yes	18-TP-556-S-2	7440-38-2	Arsenic	2.3		mg/kg
18-TP-556	3-6	05/13/92	Yes	18-TP-556-S-2	7440-50-8	Copper	17.0		mg/kg
18-TP-556	3-6	05/13/92	Yes	18-TP-556-S-2	7439-92-1	Lead	5.2	U	mg/kg
18-TP-556	3-6	05/13/92	Yes	18-TP-556-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-556	8-10	05/13/92	Yes	18-TP-556-S-3	7439-92-1	Lead	6.0		mg/kg
18-VS-245	1-1.5	09/22/99	Yes	18-VS-245	7440-38-2	Arsenic	36.0		mg/kg
18-VS-245	1-1.5	09/22/99	Yes	18-VS-245	7439-92-1	Lead	21.0		mg/kg
18-VS-246	1-1.5	09/22/99	Yes	18-VS-246	7440-38-2	Arsenic	1.9	U	mg/kg
18-VS-246	1-1.5	09/22/99	Yes	18-VS-246	7439-92-1	Lead	2.0		mg/kg
18-VS-247	1-1.5	09/22/99	Yes	18-VS-247	7440-38-2	Arsenic	1.9		mg/kg
18-VS-247	1-1.5	09/22/99	Yes	18-VS-247	7439-92-1	Lead	1.9		mg/kg
18-VS-248	1-1.5	09/22/99	Yes	18-VS-248	7440-38-2	Arsenic	9.7		mg/kg
18-VS-248	1-1.5	09/22/99	Yes	18-VS-248	7439-92-1	Lead	14.0		mg/kg
18-VS-300	5.5-6	01/25/00	Yes	18-VS-300	7440-38-2	Arsenic	2.3	U	mg/kg
18-VS-300	5.5-6	01/25/00	Yes	18-VS-300	7439-92-1	Lead	11.0		mg/kg
18R-452	0.5-1	12/10/93	Yes	18R-452-S-2	7440-38-2	Arsenic	3.0		mg/kg
18R-452	1-2	12/10/93	Yes	18R-452-S-3	7440-38-2	Arsenic	11.0		mg/kg
18R-474	0.5-1	12/16/93	Yes	18R-474-S-2	7440-38-2	Arsenic	11.0		mg/kg
18R-474	1-2	12/16/93	Yes	18R-474-S-3	7440-38-2	Arsenic	7.1		mg/kg
F-36-B	2-2.5	05/12/04	Yes	F-36-B_05/12/04_2	7440-38-2	Arsenic	7.7		mg/kg
F-36-B	2-2.5	05/12/04	Yes	F-36-B_05/12/04_2	7439-92-1	Lead	9.3		mg/kg
MSU-88-E	0-7	06/26/03	Yes	01-SS-[MSU-88-E]-D1_06/26/03_0	7440-38-2	Arsenic	4.6		mg/kg
MSU-88-E	0-7	06/26/03	Yes	01-SS-[MSU-88-E]-D1_06/26/03_0	7439-92-1	Lead	8.3		mg/kg
MSU-88-N	0-7	06/26/03	No	01-SS-[MSU-88-N]-D1_06/26/03_0	7440-38-2	Arsenic	7.5		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-88-S	0-7	06/26/03	Yes	01-SS-[MSU-88-S]-D1_06/26/03_0	7440-38-2	Arsenic	118.0		mg/kg
MSU-88-S	0-7	06/26/03	Yes	01-SS-[MSU-88-S]-D1_06/26/03_0	7439-92-1	Lead	710.0		mg/kg
MSU-88-VS-B	3-7.5	08/07/03	Yes	01-SS-[MSU-88-VS-B]-C2_08/07/03_3	7440-38-2	Arsenic	2.1	U	mg/kg
MSU-88-VS-B	3-7.5	08/07/03	Yes	01-SS-[MSU-88-VS-B]-C2_08/07/03_3	7439-92-1	Lead	3.6		mg/kg
MSU-88-W	0-0.5	06/26/03	Yes	01-SS-[MSU-88-W]-D1_06/26/03_0	7440-38-2	Arsenic	5.3		mg/kg
MSU-88-W	0-0.5	06/26/03	Yes	01-SS-[MSU-88-W]-D1_06/26/03_0	7439-92-1	Lead	16.6		mg/kg
MSU-F-24-3	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-3]-C1_05/01/03_2	7440-38-2	Arsenic	6.0		mg/kg
MSU-F-24-3	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-3]-C1_05/01/03_2	7439-92-1	Lead	5.4		mg/kg
MSU-F-24-4	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-4]-C1_05/01/03_2	7440-38-2	Arsenic	6.5		mg/kg
MSU-F-24-4	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-4]-C1_05/01/03_2	7439-92-1	Lead	7.3		mg/kg
MSU-F-24-5	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-5]-C1_05/01/03_2	7440-38-2	Arsenic	4.6		mg/kg
MSU-F-24-5	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-5]-C1_05/01/03_2	7439-92-1	Lead	5.9		mg/kg
MSU-F-24	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-1]-C1_05/01/03_2	7440-38-2	Arsenic	5.6		mg/kg
MSU-F-24	2-2.5	05/01/03	Yes	01-SS-[MSU-F-24-1]-C1_05/01/03_2	7439-92-1	Lead	5.9		mg/kg
MSU-F-26-4	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-4]-C1_05/13/03_2	7440-38-2	Arsenic	6.5		mg/kg
MSU-F-26-4	2-2.5	05/13/03	Yes	01-SS-[MSU-F-26-4]-C1_05/13/03_2	7439-92-1	Lead	4.9		mg/kg
MSU-F-27-2	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-2]-C1_05/01/03_2	7440-38-2	Arsenic	5.6		mg/kg
MSU-F-27-2	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-2]-C1_05/01/03_2	7439-92-1	Lead	8.7		mg/kg
MSU-F-27-3	2-2.5	05/01/03	No	01-SS-[MSU-F-27-3]-C1_05/01/03_2	7440-38-2	Arsenic	8.4		mg/kg
MSU-F-27-3	3-3.5	11/20/03	Yes	02-SS-[MSU-F-27-3]-C2_11/20/03_3	7439-92-1	Lead	5.3		mg/kg
MSU-F-27-4	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-4]-C1_05/01/03_2	7440-38-2	Arsenic	9.9		mg/kg
MSU-F-27-4	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-4]-C1_05/01/03_2	7439-92-1	Lead	11.8		mg/kg
MSU-F-27-5	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-5]-C1_05/01/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-27-5	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-5]-C1_05/01/03_2	7439-92-1	Lead	14.8		mg/kg
MSU-F-27	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-1]-C1_05/01/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-27	2-2.5	05/01/03	Yes	01-SS-[MSU-F-27-1]-C1_05/01/03_2	7439-92-1	Lead	20.0		mg/kg
MSU-F-31-2	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-2]-C1_05/05/03_2	7440-38-2	Arsenic	3.5		mg/kg
MSU-F-31-2	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-2]-C1_05/05/03_2	7439-92-1	Lead	11.3		mg/kg
MSU-F-31-3	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-3]-C1_05/05/03_2	7440-38-2	Arsenic	4.1		mg/kg
MSU-F-31-3	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-3]-C1_05/05/03_2	7439-92-1	Lead	19.6		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-31-4	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-4]-C1_05/05/03_2	7440-38-2	Arsenic	5.1		mg/kg
MSU-F-31-4	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-4]-C1_05/05/03_2	7439-92-1	Lead	8.4		mg/kg
MSU-F-31-5	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-5]-C1_05/05/03_2	7440-38-2	Arsenic	3.1		mg/kg
MSU-F-31-5	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-5]-C1_05/05/03_2	7439-92-1	Lead	11.9		mg/kg
MSU-F-31-6	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-6]-C1_05/05/03_2	7440-38-2	Arsenic	2.9		mg/kg
MSU-F-31-6	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-6]-C1_05/05/03_2	7439-92-1	Lead	107.0		mg/kg
MSU-F-31	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-1]-C1_05/05/03_2	7440-38-2	Arsenic	4.8		mg/kg
MSU-F-31	2-2.5	05/05/03	Yes	01-SS-[MSU-F-31-1]-C1_05/05/03_2	7439-92-1	Lead	11.9		mg/kg
MSU-F-33-2	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-2]-C1_05/06/03_2	7440-38-2	Arsenic	3.5		mg/kg
MSU-F-33-2	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-2]-C1_05/06/03_2	7439-92-1	Lead	19.7		mg/kg
MSU-F-33-4	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-4]-C1_05/06/03_2	7440-38-2	Arsenic	6.6		mg/kg
MSU-F-33-4	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-4]-C1_05/06/03_2	7439-92-1	Lead	4.0		mg/kg
MSU-F-33	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-1]-C1_05/06/03_2	7440-38-2	Arsenic	5.6		mg/kg
MSU-F-33	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-1]-C1_05/06/03_2	7439-92-1	Lead	14.6		mg/kg
MSU-F-36-2	2-2.5	05/07/03	Yes	01-SS-[MSU-F-36-2]-C1_05/07/03_2	7440-38-2	Arsenic	3.5		mg/kg
MSU-F-36-2	2-2.5	05/07/03	Yes	01-SS-[MSU-F-36-2]-C1_05/07/03_2	7439-92-1	Lead	3.2		mg/kg
MSU-F-36-3	2-2.5	05/07/03	Yes	01-SS-[MSU-F-36-3]-C1_05/07/03_2	7440-38-2	Arsenic	4.4		mg/kg
MSU-F-36-3	2-2.5	05/07/03	Yes	01-SS-[MSU-F-36-3]-C1_05/07/03_2	7439-92-1	Lead	5.1		mg/kg
MSU-F-36	2-2.5	05/07/03	Yes	01-SS-[MSU-F-36-1]-C1_05/07/03_2	7440-38-2	Arsenic	35.2		mg/kg
MSU-F-36	2-2.5	05/07/03	Yes	01-SS-[MSU-F-36-1]-C1_05/07/03_2	7439-92-1	Lead	10.8		mg/kg
MSU-NGRR-21-10	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-10]-C1_05/06/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-NGRR-21-10	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-10]-C1_05/06/03_1.5	7439-92-1	Lead	3.1		mg/kg
MSU-NGRR-21-11	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-11]-C1_05/06/03_1.5	7440-38-2	Arsenic	39.9		mg/kg
MSU-NGRR-21-11	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-11]-C1_05/06/03_1.5	7439-92-1	Lead	8.7		mg/kg
MSU-NGRR-21-12	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-12]-C1_05/06/03_1.5	7440-38-2	Arsenic	6.7		mg/kg
MSU-NGRR-21-12	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-12]-C1_05/06/03_1.5	7439-92-1	Lead	3.2		mg/kg
MSU-NGRR-21-13	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-13]-C1_05/06/03_1.5	7440-38-2	Arsenic	4.3		mg/kg
MSU-NGRR-21-13	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-13]-C1_05/06/03_1.5	7439-92-1	Lead	3.2		mg/kg
MSU-NGRR-21-14	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-14]-C1_05/06/03_1.5	7440-38-2	Arsenic	9.9		mg/kg
MSU-NGRR-21-14	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-14]-C1_05/06/03_1.5	7439-92-1	Lead	5.3		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-21-15	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-15]-C1_05/06/03_1.5	7440-38-2	Arsenic	4.6		mg/kg
MSU-NGRR-21-15	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-15]-C1_05/06/03_1.5	7439-92-1	Lead	2.7		mg/kg
MSU-NGRR-21-16	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-16]-C1_05/06/03_1.5	7440-38-2	Arsenic	3.0		mg/kg
MSU-NGRR-21-16	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-16]-C1_05/06/03_1.5	7439-92-1	Lead	2.2		mg/kg
MSU-NGRR-21-19	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-19]-C1_05/06/03_1.5	7440-38-2	Arsenic	7.7		mg/kg
MSU-NGRR-21-19	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-19]-C1_05/06/03_1.5	7439-92-1	Lead	5.0		mg/kg
MSU-NGRR-21-20	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-20]-C1_05/06/03_1.5	7440-38-2	Arsenic	9.1		mg/kg
MSU-NGRR-21-20	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-20]-C1_05/06/03_1.5	7439-92-1	Lead	9.5		mg/kg
MSU-NGRR-21-2	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-2]-C1_05/05/03_1.5	7440-38-2	Arsenic	3.4		mg/kg
MSU-NGRR-21-2	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-2]-C1_05/05/03_1.5	7439-92-1	Lead	3.7		mg/kg
MSU-NGRR-21-21	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-21]-C1_05/07/03_1.5	7440-38-2	Arsenic	4.5		mg/kg
MSU-NGRR-21-21	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-21]-C1_05/07/03_1.5	7439-92-1	Lead	6.0		mg/kg
MSU-NGRR-21-22	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-22]-C1_05/07/03_1.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-NGRR-21-22	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-22]-C1_05/07/03_1.5	7439-92-1	Lead	3.1		mg/kg
MSU-NGRR-21-23	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-23]-C1_05/07/03_1.5	7440-38-2	Arsenic	6.1		mg/kg
MSU-NGRR-21-23	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-23]-C1_05/07/03_1.5	7439-92-1	Lead	3.6		mg/kg
MSU-NGRR-21-24	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-24]-C1_05/07/03_1.5	7440-38-2	Arsenic	5.3		mg/kg
MSU-NGRR-21-24	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-21-24]-C1_05/07/03_1.5	7439-92-1	Lead	3.2		mg/kg
MSU-NGRR-21-26	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-26]-C1_05/06/03_1.5	7440-38-2	Arsenic	2.1	U	mg/kg
MSU-NGRR-21-26	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-26]-C1_05/06/03_1.5	7439-92-1	Lead	3.0		mg/kg
MSU-NGRR-21-3	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-3]-C1_05/05/03_1.5	7440-38-2	Arsenic	7.6		mg/kg
MSU-NGRR-21-3	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-3]-C1_05/05/03_1.5	7439-92-1	Lead	4.0		mg/kg
MSU-NGRR-21-4	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-4]-C1_05/05/03_1.5	7440-38-2	Arsenic	2.9		mg/kg
MSU-NGRR-21-4	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-4]-C1_05/05/03_1.5	7439-92-1	Lead	2.4		mg/kg
MSU-NGRR-21-5	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-5]-C1_05/05/03_1.5	7440-38-2	Arsenic	3.9		mg/kg
MSU-NGRR-21-5	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-5]-C1_05/05/03_1.5	7439-92-1	Lead	3.3		mg/kg
MSU-NGRR-21-6	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-6]-C1_05/05/03_1.5	7440-38-2	Arsenic	5.9		mg/kg
MSU-NGRR-21-6	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-6]-C1_05/05/03_1.5	7439-92-1	Lead	2.4		mg/kg
MSU-NGRR-21-7	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-7]-C1_05/05/03_1.5	7440-38-2	Arsenic	2.6		mg/kg
MSU-NGRR-21-7	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-7]-C1_05/05/03_1.5	7439-92-1	Lead	2.7		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-21-8	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-8]-C1_05/06/03_1.5	7440-38-2	Arsenic	3.4		mg/kg
MSU-NGRR-21-8	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-8]-C1_05/06/03_1.5	7439-92-1	Lead	3.1		mg/kg
MSU-NGRR-21-9	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-9]-C1_05/06/03_1.5	7440-38-2	Arsenic	12.6		mg/kg
MSU-NGRR-21-9	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-9]-C1_05/06/03_1.5	7439-92-1	Lead	4.0		mg/kg
MSU-NGRR-21	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-1]-C1_05/05/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-NGRR-21	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-21-1]-C1_05/05/03_1.5	7439-92-1	Lead	3.8		mg/kg
MSU-NGRR-32	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-32-1]-C1_05/05/03_1.5	7440-38-2	Arsenic	8.2		mg/kg
MSU-NGRR-32	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-32-1]-C1_05/05/03_1.5	7439-92-1	Lead	7.9		mg/kg
MSU-NGRR-33-10A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-10]-C1A_04/29/03_1.5	7440-38-2	Arsenic	4.5		mg/kg
MSU-NGRR-33-10A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-10]-C1A_04/29/03_1.5	7439-92-1	Lead	5.2		mg/kg
MSU-NGRR-33-11A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-11]-C1A_04/29/03_1.5	7440-38-2	Arsenic	11.5		mg/kg
MSU-NGRR-33-11A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-11]-C1A_04/29/03_1.5	7439-92-1	Lead	9.0		mg/kg
MSU-NGRR-33-12A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-12]-C1A_04/29/03_1.5	7440-38-2	Arsenic	7.2		mg/kg
MSU-NGRR-33-12A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-12]-C1A_04/29/03_1.5	7439-92-1	Lead	10.2		mg/kg
MSU-NGRR-33-13A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-13]-C1A_04/29/03_1.5	7440-38-2	Arsenic	20.7		mg/kg
MSU-NGRR-33-13A	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-13]-C1A_04/29/03_1.5	7439-92-1	Lead	10.3		mg/kg
MSU-NGRR-33-14	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-14]-C1_AVG_05/01/03_1.5	7440-38-2	Arsenic	7.8		mg/kg
MSU-NGRR-33-14	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-14]-C1_AVG_05/01/03_1.5	7439-92-1	Lead	9.2		mg/kg
MSU-NGRR-33-15	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-15]-C1A_05/01/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-NGRR-33-15	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-15]-C1A_05/01/03_1.5	7439-92-1	Lead	4.7		mg/kg
MSU-NGRR-33-16	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-16]-C1A_05/01/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-NGRR-33-16	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-16]-C1A_05/01/03_1.5	7439-92-1	Lead	4.1		mg/kg
MSU-NGRR-33-17	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-17]-C1A_05/01/03_1.5	7440-38-2	Arsenic	3.3		mg/kg
MSU-NGRR-33-17	1.5-2	05/01/03	Yes	01-SS-[MSU-NGRR-33-17]-C1A_05/01/03_1.5	7439-92-1	Lead	2.8		mg/kg
MSU-NGRR-33-18	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-33-18]-C1_05/05/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-NGRR-33-18	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-33-18]-C1_05/05/03_1.5	7439-92-1	Lead	4.6		mg/kg
MSU-NGRR-33-19	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-33-19]-C1_05/05/03_1.5	7440-38-2	Arsenic	3.8		mg/kg
MSU-NGRR-33-19	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-33-19]-C1_05/05/03_1.5	7439-92-1	Lead	31.7		mg/kg
MSU-NGRR-33-20	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-33-20]-C1_05/05/03_1.5	7440-38-2	Arsenic	2.7		mg/kg
MSU-NGRR-33-20	1.5-2	05/05/03	Yes	01-SS-[MSU-NGRR-33-20]-C1_05/05/03_1.5	7439-92-1	Lead	3.3		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-33-23	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-23]-C1_05/13/03_1.5	7440-38-2	Arsenic	3.9		mg/kg
MSU-NGRR-33-23	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-23]-C1_05/13/03_1.5	7439-92-1	Lead	2.4		mg/kg
MSU-NGRR-33-24	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-24]-C1_05/13/03_1.5	7440-38-2	Arsenic	5.3		mg/kg
MSU-NGRR-33-24	1.5-2	05/13/03	Yes	01-SS-[MSU-NGRR-33-24]-C1_05/13/03_1.5	7439-92-1	Lead	4.0		mg/kg
MSU-NGRR-33-9_GO07	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-9]-C1A_AVG_04/29/03_1.5	7440-38-2	Arsenic	22.4		mg/kg
MSU-NGRR-33-9_GO07	1.5-2	04/29/03	Yes	01-SS-[MSU-NGRR-33-9]-C1A_AVG_04/29/03_1.5	7439-92-1	Lead	17.1		mg/kg
R59C35	1-1.5	03/03/04	No	01-R59C35_03/03/04_1	7440-38-2	Arsenic	52.6		mg/kg
R59C35	2-2.5	04/09/04	Yes	2-R59C35_04/09/04_2	7439-92-1	Lead	14.2		mg/kg
R60C34	1-1.5	02/20/04	Yes	1-R60C34_02/20/04_1	7440-38-2	Arsenic	52.6		mg/kg
R60C34	1-1.5	02/20/04	Yes	1-R60C34_02/20/04_1	7439-92-1	Lead	40.7		mg/kg
R60C39	1-1.5	03/03/04	No	01-R60C39_03/03/04_1	7440-38-2	Arsenic	20.5		mg/kg
R60C39	2-2.5	04/02/04	Yes	02-R60C39_04/02/04_2	7439-92-1	Lead	5.8		mg/kg
R61C33	1-1.5	02/20/04	Yes	1-R61C33_02/20/04_1	7440-38-2	Arsenic	30.4		mg/kg
R61C33	1-1.5	02/20/04	Yes	1-R61C33_02/20/04_1	7439-92-1	Lead	20.5		mg/kg
R61C34	1-1.5	02/20/04	Yes	1-R61C34_02/20/04_1	7440-38-2	Arsenic	24.2		mg/kg
R61C34	1-1.5	02/20/04	Yes	1-R61C34_02/20/04_1	7439-92-1	Lead	53.7		mg/kg
R61C35	1-1.5	03/03/04	Yes	01-R61C35_03/03/04_1	7440-38-2	Arsenic	31.3		mg/kg
R61C35	1-1.5	03/03/04	Yes	01-R61C35_03/03/04_1	7439-92-1	Lead	60.9		mg/kg
R61C40	1-1.5	03/02/04	Yes	01-R61C40_03/02/04_1	7440-38-2	Arsenic	6.0		mg/kg
R61C40	1-1.5	03/02/04	Yes	01-R61C40_03/02/04_1	7439-92-1	Lead	6.1		mg/kg
R62C33	1-1.5	02/20/04	Yes	1-R62C33_02/20/04_1	7440-38-2	Arsenic	9.1		mg/kg
R62C33	1-1.5	02/20/04	Yes	1-R62C33_02/20/04_1	7439-92-1	Lead	7.8		mg/kg
R62C34	1-1.5	02/20/04	Yes	1-R62C34_AVG_02/20/04_1	7440-38-2	Arsenic	19.4		mg/kg
R62C34	1-1.5	02/20/04	Yes	1-R62C34_AVG_02/20/04_1	7439-92-1	Lead	70.5		mg/kg
R62C35	1-1.5	02/20/04	Yes	1-R62C35_02/20/04_1	7440-38-2	Arsenic	20.1		mg/kg
R62C35	1-1.5	02/20/04	Yes	1-R62C35_02/20/04_1	7439-92-1	Lead	37.4		mg/kg
R62C36	2-2.5	04/29/04	Yes	02-R62C36_04/29/04_2	7439-92-1	Lead	15.1		mg/kg
R62C36	1-1.5	02/20/04	No	1-R62C36_02/20/04_1	7440-38-2	Arsenic	27.1		mg/kg
R62C39	1-1.5	03/02/04	Yes	01-R62C39_03/02/04_1	7440-38-2	Arsenic	7.6		mg/kg
R62C39	1-1.5	03/02/04	Yes	01-R62C39_03/02/04_1	7439-92-1	Lead	13.5		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R62C41	1-1.5	03/02/04	Yes	01-R62C41_03/02/04_1	7440-38-2	Arsenic	7.9		mg/kg
R62C41	1-1.5	03/02/04	Yes	01-R62C41_03/02/04_1	7439-92-1	Lead	9.3		mg/kg
R63C31	1-1.5	11/19/03	Yes	01-SS-[R63C31]-C2_11/19/03_1	7440-38-2	Arsenic	17.3		mg/kg
R63C31	1-1.5	11/19/03	Yes	01-SS-[R63C31]-C2_11/19/03_1	7439-92-1	Lead	5.6		mg/kg
R63C32	1-1.5	02/24/04	Yes	1-R63C32_02/24/04_1	7440-38-2	Arsenic	9.1		mg/kg
R63C32	1-1.5	02/24/04	Yes	1-R63C32_02/24/04_1	7439-92-1	Lead	6.0		mg/kg
R63C33	1-1.5	02/20/04	Yes	1-R63C33_02/20/04_1	7440-38-2	Arsenic	8.9		mg/kg
R63C33	1-1.5	02/20/04	Yes	1-R63C33_02/20/04_1	7439-92-1	Lead	9.0		mg/kg
R63C34	1-1.5	02/20/04	Yes	1-R63C34_02/20/04_1	7440-38-2	Arsenic	25.0		mg/kg
R63C34	1-1.5	02/20/04	Yes	1-R63C34_02/20/04_1	7439-92-1	Lead	19.2		mg/kg
R63C35	1-1.5	02/20/04	Yes	1-R63C35_02/20/04_1	7440-38-2	Arsenic	17.1		mg/kg
R63C35	1-1.5	02/20/04	Yes	1-R63C35_02/20/04_1	7439-92-1	Lead	64.9		mg/kg
R63C36	1-1.5	02/20/04	Yes	1-R63C36_02/20/04_1	7440-38-2	Arsenic	19.4		mg/kg
R63C36	1-1.5	02/20/04	Yes	1-R63C36_02/20/04_1	7439-92-1	Lead	23.6		mg/kg
R63C40	1-1.5	03/02/04	Yes	01-R63C40_AVG_03/02/04_1	7440-38-2	Arsenic	8.1		mg/kg
R63C40	1-1.5	03/02/04	Yes	01-R63C40_AVG_03/02/04_1	7439-92-1	Lead	42.5		mg/kg
R64C30	1-1.5	11/17/03	Yes	01-SS-[R64C30]-C2_11/17/03_1	7440-38-2	Arsenic	6.8		mg/kg
R64C30	1-1.5	11/17/03	Yes	01-SS-[R64C30]-C2_11/17/03_1	7439-92-1	Lead	7.8		mg/kg
R64C31	1-1.5	11/17/03	Yes	01-SS-[R64C31]-C2_11/17/03_1	7440-38-2	Arsenic	3.8		mg/kg
R64C31	1-1.5	11/17/03	Yes	01-SS-[R64C31]-C2_11/17/03_1	7439-92-1	Lead	7.2		mg/kg
R64C32	1-1.5	11/17/03	Yes	01-SS-[R64C32]-C2_11/17/03_1	7440-38-2	Arsenic	5.1		mg/kg
R64C32	1-1.5	11/17/03	Yes	01-SS-[R64C32]-C2_11/17/03_1	7439-92-1	Lead	6.8		mg/kg
R64C34	1-1.5	02/20/04	Yes	1-R64C34_02/20/04_1	7440-38-2	Arsenic	18.0		mg/kg
R64C34	1-1.5	02/20/04	Yes	1-R64C34_02/20/04_1	7439-92-1	Lead	13.5		mg/kg
R64C35	1-1.5	02/20/04	Yes	1-R64C35_02/20/04_1	7440-38-2	Arsenic	11.2		mg/kg
R64C35	1-1.5	02/20/04	Yes	1-R64C35_02/20/04_1	7439-92-1	Lead	7.1		mg/kg
R64C36	1-1.5	02/20/04	Yes	1-R64C36_02/20/04_1	7440-38-2	Arsenic	33.9		mg/kg
R64C36	1-1.5	02/20/04	Yes	1-R64C36_02/20/04_1	7439-92-1	Lead	29.5		mg/kg
R65C30	1-1.5	11/17/03	Yes	01-SS-[R65C30]-C2_11/17/03_1	7440-38-2	Arsenic	5.0		mg/kg
R65C30	1-1.5	11/17/03	Yes	01-SS-[R65C30]-C2_11/17/03_1	7439-92-1	Lead	4.3		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R65C31	1-1.5	11/17/03	Yes	01-SS-[R65C31]-C2_11/17/03_1	7440-38-2	Arsenic	4.1		mg/kg
R65C31	1-1.5	11/17/03	Yes	01-SS-[R65C31]-C2_11/17/03_1	7439-92-1	Lead	3.7		mg/kg
R65C32	1-1.5	03/03/04	Yes	01-R65C32_AVG_03/03/04_1	7440-38-2	Arsenic	16.9		mg/kg
R65C32	1-1.5	03/03/04	Yes	01-R65C32_AVG_03/03/04_1	7439-92-1	Lead	12.5		mg/kg
R65C35	1-1.5	02/20/04	Yes	1-R65C35_02/20/04_1	7440-38-2	Arsenic	15.3		mg/kg
R65C35	1-1.5	02/20/04	Yes	1-R65C35_02/20/04_1	7439-92-1	Lead	15.9		mg/kg
R65C36	1-1.5	02/20/04	Yes	1-R65C36_02/20/04_1	7440-38-2	Arsenic	45.3		mg/kg
R65C36	1-1.5	02/20/04	Yes	1-R65C36_02/20/04_1	7439-92-1	Lead	61.1		mg/kg
R66C30	1-1.5	02/24/04	Yes	1-R66C30_02/24/04_1	7440-38-2	Arsenic	9.1		mg/kg
R66C30	1-1.5	02/24/04	Yes	1-R66C30_02/24/04_1	7439-92-1	Lead	8.1		mg/kg
R66C31	1-1.5	11/19/03	Yes	01-SS-[R66C31]-C2_11/19/03_1	7440-38-2	Arsenic	18.1		mg/kg
R66C31	1-1.5	11/19/03	Yes	01-SS-[R66C31]-C2_11/19/03_1	7439-92-1	Lead	3.5		mg/kg
R66C32	1-1.5	11/19/03	Yes	01-SS-[R66C32]-C2_11/19/03_1	7440-38-2	Arsenic	4.5		mg/kg
R66C32	1-1.5	11/19/03	Yes	01-SS-[R66C32]-C2_11/19/03_1	7439-92-1	Lead	3.8		mg/kg
R67C31	1-1.5	11/19/03	Yes	01-SS-[R67C31]-C2_11/19/03_1	7440-38-2	Arsenic	6.5		mg/kg
R67C31	1-1.5	11/19/03	Yes	01-SS-[R67C31]-C2_11/19/03_1	7439-92-1	Lead	5.4		mg/kg
R67C32	1-1.5	11/19/03	Yes	01-SS-[R67C32]-C2_11/19/03_1	7440-38-2	Arsenic	5.9		mg/kg
R67C32	1-1.5	11/19/03	Yes	01-SS-[R67C32]-C2_11/19/03_1	7439-92-1	Lead	9.9		mg/kg
R68C32	1-1.5	11/19/03	Yes	01-SS-[R68C32]-C2_11/19/03_1	7440-38-2	Arsenic	8.1		mg/kg
R68C32	1-1.5	11/19/03	Yes	01-SS-[R68C32]-C2_11/19/03_1	7439-92-1	Lead	8.6		mg/kg
R68C33	1-1.5	11/19/03	Yes	01-SS-[R68C33]-C2_11/19/03_1	7440-38-2	Arsenic	5.5		mg/kg
R68C33	1-1.5	11/19/03	Yes	01-SS-[R68C33]-C2_11/19/03_1	7439-92-1	Lead	6.3		mg/kg
R69C32	1-1.5	11/19/03	Yes	01-SS-[R69C32]-C2_11/19/03_1	7440-38-2	Arsenic	10.0		mg/kg
R69C32	1-1.5	11/19/03	Yes	01-SS-[R69C32]-C2_11/19/03_1	7439-92-1	Lead	20.9		mg/kg
R69C33	1-1.5	11/19/03	Yes	01-SS-[R69C33]-C2_11/19/03_1	7440-38-2	Arsenic	4.3		mg/kg
R69C33	1-1.5	11/19/03	Yes	01-SS-[R69C33]-C2_11/19/03_1	7439-92-1	Lead	14.3		mg/kg
R69C34	1-1.5	11/20/03	Yes	01-SS-[R69C34]-C2_11/20/03_1	7440-38-2	Arsenic	26.7		mg/kg
R69C34	1-1.5	11/20/03	Yes	01-SS-[R69C34]-C2_11/20/03_1	7439-92-1	Lead	26.0		mg/kg
R70C33	1-1.5	11/20/03	Yes	01-SS-[R70C33]-C2_11/20/03_1	7440-38-2	Arsenic	23.0		mg/kg
R70C33	1-1.5	11/20/03	Yes	01-SS-[R70C33]-C2_11/20/03_1	7439-92-1	Lead	59.9		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R70C34	1-1.5	11/20/03	Yes	01-SS-[R70C34]-C2_AVG_11/20/03_1	7440-38-2	Arsenic	2.5	U	mg/kg
R70C34	1-1.5	11/20/03	Yes	01-SS-[R70C34]-C2_AVG_11/20/03_1	7439-92-1	Lead	3.8		mg/kg
R70C35	1-1.5	11/20/03	Yes	01-SS-[R70C35]-C2_11/20/03_1	7440-38-2	Arsenic	13.9		mg/kg
R70C35	1-1.5	11/20/03	Yes	01-SS-[R70C35]-C2_11/20/03_1	7439-92-1	Lead	11.5		mg/kg
R70C41	1-1.5	03/02/04	Yes	01-R70C41_03/02/04_1	7440-38-2	Arsenic	9.0		mg/kg
R70C41	1-1.5	03/02/04	Yes	01-R70C41_03/02/04_1	7439-92-1	Lead	7.9		mg/kg
R71C34	1-1.5	11/20/03	Yes	01-SS-[R71C34]-C2_11/20/03_1	7440-38-2	Arsenic	11.9		mg/kg
R71C34	1-1.5	11/20/03	Yes	01-SS-[R71C34]-C2_11/20/03_1	7439-92-1	Lead	22.7		mg/kg
R71C35	1-1.5	02/24/04	Yes	1-R71C35_02/24/04_1	7440-38-2	Arsenic	7.1		mg/kg
R71C35	1-1.5	02/24/04	Yes	1-R71C35_02/24/04_1	7439-92-1	Lead	4.2		mg/kg
R71C36	1-1.5	11/20/03	Yes	01-SS-[R71C36]-C2_11/20/03_1	7440-38-2	Arsenic	5.1		mg/kg
R71C36	1-1.5	11/20/03	Yes	01-SS-[R71C36]-C2_11/20/03_1	7439-92-1	Lead	4.4		mg/kg
R72C35	1-1.5	11/20/03	Yes	01-SS-[R72C35]-C2_11/20/03_1	7440-38-2	Arsenic	16.3		mg/kg
R72C35	1-1.5	11/20/03	Yes	01-SS-[R72C35]-C2_11/20/03_1	7439-92-1	Lead	7.7		mg/kg
R72C36	1-1.5	11/20/03	Yes	01-SS-[R72C36]-C2_11/20/03_1	7440-38-2	Arsenic	9.5		mg/kg
R72C36	1-1.5	11/20/03	Yes	01-SS-[R72C36]-C2_11/20/03_1	7439-92-1	Lead	5.3		mg/kg
R72C37	1-1.5	11/20/03	Yes	01-SS-[R72C37]-C2_11/20/03_1	7440-38-2	Arsenic	37.6		mg/kg
R72C37	1-1.5	11/20/03	Yes	01-SS-[R72C37]-C2_11/20/03_1	7439-92-1	Lead	34.2		mg/kg
R72C42	1-1.5	03/02/04	Yes	01-R72C42_03/02/04_1	7440-38-2	Arsenic	6.3		mg/kg
R72C42	1-1.5	03/02/04	Yes	01-R72C42_03/02/04_1	7439-92-1	Lead	4.6		mg/kg
R73C35	1-1.5	03/03/04	Yes	01-R73C35_03/03/04_1	7440-38-2	Arsenic	20.6		mg/kg
R73C35	1-1.5	03/03/04	Yes	01-R73C35_03/03/04_1	7439-92-1	Lead	21.5		mg/kg
R73C36	1-1.5	02/24/04	Yes	1-R73C36_02/24/04_1	7440-38-2	Arsenic	24.4		mg/kg
R73C36	1-1.5	02/24/04	Yes	1-R73C36_02/24/04_1	7439-92-1	Lead	8.3		mg/kg
R73C37	1-1.5	02/24/04	Yes	1-R73C37_02/24/04_1	7440-38-2	Arsenic	36.2		mg/kg
R73C37	1-1.5	02/24/04	Yes	1-R73C37_02/24/04_1	7439-92-1	Lead	12.8		mg/kg
R73C42	1-1.5	03/02/04	Yes	01-R73C42_03/02/04_1	7440-38-2	Arsenic	7.5		mg/kg
R73C42	1-1.5	03/02/04	Yes	01-R73C42_03/02/04_1	7439-92-1	Lead	19.9		mg/kg
R74C36	1-1.5	11/21/03	Yes	01-SS-[R74C36]-C2_AVG_11/21/03_1	7440-38-2	Arsenic	19.0		mg/kg
R74C36	1-1.5	11/21/03	Yes	01-SS-[R74C36]-C2_AVG_11/21/03_1	7439-92-1	Lead	12.6		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R74C37	2-2.5	04/29/04	Yes	02-R74C37_04/29/04_2	7440-38-2	Arsenic	5.0		mg/kg
R74C37	1-1.5	02/24/04	No	1-R74C37_02/24/04_1	7439-92-1	Lead	32.3		mg/kg
R74C38	1-1.5	02/24/04	Yes	1-R74C38_02/24/04_1	7440-38-2	Arsenic	10.4		mg/kg
R74C38	1-1.5	02/24/04	Yes	1-R74C38_02/24/04_1	7439-92-1	Lead	12.0		mg/kg
R74C42	1-1.5	03/02/04	Yes	01-R74C42_03/02/04_1	7440-38-2	Arsenic	7.2		mg/kg
R74C42	1-1.5	03/02/04	Yes	01-R74C42_03/02/04_1	7439-92-1	Lead	8.0		mg/kg
R75C37	1-1.5	02/24/04	Yes	1-R75C37_02/24/04_1	7440-38-2	Arsenic	13.2		mg/kg
R75C37	1-1.5	02/24/04	Yes	1-R75C37_02/24/04_1	7439-92-1	Lead	17.8		mg/kg
R75C38	1-1.5	02/24/04	Yes	1-R75C38_02/24/04_1	7440-38-2	Arsenic	10.3		mg/kg
R75C38	1-1.5	02/24/04	Yes	1-R75C38_02/24/04_1	7439-92-1	Lead	7.7		mg/kg
R75C41	1-1.5	03/02/04	Yes	01-R75C41_03/02/04_1	7440-38-2	Arsenic	12.2		mg/kg
R75C41	1-1.5	03/02/04	Yes	01-R75C41_03/02/04_1	7439-92-1	Lead	6.2		mg/kg
R75C42	1-1.5	03/02/04	Yes	01-R75C42_03/02/04_1	7440-38-2	Arsenic	7.0		mg/kg
R75C42	1-1.5	03/02/04	Yes	01-R75C42_03/02/04_1	7439-92-1	Lead	7.6		mg/kg
R75C43	1-1.5	03/02/04	Yes	01-R75C43_03/02/04_1	7440-38-2	Arsenic	6.8		mg/kg
R75C43	1-1.5	03/02/04	Yes	01-R75C43_03/02/04_1	7439-92-1	Lead	7.4		mg/kg
R76C37	1-1.5	03/03/04	Yes	01-R76C37_03/03/04_1	7440-38-2	Arsenic	7.3		mg/kg
R76C37	1-1.5	03/03/04	Yes	01-R76C37_03/03/04_1	7439-92-1	Lead	6.6		mg/kg
R76C39	1-1.5	02/24/04	Yes	1-R76C39_02/24/04_1	7440-38-2	Arsenic	8.3		mg/kg
R76C39	1-1.5	02/24/04	Yes	1-R76C39_02/24/04_1	7439-92-1	Lead	6.6		mg/kg
R76C40	1-1.5	02/09/04	Yes	1-R76C40_02/09/04_1	7440-38-2	Arsenic	7.9		mg/kg
R76C40	1-1.5	02/09/04	Yes	1-R76C40_02/09/04_1	7439-92-1	Lead	5.7		mg/kg
R76C42	1-1.5	03/02/04	Yes	01-R76C42_03/02/04_1	7440-38-2	Arsenic	5.3		mg/kg
R76C42	1-1.5	03/02/04	Yes	01-R76C42_03/02/04_1	7439-92-1	Lead	4.6		mg/kg
R76C43	1-1.5	04/15/04	Yes	1-R76C43_04/15/04_1	7440-38-2	Arsenic	5.2		mg/kg
R76C43	1-1.5	04/15/04	Yes	1-R76C43_04/15/04_1	7439-92-1	Lead	4.1		mg/kg
R76C44	1-1.5	04/15/04	Yes	1-R76C44_04/15/04_1	7440-38-2	Arsenic	3.9		mg/kg
R76C44	1-1.5	04/15/04	Yes	1-R76C44_04/15/04_1	7439-92-1	Lead	3.1		mg/kg
R77C38	1-1.5	11/10/03	Yes	01-SS-[R77C38]-C2_11/10/03_1	7440-38-2	Arsenic	18.1		mg/kg
R77C38	1-1.5	11/10/03	Yes	01-SS-[R77C38]-C2_11/10/03_1	7439-92-1	Lead	25.6		mg/kg

Table B.15
Sample Results for GC-07 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R77C43	1-1.5	04/15/04	Yes	1-R77C43_04/15/04_1	7440-38-2	Arsenic	4.6		mg/kg
R77C43	1-1.5	04/15/04	Yes	1-R77C43_04/15/04_1	7439-92-1	Lead	3.6		mg/kg
R78C39	1-1.5	02/26/04	Yes	01-R78C39_02/26/04_1	7440-38-2	Arsenic	9.4		mg/kg
R78C39	1-1.5	02/26/04	Yes	01-R78C39_02/26/04_1	7439-92-1	Lead	6.1		mg/kg
R78C40	1-1.5	02/26/04	Yes	01-R78C40_02/26/04_1	7440-38-2	Arsenic	9.6		mg/kg
R78C40	1-1.5	02/26/04	Yes	01-R78C40_02/26/04_1	7439-92-1	Lead	6.9		mg/kg
R79C40	1-1.5	11/10/03	Yes	01-SS-[R79C40]-C2_11/10/03_1	7440-38-2	Arsenic	10.5		mg/kg
R79C40	1-1.5	11/10/03	Yes	01-SS-[R79C40]-C2_11/10/03_1	7439-92-1	Lead	14.7		mg/kg
RR-515 1'-2'	1-2	07/02/93	Yes	RR-515 1'-2'	7440-38-2	Arsenic	47.0		mg/kg
T-201	0-0.5	04/03/03	Yes	01-SS-[T201]-C1_04/03/03_0	7439-92-1	Lead	68.7		mg/kg
T-201	1-1.5	08/13/03	Yes	02-SS-[T-201]-C2_AVG_08/13/03_1	7440-38-2	Arsenic	8.7		mg/kg
T-204	0-0.5	04/03/03	Yes	01-SS-[T204]-C1_04/03/03_0	7439-92-1	Lead	32.2		mg/kg
T-204	1-1.5	08/13/03	Yes	02-SS-[T-204]-C2_08/13/03_1	7440-38-2	Arsenic	18.3		mg/kg
T183,184,185	0-0.5	04/03/03	Yes	01-SS-[T183,184,185]-C1_04/03/03_0	7439-92-1	Lead	93.4		mg/kg
T186	0-0.5	04/03/03	Yes	01-SS-[T186]-C1_04/03/03_0	7440-38-2	Arsenic	34.1		mg/kg
T186	0-0.5	04/03/03	Yes	01-SS-[T186]-C1_04/03/03_0	7439-92-1	Lead	45.1		mg/kg
T187	0-0.5	04/03/03	Yes	01-SS-[T187]-C1_04/03/03_0	7440-38-2	Arsenic	16.1		mg/kg
T187	0-0.5	04/03/03	Yes	01-SS-[T187]-C1_04/03/03_0	7439-92-1	Lead	24.2		mg/kg
T191	0-0.5	04/03/03	Yes	01-SS-[T191]-C1_04/03/03_0	7440-38-2	Arsenic	56.2		mg/kg
T191	0-0.5	04/03/03	Yes	01-SS-[T191]-C1_04/03/03_0	7439-92-1	Lead	90.3		mg/kg
T199	0-0.5	04/03/03	Yes	01-SS-[T199]-C1_04/03/03_0	7440-38-2	Arsenic	50.0		mg/kg
T199	0-0.5	04/03/03	Yes	01-SS-[T199]-C1_04/03/03_0	7439-92-1	Lead	99.6		mg/kg
T200	0-0.5	04/30/03	Yes	01-SS-[T-200]-C1_04/30/03_0	7440-38-2	Arsenic	27.4		mg/kg
T200	0-0.5	04/30/03	Yes	01-SS-[T-200]-C1_04/30/03_0	7439-92-1	Lead	40.0		mg/kg
T202,203	0-0.5	04/03/03	Yes	01-SS-[T202,203]-C1_04/03/03_0	7440-38-2	Arsenic	35.8		mg/kg
T202,203	0-0.5	04/03/03	Yes	01-SS-[T202,203]-C1_04/03/03_0	7439-92-1	Lead	50.0		mg/kg
T205,206	0-0.5	04/03/03	Yes	01-SS-[T205,206]-C1_04/03/03_0	7440-38-2	Arsenic	56.6		mg/kg
T205,206	0-0.5	04/03/03	Yes	01-SS-[T205,206]-C1_04/03/03_0	7439-92-1	Lead	43.5		mg/kg
T207	0-0.5	04/03/03	Yes	01-SS-[T207]-C1_04/03/03_0	7440-38-2	Arsenic	33.8		mg/kg
T207	0-0.5	04/03/03	Yes	01-SS-[T207]-C1_04/03/03_0	7439-92-1	Lead	17.2		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-1-TP-502	3-5	04/16/92	Yes	12-1-TP-502-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-TP-502	3-5	04/16/92	Yes	12-1-TP-502-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-TP-502	3-5	04/16/92	Yes	12-1-TP-502-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	7440-38-2	Arsenic	1.3	J	mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	7440-50-8	Copper	15.0		mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	7439-92-1	Lead	5.3	U	mg/kg
12-1-TP-503	3-6	04/16/92	Yes	12-1-TP-503-S-2-DAVG	7439-97-6	Mercury	0.08	U	mg/kg
12-1-TP-6	0-3	04/24/87	Yes	12-1-TP-6,S-1	7439-92-1	Lead	15.0		mg/kg
12-1-TP-6	3-6	04/24/87	Yes	12-1-TP-6,S-2	7439-92-1	Lead	23.0		mg/kg
12-4-TP-501	3-6	04/16/92	Yes	12-4-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-4-TP-501	3-6	04/16/92	Yes	12-4-TP-501-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-4-TP-501	3-6	04/16/92	Yes	12-4-TP-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-VS-5	1-1.5	09/23/99	Yes	12-VS-5	7440-38-2	Arsenic	4.2		mg/kg
12-VS-5	1-1.5	09/23/99	Yes	12-VS-5	7439-92-1	Lead	6.6		mg/kg
12-VS-6	1-1.5	09/23/99	Yes	12-VS-6	7440-38-2	Arsenic	3.8		mg/kg
12-VS-6	1-1.5	09/23/99	Yes	12-VS-6	7439-92-1	Lead	6.1		mg/kg
12-VS-7	1-1.5	09/23/99	Yes	12-VS-7-DAVG	7440-38-2	Arsenic	54.5		mg/kg
12-VS-7	1-1.5	09/23/99	Yes	12-VS-7-DAVG	7439-92-1	Lead	63.5		mg/kg
12-VS-8	1-1.5	09/23/99	Yes	12-VS-8	7440-38-2	Arsenic	2.5		mg/kg
12-VS-8	1-1.5	09/23/99	Yes	12-VS-8	7439-92-1	Lead	5.0		mg/kg
LR-256	0-0.5	11/16/93	Yes	LR-256	7440-38-2	Arsenic	59.0		mg/kg
LR-257	0-0.5	11/17/93	Yes	LR-257	7440-38-2	Arsenic	38.0	J	mg/kg
LR-265	0-0.5	11/17/93	Yes	LR-265	7440-38-2	Arsenic	34.0		mg/kg
MSU-F-35-2	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-2]-C1_05/07/03_2	7440-38-2	Arsenic	6.4		mg/kg
MSU-F-35-2	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-2]-C1_05/07/03_2	7439-92-1	Lead	7.4		mg/kg
MSU-F-35-3	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-3]-C1_05/07/03_2	7440-38-2	Arsenic	4.6		mg/kg
MSU-F-35-3	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-3]-C1_05/07/03_2	7439-92-1	Lead	45.8		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-35-4	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-4]-C1_05/07/03_2	7440-38-2	Arsenic	7.6		mg/kg
MSU-F-35-4	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-4]-C1_05/07/03_2	7439-92-1	Lead	5.0		mg/kg
MSU-F-35-5	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-5]-C1_05/07/03_2	7440-38-2	Arsenic	4.2		mg/kg
MSU-F-35-5	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-5]-C1_05/07/03_2	7439-92-1	Lead	2.8		mg/kg
MSU-F-35	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-1]-C1_05/07/03_2	7440-38-2	Arsenic	3.0		mg/kg
MSU-F-35	2-2.5	05/07/03	Yes	01-SS-[MSU-F-35-1]-C1_05/07/03_2	7439-92-1	Lead	2.1	U	mg/kg
MSU-NGRR-21-17	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-17]-C1_05/06/03_1.5	7440-38-2	Arsenic	10.7		mg/kg
MSU-NGRR-21-17	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-17]-C1_05/06/03_1.5	7439-92-1	Lead	4.7		mg/kg
MSU-NGRR-21-18	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-18]-C1_AVG_05/06/03_1.5	7440-38-2	Arsenic	4.9		mg/kg
MSU-NGRR-21-18	1.5-2	05/06/03	Yes	01-SS-[MSU-NGRR-21-18]-C1_AVG_05/06/03_1.5	7439-92-1	Lead	4.8		mg/kg
MSU-NGRR-22-10	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-10]-C1_06/11/03_1.5	7440-38-2	Arsenic	29.0		mg/kg
MSU-NGRR-22-10	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-10]-C1_06/11/03_1.5	7439-92-1	Lead	8.1		mg/kg
MSU-NGRR-22-11	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-11]-C1_06/11/03_1.5	7440-38-2	Arsenic	28.1		mg/kg
MSU-NGRR-22-11	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-11]-C1_06/11/03_1.5	7439-92-1	Lead	23.3		mg/kg
MSU-NGRR-22-12	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-12]-C1_AVG_06/11/03_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-NGRR-22-12	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-12]-C1_AVG_06/11/03_1.5	7439-92-1	Lead	10.3		mg/kg
MSU-NGRR-22-2	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-2]-C1_06/11/03_1.5	7440-38-2	Arsenic	4.4		mg/kg
MSU-NGRR-22-2	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-2]-C1_06/11/03_1.5	7439-92-1	Lead	5.3		mg/kg
MSU-NGRR-22-3	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-3]-C1_06/11/03_1.5	7440-38-2	Arsenic	4.2		mg/kg
MSU-NGRR-22-3	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-3]-C1_06/11/03_1.5	7439-92-1	Lead	7.0		mg/kg
MSU-NGRR-22-4	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-4]-C1_06/11/03_1.5	7440-38-2	Arsenic	7.2		mg/kg
MSU-NGRR-22-4	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-4]-C1_06/11/03_1.5	7439-92-1	Lead	10.3		mg/kg
MSU-NGRR-22-5	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-5]-C1_06/11/03_1.5	7440-38-2	Arsenic	26.4		mg/kg
MSU-NGRR-22-5	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-5]-C1_06/11/03_1.5	7439-92-1	Lead	6.2		mg/kg
MSU-NGRR-22-6	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-6]-C1_06/11/03_1.5	7440-38-2	Arsenic	19.2		mg/kg
MSU-NGRR-22-6	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-6]-C1_06/11/03_1.5	7439-92-1	Lead	3.8		mg/kg
MSU-NGRR-22-7	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-7]-C1_06/11/03_1.5	7440-38-2	Arsenic	17.9		mg/kg
MSU-NGRR-22-7	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-7]-C1_06/11/03_1.5	7439-92-1	Lead	4.8		mg/kg
MSU-NGRR-22-8	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-8]-C1_06/11/03_1.5	7440-38-2	Arsenic	9.5		mg/kg
MSU-NGRR-22-8	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-8]-C1_06/11/03_1.5	7439-92-1	Lead	5.4		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-22-9	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-9]-C1_06/11/03_1.5	7440-38-2	Arsenic	9.5		mg/kg
MSU-NGRR-22-9	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-9]-C1_06/11/03_1.5	7439-92-1	Lead	4.3		mg/kg
MSU-NGRR-22	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-1]-C1_06/11/03_1.5	7440-38-2	Arsenic	7.9		mg/kg
MSU-NGRR-22	1.5-2	06/11/03	Yes	01-SS-[MSU-NGRR-22-1]-C1_06/11/03_1.5	7439-92-1	Lead	10.4		mg/kg
MSU-NGRR-23-2	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-23-2]-C1_05/07/03_1.5	7440-38-2	Arsenic	3.6		mg/kg
MSU-NGRR-23-2	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-23-2]-C1_05/07/03_1.5	7439-92-1	Lead	3.6		mg/kg
MSU-NGRR-24	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-24-1]-C1_05/07/03_1.5	7440-38-2	Arsenic	5.1		mg/kg
MSU-NGRR-24	1.5-2	05/07/03	Yes	01-SS-[MSU-NGRR-24-1]-C1_05/07/03_1.5	7439-92-1	Lead	3.7		mg/kg
PL-10	1-1.5	07/12/02	Yes	01-SS-[PL-10] -D1-050	7440-38-2	Arsenic	34.7		mg/kg
PL-10	1-1.5	07/12/02	Yes	01-SS-[PL-10] -D1-050	7439-92-1	Lead	65.6		mg/kg
PL-11	1-1.5	07/12/02	Yes	01-SS-[PL-11] -D1-050	7440-38-2	Arsenic	26.4		mg/kg
PL-11	1-1.5	07/12/02	Yes	01-SS-[PL-11] -D1-050	7439-92-1	Lead	25.0		mg/kg
PL-12	2-2.5	07/24/02	Yes	02-SS-[PL-12-2]-D1-050	7440-38-2	Arsenic	2.0	U	mg/kg
PL-12	2-2.5	07/24/02	Yes	02-SS-[PL-12-2]-D1-050	7439-92-1	Lead	4.3		mg/kg
PL-13	1-1.5	07/12/02	Yes	01-SS-[PL-13] -D1-050	7440-38-2	Arsenic	46.5		mg/kg
PL-13	1-1.5	07/12/02	Yes	01-SS-[PL-13] -D1-050	7439-92-1	Lead	27.5		mg/kg
PL-2	1-1.5	07/12/02	Yes	01-SS-[PL-2] -D1-050	7440-38-2	Arsenic	19.5		mg/kg
PL-2	1-1.5	07/12/02	Yes	01-SS-[PL-2] -D1-050	7439-92-1	Lead	20.7		mg/kg
PL-20	1-1.5	12/19/02	Yes	OL-SS-[PL-20]-C1	7440-38-2	Arsenic	2.7		mg/kg
PL-20	1-1.5	12/19/02	Yes	OL-SS-[PL-20]-C1	7439-92-1	Lead	2.2		mg/kg
PL-21	1-1.5	12/19/02	Yes	OL-SS-[PL-21]-C1	7440-38-2	Arsenic	3.2		mg/kg
PL-21	1-1.5	12/19/02	Yes	OL-SS-[PL-21]-C1	7439-92-1	Lead	2.4		mg/kg
PL-22	1-1.5	12/19/02	Yes	OL-SS-[PL-22]-C1	7440-38-2	Arsenic	3.0		mg/kg
PL-22	1-1.5	12/19/02	Yes	OL-SS-[PL-22]-C1	7439-92-1	Lead	3.6		mg/kg
PL-23	1-1.5	12/19/02	Yes	OL-SS-[PL-23]-C1	7440-38-2	Arsenic	3.7		mg/kg
PL-23	1-1.5	12/19/02	Yes	OL-SS-[PL-23]-C1	7439-92-1	Lead	4.2		mg/kg
PL-24	1-1.5	12/19/02	Yes	OL-SS-[PL-24]-C1	7440-38-2	Arsenic	3.3		mg/kg
PL-24	1-1.5	12/19/02	Yes	OL-SS-[PL-24]-C1	7439-92-1	Lead	4.2		mg/kg
PL-25	1-1.5	12/19/02	Yes	OL-SS-[PL-25]-C1	7440-38-2	Arsenic	4.4		mg/kg
PL-25	1-1.5	12/19/02	Yes	OL-SS-[PL-25]-C1	7439-92-1	Lead	5.4		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
PL-26	1-1.5	12/19/02	Yes	OL-SS-[PL-26]-C1	7440-38-2	Arsenic	3.9		mg/kg
PL-26	1-1.5	12/19/02	Yes	OL-SS-[PL-26]-C1	7439-92-1	Lead	5.3		mg/kg
PL-27	1-1.5	12/19/02	Yes	OL-SS-[PL-27]-C1	7440-38-2	Arsenic	3.5		mg/kg
PL-27	1-1.5	12/19/02	Yes	OL-SS-[PL-27]-C1	7439-92-1	Lead	4.0		mg/kg
PL-28	1-1.5	12/19/02	Yes	OL-SS-[PL-28]-C1	7440-38-2	Arsenic	3.9		mg/kg
PL-28	1-1.5	12/19/02	Yes	OL-SS-[PL-28]-C1	7439-92-1	Lead	4.2		mg/kg
PL-29	1-1.5	12/19/02	Yes	OL-SS-[PL-29]-C1	7440-38-2	Arsenic	6.9		mg/kg
PL-29	1-1.5	12/19/02	Yes	OL-SS-[PL-29]-C1	7439-92-1	Lead	8.5		mg/kg
PL-3	1-1.5	07/12/02	Yes	01-SS-[PL-3] -D1-050	7440-38-2	Arsenic	10.8		mg/kg
PL-3	1-1.5	07/12/02	Yes	01-SS-[PL-3] -D1-050	7439-92-1	Lead	10.7		mg/kg
PL-4	1-1.5	07/12/02	Yes	01-SS-[PL-4] -D1-050	7440-38-2	Arsenic	23.6		mg/kg
PL-4	1-1.5	07/12/02	Yes	01-SS-[PL-4] -D1-050	7439-92-1	Lead	22.2		mg/kg
PL-5	1-1.5	07/12/02	Yes	01-SS-[PL-5] -D1-050	7440-38-2	Arsenic	27.4		mg/kg
PL-5	1-1.5	07/12/02	Yes	01-SS-[PL-5] -D1-050	7439-92-1	Lead	27.2		mg/kg
PL-6	1-1.5	07/12/02	Yes	01-SS-[PL-6] -D1-050	7440-38-2	Arsenic	4.6		mg/kg
PL-6	1-1.5	07/12/02	Yes	01-SS-[PL-6] -D1-050	7439-92-1	Lead	3.1		mg/kg
PL-7	1-1.5	07/12/02	Yes	01-SS-[PL-7] -D1-050	7440-38-2	Arsenic	8.9		mg/kg
PL-7	1-1.5	07/12/02	Yes	01-SS-[PL-7] -D1-050	7439-92-1	Lead	4.7		mg/kg
PL-8	2-2.5	07/24/02	Yes	02-SS-[PL-8-2]-D1-050	7440-38-2	Arsenic	10.5		mg/kg
PL-8	2-2.5	07/24/02	Yes	02-SS-[PL-8-2]-D1-050	7439-92-1	Lead	7.1		mg/kg
PL-9	1-1.5	07/12/02	Yes	01-SS-[PL-9] -D1-050	7440-38-2	Arsenic	59.3		mg/kg
PL-9	1-1.5	07/12/02	Yes	01-SS-[PL-9] -D1-050	7439-92-1	Lead	38.1		mg/kg
R73C61	1-1.5	03/05/04	Yes	01-R73C61_03/05/04_1	7440-38-2	Arsenic	8.3		mg/kg
R73C61	1-1.5	03/05/04	Yes	01-R73C61_03/05/04_1	7439-92-1	Lead	8.2		mg/kg
R73C62	1-1.5	12/05/03	Yes	01-SS-[R73C62]-C2_12/05/03_1	7440-38-2	Arsenic	3.4		mg/kg
R73C62	1-1.5	12/05/03	Yes	01-SS-[R73C62]-C2_12/05/03_1	7439-92-1	Lead	4.5		mg/kg
R74C59	1-1.5	03/05/04	Yes	01-R74C59_03/05/04_1	7440-38-2	Arsenic	9.2		mg/kg
R74C59	1-1.5	03/05/04	Yes	01-R74C59_03/05/04_1	7439-92-1	Lead	7.5		mg/kg
R74C60	1-1.5	03/05/04	Yes	01-R74C60_03/05/04_1	7440-38-2	Arsenic	9.2		mg/kg
R74C60	1-1.5	03/05/04	Yes	01-R74C60_03/05/04_1	7439-92-1	Lead	8.4		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R74C61	1-1.5	03/05/04	Yes	01-R74C61_03/05/04_1	7440-38-2	Arsenic	10.9		mg/kg
R74C61	1-1.5	03/05/04	Yes	01-R74C61_03/05/04_1	7439-92-1	Lead	13.8		mg/kg
R74C62	1-1.5	12/05/03	Yes	01-SS-[R74C62]-C2_12/05/03_1	7440-38-2	Arsenic	3.4		mg/kg
R74C62	1-1.5	12/05/03	Yes	01-SS-[R74C62]-C2_12/05/03_1	7439-92-1	Lead	3.7		mg/kg
R75C59	1-1.5	04/15/04	Yes	1-R75C59_04/15/04_1	7440-38-2	Arsenic	7.7		mg/kg
R75C59	1-1.5	04/15/04	Yes	1-R75C59_04/15/04_1	7439-92-1	Lead	6.2		mg/kg
R75C60	1-1.5	03/05/04	Yes	01-R75C60_03/05/04_1	7440-38-2	Arsenic	14.7		mg/kg
R75C60	1-1.5	03/05/04	Yes	01-R75C60_03/05/04_1	7439-92-1	Lead	16.4		mg/kg
R75C62	1-1.5	12/05/03	Yes	01-SS-[R75C62]-C2_12/05/03_1	7440-38-2	Arsenic	8.3		mg/kg
R75C62	1-1.5	12/05/03	Yes	01-SS-[R75C62]-C2_12/05/03_1	7439-92-1	Lead	11.9		mg/kg
R75C63	1-1.5	12/05/03	Yes	01-SS-[R75C63]-C2_12/05/03_1	7440-38-2	Arsenic	5.9		mg/kg
R75C63	1-1.5	12/05/03	Yes	01-SS-[R75C63]-C2_12/05/03_1	7439-92-1	Lead	5.2		mg/kg
R76C56	1-1.5	01/30/04	Yes	01-SS-[R76C56]-C2_01/30/04_1	7440-38-2	Arsenic	5.3		mg/kg
R76C56	1-1.5	01/30/04	Yes	01-SS-[R76C56]-C2_01/30/04_1	7439-92-1	Lead	2.7		mg/kg
R76C57	1-1.5	01/30/04	Yes	01-SS-[R76C57]-C2_01/30/04_1	7440-38-2	Arsenic	10.8		mg/kg
R76C57	1-1.5	01/30/04	Yes	01-SS-[R76C57]-C2_01/30/04_1	7439-92-1	Lead	9.9		mg/kg
R76C62	1-1.5	12/05/03	Yes	01-SS-[R76C62]-C2_12/05/03_1	7440-38-2	Arsenic	6.2		mg/kg
R76C62	1-1.5	12/05/03	Yes	01-SS-[R76C62]-C2_12/05/03_1	7439-92-1	Lead	5.2		mg/kg
R77C44	1-1.5	04/15/04	Yes	1-R77C44_04/15/04_1	7440-38-2	Arsenic	4.6		mg/kg
R77C44	1-1.5	04/15/04	Yes	1-R77C44_04/15/04_1	7439-92-1	Lead	3.1		mg/kg
R77C45	1-1.5	04/15/04	Yes	1-R77C45_04/15/04_1	7440-38-2	Arsenic	4.3		mg/kg
R77C45	1-1.5	04/15/04	Yes	1-R77C45_04/15/04_1	7439-92-1	Lead	3.0		mg/kg
R77C55	1-1.5	01/30/04	Yes	01-SS-[R77C55]-C2_01/30/04_1	7440-38-2	Arsenic	6.3		mg/kg
R77C55	1-1.5	01/30/04	Yes	01-SS-[R77C55]-C2_01/30/04_1	7439-92-1	Lead	2.7		mg/kg
R77C56	1-1.5	01/30/04	Yes	01-SS-[R77C56]-C2_01/30/04_1	7440-38-2	Arsenic	11.0		mg/kg
R77C56	1-1.5	01/30/04	Yes	01-SS-[R77C56]-C2_01/30/04_1	7439-92-1	Lead	6.5		mg/kg
R77C62	1-1.5	12/05/03	Yes	01-SS-[R77C62]-C2_12/05/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
R77C62	1-1.5	12/05/03	Yes	01-SS-[R77C62]-C2_12/05/03_1	7439-92-1	Lead	4.6		mg/kg
R77C62	1-1.5	03/16/04	Yes	1-R77C62_AVG_03/16/04_1	7440-38-2	Arsenic	8.7		mg/kg
R77C62	1-1.5	03/16/04	Yes	1-R77C62_AVG_03/16/04_1	7439-92-1	Lead	14.0		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R78C43	1-1.5	03/03/04	Yes	01-R78C43_03/03/04_1	7440-38-2	Arsenic	5.7		mg/kg
R78C43	1-1.5	03/03/04	Yes	01-R78C43_03/03/04_1	7439-92-1	Lead	6.6		mg/kg
R78C44	1-1.5	04/15/04	Yes	1-R78C44_04/15/04_1	7440-38-2	Arsenic	5.6		mg/kg
R78C44	1-1.5	04/15/04	Yes	1-R78C44_04/15/04_1	7439-92-1	Lead	3.1		mg/kg
R78C45	1-1.5	04/15/04	Yes	1-R78C45_04/15/04_1	7440-38-2	Arsenic	12.2		mg/kg
R78C45	1-1.5	04/15/04	Yes	1-R78C45_04/15/04_1	7439-92-1	Lead	4.7		mg/kg
R78C54	1-1.5	02/17/04	Yes	1-R78C54_02/17/04_1	7440-38-2	Arsenic	7.4		mg/kg
R78C54	1-1.5	02/17/04	Yes	1-R78C54_02/17/04_1	7439-92-1	Lead	4.9		mg/kg
R78C55	1-1.5	02/26/04	Yes	01-R78C55_02/26/04_1	7440-38-2	Arsenic	12.4		mg/kg
R78C55	1-1.5	02/26/04	Yes	01-R78C55_02/26/04_1	7439-92-1	Lead	12.7		mg/kg
R79C41	1-1.5	11/10/03	Yes	01-SS-[R79C41]-C2_11/10/03_1	7440-38-2	Arsenic	7.6		mg/kg
R79C41	1-1.5	11/10/03	Yes	01-SS-[R79C41]-C2_11/10/03_1	7439-92-1	Lead	7.9		mg/kg
R79C42	1-1.5	02/26/04	Yes	01-R79C42_02/26/04_1	7440-38-2	Arsenic	12.2		mg/kg
R79C42	1-1.5	02/26/04	Yes	01-R79C42_02/26/04_1	7439-92-1	Lead	10.1		mg/kg
R79C53	1-1.5	02/17/04	Yes	1-R79C53_02/17/04_1	7440-38-2	Arsenic	13.0		mg/kg
R79C53	1-1.5	02/17/04	Yes	1-R79C53_02/17/04_1	7439-92-1	Lead	10.7		mg/kg
R79C54	1-1.5	02/17/04	Yes	1-R79C54_02/17/04_1	7440-38-2	Arsenic	8.3		mg/kg
R79C54	1-1.5	02/17/04	Yes	1-R79C54_02/17/04_1	7439-92-1	Lead	6.7		mg/kg
R79C63	1-1.5	12/05/03	Yes	01-SS-[R79C63]-C2_12/05/03_1	7440-38-2	Arsenic	3.2		mg/kg
R79C63	1-1.5	12/05/03	Yes	01-SS-[R79C63]-C2_12/05/03_1	7439-92-1	Lead	3.6		mg/kg
R80C40	1-1.5	07/02/02	Yes	01-SS-[75-R80C40]-D1-050	7440-38-2	Arsenic	11.2		mg/kg
R80C40	1-1.5	07/02/02	Yes	01-SS-[75-R80C40]-D1-050	7439-92-1	Lead	15.2		mg/kg
R80C41	1-1.5	11/10/03	Yes	01-SS-[R80C41]-C2_11/10/03_1	7440-38-2	Arsenic	4.8		mg/kg
R80C41	1-1.5	11/10/03	Yes	01-SS-[R80C41]-C2_11/10/03_1	7439-92-1	Lead	5.5		mg/kg
R80C42	1-1.5	02/26/04	Yes	01-R80C42_02/26/04_1	7440-38-2	Arsenic	15.9		mg/kg
R80C42	1-1.5	02/26/04	Yes	01-R80C42_02/26/04_1	7439-92-1	Lead	14.6		mg/kg
R80C53	1-1.5	02/17/04	Yes	1-R80C53_02/17/04_1	7440-38-2	Arsenic	11.9		mg/kg
R80C53	1-1.5	02/17/04	Yes	1-R80C53_02/17/04_1	7439-92-1	Lead	9.1		mg/kg
R80C63	1-1.5	12/05/03	Yes	01-SS-[R80C63]-C2_12/05/03_1	7440-38-2	Arsenic	11.7		mg/kg
R80C63	1-1.5	12/05/03	Yes	01-SS-[R80C63]-C2_12/05/03_1	7439-92-1	Lead	23.1		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R81C41	2-2.5	07/09/02	Yes	02-SS-[75-R81C41-2]-D1-050	7440-38-2	Arsenic	19.1		mg/kg
R81C41	2-2.5	07/09/02	Yes	02-SS-[75-R81C41-2]-D1-050	7439-92-1	Lead	10.5		mg/kg
R81C42	1-1.5	07/02/02	Yes	01-SS-[75-R81C42]-D1-050	7440-38-2	Arsenic	4.8		mg/kg
R81C42	1-1.5	07/02/02	Yes	01-SS-[75-R81C42]-D1-050	7439-92-1	Lead	7.6		mg/kg
R81C43	1-1.5	07/02/02	Yes	01-SS-[75-R81C43]-D1-050	7440-38-2	Arsenic	3.9		mg/kg
R81C43	1-1.5	07/02/02	Yes	01-SS-[75-R81C43]-D1-050	7439-92-1	Lead	6.0		mg/kg
R81C44	1-1.5	07/02/02	Yes	01-SS-[75-R81C44]-D1-050	7440-38-2	Arsenic	3.3		mg/kg
R81C44	1-1.5	07/02/02	Yes	01-SS-[75-R81C44]-D1-050	7439-92-1	Lead	4.7		mg/kg
R81C45	1-1.5	07/02/02	Yes	01-SS-[75-R81C45]-D1-050	7440-38-2	Arsenic	7.4		mg/kg
R81C45	1-1.5	07/02/02	Yes	01-SS-[75-R81C45]-D1-050	7439-92-1	Lead	10.6		mg/kg
R81C54	1-1.5	04/15/04	Yes	1-R81C54_AVG_04/15/04_1	7440-38-2	Arsenic	3.9		mg/kg
R81C54	1-1.5	04/15/04	Yes	1-R81C54_AVG_04/15/04_1	7439-92-1	Lead	2.5		mg/kg
R81C63	1-1.5	12/05/03	Yes	01-SS-[R81C63]-C2_12/05/03_1	7440-38-2	Arsenic	7.0		mg/kg
R81C63	1-1.5	12/05/03	Yes	01-SS-[R81C63]-C2_12/05/03_1	7439-92-1	Lead	7.0		mg/kg
R82C42	1-1.5	07/02/02	Yes	01-SS-[75-R82C42]-D1-050	7440-38-2	Arsenic	4.8		mg/kg
R82C42	1-1.5	07/02/02	Yes	01-SS-[75-R82C42]-D1-050	7439-92-1	Lead	6.5		mg/kg
R82C43	1-1.5	07/02/02	Yes	01-SS-[75-R82C43]-D1-050	7440-38-2	Arsenic	4.2		mg/kg
R82C43	1-1.5	07/02/02	Yes	01-SS-[75-R82C43]-D1-050	7439-92-1	Lead	5.3		mg/kg
R82C44	1-1.5	07/02/02	Yes	01-SS-[75-R82C44]-D1-050	7440-38-2	Arsenic	3.8		mg/kg
R82C44	1-1.5	07/02/02	Yes	01-SS-[75-R82C44]-D1-050	7439-92-1	Lead	5.3		mg/kg
R82C45	1-1.5	07/02/02	Yes	01-SS-[75-R82C45]-D1-050	7440-38-2	Arsenic	4.0		mg/kg
R82C45	1-1.5	07/02/02	Yes	01-SS-[75-R82C45]-D1-050	7439-92-1	Lead	5.7		mg/kg
R82C54	1-1.5	02/17/04	Yes	1-R82C54_AVG_02/17/04_1	7440-38-2	Arsenic	26.4		mg/kg
R82C54	1-1.5	02/17/04	Yes	1-R82C54_AVG_02/17/04_1	7439-92-1	Lead	21.9		mg/kg
R82C55	1-1.5	02/17/04	Yes	1-R82C55_02/17/04_1	7440-38-2	Arsenic	25.1		mg/kg
R82C55	1-1.5	02/17/04	Yes	1-R82C55_02/17/04_1	7439-92-1	Lead	16.8		mg/kg
R82C56	1-1.5	02/17/04	Yes	1-R82C56_02/17/04_1	7440-38-2	Arsenic	15.2		mg/kg
R82C56	1-1.5	02/17/04	Yes	1-R82C56_02/17/04_1	7439-92-1	Lead	12.4		mg/kg
R82C57	1-1.5	03/03/04	Yes	01-R82C57_03/03/04_1	7440-38-2	Arsenic	8.1		mg/kg
R82C57	1-1.5	03/03/04	Yes	01-R82C57_03/03/04_1	7439-92-1	Lead	6.9		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R82C61	1-1.5	11/10/03	Yes	01-SS-[R82C61]-C2_11/10/03_1	7440-38-2	Arsenic	2.4	U	mg/kg
R82C61	1-1.5	11/10/03	Yes	01-SS-[R82C61]-C2_11/10/03_1	7439-92-1	Lead	3.4		mg/kg
R82C62	1-1.5	12/05/03	Yes	01-SS-[R82C62]-C2_12/05/03_1	7440-38-2	Arsenic	10.8		mg/kg
R82C62	1-1.5	12/05/03	Yes	01-SS-[R82C62]-C2_12/05/03_1	7439-92-1	Lead	17.1		mg/kg
R82C63	1-1.5	12/05/03	Yes	01-SS-[R82C63]-C2_12/05/03_1	7440-38-2	Arsenic	11.3		mg/kg
R82C63	1-1.5	12/05/03	Yes	01-SS-[R82C63]-C2_12/05/03_1	7439-92-1	Lead	22.0		mg/kg
R83C43	1-1.5	07/02/02	Yes	01-SS-[75-R83C43]-D1-050	7440-38-2	Arsenic	4.0		mg/kg
R83C43	1-1.5	07/02/02	Yes	01-SS-[75-R83C43]-D1-050	7439-92-1	Lead	5.6		mg/kg
R83C44	1-1.5	07/02/02	Yes	01-SS-[75-R83C44]-D1-050	7440-38-2	Arsenic	5.9		mg/kg
R83C44	1-1.5	07/02/02	Yes	01-SS-[75-R83C44]-D1-050	7439-92-1	Lead	7.5		mg/kg
R83C45	1-1.5	07/02/02	Yes	01-SS-[75-R83C45]-D1-050	7440-38-2	Arsenic	3.4		mg/kg
R83C45	1-1.5	07/02/02	Yes	01-SS-[75-R83C45]-D1-050	7439-92-1	Lead	5.5		mg/kg
R83C46	1-1.5	07/02/02	Yes	01-SS-[75-R83C46]-D1-050	7440-38-2	Arsenic	5.6		mg/kg
R83C46	1-1.5	07/02/02	Yes	01-SS-[75-R83C46]-D1-050	7439-92-1	Lead	7.0		mg/kg
R83C54	1-1.5	07/16/02	Yes	01-SS-[75-R83C54]-D1-050	7440-38-2	Arsenic	5.7		mg/kg
R83C54	1-1.5	07/16/02	Yes	01-SS-[75-R83C54]-D1-050	7439-92-1	Lead	6.0		mg/kg
R83C55	1-1.5	07/16/02	Yes	01-SS-[75-R83C55]-D1-050	7440-38-2	Arsenic	4.6		mg/kg
R83C55	1-1.5	07/16/02	Yes	01-SS-[75-R83C55]-D1-050	7439-92-1	Lead	5.0		mg/kg
R83C57	1-1.5	07/16/02	Yes	01-SS-[75-R83C57]-D1-050	7440-38-2	Arsenic	39.5		mg/kg
R83C57	1-1.5	07/16/02	Yes	01-SS-[75-R83C57]-D1-050	7439-92-1	Lead	61.8		mg/kg
R83C57	1-1.5	11/10/03	Yes	01-SS-[R83C57]-C2_11/10/03_1	7440-38-2	Arsenic	28.5		mg/kg
R83C57	1-1.5	11/10/03	Yes	01-SS-[R83C57]-C2_11/10/03_1	7439-92-1	Lead	3.1		mg/kg
R83C58	1-1.5	11/10/03	Yes	01-SS-[R83C58]-C2_11/10/03_1	7440-38-2	Arsenic	7.0		mg/kg
R83C58	1-1.5	11/10/03	Yes	01-SS-[R83C58]-C2_11/10/03_1	7439-92-1	Lead	5.8		mg/kg
R83C59	1-1.5	11/10/03	Yes	01-SS-[R83C59]-C2_11/10/03_1	7440-38-2	Arsenic	8.0		mg/kg
R83C59	1-1.5	11/10/03	Yes	01-SS-[R83C59]-C2_11/10/03_1	7439-92-1	Lead	9.5		mg/kg
R83C60	1-1.5	11/10/03	Yes	01-SS-[R83C60]-C2_11/10/03_1	7440-38-2	Arsenic	9.2		mg/kg
R83C60	1-1.5	11/10/03	Yes	01-SS-[R83C60]-C2_11/10/03_1	7439-92-1	Lead	4.9		mg/kg
R83C61	1-1.5	11/10/03	Yes	01-SS-[R83C61]-C2_11/10/03_1	7440-38-2	Arsenic	7.3		mg/kg
R83C61	1-1.5	11/10/03	Yes	01-SS-[R83C61]-C2_11/10/03_1	7439-92-1	Lead	4.4		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R83C62	1-1.5	12/05/03	Yes	01-SS-[R83C62]-C2_12/05/03_1	7440-38-2	Arsenic	2.3	U	mg/kg
R83C62	1-1.5	12/05/03	Yes	01-SS-[R83C62]-C2_12/05/03_1	7439-92-1	Lead	2.3	U	mg/kg
R84C48	1-1.5	07/16/02	Yes	01-SS-[75-R84C48]-D1-050	7440-38-2	Arsenic	9.7		mg/kg
R84C48	1-1.5	07/16/02	Yes	01-SS-[75-R84C48]-D1-050	7439-92-1	Lead	4.7		mg/kg
R84C49	1-1.5	07/16/02	Yes	01-SS-[75-R84C49]-D1-050	7440-38-2	Arsenic	4.4		mg/kg
R84C49	1-1.5	07/16/02	Yes	01-SS-[75-R84C49]-D1-050	7439-92-1	Lead	4.5		mg/kg
R84C55	1-1.5	07/16/02	Yes	01-SS-[75-R84C55]-D1-050	7440-38-2	Arsenic	6.4		mg/kg
R84C55	1-1.5	07/16/02	Yes	01-SS-[75-R84C55]-D1-050	7439-92-1	Lead	7.1		mg/kg
R84C57	1-1.5	07/16/02	Yes	01-SS-[75-R84C57]-D1-050	7440-38-2	Arsenic	2.1		mg/kg
R84C57	1-1.5	07/16/02	Yes	01-SS-[75-R84C57]-D1-050	7439-92-1	Lead	3.0		mg/kg
R84C58	1-1.5	11/10/03	Yes	01-SS-[R84C58]-C2_11/10/03_1	7440-38-2	Arsenic	3.3		mg/kg
R84C58	1-1.5	11/10/03	Yes	01-SS-[R84C58]-C2_11/10/03_1	7439-92-1	Lead	4.3		mg/kg
RR-559-S-3	1-2	12/16/93	Yes	RR-559-S-3	7440-38-2	Arsenic	16.0		mg/kg
SA4-119-94	1.5-2	10/13/99	Yes	SA4-119-94	7440-38-2	Arsenic	2.0	U	mg/kg
SA4-119-94	1.5-2	10/13/99	Yes	SA4-119-94	7439-92-1	Lead	4.1		mg/kg
T-216-217-218	1-1.5	08/13/03	Yes	02-SS-[T-216-217-218]-C2_08/13/03_1	7440-38-2	Arsenic	12.2		mg/kg
T108,109	0-0.5	04/03/03	Yes	01-SS-[T108,109]-C1_AVG_04/03/03_0	7439-92-1	Lead	61.0		mg/kg
T193	0-0.5	04/03/03	Yes	01-SS-[T193]-C1_04/03/03_0	7440-38-2	Arsenic	43.2		mg/kg
T193	0-0.5	04/03/03	Yes	01-SS-[T193]-C1_04/03/03_0	7439-92-1	Lead	31.9		mg/kg
T194	0-0.5	04/03/03	Yes	01-SS-[T194]-C1_04/03/03_0	7440-38-2	Arsenic	44.8		mg/kg
T194	0-0.5	04/03/03	Yes	01-SS-[T194]-C1_04/03/03_0	7439-92-1	Lead	80.1		mg/kg
T195	0-0.5	04/03/03	Yes	01-SS-[T195]-C1_04/03/03_0	7440-38-2	Arsenic	46.7		mg/kg
T195	0-0.5	04/03/03	Yes	01-SS-[T195]-C1_04/03/03_0	7439-92-1	Lead	42.9		mg/kg
T196	0-0.5	04/03/03	Yes	01-SS-[T196]-C1_04/03/03_0	7440-38-2	Arsenic	32.0		mg/kg
T196	0-0.5	04/03/03	Yes	01-SS-[T196]-C1_04/03/03_0	7439-92-1	Lead	47.0		mg/kg
T197	0-0.5	04/03/03	Yes	01-SS-[T197]-C1_04/03/03_0	7440-38-2	Arsenic	28.2		mg/kg
T197	0-0.5	04/03/03	Yes	01-SS-[T197]-C1_04/03/03_0	7439-92-1	Lead	52.3		mg/kg
T198	0-0.5	04/03/03	Yes	01-SS-[T198]-C1_04/03/03_0	7440-38-2	Arsenic	28.6		mg/kg
T198	0-0.5	04/03/03	Yes	01-SS-[T198]-C1_04/03/03_0	7439-92-1	Lead	47.3		mg/kg
T208-209	1-1.5	08/13/03	Yes	02-SS-[T-208-209]-C2_08/13/03_1	7440-38-2	Arsenic	7.7		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T210,211	0-0.5	04/03/03	Yes	01-SS-[T210,211]-C1_04/03/03_0	7440-38-2	Arsenic	15.7		mg/kg
T210,211	0-0.5	04/03/03	Yes	01-SS-[T210,211]-C1_04/03/03_0	7439-92-1	Lead	12.4		mg/kg
T212	0-0.5	04/03/03	Yes	01-SS-[T212]-C1_04/03/03_0	7440-38-2	Arsenic	18.8		mg/kg
T212	0-0.5	04/03/03	Yes	01-SS-[T212]-C1_04/03/03_0	7439-92-1	Lead	18.9		mg/kg
T213,T215,T214	0-0.5	04/03/03	Yes	01-SS-[T213,T215,T214]-C1_04/03/03_0	7440-38-2	Arsenic	21.7		mg/kg
T213,T215,T214	0-0.5	04/03/03	Yes	01-SS-[T213,T215,T214]-C1_04/03/03_0	7439-92-1	Lead	38.5		mg/kg
T216,217,218	0-0.5	04/03/03	Yes	01-SS-[T216,217,218]-C1_04/03/03_0	7439-92-1	Lead	29.9		mg/kg
T219,220,221,222	0-0.5	04/02/03	Yes	01-SS-[T219-220-221-222]-D1_04/02/03_0	7440-38-2	Arsenic	40.8		mg/kg
T219,220,221,222	0-0.5	04/02/03	Yes	01-SS-[T219-220-221-222]-D1_04/02/03_0	7439-92-1	Lead	93.4		mg/kg
T223	0-0.5	04/02/03	Yes	01-SS-[T223]-D1_04/02/03_0	7439-92-1	Lead	43.4		mg/kg
T223	0-0.5	04/13/04	Yes	T-223_04/13/04_0	7440-38-2	Arsenic	6.2		mg/kg
T223	0-0.5	04/13/04	Yes	T-223_04/13/04_0	7439-92-1	Lead	4.6		mg/kg
T224,225	0-0.5	04/02/03	Yes	01-SS-[T224,225]-D1_04/02/03_0	7439-92-1	Lead	35.3		mg/kg
T224-225	1-1.5	08/13/03	Yes	02-SS-[T-224-225]-C2_08/13/03_1	7440-38-2	Arsenic	11.8		mg/kg
T226,227,228	0-0.5	04/03/03	Yes	01-SS-[T226,227,228]-C1_04/03/03_0	7440-38-2	Arsenic	28.4		mg/kg
T226,227,228	0-0.5	04/03/03	Yes	01-SS-[T226,227,228]-C1_04/03/03_0	7439-92-1	Lead	69.3		mg/kg
T229	0-0.5	04/03/03	Yes	01-SS-[T229]-C1_04/03/03_0	7440-38-2	Arsenic	16.0		mg/kg
T229	0-0.5	04/03/03	Yes	01-SS-[T229]-C1_04/03/03_0	7439-92-1	Lead	20.8		mg/kg
T230	0-0.5	04/02/03	Yes	01-SS-[T230]-D1_04/02/03_0	7440-38-2	Arsenic	46.5		mg/kg
T230	0-0.5	04/02/03	Yes	01-SS-[T230]-D1_04/02/03_0	7439-92-1	Lead	77.2		mg/kg
T231	0-0.5	04/02/03	Yes	01-SS-[T231]-C1_AVG_04/02/03_0	7440-38-2	Arsenic	25.9		mg/kg
T231	0-0.5	04/02/03	Yes	01-SS-[T231]-C1_AVG_04/02/03_0	7439-92-1	Lead	45.3		mg/kg
T232	0-0.5	04/02/03	Yes	01-SS-[T232]-D1_04/02/03_0	7440-38-2	Arsenic	47.1		mg/kg
T232	0-0.5	04/02/03	Yes	01-SS-[T232]-D1_04/02/03_0	7439-92-1	Lead	46.1		mg/kg
T233	0-0.5	04/02/03	Yes	01-SS-[T233]-D1_04/02/03_0	7440-38-2	Arsenic	28.6		mg/kg
T233	0-0.5	04/02/03	Yes	01-SS-[T233]-D1_04/02/03_0	7439-92-1	Lead	36.0		mg/kg
T234,235,236,237	0-0.5	04/02/03	Yes	01-SS-[T234,235,236,237]-C1_04/02/03_0	7440-38-2	Arsenic	25.4		mg/kg
T234,235,236,237	0-0.5	04/02/03	Yes	01-SS-[T234,235,236,237]-C1_04/02/03_0	7439-92-1	Lead	29.8		mg/kg
T238	0-0.5	04/02/03	Yes	01-SS-[T238]-D1_04/02/03_0	7440-38-2	Arsenic	33.2		mg/kg
T238	0-0.5	04/02/03	Yes	01-SS-[T238]-D1_04/02/03_0	7439-92-1	Lead	43.8		mg/kg

Table B.16
Sample Results for GC-08 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
T239	0-0.5	04/02/03	Yes	01-SS-[T239]-D1_04/02/03_0	7440-38-2	Arsenic	39.6		mg/kg
T239	0-0.5	04/02/03	Yes	01-SS-[T239]-D1_04/02/03_0	7439-92-1	Lead	64.6		mg/kg
T240	0-0.5	04/02/03	Yes	01-SS-[T240]-D1_04/02/03_0	7439-92-1	Lead	53.3		mg/kg
T241	0-0.5	04/02/03	No	01-SS-[T241]-D1_04/02/03_0	7439-92-1	Lead	90.1		mg/kg
T241	1-1.5	08/13/03	Yes	02-SS-[T-241]-C2_08/13/03_1	7440-38-2	Arsenic	2.2	U	mg/kg
T242	0-0.5	04/02/03	Yes	01-SS-[T242]-C1_AVG_04/02/03_0	7440-38-2	Arsenic	45.1		mg/kg
T242	0-0.5	04/02/03	Yes	01-SS-[T242]-C1_AVG_04/02/03_0	7439-92-1	Lead	53.7		mg/kg
T243	0-0.5	04/02/03	Yes	01-SS-[T243]-D1_04/02/03_0	7440-38-2	Arsenic	14.8		mg/kg
T243	0-0.5	04/02/03	Yes	01-SS-[T243]-D1_04/02/03_0	7439-92-1	Lead	22.0		mg/kg
T244	0-0.5	04/02/03	Yes	01-SS-[T244]-C1_04/02/03_0	7440-38-2	Arsenic	8.5		mg/kg
T244	0-0.5	04/02/03	Yes	01-SS-[T244]-C1_04/02/03_0	7439-92-1	Lead	18.0		mg/kg
T246	0-0.5	04/02/03	Yes	01-SS-[T246]-C1_04/02/03_0	7440-38-2	Arsenic	26.7		mg/kg
T246	0-0.5	04/02/03	Yes	01-SS-[T246]-C1_04/02/03_0	7439-92-1	Lead	45.2		mg/kg
T247	0-0.5	04/02/03	Yes	01-SS-[T247]-C1_04/02/03_0	7440-38-2	Arsenic	50.9		mg/kg
T247	0-0.5	04/02/03	Yes	01-SS-[T247]-C1_04/02/03_0	7439-92-1	Lead	65.1		mg/kg
T248	0-0.5	04/02/03	Yes	01-SS-[T248]-C1_04/02/03_0	7440-38-2	Arsenic	16.3		mg/kg
T248	0-0.5	04/02/03	Yes	01-SS-[T248]-C1_04/02/03_0	7439-92-1	Lead	20.9		mg/kg
T249	0-0.5	04/02/03	Yes	01-SS-[T249]-C1_04/02/03_0	7440-38-2	Arsenic	19.9		mg/kg
T249	0-0.5	04/02/03	Yes	01-SS-[T249]-C1_04/02/03_0	7439-92-1	Lead	31.6		mg/kg
T250	0-0.5	04/02/03	Yes	01-SS-[T250]-D1_04/02/03_0	7440-38-2	Arsenic	40.4		mg/kg
T250	0-0.5	04/02/03	Yes	01-SS-[T250]-D1_04/02/03_0	7439-92-1	Lead	62.5		mg/kg
T251	0-0.5	04/02/03	Yes	01-SS-[T251]-C1_04/02/03_0	7440-38-2	Arsenic	25.5		mg/kg
T251	0-0.5	04/02/03	Yes	01-SS-[T251]-C1_04/02/03_0	7439-92-1	Lead	34.0		mg/kg
T252	0-0.5	04/02/03	Yes	01-SS-[T252]-C1_04/02/03_0	7440-38-2	Arsenic	25.7		mg/kg
T252	0-0.5	04/02/03	Yes	01-SS-[T252]-C1_04/02/03_0	7439-92-1	Lead	50.1		mg/kg
T253	0-0.5	04/02/03	Yes	01-SS-[T253]-C1_04/02/03_0	7440-38-2	Arsenic	22.6		mg/kg
T253	0-0.5	04/02/03	Yes	01-SS-[T253]-C1_04/02/03_0	7439-92-1	Lead	27.8		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-2-B-501	0-1	03/24/92	Yes	12-2-B-501-S-1	7440-38-2	Arsenic	3.6	J	mg/kg
12-2-B-501	0-1	03/24/92	Yes	12-2-B-501-S-1	7440-50-8	Copper	21.0		mg/kg
12-2-B-501	0-1	03/24/92	Yes	12-2-B-501-S-1	7439-92-1	Lead	18.0		mg/kg
12-2-B-501	0-1	03/24/92	Yes	12-2-B-501-S-1	7439-97-6	Mercury	0.09	UJ	mg/kg
12-2-B-501	5-8	03/24/92	Yes	12-2-B-501-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-B-501	5-8	03/24/92	Yes	12-2-B-501-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-B-501	5-8	03/24/92	Yes	12-2-B-501-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-B-501	8-9.5	03/24/92	Yes	12-2-B-501-S-2A	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
12-2-B-501	8-9.5	03/24/92	Yes	12-2-B-501-S-2A	98-95-3	Nitrobenzene	0.1	U	mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	7440-38-2	Arsenic	1.4		mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	7440-50-8	Copper	15.0		mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	7439-92-1	Lead	9.4		mg/kg
12-2-B-501	13-14.5	03/24/92	Yes	12-2-B-501-S-3A	7439-97-6	Mercury	0.1	J	mg/kg
12-2-B-501	20-23	03/24/92	Yes	12-2-B-501-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-B-501	20-23	03/24/92	Yes	12-2-B-501-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-B-501	20-23	03/24/92	Yes	12-2-B-501-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-B-502	0-1	03/24/92	Yes	12-2-B-502-S-1-DAVG	7440-38-2	Arsenic	2.0		mg/kg
12-2-B-502	0-1	03/24/92	Yes	12-2-B-502-S-1-DAVG	7440-50-8	Copper	14.0		mg/kg
12-2-B-502	0-1	03/24/92	Yes	12-2-B-502-S-1-DAVG	7439-92-1	Lead	12.0		mg/kg
12-2-B-502	0-1	03/24/92	Yes	12-2-B-502-S-1-DAVG	7439-97-6	Mercury	0.1	UJ	mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	7440-38-2	Arsenic	1.9		mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	7440-50-8	Copper	12.0		mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	7439-92-1	Lead	11.0		mg/kg
12-2-B-502	5-8	03/24/92	Yes	12-2-B-502-S-2-DAVG	7439-97-6	Mercury	0.08	UJ	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	7440-38-2	Arsenic	1.3		mg/kg
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	7440-50-8	Copper	17.0		mg/kg
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	7439-92-1	Lead	7.0		mg/kg
12-2-B-502	10-12.3	03/24/92	Yes	12-2-B-502-S-3	7439-97-6	Mercury	0.1	UJ	mg/kg
12-2-B-502	20-23	03/24/92	Yes	12-2-B-502-S-5-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-B-502	20-23	03/24/92	Yes	12-2-B-502-S-5-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-B-502	20-23	03/24/92	Yes	12-2-B-502-S-5-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-OBTP-504	2-4	04/16/92	Yes	12-2-OBTP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
12-2-OBTP-504	2-4	04/16/92	Yes	12-2-OBTP-504-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
12-2-OBTP-504	2-4	04/16/92	Yes	12-2-OBTP-504-S-2	98-95-3	Nitrobenzene	0.9	U	mg/kg
12-2-OBTP-505	2-4	04/16/92	Yes	12-2-OBTP-505-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
12-2-OBTP-505	2-4	04/16/92	Yes	12-2-OBTP-505-S-2	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
12-2-OBTP-505	2-4	04/16/92	Yes	12-2-OBTP-505-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
12-2-OBTP-505	5.5-6.6	04/16/92	Yes	12-2-OBTP-505-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-OBTP-505	5.5-6.6	04/16/92	Yes	12-2-OBTP-505-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-OBTP-505	5.5-6.6	04/16/92	Yes	12-2-OBTP-505-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-TP-10	0-3	04/23/87	Yes	12-2-TP-10,S-1	7439-92-1	Lead	36.0		mg/kg
12-2-TP-10	3-6	04/23/87	Yes	12-2-TP-10,S-2	7439-92-1	Lead	48.0		mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	98-95-3	Nitrobenzene	0.3	UJ	mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	7440-38-2	Arsenic	2.8		mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	7440-50-8	Copper	18.0	J	mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	7439-92-1	Lead	5.8	U	mg/kg
12-2-TP-501	3-6	04/15/92	Yes	12-2-TP-501-S-2	7439-97-6	Mercury	0.09	U	mg/kg
12-2-TP-501	8-10	04/16/92	Yes	12-2-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-TP-501	8-10	04/16/92	Yes	12-2-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-2-TP-501	8-10	04/16/92	Yes	12-2-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	DNT-TOTAL	DNT - Total	0.2	U	mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	98-95-3	Nitrobenzene	1.3	UJ	mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	7440-38-2	Arsenic	2.2		mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	7440-50-8	Copper	12.0	J	mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	7439-92-1	Lead	23.0		mg/kg
12-2-TP-502	3-6	04/14/92	Yes	12-2-TP-502-S-2	7439-97-6	Mercury	0.08	U	mg/kg
12-2-TP-503	2-4	04/15/92	Yes	12-2-TP-503-S-2	7440-38-2	Arsenic	1.8		mg/kg
12-2-TP-503	2-4	04/15/92	Yes	12-2-TP-503-S-2	7440-50-8	Copper	12.0	J	mg/kg
12-2-TP-503	2-4	04/15/92	Yes	12-2-TP-503-S-2	7439-92-1	Lead	6.2		mg/kg
12-2-TP-503	2-4	04/15/92	Yes	12-2-TP-503-S-2	7439-97-6	Mercury	0.07	U	mg/kg
12-2-TP-503	8-10	04/14/92	Yes	12-2-TP-503-S-3-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
12-2-TP-503	8-10	04/14/92	Yes	12-2-TP-503-S-3-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-TP-503	8-10	04/14/92	Yes	12-2-TP-503-S-3-DAVG	98-95-3	Nitrobenzene	0.08	UJ	mg/kg
12-2-TP-503	4-6	04/13/92	Yes	12-2-TP-503-S-4	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
12-2-TP-503	4-6	04/13/92	Yes	12-2-TP-503-S-4	98-95-3	Nitrobenzene	0.1	U	mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	7440-38-2	Arsenic	0.9		mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	7440-50-8	Copper	11.0	J	mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	7439-92-1	Lead	5.0	U	mg/kg
12-2-TP-504	3-6	04/15/92	Yes	12-2-TP-504-S-2-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
12-2-TP-505	0-1	04/13/92	Yes	12-2-TP-505-S-1	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
12-2-TP-505	0-1	04/13/92	Yes	12-2-TP-505-S-1	98-95-3	Nitrobenzene	0.1	U	mg/kg
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	7440-38-2	Arsenic	3.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	7440-50-8	Copper	15.0	J	mg/kg
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	7439-92-1	Lead	5.7	U	mg/kg
12-2-TP-505	3-6	04/15/92	Yes	12-2-TP-505-S-2-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
12-2-TP-505	9-10	04/15/92	Yes	12-2-TP-505-S-3	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
12-2-TP-505	9-10	04/15/92	Yes	12-2-TP-505-S-3	98-95-3	Nitrobenzene	0.1	U	mg/kg
12-2-TP-506	3-6	04/16/92	Yes	12-2-TP-506-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-2-TP-506	3-6	04/16/92	Yes	12-2-TP-506-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-2-TP-506	3-6	04/16/92	Yes	12-2-TP-506-S-2	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-2-TP-9	0-3	04/24/87	Yes	12-2-TP-9,S-1	7439-92-1	Lead	35.0		mg/kg
12-2-TP-9	3-6	04/24/87	Yes	12-2-TP-9,S-2	7439-92-1	Lead	39.0		mg/kg
12-3-TP-3	0-3	04/27/87	Yes	12-3-TP-3,S-1	7439-92-1	Lead	28.0		mg/kg
12-3-TP-3	3-6	04/27/87	Yes	12-3-TP-3,S-2	7439-92-1	Lead	29.0		mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	98-95-3	Nitrobenzene	0.3	U	mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	7440-38-2	Arsenic	15.3	J	mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	7440-50-8	Copper	24.0		mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	7439-92-1	Lead	39.0		mg/kg
12-3-TP-501	2-4	04/16/92	Yes	12-3-TP-501-S-2-DAVG	7439-97-6	Mercury	0.1		mg/kg
12-3-TP-501	8-10	04/16/92	Yes	12-3-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-3-TP-501	8-10	04/16/92	Yes	12-3-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-3-TP-501	8-10	04/16/92	Yes	12-3-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-3-TP-502	2-4	04/16/92	Yes	12-3-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-3-TP-502	2-4	04/16/92	Yes	12-3-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-3-TP-502	2-4	04/16/92	Yes	12-3-TP-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-3-TP-502	4-6	04/16/92	Yes	12-3-TP-502-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-3-TP-502	4-6	04/16/92	Yes	12-3-TP-502-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-3-TP-502	4-6	04/16/92	Yes	12-3-TP-502-S-3	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-3-TP-503	3-6	04/16/92	Yes	12-3-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-3-TP-503	3-6	04/16/92	Yes	12-3-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-3-TP-503	3-6	04/16/92	Yes	12-3-TP-503-S-2	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-3-TP-503	8-10	04/16/92	Yes	12-3-TP-503-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-3-TP-503	8-10	04/16/92	Yes	12-3-TP-503-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-3-TP-503	8-10	04/16/92	Yes	12-3-TP-503-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-SS-401	0-0.5	11/17/93	Yes	12-SS-401	7440-38-2	Arsenic	22.0		mg/kg
12-SS-403	0-0.5	11/17/93	Yes	12-SS-403	7440-38-2	Arsenic	6.0		mg/kg
12-SS-405	0-0.5	11/17/93	Yes	12-SS-405	7440-38-2	Arsenic	6.5		mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	7440-38-2	Arsenic	3.2	J	mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	7440-50-8	Copper	13.0		mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	7439-92-1	Lead	5.8	U	mg/kg
12-TP-501	0-1	04/16/92	Yes	12-TP-501-S-1-DAVG	7439-97-6	Mercury	0.08	U	mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	7440-38-2	Arsenic	18.0	J	mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	7440-50-8	Copper	17.0		mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	7439-92-1	Lead	15.0		mg/kg
12-TP-501	3-4.5	04/16/92	Yes	12-TP-501-S-2-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	7440-38-2	Arsenic	3.2		mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	7440-50-8	Copper	14.0		mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	7439-92-1	Lead	6.1	U	mg/kg
12-TP-502	0-1	04/16/92	Yes	12-TP-502-S-1-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	7440-38-2	Arsenic	1.3		mg/kg
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	7440-50-8	Copper	15.0		mg/kg
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	7439-92-1	Lead	5.2	U	mg/kg
12-TP-502	3-6	04/17/92	Yes	12-TP-502-S-2-DAVG	7439-97-6	Mercury	0.08	U	mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	98-95-3	Nitrobenzene	0.07	U	mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	7440-38-2	Arsenic	2.8	J	mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	7440-50-8	Copper	11.0		mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	7439-92-1	Lead	6.5	U	mg/kg
12-TP-503	0-1	04/16/92	Yes	12-TP-503-S-1	7439-97-6	Mercury	0.01		mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	7440-38-2	Arsenic	1.4	J	mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	7440-50-8	Copper	13.0		mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	7439-92-1	Lead	5.5	U	mg/kg
12-TP-503	3-6	04/16/92	Yes	12-TP-503-S-2	7439-97-6	Mercury	0.09	U	mg/kg
1234-SS-501	0-0.5	05/07/92	Yes	1234-SS-501	7439-92-1	Lead	23.0		mg/kg
1234-SS-502	0-0.5	05/07/92	Yes	1234-SS-502	7439-92-1	Lead	63.0		mg/kg
1234-SS-504	0-0.5	05/07/92	Yes	1234-SS-504	7439-92-1	Lead	19.0		mg/kg
1234-SS-505	0-0.5	05/07/92	Yes	1234-SS-505	7439-92-1	Lead	14.0		mg/kg
1234-SS-506	0-0.5	05/07/92	Yes	1234-SS-506	7439-92-1	Lead	46.0		mg/kg
1234-SS-507	0-0.5	05/07/92	Yes	1234-SS-507	7439-92-1	Lead	200.0		mg/kg
1234-SS-508	0-0.5	05/07/92	Yes	1234-SS-508	7439-92-1	Lead	17.0		mg/kg
1234-SS-509	0-0.5	05/08/92	Yes	1234-SS-509	7439-92-1	Lead	19.0		mg/kg
1234-SS-510	0-0.5	05/08/92	Yes	1234-SS-510	7439-92-1	Lead	430.0		mg/kg
1234-SS-511	0-0.5	03/04/92	Yes	1234-SS-511	7439-92-1	Lead	59.0		mg/kg
1234-SS-512	0-0.5	03/04/92	Yes	1234-SS-512	7439-92-1	Lead	6.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-SS-513	0-0.5	05/08/92	Yes	1234-SS-513-DAVG	7439-92-1	Lead	170.0		mg/kg
1234-SS-514	0-0.5	03/04/92	Yes	1234-SS-514-DAVG	7439-92-1	Lead	51.0		mg/kg
1234-SS-515	0-0.5	05/08/92	Yes	1234-SS-515	7439-92-1	Lead	48.0		mg/kg
1234-TP-501	0-1	05/18/92	Yes	1234-TP-501-S-1	118-96-7	2,4,6-Trinitrotoluene	0.1	U	mg/kg
1234-TP-501	0-1	05/18/92	Yes	1234-TP-501-S-1	DNT-TOTAL	DNT - Total	0.7	U	mg/kg
1234-TP-501	0-1	05/18/92	Yes	1234-TP-501-S-1	98-95-3	Nitrobenzene	3.7	U	mg/kg
1234-TP-501	0-1	05/18/92	Yes	1234-TP-501-S-1	7439-92-1	Lead	270.0		mg/kg
1234-TP-501	3-6	05/18/92	Yes	1234-TP-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
1234-TP-501	3-6	05/18/92	Yes	1234-TP-501-S-2	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
1234-TP-501	3-6	05/18/92	Yes	1234-TP-501-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
1234-TP-501	3-6	05/18/92	Yes	1234-TP-501-S-2	7439-92-1	Lead	79.0		mg/kg
1234-TP-501	8-10	05/18/92	Yes	1234-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-501	8-10	05/18/92	Yes	1234-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-501	8-10	05/18/92	Yes	1234-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-502	0-1	05/18/92	Yes	1234-TP-502-S-1	7439-92-1	Lead	7.8		mg/kg
1234-TP-502	3-6	05/18/92	Yes	1234-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-502	3-6	05/18/92	Yes	1234-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-502	3-6	05/18/92	Yes	1234-TP-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-502	3-6	05/18/92	Yes	1234-TP-502-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-502	8-10	05/18/92	Yes	1234-TP-502-S-3	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-503	0-1	05/21/92	Yes	1234-TP-503-S-1	7439-92-1	Lead	100.0		mg/kg
1234-TP-503	3-6	05/21/92	Yes	1234-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-503	3-6	05/21/92	Yes	1234-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-503	3-6	05/21/92	Yes	1234-TP-503-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-503	3-6	05/21/92	Yes	1234-TP-503-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-503	8-10	05/21/92	Yes	1234-TP-503-S-3	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-504	0-1	05/19/92	Yes	1234-TP-504-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.1	U	mg/kg
1234-TP-504	0-1	05/19/92	Yes	1234-TP-504-S-1-DAVG	DNT-TOTAL	DNT - Total	0.6	U	mg/kg
1234-TP-504	0-1	05/19/92	Yes	1234-TP-504-S-1-DAVG	98-95-3	Nitrobenzene	3.3	U	mg/kg
1234-TP-504	0-1	05/19/92	Yes	1234-TP-504-S-1-DAVG	7439-92-1	Lead	300.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-TP-504	3-6	05/19/92	Yes	1234-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.1	U	mg/kg
1234-TP-504	3-6	05/19/92	Yes	1234-TP-504-S-2	DNT-TOTAL	DNT - Total	0.6	U	mg/kg
1234-TP-504	3-6	05/19/92	Yes	1234-TP-504-S-2	98-95-3	Nitrobenzene	3.2	U	mg/kg
1234-TP-504	3-6	05/19/92	Yes	1234-TP-504-S-2	7439-92-1	Lead	42.0		mg/kg
1234-TP-504	8-10	05/19/92	Yes	1234-TP-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
1234-TP-504	8-10	05/19/92	Yes	1234-TP-504-S-3	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
1234-TP-504	8-10	05/19/92	Yes	1234-TP-504-S-3	98-95-3	Nitrobenzene	0.3	U	mg/kg
1234-TP-505	0-1	05/19/92	Yes	1234-TP-505-S-1	7439-92-1	Lead	50.0		mg/kg
1234-TP-505	3-6	05/19/92	Yes	1234-TP-505-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
1234-TP-505	3-6	05/19/92	Yes	1234-TP-505-S-2	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
1234-TP-505	3-6	05/19/92	Yes	1234-TP-505-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
1234-TP-505	3-6	05/19/92	Yes	1234-TP-505-S-2	7439-92-1	Lead	68.0		mg/kg
1234-TP-505	8-10	05/19/92	Yes	1234-TP-505-S-3	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-506	0-1	05/20/92	Yes	1234-TP-506-S-1	7439-92-1	Lead	54.0		mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	7440-38-2	Arsenic	3.7		mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	7440-50-8	Copper	29.1		mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	7439-92-1	Lead	65.0		mg/kg
1234-TP-506	3-6	05/20/92	Yes	1234-TP-506-S-2	7439-97-6	Mercury	0.1	U	mg/kg
1234-TP-506	8-10	05/20/92	Yes	1234-TP-506-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-506	8-10	05/20/92	Yes	1234-TP-506-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-506	8-10	05/20/92	Yes	1234-TP-506-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-506	8-10	05/20/92	Yes	1234-TP-506-S-3	7439-92-1	Lead	7.0		mg/kg
1234-TP-507	0-1	05/18/92	Yes	1234-TP-507-S-1	7439-92-1	Lead	34.0		mg/kg
1234-TP-507	3-6	05/18/92	Yes	1234-TP-507-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-507	3-6	05/18/92	Yes	1234-TP-507-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-507	3-6	05/18/92	Yes	1234-TP-507-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-507	3-6	05/18/92	Yes	1234-TP-507-S-2	7439-92-1	Lead	5.0	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-TP-507	8-10	05/18/92	Yes	1234-TP-507-S-3	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-508	0-1	05/18/92	Yes	1234-TP-508-S-1	7439-92-1	Lead	81.0		mg/kg
1234-TP-508	3-6	05/18/92	Yes	1234-TP-508-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-508	3-6	05/18/92	Yes	1234-TP-508-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-508	3-6	05/18/92	Yes	1234-TP-508-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-508	3-6	05/18/92	Yes	1234-TP-508-S-2	7439-92-1	Lead	11.0		mg/kg
1234-TP-508	8-10	05/18/92	Yes	1234-TP-508-S-3	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-509	0-1	05/21/92	Yes	1234-TP-509-S-1	7439-92-1	Lead	26.0		mg/kg
1234-TP-509	3-6	05/21/92	Yes	1234-TP-509-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-509	3-6	05/21/92	Yes	1234-TP-509-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-509	3-6	05/21/92	Yes	1234-TP-509-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-509	3-6	05/21/92	Yes	1234-TP-509-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-509	8-10	05/21/92	Yes	1234-TP-509-S-3	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-511	0-1	05/21/92	Yes	1234-TP-511-S-1	7439-92-1	Lead	6.0		mg/kg
1234-TP-511	3-6	05/21/92	Yes	1234-TP-511-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-511	3-6	05/21/92	Yes	1234-TP-511-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-511	3-6	05/21/92	Yes	1234-TP-511-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-511	3-6	05/21/92	Yes	1234-TP-511-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-511	8-10	05/21/92	Yes	1234-TP-511-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-511	8-10	05/21/92	Yes	1234-TP-511-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-511	8-10	05/21/92	Yes	1234-TP-511-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-512	0-1	05/19/92	Yes	1234-TP-512-S-1	7439-92-1	Lead	2500.0		mg/kg
1234-TP-512	0-1	05/19/92	Yes	1234-TP-512-S-1	7439-92-1	Lead	28.0		MG/L
1234-TP-512	3-6	05/19/92	Yes	1234-TP-512-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-512	3-6	05/19/92	Yes	1234-TP-512-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-512	3-6	05/19/92	Yes	1234-TP-512-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-512	3-6	05/19/92	Yes	1234-TP-512-S-2	7439-92-1	Lead	19.0		mg/kg
1234-TP-512	8-10	05/19/92	Yes	1234-TP-512-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-512	8-10	05/19/92	Yes	1234-TP-512-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-512	8-10	05/19/92	Yes	1234-TP-512-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-TP-513	0-1	05/19/92	Yes	1234-TP-513-S-1	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
1234-TP-513	0-1	05/19/92	Yes	1234-TP-513-S-1	DNT-TOTAL	DNT - Total	0.2	U	mg/kg
1234-TP-513	0-1	05/19/92	Yes	1234-TP-513-S-1	98-95-3	Nitrobenzene	1.3	U	mg/kg
1234-TP-513	0-1	05/19/92	Yes	1234-TP-513-S-1	7439-92-1	Lead	560.0		mg/kg
1234-TP-513	3-6	05/19/92	Yes	1234-TP-513-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-513	3-6	05/19/92	Yes	1234-TP-513-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-513	3-6	05/19/92	Yes	1234-TP-513-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-513	3-6	05/19/92	Yes	1234-TP-513-S-2	7439-92-1	Lead	15.0		mg/kg
1234-TP-513	8-10	05/19/92	Yes	1234-TP-513-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-513	8-10	05/19/92	Yes	1234-TP-513-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-513	8-10	05/19/92	Yes	1234-TP-513-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-514	0-1	05/19/92	Yes	1234-TP-514-S-1	7439-92-1	Lead	470.0		mg/kg
1234-TP-514	3-6	05/19/92	Yes	1234-TP-514-S-2	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
1234-TP-514	3-6	05/19/92	Yes	1234-TP-514-S-2	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
1234-TP-514	3-6	05/19/92	Yes	1234-TP-514-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
1234-TP-514	3-6	05/19/92	Yes	1234-TP-514-S-2	7439-92-1	Lead	36.0		mg/kg
1234-TP-514	3-6	05/19/92	Yes	1234-TP-514-S-2	127-18-4	Tetrachloroethene	0.05	U	mg/kg
1234-TP-514	8-10	05/19/92	Yes	1234-TP-514-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-514	8-10	05/19/92	Yes	1234-TP-514-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-514	8-10	05/19/92	Yes	1234-TP-514-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-515	0-1	05/19/92	Yes	1234-TP-515-S-1	7439-92-1	Lead	19.0		mg/kg
1234-TP-515	3-6	05/19/92	Yes	1234-TP-515-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-515	3-6	05/19/92	Yes	1234-TP-515-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-515	3-6	05/19/92	Yes	1234-TP-515-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-515	3-6	05/19/92	Yes	1234-TP-515-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-515	8-10	05/19/92	Yes	1234-TP-515-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-515	8-10	05/19/92	Yes	1234-TP-515-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-515	8-10	05/19/92	Yes	1234-TP-515-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-518	0-1	05/19/92	Yes	1234-TP-518-S-1	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-518	3-6	05/19/92	Yes	1234-TP-518-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-TP-518	3-6	05/19/92	Yes	1234-TP-518-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-518	3-6	05/19/92	Yes	1234-TP-518-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-518	3-6	05/19/92	Yes	1234-TP-518-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-518	8-10	05/19/92	Yes	1234-TP-518-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-518	8-10	05/19/92	Yes	1234-TP-518-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-518	8-10	05/19/92	Yes	1234-TP-518-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-519	0-1	05/20/92	Yes	1234-TP-519-S-1	7439-92-1	Lead	9.0		mg/kg
1234-TP-519	3-6	05/20/92	Yes	1234-TP-519-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-519	3-6	05/20/92	Yes	1234-TP-519-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-519	3-6	05/20/92	Yes	1234-TP-519-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-519	3-6	05/20/92	Yes	1234-TP-519-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-519	8-10	05/20/92	Yes	1234-TP-519-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-519	8-10	05/20/92	Yes	1234-TP-519-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-519	8-10	05/20/92	Yes	1234-TP-519-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-520	0-1	05/18/92	Yes	1234-TP-520-S-1	7439-92-1	Lead	410.0		mg/kg
1234-TP-520	3-6	05/18/92	Yes	1234-TP-520-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-520	3-6	05/18/92	Yes	1234-TP-520-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-520	3-6	05/18/92	Yes	1234-TP-520-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-520	3-6	05/18/92	Yes	1234-TP-520-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-520	8-10	05/18/92	Yes	1234-TP-520-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-520	8-10	05/18/92	Yes	1234-TP-520-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-520	8-10	05/18/92	Yes	1234-TP-520-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-522	0-1	05/20/92	Yes	1234-TP-522-S-1-DAVG	7439-92-1	Lead	330.0		mg/kg
1234-TP-522	3-6	05/20/92	Yes	1234-TP-522-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-522	3-6	05/20/92	Yes	1234-TP-522-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-522	3-6	05/20/92	Yes	1234-TP-522-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-522	3-6	05/20/92	Yes	1234-TP-522-S-2-DAVG	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-522	8-10	05/20/92	Yes	1234-TP-522-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-522	8-10	05/20/92	Yes	1234-TP-522-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-522	8-10	05/20/92	Yes	1234-TP-522-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
1234-TP-523-S-2	3-6	05/20/92	Yes	1234-TP-523-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-523-S-2	3-6	05/20/92	Yes	1234-TP-523-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-523-S-2	3-6	05/20/92	Yes	1234-TP-523-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-523-S-2	3-6	05/20/92	Yes	1234-TP-523-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-525	0-1	05/20/92	Yes	1234-TP-525-S-1	7439-92-1	Lead	1900.0		mg/kg
1234-TP-525	0-1	05/20/92	Yes	1234-TP-525-S-1	7439-92-1	Lead	14.0		MG/L
1234-TP-525	3-6	05/20/92	Yes	1234-TP-525-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-525	3-6	05/20/92	Yes	1234-TP-525-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-525	3-6	05/20/92	Yes	1234-TP-525-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-525	3-6	05/20/92	Yes	1234-TP-525-S-2	7439-92-1	Lead	330.0		mg/kg
1234-TP-525	8-10	05/20/92	Yes	1234-TP-525-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-525	8-10	05/20/92	Yes	1234-TP-525-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-525	8-10	05/20/92	Yes	1234-TP-525-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-526	0-1	05/19/92	Yes	1234-TP-526-S-1-DAVG	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-526	3-6	05/19/92	Yes	1234-TP-526-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-526	3-6	05/19/92	Yes	1234-TP-526-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-526	3-6	05/19/92	Yes	1234-TP-526-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-526	3-6	05/19/92	Yes	1234-TP-526-S-2-DAVG	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-526	8-10	05/19/92	Yes	1234-TP-526-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-526	8-10	05/19/92	Yes	1234-TP-526-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-526	8-10	05/19/92	Yes	1234-TP-526-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-527	0-1	05/18/92	Yes	1234-TP-527-S-1	7439-92-1	Lead	30.0		mg/kg
1234-TP-527	3-6	05/18/92	Yes	1234-TP-527-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-527	3-6	05/18/92	Yes	1234-TP-527-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-527	3-6	05/18/92	Yes	1234-TP-527-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
1234-TP-527	3-6	05/18/92	Yes	1234-TP-527-S-2	7439-92-1	Lead	5.0	U	mg/kg
1234-TP-527	8-10	05/18/92	Yes	1234-TP-527-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
1234-TP-527	8-10	05/18/92	Yes	1234-TP-527-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
1234-TP-527	8-10	05/18/92	Yes	1234-TP-527-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-3	12.5-14	04/27/87	Yes	16-B-3,S-5-DAVG	7439-92-1	Lead	46.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-B-4	2.5-4	04/27/87	Yes	16-B-4,S-1	7439-92-1	Lead	80.0		mg/kg
16-B-4	7.5-9	04/28/87	Yes	16-B-4,S-3	7439-92-1	Lead	180.0		mg/kg
16-B-4	10-11.5	04/28/87	Yes	16-B-4,S-4-DAVG	7439-92-1	Lead	64.0		mg/kg
16-B-4	11.5-14	04/27/87	Yes	16-B-4,S-5	7439-92-1	Lead	91.0		mg/kg
16-B-501-HG-2	0-0.5	12/10/01	Yes	02-P001-SS-[16-B-501-Hg-2-2]-D2-005_12/10/01_2.5	7439-97-6	Mercury	1.5		mg/kg
16-B-501-HG-3	0-0.5	12/10/01	Yes	02-P001-SS-[16-B-501-Hg-3-2]-D2-005_12/10/01_2.5	7439-97-6	Mercury	7.5		mg/kg
16-B-501-HG-4	0-0.5	11/21/01	Yes	01-P001-SS-[16-B-501-Hg-4]-D2-030_11/21/01_2.5	7439-97-6	Mercury	1.7		mg/kg
16-B-501-Hg-5-2	0-0.5	12/10/01	Yes	02-P001-SS-[16-B-501-Hg-5-2]-D2-005_12/10/01_2.5	7439-97-6	Mercury	4.5		mg/kg
16-B-501-HG-5	0-0.5	11/21/01	No	01-P001-SS-[16-B-501-Hg-5]-D2-030_11/21/01_2.5	7439-97-6	Mercury	22.6		mg/kg
16-B-501	46.5-48	07/16/92	Yes	16-B-501-S-10A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	46.5-48	07/16/92	Yes	16-B-501-S-10A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	46.5-48	07/16/92	Yes	16-B-501-S-10A	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	46.5-48	07/16/92	Yes	16-B-501-S-10A	7439-92-1	Lead	5.6	U	mg/kg
16-B-501	55-56.5	07/16/92	Yes	16-B-501-S-12	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	55-56.5	07/16/92	Yes	16-B-501-S-12	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	55-56.5	07/16/92	Yes	16-B-501-S-12	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	55-56.5	07/16/92	Yes	16-B-501-S-12	7439-92-1	Lead	14.0		mg/kg
16-B-501	62.5-64	07/16/92	Yes	16-B-501-S-13A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	62.5-64	07/16/92	Yes	16-B-501-S-13A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	62.5-64	07/16/92	Yes	16-B-501-S-13A	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	62.5-64	07/16/92	Yes	16-B-501-S-13A	7439-92-1	Lead	13.0		mg/kg
16-B-501	70-71.5	07/16/92	Yes	16-B-501-S-15	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
16-B-501	70-71.5	07/16/92	Yes	16-B-501-S-15	98-95-3	Nitrobenzene	0.1	U	mg/kg
16-B-501	70-71.5	07/16/92	Yes	16-B-501-S-15	7439-92-1	Lead	5.5	U	mg/kg
16-B-501	75-76.5	07/16/92	Yes	16-B-501-S-16	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	75-76.5	07/16/92	Yes	16-B-501-S-16	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	75-76.5	07/16/92	Yes	16-B-501-S-16	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	2.5-3.5	07/14/92	Yes	16-B-501-S-1B	7440-38-2	Arsenic	21.0		mg/kg
16-B-501	2.5-3.5	07/14/92	Yes	16-B-501-S-1B	7440-50-8	Copper	3.6		mg/kg
16-B-501	2.5-3.5	07/14/92	Yes	16-B-501-S-1B	7439-92-1	Lead	400.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-B-501	2.5-3.5	07/14/92	Yes	16-B-501-S-1B	7439-97-6	Mercury	4.3		mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-2A	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-2A	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-2A	98-95-3	Nitrobenzene	0.3	U	mg/kg
16-B-501	12.5-14	07/14/92	Yes	16-B-501-S-3A	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
16-B-501	12.5-14	07/14/92	Yes	16-B-501-S-3A	98-95-3	Nitrobenzene	0.1	U	mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	7440-38-2	Arsenic	8.7		mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	7440-50-8	Copper	5.6		mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	7439-92-1	Lead	75.0		mg/kg
16-B-501	7.5-9	07/14/92	Yes	16-B-501-S-3	7439-97-6	Mercury	0.5		mg/kg
16-B-501	17.5-19	07/14/92	Yes	16-B-501-S-4A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	17.5-19	07/14/92	Yes	16-B-501-S-4A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	17.5-19	07/14/92	Yes	16-B-501-S-4A	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	7440-38-2	Arsenic	5.8		mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	7440-50-8	Copper	7.0		mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	7439-92-1	Lead	58.0		mg/kg
16-B-501	15-16.5	07/14/92	Yes	16-B-501-S-4	7439-97-6	Mercury	0.08	U	mg/kg
16-B-501	22.5-24	07/14/92	Yes	16-B-501-S-5A	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
16-B-501	22.5-24	07/14/92	Yes	16-B-501-S-5A	98-95-3	Nitrobenzene	0.1	U	mg/kg
16-B-501	20-21.5	07/14/92	Yes	16-B-501-S-5	7439-92-1	Lead	51.0		mg/kg
16-B-501	27.5-29	07/14/92	Yes	16-B-501-S-6A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	27.5-29	07/14/92	Yes	16-B-501-S-6A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	27.5-29	07/14/92	Yes	16-B-501-S-6A	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-501	30-31.5	07/14/92	Yes	16-B-501-S-7-DAVG	7439-92-1	Lead	22.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-B-501	32.5-34	07/14/92	Yes	16-B-501-S-7A	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
16-B-501	32.5-34	07/14/92	Yes	16-B-501-S-7A	98-95-3	Nitrobenzene	0.1	U	mg/kg
16-B-501	40-41.5	07/16/92	Yes	16-B-501-S-9	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-501	40-41.5	07/16/92	Yes	16-B-501-S-9	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-501	40-41.5	07/16/92	Yes	16-B-501-S-9	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-502	4-7	02/24/92	Yes	16-B-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.06	J	mg/kg
16-B-502	4-7	02/24/92	Yes	16-B-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-502	4-7	02/24/92	Yes	16-B-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-502	4-7	02/24/92	Yes	16-B-502-S-2	7439-92-1	Lead	35.0		mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	98-95-3	Nitrobenzene	0.07	U	mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	7440-38-2	Arsenic	2.3		mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	7440-50-8	Copper	13.0		mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	7439-92-1	Lead	300.0		mg/kg
16-B-503	4-7	02/24/92	Yes	16-B-503-S-2	7439-97-6	Mercury	0.07	U	mg/kg
16-B-503	9-10.5	02/24/92	Yes	16-B-503-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-503	9-10.5	02/24/92	Yes	16-B-503-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-503	9-10.5	02/24/92	Yes	16-B-503-S-3	98-95-3	Nitrobenzene	0.07	U	mg/kg
16-B-503	9-10.5	02/24/92	Yes	16-B-503-S-3	7439-92-1	Lead	220.0		mg/kg
16-B-503	14-15.5	02/24/92	Yes	16-B-503-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-503	14-15.5	02/24/92	Yes	16-B-503-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-503	14-15.5	02/24/92	Yes	16-B-503-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-503	14-15.5	02/24/92	Yes	16-B-503-S-5	7439-92-1	Lead	6.4		mg/kg
16-B-503	19-20.5	02/24/92	Yes	16-B-503-S-7	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-503	19-20.5	02/24/92	Yes	16-B-503-S-7	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-503	19-20.5	02/24/92	Yes	16-B-503-S-7	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-503	19-20.5	02/24/92	Yes	16-B-503-S-7	7439-92-1	Lead	20.0		mg/kg
16-B-503	21.5-23	02/24/92	Yes	16-B-503-S-8	7439-92-1	Lead	21.0		mg/kg
16-B-503	24-25.5	02/24/92	Yes	16-B-503-S-9	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-B-503	24-25.5	02/24/92	Yes	16-B-503-S-9	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-503	24-25.5	02/24/92	Yes	16-B-503-S-9	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	98-95-3	Nitrobenzene	0.07	U	mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	7440-38-2	Arsenic	41.0		mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	7440-50-8	Copper	10.0		mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	7439-92-1	Lead	430.0		mg/kg
16-B-504	7-8.5	02/25/92	Yes	16-B-504-S-2A	7439-97-6	Mercury	0.4		mg/kg
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7440-38-2	Arsenic	220.0		mg/kg
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7440-38-2	Arsenic	0.05	U	MG/L
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7440-50-8	Copper	13.0		mg/kg
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7439-92-1	Lead	480.0		mg/kg
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7439-92-1	Lead	0.1		MG/L
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7439-97-6	Mercury	1.5		mg/kg
16-B-504	5.5-7	02/25/92	Yes	16-B-504-S-2	7439-97-6	Mercury	0.0002	U	MG/L
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	7440-38-2	Arsenic	330.0		mg/kg
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	7440-50-8	Copper	15.0		mg/kg
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	7439-92-1	Lead	38.0		mg/kg
16-B-504	9-10.5	02/25/92	Yes	16-B-504-S-3	7439-97-6	Mercury	0.5	J	mg/kg
16-B-504	14-15.5	02/25/92	Yes	16-B-504-S-4-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	14-15.5	02/25/92	Yes	16-B-504-S-4-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	14-15.5	02/25/92	Yes	16-B-504-S-4-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	17-16.5	02/25/92	Yes	16-B-504-S-4A	7440-38-2	Arsenic	18.0	J	mg/kg
16-B-504	22-23.5	02/25/92	Yes	16-B-504-S-5A	7440-38-2	Arsenic	2.5	J	mg/kg
16-B-504	19-22	02/25/92	Yes	16-B-504-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	19-22	02/25/92	Yes	16-B-504-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-B-504	19-22	02/25/92	Yes	16-B-504-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	19-22	02/25/92	Yes	16-B-504-S-5	7440-38-2	Arsenic	9.4	J	mg/kg
16-B-504	19-22	02/25/92	Yes	16-B-504-S-5	7439-92-1	Lead	5.7	U	mg/kg
16-B-504	27-28.5	02/25/92	Yes	16-B-504-S-6A	7439-92-1	Lead	6.8		mg/kg
16-B-504	25-25.5	02/25/92	Yes	16-B-504-S-6	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	25-25.5	02/25/92	Yes	16-B-504-S-6	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	25-25.5	02/25/92	Yes	16-B-504-S-6	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	29-32	02/25/92	Yes	16-B-504-S-7	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	29-32	02/25/92	Yes	16-B-504-S-7	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	29-32	02/25/92	Yes	16-B-504-S-7	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	34-37	02/25/92	Yes	16-B-504-S-8	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	34-37	02/25/92	Yes	16-B-504-S-8	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	34-37	02/25/92	Yes	16-B-504-S-8	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-504	39-40.5	02/25/92	Yes	16-B-504-S-9	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-504	39-40.5	02/25/92	Yes	16-B-504-S-9	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-504	39-40.5	02/25/92	Yes	16-B-504-S-9	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	98-95-3	Nitrobenzene	0.6	U	mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	7440-38-2	Arsenic	49.0		mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	7440-50-8	Copper	12.0		mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	7439-92-1	Lead	190.0		mg/kg
16-B-505	0-1	07/14/92	Yes	16-B-505-S-1-DAVG	7439-97-6	Mercury	3.0	J	mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	98-95-3	Nitrobenzene	0.6	U	mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	7440-38-2	Arsenic	44.0		mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	7440-50-8	Copper	11.0		mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	7439-92-1	Lead	110.0		mg/kg
16-B-505	5-6.5	07/14/92	Yes	16-B-505-S-2	7439-97-6	Mercury	3.0	J	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	7440-38-2	Arsenic	233.0		mg/kg
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	7440-50-8	Copper	19.4		mg/kg
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	7439-92-1	Lead	170.0		mg/kg
16-B-505	10-11.5	07/14/92	Yes	16-B-505-S-3	7439-97-6	Mercury	0.07	U	mg/kg
16-B-505	15.5-16.	07/14/92	Yes	16-B-505-S-4A	7439-92-1	Lead	130.0		mg/kg
16-B-505	15-15.5	07/14/92	Yes	16-B-505-S-4	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
16-B-505	15-15.5	07/14/92	Yes	16-B-505-S-4	DNT-TOTAL	DNT - Total	0.06	U	mg/kg
16-B-505	15-15.5	07/14/92	Yes	16-B-505-S-4	98-95-3	Nitrobenzene	0.3	U	mg/kg
16-B-505	22.5-24	07/14/92	Yes	16-B-505-S-5A	7440-38-2	Arsenic	4.5	J	mg/kg
16-B-505	20-21.5	07/14/92	Yes	16-B-505-S-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-505	20-21.5	07/14/92	Yes	16-B-505-S-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-505	20-21.5	07/14/92	Yes	16-B-505-S-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-505	20-21.5	07/14/92	Yes	16-B-505-S-5	7439-92-1	Lead	150.0		mg/kg
16-B-505	25-26.5	07/14/92	Yes	16-B-505-S-6	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-B-505	25-26.5	07/14/92	Yes	16-B-505-S-6	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-B-505	25-26.5	07/14/92	Yes	16-B-505-S-6	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-B-505	25-26.5	07/14/92	Yes	16-B-505-S-6	7439-92-1	Lead	55.0		mg/kg
16-B-5	6.5-8	04/27/87	Yes	16-B-5,S-3	7439-92-1	Lead	34.0		mg/kg
16-B-5	16.5-18	04/27/87	Yes	16-B-5,S-7-DAVG	7439-92-1	Lead	30.0		mg/kg
16-SS-401	0-0.5	11/02/93	Yes	16-SS-401	7440-38-2	Arsenic	14.0		mg/kg
16-SS-504	0-0.5	10/20/93	Yes	16-SS-504	7440-38-2	Arsenic	24.0		mg/kg
16-SS-504	0-0.5	10/20/93	Yes	16-SS-504	7439-92-1	Lead	25.0	J	mg/kg
16-SS-505	0-0.5	10/20/93	Yes	16-SS-505	7440-38-2	Arsenic	15.0		mg/kg
16-SS-505	0-0.5	10/20/93	Yes	16-SS-505	7439-92-1	Lead	31.0	J	mg/kg
16-SS-506	0-0.5	10/20/93	Yes	16-SS-506	7440-38-2	Arsenic	12.0		mg/kg
16-SS-506	0-0.5	10/20/93	Yes	16-SS-506	7439-92-1	Lead	14.0	J	mg/kg
16-SS-507	0-0.5	10/20/93	Yes	16-SS-507	7440-38-2	Arsenic	30.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-SS-507	0-0.5	10/20/93	Yes	16-SS-507	7439-92-1	Lead	45.0	J	mg/kg
16-SS-508	0-0.5	10/20/93	Yes	16-SS-508	7440-38-2	Arsenic	12.0		mg/kg
16-SS-508	0-0.5	10/20/93	Yes	16-SS-508	7439-92-1	Lead	200.0	J	mg/kg
16-SS-508	0-0.5	10/20/93	Yes	16-SS-508	7439-97-6	Mercury	10.0		mg/kg
16-SS-509	0-0.5	10/20/93	Yes	16-SS-509	7440-38-2	Arsenic	24.0		mg/kg
16-SS-509	0-0.5	10/20/93	Yes	16-SS-509	7439-92-1	Lead	120.0	J	mg/kg
16-SS-510	0-0.5	10/20/93	Yes	16-SS-510	7440-38-2	Arsenic	9.5		mg/kg
16-SS-510	0-0.5	10/20/93	Yes	16-SS-510	7439-92-1	Lead	8.0	J	mg/kg
16-SS-510	0-0.5	10/20/93	Yes	16-SS-510	7439-97-6	Mercury	0.1		mg/kg
16-SS-512	0-0.5	10/20/93	Yes	16-SS-512	7440-38-2	Arsenic	120.0		mg/kg
16-SS-512	0-0.5	10/20/93	Yes	16-SS-512	7439-92-1	Lead	1100.0	J	mg/kg
16-SS-513-HG-1	2.5-3	11/21/01	Yes	01-P001-SS-[16-B-501-Hg-1]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.02		mg/kg
16-SS-513-HG-1	2.5-3	11/21/01	Yes	01-P001-SS-[16-SS-513-Hg-1]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.5		mg/kg
16-SS-513-HG-2	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-513-Hg-2]-D2-030_11/21/01_2.5	7439-97-6	Mercury	1.6		mg/kg
16-SS-513-HG-3	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-513-Hg-3]-D2-030_11/21/01_2.5	7439-97-6	Mercury	2.1		mg/kg
16-SS-513-HG-4	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-513-Hg-4]-D2-030_11/21/01_2.5	7439-97-6	Mercury	2.2		mg/kg
16-SS-513-HG-5	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-513-Hg-5]-D2-030_11/21/01_2.5	7439-97-6	Mercury	4.4		mg/kg
16-SS-514	0-0.5	10/20/93	Yes	16-SS-514	7440-38-2	Arsenic	18.0		mg/kg
16-SS-514	0-0.5	10/20/93	Yes	16-SS-514	7439-92-1	Lead	33.0	J	mg/kg
16-SS-515	0-0.5	10/20/93	Yes	16-SS-515	7440-38-2	Arsenic	30.0		mg/kg
16-SS-515	0-0.5	10/20/93	Yes	16-SS-515	7439-92-1	Lead	21.0	J	mg/kg
16-SS-515	0-0.5	10/20/93	Yes	16-SS-515	7439-97-6	Mercury	0.1		mg/kg
16-SS-517	0-0.5	10/20/93	Yes	16-SS-517	7440-38-2	Arsenic	28.0		mg/kg
16-SS-517	0-0.5	10/20/93	Yes	16-SS-517	7439-92-1	Lead	46.0	J	mg/kg
16-SS-518	0-0.5	10/20/93	Yes	16-SS-518	7440-38-2	Arsenic	29.0		mg/kg
16-SS-518	0-0.5	10/20/93	Yes	16-SS-518	7439-92-1	Lead	6.2	UJ	mg/kg
16-SS-519	0-0.5	10/20/93	Yes	16-SS-519	7440-38-2	Arsenic	33.0		mg/kg
16-SS-519	0-0.5	10/20/93	Yes	16-SS-519	7439-92-1	Lead	34.0	J	mg/kg
16-SS-520	0-0.5	10/20/93	Yes	16-SS-520	7440-38-2	Arsenic	7.1		mg/kg
16-SS-520	0-0.5	10/20/93	Yes	16-SS-520	7439-92-1	Lead	8.8	J	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-SS-521	0-0.5	10/20/93	Yes	16-SS-521	7440-38-2	Arsenic	8.2		mg/kg
16-SS-521	0-0.5	10/20/93	Yes	16-SS-521	7439-92-1	Lead	9.9	J	mg/kg
16-SS-522	0-0.5	10/20/93	Yes	16-SS-522	7440-38-2	Arsenic	3.0		mg/kg
16-SS-522	0-0.5	10/20/93	Yes	16-SS-522	7439-92-1	Lead	5.8	UJ	mg/kg
16-SS-523	0-0.5	10/20/93	Yes	16-SS-523	7440-38-2	Arsenic	7.8		mg/kg
16-SS-523	0-0.5	10/20/93	Yes	16-SS-523	7439-92-1	Lead	5.8	J	mg/kg
16-SS-524-HG-1	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-524-Hg-1]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.03		mg/kg
16-SS-524-HG-2	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-524-Hg-2]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.7		mg/kg
16-SS-524-HG-3	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-524-Hg-3]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.04		mg/kg
16-SS-524-HG-4	0-0.5	11/21/01	Yes	01-P001-SS-[16-SS-524-Hg-4]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.04		mg/kg
16-SS-524-Hg-5	0-2.5	11/21/01	Yes	01-P001-SS-[16-SS-524-Hg-5]-D2-030_AVG_11/21/01_	7439-97-6	Mercury	0.02		mg/kg
16-TP-10	2-5	04/27/87	Yes	16-TP-10,S-2	7439-92-1	Lead	96.0		mg/kg
16-TP-11	2-5	04/27/87	Yes	16-TP-11,S-2	7439-92-1	Lead	480.0		mg/kg
16-TP-12	2-5	04/27/87	Yes	16-TP-12,S-2	7439-92-1	Lead	160.0		mg/kg
16-TP-14	2-5	04/27/87	Yes	16-TP-14,S-2	7439-92-1	Lead	130.0		mg/kg
16-TP-16	2-5	04/27/87	Yes	16-TP-16,S-2	7439-92-1	Lead	660.0		mg/kg
16-TP-3	3-6	04/27/87	Yes	16-TP-3,S-2	7439-92-1	Lead	11.0		mg/kg
16-TP-501	0-1	02/25/92	Yes	16-TP-501-S-1	7439-92-1	Lead	50.0		mg/kg
16-TP-501	2-5.5	02/25/92	Yes	16-TP-501-S-2	7439-92-1	Lead	6.1		mg/kg
16-TP-501	7-9	02/25/92	Yes	16-TP-501-S-3	7439-92-1	Lead	5.0	U	mg/kg
16-TP-502	2-5	02/25/92	Yes	16-TP-502-S-2	7439-92-1	Lead	12.0		mg/kg
16-TP-502	6.5-9	02/25/92	Yes	16-TP-502-S-3	7439-92-1	Lead	130.0		mg/kg
16-TP-503	2-5	02/25/92	Yes	16-TP-503-S-2	7439-92-1	Lead	6.3		mg/kg
16-TP-503	7-9	02/25/92	Yes	16-TP-503-S-3	7439-92-1	Lead	5.2	U	mg/kg
16-TP-504	2-5	02/25/92	Yes	16-TP-504-S-2	7439-92-1	Lead	5.6	U	mg/kg
16-TP-504	7-9	02/25/92	Yes	16-TP-504-S-3	7439-92-1	Lead	5.7	U	mg/kg
16-TP-505	2-5	02/25/92	Yes	16-TP-505-S-2	7440-38-2	Arsenic	436.0		mg/kg
16-TP-505	2-5	02/25/92	Yes	16-TP-505-S-2	7440-50-8	Copper	16.0		mg/kg
16-TP-505	2-5	02/25/92	Yes	16-TP-505-S-2	7439-92-1	Lead	720.0		mg/kg
16-TP-505	2-5	02/25/92	Yes	16-TP-505-S-2	7439-97-6	Mercury	1.6	J	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-TP-505	7-9	03/11/92	Yes	16-TP-505-S-3	7439-92-1	Lead	770.0		mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	7440-38-2	Arsenic	171.0		mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	7440-50-8	Copper	8.9	U	mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	7439-92-1	Lead	580.0		mg/kg
16-TP-507	2-5	03/11/92	Yes	16-TP-507-S-2	7439-97-6	Mercury	0.4	J	mg/kg
16-TP-507	7-9	03/11/92	Yes	16-TP-507-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-TP-507	7-9	03/11/92	Yes	16-TP-507-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-TP-507	7-9	03/11/92	Yes	16-TP-507-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-TP-507	7-9	03/11/92	Yes	16-TP-507-S-3	7440-38-2	Arsenic	244.0	J	mg/kg
16-TP-507	7-9	03/11/92	Yes	16-TP-507-S-3	7439-92-1	Lead	450.0		mg/kg
16-TP-508	2-5	03/11/92	Yes	16-TP-508-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-TP-508	2-5	03/11/92	Yes	16-TP-508-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-TP-508	2-5	03/11/92	Yes	16-TP-508-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-TP-508	2-5	03/11/92	Yes	16-TP-508-S-2	7439-92-1	Lead	23.0		mg/kg
16-TP-508	7-9	03/11/92	Yes	16-TP-508-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
16-TP-508	7-9	03/11/92	Yes	16-TP-508-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
16-TP-508	7-9	03/11/92	Yes	16-TP-508-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
16-TP-508	7-9	03/11/92	Yes	16-TP-508-S-3	7439-92-1	Lead	34.0		mg/kg
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7440-38-2	Arsenic	110.0		mg/kg
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7440-38-2	Arsenic	0.05	U	MG/L
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7440-50-8	Copper	15.0		mg/kg
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7439-92-1	Lead	390.0		mg/kg
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7439-92-1	Lead	1.0		MG/L
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7439-97-6	Mercury	9.8		mg/kg
16-TP-509	2-5	03/11/92	Yes	16-TP-509-S-2	7439-97-6	Mercury	0.0002	U	MG/L
16-TP-509	7-9	03/11/92	Yes	16-TP-509-S-3	7440-38-2	Arsenic	147.0		mg/kg
16-TP-509	7-9	03/11/92	Yes	16-TP-509-S-3	7440-50-8	Copper	24.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
16-TP-509	7-9	03/11/92	Yes	16-TP-509-S-3	7439-92-1	Lead	710.0		mg/kg
16-TP-509	7-9	03/11/92	Yes	16-TP-509-S-3	7439-97-6	Mercury	1.6	J	mg/kg
16-TP-6	2-5	04/27/87	Yes	16-TP-6,S-2	7439-92-1	Lead	100.0		mg/kg
16-TP-7	2-5	04/27/87	Yes	16-TP-7,S-2	7439-92-1	Lead	920.0		mg/kg
16-TP-8	2-5	04/27/87	Yes	16-TP-8,S-2	7439-92-1	Lead	160.0		mg/kg
16-TP-9	2-5	04/27/87	Yes	16-TP-9,S-2	7439-92-1	Lead	140.0		mg/kg
18-B-501	7.5-9	11/05/92	Yes	18-B-501-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-B-501	7.5-9	11/05/92	Yes	18-B-501-S-1	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-B-501	7.5-9	11/05/92	Yes	18-B-501-S-1	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-B-501	10-11.5	11/05/92	Yes	18-B-501-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-B-501	10-11.5	11/05/92	Yes	18-B-501-S-2	DNT-TOTAL	DNT - Total	0.008		mg/kg
18-B-501	10-11.5	11/05/92	Yes	18-B-501-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-B-501	15-16.5	11/05/92	Yes	18-B-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-B-501	15-16.5	11/05/92	Yes	18-B-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-B-501	15-16.5	11/05/92	Yes	18-B-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-B-501	20-21.5	11/05/92	Yes	18-B-501-S-4	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-B-501	20-21.5	11/05/92	Yes	18-B-501-S-4	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-B-501	20-21.5	11/05/92	Yes	18-B-501-S-4	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-MH-3	0-0.5	07/01/93	Yes	18-MH-3	7440-38-2	Arsenic	52.0		mg/kg
18-MH-7	0-0.5	07/07/93	Yes	18-MH-7	7440-38-2	Arsenic	38.0		mg/kg
18-SS-522	0-0.5	05/04/92	Yes	18-SS-522	7439-92-1	Lead	110.0		mg/kg
18-SS-527	0-0.5	05/04/92	Yes	18-SS-527	7439-92-1	Lead	390.0		mg/kg
18-SS-528	0-0.5	05/04/92	Yes	18-SS-528	7439-92-1	Lead	190.0		mg/kg
18-SS-541	0-0.5	03/04/92	Yes	18-SS-541	7439-92-1	Lead	25.0		mg/kg
18-SS-542	0-0.5	03/04/92	Yes	18-SS-542	7439-92-1	Lead	26.0		mg/kg
18-SS-543	0-0.5	03/04/92	Yes	18-SS-543	7439-92-1	Lead	27.0		mg/kg
18-SS-566	0-0.5	03/04/92	Yes	18-SS-566	7439-92-1	Lead	44.0		mg/kg
18-SS-578	0-0.5	05/06/92	Yes	18-SS-578	7439-92-1	Lead	120.0		mg/kg
18-SS-580	0-0.5	05/06/92	Yes	18-SS-580	7439-92-1	Lead	58.0		mg/kg
18-SS-581	0-0.5	05/06/92	Yes	18-SS-581	7439-92-1	Lead	38.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-584-2	0-0.5	07/01/93	Yes	18-SS-584-2	7440-38-2	Arsenic	150.0		mg/kg
18-SS-584-2	0-0.5	07/01/93	Yes	18-SS-584-2	7439-92-1	Lead	75.0		mg/kg
18-SS-585	0-0.5	05/06/92	Yes	18-SS-585	7439-92-1	Lead	19.0		mg/kg
18-SS-587	0-0.5	05/06/92	Yes	18-SS-587	7439-92-1	Lead	21.0		mg/kg
18-SS-588	0-0.5	05/06/92	Yes	18-SS-588	7439-92-1	Lead	43.0		mg/kg
18-SS-592	0-0.5	05/06/92	Yes	18-SS-592	7439-92-1	Lead	150.0		mg/kg
18-SS-614	0-0.5	10/27/92	Yes	18-SS-614	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-SS-666	0-0.5	11/02/92	Yes	18-SS-666	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-SS-666	0-0.5	11/02/92	Yes	18-SS-666	DNT-TOTAL	DNT - Total	0.03	U	mg/kg
18-SS-666	0-0.5	11/02/92	Yes	18-SS-666	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-SS-666	0-0.5	11/02/92	Yes	18-SS-666	7439-92-1	Lead	99.0		mg/kg
18-SS-668	0-0.5	11/02/92	Yes	18-SS-668	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
18-SS-668	0-0.5	11/02/92	Yes	18-SS-668	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-668	0-0.5	11/02/92	Yes	18-SS-668	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-SS-668	0-0.5	11/02/92	Yes	18-SS-668	7439-92-1	Lead	8.5		mg/kg
18-SS-686	0-0.5	11/02/92	Yes	18-SS-686-DAVG	7439-92-1	Lead	59.0		mg/kg
18-SS-690	0-0.5	11/03/92	Yes	18-SS-690	7439-92-1	Lead	170.0		mg/kg
18-SS-693	0-0.5	11/03/92	Yes	18-SS-693	7439-92-1	Lead	130.0		mg/kg
18-SS-694	0-0.5	11/03/92	Yes	18-SS-694	7439-92-1	Lead	86.0		mg/kg
18-SS-696	0-0.5	11/03/92	Yes	18-SS-696	7439-92-1	Lead	570.0		mg/kg
18-SS-706	0-0.5	11/03/92	Yes	18-SS-706	7439-92-1	Lead	34.0		mg/kg
18-SS-707	0-0.5	11/03/92	Yes	18-SS-707	7439-92-1	Lead	1000.0		mg/kg
18-SS-708	0-0.5	11/03/92	Yes	18-SS-708	7439-92-1	Lead	930.0		mg/kg
18-SS-709	0-0.5	11/03/92	Yes	18-SS-709	7439-92-1	Lead	330.0		mg/kg
18-SS-716	0-0.5	11/05/92	Yes	18-SS-716	118-96-7	2,4,6-Trinitrotoluene	0.008		mg/kg
18-SS-716	0-0.5	11/05/92	Yes	18-SS-716	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-SS-716	0-0.5	11/05/92	Yes	18-SS-716	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-SS-725	0-0.5	11/30/92	Yes	18-SS-725	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-726	0-0.5	11/30/92	Yes	18-SS-726	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-729	0-0.5	11/05/92	Yes	18-SS-729	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-839	0-0.5	04/05/93	Yes	18-SS-839	7439-92-1	Lead	280.0		mg/kg
18-SS-840	0-0.5	04/05/93	Yes	18-SS-840	7439-92-1	Lead	200.0	J	mg/kg
18-SS-841	0-0.5	04/05/93	Yes	18-SS-841	7439-92-1	Lead	180.0		mg/kg
18-SS-844	0-0.5	04/05/93	Yes	18-SS-844	7439-92-1	Lead	390.0		mg/kg
18-SS-845	0-0.5	04/05/93	Yes	18-SS-845	7439-92-1	Lead	200.0		mg/kg
18-SS-846	0-0.5	04/05/93	Yes	18-SS-846	7439-92-1	Lead	190.0		mg/kg
18-SS-852	0-0.5	04/05/93	Yes	18-SS-852	7439-92-1	Lead	290.0		mg/kg
18-SS-853	0-0.5	04/05/93	Yes	18-SS-853	7439-92-1	Lead	590.0		mg/kg
18-SS-854	0-0.5	04/05/93	Yes	18-SS-854	7439-92-1	Lead	11.0		mg/kg
18-SS-856	0-0.5	04/05/93	Yes	18-SS-856	7439-92-1	Lead	34.0		mg/kg
18-SS-857	0-0.5	04/05/93	Yes	18-SS-857	7439-92-1	Lead	63.0		mg/kg
18-SS-860	0-0.5	04/05/93	Yes	18-SS-860-DAVG	7439-92-1	Lead	44.0		mg/kg
18-SS-867	0-0.5	04/05/93	Yes	18-SS-867	7439-92-1	Lead	59.0		mg/kg
18-SS-868	0-0.5	04/05/93	Yes	18-SS-868	7439-92-1	Lead	37.0		mg/kg
18-SS-869	0-0.5	04/05/93	Yes	18-SS-869	7439-92-1	Lead	21.0		mg/kg
18-SS-894	0-0.5	04/05/93	Yes	18-SS-894	7439-92-1	Lead	92.0		mg/kg
18-SS-898	0-0.5	04/05/93	Yes	18-SS-898	7439-92-1	Lead	1000.0		mg/kg
18-SS-899	0-0.5	04/05/93	Yes	18-SS-899	7439-92-1	Lead	10.0		mg/kg
18-SS-900	0-0.5	07/02/93	Yes	18-SS-900	7439-92-1	Lead	2200.0		mg/kg
18-SS-901	0-0.5	07/02/93	Yes	18-SS-901	7439-92-1	Lead	810.0		mg/kg
18-SS-902	0-0.5	07/02/93	Yes	18-SS-902	7439-92-1	Lead	230.0		mg/kg
18-SS-903	0-0.5	07/02/93	Yes	18-SS-903	7439-92-1	Lead	1000.0		mg/kg
18-SS-904	0-0.5	07/02/93	Yes	18-SS-904	7439-92-1	Lead	450.0		mg/kg
18-SS-905	0-0.5	07/02/93	Yes	18-SS-905	7439-92-1	Lead	360.0		mg/kg
18-SS-906	0-0.5	07/02/93	Yes	18-SS-906	7439-92-1	Lead	140.0		mg/kg
18-SS-909	0-0.5	07/02/93	Yes	18-SS-909	7439-92-1	Lead	7.6	J	mg/kg
18-SS-GS-26	0-0.5	07/02/93	Yes	18-SS-GS-26	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-29	0-0.5	07/02/93	Yes	18-SS-GS-29	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-34	0-0.5	07/02/93	Yes	18-SS-GS-34	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-36	0-0.5	07/02/93	Yes	18-SS-GS-36	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-GS-37	0-0.5	07/02/93	Yes	18-SS-GS-37	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-39	0-0.5	07/02/93	Yes	18-SS-GS-39	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-44	0-0.5	07/02/93	Yes	18-SS-GS-44	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-45	0-0.5	07/02/93	Yes	18-SS-GS-45	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-SS-GS-46	0-0.5	07/02/93	Yes	18-SS-GS-46	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-41	0-1	07/06/93	Yes	18-TP-41-S-1	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TP-41	0-1	07/06/93	Yes	18-TP-41-S-1	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
18-TP-41	0-1	07/06/93	Yes	18-TP-41-S-1	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-505	0-1	05/11/92	Yes	18-TP-505-S-1	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
18-TP-505	0-1	05/11/92	Yes	18-TP-505-S-1	DNT-TOTAL	DNT - Total	0.5		mg/kg
18-TP-505	0-1	05/11/92	Yes	18-TP-505-S-1	98-95-3	Nitrobenzene	1.4	U	mg/kg
18-TP-505	0-1	05/11/92	Yes	18-TP-505-S-1	7439-92-1	Lead	68.0		mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	7440-38-2	Arsenic	3.3	J	mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	7440-50-8	Copper	21.6		mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-505	3-6	05/11/92	Yes	18-TP-505-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-505	8-10	05/11/92	Yes	18-TP-505-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-505	8-10	05/11/92	Yes	18-TP-505-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-505	8-10	05/11/92	Yes	18-TP-505-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-505	8-10	05/11/92	Yes	18-TP-505-S-3	7439-92-1	Lead	4.0	J	mg/kg
18-TP-506	0-1	05/12/92	Yes	18-TP-506-S-1	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-TP-506	0-1	05/12/92	Yes	18-TP-506-S-1	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-TP-506	0-1	05/12/92	Yes	18-TP-506-S-1	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-506	0-1	05/12/92	Yes	18-TP-506-S-1	7439-92-1	Lead	56.0		mg/kg
18-TP-506	3-6	05/12/92	Yes	18-TP-506-S-2	7439-92-1	Lead	32.0		mg/kg
18-TP-506	8-10	05/12/92	Yes	18-TP-506-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-507	0-1	05/12/92	Yes	18-TP-507-S-1	7439-92-1	Lead	700.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-507	3-6	05/12/92	Yes	18-TP-507-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-507	3-6	05/12/92	Yes	18-TP-507-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-507	3-6	05/12/92	Yes	18-TP-507-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-507	3-6	05/12/92	Yes	18-TP-507-S-2	7439-92-1	Lead	16.0		mg/kg
18-TP-507	8-10	05/12/92	Yes	18-TP-507-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-508	0-1	05/12/92	Yes	18-TP-508-S-1	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-TP-508	0-1	05/12/92	Yes	18-TP-508-S-1	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-TP-508	0-1	05/12/92	Yes	18-TP-508-S-1	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-508	0-1	05/12/92	Yes	18-TP-508-S-1	7439-92-1	Lead	5.0	U	mg/kg
18-TP-508	3-6	05/12/92	Yes	18-TP-508-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-508	8-10	05/12/92	Yes	18-TP-508-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-509	0-1	05/12/92	Yes	18-TP-509-S-1	7439-92-1	Lead	56.0		mg/kg
18-TP-509	3-6	05/12/92	Yes	18-TP-509-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-509	3-6	05/12/92	Yes	18-TP-509-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-509	3-6	05/12/92	Yes	18-TP-509-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-509	3-6	05/12/92	Yes	18-TP-509-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-TP-509	8-10	05/12/92	Yes	18-TP-509-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	7440-38-2	Arsenic	3.1		mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	7440-50-8	Copper	16.5		mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	7439-92-1	Lead	5.3	U	mg/kg
18-TP-510	3-6	05/14/92	Yes	18-TP-510-S-2-DAVG	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-510	8-10	05/14/92	Yes	18-TP-510-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-510	8-10	05/14/92	Yes	18-TP-510-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-510	8-10	05/14/92	Yes	18-TP-510-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-510	8-10	05/14/92	Yes	18-TP-510-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-512	0-1	05/14/92	Yes	18-TP-512-S-1	7439-92-1	Lead	60.0		mg/kg
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	118-96-7	2,4,6-Trinitrotoluene	0.4	J	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	7440-38-2	Arsenic	2.5		mg/kg
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	7440-50-8	Copper	19.3		mg/kg
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	7439-92-1	Lead	5.5	U	mg/kg
18-TP-512	3-6	05/14/92	Yes	18-TP-512-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-512	8-10	05/14/92	Yes	18-TP-512-S-3	118-96-7	2,4,6-Trinitrotoluene	0.02	J	mg/kg
18-TP-512	8-10	05/14/92	Yes	18-TP-512-S-3	DNT-TOTAL	DNT - Total	0.06		mg/kg
18-TP-512	8-10	05/14/92	Yes	18-TP-512-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-512	8-10	05/14/92	Yes	18-TP-512-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-513	0-1	05/14/92	Yes	18-TP-513-S-1	7439-92-1	Lead	19.0		mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	7440-38-2	Arsenic	3.2		mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	7440-50-8	Copper	18.6		mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	7439-92-1	Lead	5.4	U	mg/kg
18-TP-513	3-6	05/14/92	Yes	18-TP-513-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-513	8-10	05/14/92	Yes	18-TP-513-S-3	118-96-7	2,4,6-Trinitrotoluene	0.1	U	mg/kg
18-TP-513	8-10	05/14/92	Yes	18-TP-513-S-3	DNT-TOTAL	DNT - Total	0.6	U	mg/kg
18-TP-513	8-10	05/14/92	Yes	18-TP-513-S-3	98-95-3	Nitrobenzene	3.2	U	mg/kg
18-TP-513	8-10	05/14/92	Yes	18-TP-513-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-532	0-1	04/29/92	Yes	18-TP-532-S-1	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-TP-532	0-1	04/29/92	Yes	18-TP-532-S-1	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
18-TP-532	0-1	04/29/92	Yes	18-TP-532-S-1	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-532	0-1	04/29/92	Yes	18-TP-532-S-1	7439-92-1	Lead	97.0		mg/kg
18-TP-532	3-6	04/29/92	Yes	18-TP-532-S-2	7440-38-2	Arsenic	7.1		mg/kg
18-TP-532	3-6	04/29/92	Yes	18-TP-532-S-2	7440-50-8	Copper	29.6		mg/kg
18-TP-532	3-6	04/29/92	Yes	18-TP-532-S-2	7439-92-1	Lead	67.0		mg/kg
18-TP-532	3-6	04/29/92	Yes	18-TP-532-S-2	7439-97-6	Mercury	0.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-532	8-10	04/29/92	Yes	18-TP-532-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-533	0-1	04/28/92	Yes	18-TP-533-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-533	0-1	04/28/92	Yes	18-TP-533-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-533	0-1	04/28/92	Yes	18-TP-533-S-1-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-TP-533	0-1	04/28/92	Yes	18-TP-533-S-1-DAVG	7439-92-1	Lead	21.0		mg/kg
18-TP-533	2-3	04/28/92	Yes	18-TP-533-S-2-DAVG	7440-38-2	Arsenic	2.6		mg/kg
18-TP-533	2-3	04/28/92	Yes	18-TP-533-S-2-DAVG	7440-50-8	Copper	12.0		mg/kg
18-TP-533	2-3	04/28/92	Yes	18-TP-533-S-2-DAVG	7439-92-1	Lead	5.9	U	mg/kg
18-TP-533	2-3	04/28/92	Yes	18-TP-533-S-2-DAVG	7439-97-6	Mercury	0.09	U	mg/kg
18-TP-533	8-10	04/28/92	Yes	18-TP-533-S-4	7439-92-1	Lead	5.3	U	mg/kg
18-TP-544	0-1	05/15/92	Yes	18-TP-544-S-1	7439-92-1	Lead	28.0		mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	7440-38-2	Arsenic	4.4		mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	7440-50-8	Copper	61.8		mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	7439-92-1	Lead	290.0		mg/kg
18-TP-544	3-6	05/15/92	Yes	18-TP-544-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-544	8-10	05/15/92	Yes	18-TP-544-S-3	7439-92-1	Lead	35.0		mg/kg
18-TP-545	0-1	04/29/92	Yes	18-TP-545-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-545	0-1	04/29/92	Yes	18-TP-545-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-545	0-1	04/29/92	Yes	18-TP-545-S-1	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-545	0-1	04/29/92	Yes	18-TP-545-S-1	7439-92-1	Lead	15.0		mg/kg
18-TP-545	3-6	04/29/92	Yes	18-TP-545-S-2	7440-38-2	Arsenic	9.1		mg/kg
18-TP-545	3-6	04/29/92	Yes	18-TP-545-S-2	7440-50-8	Copper	17.3		mg/kg
18-TP-545	3-6	04/29/92	Yes	18-TP-545-S-2	7439-92-1	Lead	9.6		mg/kg
18-TP-545	3-6	04/29/92	Yes	18-TP-545-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-545	8-10	04/29/92	Yes	18-TP-545-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-547	0-1	05/01/92	Yes	18-TP-547-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.03	UJ	mg/kg
18-TP-547	0-1	05/01/92	Yes	18-TP-547-S-1-DAVG	DNT-TOTAL	DNT - Total	0.1		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-547	0-1	05/01/92	Yes	18-TP-547-S-1-DAVG	98-95-3	Nitrobenzene	0.6	UJ	mg/kg
18-TP-547	0-1	05/01/92	Yes	18-TP-547-S-1-DAVG	7439-92-1	Lead	140.0		mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	7440-38-2	Arsenic	2.0		mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	7440-50-8	Copper	14.0		mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	7439-92-1	Lead	5.3	U	mg/kg
18-TP-547	3-6	05/01/92	Yes	18-TP-547-S-2-DAVG	7439-97-6	Mercury	0.08	U	mg/kg
18-TP-547	8-10	05/01/92	Yes	18-TP-547-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-547	8-10	05/01/92	Yes	18-TP-547-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-547	8-10	05/01/92	Yes	18-TP-547-S-3	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-547	8-10	05/01/92	Yes	18-TP-547-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-548	0-1	05/14/92	Yes	18-TP-548-S-1	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
18-TP-548	0-1	05/14/92	Yes	18-TP-548-S-1	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
18-TP-548	0-1	05/14/92	Yes	18-TP-548-S-1	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-548	0-1	05/14/92	Yes	18-TP-548-S-1	7439-92-1	Lead	19.0		mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	7440-38-2	Arsenic	2.6		mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	7440-50-8	Copper	15.1		mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	7439-92-1	Lead	5.5	U	mg/kg
18-TP-548	3-6	05/14/92	Yes	18-TP-548-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-548	8-10	05/14/92	Yes	18-TP-548-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-548	8-10	05/14/92	Yes	18-TP-548-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-548	8-10	05/14/92	Yes	18-TP-548-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-548	8-10	05/14/92	Yes	18-TP-548-S-3	7439-92-1	Lead	5.0		mg/kg
18-TP-553	0-1	04/29/92	Yes	18-TP-553-S-1	7439-92-1	Lead	11.0		mg/kg
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	DNT-TOTAL	DNT - Total	0.07	U	mg/kg
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	7440-38-2	Arsenic	4.2		mg/kg
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	7440-50-8	Copper	66.3		mg/kg
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	7439-92-1	Lead	46.0		mg/kg
18-TP-553	3-6	04/29/92	Yes	18-TP-553-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-554	0-1	04/29/92	Yes	18-TP-554-S-1	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
18-TP-554	0-1	04/29/92	Yes	18-TP-554-S-1	DNT-TOTAL	DNT - Total	0.3		mg/kg
18-TP-554	0-1	04/29/92	Yes	18-TP-554-S-1	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-554	0-1	04/29/92	Yes	18-TP-554-S-1	7439-92-1	Lead	40.0		mg/kg
18-TP-554	3-6	04/29/92	Yes	18-TP-554-S-2	7440-38-2	Arsenic	4.4		mg/kg
18-TP-554	3-6	04/29/92	Yes	18-TP-554-S-2	7440-50-8	Copper	14.8		mg/kg
18-TP-554	3-6	04/29/92	Yes	18-TP-554-S-2	7439-92-1	Lead	5.6	U	mg/kg
18-TP-554	3-6	04/29/92	Yes	18-TP-554-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-554	8-10	04/29/92	Yes	18-TP-554-S-3	7439-92-1	Lead	5.0	U	mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	7440-38-2	Arsenic	3.1		mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	7440-50-8	Copper	16.3		mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	7439-92-1	Lead	9.4		mg/kg
18-TP-557	3-6	04/30/92	Yes	18-TP-557-S-2	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-557	8-10	04/30/92	Yes	18-TP-557-S-3	7439-92-1	Lead	260.0		mg/kg
18-TP-558	0-1	04/30/92	Yes	18-TP-558-S-1	7439-92-1	Lead	26.0		mg/kg
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	7440-38-2	Arsenic	3.2		mg/kg
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	7440-50-8	Copper	20.8		mg/kg
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	7439-92-1	Lead	5.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-558	3-6	04/30/92	Yes	18-TP-558-S-3	7439-97-6	Mercury	0.1	U	mg/kg
18-TP-558	8-10	04/30/92	Yes	18-TP-558-S-4	7439-92-1	Lead	5.0	U	mg/kg
18-TP-559	0-1	05/01/92	Yes	18-TP-559-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.06	UJ	mg/kg
18-TP-559	0-1	05/01/92	Yes	18-TP-559-S-1-DAVG	DNT-TOTAL	DNT - Total	0.2	U	mg/kg
18-TP-559	0-1	05/01/92	Yes	18-TP-559-S-1-DAVG	98-95-3	Nitrobenzene	1.4	UJ	mg/kg
18-TP-559	0-1	05/01/92	Yes	18-TP-559-S-1-DAVG	7439-92-1	Lead	76.0		mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	7440-38-2	Arsenic	2.4		mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	7440-50-8	Copper	3.1		mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	7439-92-1	Lead	23.0		mg/kg
18-TP-559	3-6	05/01/92	Yes	18-TP-559-S-2-DAVG	7439-97-6	Mercury	0.08	U	mg/kg
18-TP-559	8-10	05/01/92	Yes	18-TP-559-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-TP-559	8-10	05/01/92	Yes	18-TP-559-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-TP-559	8-10	05/01/92	Yes	18-TP-559-S-3	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-TP-559	8-10	05/01/92	Yes	18-TP-559-S-3	7439-92-1	Lead	100.0		mg/kg
18-TP-601	3-6	11/05/92	Yes	18-TP-601-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-601	3-6	11/05/92	Yes	18-TP-601-S-2	DNT-TOTAL	DNT - Total	0.009		mg/kg
18-TP-601	3-6	11/05/92	Yes	18-TP-601-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-601	8-10	11/05/92	Yes	18-TP-601-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-601	8-10	11/05/92	Yes	18-TP-601-S-3	DNT-TOTAL	DNT - Total	0.009		mg/kg
18-TP-601	8-10	11/05/92	Yes	18-TP-601-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-602	5-6	11/05/92	Yes	18-TP-602-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-602	5-6	11/05/92	Yes	18-TP-602-S-2	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-602	5-6	11/05/92	Yes	18-TP-602-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-602	8-10	11/05/92	Yes	18-TP-602-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-TP-602	8-10	11/05/92	Yes	18-TP-602-S-3	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-TP-602	8-10	11/05/92	Yes	18-TP-602-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-TP-DEP	0-1	07/02/93	Yes	18-TP-DEP,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-TP-DEP	3-4	07/02/93	Yes	18-TP-DEP,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-27	0-1	07/06/93	Yes	18-TP-GS-27-S-1	118-96-7	2,4,6-Trinitrotoluene	0.007	U	mg/kg
18-TP-GS-27	0-1	07/06/93	Yes	18-TP-GS-27-S-1	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
18-TP-GS-27	0-1	07/06/93	Yes	18-TP-GS-27-S-1	98-95-3	Nitrobenzene	0.1	U	mg/kg
18-TP-GS-27	3-4	07/02/93	Yes	18-TP-GS-27-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-28	0-1	07/02/93	Yes	18-TP-GS-28-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-28	3-4	07/02/93	Yes	18-TP-GS-28-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-32	0-1	07/02/93	Yes	18-TP-GS-32-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-32	3-4	07/02/93	Yes	18-TP-GS-32-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-33	0-1	07/02/93	Yes	18-TP-GS-33-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-33	3-4	07/02/93	Yes	18-TP-GS-33-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-43	0-1	07/02/93	Yes	18-TP-GS-43-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-43	3-4	07/02/93	Yes	18-TP-GS-43-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-47	0-1	07/02/93	Yes	18-TP-GS-47-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-47	3-4	07/02/93	Yes	18-TP-GS-47-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-49	0-1	07/02/93	Yes	18-TP-GS-49-S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-TP-GS-49	3-4	07/02/93	Yes	18-TP-GS-49-S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
18-VS-150	1-2	08/26/93	Yes	18-VS-150-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.009		mg/kg
18-VS-150	1-2	08/26/93	Yes	18-VS-150-DAVG	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-150	1-2	08/26/93	Yes	18-VS-150-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-150	1-2	08/26/93	Yes	18-VS-150-DAVG	7439-92-1	Lead	5.5	U	mg/kg
18-VS-15	7-7.5	04/12/93	Yes	18-VS-15-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.001	J	mg/kg
18-VS-15	7-7.5	04/12/93	Yes	18-VS-15-DAVG	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-15	7-7.5	04/12/93	Yes	18-VS-15-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-17	3-3.5	04/12/93	Yes	18-VS-17	118-96-7	2,4,6-Trinitrotoluene	0.007		mg/kg
18-VS-17	3-3.5	04/12/93	Yes	18-VS-17	DNT-TOTAL	DNT - Total	0.06		mg/kg
18-VS-17	3-3.5	04/12/93	Yes	18-VS-17	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-18	3-3.5	04/12/93	Yes	18-VS-18	118-96-7	2,4,6-Trinitrotoluene	0.07		mg/kg
18-VS-18	3-3.5	04/12/93	Yes	18-VS-18	DNT-TOTAL	DNT - Total	0.5		mg/kg
18-VS-18	3-3.5	04/12/93	Yes	18-VS-18	98-95-3	Nitrobenzene	0.6	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-184	21-23	03/18/94	Yes	18-VS-184	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-184	21-23	03/18/94	Yes	18-VS-184	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-184	21-23	03/18/94	Yes	18-VS-184	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-186	17-17.5	03/18/94	Yes	18-VS-186	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-186	17-17.5	03/18/94	Yes	18-VS-186	DNT-TOTAL	DNT - Total	0.4		mg/kg
18-VS-186	17-17.5	03/18/94	Yes	18-VS-186	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-188	21-23	04/04/94	Yes	18-VS-188	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
18-VS-188	21-23	04/04/94	Yes	18-VS-188	DNT-TOTAL	DNT - Total	1.6		mg/kg
18-VS-188	21-23	04/04/94	Yes	18-VS-188	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-191	27-27.5	04/14/94	Yes	18-VS-191	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
18-VS-191	27-27.5	04/14/94	Yes	18-VS-191	DNT-TOTAL	DNT - Total	1.3		mg/kg
18-VS-191	27-27.5	04/14/94	Yes	18-VS-191	98-95-3	Nitrobenzene	1.3	U	mg/kg
18-VS-19	2-2.5	04/12/93	Yes	18-VS-19-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-19	2-2.5	04/12/93	Yes	18-VS-19-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-19	2-2.5	04/12/93	Yes	18-VS-19-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-19	2-2.5	04/12/93	Yes	18-VS-19-DAVG	7439-92-1	Lead	5.6	U	mg/kg
18-VS-192	23-25	04/14/94	Yes	18-VS-192	118-96-7	2,4,6-Trinitrotoluene	0.006		mg/kg
18-VS-192	23-25	04/14/94	Yes	18-VS-192	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-192	23-25	04/14/94	Yes	18-VS-192	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-194	25-27	04/28/94	Yes	18-VS-194	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-VS-194	25-27	04/28/94	Yes	18-VS-194	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-194	25-27	04/28/94	Yes	18-VS-194	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-20	5-5.5	04/12/93	Yes	18-VS-20	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-20	5-5.5	04/12/93	Yes	18-VS-20	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-20	5-5.5	04/12/93	Yes	18-VS-20	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-203	0-0.5	09/21/99	Yes	18-VS-203	7440-38-2	Arsenic	13.0		mg/kg
18-VS-203	0-0.5	09/21/99	Yes	18-VS-203	7439-92-1	Lead	760.0		mg/kg
18-VS-204	0-0.5	09/21/99	Yes	18-VS-204	7440-38-2	Arsenic	1.9		mg/kg
18-VS-204	0-0.5	09/21/99	Yes	18-VS-204	7439-92-1	Lead	310.0		mg/kg
18-VS-205	0-0.5	09/21/99	Yes	18-VS-205	7440-38-2	Arsenic	10.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-205	0-0.5	09/21/99	Yes	18-VS-205	7439-92-1	Lead	300.0		mg/kg
18-VS-206	1-1.5	09/21/99	Yes	18-VS-206	7440-38-2	Arsenic	8.8		mg/kg
18-VS-206	1-1.5	09/21/99	Yes	18-VS-206	7439-92-1	Lead	560.0		mg/kg
18-VS-207	1-1.5	09/21/99	Yes	18-VS-207	7440-38-2	Arsenic	12.0		mg/kg
18-VS-207	1-1.5	09/21/99	Yes	18-VS-207	7439-92-1	Lead	1600.0		mg/kg
18-VS-21	5-5.5	04/12/93	Yes	18-VS-21	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-21	5-5.5	04/12/93	Yes	18-VS-21	DNT-TOTAL	DNT - Total	0.009		mg/kg
18-VS-21	5-5.5	04/12/93	Yes	18-VS-21	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-216	0-0.5	09/22/99	Yes	18-VS-216	7440-38-2	Arsenic	63.0		mg/kg
18-VS-216	0-0.5	09/22/99	Yes	18-VS-216	7439-92-1	Lead	44.0		mg/kg
18-VS-217	0-0.5	09/22/99	Yes	18-VS-217	7440-38-2	Arsenic	15.0		mg/kg
18-VS-217	0-0.5	09/22/99	Yes	18-VS-217	7439-92-1	Lead	11.0		mg/kg
18-VS-218	0-0.5	09/22/99	Yes	18-VS-218	7440-38-2	Arsenic	25.0		mg/kg
18-VS-218	0-0.5	09/22/99	Yes	18-VS-218	7439-92-1	Lead	25.0		mg/kg
18-VS-220	1-1.5	09/22/99	Yes	18-VS-220	7440-38-2	Arsenic	2.8		mg/kg
18-VS-220	1-1.5	09/22/99	Yes	18-VS-220	7439-92-1	Lead	2.7		mg/kg
18-VS-221	1-1.5	09/22/99	Yes	18-VS-221	7440-38-2	Arsenic	5.3		mg/kg
18-VS-221	1-1.5	09/22/99	Yes	18-VS-221	7439-92-1	Lead	5.2		mg/kg
18-VS-22	3-3.5	04/12/93	Yes	18-VS-22	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-22	3-3.5	04/12/93	Yes	18-VS-22	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-22	3-3.5	04/12/93	Yes	18-VS-22	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-222	1-1.5	09/22/99	Yes	18-VS-222	7440-38-2	Arsenic	36.0		mg/kg
18-VS-222	1-1.5	09/22/99	Yes	18-VS-222	7439-92-1	Lead	22.0		mg/kg
18-VS-223	1-1.5	09/22/99	Yes	18-VS-223	7440-38-2	Arsenic	4.9		mg/kg
18-VS-223	1-1.5	09/22/99	Yes	18-VS-223	7439-92-1	Lead	3.9		mg/kg
18-VS-224	0-0.5	09/22/99	Yes	18-VS-224-DAVG	7440-38-2	Arsenic	9.4		mg/kg
18-VS-224	0-0.5	09/22/99	Yes	18-VS-224-DAVG	7439-92-1	Lead	6.9		mg/kg
18-VS-225	0-0.5	09/22/99	Yes	18-VS-225	7440-38-2	Arsenic	67.0		mg/kg
18-VS-225	0-0.5	09/22/99	Yes	18-VS-225	7439-92-1	Lead	95.0		mg/kg
18-VS-226	0-0.5	09/22/99	Yes	18-VS-226	7440-38-2	Arsenic	350.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-226	0-0.5	09/22/99	Yes	18-VS-226	7439-92-1	Lead	25.0		mg/kg
18-VS-227	0-0.5	09/22/99	Yes	18-VS-227	7440-38-2	Arsenic	40.0		mg/kg
18-VS-227	0-0.5	09/22/99	Yes	18-VS-227	7439-92-1	Lead	50.0		mg/kg
18-VS-230	1-1.5	09/22/99	Yes	18-VS-230	7440-38-2	Arsenic	4.9		mg/kg
18-VS-230	1-1.5	09/22/99	Yes	18-VS-230	7439-92-1	Lead	2.9		mg/kg
18-VS-231	1-1.5	09/22/99	Yes	18-VS-231	7440-38-2	Arsenic	2.3	U	mg/kg
18-VS-231	1-1.5	09/22/99	Yes	18-VS-231	7439-92-1	Lead	3.3		mg/kg
18-VS-23	3-3.5	04/12/93	Yes	18-VS-23	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-23	3-3.5	04/12/93	Yes	18-VS-23	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-23	3-3.5	04/12/93	Yes	18-VS-23	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-232	1-1.5	09/22/99	Yes	18-VS-232	7440-38-2	Arsenic	6.9		mg/kg
18-VS-232	1-1.5	09/22/99	Yes	18-VS-232	7439-92-1	Lead	12.0		mg/kg
18-VS-233	0-0.5	09/22/99	Yes	18-VS-233	7440-38-2	Arsenic	56.0		mg/kg
18-VS-233	0-0.5	09/22/99	Yes	18-VS-233	7439-92-1	Lead	52.0		mg/kg
18-VS-234	0-0.5	09/22/99	Yes	18-VS-234	7440-38-2	Arsenic	150.0		mg/kg
18-VS-234	0-0.5	09/22/99	Yes	18-VS-234	7439-92-1	Lead	99.0		mg/kg
18-VS-235	0-0.5	09/22/99	Yes	18-VS-235	7440-38-2	Arsenic	36.0		mg/kg
18-VS-235	0-0.5	09/22/99	Yes	18-VS-235	7439-92-1	Lead	33.0		mg/kg
18-VS-236	0-0.5	09/22/99	Yes	18-VS-236	7440-38-2	Arsenic	8.0		mg/kg
18-VS-236	0-0.5	09/22/99	Yes	18-VS-236	7439-92-1	Lead	52.0		mg/kg
18-VS-237	1-1.5	09/22/99	Yes	18-VS-237	7440-38-2	Arsenic	2.4		mg/kg
18-VS-237	1-1.5	09/22/99	Yes	18-VS-237	7439-92-1	Lead	5.7		mg/kg
18-VS-238	1-1.5	09/22/99	Yes	18-VS-238	7440-38-2	Arsenic	6.7		mg/kg
18-VS-238	1-1.5	09/22/99	Yes	18-VS-238	7439-92-1	Lead	11.0		mg/kg
18-VS-239	1-1.5	09/22/99	Yes	18-VS-239	7440-38-2	Arsenic	2.3	U	mg/kg
18-VS-239	1-1.5	09/22/99	Yes	18-VS-239	7439-92-1	Lead	2.7		mg/kg
18-VS-240	1-1.5	09/22/99	Yes	18-VS-240	7440-38-2	Arsenic	4.8		mg/kg
18-VS-240	1-1.5	09/22/99	Yes	18-VS-240	7439-92-1	Lead	11.0		mg/kg
18-VS-240A	1-1.5	10/18/99	Yes	18-VS-240A	7440-38-2	Arsenic	5.0		mg/kg
18-VS-240A	1-1.5	10/18/99	Yes	18-VS-240A	7439-92-1	Lead	4.9		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-24	3-3.5	04/12/93	Yes	18-VS-24-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-VS-24	3-3.5	04/12/93	Yes	18-VS-24-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-24	3-3.5	04/12/93	Yes	18-VS-24-DAVG	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
18-VS-241A	1-1.5	10/18/99	Yes	18-VS-241A	7440-38-2	Arsenic	50.0		mg/kg
18-VS-241A	1-1.5	10/18/99	Yes	18-VS-241A	7439-92-1	Lead	5.9		mg/kg
18-VS-25	15-15.5	04/12/93	Yes	18-VS-25	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-25	15-15.5	04/12/93	Yes	18-VS-25	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-25	15-15.5	04/12/93	Yes	18-VS-25	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-27	2-2.5	04/12/93	Yes	18-VS-27	118-96-7	2,4,6-Trinitrotoluene	0.003	J	mg/kg
18-VS-27	2-2.5	04/12/93	Yes	18-VS-27	DNT-TOTAL	DNT - Total	0.4		mg/kg
18-VS-27	2-2.5	04/12/93	Yes	18-VS-27	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-VS-28	7-7.5	04/12/93	Yes	18-VS-28	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-28	7-7.5	04/12/93	Yes	18-VS-28	DNT-TOTAL	DNT - Total	0.002		mg/kg
18-VS-28	7-7.5	04/12/93	Yes	18-VS-28	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-29	3-3.5	04/12/93	Yes	18-VS-29	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-29	3-3.5	04/12/93	Yes	18-VS-29	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-29	3-3.5	04/12/93	Yes	18-VS-29	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-29	3-3.5	04/12/93	Yes	18-VS-29	7439-92-1	Lead	5.1	U	mg/kg
18-VS-31	15-15.5	04/12/93	Yes	18-VS-31	118-96-7	2,4,6-Trinitrotoluene	0.02	J	mg/kg
18-VS-31	15-15.5	04/12/93	Yes	18-VS-31	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-VS-31	15-15.5	04/12/93	Yes	18-VS-31	98-95-3	Nitrobenzene	3.2	U	mg/kg
18-VS-32	15-15.5	04/12/93	Yes	18-VS-32	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-32	15-15.5	04/12/93	Yes	18-VS-32	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-32	15-15.5	04/12/93	Yes	18-VS-32	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-32	15-15.5	04/12/93	Yes	18-VS-32	7439-92-1	Lead	5.6	U	mg/kg
18-VS-33	15-15.5	04/12/93	Yes	18-VS-33	118-96-7	2,4,6-Trinitrotoluene	0.007		mg/kg
18-VS-33	15-15.5	04/12/93	Yes	18-VS-33	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-33	15-15.5	04/12/93	Yes	18-VS-33	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-34	1-3	04/12/93	Yes	18-VS-34	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-34	1-3	04/12/93	Yes	18-VS-34	DNT-TOTAL	DNT - Total	0.01		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-34	1-3	04/12/93	Yes	18-VS-34	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-37	8-10	04/12/93	Yes	18-VS-37	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-37	8-10	04/12/93	Yes	18-VS-37	DNT-TOTAL	DNT - Total	0.005		mg/kg
18-VS-37	8-10	04/12/93	Yes	18-VS-37	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-38	6-8	04/12/93	Yes	18-VS-38	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-38	6-8	04/12/93	Yes	18-VS-38	DNT-TOTAL	DNT - Total	0.006		mg/kg
18-VS-38	6-8	04/12/93	Yes	18-VS-38	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-39	12-14	04/12/93	Yes	18-VS-39	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-39	12-14	04/12/93	Yes	18-VS-39	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-39	12-14	04/12/93	Yes	18-VS-39	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-40	4-6	04/12/93	Yes	18-VS-40	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-40	4-6	04/12/93	Yes	18-VS-40	DNT-TOTAL	DNT - Total	0.003		mg/kg
18-VS-40	4-6	04/12/93	Yes	18-VS-40	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-41	8-10	04/12/93	Yes	18-VS-41	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-41	8-10	04/12/93	Yes	18-VS-41	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-41	8-10	04/12/93	Yes	18-VS-41	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-42	0-1	04/12/93	Yes	18-VS-42-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
18-VS-42	0-1	04/12/93	Yes	18-VS-42-DAVG	DNT-TOTAL	DNT - Total	0.1		mg/kg
18-VS-42	0-1	04/12/93	Yes	18-VS-42-DAVG	98-95-3	Nitrobenzene	0.08	U	mg/kg
18-VS-44	2-3	04/12/93	Yes	18-VS-44	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-44	2-3	04/12/93	Yes	18-VS-44	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-44	2-3	04/12/93	Yes	18-VS-44	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-45	1-2	04/12/93	Yes	18-VS-45	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-VS-45	1-2	04/12/93	Yes	18-VS-45	DNT-TOTAL	DNT - Total	0.06		mg/kg
18-VS-45	1-2	04/12/93	Yes	18-VS-45	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-46	4-5	04/12/93	Yes	18-VS-46	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
18-VS-46	4-5	04/12/93	Yes	18-VS-46	DNT-TOTAL	DNT - Total	0.3		mg/kg
18-VS-46	4-5	04/12/93	Yes	18-VS-46	98-95-3	Nitrobenzene	0.09	U	mg/kg
18-VS-47	3-4	04/12/93	Yes	18-VS-47	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-47	3-4	04/12/93	Yes	18-VS-47	DNT-TOTAL	DNT - Total	0.5		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-47	3-4	04/12/93	Yes	18-VS-47	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-48	2-3	04/12/93	Yes	18-VS-48	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-48	2-3	04/12/93	Yes	18-VS-48	DNT-TOTAL	DNT - Total	0.005		mg/kg
18-VS-48	2-3	04/12/93	Yes	18-VS-48	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-49	1-2	04/12/93	Yes	18-VS-49	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
18-VS-49	1-2	04/12/93	Yes	18-VS-49	DNT-TOTAL	DNT - Total	0.009		mg/kg
18-VS-49	1-2	04/12/93	Yes	18-VS-49	98-95-3	Nitrobenzene	0.07	UJ	mg/kg
18-VS-50	1-2	04/12/93	Yes	18-VS-50	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
18-VS-50	1-2	04/12/93	Yes	18-VS-50	DNT-TOTAL	DNT - Total	0.005		mg/kg
18-VS-50	1-2	04/12/93	Yes	18-VS-50	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-51	0-1	04/12/93	Yes	18-VS-51	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-51	0-1	04/12/93	Yes	18-VS-51	DNT-TOTAL	DNT - Total	0.5		mg/kg
18-VS-51	0-1	04/12/93	Yes	18-VS-51	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-VS-52	4-5	04/12/93	Yes	18-VS-52	118-96-7	2,4,6-Trinitrotoluene	0.01	J	mg/kg
18-VS-52	4-5	04/12/93	Yes	18-VS-52	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-VS-52	4-5	04/12/93	Yes	18-VS-52	98-95-3	Nitrobenzene	0.3	U	mg/kg
18-VS-53	1-2	04/12/93	Yes	18-VS-53	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-53	1-2	04/12/93	Yes	18-VS-53	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-53	1-2	04/12/93	Yes	18-VS-53	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-54	0-1	04/12/93	Yes	18-VS-54	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-54	0-1	04/12/93	Yes	18-VS-54	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-54	0-1	04/12/93	Yes	18-VS-54	98-95-3	Nitrobenzene	0.07	U	mg/kg
18-VS-54	0-1	04/12/93	Yes	18-VS-54	7439-92-1	Lead	5.8	U	mg/kg
18-VS-55	1-2	04/12/93	Yes	18-VS-55	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
18-VS-55	1-2	04/12/93	Yes	18-VS-55	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-55	1-2	04/12/93	Yes	18-VS-55	98-95-3	Nitrobenzene	0.9	U	mg/kg
18-VS-56	2-3	04/12/93	Yes	18-VS-56	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
18-VS-56	2-3	04/12/93	Yes	18-VS-56	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-VS-56	2-3	04/12/93	Yes	18-VS-56	98-95-3	Nitrobenzene	1.0	U	mg/kg
18-VS-57	1-2	04/12/93	Yes	18-VS-57	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-57	1-2	04/12/93	Yes	18-VS-57	DNT-TOTAL	DNT - Total	0.2		mg/kg
18-VS-57	1-2	04/12/93	Yes	18-VS-57	98-95-3	Nitrobenzene	0.9	U	mg/kg
18-VS-58	1-1.5	08/26/93	Yes	18-VS-58	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-58	1-1.5	08/26/93	Yes	18-VS-58	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-58	1-1.5	08/26/93	Yes	18-VS-58	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-59	2-2.5	08/26/93	Yes	18-VS-59	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-59	2-2.5	08/26/93	Yes	18-VS-59	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-59	2-2.5	08/26/93	Yes	18-VS-59	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-59	2-2.5	08/26/93	Yes	18-VS-59	7439-92-1	Lead	5.1	U	mg/kg
18-VS-60	8-8.5	08/26/93	Yes	18-VS-60-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.05		mg/kg
18-VS-60	8-8.5	08/26/93	Yes	18-VS-60-DAVG	DNT-TOTAL	DNT - Total	0.07		mg/kg
18-VS-60	8-8.5	08/26/93	Yes	18-VS-60-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-61	6-6.5	08/26/93	Yes	18-VS-61	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-61	6-6.5	08/26/93	Yes	18-VS-61	DNT-TOTAL	DNT - Total	0.07		mg/kg
18-VS-61	6-6.5	08/26/93	Yes	18-VS-61	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-62	2-2.5	08/26/93	Yes	18-VS-62	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-62	2-2.5	08/26/93	Yes	18-VS-62	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-62	2-2.5	08/26/93	Yes	18-VS-62	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-63	4-4.5	08/26/93	Yes	18-VS-63	118-96-7	2,4,6-Trinitrotoluene	0.5		mg/kg
18-VS-63	4-4.5	08/26/93	Yes	18-VS-63	DNT-TOTAL	DNT - Total	0.4		mg/kg
18-VS-63	4-4.5	08/26/93	Yes	18-VS-63	98-95-3	Nitrobenzene	1.3	U	mg/kg
18-VS-64	2-2.5	08/26/93	Yes	18-VS-64	118-96-7	2,4,6-Trinitrotoluene	0.08		mg/kg
18-VS-64	2-2.5	08/26/93	Yes	18-VS-64	DNT-TOTAL	DNT - Total	0.07		mg/kg
18-VS-64	2-2.5	08/26/93	Yes	18-VS-64	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-65	2-2.5	08/26/93	Yes	18-VS-65	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-65	2-2.5	08/26/93	Yes	18-VS-65	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-65	2-2.5	08/26/93	Yes	18-VS-65	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-66	2-2.5	08/26/93	Yes	18-VS-66	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-66	2-2.5	08/26/93	Yes	18-VS-66	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-66	2-2.5	08/26/93	Yes	18-VS-66	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-67	2-2.5	08/26/93	Yes	18-VS-67	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-67	2-2.5	08/26/93	Yes	18-VS-67	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-67	2-2.5	08/26/93	Yes	18-VS-67	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-68	3-3.5	08/26/93	Yes	18-VS-68	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-68	3-3.5	08/26/93	Yes	18-VS-68	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-68	3-3.5	08/26/93	Yes	18-VS-68	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-70	2-2.5	08/26/93	Yes	18-VS-70	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-70	2-2.5	08/26/93	Yes	18-VS-70	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-70	2-2.5	08/26/93	Yes	18-VS-70	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-71	0-0.5	08/26/93	Yes	18-VS-71	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-71	0-0.5	08/26/93	Yes	18-VS-71	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-71	0-0.5	08/26/93	Yes	18-VS-71	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-72	3-4	08/26/93	Yes	18-VS-72	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-72	3-4	08/26/93	Yes	18-VS-72	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-72	3-4	08/26/93	Yes	18-VS-72	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-73	0-0.5	08/26/93	Yes	18-VS-73	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-73	0-0.5	08/26/93	Yes	18-VS-73	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-73	0-0.5	08/26/93	Yes	18-VS-73	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-73	0-0.5	08/26/93	Yes	18-VS-73	7439-92-1	Lead	5.4	U	mg/kg
18-VS-74	0-1	08/26/93	Yes	18-VS-74	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
18-VS-74	0-1	08/26/93	Yes	18-VS-74	DNT-TOTAL	DNT - Total	0.9		mg/kg
18-VS-74	0-1	08/26/93	Yes	18-VS-74	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-VS-75	0-1	08/26/93	Yes	18-VS-75	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-75	0-1	08/26/93	Yes	18-VS-75	DNT-TOTAL	DNT - Total	0.03		mg/kg
18-VS-75	0-1	08/26/93	Yes	18-VS-75	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-76	0-0.5	08/26/93	Yes	18-VS-76	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
18-VS-76	0-0.5	08/26/93	Yes	18-VS-76	DNT-TOTAL	DNT - Total	0.7		mg/kg
18-VS-76	0-0.5	08/26/93	Yes	18-VS-76	98-95-3	Nitrobenzene	0.6	U	mg/kg
18-VS-76	0-0.5	08/26/93	Yes	18-VS-76	7439-92-1	Lead	240.0		mg/kg
18-VS-77	1-2	08/26/93	Yes	18-VS-77	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-VS-77	1-2	08/26/93	Yes	18-VS-77	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-77	1-2	08/26/93	Yes	18-VS-77	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-78	3-4	08/26/93	Yes	18-VS-78	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-78	3-4	08/26/93	Yes	18-VS-78	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-78	3-4	08/26/93	Yes	18-VS-78	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-82	0-1	08/26/93	Yes	18-VS-82	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-82	0-1	08/26/93	Yes	18-VS-82	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-82	0-1	08/26/93	Yes	18-VS-82	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-83	0-1	08/26/93	Yes	18-VS-83	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-83	0-1	08/26/93	Yes	18-VS-83	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-83	0-1	08/26/93	Yes	18-VS-83	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-84	0-0.5	08/26/93	Yes	18-VS-84	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-84	0-0.5	08/26/93	Yes	18-VS-84	DNT-TOTAL	DNT - Total	0.01		mg/kg
18-VS-84	0-0.5	08/26/93	Yes	18-VS-84	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-85	2-3	08/26/93	Yes	18-VS-85	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-85	2-3	08/26/93	Yes	18-VS-85	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-85	2-3	08/26/93	Yes	18-VS-85	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-86	10-10.5	08/26/93	Yes	18-VS-86	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
18-VS-86	10-10.5	08/26/93	Yes	18-VS-86	DNT-TOTAL	DNT - Total	0.3		mg/kg
18-VS-86	10-10.5	08/26/93	Yes	18-VS-86	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-87	12-14	08/26/93	Yes	18-VS-87	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-87	12-14	08/26/93	Yes	18-VS-87	DNT-TOTAL	DNT - Total	0.02		mg/kg
18-VS-87	12-14	08/26/93	Yes	18-VS-87	98-95-3	Nitrobenzene	0.06	U	mg/kg
18-VS-88	5-7	08/26/93	Yes	18-VS-88	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
18-VS-88	5-7	08/26/93	Yes	18-VS-88	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
18-VS-88	5-7	08/26/93	Yes	18-VS-88	98-95-3	Nitrobenzene	0.06	U	mg/kg
18R-02	0-0.5	03/29/93	Yes	18R-02	7440-38-2	Arsenic	3.5	J	mg/kg
18R-06	0-0.5	03/29/93	Yes	18R-06	7440-38-2	Arsenic	23.0		mg/kg
18R-07	0-0.5	03/29/93	Yes	18R-07	7440-38-2	Arsenic	12.0	J	mg/kg
18R-103	0-0.5	06/30/93	Yes	18R-103	7440-38-2	Arsenic	7.4		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18R-104	0-0.5	06/30/93	Yes	18R-104	7440-38-2	Arsenic	67.0		mg/kg
18R-105	0-0.5	06/30/93	Yes	18R-105-DAVG	7440-38-2	Arsenic	16.0		mg/kg
18R-106	0-0.5	06/30/93	Yes	18R-106	7440-38-2	Arsenic	14.0		mg/kg
18R-107-100S	0-0.5	12/07/93	Yes	18R-107-100S	7440-38-2	Arsenic	38.0		mg/kg
18R-107-100W	0-0.5	12/07/93	Yes	18R-107-100W	7440-38-2	Arsenic	28.0		mg/kg
18R-107-125W	0-0.5	12/07/93	Yes	18R-107-125W	7440-38-2	Arsenic	14.0		mg/kg
18R-107-25E	0-0.5	12/07/93	Yes	18R-107-25E	7440-38-2	Arsenic	50.0		mg/kg
18R-107-25S	0-0.5	12/07/93	Yes	18R-107-25S	7440-38-2	Arsenic	140.0		mg/kg
18R-107-50E	0-0.5	12/07/93	Yes	18R-107-50E	7440-38-2	Arsenic	66.0		mg/kg
18R-107-50N	0-0.5	12/07/93	Yes	18R-107-50N-DAVG	7440-38-2	Arsenic	150.0		mg/kg
18R-107-50S	0-0.5	12/07/93	Yes	18R-107-50S	7440-38-2	Arsenic	25.0		mg/kg
18R-107-50W	0-0.5	12/07/93	Yes	18R-107-50W	7440-38-2	Arsenic	140.0		mg/kg
18R-107-75E	0-0.5	12/07/93	Yes	18R-107-75E	7440-38-2	Arsenic	59.0		mg/kg
18R-107-75S	0-0.5	12/07/93	Yes	18R-107-75S	7440-38-2	Arsenic	47.0		mg/kg
18R-107-75W	0-0.5	12/07/93	Yes	18R-107-75W	7440-38-2	Arsenic	37.0		mg/kg
18R-107	1-2	12/14/93	Yes	18R-107-S-3	7440-38-2	Arsenic	15.0	J	mg/kg
18R-108	0-0.5	06/30/93	Yes	18R-108	7440-38-2	Arsenic	81.0		mg/kg
18R-109	0-0.5	06/30/93	Yes	18R-109	7440-38-2	Arsenic	10.0		mg/kg
18R-110	0-0.5	06/30/93	Yes	18R-110	7440-38-2	Arsenic	81.0		mg/kg
18R-112-100N	0-0.5	12/08/93	Yes	18R-112-100N	7440-38-2	Arsenic	81.0		mg/kg
18R-112-10E	0-0.5	12/08/93	Yes	18R-112-10E-DAVG	7440-38-2	Arsenic	58.0		mg/kg
18R-112-10N	0-0.5	12/08/93	Yes	18R-112-10N	7440-38-2	Arsenic	290.0		mg/kg
18R-112-125N	0-0.5	12/08/93	Yes	18R-112-125N	7440-38-2	Arsenic	130.0		mg/kg
18R-112	0.5-1	12/13/93	Yes	18R-112-S-2	7440-38-2	Arsenic	42.0	J	mg/kg
18R-112	1-2	12/13/93	Yes	18R-112-S-3	7440-38-2	Arsenic	10.0	J	mg/kg
18R-112	0-0.5	06/30/93	Yes	18R-112	7440-38-2	Arsenic	230.0		mg/kg
18R-113	0-0.5	06/30/93	Yes	18R-113	7440-38-2	Arsenic	82.0		mg/kg
18R-114	0-0.5	06/30/93	Yes	18R-114	7440-38-2	Arsenic	91.0		mg/kg
18R-121-100W	0-0.5	12/09/93	Yes	18R-121-100W-DAVG	7440-38-2	Arsenic	15.0		mg/kg
18R-121-50W	0-0.5	12/10/93	Yes	18R-121-50W	7440-38-2	Arsenic	20.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18R-121-75W	0-0.5	12/10/93	Yes	18R-121-75W	7440-38-2	Arsenic	59.0		mg/kg
18R-14	0-0.5	03/30/93	Yes	18R-14	7440-38-2	Arsenic	19.0		mg/kg
18R-15 1'-2'	1-2	07/02/93	Yes	18R-15 1'-2'-DAVG	7440-38-2	Arsenic	3.2		mg/kg
18R-15 6"-12"	0.5-1	07/02/93	Yes	18R-15 6"-12"	7440-38-2	Arsenic	4.9		mg/kg
18R-15-100N	0-0.5	12/07/93	Yes	18R-15-100N-DAVG	7440-38-2	Arsenic	63.0		mg/kg
18R-15-10N	0-0.5	12/07/93	Yes	18R-15-10N	7440-38-2	Arsenic	45.0		mg/kg
18R-15-10W	0-0.5	12/07/93	Yes	18R-15-10W	7440-38-2	Arsenic	35.0		mg/kg
18R-15-25N	0-0.5	12/07/93	Yes	18R-15-25N	7440-38-2	Arsenic	25.0		mg/kg
18R-15-50N	0-0.5	12/07/93	Yes	18R-15-50N	7440-38-2	Arsenic	16.0		mg/kg
18R-15-75N	0-0.5	12/07/93	Yes	18R-15-75N	7440-38-2	Arsenic	3.6		mg/kg
18R-15	0-0.5	03/30/93	Yes	18R-15	7440-38-2	Arsenic	210.0		mg/kg
18R-15	0-0.5	03/30/93	Yes	18R-15	7440-38-2	Arsenic	0.05	U	MG/L
18R-21	0-0.5	03/29/93	Yes	18R-21	7440-38-2	Arsenic	13.0		mg/kg
18R-402	0-0.5	11/30/93	Yes	18R-402	7440-38-2	Arsenic	4.2		mg/kg
18R-408	0-0.5	11/30/93	Yes	18R-408	7440-38-2	Arsenic	12.0		mg/kg
18R-413	0-0.5	11/30/93	Yes	18R-413	7440-38-2	Arsenic	15.0		mg/kg
18R-414	0-0.5	11/30/93	Yes	18R-414	7440-38-2	Arsenic	7.5		mg/kg
18R-415	0-0.5	11/30/93	Yes	18R-415	7440-38-2	Arsenic	7.8		mg/kg
18R-416	0-0.5	11/30/93	Yes	18R-416	7440-38-2	Arsenic	2.5		mg/kg
18R-420	0-0.5	11/30/93	Yes	18R-420	7440-38-2	Arsenic	4.2		mg/kg
18R-426	0-0.5	11/30/93	Yes	18R-426	7440-38-2	Arsenic	74.0		mg/kg
18R-448	0-0.5	11/16/93	Yes	18R-448	7440-38-2	Arsenic	68.0		mg/kg
18R-449	0-0.5	11/29/93	Yes	18R-449	7440-38-2	Arsenic	39.0		mg/kg
18R-453	0-0.5	11/29/93	Yes	18R-453	7440-38-2	Arsenic	37.0		mg/kg
18R-457	0-0.5	11/16/93	Yes	18R-457	7440-38-2	Arsenic	25.0		mg/kg
18R-467	0-0.5	11/17/93	Yes	18R-467	7440-38-2	Arsenic	14.0	J	mg/kg
18R-468	0-0.5	11/17/93	Yes	18R-468	7440-38-2	Arsenic	110.0	J	mg/kg
18R-471	0-0.5	11/17/93	Yes	18R-471	7440-38-2	Arsenic	9.1	J	mg/kg
18S-PS-VS-1-01	1.7-2.2	12/11/98	Yes	18S-PS-VS-01-01	7440-38-2	Arsenic	3.1		mg/kg
18S-PS-VS-1-01	1.7-2.2	12/11/98	Yes	18S-PS-VS-01-01	7439-92-1	Lead	6.2		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18S-PS-VS-1-02	1-1.8	12/11/98	Yes	18S-PS-VS-01-02	7440-38-2	Arsenic	3.6		mg/kg
18S-PS-VS-1-02	1-1.8	12/11/98	Yes	18S-PS-VS-01-02	7439-92-1	Lead	5.6		mg/kg
18S-PS-VS-1-03	1.3-1.8	12/11/98	Yes	18S-PS-VS-01-03	7440-38-2	Arsenic	5.3		mg/kg
18S-PS-VS-1-03	1.3-1.8	12/11/98	Yes	18S-PS-VS-01-03	7439-92-1	Lead	5.8		mg/kg
18S-PS-VS-1-04	1-1.8	12/11/98	Yes	18S-PS-VS-01-04	7440-38-2	Arsenic	3.6		mg/kg
18S-PS-VS-1-04	1-1.8	12/11/98	Yes	18S-PS-VS-01-04	7439-92-1	Lead	5.6		mg/kg
18S-PS-VS-1-06	1.2-1.7	12/11/98	Yes	18S-PS-VS-01-06	7440-38-2	Arsenic	3.9		mg/kg
18S-PS-VS-1-06	1.2-1.7	12/11/98	Yes	18S-PS-VS-01-06	7439-92-1	Lead	6.0		mg/kg
18S-PS-VS-1-07	1-1.8	12/11/98	Yes	18S-PS-VS-01-07	7440-38-2	Arsenic	3.3		mg/kg
18S-PS-VS-1-07	1-1.8	12/11/98	Yes	18S-PS-VS-01-07	7439-92-1	Lead	4.9		mg/kg
18S-PS-VS-1-08	1.2-1.7	12/11/98	Yes	18S-PS-VS-01-08	7440-38-2	Arsenic	4.3		mg/kg
18S-PS-VS-1-08	1.2-1.7	12/11/98	Yes	18S-PS-VS-01-08	7439-92-1	Lead	5.3		mg/kg
18S-PS-VS-1-11	1.3-1.8	12/11/98	Yes	18S-PS-VS-01-11-DAVG	7440-38-2	Arsenic	4.7		mg/kg
18S-PS-VS-1-11	1.3-1.8	12/11/98	Yes	18S-PS-VS-01-11-DAVG	7439-92-1	Lead	5.0		mg/kg
24-VS-105	0-0.5	10/10/95	Yes	24-VS-105	7440-38-2	Arsenic	18.0		mg/kg
24-VS-105	0-0.5	10/10/95	Yes	24-VS-105	7439-92-1	Lead	1100.0		mg/kg
24-VS-105	0-0.5	10/10/95	Yes	24-VS-105	7439-97-6	Mercury	10.0		mg/kg
24-VS-106	0-0.5	10/10/95	Yes	24-VS-106	7440-38-2	Arsenic	11.0		mg/kg
24-VS-106	0-0.5	10/10/95	Yes	24-VS-106	7439-92-1	Lead	2400.0		mg/kg
24-VS-106	0-0.5	10/10/95	Yes	24-VS-106	7439-97-6	Mercury	2.3		mg/kg
24-VS-107-HG-1	2.5-3	11/28/01	Yes	01-P007-SS-24-VS-107-Hg-1-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.2		mg/kg
24-VS-107-HG-3	0-0.5	11/28/01	Yes	01-P007-SS-24-VS-107-Hg-3-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.9		mg/kg
24-VS-107-HG-4	0-0.5	11/28/01	Yes	01-P007-SS-24-VS-107-Hg-4-D2-003_11/28/01_2.5	7439-97-6	Mercury	9.5		mg/kg
24-VS-107-HG-5	0-0.5	11/28/01	Yes	01-P007-SS-24-VS-107-Hg-5-D2-003_11/28/01_2.5	7439-97-6	Mercury	1.2		mg/kg
24-VS-108	0-0.5	10/10/95	Yes	24-VS-108	7440-38-2	Arsenic	12.0		mg/kg
24-VS-108	0-0.5	10/10/95	Yes	24-VS-108	7439-92-1	Lead	390.0		mg/kg
24-VS-108	0-0.5	10/10/95	Yes	24-VS-108	7439-97-6	Mercury	1.3		mg/kg
24-VS-109	0-0.5	10/10/95	Yes	24-VS-109	7440-38-2	Arsenic	6.4		mg/kg
24-VS-109	0-0.5	10/10/95	Yes	24-VS-109	7439-92-1	Lead	49.0		mg/kg
24-VS-109	0-0.5	10/10/95	Yes	24-VS-109	7439-97-6	Mercury	0.1		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
24-VS-110	0-0.5	10/10/95	Yes	24-VS-110	7440-38-2	Arsenic	6.1		mg/kg
24-VS-110	0-0.5	10/10/95	Yes	24-VS-110	7439-92-1	Lead	230.0		mg/kg
24-VS-110	0-0.5	10/10/95	Yes	24-VS-110	7439-97-6	Mercury	0.2		mg/kg
24-VS-111	0-0.5	10/10/95	Yes	24-VS-111-DAVG	7440-38-2	Arsenic	6.1		mg/kg
24-VS-111	0-0.5	10/10/95	Yes	24-VS-111-DAVG	7439-92-1	Lead	270.0		mg/kg
24-VS-111	0-0.5	10/10/95	Yes	24-VS-111-DAVG	7439-97-6	Mercury	1.9		mg/kg
24-VS-112	0-0.5	10/10/95	Yes	24-VS-112	7440-38-2	Arsenic	17.0		mg/kg
24-VS-112	0-0.5	10/10/95	Yes	24-VS-112	7439-92-1	Lead	450.0		mg/kg
24-VS-112	0-0.5	10/10/95	Yes	24-VS-112	7439-97-6	Mercury	0.8		mg/kg
24-VS-113	0-0.5	10/10/95	Yes	24-VS-113	7440-38-2	Arsenic	10.0		mg/kg
24-VS-113	0-0.5	10/10/95	Yes	24-VS-113	7439-92-1	Lead	230.0		mg/kg
24-VS-113	0-0.5	10/10/95	Yes	24-VS-113	7439-97-6	Mercury	0.4		mg/kg
24-VS-114	0-0.5	10/10/95	Yes	24-VS-114	7440-38-2	Arsenic	6.7		mg/kg
24-VS-114	0-0.5	10/10/95	Yes	24-VS-114	7439-92-1	Lead	120.0		mg/kg
24-VS-114	0-0.5	10/10/95	Yes	24-VS-114	7439-97-6	Mercury	4.2		mg/kg
24-VS-115	0-0.5	10/10/95	Yes	24-VS-115	7440-38-2	Arsenic	7.8		mg/kg
24-VS-115	0-0.5	10/10/95	Yes	24-VS-115	7439-92-1	Lead	66.0		mg/kg
24-VS-115	0-0.5	10/10/95	Yes	24-VS-115	7439-97-6	Mercury	1.0		mg/kg
24-VS-116	0-0.5	10/10/95	Yes	24-VS-116	7440-38-2	Arsenic	15.0		mg/kg
24-VS-116	0-0.5	10/10/95	Yes	24-VS-116	7439-92-1	Lead	73.0		mg/kg
24-VS-116	0-0.5	10/10/95	Yes	24-VS-116	7439-97-6	Mercury	0.2		mg/kg
24-VS-117	0-0.5	10/10/95	Yes	24-VS-117	7440-38-2	Arsenic	12.0		mg/kg
24-VS-117	0-0.5	10/10/95	Yes	24-VS-117	7439-92-1	Lead	46.0		mg/kg
24-VS-117	0-0.5	10/10/95	Yes	24-VS-117	7439-97-6	Mercury	0.2		mg/kg
24-VS-120	3-6	10/10/95	Yes	24-VS-120	7440-38-2	Arsenic	2.8		mg/kg
24-VS-120	3-6	10/10/95	Yes	24-VS-120	7439-92-1	Lead	59.0		mg/kg
24-VS-120	3-6	10/10/95	Yes	24-VS-120	7439-97-6	Mercury	0.2		mg/kg
24-VS-121	6-7	10/10/95	Yes	24-VS-121	7440-38-2	Arsenic	3.6		mg/kg
24-VS-121	6-7	10/10/95	Yes	24-VS-121	7439-92-1	Lead	20.0		mg/kg
24-VS-121	6-7	10/10/95	Yes	24-VS-121	7439-97-6	Mercury	0.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
24-VS-122	3-6	10/10/95	Yes	24-VS-122-DAVG	7440-38-2	Arsenic	6.2		mg/kg
24-VS-122	3-6	10/10/95	Yes	24-VS-122-DAVG	7439-92-1	Lead	150.0		mg/kg
24-VS-122	3-6	10/10/95	Yes	24-VS-122-DAVG	7439-97-6	Mercury	8.9		mg/kg
24-VS-123	7-8	10/10/95	Yes	24-VS-123	7440-38-2	Arsenic	3.4		mg/kg
24-VS-123	7-8	10/10/95	Yes	24-VS-123	7439-92-1	Lead	74.0		mg/kg
24-VS-123	7-8	10/10/95	Yes	24-VS-123	7439-97-6	Mercury	7.7		mg/kg
25-SS-514	0-0.5	10/21/93	Yes	25-SS-514	7440-38-2	Arsenic	43.0		mg/kg
25-SS-514	0-0.5	10/21/93	Yes	25-SS-514	7439-92-1	Lead	190.0		mg/kg
25-SS-516	0-0.5	10/21/93	Yes	25-SS-516	7440-38-2	Arsenic	9.5		mg/kg
25-SS-516	0-0.5	10/21/93	Yes	25-SS-516	7439-92-1	Lead	41.0		mg/kg
25-SS-518	0-0.5	10/21/93	Yes	25-SS-518	7440-38-2	Arsenic	9.5		mg/kg
25-SS-518	0-0.5	10/21/93	Yes	25-SS-518	7439-92-1	Lead	89.0		mg/kg
25-SS-520	0-0.5	10/21/93	Yes	25-SS-520	7440-38-2	Arsenic	3.0		mg/kg
25-SS-520	0-0.5	10/21/93	Yes	25-SS-520	7439-92-1	Lead	5.7	U	mg/kg
25-SS-520	0-0.5	10/21/93	Yes	25-SS-520	7439-97-6	Mercury	0.1	U	mg/kg
25-SS-521	0-0.5	10/21/93	Yes	25-SS-521	7440-38-2	Arsenic	6.3		mg/kg
25-SS-521	0-0.5	10/21/93	Yes	25-SS-521	7439-92-1	Lead	16.0		mg/kg
25-SS-522	0-0.5	10/21/93	Yes	25-SS-522	7440-38-2	Arsenic	9.0		mg/kg
25-SS-522	0-0.5	10/21/93	Yes	25-SS-522	7439-92-1	Lead	29.0		mg/kg
25-SS-522	0-0.5	10/21/93	Yes	25-SS-522	7439-97-6	Mercury	0.1	U	mg/kg
25-SS-523	0-0.5	10/21/93	Yes	25-SS-523	7440-38-2	Arsenic	23.0	J	mg/kg
25-SS-523	0-0.5	10/21/93	Yes	25-SS-523	7439-92-1	Lead	74.0		mg/kg
25-SS-524	0-0.5	10/21/93	Yes	25-SS-524	7440-38-2	Arsenic	5.6	J	mg/kg
25-SS-524	0-0.5	10/21/93	Yes	25-SS-524	7439-92-1	Lead	5.4	U	mg/kg
25-SS-524	0-0.5	10/21/93	Yes	25-SS-524	7439-97-6	Mercury	0.1	U	mg/kg
25-SS-526	0-0.5	10/21/93	Yes	25-SS-526	7440-38-2	Arsenic	12.0	J	mg/kg
25-SS-526	0-0.5	10/21/93	Yes	25-SS-526	7439-92-1	Lead	1800.0		mg/kg
25-SS-530	0-0.5	10/21/93	Yes	25-SS-530-DAVG	7440-38-2	Arsenic	22.0		mg/kg
25-SS-530	0-0.5	10/21/93	Yes	25-SS-530-DAVG	7439-92-1	Lead	210.0		mg/kg
25-SS-530	0-0.5	10/21/93	Yes	25-SS-530-DAVG	7439-97-6	Mercury	0.4		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
25-TP-10	0-3.5	04/15/87	Yes	25-TP-10,S-1	7439-92-1	Lead	2100.0		mg/kg
25-TP-10	3.5-7	04/15/87	Yes	25-TP-10,S-2	7439-92-1	Lead	110.0		mg/kg
25-TP-11	0-3.5	04/15/87	Yes	25-TP-11,S-1	7439-92-1	Lead	110.0		mg/kg
25-TP-11	3.5-7	04/15/87	Yes	25-TP-11,S-2	7439-92-1	Lead	13.0		mg/kg
25-TP-501	3-6	04/22/92	Yes	25-TP-501-S-2-DAVG	7440-38-2	Arsenic	2.6		mg/kg
25-TP-501	3-6	04/22/92	Yes	25-TP-501-S-2-DAVG	7440-50-8	Copper	14.0		mg/kg
25-TP-501	3-6	04/22/92	Yes	25-TP-501-S-2-DAVG	7439-92-1	Lead	29.0		mg/kg
25-TP-501	3-6	04/22/92	Yes	25-TP-501-S-2-DAVG	7439-97-6	Mercury	0.1		mg/kg
25-TP-502	0-1	04/22/92	Yes	25-TP-502-S-1	7440-38-2	Arsenic	5.4		mg/kg
25-TP-502	0-1	04/22/92	Yes	25-TP-502-S-1	7440-50-8	Copper	12.0		mg/kg
25-TP-502	0-1	04/22/92	Yes	25-TP-502-S-1	7439-92-1	Lead	15.0		mg/kg
25-TP-502	0-1	04/22/92	Yes	25-TP-502-S-1	7439-97-6	Mercury	0.1		mg/kg
25-TP-502	3-6	04/22/92	Yes	25-TP-502-S-2	7440-38-2	Arsenic	2.4		mg/kg
25-TP-502	3-6	04/22/92	Yes	25-TP-502-S-2	7440-50-8	Copper	12.0		mg/kg
25-TP-502	3-6	04/22/92	Yes	25-TP-502-S-2	7439-92-1	Lead	5.4	U	mg/kg
25-TP-502	3-6	04/22/92	Yes	25-TP-502-S-2	7439-97-6	Mercury	0.09	U	mg/kg
25-TP-503	2-4	04/22/92	Yes	25-TP-503-S-3	7440-38-2	Arsenic	67.0		mg/kg
25-TP-503	2-4	04/22/92	Yes	25-TP-503-S-3	7440-50-8	Copper	43.0		mg/kg
25-TP-503	2-4	04/22/92	Yes	25-TP-503-S-3	7439-92-1	Lead	23.0		mg/kg
25-TP-503	2-4	04/22/92	Yes	25-TP-503-S-3	7439-97-6	Mercury	2.6		mg/kg
25-TP-503	5-7	04/22/92	Yes	25-TP-503-S-4	7440-38-2	Arsenic	110.0		mg/kg
25-TP-503	5-7	04/22/92	Yes	25-TP-503-S-4	7440-50-8	Copper	0.2	U	mg/kg
25-TP-503	5-7	04/22/92	Yes	25-TP-503-S-4	7439-92-1	Lead	62.0		mg/kg
25-TP-503	5-7	04/22/92	Yes	25-TP-503-S-4	7439-97-6	Mercury	0.8	J	mg/kg
25-TP-505	1-4	04/22/92	Yes	25-TP-505-S-2	7440-38-2	Arsenic	1.5		mg/kg
25-TP-505	1-4	04/22/92	Yes	25-TP-505-S-2	7440-50-8	Copper	9.3		mg/kg
25-TP-505	1-4	04/22/92	Yes	25-TP-505-S-2	7439-92-1	Lead	5.5	U	mg/kg
25-TP-505	1-4	04/22/92	Yes	25-TP-505-S-2	7439-97-6	Mercury	0.08	UJ	mg/kg
25-TP-506	0-1	04/22/92	Yes	25-TP-506-S-1	7440-38-2	Arsenic	16.0		mg/kg
25-TP-506	0-1	04/22/92	Yes	25-TP-506-S-1	7440-50-8	Copper	96.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
25-TP-506	0-1	04/22/92	Yes	25-TP-506-S-1	7439-92-1	Lead	3100.0		mg/kg
25-TP-506	0-1	04/22/92	Yes	25-TP-506-S-1	7439-92-1	Lead	1.8		MG/L
25-TP-506	0-1	04/22/92	Yes	25-TP-506-S-1	7439-97-6	Mercury	0.8	J	mg/kg
25-TP-506	3-6	04/22/92	Yes	25-TP-506-S-2	7440-38-2	Arsenic	2.6		mg/kg
25-TP-506	3-6	04/22/92	Yes	25-TP-506-S-2	7440-50-8	Copper	23.0		mg/kg
25-TP-506	3-6	04/22/92	Yes	25-TP-506-S-2	7439-92-1	Lead	5.6	U	mg/kg
25-TP-506	3-6	04/22/92	Yes	25-TP-506-S-2	7439-97-6	Mercury	0.08	UJ	mg/kg
25-TP-511	0-1	04/22/92	Yes	25-TP-511-S-1-DAVG	7440-38-2	Arsenic	3.0		mg/kg
25-TP-511	0-1	04/22/92	Yes	25-TP-511-S-1-DAVG	7440-50-8	Copper	6.6		mg/kg
25-TP-511	0-1	04/22/92	Yes	25-TP-511-S-1-DAVG	7439-92-1	Lead	470.0		mg/kg
25-TP-511	0-1	04/22/92	Yes	25-TP-511-S-1-DAVG	7439-97-6	Mercury	0.6	J	mg/kg
25-TP-511	3-6	04/22/92	Yes	25-TP-511-S-2	7440-38-2	Arsenic	3.6		mg/kg
25-TP-511	3-6	04/22/92	Yes	25-TP-511-S-2	7440-50-8	Copper	6.8		mg/kg
25-TP-511	3-6	04/22/92	Yes	25-TP-511-S-2	7439-92-1	Lead	240.0		mg/kg
25-TP-511	3-6	04/22/92	Yes	25-TP-511-S-2	7439-97-6	Mercury	0.08	UJ	mg/kg
25-TP-511	8-10	04/22/92	Yes	25-TP-511-S-3	7440-38-2	Arsenic	7.1		mg/kg
25-TP-511	8-10	04/22/92	Yes	25-TP-511-S-3	7440-50-8	Copper	8.3		mg/kg
25-TP-511	8-10	04/22/92	Yes	25-TP-511-S-3	7439-92-1	Lead	31.0		mg/kg
25-TP-511	8-10	04/22/92	Yes	25-TP-511-S-3	7439-97-6	Mercury	0.08	UJ	mg/kg
25-TP-515	0-1	11/03/92	Yes	25-TP-515-S-1	7440-38-2	Arsenic	24.0		mg/kg
25-TP-515	0-1	11/03/92	Yes	25-TP-515-S-1	7439-92-1	Lead	330.0		mg/kg
25-TP-515	0-1	11/03/92	Yes	25-TP-515-S-1	7439-97-6	Mercury	3.1		mg/kg
25-TP-515	3-6	11/03/92	Yes	25-TP-515-S-2	7440-38-2	Arsenic	3.5		mg/kg
25-TP-515	3-6	11/03/92	Yes	25-TP-515-S-2	7439-92-1	Lead	22.0		mg/kg
25-TP-515	3-6	11/03/92	Yes	25-TP-515-S-2	7439-97-6	Mercury	0.3		mg/kg
25-TP-516	0-1	11/04/92	Yes	25-TP-516-S-1	7440-38-2	Arsenic	3.1		mg/kg
25-TP-516	0-1	11/04/92	Yes	25-TP-516-S-1	7439-92-1	Lead	7.1	J	mg/kg
25-TP-516	0-1	11/04/92	Yes	25-TP-516-S-1	7439-97-6	Mercury	0.1	UJ	mg/kg
25-TP-516	4-6	11/04/92	Yes	25-TP-516-S-3	7440-38-2	Arsenic	34.0		mg/kg
25-TP-516	4-6	11/04/92	Yes	25-TP-516-S-3	7439-92-1	Lead	380.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
25-TP-516	4-6	11/04/92	Yes	25-TP-516-S-3	7439-97-6	Mercury	0.1	J	mg/kg
25-TP-7	0-3.5	04/15/87	Yes	25-TP-7,S-1	7439-92-1	Lead	76.0		mg/kg
25-TP-7	3.5-7	04/15/87	Yes	25-TP-7,S-2	7439-92-1	Lead	8.0	J	mg/kg
25-TP-8	0-3.5	04/15/87	Yes	25-TP-8,S-1	7439-92-1	Lead	4000.0		mg/kg
25-TP-8	3.5-7	04/15/87	Yes	25-TP-8,S-2	7439-92-1	Lead	160.0		mg/kg
25-TP-9	0-3.5	04/15/87	Yes	25-TP-9,S-1	7439-92-1	Lead	120.0		mg/kg
25-TP-9	3.5-7	04/15/87	Yes	25-TP-9,S-2	7439-92-1	Lead	71.0		mg/kg
25-VS-10	2-2.5	06/16/93	Yes	25-VS-10	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
25-VS-10	2-2.5	06/16/93	Yes	25-VS-10	DNT-TOTAL	DNT - Total	0.2	U	mg/kg
25-VS-10	2-2.5	06/16/93	Yes	25-VS-10	98-95-3	Nitrobenzene	1.2	U	mg/kg
25-VS-12	15-15.5	06/16/93	Yes	25-VS-12-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.06	U	mg/kg
25-VS-12	15-15.5	06/16/93	Yes	25-VS-12-DAVG	DNT-TOTAL	DNT - Total	1.1		mg/kg
25-VS-12	15-15.5	06/16/93	Yes	25-VS-12-DAVG	98-95-3	Nitrobenzene	1.3	U	mg/kg
25-VS-12	15-15.5	06/16/93	Yes	25-VS-12-DAVG	7439-92-1	Lead	5.3	U	mg/kg
25-VS-1	3-6	06/16/93	Yes	25-VS-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-1	3-6	06/16/93	Yes	25-VS-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-VS-1	3-6	06/16/93	Yes	25-VS-1-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-1	3-6	06/16/93	Yes	25-VS-1-DAVG	7439-92-1	Lead	5.4	U	mg/kg
25-VS-14	15-15.5	06/16/93	Yes	25-VS-14	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
25-VS-14	15-15.5	06/16/93	Yes	25-VS-14	DNT-TOTAL	DNT - Total	1.2		mg/kg
25-VS-14	15-15.5	06/16/93	Yes	25-VS-14	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-2	3-6	06/16/93	Yes	25-VS-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-2	3-6	06/16/93	Yes	25-VS-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-VS-2	3-6	06/16/93	Yes	25-VS-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-25	24-26	04/05/94	Yes	25-VS-25	118-96-7	2,4,6-Trinitrotoluene	0.3		mg/kg
25-VS-25	24-26	04/05/94	Yes	25-VS-25	DNT-TOTAL	DNT - Total	0.7		mg/kg
25-VS-25	24-26	04/05/94	Yes	25-VS-25	98-95-3	Nitrobenzene	0.3	U	mg/kg
25-VS-26	24-26	04/05/94	Yes	25-VS-26	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
25-VS-26	24-26	04/05/94	Yes	25-VS-26	DNT-TOTAL	DNT - Total	0.07		mg/kg
25-VS-26	24-26	04/05/94	Yes	25-VS-26	98-95-3	Nitrobenzene	0.06	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
25-VS-27	27-29	04/13/94	Yes	25-VS-27	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
25-VS-27	27-29	04/13/94	Yes	25-VS-27	DNT-TOTAL	DNT - Total	0.03		mg/kg
25-VS-27	27-29	04/13/94	Yes	25-VS-27	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-29	27-29	04/13/94	Yes	25-VS-29	118-96-7	2,4,6-Trinitrotoluene	0.003		mg/kg
25-VS-29	27-29	04/13/94	Yes	25-VS-29	DNT-TOTAL	DNT - Total	0.2		mg/kg
25-VS-29	27-29	04/13/94	Yes	25-VS-29	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-30	37-37.5	04/28/94	Yes	25-VS-30	118-96-7	2,4,6-Trinitrotoluene	0.08		mg/kg
25-VS-30	37-37.5	04/28/94	Yes	25-VS-30	DNT-TOTAL	DNT - Total	0.1		mg/kg
25-VS-30	37-37.5	04/28/94	Yes	25-VS-30	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-4	3-6	06/16/93	Yes	25-VS-4	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-4	3-6	06/16/93	Yes	25-VS-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-VS-4	3-6	06/16/93	Yes	25-VS-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-5	9-12	06/16/93	Yes	25-VS-5	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-5	9-12	06/16/93	Yes	25-VS-5	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-VS-5	9-12	06/16/93	Yes	25-VS-5	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-6	3-6	06/16/93	Yes	25-VS-6	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-6	3-6	06/16/93	Yes	25-VS-6	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
25-VS-6	3-6	06/16/93	Yes	25-VS-6	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-7	3-3.5	06/16/93	Yes	25-VS-7	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-7	3-3.5	06/16/93	Yes	25-VS-7	DNT-TOTAL	DNT - Total	0.02		mg/kg
25-VS-7	3-3.5	06/16/93	Yes	25-VS-7	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-8	3-6	06/16/93	Yes	25-VS-8	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-8	3-6	06/16/93	Yes	25-VS-8	DNT-TOTAL	DNT - Total	0.005		mg/kg
25-VS-8	3-6	06/16/93	Yes	25-VS-8	98-95-3	Nitrobenzene	0.06	U	mg/kg
25-VS-8	3-6	06/16/93	Yes	25-VS-8	7439-92-1	Lead	5.4	U	mg/kg
25-VS-9	9-12	06/16/93	Yes	25-VS-9	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
25-VS-9	9-12	06/16/93	Yes	25-VS-9	DNT-TOTAL	DNT - Total	0.006		mg/kg
25-VS-9	9-12	06/16/93	Yes	25-VS-9	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-B-2	25-26.5	04/21/87	Yes	26-B-2,S-10	DNT-TOTAL	DNT - Total	0.7	U	mg/kg
26-B-2	25-26.5	04/21/87	Yes	26-B-2,S-10	7439-92-1	Lead	470.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-B-2	20-21	04/21/87	Yes	26-B-2,S-8	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
26-B-2	20-21	04/21/87	Yes	26-B-2,S-8	7439-92-1	Lead	610.0		mg/kg
26-B-2	22.5-24	04/21/87	Yes	26-B-2,S-9	7439-92-1	Lead	550.0		mg/kg
26-B-501	23-24.5	02/26/92	Yes	26-B-501-S-5A	7439-92-1	Lead	40.0		mg/kg
26-B-501	30-31.5	02/26/92	Yes	26-B-501-S-7	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-B-501	30-31.5	02/26/92	Yes	26-B-501-S-7	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-B-501	30-31.5	02/26/92	Yes	26-B-501-S-7	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-B-501	30-31.5	02/26/92	Yes	26-B-501-S-7	7439-92-1	Lead	5.2	U	mg/kg
26-B-502	23-24.5	02/26/92	Yes	26-B-502-S-5A	7439-92-1	Lead	120.0		mg/kg
26-B-502	30-33	02/26/92	Yes	26-B-502-S-7	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-B-502	30-33	02/26/92	Yes	26-B-502-S-7	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-B-502	30-33	02/26/92	Yes	26-B-502-S-7	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-B-502	30-33	02/26/92	Yes	26-B-502-S-7	7439-92-1	Lead	53.0		mg/kg
26-B-503	50-51.5	07/10/92	Yes	26-B-503-S-11	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-B-503	50-51.5	07/10/92	Yes	26-B-503-S-11	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-B-503	50-51.5	07/10/92	Yes	26-B-503-S-11	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-B-503	50-51.5	07/10/92	Yes	26-B-503-S-11	7439-92-1	Lead	5.3	U	mg/kg
26-B-503	60-61.5	07/10/92	Yes	26-B-503-S-13	7439-92-1	Lead	5.3	U	mg/kg
26-B-503	75-76.5	07/13/92	Yes	26-B-503-S-16	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-B-503	75-76.5	07/13/92	Yes	26-B-503-S-16	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-B-503	75-76.5	07/13/92	Yes	26-B-503-S-16	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-B-503	75-76.5	07/13/92	Yes	26-B-503-S-16	7439-92-1	Lead	11.0		mg/kg
26-B-503	20-21.5	07/10/92	Yes	26-B-503-S-5-DAVG	7439-92-1	Lead	46.0		mg/kg
26-B-503	27.5-29	07/10/92	Yes	26-B-503-S-6A	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-B-503	27.5-29	07/10/92	Yes	26-B-503-S-6A	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-B-503	27.5-29	07/10/92	Yes	26-B-503-S-6A	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-B-503	25-26.5	07/10/92	Yes	26-B-503-S-6	7439-92-1	Lead	37.0		mg/kg
26-B-503	37.5-39	07/10/92	Yes	26-B-503-S-8A	7439-92-1	Lead	7.3		mg/kg
26-HA-501	0-1	06/30/92	Yes	26-HA-501-S-1	7440-38-2	Arsenic	4.8		mg/kg
26-HA-501	0-1	06/30/92	Yes	26-HA-501-S-1	7440-50-8	Copper	16.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-HA-501	0-1	06/30/92	Yes	26-HA-501-S-1	7439-92-1	Lead	170.0		mg/kg
26-HA-501	0-1	06/30/92	Yes	26-HA-501-S-1	7439-97-6	Mercury	0.3		mg/kg
26-HA-501	1-2	06/30/92	Yes	26-HA-501-S-2	7439-92-1	Lead	220.0		mg/kg
26-HA-503	1-2	06/30/92	Yes	26-HA-503-S-2	7439-92-1	Lead	1400.0		mg/kg
26-HA-504	0-1	06/30/92	Yes	26-HA-504-S-1	7439-92-1	Lead	100.0		mg/kg
26-HA-504	1-2	06/30/92	Yes	26-HA-504-S-2	7439-92-1	Lead	350.0		mg/kg
26-SS-403	0-0.5	11/11/93	Yes	26-SS-403	7440-38-2	Arsenic	13.0		mg/kg
26-SS-404	0-0.5	11/11/93	Yes	26-SS-404	7440-38-2	Arsenic	16.0		mg/kg
26-SS-501	0-0.5	03/23/92	Yes	26-SS-501	7439-92-1	Lead	5.7	U	mg/kg
26-SS-502	0-0.5	03/23/92	Yes	26-SS-502-DAVG	7439-92-1	Lead	120.0		mg/kg
26-SS-503	0-0.5	03/23/92	Yes	26-SS-503	7439-92-1	Lead	37.0		mg/kg
26-SS-504	0-0.5	03/23/92	Yes	26-SS-504	7439-92-1	Lead	26.0		mg/kg
26-TP-504	0-1	03/23/92	Yes	26-TP-504-S-1	7440-38-2	Arsenic	15.0		mg/kg
26-TP-504	0-1	03/23/92	Yes	26-TP-504-S-1	7440-50-8	Copper	16.0		mg/kg
26-TP-504	0-1	03/23/92	Yes	26-TP-504-S-1	7439-92-1	Lead	10.0		mg/kg
26-TP-504	0-1	03/23/92	Yes	26-TP-504-S-1	7439-97-6	Mercury	0.1	U	mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	7440-38-2	Arsenic	1.5		mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	7440-50-8	Copper	22.0		mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	7439-92-1	Lead	6.0	U	mg/kg
26-TP-504	3-6	03/23/92	Yes	26-TP-504-S-2	7439-97-6	Mercury	0.07	U	mg/kg
26-TP-504	8-10	03/23/92	Yes	26-TP-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-504	8-10	03/23/92	Yes	26-TP-504-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-504	8-10	03/23/92	Yes	26-TP-504-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-504	8-10	03/23/92	Yes	26-TP-504-S-3	7439-92-1	Lead	6.4		mg/kg
26-TP-505	0-1	03/23/92	Yes	26-TP-505-S-1	7439-92-1	Lead	43.0		mg/kg
26-TP-505	3-6	03/23/92	Yes	26-TP-505-S-2	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
26-TP-505	3-6	03/23/92	Yes	26-TP-505-S-2	98-95-3	Nitrobenzene	0.1	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-TP-505	3-6	03/23/92	Yes	26-TP-505-S-2	7439-92-1	Lead	9.0		mg/kg
26-TP-505	8-10	03/23/92	Yes	26-TP-505-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-505	8-10	03/23/92	Yes	26-TP-505-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-505	8-10	03/23/92	Yes	26-TP-505-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-505	8-10	03/23/92	Yes	26-TP-505-S-3	7439-92-1	Lead	5.1	U	mg/kg
26-TP-506	0-1	03/24/92	Yes	26-TP-506-S-1	7439-92-1	Lead	6.5	U	mg/kg
26-TP-506	3-6	03/24/92	Yes	26-TP-506-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-506	3-6	03/24/92	Yes	26-TP-506-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-506	3-6	03/24/92	Yes	26-TP-506-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-506	3-6	03/24/92	Yes	26-TP-506-S-2	7439-92-1	Lead	5.4	U	mg/kg
26-TP-506	8-10	03/24/92	Yes	26-TP-506-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-506	8-10	03/24/92	Yes	26-TP-506-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-506	8-10	03/24/92	Yes	26-TP-506-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-506	8-10	03/24/92	Yes	26-TP-506-S-3	7439-92-1	Lead	5.2	U	mg/kg
26-TP-510	0-1	03/24/92	Yes	26-TP-510-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-510	0-1	03/24/92	Yes	26-TP-510-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-510	0-1	03/24/92	Yes	26-TP-510-S-1-DAVG	98-95-3	Nitrobenzene	0.07	U	mg/kg
26-TP-510	0-1	03/24/92	Yes	26-TP-510-S-1-DAVG	7439-92-1	Lead	240.0		mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	7440-38-2	Arsenic	1.6		mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	7440-50-8	Copper	12.0		mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	7439-92-1	Lead	9.2		mg/kg
26-TP-510	3-6	03/24/92	Yes	26-TP-510-S-2	7439-97-6	Mercury	0.07	U	mg/kg
26-TP-510	8-10	03/24/92	Yes	26-TP-510-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
26-TP-510	8-10	03/24/92	Yes	26-TP-510-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
26-TP-510	8-10	03/24/92	Yes	26-TP-510-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
26-TP-510	8-10	03/24/92	Yes	26-TP-510-S-3	7439-92-1	Lead	54.0		mg/kg
26-TP-517	0-1	06/30/92	Yes	26-TP-517-S-1	7439-92-1	Lead	1500.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-TP-517	1-2	06/30/92	Yes	26-TP-517-S-2	7439-92-1	Lead	410.0		mg/kg
26-VS-10	0-0.5	09/15/99	Yes	26-VS-10	7440-38-2	Arsenic	12.0		mg/kg
26-VS-10	0-0.5	09/15/99	Yes	26-VS-10	7439-92-1	Lead	1700.0	J	mg/kg
26-VS-11	0-0.5	09/15/99	Yes	26-VS-11	7440-38-2	Arsenic	13.0		mg/kg
26-VS-11	0-0.5	09/15/99	Yes	26-VS-11	7439-92-1	Lead	2400.0	J	mg/kg
26-VS-12	0-0.5	09/15/99	Yes	26-VS-12	7440-38-2	Arsenic	15.0		mg/kg
26-VS-12	0-0.5	09/15/99	Yes	26-VS-12	7439-92-1	Lead	430.0	J	mg/kg
26-VS-1	0-0.5	09/15/99	Yes	26-VS-1	7440-38-2	Arsenic	7.1		mg/kg
26-VS-1	0-0.5	09/15/99	Yes	26-VS-1	7439-92-1	Lead	2500.0	J	mg/kg
26-VS-13	0-0.5	09/15/99	Yes	26-VS-13	7440-38-2	Arsenic	22.0		mg/kg
26-VS-13	0-0.5	09/15/99	Yes	26-VS-13	7439-92-1	Lead	510.0	J	mg/kg
26-VS-14	0-0.5	09/15/99	Yes	26-VS-14	7440-38-2	Arsenic	8.6		mg/kg
26-VS-14	0-0.5	09/15/99	Yes	26-VS-14	7439-92-1	Lead	78.0	J	mg/kg
26-VS-15	0-0.5	09/15/99	Yes	26-VS-15	7440-38-2	Arsenic	25.0		mg/kg
26-VS-15	0-0.5	09/15/99	Yes	26-VS-15	7439-92-1	Lead	57.0	J	mg/kg
26-VS-16	0-0.5	09/15/99	Yes	26-VS-16	7440-38-2	Arsenic	12.0		mg/kg
26-VS-16	0-0.5	09/15/99	Yes	26-VS-16	7439-92-1	Lead	2400.0	J	mg/kg
26-VS-17	1-1.5	09/15/99	Yes	26-VS-17	7440-38-2	Arsenic	9.8		mg/kg
26-VS-17	1-1.5	09/15/99	Yes	26-VS-17	7439-92-1	Lead	3500.0		mg/kg
26-VS-18	1-1.5	09/15/99	Yes	26-VS-18	7440-38-2	Arsenic	4.6		mg/kg
26-VS-18	1-1.5	09/15/99	Yes	26-VS-18	7439-92-1	Lead	1300.0		mg/kg
26-VS-19	1-1.5	09/15/99	Yes	26-VS-19	7440-38-2	Arsenic	3.6		mg/kg
26-VS-19	1-1.5	09/15/99	Yes	26-VS-19	7439-92-1	Lead	3400.0		mg/kg
26-VS-20	1-1.5	09/15/99	Yes	26-VS-20	7440-38-2	Arsenic	11.0		mg/kg
26-VS-20	1-1.5	09/15/99	Yes	26-VS-20	7439-92-1	Lead	2700.0		mg/kg
26-VS-21	1-1.5	09/15/99	Yes	26-VS-21	7440-38-2	Arsenic	3.1		mg/kg
26-VS-21	1-1.5	09/15/99	Yes	26-VS-21	7439-92-1	Lead	160.0		mg/kg
26-VS-22	1-1.5	09/15/99	Yes	26-VS-22	7440-38-2	Arsenic	2.9		mg/kg
26-VS-22	1-1.5	09/15/99	Yes	26-VS-22	7439-92-1	Lead	59.0		mg/kg
26-VS-24	1-1.5	09/15/99	Yes	26-VS-24	7440-38-2	Arsenic	8.5		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-VS-24	1-1.5	09/15/99	Yes	26-VS-24	7439-92-1	Lead	380.0		mg/kg
26-VS-25	1-1.5	09/15/99	Yes	26-VS-25	7440-38-2	Arsenic	3.6		mg/kg
26-VS-25	1-1.5	09/15/99	Yes	26-VS-25	7439-92-1	Lead	1200.0		mg/kg
26-VS-27	0-0.5	09/21/99	Yes	26-VS-27	7440-38-2	Arsenic	6.9		mg/kg
26-VS-27	0-0.5	09/21/99	Yes	26-VS-27	7439-92-1	Lead	14.0		mg/kg
26-VS-27A	2-2.5	09/30/99	Yes	26-VS-27A	7440-38-2	Arsenic	4.1		mg/kg
26-VS-27A	2-2.5	09/30/99	Yes	26-VS-27A	7439-92-1	Lead	15.0		mg/kg
26-VS-28	0-0.5	09/21/99	Yes	26-VS-28	7440-38-2	Arsenic	52.0		mg/kg
26-VS-28	0-0.5	09/21/99	Yes	26-VS-28	7439-92-1	Lead	43.0		mg/kg
26-VS-28A	2-2.5	09/30/99	Yes	26-VS-28A	7440-38-2	Arsenic	11.0		mg/kg
26-VS-28A	2-2.5	09/30/99	Yes	26-VS-28A	7439-92-1	Lead	3300.0		mg/kg
26-VS-29	0-0.5	09/21/99	Yes	26-VS-29	7440-38-2	Arsenic	34.0		mg/kg
26-VS-29	0-0.5	09/21/99	Yes	26-VS-29	7439-92-1	Lead	73.0		mg/kg
26-VS-30	0-0.5	09/21/99	Yes	26-VS-30	7440-38-2	Arsenic	45.0		mg/kg
26-VS-30	0-0.5	09/21/99	Yes	26-VS-30	7439-92-1	Lead	19.0		mg/kg
26-VS-31	1-1.5	09/21/99	Yes	26-VS-31	7440-38-2	Arsenic	5.3		mg/kg
26-VS-31	1-1.5	09/21/99	Yes	26-VS-31	7439-92-1	Lead	5.1		mg/kg
26-VS-33	1-1.5	09/21/99	Yes	26-VS-33	7440-38-2	Arsenic	28.0		mg/kg
26-VS-33	1-1.5	09/21/99	Yes	26-VS-33	7439-92-1	Lead	4.9		mg/kg
26-VS-34	1-1.5	09/21/99	Yes	26-VS-34	7440-38-2	Arsenic	15.0		mg/kg
26-VS-34	1-1.5	09/21/99	Yes	26-VS-34	7439-92-1	Lead	5.3		mg/kg
26-VS-35	1-1.5	09/21/99	Yes	26-VS-35-DAVG	7440-38-2	Arsenic	6.0		mg/kg
26-VS-35	1-1.5	09/21/99	Yes	26-VS-35-DAVG	7439-92-1	Lead	3.7		mg/kg
26-VS-36	0-0.5	09/21/99	Yes	26-VS-36	7440-38-2	Arsenic	220.0		mg/kg
26-VS-36	0-0.5	09/21/99	Yes	26-VS-36	7439-92-1	Lead	84.0		mg/kg
26-VS-37	0-0.5	09/21/99	Yes	26-VS-37	7440-38-2	Arsenic	3.0		mg/kg
26-VS-37	0-0.5	09/21/99	Yes	26-VS-37	7439-92-1	Lead	6.9		mg/kg
26-VS-38	0-0.5	09/21/99	Yes	26-VS-38	7440-38-2	Arsenic	17.0		mg/kg
26-VS-38	0-0.5	09/21/99	Yes	26-VS-38	7439-92-1	Lead	29.0		mg/kg
26-VS-40	1-1.5	09/21/99	Yes	26-VS-40	7440-38-2	Arsenic	4.8		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
26-VS-40	1-1.5	09/21/99	Yes	26-VS-40	7439-92-1	Lead	19.0		mg/kg
26-VS-41	1-1.5	09/21/99	Yes	26-VS-41	7440-38-2	Arsenic	11.0		mg/kg
26-VS-41	1-1.5	09/21/99	Yes	26-VS-41	7439-92-1	Lead	8.2		mg/kg
26-VS-42	1-1.5	09/21/99	Yes	26-VS-42	7440-38-2	Arsenic	15.0		mg/kg
26-VS-42	1-1.5	09/21/99	Yes	26-VS-42	7439-92-1	Lead	16.0		mg/kg
26-VS-43	1-1.5	09/21/99	Yes	26-VS-43	7440-38-2	Arsenic	6.3		mg/kg
26-VS-43	1-1.5	09/21/99	Yes	26-VS-43	7439-92-1	Lead	4.0		mg/kg
26-VS-44	0-0.5	09/21/99	Yes	26-VS-44-DAVG	7440-38-2	Arsenic	180.0		mg/kg
26-VS-44	0-0.5	09/21/99	Yes	26-VS-44-DAVG	7439-92-1	Lead	24.0		mg/kg
26-VS-50	0-0.5	04/19/00	Yes	26-VS-50	7440-38-2	Arsenic	22.0		mg/kg
26-VS-50	0-0.5	04/19/00	Yes	26-VS-50	7439-92-1	Lead	430.0		mg/kg
26-VS-56	2-2.5	04/19/00	Yes	26-VS-56-DAVG	7440-38-2	Arsenic	3.0		mg/kg
26-VS-56	2-2.5	04/19/00	Yes	26-VS-56-DAVG	7439-92-1	Lead	525.0		mg/kg
26-VS-58	4-4.5	05/24/00	Yes	26-VS-58	7440-38-2	Arsenic	6.5		mg/kg
26-VS-58	4-4.5	05/24/00	Yes	26-VS-58	7439-92-1	Lead	470.0		mg/kg
3-TP-1	0-3	04/22/87	Yes	3-TP-1,S-1-DAVG	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-1	3-6	04/22/87	Yes	3-TP-1,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-2	0-3	04/22/87	Yes	3-TP-2,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-2	3-6	04/22/87	Yes	3-TP-2,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-3	0-3	04/26/87	Yes	3-TP-3,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-3	3-6	04/26/87	Yes	3-TP-3,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-4	0-3	04/21/87	Yes	3-TP-4,S-1-DAVG	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-4	3-6	04/21/87	Yes	3-TP-4,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-5	0-3	04/21/87	Yes	3-TP-5,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-5	3-6	04/21/87	Yes	3-TP-5,S-2-DAVG	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-6	0-3	04/21/87	Yes	3-TP-6,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
3-TP-6	3-6	04/21/87	Yes	3-TP-6,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
36-SS-07	0-0.5	01/10/92	Yes	36-SS-07	7439-92-1	Lead	92.0		mg/kg
36-SS-10	0-0.5	01/10/92	Yes	36-SS-10	7439-92-1	Lead	140.0		mg/kg
36-SS-18	0-0.5	04/27/92	Yes	36-SS-18	7439-92-1	Lead	23.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
36-SS-20	0-0.5	04/27/92	Yes	36-SS-20	7439-92-1	Lead	5.0	U	mg/kg
36-SS-21	0-0.5	04/27/92	Yes	36-SS-21	7439-92-1	Lead	120.0		mg/kg
36-SS-24	0-0.5	04/27/92	Yes	36-SS-24	7439-92-1	Lead	5.0	U	mg/kg
36-SS-25	0-0.5	04/27/92	Yes	36-SS-25	7439-92-1	Lead	29.0		mg/kg
36-SS-26	0-0.5	04/27/92	Yes	36-SS-26	7439-92-1	Lead	1300.0		mg/kg
36-SS-27	0-0.5	04/30/92	Yes	36-SS-27	7439-92-1	Lead	130.0		mg/kg
36-SS-31	0-0.5	04/27/92	Yes	36-SS-31	7439-92-1	Lead	1000.0		mg/kg
36-SS-32	0-0.5	04/27/92	Yes	36-SS-32	7439-92-1	Lead	74.0		mg/kg
36-TP-1	3-5	04/27/92	Yes	36-TP-1-S-3	7439-92-1	Lead	240.0		mg/kg
36-TP-2	3-5	04/27/92	Yes	36-TP-2-S-3	7439-92-1	Lead	10.0		mg/kg
36-TP-4	3-5	04/27/92	Yes	36-TP-4-S-3	7439-92-1	Lead	5.0	U	mg/kg
36-TP-5	3-5	04/27/92	Yes	36-TP-5-S-3	7439-92-1	Lead	5.0	U	mg/kg
36-TP-6	0-1	04/27/92	Yes	36-TP-6-S-1	7439-92-1	Lead	75.0		mg/kg
36-TP-6	1-2	04/27/92	Yes	36-TP-6-S-2	7439-92-1	Lead	5.0	U	mg/kg
36-TP-6	3-5	04/27/92	Yes	36-TP-6-S-3	7439-92-1	Lead	5.0	U	mg/kg
36-VS-10	1-1.5	09/20/99	Yes	36-VS-10	7440-38-2	Arsenic	9.0		mg/kg
36-VS-10	1-1.5	09/20/99	Yes	36-VS-10	7439-92-1	Lead	1800.0		mg/kg
36-VS-11	1-1.5	09/20/99	Yes	36-VS-11	7440-38-2	Arsenic	4.0		mg/kg
36-VS-11	1-1.5	09/20/99	Yes	36-VS-11	7439-92-1	Lead	100.0		mg/kg
36-VS-12	1-1.5	09/20/99	Yes	36-VS-12	7440-38-2	Arsenic	2.4		mg/kg
36-VS-12	1-1.5	09/20/99	Yes	36-VS-12	7439-92-1	Lead	44.0		mg/kg
36-VS-13	0-0.5	09/20/99	Yes	36-VS-13	7440-38-2	Arsenic	120.0		mg/kg
36-VS-13	0-0.5	09/20/99	Yes	36-VS-13	7439-92-1	Lead	93.0		mg/kg
36-VS-15	1-1.5	09/20/99	Yes	36-VS-15	7440-38-2	Arsenic	47.0		mg/kg
36-VS-15	1-1.5	09/20/99	Yes	36-VS-15	7439-92-1	Lead	3800.0		mg/kg
36-VS-16	0-0.5	09/20/99	Yes	36-VS-16	7440-38-2	Arsenic	91.0		mg/kg
36-VS-16	0-0.5	09/20/99	Yes	36-VS-16	7439-92-1	Lead	460.0		mg/kg
36-VS-17	0-0.5	09/20/99	Yes	36-VS-17	7440-38-2	Arsenic	240.0		mg/kg
36-VS-17	0-0.5	09/20/99	Yes	36-VS-17	7439-92-1	Lead	210.0		mg/kg
36-VS-18	1-1.5	09/20/99	Yes	36-VS-18	7440-38-2	Arsenic	330.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
36-VS-18	1-1.5	09/20/99	Yes	36-VS-18	7439-92-1	Lead	14.0		mg/kg
36-VS-19	0-0.5	10/01/99	Yes	36-VS-19	7440-38-2	Arsenic	28.0		mg/kg
36-VS-19	0-0.5	10/01/99	Yes	36-VS-19	7439-92-1	Lead	170.0		mg/kg
36-VS-20	2-2.5	10/01/99	Yes	36-VS-20	7440-38-2	Arsenic	6.2		mg/kg
36-VS-20	2-2.5	10/01/99	Yes	36-VS-20	7439-92-1	Lead	11.0		mg/kg
36-VS-21	2-2.5	10/01/99	Yes	36-VS-21	7440-38-2	Arsenic	4.1	U	mg/kg
36-VS-21	2-2.5	10/01/99	Yes	36-VS-21	7439-92-1	Lead	6.9		mg/kg
36-VS-22	2-2.5	10/01/99	Yes	36-VS-22	7440-38-2	Arsenic	22.0		mg/kg
36-VS-22	2-2.5	10/01/99	Yes	36-VS-22	7439-92-1	Lead	700.0		mg/kg
36-VS-5	0-0.5	09/20/99	Yes	36-VS-5	7440-38-2	Arsenic	5.9		mg/kg
36-VS-5	0-0.5	09/20/99	Yes	36-VS-5	7439-92-1	Lead	280.0		mg/kg
36-VS-6	0-0.5	09/20/99	Yes	36-VS-6	7440-38-2	Arsenic	2.7		mg/kg
36-VS-6	0-0.5	09/20/99	Yes	36-VS-6	7439-92-1	Lead	9.4		mg/kg
36-VS-8	1-1.5	09/20/99	Yes	36-VS-8	7440-38-2	Arsenic	3.0		mg/kg
36-VS-8	1-1.5	09/20/99	Yes	36-VS-8	7439-92-1	Lead	37.0		mg/kg
36-VS-9	0-0.5	09/20/99	Yes	36-VS-9	7440-38-2	Arsenic	2.1	U	mg/kg
36-VS-9	0-0.5	09/20/99	Yes	36-VS-9	7439-92-1	Lead	23.0		mg/kg
38-B-501	15-16.5	03/25/92	Yes	38-B-501-S-5	7440-38-2	Arsenic	1.6		mg/kg
38-B-501	15-16.5	03/25/92	Yes	38-B-501-S-5	7440-50-8	Copper	22.0		mg/kg
38-B-501	15-16.5	03/25/92	Yes	38-B-501-S-5	7439-92-1	Lead	8.2		mg/kg
38-B-501	15-16.5	03/25/92	Yes	38-B-501-S-5	7439-97-6	Mercury	0.1	J	mg/kg
38-B-501	16.5-19.	03/25/92	Yes	38-B-501-S-6	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
38-B-501	16.5-19.	03/25/92	Yes	38-B-501-S-6	98-95-3	Nitrobenzene	0.1	U	mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	98-95-3	Nitrobenzene	0.1	U	mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	7440-38-2	Arsenic	1.5		mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	7440-50-8	Copper	14.0		mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	7439-92-1	Lead	6.2		mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	7439-97-6	Mercury	0.1	UJ	mg/kg
38-B-501	20-23	03/25/92	Yes	38-B-501-S-7	127-18-4	Tetrachloroethene	0.05	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-HA-502	0-1	10/30/92	Yes	38-HA-502-S-1	7440-38-2	Arsenic	32.0	J	mg/kg
38-HA-502	0-1	10/30/92	Yes	38-HA-502-S-1	7439-92-1	Lead	25.0	J	mg/kg
38-HA-502	0-1	10/30/92	Yes	38-HA-502-S-1	7439-97-6	Mercury	0.3		mg/kg
38-HA-502	2-3	10/30/92	Yes	38-HA-502-S-2	7440-38-2	Arsenic	4.1	J	mg/kg
38-HA-502	2-3	10/30/92	Yes	38-HA-502-S-2	7439-92-1	Lead	6.2	UJ	mg/kg
38-HA-502	2-3	10/30/92	Yes	38-HA-502-S-2	7439-97-6	Mercury	0.1	U	mg/kg
38-HA-503	0-1	10/30/92	Yes	38-HA-503-S-1	7440-38-2	Arsenic	31.0	J	mg/kg
38-HA-503	0-1	10/30/92	Yes	38-HA-503-S-1	7439-92-1	Lead	39.0	J	mg/kg
38-HA-503	0-1	10/30/92	Yes	38-HA-503-S-1	7439-97-6	Mercury	0.2		mg/kg
38-HA-503	2-3	10/30/92	Yes	38-HA-503-S-2	7440-38-2	Arsenic	4.9	J	mg/kg
38-HA-503	2-3	10/30/92	Yes	38-HA-503-S-2	7439-92-1	Lead	6.2	UJ	mg/kg
38-HA-503	2-3	10/30/92	Yes	38-HA-503-S-2	7439-97-6	Mercury	0.1	U	mg/kg
38-SS-401	0-0.5	11/10/93	Yes	38-SS-401	7440-38-2	Arsenic	13.0	J	mg/kg
38-SS-501	0-0.5	04/20/92	Yes	38-SS-501	7440-38-2	Arsenic	220.0		mg/kg
38-SS-501	0-0.5	04/20/92	Yes	38-SS-501	7440-50-8	Copper	38.0		mg/kg
38-SS-501	0-0.5	04/20/92	Yes	38-SS-501	7439-92-1	Lead	120.0		mg/kg
38-SS-501	0-0.5	04/20/92	Yes	38-SS-501	7439-97-6	Mercury	0.1		mg/kg
38-SS-505	0-0.5	04/20/92	Yes	38-SS-505	7440-38-2	Arsenic	50.0		mg/kg
38-SS-505	0-0.5	04/20/92	Yes	38-SS-505	7440-50-8	Copper	23.0		mg/kg
38-SS-505	0-0.5	04/20/92	Yes	38-SS-505	7439-92-1	Lead	38.0		mg/kg
38-SS-505	0-0.5	04/20/92	Yes	38-SS-505	7439-97-6	Mercury	0.2		mg/kg
38-SS-507	0-0.5	04/20/92	Yes	38-SS-507	7440-38-2	Arsenic	60.0		mg/kg
38-SS-507	0-0.5	04/20/92	Yes	38-SS-507	7440-50-8	Copper	19.0		mg/kg
38-SS-507	0-0.5	04/20/92	Yes	38-SS-507	7439-92-1	Lead	84.0		mg/kg
38-SS-507	0-0.5	04/20/92	Yes	38-SS-507	7439-97-6	Mercury	0.1		mg/kg
38-SS-508	0-0.5	04/20/92	Yes	38-SS-508	7440-38-2	Arsenic	270.0		mg/kg
38-SS-508	0-0.5	04/20/92	Yes	38-SS-508	7440-50-8	Copper	35.0		mg/kg
38-SS-508	0-0.5	04/20/92	Yes	38-SS-508	7439-92-1	Lead	340.0		mg/kg
38-SS-508	0-0.5	04/20/92	Yes	38-SS-508	7439-97-6	Mercury	0.1		mg/kg
38-SS-509	0-0.5	04/20/92	Yes	38-SS-509	7440-38-2	Arsenic	59.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-SS-509	0-0.5	04/20/92	Yes	38-SS-509	7440-50-8	Copper	55.0		mg/kg
38-SS-509	0-0.5	04/20/92	Yes	38-SS-509	7439-92-1	Lead	120.0		mg/kg
38-SS-509	0-0.5	04/20/92	Yes	38-SS-509	7439-97-6	Mercury	0.2		mg/kg
38-SS-510	0-0.5	04/20/92	Yes	38-SS-510	7440-38-2	Arsenic	110.0		mg/kg
38-SS-510	0-0.5	04/20/92	Yes	38-SS-510	7440-50-8	Copper	51.0		mg/kg
38-SS-510	0-0.5	04/20/92	Yes	38-SS-510	7439-92-1	Lead	200.0		mg/kg
38-SS-510	0-0.5	04/20/92	Yes	38-SS-510	7439-97-6	Mercury	11.0		mg/kg
38-SS-511	0-0.5	04/21/92	Yes	38-SS-511	7440-38-2	Arsenic	25.0		mg/kg
38-SS-511	0-0.5	04/21/92	Yes	38-SS-511	7440-50-8	Copper	17.0		mg/kg
38-SS-511	0-0.5	04/21/92	Yes	38-SS-511	7439-92-1	Lead	38.0		mg/kg
38-SS-511	0-0.5	04/21/92	Yes	38-SS-511	7439-97-6	Mercury	7.2		mg/kg
38-SS-512	0-0.5	04/21/92	Yes	38-SS-512	DNT-TOTAL	DNT - Total	0.5	U	mg/kg
38-SS-512	0-0.5	04/21/92	Yes	38-SS-512	98-95-3	Nitrobenzene	0.2	U	mg/kg
38-SS-512	0-0.5	04/21/92	Yes	38-SS-512	7440-38-2	Arsenic	180.0		mg/kg
38-SS-512	0-0.5	04/21/92	Yes	38-SS-512	7440-50-8	Copper	72.0		mg/kg
38-SS-512	0-0.5	04/21/92	Yes	38-SS-512	7439-92-1	Lead	420.0		mg/kg
38-SS-512	0-0.5	04/21/92	Yes	38-SS-512	7439-97-6	Mercury	6.0		mg/kg
38-SS-514	0-0.5	10/30/92	Yes	38-SS-514	7440-38-2	Arsenic	475.0	J	mg/kg
38-SS-514	0-0.5	10/30/92	Yes	38-SS-514	7439-92-1	Lead	36.0	J	mg/kg
38-SS-514	0-0.5	10/30/92	Yes	38-SS-514	7439-97-6	Mercury	0.6		mg/kg
38-SS-515	0-0.5	10/30/92	Yes	38-SS-515	7440-38-2	Arsenic	35.0	J	mg/kg
38-SS-515	0-0.5	10/30/92	Yes	38-SS-515	7439-92-1	Lead	32.0	J	mg/kg
38-SS-515	0-0.5	10/30/92	Yes	38-SS-515	7439-97-6	Mercury	0.1		mg/kg
38-SS-516	0-0.5	10/30/92	Yes	38-SS-516-DAVG	7440-38-2	Arsenic	135.0	J	mg/kg
38-SS-516	0-0.5	10/30/92	Yes	38-SS-516-DAVG	7439-92-1	Lead	500.0		mg/kg
38-SS-516	0-0.5	10/30/92	Yes	38-SS-516-DAVG	7439-97-6	Mercury	0.9		mg/kg
38-SS-517	0-0.5	10/30/92	Yes	38-SS-517	7440-38-2	Arsenic	62.0	J	mg/kg
38-SS-517	0-0.5	10/30/92	Yes	38-SS-517	7439-92-1	Lead	120.0	J	mg/kg
38-SS-517	0-0.5	10/30/92	Yes	38-SS-517	7439-97-6	Mercury	0.2		mg/kg
38-SS-518	0-0.5	10/30/92	Yes	38-SS-518	7440-38-2	Arsenic	47.0	J	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-SS-518	0-0.5	10/30/92	Yes	38-SS-518	7439-92-1	Lead	1200.0	J	mg/kg
38-SS-518	0-0.5	10/30/92	Yes	38-SS-518	7439-97-6	Mercury	1.2		mg/kg
38-SS-519	0-0.5	10/30/92	Yes	38-SS-519	7440-38-2	Arsenic	59.0	J	mg/kg
38-SS-519	0-0.5	10/30/92	Yes	38-SS-519	7439-92-1	Lead	110.0	J	mg/kg
38-SS-519	0-0.5	10/30/92	Yes	38-SS-519	7439-97-6	Mercury	1.2		mg/kg
38-VS-118	1-1.5	10/11/99	Yes	38-VS-118	7440-38-2	Arsenic	20.0		mg/kg
38-VS-118	1-1.5	10/11/99	Yes	38-VS-118	7439-92-1	Lead	13.0		mg/kg
38-VS-119	0-0.5	10/11/99	Yes	38-VS-119	7440-38-2	Arsenic	51.0		mg/kg
38-VS-119	0-0.5	10/11/99	Yes	38-VS-119	7439-92-1	Lead	52.0		mg/kg
38-VS-120	1-1.5	10/11/99	Yes	38-VS-120	7440-38-2	Arsenic	76.0		mg/kg
38-VS-120	1-1.5	10/11/99	Yes	38-VS-120	7439-92-1	Lead	77.0		mg/kg
38-VS-121	1-1.5	10/11/99	Yes	38-VS-121	7440-38-2	Arsenic	35.0		mg/kg
38-VS-121	1-1.5	10/11/99	Yes	38-VS-121	7439-92-1	Lead	87.0		mg/kg
38-VS-126	2-2.5	10/11/99	Yes	38-VS-126	7440-38-2	Arsenic	37.0		mg/kg
38-VS-126	2-2.5	10/11/99	Yes	38-VS-126	7439-92-1	Lead	13.0		mg/kg
38-VS-150	2-2.5	08/01/01	Yes	01-C004-SS[38-VS-150]C2-2.00	7440-38-2	Arsenic	11.0		mg/kg
38-VS-150	2-2.5	08/01/01	Yes	01-C004-SS[38-VS-150]C2-2.00	7439-92-1	Lead	26.0		mg/kg
38-VS-151	0-0.5	08/01/01	Yes	01-C004-SS[38-VS-151]C2-2.00	7440-38-2	Arsenic	23.0		mg/kg
38-VS-151	0-0.5	08/01/01	Yes	01-C004-SS[38-VS-151]C2-2.00	7439-92-1	Lead	31.0		mg/kg
38-VS-152	0-0.5	08/01/01	Yes	01-C004-SS[38-VS-152]C2-2.00	7440-38-2	Arsenic	330.0		mg/kg
38-VS-152	0-0.5	08/01/01	Yes	01-C004-SS[38-VS-152]C2-2.00	7439-92-1	Lead	44.0		mg/kg
38-VS-153	0-0.5	08/01/01	Yes	01-C004-SS[38-VS-153]C2-2.00	7440-38-2	Arsenic	8.1		mg/kg
38-VS-153	0-0.5	08/01/01	Yes	01-C004-SS[38-VS-153]C2-2.00	7439-92-1	Lead	13.0		mg/kg
38-VS-33	1-1.5	09/27/99	Yes	38-VS-33	7440-38-2	Arsenic	4.3		mg/kg
38-VS-33	1-1.5	09/27/99	Yes	38-VS-33	7439-92-1	Lead	5.6		mg/kg
38-VS-34	1-1.5	09/27/99	Yes	38-VS-34	7440-38-2	Arsenic	51.0		mg/kg
38-VS-34	1-1.5	09/27/99	Yes	38-VS-34	7439-92-1	Lead	20.0		mg/kg
38-VS-35	0-0.5	09/27/99	Yes	38-VS-35	7440-38-2	Arsenic	12.0		mg/kg
38-VS-35	0-0.5	09/27/99	Yes	38-VS-35	7439-92-1	Lead	39.0		mg/kg
38-VS-36	0-0.5	09/27/99	Yes	38-VS-36	7440-38-2	Arsenic	210.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-VS-36	0-0.5	09/27/99	Yes	38-VS-36	7439-92-1	Lead	47.0		mg/kg
38-VS-38	1-1.5	09/27/99	Yes	38-VS-38	7440-38-2	Arsenic	21.0		mg/kg
38-VS-38	1-1.5	09/27/99	Yes	38-VS-38	7439-92-1	Lead	24.0		mg/kg
38-VS-40	0-0.5	09/27/99	Yes	38-VS-40	7440-38-2	Arsenic	260.0		mg/kg
38-VS-40	0-0.5	09/27/99	Yes	38-VS-40	7439-92-1	Lead	110.0		mg/kg
38-VS-41	1-1.5	09/27/99	Yes	38-VS-41	7440-38-2	Arsenic	10.0		mg/kg
38-VS-41	1-1.5	09/27/99	Yes	38-VS-41	7439-92-1	Lead	8.0		mg/kg
38-VS-42	1-1.5	09/27/99	Yes	38-VS-42	7440-38-2	Arsenic	14.0		mg/kg
38-VS-42	1-1.5	09/27/99	Yes	38-VS-42	7439-92-1	Lead	4.9		mg/kg
38-VS-43	1-1.5	09/27/99	Yes	38-VS-43	7440-38-2	Arsenic	5.7		mg/kg
38-VS-43	1-1.5	09/27/99	Yes	38-VS-43	7439-92-1	Lead	3.2		mg/kg
38-VS-44	1-1.5	09/27/99	Yes	38-VS-44	7440-38-2	Arsenic	20.0		mg/kg
38-VS-44	1-1.5	09/27/99	Yes	38-VS-44	7439-92-1	Lead	4.5		mg/kg
38-VS-45	0-0.5	09/27/99	Yes	38-VS-45	7440-38-2	Arsenic	340.0		mg/kg
38-VS-45	0-0.5	09/27/99	Yes	38-VS-45	7439-92-1	Lead	56.0		mg/kg
38-VS-47	1-1.5	09/27/99	Yes	38-VS-47-DAVG	7440-38-2	Arsenic	70.0		mg/kg
38-VS-47	1-1.5	09/27/99	Yes	38-VS-47-DAVG	7439-92-1	Lead	23.5		mg/kg
38-VS-48	0-0.5	09/27/99	Yes	38-VS-48-DAVG	7440-38-2	Arsenic	185.0		mg/kg
38-VS-48	0-0.5	09/27/99	Yes	38-VS-48-DAVG	7439-92-1	Lead	35.5		mg/kg
38-VS-50	1-1.5	09/27/99	Yes	38-VS-50	7440-38-2	Arsenic	30.0		mg/kg
38-VS-50	1-1.5	09/27/99	Yes	38-VS-50	7439-92-1	Lead	23.0		mg/kg
38-VS-51	1-1.5	09/27/99	Yes	38-VS-51	7440-38-2	Arsenic	25.0		mg/kg
38-VS-51	1-1.5	09/27/99	Yes	38-VS-51	7439-92-1	Lead	12.0		mg/kg
38-VS-52	0-0.5	09/27/99	Yes	38-VS-52	7440-38-2	Arsenic	38.0		mg/kg
38-VS-52	0-0.5	09/27/99	Yes	38-VS-52	7439-92-1	Lead	64.0		mg/kg
38-VS-53	0-0.5	09/27/99	Yes	38-VS-53	7440-38-2	Arsenic	140.0		mg/kg
38-VS-53	0-0.5	09/27/99	Yes	38-VS-53	7439-92-1	Lead	170.0		mg/kg
38-VS-54	1-1.5	09/27/99	Yes	38-VS-54	7440-38-2	Arsenic	37.0		mg/kg
38-VS-54	1-1.5	09/27/99	Yes	38-VS-54	7439-92-1	Lead	20.0		mg/kg
38-VS-55	1-1.5	09/27/99	Yes	38-VS-55	7440-38-2	Arsenic	120.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-VS-55	1-1.5	09/27/99	Yes	38-VS-55	7439-92-1	Lead	39.0		mg/kg
38-VS-56	0-0.5	09/27/99	No	38-VS-56	7440-38-2	Arsenic	970.0		mg/kg
38-VS-56	0-0.5	09/27/99	No	38-VS-56	7439-92-1	Lead	100.0		mg/kg
38-VS-57	0-0.5	09/28/99	Yes	38-VS-57	7440-38-2	Arsenic	45.0		mg/kg
38-VS-57	0-0.5	09/28/99	Yes	38-VS-57	7439-92-1	Lead	44.0		mg/kg
38-VS-65	0-0.5	09/28/99	Yes	38-VS-65	7440-38-2	Arsenic	170.0		mg/kg
38-VS-65	0-0.5	09/28/99	Yes	38-VS-65	7439-92-1	Lead	63.0		mg/kg
38-VS-66	1-1.5	09/28/99	Yes	38-VS-66	7440-38-2	Arsenic	280.0		mg/kg
38-VS-66	1-1.5	09/28/99	Yes	38-VS-66	7439-92-1	Lead	39.0		mg/kg
38-VS-67	1-1.5	09/28/99	Yes	38-VS-67	7440-38-2	Arsenic	15.0		mg/kg
38-VS-67	1-1.5	09/28/99	Yes	38-VS-67	7439-92-1	Lead	11.0		mg/kg
38-VS-69	0-0.5	09/28/99	Yes	38-VS-69	7440-38-2	Arsenic	120.0		mg/kg
38-VS-69	0-0.5	09/28/99	Yes	38-VS-69	7439-92-1	Lead	100.0		mg/kg
38-VS-70	1-1.5	09/28/99	Yes	38-VS-70	7440-38-2	Arsenic	13.0		mg/kg
38-VS-70	1-1.5	09/28/99	Yes	38-VS-70	7439-92-1	Lead	9.6		mg/kg
38-VS-71	1-1.5	09/28/99	Yes	38-VS-71	7440-38-2	Arsenic	110.0		mg/kg
38-VS-71	1-1.5	09/28/99	Yes	38-VS-71	7439-92-1	Lead	15.0		mg/kg
38-VS-72	0-0.5	09/28/99	Yes	38-VS-72	7440-38-2	Arsenic	77.0		mg/kg
38-VS-72	0-0.5	09/28/99	Yes	38-VS-72	7439-92-1	Lead	150.0		mg/kg
38-VS-73	0-0.5	09/28/99	Yes	38-VS-73	7440-38-2	Arsenic	69.0		mg/kg
38-VS-73	0-0.5	09/28/99	Yes	38-VS-73	7439-92-1	Lead	100.0		mg/kg
38-VS-7	0-1	07/15/92	Yes	38-VS-7-S-1	7440-38-2	Arsenic	35.0		mg/kg
38-VS-7	0-1	07/15/92	Yes	38-VS-7-S-1	7440-50-8	Copper	31.0		mg/kg
38-VS-7	0-1	07/15/92	Yes	38-VS-7-S-1	7439-92-1	Lead	68.0		mg/kg
38-VS-7	0-1	07/15/92	Yes	38-VS-7-S-1	7439-97-6	Mercury	0.9		mg/kg
38-VS-7	3-6	07/15/92	Yes	38-VS-7-S-2	7440-38-2	Arsenic	6.2		mg/kg
38-VS-7	3-6	07/15/92	Yes	38-VS-7-S-2	7440-50-8	Copper	9.6		mg/kg
38-VS-7	3-6	07/15/92	Yes	38-VS-7-S-2	7439-92-1	Lead	130.0		mg/kg
38-VS-7	3-6	07/15/92	Yes	38-VS-7-S-2	7439-97-6	Mercury	0.1		mg/kg
39-B-1	0.5-2	01/08/92	Yes	39-B-1-S-6	7439-97-6	Mercury	0.5		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
39-B-1	2-3.5	01/08/92	Yes	39-B-1-S-7	7439-97-6	Mercury	0.4		mg/kg
39-SS-01	0-0.5	01/07/92	Yes	39-SS-01	7439-97-6	Mercury	0.5		mg/kg
39-SS-03	0-0.5	01/07/92	Yes	39-SS-03	7439-97-6	Mercury	1.9		mg/kg
39-SS-04	0-0.5	01/07/92	Yes	39-SS-04	7439-97-6	Mercury	0.8		mg/kg
39-SS-08	0-0.5	01/07/92	Yes	39-SS-08	7439-97-6	Mercury	1.4		mg/kg
39-SS-12	0-0.5	01/07/92	Yes	39-SS-12	7439-97-6	Mercury	0.1		mg/kg
39-SS-16	0-0.5	01/07/92	Yes	39-SS-16	7439-97-6	Mercury	0.4		mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	7440-38-2	Arsenic	1.3		mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	7440-50-8	Copper	13.0		mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	7439-92-1	Lead	26.0		mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	7439-97-6	Mercury	2.6	J	mg/kg
39-VS-10	2-9	04/21/92	Yes	39-VS-10	127-18-4	Tetrachloroethene	0.05	U	mg/kg
39-VS-11	0-0.5	04/20/92	Yes	39-VS-11	7439-92-1	Lead	110.0		mg/kg
39-VS-11	0-0.5	04/20/92	Yes	39-VS-11	7439-97-6	Mercury	13.0	J	mg/kg
39-VS-11	0-0.5	04/20/92	Yes	39-VS-11	7439-97-6	Mercury	0.0002	U	MG/L
39-VS-12-HG-1	2.5-3	11/28/01	Yes	01-P007-SS-[39-VS-12-Hg-1]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.1		mg/kg
39-VS-12-HG-2	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-12-Hg-2]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.09		mg/kg
39-VS-12-HG-3	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-12-Hg-3]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.1		mg/kg
39-VS-12-HG-4	0-0.5	12/10/01	Yes	02-P007-SS-[39-VS-12-Hg-4-2]-D2-005_12/10/01_2.5	7439-97-6	Mercury	6.4		mg/kg
39-VS-12-HG-4	0-2.5	11/21/01	No	02-P007-SS-[39-VS-16-Hg-5-2]-D2-005_AVG_12/10/01	7439-97-6	Mercury	0.06		mg/kg
39-VS-12-HG-5	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-12-Hg-5]-D2-003_11/28/01_2.5	7439-97-6	Mercury	6.7		mg/kg
39-VS-13	0-0.5	04/17/92	Yes	39-VS-13	7439-92-1	Lead	47.0		mg/kg
39-VS-13	0-0.5	04/17/92	Yes	39-VS-13	7439-97-6	Mercury	2.4	J	mg/kg
39-VS-14	0-0.5	06/01/92	Yes	39-VS-14	7440-38-2	Arsenic	11.2		mg/kg
39-VS-14	0-0.5	06/01/92	Yes	39-VS-14	7440-50-8	Copper	21.0		mg/kg
39-VS-14	0-0.5	06/01/92	Yes	39-VS-14	7439-92-1	Lead	28.0		mg/kg
39-VS-14	0-0.5	06/01/92	Yes	39-VS-14	7439-97-6	Mercury	7.5		mg/kg
39-VS-15	0-0.5	06/01/92	Yes	39-VS-15	7440-38-2	Arsenic	9.3		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
39-VS-15	0-0.5	06/01/92	Yes	39-VS-15	7440-50-8	Copper	18.0		mg/kg
39-VS-15	0-0.5	06/01/92	Yes	39-VS-15	7439-92-1	Lead	55.0		mg/kg
39-VS-15	0-0.5	06/01/92	Yes	39-VS-15	7439-97-6	Mercury	7.0		mg/kg
39-VS-16-HG-1	2.5-3	11/28/01	Yes	01-P007-SS-[39-VS-16-Hg-1]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.5		mg/kg
39-VS-16-HG-2	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-16-Hg-2]-D2-003_11/28/01_2.5	7439-97-6	Mercury	3.0		mg/kg
39-VS-16-HG-4	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-16-Hg-4]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.3		mg/kg
39-VS-23	2-12	04/20/92	Yes	39-VS-23	7440-38-2	Arsenic	2.8		mg/kg
39-VS-23	2-12	04/20/92	Yes	39-VS-23	7440-50-8	Copper	15.0		mg/kg
39-VS-23	2-12	04/20/92	Yes	39-VS-23	7439-92-1	Lead	140.0		mg/kg
39-VS-23	2-12	04/20/92	Yes	39-VS-23	7439-97-6	Mercury	13.0	J	mg/kg
39-VS-2	0-0.5	04/16/92	Yes	39-VS-2	7440-38-2	Arsenic	27.0	J	mg/kg
39-VS-2	0-0.5	04/16/92	Yes	39-VS-2	7440-50-8	Copper	17.0		mg/kg
39-VS-2	0-0.5	04/16/92	Yes	39-VS-2	7439-92-1	Lead	80.0		mg/kg
39-VS-2	0-0.5	04/16/92	Yes	39-VS-2	7439-97-6	Mercury	9.2	J	mg/kg
39-VS-25	9-12	04/21/92	Yes	39-VS-25	7440-38-2	Arsenic	1.6		mg/kg
39-VS-25	9-12	04/21/92	Yes	39-VS-25	7440-50-8	Copper	23.0		mg/kg
39-VS-25	9-12	04/21/92	Yes	39-VS-25	7439-92-1	Lead	100.0		mg/kg
39-VS-25	9-12	04/21/92	Yes	39-VS-25	7439-97-6	Mercury	11.0	J	mg/kg
39-VS-27	2-12	04/12/92	Yes	39-VS-27	7440-38-2	Arsenic	2.2		mg/kg
39-VS-27	2-12	04/12/92	Yes	39-VS-27	7440-50-8	Copper	9.8		mg/kg
39-VS-27	2-12	04/12/92	Yes	39-VS-27	7439-92-1	Lead	29.0		mg/kg
39-VS-27	2-12	04/12/92	Yes	39-VS-27	7439-97-6	Mercury	4.3	J	mg/kg
39-VS-28	2-12	04/20/92	Yes	39-VS-28	7440-38-2	Arsenic	1.8		mg/kg
39-VS-28	2-12	04/20/92	Yes	39-VS-28	7440-50-8	Copper	14.0		mg/kg
39-VS-28	2-12	04/20/92	Yes	39-VS-28	7439-92-1	Lead	21.0		mg/kg
39-VS-28	2-12	04/20/92	Yes	39-VS-28	7439-97-6	Mercury	4.7	J	mg/kg
39-VS-3	0-0.5	04/16/92	Yes	39-VS-3	7440-38-2	Arsenic	9.5		mg/kg
39-VS-3	0-0.5	04/16/92	Yes	39-VS-3	7440-50-8	Copper	13.0		mg/kg
39-VS-3	0-0.5	04/16/92	Yes	39-VS-3	7439-92-1	Lead	21.0		mg/kg
39-VS-3	0-0.5	04/16/92	Yes	39-VS-3	7439-97-6	Mercury	1.6		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
39-VS-35	0-5	06/27/92	Yes	39-VS-35	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-35	0-5	06/27/92	Yes	39-VS-35	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-35	0-5	06/27/92	Yes	39-VS-35	7439-92-1	Lead	10.0		mg/kg
39-VS-36	0-5	06/27/92	Yes	39-VS-36	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-36	0-5	06/27/92	Yes	39-VS-36	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-36	0-5	06/27/92	Yes	39-VS-36	7439-92-1	Lead	5.6	U	mg/kg
39-VS-37	0-5	06/27/92	Yes	39-VS-37	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-37	0-5	06/27/92	Yes	39-VS-37	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-37	0-5	06/27/92	Yes	39-VS-37	7439-92-1	Lead	5.1	U	mg/kg
39-VS-38	0-5	06/27/92	Yes	39-VS-38	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-38	0-5	06/27/92	Yes	39-VS-38	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-38	0-5	06/27/92	Yes	39-VS-38	7439-92-1	Lead	17.0		mg/kg
39-VS-40	4-5	06/27/92	Yes	39-VS-40	DNT-TOTAL	DNT - Total	0.3	U	mg/kg
39-VS-40	4-5	06/27/92	Yes	39-VS-40	98-95-3	Nitrobenzene	0.1	U	mg/kg
39-VS-40	4-5	06/27/92	Yes	39-VS-40	7439-92-1	Lead	22.0		mg/kg
39-VS-4	0-0.5	04/16/92	Yes	39-VS-4	7440-38-2	Arsenic	3.7		mg/kg
39-VS-4	0-0.5	04/16/92	Yes	39-VS-4	7440-50-8	Copper	12.0		mg/kg
39-VS-4	0-0.5	04/16/92	Yes	39-VS-4	7439-92-1	Lead	7.7		mg/kg
39-VS-4	0-0.5	04/16/92	Yes	39-VS-4	7439-97-6	Mercury	0.5	J	mg/kg
39-VS-5	0-0.5	04/16/92	Yes	39-VS-5	7440-38-2	Arsenic	12.0		mg/kg
39-VS-5	0-0.5	04/16/92	Yes	39-VS-5	7440-50-8	Copper	19.0		mg/kg
39-VS-5	0-0.5	04/16/92	Yes	39-VS-5	7439-92-1	Lead	220.0		mg/kg
39-VS-5	0-0.5	04/16/92	Yes	39-VS-5	7439-97-6	Mercury	6.7	J	mg/kg
39-VS-6	0-0.5	04/16/92	Yes	39-VS-6	7440-38-2	Arsenic	29.0	J	mg/kg
39-VS-6	0-0.5	04/16/92	Yes	39-VS-6	7440-50-8	Copper	31.0		mg/kg
39-VS-6	0-0.5	04/16/92	Yes	39-VS-6	7439-92-1	Lead	160.0		mg/kg
39-VS-6	0-0.5	04/16/92	Yes	39-VS-6	7439-97-6	Mercury	14.0	J	mg/kg
39-VS-7	0-0.5	04/16/92	Yes	39-VS-7	7440-38-2	Arsenic	23.0		mg/kg
39-VS-7	0-0.5	04/16/92	Yes	39-VS-7	7440-50-8	Copper	48.0		mg/kg
39-VS-7	0-0.5	04/16/92	Yes	39-VS-7	7439-92-1	Lead	54.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
39-VS-7	0-0.5	04/16/92	Yes	39-VS-7	7439-97-6	Mercury	6.8	J	mg/kg
39-VS-8	0-0.5	04/17/92	Yes	39-VS-8	7439-92-1	Lead	160.0		mg/kg
39-VS-8	0-0.5	04/17/92	Yes	39-VS-8	7439-97-6	Mercury	15.0	J	mg/kg
39-VS-9-HG-1	2.5-3	11/28/01	Yes	01-P007-SS-[39-VS-9-Hg-1]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.03		mg/kg
39-VS-9-HG-2	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-9-Hg-2]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.2		mg/kg
39-VS-9-HG-3	0-0.5	11/28/01	Yes	01-P007-SS-[39-VS-9-Hg-3]-D2-003_11/28/01_2.5	7439-97-6	Mercury	0.04		mg/kg
39-VS-9-Hg-4-2	0-0.5	12/10/01	Yes	02-P007-SS-[39-VS-9-Hg-4-2]-D2-005_12/10/01_2.5	7439-97-6	Mercury	0.1		mg/kg
39-VS-9-Hg-5-2	0-0.5	12/10/01	Yes	02-P007-SS-[39-VS-9-Hg-5-2]-D2-005_12/10/01_2.5	7439-97-6	Mercury	8.2		mg/kg
5-HA-513	0-1	03/12/92	Yes	5-HA-513-S-1	7439-92-1	Lead	73.0		mg/kg
5-HA-513	2-3	03/12/92	Yes	5-HA-513-S-2	7439-92-1	Lead	51.0		mg/kg
5-HA-514	2-3	03/12/92	Yes	5-HA-514-S-2	7439-92-1	Lead	21.0		mg/kg
5-HA-515	0-1	03/12/92	Yes	5-HA-515-S-1	7439-92-1	Lead	24.0		mg/kg
5-HA-515	2-3	03/12/92	Yes	5-HA-515-S-2	7439-92-1	Lead	13.0		mg/kg
5-TP-511	4-4.5	08/18/92	Yes	5-TP-511-S-3	7440-38-2	Arsenic	3.7		mg/kg
5-TP-511	4-4.5	08/18/92	Yes	5-TP-511-S-3	7440-50-8	Copper	17.0		mg/kg
5-TP-511	4-4.5	08/18/92	Yes	5-TP-511-S-3	7439-92-1	Lead	78.0		mg/kg
5-TP-511	4-4.5	08/18/92	Yes	5-TP-511-S-3	7439-97-6	Mercury	0.08	U	mg/kg
5-TP-512	4-4.5	08/18/92	Yes	5-TP-512-S-3	7440-38-2	Arsenic	9.6		mg/kg
5-TP-512	4-4.5	08/18/92	Yes	5-TP-512-S-3	7440-50-8	Copper	69.0		mg/kg
5-TP-512	4-4.5	08/18/92	Yes	5-TP-512-S-3	7439-92-1	Lead	41.0		mg/kg
5-TP-512	4-4.5	08/18/92	Yes	5-TP-512-S-3	7439-97-6	Mercury	0.08	U	mg/kg
5-TP-513	4-4.5	08/18/92	Yes	5-TP-513-S-3	7440-38-2	Arsenic	4.6		mg/kg
5-TP-513	4-4.5	08/18/92	Yes	5-TP-513-S-3	7440-50-8	Copper	12.0		mg/kg
5-TP-513	4-4.5	08/18/92	Yes	5-TP-513-S-3	7439-92-1	Lead	99.0		mg/kg
5-TP-513	4-4.5	08/18/92	Yes	5-TP-513-S-3	7439-97-6	Mercury	0.3		mg/kg
5-VS-100	0-0.5	09/16/99	Yes	5-VS-100	7440-38-2	Arsenic	63.0		mg/kg
5-VS-100	0-0.5	09/16/99	Yes	5-VS-100	7439-92-1	Lead	300.0		mg/kg
5-VS-101	0-0.5	09/16/99	Yes	5-VS-101	7440-38-2	Arsenic	1.9		mg/kg
5-VS-101	0-0.5	09/16/99	Yes	5-VS-101	7439-92-1	Lead	25.0		mg/kg
5-VS-102	0-0.5	09/16/99	Yes	5-VS-102	7440-38-2	Arsenic	21.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5-VS-102	0-0.5	09/16/99	Yes	5-VS-102	7439-92-1	Lead	280.0		mg/kg
5-VS-103	1-1.5	09/16/99	Yes	5-VS-103	7440-38-2	Arsenic	230.0		mg/kg
5-VS-103	1-1.5	09/16/99	Yes	5-VS-103	7439-92-1	Lead	49.0		mg/kg
5-VS-104	1-1.5	09/16/99	Yes	5-VS-104	7440-38-2	Arsenic	320.0		mg/kg
5-VS-104	1-1.5	09/16/99	Yes	5-VS-104	7439-92-1	Lead	100.0		mg/kg
5-VS-105	1-1.5	09/16/99	Yes	5-VS-105	7440-38-2	Arsenic	30.0		mg/kg
5-VS-105	1-1.5	09/16/99	Yes	5-VS-105	7439-92-1	Lead	230.0		mg/kg
5-VS-106	1-1.5	09/16/99	Yes	5-VS-106	7440-38-2	Arsenic	140.0		mg/kg
5-VS-106	1-1.5	09/16/99	Yes	5-VS-106	7439-92-1	Lead	160.0		mg/kg
5-VS-108	0-0.5	09/16/99	Yes	5-VS-108	7440-38-2	Arsenic	90.0		mg/kg
5-VS-108	0-0.5	09/16/99	Yes	5-VS-108	7439-92-1	Lead	170.0		mg/kg
5-VS-109	0-0.5	09/16/99	Yes	5-VS-109	7440-38-2	Arsenic	60.0		mg/kg
5-VS-109	0-0.5	09/16/99	Yes	5-VS-109	7439-92-1	Lead	130.0		mg/kg
5-VS-110	0-0.5	09/16/99	Yes	5-VS-110	7440-38-2	Arsenic	130.0		mg/kg
5-VS-110	0-0.5	09/16/99	Yes	5-VS-110	7439-92-1	Lead	1200.0		mg/kg
5-VS-114	1-1.5	09/16/99	Yes	5-VS-114	7440-38-2	Arsenic	190.0		mg/kg
5-VS-114	1-1.5	09/16/99	Yes	5-VS-114	7439-92-1	Lead	18.0		mg/kg
5-VS-11	0-0.5	02/12/93	Yes	5-VS-11	7440-38-2	Arsenic	11.0		mg/kg
5-VS-11	0-0.5	02/12/93	Yes	5-VS-11	7439-92-1	Lead	43.0		mg/kg
5-VS-11	0-0.5	02/12/93	Yes	5-VS-11	7439-97-6	Mercury	0.3	J	mg/kg
5-VS-17	0-0.5	08/10/93	Yes	5-VS-17	7440-38-2	Arsenic	29.0		mg/kg
5-VS-17	0-0.5	08/10/93	Yes	5-VS-17	7439-92-1	Lead	330.0		mg/kg
5-VS-17	0-0.5	08/10/93	Yes	5-VS-17	7439-97-6	Mercury	3.1	J	mg/kg
5-VS-18	0-0.5	08/10/93	Yes	5-VS-18	7440-38-2	Arsenic	5.1		mg/kg
5-VS-18	0-0.5	08/10/93	Yes	5-VS-18	7439-92-1	Lead	19.0		mg/kg
5-VS-18	0-0.5	08/10/93	Yes	5-VS-18	7439-97-6	Mercury	0.1	UJ	mg/kg
5-VS-19	0-0.5	08/10/93	Yes	5-VS-19	7440-38-2	Arsenic	5.1		mg/kg
5-VS-19	0-0.5	08/10/93	Yes	5-VS-19	7439-92-1	Lead	31.0		mg/kg
5-VS-19	0-0.5	08/10/93	Yes	5-VS-19	7439-97-6	Mercury	0.1	J	mg/kg
5-VS-21	0-0.5	08/10/93	Yes	5-VS-21	7440-38-2	Arsenic	11.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5-VS-21	0-0.5	08/10/93	Yes	5-VS-21	7439-92-1	Lead	36.0		mg/kg
5-VS-21	0-0.5	08/10/93	Yes	5-VS-21	7439-97-6	Mercury	0.1	J	mg/kg
5-VS-24-HG-1	2.5-3	11/21/01	Yes	01-P001-SS-[5-VS-24-Hg-1]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.01	U	mg/kg
5-VS-24-HG-2	0-0.5	11/21/01	Yes	01-P001-SS-[5-VS-24-Hg-2]-D2-030_11/21/01_2.5	7439-97-6	Mercury	10.4		mg/kg
5-VS-24-HG-3	0-0.5	11/21/01	Yes	01-P001-SS-[5-VS-24-Hg-3]-D2-030_11/21/01_2.5	7439-97-6	Mercury	16.9		mg/kg
5-VS-24-HG-4	0-0.5	11/21/01	Yes	01-P001-SS-[5-VS-24-Hg-4]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.3		mg/kg
5-VS-24-Hg-5	0-2.5	11/21/01	Yes	01-P001-SS-[5-VS-24-Hg-5]-D2-030_AVG_11/21/01_2.	7439-97-6	Mercury	17.8		mg/kg
5-VS-25	0-0.5	08/10/93	Yes	5-VS-25	7440-38-2	Arsenic	8.1		mg/kg
5-VS-25	0-0.5	08/10/93	Yes	5-VS-25	7439-92-1	Lead	110.0		mg/kg
5-VS-25	0-0.5	08/10/93	Yes	5-VS-25	7439-97-6	Mercury	1.0	J	mg/kg
5-VS-26	0-0.5	08/10/93	Yes	5-VS-26	7440-38-2	Arsenic	4.2		mg/kg
5-VS-26	0-0.5	08/10/93	Yes	5-VS-26	7439-92-1	Lead	7.0		mg/kg
5-VS-26	0-0.5	08/10/93	Yes	5-VS-26	7439-97-6	Mercury	0.1	UJ	mg/kg
5-VS-28	0-0.5	08/10/93	Yes	5-VS-28	7440-38-2	Arsenic	3.3		mg/kg
5-VS-28	0-0.5	08/10/93	Yes	5-VS-28	7439-92-1	Lead	5.3	U	mg/kg
5-VS-28	0-0.5	08/10/93	Yes	5-VS-28	7439-97-6	Mercury	0.3	J	mg/kg
5-VS-99	0-0.5	09/16/99	Yes	5-VS-99	7440-38-2	Arsenic	78.0		mg/kg
5-VS-99	0-0.5	09/16/99	Yes	5-VS-99	7439-92-1	Lead	260.0		mg/kg
5D-TPS-11	0-1	09/29/92	Yes	5D-TPS-11-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-11	0-1	09/29/92	Yes	5D-TPS-11-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-11	0-1	09/29/92	Yes	5D-TPS-11-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-12	0-1	09/29/92	Yes	5D-TPS-12-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-12	0-1	09/29/92	Yes	5D-TPS-12-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-12	0-1	09/29/92	Yes	5D-TPS-12-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-13	2-3.5	09/29/92	Yes	5D-TPS-13-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-13	2-3.5	09/29/92	Yes	5D-TPS-13-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-13	2-3.5	09/29/92	Yes	5D-TPS-13-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-13	2-3.5	09/29/92	Yes	5D-TPS-13-S-3	7440-38-2	Arsenic	1.6		mg/kg
5D-TPS-13	2-3.5	09/29/92	Yes	5D-TPS-13-S-3	7439-92-1	Lead	5.0	U	mg/kg
5D-TPS-13	2-3.5	09/29/92	Yes	5D-TPS-13-S-3	7439-97-6	Mercury	0.08	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-TPS-17	0-1.5	10/01/92	Yes	5D-TPS-17-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-17	0-1.5	10/01/92	Yes	5D-TPS-17-S-3	DNT-TOTAL	DNT - Total	0.1		mg/kg
5D-TPS-17	0-1.5	10/01/92	Yes	5D-TPS-17-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-17	0-1.5	10/01/92	Yes	5D-TPS-17-S-3	7440-38-2	Arsenic	2.0		mg/kg
5D-TPS-17	0-1.5	10/01/92	Yes	5D-TPS-17-S-3	7439-92-1	Lead	6.6		mg/kg
5D-TPS-17	0-1.5	10/01/92	Yes	5D-TPS-17-S-3	7439-97-6	Mercury	0.1	U	mg/kg
5D-TPS-18	0-1	10/07/92	Yes	5D-TPS-18-S-4	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-18	0-1	10/07/92	Yes	5D-TPS-18-S-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-18	0-1	10/07/92	Yes	5D-TPS-18-S-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	7440-38-2	Arsenic	5.5		mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	7440-50-8	Copper	24.0		mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	7439-92-1	Lead	5.2	U	mg/kg
5D-TPS-19	0-1	10/07/92	Yes	5D-TPS-19-S-2	7439-97-6	Mercury	0.1	U	mg/kg
5D-TPS-19	6-9	10/07/92	Yes	5D-TPS-19-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-TPS-19	6-9	10/07/92	Yes	5D-TPS-19-S-3	DNT-TOTAL	DNT - Total	0.02		mg/kg
5D-TPS-19	6-9	10/07/92	Yes	5D-TPS-19-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-TPS-19	6-9	10/07/92	Yes	5D-TPS-19-S-3	7440-38-2	Arsenic	3.7		mg/kg
5D-TPS-19	6-9	10/07/92	Yes	5D-TPS-19-S-3	7439-92-1	Lead	5.1	U	mg/kg
5D-TPS-19	6-9	10/07/92	Yes	5D-TPS-19-S-3	7439-97-6	Mercury	0.1	U	mg/kg
5D-TPS-6	0-1	09/18/92	Yes	5D-TPS-6-S-3	118-96-7	2,4,6-Trinitrotoluene	0.01	U	mg/kg
5D-TPS-6	0-1	09/18/92	Yes	5D-TPS-6-S-3	DNT-TOTAL	DNT - Total	0.3		mg/kg
5D-TPS-6	0-1	09/18/92	Yes	5D-TPS-6-S-3	98-95-3	Nitrobenzene	0.3	U	mg/kg
5D-TPS-6	0-1	09/18/92	Yes	5D-TPS-6-S-3	7440-38-2	Arsenic	3.6		mg/kg
5D-TPS-6	0-1	09/18/92	Yes	5D-TPS-6-S-3	7439-92-1	Lead	27.0		mg/kg
5D-TPS-6	0-1	09/18/92	Yes	5D-TPS-6-S-3	7439-97-6	Mercury	0.4		mg/kg
5D-TPS-7	0-1	09/18/92	Yes	5D-TPS-7-S-3	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
5D-TPS-7	0-1	09/18/92	Yes	5D-TPS-7-S-3	DNT-TOTAL	DNT - Total	0.02	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-TPS-7	0-1	09/18/92	Yes	5D-TPS-7-S-3	98-95-3	Nitrobenzene	0.1	U	mg/kg
5D-TPS-7	0-1	09/18/92	Yes	5D-TPS-7-S-3	7440-38-2	Arsenic	2.2		mg/kg
5D-TPS-7	0-1	09/18/92	Yes	5D-TPS-7-S-3	7439-92-1	Lead	5.4	U	mg/kg
5D-TPS-7	0-1	09/18/92	Yes	5D-TPS-7-S-3	7439-97-6	Mercury	0.09	U	mg/kg
5D-TPS-8	0-1.5	09/18/92	Yes	5D-TPS-8-S-3	7440-38-2	Arsenic	2.0		mg/kg
5D-TPS-8	0-1.5	09/18/92	Yes	5D-TPS-8-S-3	7439-92-1	Lead	5.4	U	mg/kg
5D-TPS-8	0-1.5	09/18/92	Yes	5D-TPS-8-S-3	7439-97-6	Mercury	0.07	U	mg/kg
5D-TPS-9	0-1	09/18/92	Yes	5D-TPS-9-S-3	7440-38-2	Arsenic	4.5		mg/kg
5D-TPS-9	0-1	09/18/92	Yes	5D-TPS-9-S-3	7439-92-1	Lead	5.9	U	mg/kg
5D-TPS-9	0-1	09/18/92	Yes	5D-TPS-9-S-3	7439-97-6	Mercury	0.08	U	mg/kg
5D-VS-11	0-0.5	04/13/93	Yes	5D-VS-11	7440-38-2	Arsenic	5.4		mg/kg
5D-VS-11	0-0.5	04/13/93	Yes	5D-VS-11	7439-92-1	Lead	6.8	UJ	mg/kg
5D-VS-11	0-0.5	04/13/93	Yes	5D-VS-11	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-17	0-0.5	04/13/93	Yes	5D-VS-17	7440-38-2	Arsenic	15.0		mg/kg
5D-VS-17	0-0.5	04/13/93	Yes	5D-VS-17	7439-92-1	Lead	140.0	J	mg/kg
5D-VS-17	0-0.5	04/13/93	Yes	5D-VS-17	7439-97-6	Mercury	0.3	J	mg/kg
5D-VS-18	0-0.5	04/13/93	Yes	5D-VS-18	7440-38-2	Arsenic	3.5		mg/kg
5D-VS-18	0-0.5	04/13/93	Yes	5D-VS-18	7439-92-1	Lead	5.8	UJ	mg/kg
5D-VS-18	0-0.5	04/13/93	Yes	5D-VS-18	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-21	0-0.5	04/13/93	Yes	5D-VS-21	7440-38-2	Arsenic	28.0		mg/kg
5D-VS-21	0-0.5	04/13/93	Yes	5D-VS-21	7439-92-1	Lead	260.0	J	mg/kg
5D-VS-21	0-0.5	04/13/93	Yes	5D-VS-21	7439-97-6	Mercury	0.4	J	mg/kg
5D-VS-23	0-0.5	04/13/93	Yes	5D-VS-23	7440-38-2	Arsenic	8.8		mg/kg
5D-VS-23	0-0.5	04/13/93	Yes	5D-VS-23	7439-92-1	Lead	89.0	J	mg/kg
5D-VS-23	0-0.5	04/13/93	Yes	5D-VS-23	7439-97-6	Mercury	0.2	J	mg/kg
5D-VS-26	0-0.5	04/13/93	Yes	5D-VS-26	7440-38-2	Arsenic	3.7		mg/kg
5D-VS-26	0-0.5	04/13/93	Yes	5D-VS-26	7439-92-1	Lead	5.6	U	mg/kg
5D-VS-26	0-0.5	04/13/93	Yes	5D-VS-26	7439-97-6	Mercury	0.1	UJ	mg/kg
5D-VS-27	0-0.5	04/13/93	Yes	5D-VS-27	7440-38-2	Arsenic	5.6	J	mg/kg
5D-VS-27	0-0.5	04/13/93	Yes	5D-VS-27	7439-92-1	Lead	68.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-VS-27	0-0.5	04/13/93	Yes	5D-VS-27	7439-97-6	Mercury	0.1	UJ	mg/kg
5D-VS-32	0-0.5	02/17/93	Yes	5D-VS-32	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
5D-VS-32	0-0.5	02/17/93	Yes	5D-VS-32	DNT-TOTAL	DNT - Total	0.03		mg/kg
5D-VS-32	0-0.5	02/17/93	Yes	5D-VS-32	98-95-3	Nitrobenzene	0.1	U	mg/kg
5D-VS-32	0-0.5	02/17/93	Yes	5D-VS-32	7440-38-2	Arsenic	18.0	J	mg/kg
5D-VS-32	0-0.5	02/17/93	Yes	5D-VS-32	7439-92-1	Lead	52.0		mg/kg
5D-VS-32	0-0.5	02/17/93	Yes	5D-VS-32	7439-97-6	Mercury	1.3	J	mg/kg
5D-VS-35	0-0.5	04/13/93	Yes	5D-VS-35	7440-38-2	Arsenic	2.9		mg/kg
5D-VS-35	0-0.5	04/13/93	Yes	5D-VS-35	7439-92-1	Lead	5.3	U	mg/kg
5D-VS-35	0-0.5	04/13/93	Yes	5D-VS-35	7439-97-6	Mercury	0.1	UJ	mg/kg
5D-VS-36	0-0.5	04/13/93	Yes	5D-VS-36	7440-38-2	Arsenic	17.0	J	mg/kg
5D-VS-36	0-0.5	04/13/93	Yes	5D-VS-36	7439-92-1	Lead	100.0		mg/kg
5D-VS-36	0-0.5	04/13/93	Yes	5D-VS-36	7439-97-6	Mercury	1.5	J	mg/kg
5D-VS-57	0-0.5	04/13/93	Yes	5D-VS-57	7440-38-2	Arsenic	4.4		mg/kg
5D-VS-57	0-0.5	04/13/93	Yes	5D-VS-57	7439-92-1	Lead	5.5	U	mg/kg
5D-VS-57	0-0.5	04/13/93	Yes	5D-VS-57	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-59	0-0.5	04/13/93	Yes	5D-VS-59-DAVG	7440-38-2	Arsenic	15.0		mg/kg
5D-VS-59	0-0.5	04/13/93	Yes	5D-VS-59-DAVG	7439-92-1	Lead	450.0		mg/kg
5D-VS-59	0-0.5	04/13/93	Yes	5D-VS-59-DAVG	7439-97-6	Mercury	0.4		mg/kg
5D-VS-68	0-0.5	08/10/93	Yes	5D-VS-68	7440-38-2	Arsenic	95.0		mg/kg
5D-VS-68	0-0.5	08/10/93	Yes	5D-VS-68	7439-92-1	Lead	170.0		mg/kg
5D-VS-68	0-0.5	08/10/93	Yes	5D-VS-68	7439-97-6	Mercury	2.1		mg/kg
5D-VS-72	0-0.5	08/10/93	Yes	5D-VS-72	7440-38-2	Arsenic	3.3		mg/kg
5D-VS-72	0-0.5	08/10/93	Yes	5D-VS-72	7439-92-1	Lead	46.0		mg/kg
5D-VS-72	0-0.5	08/10/93	Yes	5D-VS-72	7439-97-6	Mercury	1.4		mg/kg
5D-VS-73	0-0.5	08/10/93	Yes	5D-VS-73	7440-38-2	Arsenic	11.0		mg/kg
5D-VS-73	0-0.5	08/10/93	Yes	5D-VS-73	7439-92-1	Lead	38.0		mg/kg
5D-VS-73	0-0.5	08/10/93	Yes	5D-VS-73	7439-97-6	Mercury	0.4		mg/kg
5D-VS-74	0-0.5	08/10/93	Yes	5D-VS-74	7440-38-2	Arsenic	6.3		mg/kg
5D-VS-74	0-0.5	08/10/93	Yes	5D-VS-74	7439-92-1	Lead	9.9		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-VS-74	0-0.5	08/10/93	Yes	5D-VS-74	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-75	0-0.5	08/10/93	Yes	5D-VS-75	7440-38-2	Arsenic	95.0		mg/kg
5D-VS-75	0-0.5	08/10/93	Yes	5D-VS-75	7439-92-1	Lead	5.3	U	mg/kg
5D-VS-75	0-0.5	08/10/93	Yes	5D-VS-75	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-76	0-0.5	08/10/93	Yes	5D-VS-76	7440-38-2	Arsenic	1.4		mg/kg
5D-VS-76	0-0.5	08/10/93	Yes	5D-VS-76	7439-92-1	Lead	5.8	U	mg/kg
5D-VS-76	0-0.5	08/10/93	Yes	5D-VS-76	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-77	0-0.5	08/10/93	Yes	5D-VS-77	7440-38-2	Arsenic	5.5		mg/kg
5D-VS-77	0-0.5	08/10/93	Yes	5D-VS-77	7439-92-1	Lead	12.0		mg/kg
5D-VS-77	0-0.5	08/10/93	Yes	5D-VS-77	7439-97-6	Mercury	0.07		mg/kg
5D-VS-78	0-0.5	08/10/93	Yes	5D-VS-78	7440-38-2	Arsenic	6.6		mg/kg
5D-VS-78	0-0.5	08/10/93	Yes	5D-VS-78	7439-92-1	Lead	5.0	U	mg/kg
5D-VS-78	0-0.5	08/10/93	Yes	5D-VS-78	7439-97-6	Mercury	0.08	U	mg/kg
5D-VS-79	0-0.5	08/10/93	Yes	5D-VS-79	7440-38-2	Arsenic	2.4		mg/kg
5D-VS-79	0-0.5	08/10/93	Yes	5D-VS-79	7439-92-1	Lead	5.4	U	mg/kg
5D-VS-79	0-0.5	08/10/93	Yes	5D-VS-79	7439-97-6	Mercury	0.1		mg/kg
5D-VS-80	0-0.5	08/10/93	Yes	5D-VS-80-DAVG	7440-38-2	Arsenic	5.6		mg/kg
5D-VS-80	0-0.5	08/10/93	Yes	5D-VS-80-DAVG	7439-92-1	Lead	5.2	U	mg/kg
5D-VS-80	0-0.5	08/10/93	Yes	5D-VS-80-DAVG	7439-97-6	Mercury	0.2		mg/kg
5D-VS-81	0-0.5	08/10/93	Yes	5D-VS-81	7440-38-2	Arsenic	6.3		mg/kg
5D-VS-81	0-0.5	08/10/93	Yes	5D-VS-81	7439-92-1	Lead	5.3	U	mg/kg
5D-VS-81	0-0.5	08/10/93	Yes	5D-VS-81	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-82	0-0.5	08/10/93	Yes	5D-VS-82	7440-38-2	Arsenic	26.0		mg/kg
5D-VS-82	0-0.5	08/10/93	Yes	5D-VS-82	7439-92-1	Lead	110.0		mg/kg
5D-VS-82	0-0.5	08/10/93	Yes	5D-VS-82	7439-97-6	Mercury	0.1		mg/kg
5D-VS-83	0-0.5	08/10/93	Yes	5D-VS-83	7440-38-2	Arsenic	35.0		mg/kg
5D-VS-83	0-0.5	08/10/93	Yes	5D-VS-83	7439-92-1	Lead	150.0		mg/kg
5D-VS-83	0-0.5	08/10/93	Yes	5D-VS-83	7439-97-6	Mercury	1.7		mg/kg
5D-VS-84	0-0.5	08/10/93	Yes	5D-VS-84	7440-38-2	Arsenic	9.8		mg/kg
5D-VS-84	0-0.5	08/10/93	Yes	5D-VS-84	7439-92-1	Lead	18.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-VS-84	0-0.5	08/10/93	Yes	5D-VS-84	7439-97-6	Mercury	0.09	U	mg/kg
5D-VS-85	0-0.5	08/10/93	Yes	5D-VS-85	7440-38-2	Arsenic	33.0		mg/kg
5D-VS-85	0-0.5	08/10/93	Yes	5D-VS-85	7439-92-1	Lead	120.0		mg/kg
5D-VS-85	0-0.5	08/10/93	Yes	5D-VS-85	7439-97-6	Mercury	0.8		mg/kg
5D-VS-86	0-0.5	08/10/93	Yes	5D-VS-86	7440-38-2	Arsenic	17.0		mg/kg
5D-VS-86	0-0.5	08/10/93	Yes	5D-VS-86	7439-92-1	Lead	110.0		mg/kg
5D-VS-86	0-0.5	08/10/93	Yes	5D-VS-86	7439-97-6	Mercury	3.7		mg/kg
5D-VS-87	0-0.5	08/10/93	Yes	5D-VS-87	7440-38-2	Arsenic	12.0		mg/kg
5D-VS-87	0-0.5	08/10/93	Yes	5D-VS-87	7439-92-1	Lead	70.0		mg/kg
5D-VS-87	0-0.5	08/10/93	Yes	5D-VS-87	7439-97-6	Mercury	4.4		mg/kg
5D-VS-88	0-0.5	08/10/93	Yes	5D-VS-88	7440-38-2	Arsenic	12.0		mg/kg
5D-VS-88	0-0.5	08/10/93	Yes	5D-VS-88	7439-92-1	Lead	290.0		mg/kg
5D-VS-88	0-0.5	08/10/93	Yes	5D-VS-88	7439-97-6	Mercury	3.5		mg/kg
5D-VS-89	0-0.5	08/10/93	Yes	5D-VS-89-DAVG	7440-38-2	Arsenic	17.0		mg/kg
5D-VS-89	0-0.5	08/10/93	Yes	5D-VS-89-DAVG	7439-92-1	Lead	49.0		mg/kg
5D-VS-89	0-0.5	08/10/93	Yes	5D-VS-89-DAVG	7439-97-6	Mercury	0.5		mg/kg
5D-VS-90	0-0.5	09/07/93	Yes	5D-VS-90-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-VS-90	0-0.5	09/07/93	Yes	5D-VS-90-DAVG	DNT-TOTAL	DNT - Total	0.06		mg/kg
5D-VS-90	0-0.5	09/07/93	Yes	5D-VS-90-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-VS-90	0-0.5	09/07/93	Yes	5D-VS-90-DAVG	7440-38-2	Arsenic	12.0		mg/kg
5D-VS-90	0-0.5	09/07/93	Yes	5D-VS-90-DAVG	7439-92-1	Lead	60.0		mg/kg
5D-VS-90	0-0.5	09/07/93	Yes	5D-VS-90-DAVG	7439-97-6	Mercury	2.8	J	mg/kg
5D-VS-91	0-0.5	09/07/93	Yes	5D-VS-91	118-96-7	2,4,6-Trinitrotoluene	0.006	U	mg/kg
5D-VS-91	0-0.5	09/07/93	Yes	5D-VS-91	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
5D-VS-91	0-0.5	09/07/93	Yes	5D-VS-91	98-95-3	Nitrobenzene	0.1	U	mg/kg
5D-VS-91	0-0.5	09/07/93	Yes	5D-VS-91	7440-38-2	Arsenic	25.0		mg/kg
5D-VS-91	0-0.5	09/07/93	Yes	5D-VS-91	7439-92-1	Lead	210.0		mg/kg
5D-VS-91	0-0.5	09/07/93	Yes	5D-VS-91	7439-97-6	Mercury	3.3	J	mg/kg
5D-VS-92	0-0.5	09/07/93	Yes	5D-VS-92	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-VS-92	0-0.5	09/07/93	Yes	5D-VS-92	DNT-TOTAL	DNT - Total	0.01		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-VS-92	0-0.5	09/07/93	Yes	5D-VS-92	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-VS-92	0-0.5	09/07/93	Yes	5D-VS-92	7440-38-2	Arsenic	50.0		mg/kg
5D-VS-92	0-0.5	09/07/93	Yes	5D-VS-92	7439-92-1	Lead	310.0		mg/kg
5D-VS-92	0-0.5	09/07/93	Yes	5D-VS-92	7439-97-6	Mercury	4.3	J	mg/kg
5D-VS-93	0-0.5	09/07/93	Yes	5D-VS-93	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-VS-93	0-0.5	09/07/93	Yes	5D-VS-93	DNT-TOTAL	DNT - Total	0.04		mg/kg
5D-VS-93	0-0.5	09/07/93	Yes	5D-VS-93	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-VS-93	0-0.5	09/07/93	Yes	5D-VS-93	7440-38-2	Arsenic	5.2		mg/kg
5D-VS-93	0-0.5	09/07/93	Yes	5D-VS-93	7439-92-1	Lead	54.0		mg/kg
5D-VS-93	0-0.5	09/07/93	Yes	5D-VS-93	7439-97-6	Mercury	0.1	U	mg/kg
5D-VS-94	0-0.5	09/07/93	Yes	5D-VS-94	118-96-7	2,4,6-Trinitrotoluene	0.006	UJ	mg/kg
5D-VS-94	0-0.5	09/07/93	Yes	5D-VS-94	DNT-TOTAL	DNT - Total	0.02	U	mg/kg
5D-VS-94	0-0.5	09/07/93	Yes	5D-VS-94	98-95-3	Nitrobenzene	0.1	UJ	mg/kg
5D-VS-94	0-0.5	09/07/93	Yes	5D-VS-94	7440-38-2	Arsenic	8.6		mg/kg
5D-VS-94	0-0.5	09/07/93	Yes	5D-VS-94	7439-92-1	Lead	54.0		mg/kg
5D-VS-94	0-0.5	09/07/93	Yes	5D-VS-94	7439-97-6	Mercury	1.6	J	mg/kg
5D-VS-95-HG-1	2.5-3	11/21/01	Yes	01-P001-SS-[5D-VS-95-Hg-1]-D2-030_11/21/01_2.5	7439-97-6	Mercury	0.4		mg/kg
5D-VS-95-HG-3	0-0.5	11/21/01	No	01-P001-SS-[5D-VS-95-Hg-3]-D2-030_11/21/01_2.5	7439-97-6	Mercury	21.1		mg/kg
5D-VS-95-HG-4	0-0.5	11/21/01	No	01-P001-SS-[5D-VS-95-Hg-4]-D2-030_11/21/01_2.5	7439-97-6	Mercury	17.4		mg/kg
5D-VS-95-HG-5	0-0.5	11/21/01	Yes	01-P001-SS-[5D-VS-95-Hg-5]-D2-030_11/21/01_2.5	7439-97-6	Mercury	9.9		mg/kg
5D-VS-96	0-0.5	09/07/93	Yes	5D-VS-96	118-96-7	2,4,6-Trinitrotoluene	0.003	UJ	mg/kg
5D-VS-96	0-0.5	09/07/93	Yes	5D-VS-96	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
5D-VS-96	0-0.5	09/07/93	Yes	5D-VS-96	98-95-3	Nitrobenzene	0.06	UJ	mg/kg
5D-VS-96	0-0.5	09/07/93	Yes	5D-VS-96	7440-38-2	Arsenic	9.4		mg/kg
5D-VS-96	0-0.5	09/07/93	Yes	5D-VS-96	7439-92-1	Lead	140.0		mg/kg
5D-VS-96	0-0.5	09/07/93	Yes	5D-VS-96	7439-97-6	Mercury	1.3	J	mg/kg
5D-VS-97	0-0.5	09/07/93	Yes	5D-VS-97	118-96-7	2,4,6-Trinitrotoluene	0.03	U	mg/kg
5D-VS-97	0-0.5	09/07/93	Yes	5D-VS-97	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
5D-VS-97	0-0.5	09/07/93	Yes	5D-VS-97	98-95-3	Nitrobenzene	0.6	U	mg/kg
5D-VS-97	0-0.5	09/07/93	Yes	5D-VS-97	7440-38-2	Arsenic	10.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
5D-VS-97	0-0.5	09/07/93	Yes	5D-VS-97	7439-92-1	Lead	120.0		mg/kg
5D-VS-97	0-0.5	09/07/93	Yes	5D-VS-97	7439-97-6	Mercury	2.8	J	mg/kg
5D-VS-98	0-0.5	09/07/93	Yes	5D-VS-98	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
5D-VS-98	0-0.5	09/07/93	Yes	5D-VS-98	DNT-TOTAL	DNT - Total	0.01		mg/kg
5D-VS-98	0-0.5	09/07/93	Yes	5D-VS-98	98-95-3	Nitrobenzene	0.06	U	mg/kg
5D-VS-98	0-0.5	09/07/93	Yes	5D-VS-98	7440-38-2	Arsenic	31.0		mg/kg
5D-VS-98	0-0.5	09/07/93	Yes	5D-VS-98	7439-92-1	Lead	110.0		mg/kg
5D-VS-98	0-0.5	09/07/93	Yes	5D-VS-98	7439-97-6	Mercury	3.9	J	mg/kg
APH-SS-507	0-0.5	11/12/92	Yes	APH-SS-507	7439-92-1	Lead	83.0		mg/kg
APH-SS-509	0-0.5	11/12/92	Yes	APH-SS-509	7439-92-1	Lead	38.0		mg/kg
APH-SS-510	0-0.5	11/12/92	Yes	APH-SS-510	7439-92-1	Lead	210.0		mg/kg
APH-SS-512	0-0.5	11/12/92	Yes	APH-SS-512	7439-92-1	Lead	1100.0		mg/kg
F-100	2-2.5	06/19/01	Yes	01-F03-SS[F-100]C2-005	7440-38-2	Arsenic	7.8		mg/kg
F-100	2-2.5	06/19/01	Yes	01-F03-SS[F-100]C2-005	7439-92-1	Lead	23.0		mg/kg
F-101-2	3-3.5	08/28/01	Yes	02-F03-SS[F-101-2]C2-030	7440-38-2	Arsenic	3.7		mg/kg
F-101-2	3-3.5	08/28/01	Yes	02-F03-SS[F-101-2]C2-030	7439-92-1	Lead	7.5		mg/kg
F-102	2-2.5	06/20/01	Yes	01-F03-SS[F-102]C2-005-DAVG	7440-38-2	Arsenic	6.9		mg/kg
F-102	2-2.5	06/20/01	Yes	01-F03-SS[F-102]C2-005-DAVG	7439-92-1	Lead	41.5		mg/kg
F-104	2-2.5	06/20/01	Yes	01-F03-SS[F-104]C2-005	7440-38-2	Arsenic	5.8		mg/kg
F-104	2-2.5	06/20/01	Yes	01-F03-SS[F-104]C2-005	7439-92-1	Lead	30.0		mg/kg
F-105	2-2.5	06/20/01	Yes	01-F03-SS[F-105]C2-005	7440-38-2	Arsenic	8.5		mg/kg
F-105	2-2.5	06/20/01	Yes	01-F03-SS[F-105]C2-005	7439-92-1	Lead	95.0		mg/kg
F-106	2-2.5	06/20/01	Yes	01-F03-SS[F-106]C2-005	7440-38-2	Arsenic	2.9		mg/kg
F-106	2-2.5	06/20/01	Yes	01-F03-SS[F-106]C2-005	7439-92-1	Lead	38.0		mg/kg
F-107	2-2.5	06/20/01	Yes	01-F03-SS[F-107]C2-005	7440-38-2	Arsenic	14.0		mg/kg
F-107	2-2.5	06/20/01	Yes	01-F03-SS[F-107]C2-005	7439-92-1	Lead	9.9		mg/kg
F-108	2-2.5	06/20/01	Yes	01-F03-SS[F-108]C2-005	7440-38-2	Arsenic	9.7		mg/kg
F-108	2-2.5	06/20/01	Yes	01-F03-SS[F-108]C2-005	7439-92-1	Lead	18.0		mg/kg
F-109	2-2.5	06/20/01	Yes	01-F03-SS[F-109]C2-005	7440-38-2	Arsenic	7.3		mg/kg
F-109	2-2.5	06/20/01	Yes	01-F03-SS[F-109]C2-005	7439-92-1	Lead	22.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
F-110	2-2.5	06/20/01	Yes	01-F03-SS[F-110]C2-005	7440-38-2	Arsenic	7.1		mg/kg
F-110	2-2.5	06/20/01	Yes	01-F03-SS[F-110]C2-005	7439-92-1	Lead	75.0		mg/kg
F-111	2-2.5	06/20/01	Yes	01-F03-SS[F-111]C2-005	7440-38-2	Arsenic	11.0		mg/kg
F-111	2-2.5	06/20/01	Yes	01-F03-SS[F-111]C2-005	7439-92-1	Lead	4.8		mg/kg
F-112	2-2.5	06/20/01	Yes	01-F03-SS[F-112]C2-005	7440-38-2	Arsenic	8.2		mg/kg
F-112	2-2.5	06/20/01	Yes	01-F03-SS[F-112]C2-005	7439-92-1	Lead	82.0		mg/kg
F-113	2-2.5	06/20/01	Yes	01-F03-SS[F-113]C2-005	7440-38-2	Arsenic	12.0		mg/kg
F-113	2-2.5	06/20/01	Yes	01-F03-SS[F-113]C2-005	7439-92-1	Lead	26.0		mg/kg
F-37-B	2-2.5	05/12/04	Yes	F-37-B_05/12/04_2	7440-38-2	Arsenic	4.6		mg/kg
F-37-B	2-2.5	05/12/04	Yes	F-37-B_05/12/04_2	7439-92-1	Lead	33.9		mg/kg
F-94	2-2.5	06/19/01	Yes	01-F03-SS[F-94]C2-005	7440-38-2	Arsenic	3.9		mg/kg
F-94	2-2.5	06/19/01	Yes	01-F03-SS[F-94]C2-005	7439-92-1	Lead	7.7		mg/kg
F-95	2-2.5	06/19/01	Yes	01-F03-SS[F-95]C2-005	7440-38-2	Arsenic	10.0		mg/kg
F-95	2-2.5	06/19/01	Yes	01-F03-SS[F-95]C2-005	7439-92-1	Lead	89.0		mg/kg
F-96	2-2.5	06/19/01	Yes	01-F03-SS[F-96]C2-005	7440-38-2	Arsenic	2.8		mg/kg
F-96	2-2.5	06/19/01	Yes	01-F03-SS[F-96]C2-005	7439-92-1	Lead	5.0		mg/kg
F-97	2-2.5	06/19/01	Yes	01-F03-SS[F-97]C2-005	7440-38-2	Arsenic	5.5		mg/kg
F-97	2-2.5	06/19/01	Yes	01-F03-SS[F-97]C2-005	7439-92-1	Lead	83.0		mg/kg
F-98	2-2.5	06/19/01	Yes	01-F03-SS[F-98]C2-005	7440-38-2	Arsenic	5.2		mg/kg
F-98	2-2.5	06/19/01	Yes	01-F03-SS[F-98]C2-005	7439-92-1	Lead	3.5		mg/kg
F-99	2-2.5	06/19/01	Yes	01-F03-SS[F-99]C2-005	7440-38-2	Arsenic	4.9		mg/kg
F-99	2-2.5	06/19/01	Yes	01-F03-SS[F-99]C2-005	7439-92-1	Lead	3.2		mg/kg
LR-060 1'-2'	1-2	07/02/93	Yes	LR-060 1'-2'	7440-38-2	Arsenic	3.3		mg/kg
LR-060-100N	0-0.5	12/07/93	Yes	LR-060-100N	7440-38-2	Arsenic	11.0		mg/kg
LR-060-100W	0-0.5	12/07/93	Yes	LR-060-100W	7440-38-2	Arsenic	40.0		mg/kg
LR-060-25E	0-0.5	12/07/93	Yes	LR-060-25E	7440-38-2	Arsenic	48.0		mg/kg
LR-060-50E	0-0.5	12/07/93	Yes	LR-060-50E	7440-38-2	Arsenic	37.0		mg/kg
LR-060-50N	0-0.5	12/07/93	Yes	LR-060-50N	7440-38-2	Arsenic	310.0		mg/kg
LR-060-50W	0-0.5	12/07/93	Yes	LR-060-50W	7440-38-2	Arsenic	100.0		mg/kg
LR-060-75N	0-0.5	12/07/93	Yes	LR-060-75N	7440-38-2	Arsenic	18.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-060-75W	0-0.5	12/07/93	Yes	LR-060-75W	7440-38-2	Arsenic	7.0		mg/kg
LR-060-S-3	1-2	07/02/93	Yes	LR-060-S-3	7440-38-2	Arsenic	3.0		mg/kg
LR-131W	0-0.5	11/10/93	Yes	LR-131W	7440-38-2	Arsenic	20.0	J	mg/kg
LR-147	0-0.5	11/10/93	Yes	LR-147	7440-38-2	Arsenic	2.0	J	mg/kg
LR-162	0-0.5	03/24/93	Yes	LR-162-DAVG	7440-38-2	Arsenic	44.0		mg/kg
LR-162	0-0.5	03/24/93	Yes	LR-162-DAVG	7439-92-1	Lead	51.0		mg/kg
LR-249	0-0.5	03/25/93	Yes	LR-249	7440-38-2	Arsenic	8.5		mg/kg
LR-249	0-0.5	03/25/93	Yes	LR-249	7439-92-1	Lead	308.0		mg/kg
LR-258	0-0.5	11/17/93	Yes	LR-258	7440-38-2	Arsenic	58.0	J	mg/kg
LR-259	0-0.5	11/17/93	Yes	LR-259	7440-38-2	Arsenic	15.0		mg/kg
LR-261	0-0.5	11/17/93	Yes	LR-261	7440-38-2	Arsenic	34.0		mg/kg
LR-309	0-0.5	06/30/93	Yes	LR-309	7440-38-2	Arsenic	14.0	J	mg/kg
LR-310	0-0.5	06/30/93	Yes	LR-310-DAVG	7440-38-2	Arsenic	18.0		mg/kg
LR-311-100E	0-0.5	12/06/93	Yes	LR-311-100E	7440-38-2	Arsenic	17.0		mg/kg
LR-311-100N	0-0.5	12/06/93	Yes	LR-311-100N	7440-38-2	Arsenic	13.0		mg/kg
LR-311-10S	0-0.5	12/06/93	Yes	LR-311-10S	7440-38-2	Arsenic	78.0		mg/kg
LR-311-10W	0-0.5	12/06/93	Yes	LR-311-10W	7440-38-2	Arsenic	110.0		mg/kg
LR-311-25S	0-0.5	12/06/93	Yes	LR-311-25S	7440-38-2	Arsenic	29.0		mg/kg
LR-311-50N	0-0.5	12/06/93	Yes	LR-311-50N	7440-38-2	Arsenic	85.0		mg/kg
LR-311-75E	0-0.5	12/06/93	Yes	LR-311-75E	7440-38-2	Arsenic	16.0		mg/kg
LR-311-75N	0-0.5	12/06/93	Yes	LR-311-75N	7440-38-2	Arsenic	36.0		mg/kg
LR-311-S-2	0.5-1	12/10/93	Yes	LR-311-S-2	7440-38-2	Arsenic	55.0		mg/kg
LR-311-S-3	1-2	12/10/93	Yes	LR-311-S-3	7440-38-2	Arsenic	100.0		mg/kg
LR-311	0-0.5	06/30/93	Yes	LR-311	7440-38-2	Arsenic	360.0		mg/kg
LR-318-100N	0-0.5	12/07/93	Yes	LR-318-100N	7440-38-2	Arsenic	69.0		mg/kg
LR-318-100W	0-0.5	12/07/93	Yes	LR-318-100W	7440-38-2	Arsenic	95.0		mg/kg
LR-318-10E	0-0.5	12/07/93	Yes	LR-318-10E	7440-38-2	Arsenic	15.0		mg/kg
LR-318-10N	0-0.5	12/07/93	Yes	LR-318-10N	7440-38-2	Arsenic	180.0		mg/kg
LR-318-10S	0-0.5	12/07/93	Yes	LR-318-10S	7440-38-2	Arsenic	22.0		mg/kg
LR-318-10W	0-0.5	12/07/93	Yes	LR-318-10W	7440-38-2	Arsenic	90.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-318-25E	0-0.5	12/07/93	Yes	LR-318-25E	7440-38-2	Arsenic	11.0		mg/kg
LR-318-25N	0-0.5	12/07/93	Yes	LR-318-25N	7440-38-2	Arsenic	97.0		mg/kg
LR-318-25S	0-0.5	12/07/93	Yes	LR-318-25S	7440-38-2	Arsenic	330.0		mg/kg
LR-318-25W	0-0.5	12/07/93	Yes	LR-318-25W	7440-38-2	Arsenic	24.0		mg/kg
LR-318-50N	0-0.5	12/07/93	Yes	LR-318-50N	7440-38-2	Arsenic	25.0		mg/kg
LR-318-50S	0-0.5	12/07/93	Yes	LR-318-50S	7440-38-2	Arsenic	40.0		mg/kg
LR-318-50W	0-0.5	12/07/93	Yes	LR-318-50W	7440-38-2	Arsenic	51.0		mg/kg
LR-318-75N	0-0.5	12/07/93	Yes	LR-318-75N	7440-38-2	Arsenic	27.0		mg/kg
LR-318-75S	0-0.5	12/07/93	Yes	LR-318-75S	7440-38-2	Arsenic	55.0		mg/kg
LR-318-75W	0-0.5	12/07/93	Yes	LR-318-75W	7440-38-2	Arsenic	62.0		mg/kg
LR-318-S-2	0.5-1	12/10/93	Yes	LR-318-S-2	7440-38-2	Arsenic	8.7		mg/kg
LR-318-S-3	1-2	12/10/93	Yes	LR-318-S-3	7440-38-2	Arsenic	4.5		mg/kg
LR-318	0-0.5	06/30/93	Yes	LR-318	7440-38-2	Arsenic	150.0		mg/kg
LR-319	0-0.5	06/30/93	Yes	LR-319	7440-38-2	Arsenic	60.0		mg/kg
MSU-10-VS-B	17-17.5	06/24/03	No	01-SB-[MSU-10-VS-B]-C2_06/24/03_17	98-95-3	Nitrobenzene	2.5	U	mg/kg
MSU-10-VS-B	21-21.5	09/22/03	No	02-SB-[MSU-10-VS-B]-C2_09/22/03_18	118-96-7	2,4,6-Trinitrotoluene	0.4	U	mg/kg
MSU-10-VS-B	21-21.5	11/19/03	Yes	04-SS-[MSU-10-VS-B]-C2_11/12/03_21	DNT-TOTAL	DNT - Total	4.0	U	mg/kg
MSU-10-VS-E	15-17	01/13/04	Yes	01-SB-[MSU-10-VS-E]-C2_01/13/04_0	118-96-7	2,4,6-Trinitrotoluene	0.2	U	mg/kg
MSU-10-VS-E	15-17	01/13/04	Yes	01-SB-[MSU-10-VS-E]-C2_01/13/04_0	DNT-TOTAL	DNT - Total	0.5	U	mg/kg
MSU-10-VS-E	15-17	06/24/03	No	01-SB-[MSU-10-VS-E]-C2_06/24/03_0	118-96-7	2,4,6-Trinitrotoluene	1.9	AA	mg/kg
MSU-10-VS-E	15-17	06/24/03	No	01-SB-[MSU-10-VS-E]-C2_06/24/03_0	DNT-TOTAL	DNT - Total	0.7	U	mg/kg
MSU-10-VS-E	15-17	06/24/03	No	01-SB-[MSU-10-VS-E]-C2_06/24/03_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-10-VS-N	15-17	06/24/03	No	01-SB-[MSU-10-VS-N]-C2_06/24/03_0	118-96-7	2,4,6-Trinitrotoluene	0.2	J	mg/kg
MSU-10-VS-N	15-17	06/24/03	No	01-SB-[MSU-10-VS-N]-C2_06/24/03_0	DNT-TOTAL	DNT - Total	0.5		mg/kg
MSU-10-VS-N	15-17	06/24/03	No	01-SB-[MSU-10-VS-N]-C2_06/24/03_0	98-95-3	Nitrobenzene	0.05	J	mg/kg
MSU-10-VS-S	15-17	06/24/03	Yes	01-SB-[MSU-10-VS-S]-C2_06/24/03_0	118-96-7	2,4,6-Trinitrotoluene	0.2	AA	mg/kg
MSU-10-VS-S	15-17	06/24/03	Yes	01-SB-[MSU-10-VS-S]-C2_06/24/03_0	DNT-TOTAL	DNT - Total	0.3		mg/kg
MSU-10-VS-S	15-17	06/24/03	Yes	01-SB-[MSU-10-VS-S]-C2_06/24/03_0	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-10-VS-W	15-17	06/24/03	No	01-SB-[MSU-10-VS-W]-C2_06/24/03_0	DNT-TOTAL	DNT - Total	0.6		mg/kg
MSU-10-VS-W	15-17	06/24/03	No	01-SB-[MSU-10-VS-W]-C2_06/24/03_0	98-95-3	Nitrobenzene	0.2	U	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-10-VS-W	15-17	09/22/03	Yes	02-SB-[MSU-10-VS-W]-C2_09/22/03_0	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
MSU-14-11	0-0.5	09/17/03	Yes	01-SS-[MSU-14-11]-D1_09/17/03_0	7439-92-1	Lead	74.4		mg/kg
MSU-14-12	0-0.5	09/17/03	Yes	01-SS-[MSU-14-12]-D1_09/17/03_0	7439-92-1	Lead	109.0		mg/kg
MSU-14-2	3-17	09/17/03	Yes	01-SS-[MSU-14-2]-D1_09/17/03_3	MOTOROIL	Motor Oil	52.0	U	mg/kg
MSU-14-3	3-17	09/17/03	Yes	01-SS-[MSU-14-3]-D1_09/17/03_3	MOTOROIL	Motor Oil	55.3	U	mg/kg
MSU-14-4	1.5-17	09/17/03	Yes	01-SS-[MSU-14-4]-D1_09/17/03_1.5	MOTOROIL	Motor Oil	50.5	U	mg/kg
MSU-14-5	8-17	09/17/03	Yes	01-SS-[MSU-14-5]-D1_09/17/03_8	MOTOROIL	Motor Oil	52.2	U	mg/kg
MSU-14-6	8-17	09/17/03	Yes	01-SS-[MSU-14-6]-D1_09/17/03_8	MOTOROIL	Motor Oil	57.2	U	mg/kg
MSU-14-7	3-17	09/17/03	Yes	01-SS-[MSU-14-7]-D1_09/17/03_3	MOTOROIL	Motor Oil	54.8	U	mg/kg
MSU-14-E	0-0.5	06/19/03	No	01-SS-[MSU-14-E]-D1_06/19/03_0	7440-38-2	Arsenic	13.1		mg/kg
MSU-14-E	0-0.5	06/19/03	No	01-SS-[MSU-14-E]-D1_06/19/03_0	MOTOROIL	Motor Oil	397.0	X1	mg/kg
MSU-14-N	15-15.5	06/19/03	Yes	01-SS-[MSU-14-N]-D1_06/19/03_0	7440-38-2	Arsenic	10.4		mg/kg
MSU-14-N	15-15.5	06/19/03	Yes	01-SS-[MSU-14-N]-D1_06/19/03_0	MOTOROIL	Motor Oil	845.0	X1	mg/kg
MSU-14-S	0-0.5	06/19/03	No	01-SS-[MSU-14-S]-D1_06/19/03_0	7440-38-2	Arsenic	15.1		mg/kg
MSU-14-S	0-0.5	06/19/03	No	01-SS-[MSU-14-S]-D1_06/19/03_0	MOTOROIL	Motor Oil	669.0	X1	mg/kg
MSU-14-S	0-0.5	08/28/03	Yes	03-SS-[MSU-14-S]-D1_AVG_08/28/03_0	7439-92-1	Lead	53.2		mg/kg
MSU-14-VS-0-2-E	0-2	08/19/03	Yes	01-SS-[MSU-14-VS-0-2-E]D1_08/19/03_21	MOTOROIL	Motor Oil	396.0		mg/kg
MSU-14-VS-0-2-S	0-2	08/19/03	Yes	01-SS-[MSU-14-VS-0-2-S]D1_08/19/03_21	7439-92-1	Lead	85.2		mg/kg
MSU-14-VS-0-2-W	0-2	08/19/03	Yes	01-SS-[MSU-14-VS-0-2-W]D1_08/19/03_21	MOTOROIL	Motor Oil	52.9		mg/kg
MSU-14-VS-B	21-21.5	08/19/03	Yes	01-SS-[MSU-14-VS-B]-D1_08/19/03_21	MOTOROIL	Motor Oil	1630.0	X2	mg/kg
MSU-14-W	15-15.5	06/19/03	No	01-SS-[MSU-14-W]-D1_06/19/03_0	7440-38-2	Arsenic	14.8		mg/kg
MSU-14	3-17	09/17/03	Yes	01-SS-[MSU-14-1]-D1_09/17/03_3	7439-92-1	Lead	83.5		mg/kg
MSU-14	3-17	09/17/03	Yes	01-SS-[MSU-14-1]-D1_09/17/03_3	MOTOROIL	Motor Oil	51.6	U	mg/kg
MSU-15-16-1	2-2.5	09/23/03	Yes	04-SS-[MSU-15-16-1]-C2_09/23/03_0	MOTOROIL	Motor Oil	57.7		mg/kg
MSU-15-16-2	2-2.5	09/23/03	Yes	04-SS-[MSU-15-16-2]-C2_09/23/03_0	MOTOROIL	Motor Oil	53.0	U	mg/kg
MSU-15-16-3	2-2.5	09/23/03	Yes	04-SS-[MSU-15-16-3]-C2_09/23/03_0	MOTOROIL	Motor Oil	53.2	U	mg/kg
MSU-15-16-4	0-0.5	10/16/03	No	03-SS-[MSU-15-16-4]-D1_10/16/03_0	MOTOROIL	Motor Oil	1100.0	X2	mg/kg
MSU-15-16-5	0-0.5	09/23/03	Yes	04-SS-[MSU-15-16-5]-C2_09/23/03_0	MOTOROIL	Motor Oil	1980.0	X1	mg/kg
MSU-15-16-6	0-0.5	09/23/03	Yes	04-SS-[MSU-15-16-6]-C2_09/23/03_0	MOTOROIL	Motor Oil	1040.0	X1	mg/kg
MSU-15-16-7	0-0.5	09/23/03	Yes	04-SS-[MSU-15-16-7]-C2_09/23/03_0	MOTOROIL	Motor Oil	1780.0	X1	mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-15-16-8	0-0.5	10/16/03	No	03-SS-[MSU-15-16-8]-D1_10/16/03_0	MOTOROIL	Motor Oil	241.0	X2	mg/kg
MSU-15-16-9	0-0.5	10/16/03	No	03-SS-[MSU-15-16-9]-D1_10/16/03_0	MOTOROIL	Motor Oil	285.0	X2	mg/kg
MSU-15-N	0-0.5	08/19/03	Yes	02-SS-[MSU-15-N]-D1_08/19/03_0	MOTOROIL	Motor Oil	689.0		mg/kg
MSU-15-S	0-0.5	09/08/03	Yes	03-SS-[MSU-15-S]-D1_09/08/03_0	MOTOROIL	Motor Oil	430.0	X2	mg/kg
MSU-15-W	4-4.5	08/19/03	Yes	02-SS-[MSU-15-W]-D1_08/19/03_0	MOTOROIL	Motor Oil	1500.0		mg/kg
MSU-16-E	0-0.5	08/19/03	Yes	02-SS-[MSU-16-E]-D1_08/19/03_0	MOTOROIL	Motor Oil	140.0		mg/kg
MSU-16-N	0-0.5	06/19/03	No	01-SS-[MSU-16-N]-D1_06/19/03_0	7440-38-2	Arsenic	25.9		mg/kg
MSU-16-N	0-0.5	08/19/03	Yes	02-SS-[MSU-16-N]-D1_08/19/03_0	MOTOROIL	Motor Oil	396.0		mg/kg
MSU-16-S	0-0.5	08/19/03	Yes	02-SS-[MSU-16-S]-D1_08/19/03_0	MOTOROIL	Motor Oil	116.0	X2	mg/kg
MSU-18-VS-3-7-E	3-15	07/09/03	Yes	01-SB-[MSU-18-VS-3-7-E]-C2_07/09/03_15	127-18-4	Tetrachloroethene	0.4	U	ug/kg
MSU-18-VS-3-7-N	3-15	07/09/03	Yes	01-SB-[MSU-18-VS-3-7-N]-C2_07/09/03_15	127-18-4	Tetrachloroethene	0.4	U	ug/kg
MSU-18-VS-3-7-S	3-15	07/09/03	Yes	01-SB-[MSU-18-VS-3-7-S]-C2_07/09/03_15	127-18-4	Tetrachloroethene	0.4	U	ug/kg
MSU-18-VS-3-7-W	3-15	07/09/03	Yes	01-SB-[MSU-18-VS-3-7-W]-C2_07/09/03_15	127-18-4	Tetrachloroethene	0.4	U	ug/kg
MSU-18-VS-B	15-15.5	07/09/03	Yes	01-SB-[MSU-18-VS-B]-C2_07/09/03_15	127-18-4	Tetrachloroethene	0.4	U	ug/kg
MSU-21-VS-B	14-14.5	07/09/03	Yes	01-SB-[MSU-21-VS-B]-C2_07/09/03_0	7440-50-8	Copper	11.1		mg/kg
MSU-21-VS-E	12-14	07/09/03	Yes	01-SB-[MSU-21-VS-E]-C2_07/09/03_0	7440-50-8	Copper	9.7		mg/kg
MSU-21-VS-N	12-14	07/09/03	Yes	01-SB-[MSU-21-VS-N]-C2_07/09/03_0	7440-50-8	Copper	18.0		mg/kg
MSU-21-VS-S	12-14	07/09/03	Yes	01-SB-[MSU-21-VS-S]-C2_07/09/03_0	7440-50-8	Copper	14.8		mg/kg
MSU-21-VS-W	12-14	07/09/03	Yes	01-SB-[MSU-21-VS-W]-C2_07/09/03_0	7440-50-8	Copper	14.0		mg/kg
MSU-92-VS-B	8-8.5	07/07/03	Yes	01-SS-(MSU-92-VS-B)-C2	7440-38-2	Arsenic	110.0		mg/kg
MSU-92-VS-B	8-8.5	07/07/03	Yes	01-SS-(MSU-92-VS-B)-C2	7439-92-1	Lead	16.4		mg/kg
MSU-96-VS-B	2.5-3	07/07/03	No	01-SS-[MSU-96-VS-B]-C2_07/07/03_2.5	7439-92-1	Lead	35.9		mg/kg
MSU-96-VS-B	14-12.5	09/22/03	Yes	04-SS-[MSU-96-VS-B]-C2_09/22/03_14	7440-38-2	Arsenic	431.0		mg/kg
MSU-97-VS-B	2.5-3	07/07/03	No	01-SS-[MSU-97-VS-B]-C2_07/07/03_2.5	7439-92-1	Lead	30.5		mg/kg
MSU-97-VS-B	12-12.5	08/05/03	Yes	03-SS-[MSU-97-VS-B]-C2_08/05/03_12	7440-38-2	Arsenic	463.0		mg/kg
MSU-F-32-2	2-2.5	05/05/03	Yes	01-SS-[MSU-F-32-2]-C1_05/05/03_2	7440-38-2	Arsenic	5.0		mg/kg
MSU-F-32-2	2-2.5	05/05/03	Yes	01-SS-[MSU-F-32-2]-C1_05/05/03_2	7439-92-1	Lead	5.5		mg/kg
MSU-F-32-3	2-2.5	05/05/03	Yes	01-SS-[MSU-F-32-3]-C1_05/05/03_2	7440-38-2	Arsenic	4.0		mg/kg
MSU-F-32-3	2-2.5	05/05/03	Yes	01-SS-[MSU-F-32-3]-C1_05/05/03_2	7439-92-1	Lead	4.8		mg/kg
MSU-F-32	2-2.5	05/05/03	Yes	01-SS-[MSU-F-32-1]-C1_05/05/03_2	7440-38-2	Arsenic	4.8		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-F-32	2-2.5	05/05/03	Yes	01-SS-[MSU-F-32-1]-C1_05/05/03_2	7439-92-1	Lead	16.6		mg/kg
MSU-F-33-3	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-3]-C1_AVG_05/06/03_2	7440-38-2	Arsenic	4.6		mg/kg
MSU-F-33-3	2-2.5	05/06/03	Yes	01-SS-[MSU-F-33-3]-C1_AVG_05/06/03_2	7439-92-1	Lead	7.5		mg/kg
NGRR-31	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-31]C2-005	7440-38-2	Arsenic	24.0		mg/kg
NGRR-31	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-31]C2-005	7439-92-1	Lead	6.7		mg/kg
NGRR-32	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-32]C2-005	7440-38-2	Arsenic	5.1		mg/kg
NGRR-32	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-32]C2-005	7439-92-1	Lead	4.1		mg/kg
NGRR-33	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-33]C2-005	7440-38-2	Arsenic	3.4		mg/kg
NGRR-33	1.5-2	07/08/01	Yes	01-N01-SS[NGRR-33]C2-005	7439-92-1	Lead	3.2		mg/kg
R28C33	1-1.5	03/09/04	Yes	1-R28C33_03/09/04_1	7440-38-2	Arsenic	20.0		mg/kg
R28C33	1-1.5	03/09/04	Yes	1-R28C33_03/09/04_1	7439-92-1	Lead	41.6		mg/kg
R35C41	1-1.5	04/08/04	Yes	1-R35C41_04/08/04_1	7440-38-2	Arsenic	9.6		mg/kg
R35C41	1-1.5	04/08/04	Yes	1-R35C41_04/08/04_1	7439-92-1	Lead	9.7		mg/kg
R43C33	1-1.5	03/16/04	Yes	1-R43C33_03/16/04_1	7440-38-2	Arsenic	3.6		mg/kg
R43C33	1-1.5	03/16/04	Yes	1-R43C33_03/16/04_1	7439-92-1	Lead	53.9		mg/kg
R44C25	1-1.5	03/16/04	Yes	1-R44C25_03/16/04_1	7440-38-2	Arsenic	24.8		mg/kg
R44C25	1-1.5	03/16/04	Yes	1-R44C25_03/16/04_1	7439-92-1	Lead	41.7		mg/kg
R48C66	0-0.5	02/15/01	Yes	01-C011-SS-[R48C66]-D1-000	7440-38-2	Arsenic	46.0		mg/kg
R48C66	0-0.5	02/15/01	Yes	01-C011-SS-[R48C66]-D1-000	7439-92-1	Lead	35.0		mg/kg
R50C28	1-1.5	01/19/04	No	01-SS-[R50C28]-C2_01/19/04_1	7439-92-1	Lead	3.4		mg/kg
R50C28	2-2.5	02/06/04	Yes	2-R50C28_02/06/04_2	7440-38-2	Arsenic	3.8		mg/kg
R50C29	1-1.5	01/19/04	Yes	01-SS-[R50C29]-C2_01/19/04_1	7440-38-2	Arsenic	11.1		mg/kg
R50C29	1-1.5	01/19/04	Yes	01-SS-[R50C29]-C2_01/19/04_1	7439-92-1	Lead	7.8		mg/kg
R56C28	1-1.5	04/14/04	Yes	1-R56C28_04/14/04_1	7440-38-2	Arsenic	6.0		mg/kg
R56C28	1-1.5	04/14/04	Yes	1-R56C28_04/14/04_1	7439-92-1	Lead	10.0		mg/kg
R56C77	1-1.5	03/18/04	Yes	01-R56C77_03/18/04_1	7440-38-2	Arsenic	13.6		mg/kg
R56C77	1-1.5	03/18/04	Yes	01-R56C77_03/18/04_1	7439-92-1	Lead	24.5		mg/kg
R57C28	1-1.5	04/14/04	Yes	1-R57C28_04/14/04_1	7440-38-2	Arsenic	2.8		mg/kg
R57C28	1-1.5	04/14/04	Yes	1-R57C28_04/14/04_1	7439-92-1	Lead	2.7		mg/kg
R57C71	1-1.5	03/04/04	No	01-R57C71_03/04/04_1	7440-38-2	Arsenic	23.8		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R57C71	1-1.5	03/04/04	No	01-R57C71_03/04/04_1	7439-92-1	Lead	76.0		mg/kg
R58C73	1-1.5	04/08/04	Yes	1-R58C73_04/08/04_1	7440-38-2	Arsenic	9.8		mg/kg
R58C73	1-1.5	04/08/04	Yes	1-R58C73_04/08/04_1	7439-92-1	Lead	10.3		mg/kg
R59C75	1-1.5	04/08/04	Yes	1-R59C75_04/08/04_1	7440-38-2	Arsenic	10.5		mg/kg
R59C75	1-1.5	04/08/04	Yes	1-R59C75_04/08/04_1	7439-92-1	Lead	11.1		mg/kg
R59C76	1-1.5	04/08/04	Yes	1-R59C76_04/08/04_1	7440-38-2	Arsenic	11.2		mg/kg
R59C76	1-1.5	04/08/04	Yes	1-R59C76_04/08/04_1	7439-92-1	Lead	10.3		mg/kg
R59C77	1-1.5	04/08/04	Yes	1-R59C77_04/08/04_1	7440-38-2	Arsenic	30.9		mg/kg
R59C77	1-1.5	04/08/04	Yes	1-R59C77_04/08/04_1	7439-92-1	Lead	18.1		mg/kg
R67C21	1-1.5	02/10/04	Yes	1-R67C21_02/10/04_1	7440-38-2	Arsenic	12.3		mg/kg
R67C21	1-1.5	02/10/04	Yes	1-R67C21_02/10/04_1	7439-92-1	Lead	11.0		mg/kg
R68C20	1-1.5	11/17/03	Yes	01-SS-[R68C20]-C2_11/17/03_1	7440-38-2	Arsenic	10.2		mg/kg
R68C20	1-1.5	11/17/03	Yes	01-SS-[R68C20]-C2_11/17/03_1	7439-92-1	Lead	13.2		mg/kg
R71C37	1-1.5	03/03/04	Yes	01-R71C37_03/03/04_1	7440-38-2	Arsenic	59.4		mg/kg
R71C37	1-1.5	03/03/04	Yes	01-R71C37_03/03/04_1	7439-92-1	Lead	29.2		mg/kg
R72C40	1-1.5	03/02/04	Yes	01-R72C40_03/02/04_1	7440-38-2	Arsenic	31.3		mg/kg
R72C40	1-1.5	03/02/04	Yes	01-R72C40_03/02/04_1	7439-92-1	Lead	17.9		mg/kg
R73C40	1-1.5	03/02/04	Yes	01-R73C40_03/02/04_1	7440-38-2	Arsenic	6.9		mg/kg
R73C40	1-1.5	03/02/04	Yes	01-R73C40_03/02/04_1	7439-92-1	Lead	7.0		mg/kg
R80C54	1-1.5	02/17/04	Yes	1-R80C54_02/17/04_1	7440-38-2	Arsenic	14.0		mg/kg
R80C54	1-1.5	02/17/04	Yes	1-R80C54_02/17/04_2	7439-92-1	Lead	10.7		mg/kg
R82C46	1-1.5	07/02/02	Yes	01-SS-[75-R82C46]-D1-050	7440-38-2	Arsenic	2.8		mg/kg
R82C46	1-1.5	07/02/02	Yes	01-SS-[75-R82C46]-D1-050	7439-92-1	Lead	4.2		mg/kg
R83C47	1-1.5	07/16/02	Yes	01-SS-[75-R83C47]-D1-050	7440-38-2	Arsenic	4.6		mg/kg
R83C47	1-1.5	07/16/02	Yes	01-SS-[75-R83C47]-D1-050	7439-92-1	Lead	6.9		mg/kg
R83C48	1-1.5	07/16/02	Yes	01-SS-[75-R83C48]-D1-050	7440-38-2	Arsenic	4.5		mg/kg
R83C48	1-1.5	07/16/02	Yes	01-SS-[75-R83C48]-D1-050	7439-92-1	Lead	5.5		mg/kg
RR-115	0-0.5	12/17/93	Yes	RR-115-DAVG	7440-38-2	Arsenic	340.0		mg/kg
RR-116	0-0.5	12/17/93	Yes	RR-116	7440-38-2	Arsenic	220.0		mg/kg
RR-117	0-0.5	12/17/93	Yes	RR-117	7440-38-2	Arsenic	180.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
RR-118	0-0.5	12/17/93	Yes	RR-118	7440-38-2	Arsenic	230.0		mg/kg
RR-518	0-0.5	07/02/93	Yes	RR-518	7440-38-2	Arsenic	28.0	J	mg/kg
RR-525	0-0.5	07/02/93	Yes	RR-525	7440-38-2	Arsenic	22.0	J	mg/kg
RR-526	0-0.5	07/02/93	Yes	RR-526	7440-38-2	Arsenic	14.0	J	mg/kg
RR-533	0-0.5	07/02/93	Yes	RR-533	7440-38-2	Arsenic	50.0	J	mg/kg
RR-537	0-0.5	07/02/93	Yes	RR-537	7440-38-2	Arsenic	210.0		mg/kg
RR-557	0-0.5	12/02/93	Yes	RR-557	7440-38-2	Arsenic	55.0		mg/kg
RR-557	0-0.5	12/02/93	Yes	RR-557	7439-92-1	Lead	160.0	J	mg/kg
RR-560	0-0.5	12/02/93	Yes	RR-560	7440-38-2	Arsenic	110.0		mg/kg
RR-562	0-0.5	12/02/93	Yes	RR-562	7440-38-2	Arsenic	280.0		mg/kg
RR-563	0-0.5	12/02/93	Yes	RR-563	7440-38-2	Arsenic	150.0		mg/kg
RR-563	0-0.5	12/02/93	Yes	RR-563	7439-92-1	Lead	24.0	J	mg/kg
RR-567-A1	0-0.5	12/17/93	Yes	RR-567-A1	7440-38-2	Arsenic	310.0		mg/kg
RR-567-A2	0-0.5	12/17/93	Yes	RR-567-A2	7440-38-2	Arsenic	56.0		mg/kg
RR-567-B1	0-0.5	12/17/93	Yes	RR-567-B1	7440-38-2	Arsenic	210.0		mg/kg
RR-567-B2	0-0.5	12/17/93	Yes	RR-567-B2	7440-38-2	Arsenic	21.0		mg/kg
RR-567-S-2	0.5-1	12/15/93	Yes	RR-567-S-2	7440-38-2	Arsenic	16.0	J	mg/kg
RR-567-S-3	1-2	12/15/93	Yes	RR-567-S-3	7440-38-2	Arsenic	6.7	J	mg/kg
RR-567	0-0.5	12/01/93	Yes	RR-567	7440-38-2	Arsenic	400.0		mg/kg
RR-591-B2	0-0.5	12/17/93	Yes	RR-591-B2	7440-38-2	Arsenic	11.0		mg/kg
SA1-34-50	3-3.5	10/14/99	Yes	SA1-34-50	7440-38-2	Arsenic	3.9		mg/kg
SA1-34-50	3-3.5	10/14/99	Yes	SA1-34-50	7439-92-1	Lead	1000.0		mg/kg
SA1-34-51	3-3.5	10/14/99	Yes	SA1-34-51	7440-38-2	Arsenic	2.4	U	mg/kg
SA1-34-51	3-3.5	10/14/99	Yes	SA1-34-51	7439-92-1	Lead	58.0		mg/kg
SA1-35-48	3-3.5	10/14/99	Yes	SA1-35-48	7440-38-2	Arsenic	8.2		mg/kg
SA1-35-48	3-3.5	10/14/99	Yes	SA1-35-48	7439-92-1	Lead	170.0		mg/kg
SA1-35-49	3-3.5	10/14/99	Yes	SA1-35-49	7440-38-2	Arsenic	16.0		mg/kg
SA1-35-49	3-3.5	10/14/99	Yes	SA1-35-49	7439-92-1	Lead	310.0		mg/kg
SA1-36-47	3-3.5	10/14/99	Yes	SA1-36-47	7440-38-2	Arsenic	8.2		mg/kg
SA1-36-47	3-3.5	10/14/99	Yes	SA1-36-47	7439-92-1	Lead	150.0		mg/kg

Table B.17
Sample Results for GC-PA Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
SA1-36-48	3-3.5	10/14/99	Yes	SA1-36-48	7440-38-2	Arsenic	22.0		mg/kg
SA1-36-48	3-3.5	10/14/99	Yes	SA1-36-48	7439-92-1	Lead	150.0		mg/kg
SA1-36-49	3-3.5	10/14/99	Yes	SA1-36-49	7440-38-2	Arsenic	20.0		mg/kg
SA1-36-49	3-3.5	10/14/99	Yes	SA1-36-49	7439-92-1	Lead	330.0		mg/kg
SA5-86-41	1.5-2	10/12/99	Yes	SA5-86-41	7440-38-2	Arsenic	52.0		mg/kg
SA5-86-41	1.5-2	10/12/99	Yes	SA5-86-41	7439-92-1	Lead	40.0		mg/kg
SA5-87-41a	1.5-2	10/13/99	Yes	SA5-87-41a	7440-38-2	Arsenic	7.0		mg/kg
SA5-87-41a	1.5-2	10/13/99	Yes	SA5-87-41a	7439-92-1	Lead	9.9		mg/kg
SA5-88-41a	1.5-2	10/13/99	Yes	SA5-88-41a	7440-38-2	Arsenic	11.0		mg/kg
SA5-88-41a	1.5-2	10/13/99	Yes	SA5-88-41a	7439-92-1	Lead	13.0		mg/kg
T123	0-0.5	04/10/03	Yes	01-SS-[T123]-C1_04/10/03_0	7440-38-2	Arsenic	54.0		mg/kg
T128	0-0.5	04/10/03	Yes	01-SS-[T128]-C1_04/10/03_0	7439-92-1	Lead	111.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.18
Sample Results for HI-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-SS-884	0-0.5	04/05/93	Yes	18-SS-884	7439-92-1	Lead	44.0		mg/kg
18-SS-885	0-0.5	04/05/93	Yes	18-SS-885	7439-92-1	Lead	38.0		mg/kg
MSU-115-VS-B	1.5-2	05/06/04	Yes	01-SS-[MSU-115-VS-B]-C1_05/06/04_1.5	7439-92-1	Lead	30.6		mg/kg
MSU-117-E	0-0.5	09/08/03	Yes	01-SS-[MSU-117-E]-D1_09/08/03_0	7439-92-1	Lead	101.0		mg/kg
MSU-117-S	0-0.5	09/08/03	Yes	01-SS-[MSU-117-S]-D1_09/08/03_0	7439-92-1	Lead	45.8		mg/kg
MSU-117-VS-B	1.5-2	05/06/04	Yes	01-SS-[MSU-117-VS-B]-C1_05/06/04_1.5	7439-92-1	Lead	11.9		mg/kg
MSU-117-W	0-0.5	09/08/03	Yes	01-SS-[MSU-117-W]-D1_09/08/03_0	7439-92-1	Lead	6.9		mg/kg
RR-530-A	0-0.5	07/02/93	No	RR-530-A	7440-38-2	Arsenic	68.0		mg/kg
RR-530-B	0-0.5	07/02/93	Yes	RR-530-B	7440-38-2	Arsenic	5.5		mg/kg
RR-530-C	0-0.5	07/02/93	Yes	RR-530-C	7440-38-2	Arsenic	61.0		mg/kg
T319	0-0.5	04/17/03	Yes	01-SS-[T319]-C1_04/17/03_0	7440-38-2	Arsenic	15.5		mg/kg
T319	0-0.5	04/17/03	Yes	01-SS-[T319]-C1_04/17/03_0	7439-92-1	Lead	37.2		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.19
Sample Results for HI-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
19-VS-26	2-2.5	09/14/99	Yes	19-VS-26	7440-38-2	Arsenic	4.8		mg/kg
19-VS-26	2-2.5	09/14/99	Yes	19-VS-26	7439-92-1	Lead	11.0	J	mg/kg
19-VS-36	0-0.5	09/14/99	Yes	19-VS-36	7440-38-2	Arsenic	21.0		mg/kg
19-VS-36	0-0.5	09/14/99	Yes	19-VS-36	7439-92-1	Lead	180.0		mg/kg
19-VS-38	0-0.5	09/14/99	Yes	19-VS-38	7440-38-2	Arsenic	5.4		mg/kg
19-VS-38	0-0.5	09/14/99	Yes	19-VS-38	7439-92-1	Lead	13.0		mg/kg
19-VS-40	0-0.5	09/14/99	Yes	19-VS-40	7440-38-2	Arsenic	18.0		mg/kg
19-VS-40	0-0.5	09/14/99	Yes	19-VS-40	7439-92-1	Lead	82.0		mg/kg
19-VS-44	2-2.5	09/14/99	Yes	19-VS-44-DAVG	7440-38-2	Arsenic	5.8		mg/kg
19-VS-44	2-2.5	09/14/99	Yes	19-VS-44-DAVG	7439-92-1	Lead	24.0		mg/kg
H404-10	0-0.5	07/03/01	Yes	01-H404-SS[10]D1-005	7440-38-2	Arsenic	7.5		mg/kg
H404-10	0-0.5	07/03/01	Yes	01-H404-SS[10]D1-005	7439-92-1	Lead	22.0		mg/kg
H404-11	0-0.5	07/03/01	Yes	01-H404-SS[11]D1-005-DAVG	7440-38-2	Arsenic	6.2		mg/kg
H404-11	0-0.5	07/03/01	Yes	01-H404-SS[11]D1-005-DAVG	7439-92-1	Lead	31.0		mg/kg
H404-2	0-0.5	07/03/01	Yes	01-H404-SS[2]D1-005	7440-38-2	Arsenic	24.0		mg/kg
H404-2	0-0.5	07/03/01	Yes	01-H404-SS[2]D1-005	7439-92-1	Lead	450.0		mg/kg
H404-3	0-0.5	07/03/01	Yes	01-H404-SS[3]D1-005	7440-38-2	Arsenic	17.0		mg/kg
H404-3	0-0.5	07/03/01	Yes	01-H404-SS[3]D1-005	7439-92-1	Lead	88.0		mg/kg
H404-4	0-0.5	07/03/01	Yes	01-H404-SS[4]D1-005	7440-38-2	Arsenic	60.0		mg/kg
H404-4	0-0.5	07/03/01	Yes	01-H404-SS[4]D1-005	7439-92-1	Lead	46.0		mg/kg
H404-5	0-0.5	07/03/01	Yes	01-H404-SS[5]D1-005	7440-38-2	Arsenic	13.0		mg/kg
H404-5	0-0.5	07/03/01	Yes	01-H404-SS[5]D1-005	7439-92-1	Lead	160.0		mg/kg
H404-7	0-0.5	07/03/01	Yes	01-H404-SS[7]D1-005	7440-38-2	Arsenic	8.1		mg/kg
H404-7	0-0.5	07/03/01	Yes	01-H404-SS[7]D1-005	7439-92-1	Lead	18.0		mg/kg
H404-8	0-0.5	07/03/01	Yes	01-H404-SS[8]D1-005	7440-38-2	Arsenic	13.0		mg/kg
H404-8	0-0.5	07/03/01	Yes	01-H404-SS[8]D1-005	7439-92-1	Lead	170.0		mg/kg
H404-9	0-0.5	07/03/01	Yes	01-H404-SS[9]D1-005	7440-38-2	Arsenic	150.0		mg/kg
H404-9	0-0.5	07/03/01	Yes	01-H404-SS[9]D1-005	7439-92-1	Lead	280.0		mg/kg
LR-037	0-0.5	11/11/93	Yes	LR-037	7440-38-2	Arsenic	48.0		mg/kg
MSU-NGRR-09	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-09-1]-C1_05/29/03_1.5	7440-38-2	Arsenic	19.7		mg/kg

Table B.19
Sample Results for HI-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-09	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-09-1]-C1_05/29/03_1.5	7439-92-1	Lead	12.1		mg/kg
MSU-NGRR-12B-1	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-1]-C1_05/08/03_1.5	7440-38-2	Arsenic	5.8		mg/kg
MSU-NGRR-12B-1	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-1]-C1_05/08/03_1.5	7439-92-1	Lead	5.9		mg/kg
MSU-NGRR-12B-2	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-2]-C1_05/08/03_1.5	7440-38-2	Arsenic	6.3		mg/kg
MSU-NGRR-12B-2	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-2]-C1_05/08/03_1.5	7439-92-1	Lead	15.2		mg/kg
MSU-NGRR-12B-3	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-3]-C1_05/08/03_1.5	7440-38-2	Arsenic	11.1		mg/kg
MSU-NGRR-12B-3	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-3]-C1_05/08/03_1.5	7439-92-1	Lead	80.9		mg/kg
MSU-NGRR-12B-7	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-7]-C1_05/08/03_1.5	7440-38-2	Arsenic	5.8		mg/kg
MSU-NGRR-12B-7	1.5-2	05/08/03	Yes	01-SS[MSU-NGRR-12-7]-C1_05/08/03_1.5	7439-92-1	Lead	8.1		mg/kg
MSU-NGRR-9-2	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-09-2]-C1_05/29/03_1.5	7440-38-2	Arsenic	39.2		mg/kg
MSU-NGRR-9-2	1.5-2	05/29/03	Yes	01-SS-[MSU-NGRR-09-2]-C1_05/29/03_1.5	7439-92-1	Lead	26.2		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.20
Sample Results for HI-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
BG-SS-4	0-0.5	11/11/86	Yes	BG-SS-4	7439-92-1	Lead	14.0		mg/kg
BG-SS-4	0-0.5	11/11/86	Yes	BG-SS-4	309-00-2	Aldrin	0.6	J	mg/kg
LR-195	0-0.5	11/16/93	Yes	LR-195	7440-38-2	Arsenic	39.0		mg/kg
R64C2	1-1.5	03/25/04	Yes	01-R64C2_03/25/04_1	7440-38-2	Arsenic	10.7		mg/kg
R64C2	1-1.5	03/25/04	Yes	01-R64C2_03/25/04_1	7439-92-1	Lead	14.2		mg/kg
R64C3	1-1.5	10/15/03	Yes	01-SS-[R64C3]-C2_10/15/03_1	7440-38-2	Arsenic	17.8		mg/kg
R64C3	1-1.5	10/15/03	Yes	01-SS-[R64C3]-C2_10/15/03_1	7439-92-1	Lead	9.7		mg/kg
R65C3	1-1.5	10/15/03	Yes	01-SS-[R65C3]-C2_10/15/03_1	7440-38-2	Arsenic	9.6		mg/kg
R65C3	1-1.5	10/15/03	Yes	01-SS-[R65C3]-C2_10/15/03_1	7439-92-1	Lead	13.9		mg/kg
R65C6	1-1.5	01/16/04	Yes	01-SS-[R65C6]-C2_01/16/04_1	7440-38-2	Arsenic	10.5		mg/kg
R65C6	1-1.5	01/16/04	Yes	01-SS-[R65C6]-C2_01/16/04_1	7439-92-1	Lead	6.0		mg/kg
R66C7	1-1.5	01/16/04	Yes	01-SS-[R66C7]-C2_01/16/04_1	7440-38-2	Arsenic	5.3		mg/kg
R66C7	1-1.5	01/16/04	Yes	01-SS-[R66C7]-C2_01/16/04_1	7439-92-1	Lead	4.3		mg/kg
R67C2	0-0.5	09/17/01	Yes	01-SM-SS-[R67C2]-D1-005	7440-38-2	Arsenic	52.0		mg/kg
R67C2	0-0.5	09/17/01	Yes	01-SM-SS-[R67C2]-D1-005	7439-92-1	Lead	22.0		mg/kg
R67C3	0-0.5	09/17/01	Yes	01-SM-SS-[R67C3]-D1-005	7440-38-2	Arsenic	52.0		mg/kg
R67C3	0-0.5	09/17/01	Yes	01-SM-SS-[R67C3]-D1-005	7439-92-1	Lead	150.0		mg/kg
R67C4	0-0.5	09/17/01	Yes	01-SM-SS-[R67C4]-D1-005	7440-38-2	Arsenic	47.0		mg/kg
R67C4	0-0.5	09/17/01	Yes	01-SM-SS-[R67C4]-D1-005	7439-92-1	Lead	35.0		mg/kg
R67C7	1-1.5	07/11/02	Yes	01-SS-[75-R67C7]-D1-050	7440-38-2	Arsenic	3.1		mg/kg
R67C7	1-1.5	07/11/02	Yes	01-SS-[75-R67C7]-D1-050	7439-92-1	Lead	3.9		mg/kg
R68C2	0-0.5	09/17/01	Yes	01-SM-SS-[R68C2]-D1-005	7440-38-2	Arsenic	73.0		mg/kg
R68C2	0-0.5	09/17/01	Yes	01-SM-SS-[R68C2]-D1-005	7439-92-1	Lead	280.0		mg/kg
R68C3	0-0.5	09/17/01	Yes	01-SM-SS-[R68C3]-D1-005	7440-38-2	Arsenic	6.0		mg/kg
R68C3	0-0.5	09/17/01	Yes	01-SM-SS-[R68C3]-D1-005	7439-92-1	Lead	4.7		mg/kg
R68C4	0-0.5	09/17/01	Yes	01-SM-SS-[R68C4]-D1-005	7440-38-2	Arsenic	62.0		mg/kg
R68C4	0-0.5	09/17/01	Yes	01-SM-SS-[R68C4]-D1-005	7439-92-1	Lead	83.0		mg/kg
R69C4	0-0.5	09/17/01	Yes	01-SM-SS-[R69C4]-D1-005	7440-38-2	Arsenic	28.0		mg/kg
R69C4	0-0.5	09/17/01	Yes	01-SM-SS-[R69C4]-D1-005	7439-92-1	Lead	36.0		mg/kg
R69C7	1-1.5	07/11/02	Yes	01-SS-[75-R69C7]-D1-050	7440-38-2	Arsenic	4.0		mg/kg

Table B.20
Sample Results for HI-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R69C7	1-1.5	07/11/02	Yes	01-SS-[75-R69C7]-D1-050	7439-92-1	Lead	4.8		mg/kg
R70C7	1-1.5	07/11/02	Yes	01-SS-[75-R70C7]-D1-050	7440-38-2	Arsenic	30.2		mg/kg
R70C7	1-1.5	07/11/02	Yes	01-SS-[75-R70C7]-D1-050	7439-92-1	Lead	12.5		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
10-SS-401	0-0.5	11/08/93	Yes	10-SS-401	7440-38-2	Arsenic	48.0	J	mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.004		mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	7440-38-2	Arsenic	3.0		mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	7440-50-8	Copper	17.0		mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	7439-92-1	Lead	5.4	U	mg/kg
10-TP-501	4-6	02/24/92	Yes	10-TP-501-S-3	7439-97-6	Mercury	0.08	U	mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.01		mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	7440-38-2	Arsenic	2.1		mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	7440-50-8	Copper	13.0		mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	7439-92-1	Lead	5.1	U	mg/kg
10-TP-503	0-3	02/24/92	Yes	10-TP-503-S-2	7439-97-6	Mercury	0.08	U	mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	118-96-7	2,4,6-Trinitrotoluene	0.2		mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	7440-38-2	Arsenic	1.7		mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	7440-50-8	Copper	9.9		mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	7439-92-1	Lead	5.4	U	mg/kg
10-TP-503	5-7	02/24/92	Yes	10-TP-503-S-3	7439-97-6	Mercury	0.07	U	mg/kg
10-VS-1	3-3.5	03/08/93	Yes	10-VS-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.02		mg/kg
10-VS-1	3-3.5	03/08/93	Yes	10-VS-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
10-VS-1	3-3.5	03/08/93	Yes	10-VS-1-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
10-VS-11	6-6.5	09/04/01	Yes	03-IN01-SS-[10-VS-11]-C2-100	118-96-7	2,4,6-Trinitrotoluene	0.2		mg/kg
10-VS-11	6-6.5	09/04/01	Yes	03-IN01-SS-[10-VS-11]-C2-100	DNT-TOTAL	DNT - Total	0.09	U	mg/kg
10-VS-12	3-6	09/04/01	Yes	03-IN01-SS-[10-VS-12]-C2-050	118-96-7	2,4,6-Trinitrotoluene	0.04	U	mg/kg
10-VS-12	3-6	09/04/01	Yes	03-IN01-SS-[10-VS-12]-C2-050	DNT-TOTAL	DNT - Total	0.09	U	mg/kg
10-VS-2	3-3.5	03/08/93	Yes	10-VS-2	118-96-7	2,4,6-Trinitrotoluene	0.03		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
10-VS-2	3-3.5	03/08/93	Yes	10-VS-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
10-VS-2	3-3.5	03/08/93	Yes	10-VS-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
10-VS-2a	0-0.5	01/25/00	Yes	10-VS-2a	118-96-7	2,4,6-Trinitrotoluene	0.05	U	mg/kg
10-VS-4	0-0.5	03/08/93	Yes	10-VS-4	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
10-VS-4	0-0.5	03/08/93	Yes	10-VS-4	DNT-TOTAL	DNT - Total	0.03	U	mg/kg
10-VS-4	0-0.5	03/08/93	Yes	10-VS-4	98-95-3	Nitrobenzene	0.1	U	mg/kg
10-VS-6	2-2.5	08/01/01	Yes	02-IN01-SS[10-VS-6]D2-5.0	118-96-7	2,4,6-Trinitrotoluene	1.0		mg/kg
10-VS-6	2-2.5	08/01/01	Yes	02-IN01-SS[10-VS-6]D2-5.0	DNT-TOTAL	DNT - Total	0.09	U	mg/kg
10-VS-8	2-2.5	08/01/01	Yes	02-IN01-SS[10-VS-8]D2-5.0	118-96-7	2,4,6-Trinitrotoluene	0.07	J	mg/kg
10-VS-8	2-2.5	08/01/01	Yes	02-IN01-SS[10-VS-8]D2-5.0	DNT-TOTAL	DNT - Total	0.08	U	mg/kg
10-VS-9	2-2.5	08/01/01	Yes	02-IN01-SS[10-VS-9]D2-5.0-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.1		mg/kg
10-VS-9	2-2.5	08/01/01	Yes	02-IN01-SS[10-VS-9]D2-5.0-DAVG	DNT-TOTAL	DNT - Total	0.08	U	mg/kg
30-VS-3	0-0.5	03/30/92	Yes	30-VS-3	7440-38-2	Arsenic	7.6	J	mg/kg
30-VS-3	0-0.5	03/30/92	Yes	30-VS-3	7440-50-8	Copper	14.0		mg/kg
30-VS-3	0-0.5	03/30/92	Yes	30-VS-3	7439-92-1	Lead	130.0		mg/kg
30-VS-3	0-0.5	03/30/92	Yes	30-VS-3	7439-97-6	Mercury	0.1	U	mg/kg
30-VS-4	0-0.5	03/30/92	Yes	30-VS-4	7440-38-2	Arsenic	6.0	J	mg/kg
30-VS-4	0-0.5	03/30/92	Yes	30-VS-4	7440-50-8	Copper	18.0		mg/kg
30-VS-4	0-0.5	03/30/92	Yes	30-VS-4	7439-92-1	Lead	130.0		mg/kg
30-VS-4	0-0.5	03/30/92	Yes	30-VS-4	7439-97-6	Mercury	0.1		mg/kg
30-VS-5	0-0.5	03/30/92	Yes	30-VS-5	7440-38-2	Arsenic	12.0	J	mg/kg
30-VS-5	0-0.5	03/30/92	Yes	30-VS-5	7440-50-8	Copper	19.0		mg/kg
30-VS-5	0-0.5	03/30/92	Yes	30-VS-5	7439-92-1	Lead	750.0		mg/kg
30-VS-5	0-0.5	03/30/92	Yes	30-VS-5	7439-97-6	Mercury	1.4		mg/kg
30-VS-6	0-0.5	03/30/92	Yes	30-VS-6	7440-38-2	Arsenic	11.0	J	mg/kg
30-VS-6	0-0.5	03/30/92	Yes	30-VS-6	7440-50-8	Copper	13.0		mg/kg
30-VS-6	0-0.5	03/30/92	Yes	30-VS-6	7439-92-1	Lead	62.0		mg/kg
30-VS-6	0-0.5	03/30/92	Yes	30-VS-6	7439-97-6	Mercury	0.1		mg/kg
30-VS-7	0-0.5	04/07/92	Yes	30-VS-7	7440-38-2	Arsenic	21.0		mg/kg
30-VS-7	0-0.5	04/07/92	Yes	30-VS-7	7440-50-8	Copper	5.1		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
30-VS-7	0-0.5	04/07/92	Yes	30-VS-7	7439-92-1	Lead	130.0		mg/kg
30-VS-7	0-0.5	04/07/92	Yes	30-VS-7	7439-97-6	Mercury	0.1		mg/kg
31-B-1	17.5-19	04/20/87	Yes	31-B-1,S-7	118-96-7	2,4,6-Trinitrotoluene	0.08	U	mg/kg
31-B-1	17.5-19	04/20/87	Yes	31-B-1,S-7	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-B-1	17.5-19	04/20/87	Yes	31-B-1,S-7	7439-92-1	Lead	160.0		mg/kg
31-B-501	15-19.5	02/18/92	Yes	31-B-501-S-4	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-B-501	15-19.5	02/18/92	Yes	31-B-501-S-4	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-B-501	15-19.5	02/18/92	Yes	31-B-501-S-4	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-B-501	23-24.5	02/18/92	Yes	31-B-501-S-5A	7439-92-1	Lead	170.0	J	mg/kg
31-B-501	20-23	02/18/92	Yes	31-B-501-S-5	7439-92-1	Lead	68.0	J	mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	7440-38-2	Arsenic	2.4		mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	7440-50-8	Copper	28.0		mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	7439-92-1	Lead	330.0		mg/kg
31-B-502	5-8	02/19/92	Yes	31-B-502-S-2	7439-97-6	Mercury	0.08	U	mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	7440-38-2	Arsenic	2.8		mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	7440-50-8	Copper	19.0		mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	7439-92-1	Lead	120.0		mg/kg
31-B-502	10-13	02/19/92	Yes	31-B-502-S-3	7439-97-6	Mercury	0.09	U	mg/kg
31-B-503	15-16.5	02/19/92	Yes	31-B-503-S-4-DAVG	7439-92-1	Lead	9.1	J	mg/kg
31-B-503	20-21.5	02/19/92	Yes	31-B-503-S-5	7439-92-1	Lead	9.2	J	mg/kg
31-B-504	5-6.5	02/20/92	Yes	31-B-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-B-504	5-6.5	02/20/92	Yes	31-B-504-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-B-504	5-6.5	02/20/92	Yes	31-B-504-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-B-504	5-6.5	02/20/92	Yes	31-B-504-S-2	7439-92-1	Lead	7.7		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-B-504	10-11.9	02/20/92	Yes	31-B-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-B-504	10-11.9	02/20/92	Yes	31-B-504-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-B-504	10-11.9	02/20/92	Yes	31-B-504-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-B-504	10-11.9	02/20/92	Yes	31-B-504-S-3	7439-92-1	Lead	6.6		mg/kg
31-B-504	15-16.5	02/20/92	Yes	31-B-504-S-4	7439-92-1	Lead	7.0		mg/kg
31-HA-501	2-3	11/03/92	Yes	31-HA-501-S-3	7439-92-1	Lead	5.5	UJ	mg/kg
31-HA-502	2-3	11/20/92	Yes	31-HA-502-S-3	7439-92-1	Lead	7.9		mg/kg
31-SS-403	0-0.5	11/08/93	Yes	31-SS-403	7440-38-2	Arsenic	60.0		mg/kg
31-SS-404	0-0.5	11/08/93	Yes	31-SS-404	7440-38-2	Arsenic	110.0	J	mg/kg
31-SS-501	0-0.5	02/14/92	Yes	31-SS-501-DAVG	7439-92-1	Lead	26.0		mg/kg
31-SS-503	0-0.5	02/14/92	Yes	31-SS-503	7439-92-1	Lead	73.0		mg/kg
31-SS-504	0-0.5	02/14/92	Yes	31-SS-504	7439-92-1	Lead	130.0		mg/kg
31-SS-505	0-0.5	02/14/92	Yes	31-SS-505	7439-92-1	Lead	43.0		mg/kg
31-SS-506	0-0.5	02/14/92	Yes	31-SS-506	7439-92-1	Lead	110.0		mg/kg
31-SS-507	0-0.5	02/14/92	Yes	31-SS-507	7439-92-1	Lead	5.0	U	mg/kg
31-SS-509	0-0.5	02/14/92	Yes	31-SS-509	7439-92-1	Lead	38.0		mg/kg
31-SS-511	0-0.5	02/14/92	Yes	31-SS-511	7439-92-1	Lead	89.0		mg/kg
31-SS-512	0-0.5	02/14/92	Yes	31-SS-512	7439-92-1	Lead	18.0		mg/kg
31-SS-513	0-0.5	02/14/92	Yes	31-SS-513	7439-92-1	Lead	9.1		mg/kg
31-SS-518	0-0.5	02/14/92	Yes	31-SS-518	7439-92-1	Lead	13.0		mg/kg
31-SS-519	0-0.5	02/14/92	Yes	31-SS-519	7439-92-1	Lead	26.0		mg/kg
31-SS-520	0-0.5	02/14/92	Yes	31-SS-520	7439-92-1	Lead	18.0		mg/kg
31-SS-521	0-0.5	02/14/92	Yes	31-SS-521	7439-92-1	Lead	44.0		mg/kg
31-SS-522	0-0.5	02/14/92	Yes	31-SS-522	7439-92-1	Lead	114.0		mg/kg
31-SS-523	0-0.5	02/14/92	Yes	31-SS-523	7439-92-1	Lead	51.0		mg/kg
31-SS-524	0-0.5	02/14/92	Yes	31-SS-524	7439-92-1	Lead	38.0		mg/kg
31-SS-525	0-0.5	02/14/92	Yes	31-SS-525	7439-92-1	Lead	69.0		mg/kg
31-SS-526	0-0.5	02/14/92	Yes	31-SS-526	7439-92-1	Lead	22.0		mg/kg
31-SS-527	0-0.5	02/14/92	Yes	31-SS-527-DAVG	7439-92-1	Lead	29.0		mg/kg
31-SS-528	0-0.5	02/14/92	Yes	31-SS-528	7439-92-1	Lead	86.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-SS-529	0-0.5	02/14/92	Yes	31-SS-529	7439-92-1	Lead	59.0		mg/kg
31-SS-530	0-0.5	02/14/92	Yes	31-SS-530	7439-92-1	Lead	52.0		mg/kg
31-SS-533	0-0.5	11/20/92	Yes	31-SS-533	7439-92-1	Lead	51.0		mg/kg
31-SS-535	0-0.5	11/20/92	Yes	31-SS-535-DAVG	7439-92-1	Lead	90.0		mg/kg
31-SS-536	0-0.5	11/20/92	Yes	31-SS-536	7439-92-1	Lead	250.0		mg/kg
31-SS-600	0-0.5	11/03/99	Yes	31-SS-600	7440-38-2	Arsenic	26.0		mg/kg
31-SS-600	0-0.5	11/03/99	Yes	31-SS-600	7439-92-1	Lead	28.0		mg/kg
31-SS-601	0-0.5	11/03/99	Yes	31-SS-601	7440-38-2	Arsenic	88.0		mg/kg
31-SS-601	0-0.5	11/03/99	Yes	31-SS-601	7439-92-1	Lead	2000.0		mg/kg
31-SS-602	0-0.5	11/03/99	Yes	31-SS-602	7440-38-2	Arsenic	71.0		mg/kg
31-SS-602	0-0.5	11/03/99	Yes	31-SS-602	7439-92-1	Lead	170.0		mg/kg
31-SS-603	0-0.5	11/03/99	Yes	31-SS-603	7440-38-2	Arsenic	87.0		mg/kg
31-SS-603	0-0.5	11/03/99	Yes	31-SS-603	7439-92-1	Lead	36.0		mg/kg
31-SS-606	0-0.5	11/03/99	Yes	31-SS-606	7440-38-2	Arsenic	63.0		mg/kg
31-SS-606	0-0.5	11/03/99	Yes	31-SS-606	7439-92-1	Lead	180.0		mg/kg
31-SS-608	0-0.5	11/03/99	Yes	31-SS-608	7440-38-2	Arsenic	46.0		mg/kg
31-SS-608	0-0.5	11/03/99	Yes	31-SS-608	7439-92-1	Lead	200.0		mg/kg
31-SS-609	0-0.5	11/03/99	Yes	31-SS-609	7440-38-2	Arsenic	52.0		mg/kg
31-SS-609	0-0.5	11/03/99	Yes	31-SS-609	7439-92-1	Lead	250.0		mg/kg
31-SS-610	0-0.5	11/03/99	Yes	31-SS-610	7440-38-2	Arsenic	12.0		mg/kg
31-SS-610	0-0.5	11/03/99	Yes	31-SS-610	7439-92-1	Lead	40.0		mg/kg
31-SS-614	0-0.5	11/03/99	Yes	31-SS-614	7440-38-2	Arsenic	120.0		mg/kg
31-SS-614	0-0.5	11/03/99	Yes	31-SS-614	7439-92-1	Lead	250.0		mg/kg
31-SS-621	0-0.5	11/03/99	Yes	31-SS-621	7440-38-2	Arsenic	96.0		mg/kg
31-SS-621	0-0.5	11/03/99	Yes	31-SS-621	7439-92-1	Lead	220.0		mg/kg
31-SS-624	0-0.5	11/03/99	Yes	31-SS-624	7440-38-2	Arsenic	63.0		mg/kg
31-SS-624	0-0.5	11/03/99	Yes	31-SS-624	7439-92-1	Lead	78.0		mg/kg
31-SS-626	0-0.5	11/03/99	Yes	31-SS-626	7440-38-2	Arsenic	9.4		mg/kg
31-SS-626	0-0.5	11/03/99	Yes	31-SS-626	7439-92-1	Lead	77.0		mg/kg
31-SS-627	0-0.5	11/03/99	Yes	31-SS-627	7440-38-2	Arsenic	4.6	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-SS-627	0-0.5	11/03/99	Yes	31-SS-627	7439-92-1	Lead	4.1		mg/kg
31-SS-628	0-0.5	11/03/99	Yes	31-SS-628	7440-38-2	Arsenic	33.0		mg/kg
31-SS-628	0-0.5	11/03/99	Yes	31-SS-628	7439-92-1	Lead	1100.0		mg/kg
31-SS-629	0-0.5	11/03/99	Yes	31-SS-629	7440-38-2	Arsenic	64.0		mg/kg
31-SS-629	0-0.5	11/03/99	Yes	31-SS-629	7439-92-1	Lead	1300.0		mg/kg
31-SS-631	0-0.5	11/03/99	Yes	31-SS-631	7440-38-2	Arsenic	120.0		mg/kg
31-SS-631	0-0.5	11/03/99	Yes	31-SS-631	7439-92-1	Lead	240.0		mg/kg
31-SS-632	0-0.5	11/03/99	Yes	31-SS-632	7440-38-2	Arsenic	43.0		mg/kg
31-SS-632	0-0.5	11/03/99	Yes	31-SS-632	7439-92-1	Lead	160.0		mg/kg
31-SS-635	0-0.5	11/03/99	Yes	31-SS-635	7440-38-2	Arsenic	25.0		mg/kg
31-SS-635	0-0.5	11/03/99	Yes	31-SS-635	7439-92-1	Lead	97.0		mg/kg
31-SS-639	0-0.5	11/03/99	Yes	31-SS-639	7440-38-2	Arsenic	15.0		mg/kg
31-SS-639	0-0.5	11/03/99	Yes	31-SS-639	7439-92-1	Lead	47.0		mg/kg
31-SS-640	0-0.5	11/03/99	Yes	31-SS-640	7440-38-2	Arsenic	10.0		mg/kg
31-SS-640	0-0.5	11/03/99	Yes	31-SS-640	7439-92-1	Lead	15.0		mg/kg
31-SS-644	0-0.5	11/03/99	Yes	31-SS-644	7440-38-2	Arsenic	68.0		mg/kg
31-SS-644	0-0.5	11/03/99	Yes	31-SS-644	7439-92-1	Lead	200.0		mg/kg
31-SS-645	0-0.5	11/03/99	Yes	31-SS-645	7440-38-2	Arsenic	66.0		mg/kg
31-SS-645	0-0.5	11/03/99	Yes	31-SS-645	7439-92-1	Lead	110.0		mg/kg
31-SS-646	0-0.5	11/03/99	Yes	31-SS-646	7440-38-2	Arsenic	20.0		mg/kg
31-SS-646	0-0.5	11/03/99	Yes	31-SS-646	7439-92-1	Lead	3.1		mg/kg
31-SS-649	0-0.5	12/23/99	Yes	31-SS-649	7440-38-2	Arsenic	34.0		mg/kg
31-SS-649	0-0.5	12/23/99	Yes	31-SS-649	7439-92-1	Lead	520.0		mg/kg
31-SS-650	0-0.5	12/23/99	Yes	31-SS-650	7440-38-2	Arsenic	76.0		mg/kg
31-SS-650	0-0.5	12/23/99	Yes	31-SS-650	7439-92-1	Lead	200.0		mg/kg
31-SS-651	0-0.5	12/23/99	Yes	31-SS-651	7440-38-2	Arsenic	96.0		mg/kg
31-SS-651	0-0.5	12/23/99	Yes	31-SS-651	7439-92-1	Lead	590.0		mg/kg
31-SS-658	0-0.5	12/23/99	Yes	31-SS-658	7440-38-2	Arsenic	96.0		mg/kg
31-SS-658	0-0.5	12/23/99	Yes	31-SS-658	7439-92-1	Lead	230.0		mg/kg
31-TP-10	3-6	04/28/87	Yes	31-TP-10,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-TP-10	3-6	04/28/87	Yes	31-TP-10,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-10	3-6	04/28/87	Yes	31-TP-10,S-2	7439-92-1	Lead	12.0		mg/kg
31-TP-11	3-6	04/28/87	Yes	31-TP-11,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-11	3-6	04/28/87	Yes	31-TP-11,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-11	3-6	04/28/87	Yes	31-TP-11,S-2	7439-92-1	Lead	9.0	J	mg/kg
31-TP-12	3-6	04/28/87	Yes	31-TP-12,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-12	3-6	04/28/87	Yes	31-TP-12,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-12	3-6	04/28/87	Yes	31-TP-12,S-2	7439-92-1	Lead	10.0		mg/kg
31-TP-13	3-6	04/28/87	Yes	31-TP-13,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-13	3-6	04/28/87	Yes	31-TP-13,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-13	3-6	04/28/87	Yes	31-TP-13,S-2	7439-92-1	Lead	60.0		mg/kg
31-TP-14	3-6	04/28/87	Yes	31-TP-14,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-14	3-6	04/28/87	Yes	31-TP-14,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-14	3-6	04/28/87	Yes	31-TP-14,S-2	7439-92-1	Lead	8.0	J	mg/kg
31-TP-16	3-6	04/28/87	Yes	31-TP-16,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-16	3-6	04/28/87	Yes	31-TP-16,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-16	3-6	04/28/87	Yes	31-TP-16,S-2	7439-92-1	Lead	88.0		mg/kg
31-TP-17	3-6	04/28/87	Yes	31-TP-17,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-17	3-6	04/28/87	Yes	31-TP-17,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-17	3-6	04/28/87	Yes	31-TP-17,S-2	7439-92-1	Lead	10.0		mg/kg
31-TP-18	3-6	04/28/87	Yes	31-TP-18,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-18	3-6	04/28/87	Yes	31-TP-18,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-18	3-6	04/28/87	Yes	31-TP-18,S-2	7439-92-1	Lead	9.0	J	mg/kg
31-TP-19	0-3	04/28/87	Yes	31-TP-19,S-1	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-19	0-3	04/28/87	Yes	31-TP-19,S-1	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-19	0-3	04/28/87	Yes	31-TP-19,S-1	7439-92-1	Lead	11.0		mg/kg
31-TP-19	3-6	04/28/87	Yes	31-TP-19,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-19	3-6	04/28/87	Yes	31-TP-19,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-19	3-6	04/28/87	Yes	31-TP-19,S-2	7439-92-1	Lead	6.0	J	mg/kg
31-TP-21	0-3	04/28/87	Yes	31-TP-21,S-1-DAVG	DNT-TOTAL	DNT - Total	0.1	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-TP-21	0-3	04/28/87	Yes	31-TP-21,S-1-DAVG	7439-92-1	Lead	9.0	J	mg/kg
31-TP-21	3-6	04/28/87	Yes	31-TP-21,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-21	3-6	04/28/87	Yes	31-TP-21,S-2	7439-92-1	Lead	12.0		mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	7440-38-2	Arsenic	2.9		mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	7440-50-8	Copper	16.0		mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	7439-92-1	Lead	11.0		mg/kg
31-TP-501	3-6	02/26/92	Yes	31-TP-501-S-2-DAVG	7439-97-6	Mercury	0.09		mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	7440-38-2	Arsenic	2.5		mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	7440-50-8	Copper	16.0		mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	7439-92-1	Lead	10.0		mg/kg
31-TP-501	8-10	02/26/92	Yes	31-TP-501-S-3	7439-97-6	Mercury	0.08	U	mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	7440-38-2	Arsenic	2.0		mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	7440-50-8	Copper	19.0		mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	7439-92-1	Lead	5.4	U	mg/kg
31-TP-502	3-6	02/26/92	Yes	31-TP-502-S-2	7439-97-6	Mercury	0.08	U	mg/kg
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	7440-38-2	Arsenic	1.7		mg/kg
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	7440-50-8	Copper	17.0		mg/kg
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	7439-92-1	Lead	5.3	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-TP-502	8-10	02/26/92	Yes	31-TP-502-S-3	7439-97-6	Mercury	0.08	U	mg/kg
31-TP-503	0-1	02/27/92	Yes	31-TP-503-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-503	0-1	02/27/92	Yes	31-TP-503-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-503	0-1	02/27/92	Yes	31-TP-503-S-1	98-95-3	Nitrobenzene	0.07	U	mg/kg
31-TP-503	0-1	02/27/92	Yes	31-TP-503-S-1	7439-92-1	Lead	160.0		mg/kg
31-TP-503	3-6	02/27/92	Yes	31-TP-503-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-503	3-6	02/27/92	Yes	31-TP-503-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-503	3-6	02/27/92	Yes	31-TP-503-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-503	3-6	02/27/92	Yes	31-TP-503-S-2	7439-92-1	Lead	5.2	U	mg/kg
31-TP-503	8-10	02/27/92	Yes	31-TP-503-S-3	7439-92-1	Lead	5.2	U	mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	7440-38-2	Arsenic	1.7		mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	7440-50-8	Copper	14.0		mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	7439-92-1	Lead	5.4	U	mg/kg
31-TP-504	3-6	02/26/92	Yes	31-TP-504-S-2	7439-97-6	Mercury	0.1		mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	7440-38-2	Arsenic	1.8		mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	7440-50-8	Copper	14.0		mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	7439-92-1	Lead	5.7		mg/kg
31-TP-504	8-10	02/26/92	Yes	31-TP-504-S-3	7439-97-6	Mercury	0.1		mg/kg
31-TP-505	0-1	02/27/92	Yes	31-TP-505-S-1-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
31-TP-505	0-1	02/27/92	Yes	31-TP-505-S-1-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-505	0-1	02/27/92	Yes	31-TP-505-S-1-DAVG	98-95-3	Nitrobenzene	0.08	U	mg/kg
31-TP-505	0-1	02/27/92	Yes	31-TP-505-S-1-DAVG	7439-92-1	Lead	12.0		mg/kg
31-TP-505	3-6	02/27/92	Yes	31-TP-505-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-505	3-6	02/27/92	Yes	31-TP-505-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-TP-505	3-6	02/27/92	Yes	31-TP-505-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-505	3-6	02/27/92	Yes	31-TP-505-S-2	7439-92-1	Lead	4.9	U	mg/kg
31-TP-505	8-10	02/27/92	Yes	31-TP-505-S-3	7439-92-1	Lead	5.8	U	mg/kg
31-TP-506	0-1	02/27/92	Yes	31-TP-506-S-1	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-506	0-1	02/27/92	Yes	31-TP-506-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-506	0-1	02/27/92	Yes	31-TP-506-S-1	98-95-3	Nitrobenzene	0.07	U	mg/kg
31-TP-506	0-1	02/27/92	Yes	31-TP-506-S-1	7439-92-1	Lead	27.0		mg/kg
31-TP-506	3-6	02/27/92	Yes	31-TP-506-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-506	3-6	02/27/92	Yes	31-TP-506-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-506	3-6	02/27/92	Yes	31-TP-506-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-506	3-6	02/27/92	Yes	31-TP-506-S-2	7439-92-1	Lead	5.3	U	mg/kg
31-TP-506	8-10	02/27/92	Yes	31-TP-506-S-3	7439-92-1	Lead	5.1	U	mg/kg
31-TP-507	0-1	02/27/92	Yes	31-TP-507-S-1	118-96-7	2,4,6-Trinitrotoluene	0.004	U	mg/kg
31-TP-507	0-1	02/27/92	Yes	31-TP-507-S-1	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-507	0-1	02/27/92	Yes	31-TP-507-S-1	98-95-3	Nitrobenzene	0.08	U	mg/kg
31-TP-507	0-1	02/27/92	Yes	31-TP-507-S-1	7439-92-1	Lead	6.8	U	mg/kg
31-TP-507	3-6	02/27/92	Yes	31-TP-507-S-2	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-507	3-6	02/27/92	Yes	31-TP-507-S-2	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-507	3-6	02/27/92	Yes	31-TP-507-S-2	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-507	3-6	02/27/92	Yes	31-TP-507-S-2	7439-92-1	Lead	5.1	U	mg/kg
31-TP-507	8-10	02/27/92	Yes	31-TP-507-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-507	8-10	02/27/92	Yes	31-TP-507-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-507	8-10	02/27/92	Yes	31-TP-507-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-507	8-10	02/27/92	Yes	31-TP-507-S-3	7439-92-1	Lead	5.3	U	mg/kg
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	7440-38-2	Arsenic	7.1		mg/kg
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	7440-50-8	Copper	30.0		mg/kg
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	7439-92-1	Lead	140.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-TP-508	6-8	02/27/92	Yes	31-TP-508-S-3	7439-97-6	Mercury	0.08	U	mg/kg
31-TP-7	3-6	04/28/87	Yes	31-TP-7,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-7	3-6	04/28/87	Yes	31-TP-7,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-7	3-6	04/28/87	Yes	31-TP-7,S-2	7439-92-1	Lead	19.0		mg/kg
31-TP-8	3-6	04/28/87	Yes	31-TP-8,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-8	3-6	04/28/87	Yes	31-TP-8,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-8	3-6	04/28/87	Yes	31-TP-8,S-2	7439-92-1	Lead	12.0		mg/kg
31-TP-9	3-6	04/28/87	Yes	31-TP-9,S-2	118-96-7	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-TP-9	3-6	04/28/87	Yes	31-TP-9,S-2	DNT-TOTAL	DNT - Total	0.1	U	mg/kg
31-TP-9	3-6	04/28/87	Yes	31-TP-9,S-2	7439-92-1	Lead	23.0		mg/kg
31-VS-100	1-1.5	09/14/99	Yes	31-VS-100	7440-38-2	Arsenic	20.0		mg/kg
31-VS-100	1-1.5	09/14/99	Yes	31-VS-100	7439-92-1	Lead	7.8		mg/kg
31-VS-101	1-1.5	09/14/99	Yes	31-VS-101	7440-38-2	Arsenic	54.0		mg/kg
31-VS-101	1-1.5	09/14/99	Yes	31-VS-101	7439-92-1	Lead	35.0		mg/kg
31-VS-102	1-1.5	09/14/99	Yes	31-VS-102	7440-38-2	Arsenic	6.9		mg/kg
31-VS-102	1-1.5	09/14/99	Yes	31-VS-102	7439-92-1	Lead	8.8		mg/kg
31-VS-103	1-1.5	09/14/99	Yes	31-VS-103	7440-38-2	Arsenic	6.8		mg/kg
31-VS-103	1-1.5	09/14/99	Yes	31-VS-103	7439-92-1	Lead	7.5		mg/kg
31-VS-104	1-1.5	09/14/99	Yes	31-VS-104	7440-38-2	Arsenic	27.0		mg/kg
31-VS-104	1-1.5	09/14/99	Yes	31-VS-104	7439-92-1	Lead	7.4		mg/kg
31-VS-107	0-0.5	09/14/99	Yes	31-VS-107	7440-38-2	Arsenic	65.0		mg/kg
31-VS-107	0-0.5	09/14/99	Yes	31-VS-107	7439-92-1	Lead	140.0		mg/kg
31-VS-110	1-1.5	09/14/99	Yes	31-VS-110	7440-38-2	Arsenic	8.6		mg/kg
31-VS-110	1-1.5	09/14/99	Yes	31-VS-110	7439-92-1	Lead	22.0	J	mg/kg
31-VS-111	1-1.5	09/14/99	Yes	31-VS-111	7440-38-2	Arsenic	16.0		mg/kg
31-VS-111	1-1.5	09/14/99	Yes	31-VS-111	7439-92-1	Lead	39.0	J	mg/kg
31-VS-116	2-2.5	09/29/99	Yes	31-VS-116	7440-38-2	Arsenic	4.5		mg/kg
31-VS-116	2-2.5	09/29/99	Yes	31-VS-116	7439-92-1	Lead	100.0		mg/kg
31-VS-117	2-2.5	09/29/99	Yes	31-VS-117	7440-38-2	Arsenic	4.9		mg/kg
31-VS-117	2-2.5	09/29/99	Yes	31-VS-117	7439-92-1	Lead	10.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-118	2-2.5	09/29/99	Yes	31-VS-118	7440-38-2	Arsenic	5.7		mg/kg
31-VS-118	2-2.5	09/29/99	Yes	31-VS-118	7439-92-1	Lead	230.0		mg/kg
31-VS-122	2-2.5	09/29/99	Yes	31-VS-122	7440-38-2	Arsenic	7.5		mg/kg
31-VS-122	2-2.5	09/29/99	Yes	31-VS-122	7439-92-1	Lead	640.0		mg/kg
31-VS-123	2-2.5	09/29/99	Yes	31-VS-123	7440-38-2	Arsenic	6.4		mg/kg
31-VS-123	2-2.5	09/29/99	Yes	31-VS-123	7439-92-1	Lead	170.0		mg/kg
31-VS-124	2-2.5	09/29/99	Yes	31-VS-124	7440-38-2	Arsenic	4.8		mg/kg
31-VS-124	2-2.5	09/29/99	Yes	31-VS-124	7439-92-1	Lead	53.0		mg/kg
31-VS-125	2-2.5	09/29/99	Yes	31-VS-125	7440-38-2	Arsenic	9.0		mg/kg
31-VS-125	2-2.5	09/29/99	Yes	31-VS-125	7439-92-1	Lead	300.0		mg/kg
31-VS-127	2-2.5	09/29/99	Yes	31-VS-127	7440-38-2	Arsenic	5.9		mg/kg
31-VS-127	2-2.5	09/29/99	Yes	31-VS-127	7439-92-1	Lead	300.0		mg/kg
31-VS-129	2-2.5	09/29/99	Yes	31-VS-129	7440-38-2	Arsenic	55.0		mg/kg
31-VS-129	2-2.5	09/29/99	Yes	31-VS-129	7439-92-1	Lead	400.0		mg/kg
31-VS-131	2-2.5	09/29/99	Yes	31-VS-131	7440-38-2	Arsenic	5.5		mg/kg
31-VS-131	2-2.5	09/29/99	Yes	31-VS-131	7439-92-1	Lead	100.0		mg/kg
31-VS-134	2-2.5	09/29/99	Yes	31-VS-134	7440-38-2	Arsenic	3.8		mg/kg
31-VS-134	2-2.5	09/29/99	Yes	31-VS-134	7439-92-1	Lead	11.0		mg/kg
31-VS-136	0-0.5	09/29/99	Yes	31-VS-136	7440-38-2	Arsenic	12.0		mg/kg
31-VS-136	0-0.5	09/29/99	Yes	31-VS-136	7439-92-1	Lead	49.0		mg/kg
31-VS-138	2-2.5	09/29/99	Yes	31-VS-138	7440-38-2	Arsenic	5.1		mg/kg
31-VS-138	2-2.5	09/29/99	Yes	31-VS-138	7439-92-1	Lead	29.0		mg/kg
31-VS-139	2-2.5	09/29/99	Yes	31-VS-139	7440-38-2	Arsenic	4.6		mg/kg
31-VS-139	2-2.5	09/29/99	Yes	31-VS-139	7439-92-1	Lead	28.0		mg/kg
31-VS-140	2-2.5	09/29/99	Yes	31-VS-140	7440-38-2	Arsenic	8.7		mg/kg
31-VS-140	2-2.5	09/29/99	Yes	31-VS-140	7439-92-1	Lead	200.0		mg/kg
31-VS-141	2-2.5	09/29/99	Yes	31-VS-141	7440-38-2	Arsenic	5.3		mg/kg
31-VS-141	2-2.5	09/29/99	Yes	31-VS-141	7439-92-1	Lead	87.0		mg/kg
31-VS-142	2-2.5	09/29/99	Yes	31-VS-142	7440-38-2	Arsenic	6.4		mg/kg
31-VS-142	2-2.5	09/29/99	Yes	31-VS-142	7439-92-1	Lead	180.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-144	0-0.5	09/29/99	Yes	31-VS-144	7440-38-2	Arsenic	23.0		mg/kg
31-VS-144	0-0.5	09/29/99	Yes	31-VS-144	7439-92-1	Lead	230.0		mg/kg
31-VS-145	2-2.5	09/29/99	Yes	31-VS-145	7440-38-2	Arsenic	8.2		mg/kg
31-VS-145	2-2.5	09/29/99	Yes	31-VS-145	7439-92-1	Lead	440.0		mg/kg
31-VS-147	2-2.5	09/29/99	Yes	31-VS-147	7440-38-2	Arsenic	15.0		mg/kg
31-VS-147	2-2.5	09/29/99	Yes	31-VS-147	7439-92-1	Lead	570.0		mg/kg
31-VS-148	2-2.5	09/29/99	Yes	31-VS-148	7440-38-2	Arsenic	4.3		mg/kg
31-VS-148	2-2.5	09/29/99	Yes	31-VS-148	7439-92-1	Lead	54.0		mg/kg
31-VS-149	0-0.5	09/29/99	Yes	31-VS-149	7440-38-2	Arsenic	8.2		mg/kg
31-VS-149	0-0.5	09/29/99	Yes	31-VS-149	7439-92-1	Lead	180.0		mg/kg
31-VS-150	2-2.5	09/29/99	Yes	31-VS-150	7440-38-2	Arsenic	3.7		mg/kg
31-VS-150	2-2.5	09/29/99	Yes	31-VS-150	7439-92-1	Lead	43.0		mg/kg
31-VS-151	2-2.5	09/29/99	Yes	31-VS-151	7440-38-2	Arsenic	4.4		mg/kg
31-VS-151	2-2.5	09/29/99	Yes	31-VS-151	7439-92-1	Lead	41.0		mg/kg
31-VS-154	2-2.5	09/29/99	Yes	31-VS-154	7440-38-2	Arsenic	6.5		mg/kg
31-VS-154	2-2.5	09/29/99	Yes	31-VS-154	7439-92-1	Lead	69.0		mg/kg
31-VS-155	2-2.5	09/29/99	Yes	31-VS-155	7440-38-2	Arsenic	11.0		mg/kg
31-VS-155	2-2.5	09/29/99	Yes	31-VS-155	7439-92-1	Lead	280.0		mg/kg
31-VS-158	2-2.5	09/29/99	Yes	31-VS-158	7440-38-2	Arsenic	9.4		mg/kg
31-VS-158	2-2.5	09/29/99	Yes	31-VS-158	7439-92-1	Lead	450.0		mg/kg
31-VS-159	2-2.5	09/29/99	Yes	31-VS-159	7440-38-2	Arsenic	4.2		mg/kg
31-VS-159	2-2.5	09/29/99	Yes	31-VS-159	7439-92-1	Lead	190.0		mg/kg
31-VS-161	0-0.5	09/29/99	Yes	31-VS-161	7440-38-2	Arsenic	33.0		mg/kg
31-VS-161	0-0.5	09/29/99	Yes	31-VS-161	7439-92-1	Lead	450.0		mg/kg
31-VS-163	2-2.5	09/29/99	Yes	31-VS-163-DAVG	7440-38-2	Arsenic	7.6		mg/kg
31-VS-163	2-2.5	09/29/99	Yes	31-VS-163-DAVG	7439-92-1	Lead	170.0		mg/kg
31-VS-164	15-15.5	09/29/99	Yes	31-VS-164	7440-38-2	Arsenic	5.5		mg/kg
31-VS-164	15-15.5	09/29/99	Yes	31-VS-164	7439-92-1	Lead	9.1		mg/kg
31-VS-165	4-15.5	09/29/99	Yes	31-VS-165	7440-38-2	Arsenic	9.2		mg/kg
31-VS-165	4-15.5	09/29/99	Yes	31-VS-165	7439-92-1	Lead	59.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-167	4-15.5	09/29/99	Yes	31-VS-167	7440-38-2	Arsenic	4.7		mg/kg
31-VS-167	4-15.5	09/29/99	Yes	31-VS-167	7439-92-1	Lead	67.0		mg/kg
31-VS-168	3-3.5	09/29/99	Yes	31-VS-168	7440-38-2	Arsenic	4.0		mg/kg
31-VS-168	3-3.5	09/29/99	Yes	31-VS-168	7439-92-1	Lead	74.0		mg/kg
31-VS-169	3-3.5	09/29/99	Yes	31-VS-169	7440-38-2	Arsenic	3.1		mg/kg
31-VS-169	3-3.5	09/29/99	Yes	31-VS-169	7439-92-1	Lead	31.0		mg/kg
31-VS-170	3-3.5	09/29/99	Yes	31-VS-170	7440-38-2	Arsenic	3.9		mg/kg
31-VS-170	3-3.5	09/29/99	Yes	31-VS-170	7439-92-1	Lead	24.0		mg/kg
31-VS-172	3-3.5	09/29/99	Yes	31-VS-172	7440-38-2	Arsenic	3.4		mg/kg
31-VS-172	3-3.5	09/29/99	Yes	31-VS-172	7439-92-1	Lead	5.2		mg/kg
31-VS-173	3-3.5	09/29/99	Yes	31-VS-173	7440-38-2	Arsenic	5.1		mg/kg
31-VS-173	3-3.5	09/29/99	Yes	31-VS-173	7439-92-1	Lead	17.0		mg/kg
31-VS-174	3-3.5	09/29/99	Yes	31-VS-174	7440-38-2	Arsenic	5.2		mg/kg
31-VS-174	3-3.5	09/29/99	Yes	31-VS-174	7439-92-1	Lead	18.0		mg/kg
31-VS-175	3-3.5	09/29/99	Yes	31-VS-175-DAVG	7440-38-2	Arsenic	6.5		mg/kg
31-VS-175	3-3.5	09/29/99	Yes	31-VS-175-DAVG	7439-92-1	Lead	270.0		mg/kg
31-VS-177	2-2.5	10/18/99	Yes	31-VS-177	7440-38-2	Arsenic	6.3		mg/kg
31-VS-177	2-2.5	10/18/99	Yes	31-VS-177	7439-92-1	Lead	33.0		mg/kg
31-VS-178	2-2.5	10/18/99	Yes	31-VS-178	7440-38-2	Arsenic	1.8	U	mg/kg
31-VS-178	2-2.5	10/18/99	Yes	31-VS-178	7439-92-1	Lead	1.5		mg/kg
31-VS-179	2-2.5	10/19/99	Yes	31-VS-179	7440-38-2	Arsenic	3.6		mg/kg
31-VS-179	2-2.5	10/19/99	Yes	31-VS-179	7439-92-1	Lead	3.6		mg/kg
31-VS-180	2-2.5	10/18/99	Yes	31-VS-180	7440-38-2	Arsenic	3.1		mg/kg
31-VS-180	2-2.5	10/18/99	Yes	31-VS-180	7439-92-1	Lead	4.8		mg/kg
31-VS-181	2-2.5	10/19/99	Yes	31-VS-181	7440-38-2	Arsenic	2.7		mg/kg
31-VS-181	2-2.5	10/19/99	Yes	31-VS-181	7439-92-1	Lead	6.1	U	mg/kg
31-VS-182	2-2.5	10/18/99	Yes	31-VS-182	7440-38-2	Arsenic	3.5		mg/kg
31-VS-182	2-2.5	10/18/99	Yes	31-VS-182	7439-92-1	Lead	6.1		mg/kg
31-VS-18	2.5-3	07/29/93	Yes	31-VS-18	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-VS-18	2.5-3	07/29/93	Yes	31-VS-18	DNT-TOTAL	DNT - Total	0.01	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-18	2.5-3	07/29/93	Yes	31-VS-18	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-VS-18	2.5-3	07/29/93	Yes	31-VS-18	7440-38-2	Arsenic	2.9		mg/kg
31-VS-18	2.5-3	07/29/93	Yes	31-VS-18	7439-92-1	Lead	24.0		mg/kg
31-VS-18	2.5-3	07/29/93	Yes	31-VS-18	7439-97-6	Mercury	0.1	U	mg/kg
31-VS-183	2-2.5	10/18/99	Yes	31-VS-183	7440-38-2	Arsenic	2.3		mg/kg
31-VS-183	2-2.5	10/18/99	Yes	31-VS-183	7439-92-1	Lead	3.0		mg/kg
31-VS-186	2-2.5	10/18/99	Yes	31-VS-186	7440-38-2	Arsenic	2.5		mg/kg
31-VS-186	2-2.5	10/18/99	Yes	31-VS-186	7439-92-1	Lead	4.8		mg/kg
31-VS-188	2-2.5	10/19/99	Yes	31-VS-188	7440-38-2	Arsenic	3.1		mg/kg
31-VS-188	2-2.5	10/19/99	Yes	31-VS-188	7439-92-1	Lead	5.8	U	mg/kg
31-VS-190	2-2.5	10/19/99	Yes	31-VS-190	7440-38-2	Arsenic	2.8		mg/kg
31-VS-190	2-2.5	10/19/99	Yes	31-VS-190	7439-92-1	Lead	5.6	U	mg/kg
31-VS-192	2-2.5	10/19/99	Yes	31-VS-192	7440-38-2	Arsenic	2.1		mg/kg
31-VS-192	2-2.5	10/19/99	Yes	31-VS-192	7439-92-1	Lead	5.8	U	mg/kg
31-VS-194	2-2.5	10/19/99	Yes	31-VS-194	7440-38-2	Arsenic	2.6		mg/kg
31-VS-194	2-2.5	10/19/99	Yes	31-VS-194	7439-92-1	Lead	6.1	U	mg/kg
31-VS-195	2-2.5	10/19/99	Yes	31-VS-195	7440-38-2	Arsenic	3.5		mg/kg
31-VS-195	2-2.5	10/19/99	Yes	31-VS-195	7439-92-1	Lead	240.0		mg/kg
31-VS-197	2-2.5	10/19/99	Yes	31-VS-197	7440-38-2	Arsenic	3.1		mg/kg
31-VS-197	2-2.5	10/19/99	Yes	31-VS-197	7439-92-1	Lead	6.6	U	mg/kg
31-VS-198	2-2.5	10/19/99	Yes	31-VS-198	7440-38-2	Arsenic	3.1		mg/kg
31-VS-198	2-2.5	10/19/99	Yes	31-VS-198	7439-92-1	Lead	17.0		mg/kg
31-VS-200	2-2.5	10/21/99	Yes	31-VS-200	7440-38-2	Arsenic	3.8		mg/kg
31-VS-200	2-2.5	10/21/99	Yes	31-VS-200	7439-92-1	Lead	77.0		mg/kg
31-VS-201	2-2.5	10/19/99	Yes	31-VS-201	7440-38-2	Arsenic	4.4		mg/kg
31-VS-201	2-2.5	10/19/99	Yes	31-VS-201	7439-92-1	Lead	500.0		mg/kg
31-VS-202	2-2.5	10/19/99	Yes	31-VS-202	7440-38-2	Arsenic	2.6		mg/kg
31-VS-202	2-2.5	10/19/99	Yes	31-VS-202	7439-92-1	Lead	5.8	U	mg/kg
31-VS-203	2-2.5	10/19/99	Yes	31-VS-203	7440-38-2	Arsenic	2.9		mg/kg
31-VS-203	2-2.5	10/19/99	Yes	31-VS-203	7439-92-1	Lead	6.0	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-205	2-2.5	10/19/99	Yes	31-VS-205	7440-38-2	Arsenic	2.1		mg/kg
31-VS-205	2-2.5	10/19/99	Yes	31-VS-205	7439-92-1	Lead	6.2	U	mg/kg
31-VS-206	2-2.5	10/19/99	Yes	31-VS-206	7440-38-2	Arsenic	2.0		mg/kg
31-VS-206	2-2.5	10/19/99	Yes	31-VS-206	7439-92-1	Lead	5.4	U	mg/kg
31-VS-209	2-2.5	10/19/99	Yes	31-VS-209	7440-38-2	Arsenic	2.3		mg/kg
31-VS-209	2-2.5	10/19/99	Yes	31-VS-209	7439-92-1	Lead	90.0		mg/kg
31-VS-210	2-2.5	10/19/99	Yes	31-VS-210	7440-38-2	Arsenic	2.7		mg/kg
31-VS-210	2-2.5	10/19/99	Yes	31-VS-210	7439-92-1	Lead	5.5	U	mg/kg
31-VS-211	0-0.5	10/19/99	Yes	31-VS-211	7440-38-2	Arsenic	9.5		mg/kg
31-VS-211	0-0.5	10/19/99	Yes	31-VS-211	7439-92-1	Lead	93.0		mg/kg
31-VS-212	0-0.5	10/19/99	Yes	31-VS-212	7440-38-2	Arsenic	45.0		mg/kg
31-VS-212	0-0.5	10/19/99	Yes	31-VS-212	7439-92-1	Lead	200.0		mg/kg
31-VS-216	2-2.5	10/19/99	Yes	31-VS-216-DAVG	7440-38-2	Arsenic	2.3		mg/kg
31-VS-216	2-2.5	10/19/99	Yes	31-VS-216-DAVG	7439-92-1	Lead	6.1	U	mg/kg
31-VS-217	1-1.5	10/19/99	Yes	31-VS-217	7440-38-2	Arsenic	3.7		mg/kg
31-VS-217	1-1.5	10/19/99	Yes	31-VS-217	7439-92-1	Lead	6.2	U	mg/kg
31-VS-26	2-2.5	09/10/99	Yes	31-VS-26	7440-38-2	Arsenic	18.0		mg/kg
31-VS-26	2-2.5	09/10/99	Yes	31-VS-26	7439-92-1	Lead	94.0		mg/kg
31-VS-27	2-2.5	09/10/99	Yes	31-VS-27	7440-38-2	Arsenic	14.0		mg/kg
31-VS-27	2-2.5	09/10/99	Yes	31-VS-27	7439-92-1	Lead	140.0		mg/kg
31-VS-28	2-2.5	09/10/99	Yes	31-VS-28	7440-38-2	Arsenic	8.7		mg/kg
31-VS-28	2-2.5	09/10/99	Yes	31-VS-28	7439-92-1	Lead	140.0		mg/kg
31-VS-29	2-2.5	09/10/99	Yes	31-VS-29	7440-38-2	Arsenic	21.0		mg/kg
31-VS-29	2-2.5	09/10/99	Yes	31-VS-29	7439-92-1	Lead	360.0		mg/kg
31-VS-34	2-2.5	09/10/99	Yes	31-VS-34	7440-38-2	Arsenic	17.0		mg/kg
31-VS-34	2-2.5	09/10/99	Yes	31-VS-34	7439-92-1	Lead	230.0		mg/kg
31-VS-38	2-2.5	09/13/99	Yes	31-VS-38	7440-38-2	Arsenic	8.8		mg/kg
31-VS-38	2-2.5	09/13/99	Yes	31-VS-38	7439-92-1	Lead	210.0		mg/kg
31-VS-39	2-2.5	09/13/99	Yes	31-VS-39	7440-38-2	Arsenic	5.8		mg/kg
31-VS-39	2-2.5	09/13/99	Yes	31-VS-39	7439-92-1	Lead	550.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-401	2-2.5	01/25/00	Yes	31-VS-401	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-401	2-2.5	01/25/00	Yes	31-VS-401	7439-92-1	Lead	10.0		mg/kg
31-VS-402	2-2.5	01/25/00	Yes	31-VS-402	7440-38-2	Arsenic	3.1		mg/kg
31-VS-402	2-2.5	01/25/00	Yes	31-VS-402	7439-92-1	Lead	250.0		mg/kg
31-VS-40	2-2.5	09/13/99	Yes	31-VS-40	7440-38-2	Arsenic	5.8		mg/kg
31-VS-40	2-2.5	09/13/99	Yes	31-VS-40	7439-92-1	Lead	730.0		mg/kg
31-VS-403	2-2.5	01/25/00	Yes	31-VS-403	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-403	2-2.5	01/25/00	Yes	31-VS-403	7439-92-1	Lead	8.8		mg/kg
31-VS-404	2-2.5	01/25/00	Yes	31-VS-404	7440-38-2	Arsenic	2.2	U	mg/kg
31-VS-404	2-2.5	01/25/00	Yes	31-VS-404	7439-92-1	Lead	2.3		mg/kg
31-VS-405	2-2.5	01/25/00	Yes	31-VS-405	7440-38-2	Arsenic	2.0	U	mg/kg
31-VS-405	2-2.5	01/25/00	Yes	31-VS-405	7439-92-1	Lead	42.0		mg/kg
31-VS-406	2-2.5	01/25/00	Yes	31-VS-406	7440-38-2	Arsenic	2.3	U	mg/kg
31-VS-406	2-2.5	01/25/00	Yes	31-VS-406	7439-92-1	Lead	3.2		mg/kg
31-VS-407	2-2.5	01/25/00	Yes	31-VS-407	7440-38-2	Arsenic	2.0	U	mg/kg
31-VS-407	2-2.5	01/25/00	Yes	31-VS-407	7439-92-1	Lead	2.0	U	mg/kg
31-VS-408	2-2.5	01/25/00	Yes	31-VS-408	7440-38-2	Arsenic	1.8	U	mg/kg
31-VS-408	2-2.5	01/25/00	Yes	31-VS-408	7439-92-1	Lead	1.8	U	mg/kg
31-VS-409	2-2.5	01/25/00	Yes	31-VS-409	7440-38-2	Arsenic	2.5		mg/kg
31-VS-409	2-2.5	01/25/00	Yes	31-VS-409	7439-92-1	Lead	2.0	U	mg/kg
31-VS-410	2-2.5	01/25/00	Yes	31-VS-410	7440-38-2	Arsenic	1.8	U	mg/kg
31-VS-410	2-2.5	01/25/00	Yes	31-VS-410	7439-92-1	Lead	5.9		mg/kg
31-VS-411	2-2.5	01/25/00	Yes	31-VS-411	7440-38-2	Arsenic	2.0	U	mg/kg
31-VS-411	2-2.5	01/25/00	Yes	31-VS-411	7439-92-1	Lead	2.0	U	mg/kg
31-VS-412	2-2.5	01/25/00	Yes	31-VS-412	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-412	2-2.5	01/25/00	Yes	31-VS-412	7439-92-1	Lead	2.1	U	mg/kg
31-VS-41	2-2.5	09/13/99	Yes	31-VS-41	7440-38-2	Arsenic	4.4		mg/kg
31-VS-41	2-2.5	09/13/99	Yes	31-VS-41	7439-92-1	Lead	33.0		mg/kg
31-VS-413	2-2.5	01/25/00	Yes	31-VS-413	7440-38-2	Arsenic	2.2	U	mg/kg
31-VS-413	2-2.5	01/25/00	Yes	31-VS-413	7439-92-1	Lead	9.8		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-414	2-2.5	01/25/00	Yes	31-VS-414	7440-38-2	Arsenic	2.0	U	mg/kg
31-VS-414	2-2.5	01/25/00	Yes	31-VS-414	7439-92-1	Lead	2.1		mg/kg
31-VS-415	2-2.5	01/25/00	Yes	31-VS-415	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-415	2-2.5	01/25/00	Yes	31-VS-415	7439-92-1	Lead	5.3		mg/kg
31-VS-416	2-2.5	01/25/00	Yes	31-VS-416	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-416	2-2.5	01/25/00	Yes	31-VS-416	7439-92-1	Lead	2.1	U	mg/kg
31-VS-417	2-2.5	01/25/00	Yes	31-VS-417	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-417	2-2.5	01/25/00	Yes	31-VS-417	7439-92-1	Lead	2.1	U	mg/kg
31-VS-418	2-2.5	01/25/00	Yes	31-VS-418	7440-38-2	Arsenic	2.9		mg/kg
31-VS-418	2-2.5	01/25/00	Yes	31-VS-418	7439-92-1	Lead	4.0		mg/kg
31-VS-419	0-0.5	01/25/00	Yes	31-VS-419	7440-38-2	Arsenic	23.0		mg/kg
31-VS-419	0-0.5	01/25/00	Yes	31-VS-419	7439-92-1	Lead	9.6		mg/kg
31-VS-420	0-0.5	01/25/00	Yes	31-VS-420	7440-38-2	Arsenic	52.0		mg/kg
31-VS-420	0-0.5	01/25/00	Yes	31-VS-420	7439-92-1	Lead	45.0		mg/kg
31-VS-421	2-2.5	01/25/00	Yes	31-VS-421	7440-38-2	Arsenic	31.0		mg/kg
31-VS-421	2-2.5	01/25/00	Yes	31-VS-421	7439-92-1	Lead	25.0		mg/kg
31-VS-422	0-0.5	01/25/00	Yes	31-VS-422	7440-38-2	Arsenic	13.0		mg/kg
31-VS-422	0-0.5	01/25/00	Yes	31-VS-422	7439-92-1	Lead	360.0		mg/kg
31-VS-42	2-2.5	09/13/99	Yes	31-VS-42	7440-38-2	Arsenic	5.3		mg/kg
31-VS-42	2-2.5	09/13/99	Yes	31-VS-42	7439-92-1	Lead	200.0		mg/kg
31-VS-423	2-2.5	01/25/00	Yes	31-VS-423	7440-38-2	Arsenic	8.2		mg/kg
31-VS-423	2-2.5	01/25/00	Yes	31-VS-423	7439-92-1	Lead	5.1		mg/kg
31-VS-424	0-0.5	01/25/00	Yes	31-VS-424	7440-38-2	Arsenic	46.0		mg/kg
31-VS-424	0-0.5	01/25/00	Yes	31-VS-424	7439-92-1	Lead	17.0		mg/kg
31-VS-425	0-0.5	01/25/00	Yes	31-VS-425	7440-38-2	Arsenic	9.6		mg/kg
31-VS-425	0-0.5	01/25/00	Yes	31-VS-425	7439-92-1	Lead	28.0		mg/kg
31-VS-427	0-0.5	01/25/00	Yes	31-VS-427	7440-38-2	Arsenic	9.5		mg/kg
31-VS-427	0-0.5	01/25/00	Yes	31-VS-427	7439-92-1	Lead	6.3		mg/kg
31-VS-428	0-0.5	01/25/00	Yes	31-VS-428	7440-38-2	Arsenic	36.0		mg/kg
31-VS-428	0-0.5	01/25/00	Yes	31-VS-428	7439-92-1	Lead	46.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-429	2-2.5	01/25/00	Yes	31-VS-429	7440-38-2	Arsenic	44.0		mg/kg
31-VS-429	2-2.5	01/25/00	Yes	31-VS-429	7439-92-1	Lead	11.0		mg/kg
31-VS-430	0-0.5	01/25/00	Yes	31-VS-430	7440-38-2	Arsenic	81.0		mg/kg
31-VS-430	0-0.5	01/25/00	Yes	31-VS-430	7439-92-1	Lead	27.0		mg/kg
31-VS-431	0-0.5	01/25/00	Yes	31-VS-431	7440-38-2	Arsenic	8.0		mg/kg
31-VS-431	0-0.5	01/25/00	Yes	31-VS-431	7439-92-1	Lead	26.0		mg/kg
31-VS-43	2-2.5	09/13/99	Yes	31-VS-43	7440-38-2	Arsenic	3.8		mg/kg
31-VS-43	2-2.5	09/13/99	Yes	31-VS-43	7439-92-1	Lead	220.0		mg/kg
31-VS-434	2-2.5	01/25/00	Yes	31-VS-434	7440-38-2	Arsenic	2.6	U	mg/kg
31-VS-434	2-2.5	01/25/00	Yes	31-VS-434	7439-92-1	Lead	2.6	U	mg/kg
31-VS-435	2-2.5	01/25/00	Yes	31-VS-435	7440-38-2	Arsenic	130.0		mg/kg
31-VS-435	2-2.5	01/25/00	Yes	31-VS-435	7439-92-1	Lead	3.7		mg/kg
31-VS-436	2-2.5	01/25/00	Yes	31-VS-436	7440-38-2	Arsenic	2.1	U	mg/kg
31-VS-436	2-2.5	01/25/00	Yes	31-VS-436	7439-92-1	Lead	2.1	U	mg/kg
31-VS-437	2-2.5	01/25/00	Yes	31-VS-437	7440-38-2	Arsenic	2.7		mg/kg
31-VS-437	2-2.5	01/25/00	Yes	31-VS-437	7439-92-1	Lead	2.5		mg/kg
31-VS-438	2-2.5	01/25/00	Yes	31-VS-438	7440-38-2	Arsenic	2.6		mg/kg
31-VS-438	2-2.5	01/25/00	Yes	31-VS-438	7439-92-1	Lead	2.6		mg/kg
31-VS-439	0-0.5	01/25/00	Yes	31-VS-439	7440-38-2	Arsenic	5.6		mg/kg
31-VS-439	0-0.5	01/25/00	Yes	31-VS-439	7439-92-1	Lead	2.8	U	mg/kg
31-VS-440	0-0.5	01/25/00	Yes	31-VS-440	7440-38-2	Arsenic	25.0		mg/kg
31-VS-440	0-0.5	01/25/00	Yes	31-VS-440	7439-92-1	Lead	20.0		mg/kg
31-VS-441	0-0.5	01/25/00	Yes	31-VS-441	7440-38-2	Arsenic	30.0		mg/kg
31-VS-441	0-0.5	01/25/00	Yes	31-VS-441	7439-92-1	Lead	12.0		mg/kg
31-VS-442	0-0.5	01/25/00	Yes	31-VS-442	7440-38-2	Arsenic	8.1		mg/kg
31-VS-442	0-0.5	01/25/00	Yes	31-VS-442	7439-92-1	Lead	9.5		mg/kg
31-VS-444	2-2.5	01/28/00	Yes	31-VS-444	7440-38-2	Arsenic	2.6		mg/kg
31-VS-444	2-2.5	01/28/00	Yes	31-VS-444	7439-92-1	Lead	3.0		mg/kg
31-VS-446	0-0.5	01/28/00	Yes	31-VS-446	7440-38-2	Arsenic	17.0		mg/kg
31-VS-446	0-0.5	01/28/00	Yes	31-VS-446	7439-92-1	Lead	9.7		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-45	2-2.5	09/13/99	Yes	31-VS-45	7440-38-2	Arsenic	3.2		mg/kg
31-VS-45	2-2.5	09/13/99	Yes	31-VS-45	7439-92-1	Lead	940.0		mg/kg
31-VS-46	2-2.5	09/13/99	Yes	31-VS-46	7440-38-2	Arsenic	4.1		mg/kg
31-VS-46	2-2.5	09/13/99	Yes	31-VS-46	7439-92-1	Lead	1000.0		mg/kg
31-VS-501	2-2.5	03/07/00	Yes	31-VS-501	7440-38-2	Arsenic	6.3	U	mg/kg
31-VS-501	2-2.5	03/07/00	Yes	31-VS-501	7439-92-1	Lead	38.0		mg/kg
31-VS-502	2-2.5	03/07/00	Yes	31-VS-502	7440-38-2	Arsenic	6.2	U	mg/kg
31-VS-502	2-2.5	03/07/00	Yes	31-VS-502	7439-92-1	Lead	9.4		mg/kg
31-VS-503	4-15.5	03/07/00	Yes	31-VS-503-DAVG	7440-38-2	Arsenic	6.1	U	mg/kg
31-VS-503	4-15.5	03/07/00	Yes	31-VS-503-DAVG	7439-92-1	Lead	19.0		mg/kg
31-VS-506	2-2.5	04/18/00	Yes	31-VS-506	7440-38-2	Arsenic	4.2		mg/kg
31-VS-506	2-2.5	04/18/00	Yes	31-VS-506	7439-92-1	Lead	3.4		mg/kg
31-VS-508	0-0.5	04/18/00	Yes	31-VS-508	7440-38-2	Arsenic	15.0		mg/kg
31-VS-508	0-0.5	04/18/00	Yes	31-VS-508	7439-92-1	Lead	15.0		mg/kg
31-VS-509	0-0.5	04/18/00	Yes	31-VS-509	7440-38-2	Arsenic	4.9		mg/kg
31-VS-509	0-0.5	04/18/00	Yes	31-VS-509	7439-92-1	Lead	7.3		mg/kg
31-VS-510	0-0.5	04/18/00	Yes	31-VS-510	7440-38-2	Arsenic	6.8		mg/kg
31-VS-510	0-0.5	04/18/00	Yes	31-VS-510	7439-92-1	Lead	9.4		mg/kg
31-VS-511	2-2.5	04/18/00	Yes	31-VS-511	7440-38-2	Arsenic	4.2		mg/kg
31-VS-511	2-2.5	04/18/00	Yes	31-VS-511	7439-92-1	Lead	4.2		mg/kg
31-VS-512	2-2.5	04/18/00	Yes	31-VS-512	7440-38-2	Arsenic	4.0		mg/kg
31-VS-512	2-2.5	04/18/00	Yes	31-VS-512	7439-92-1	Lead	3.5		mg/kg
31-VS-513	2-2.5	04/18/00	Yes	31-VS-513	7440-38-2	Arsenic	4.1		mg/kg
31-VS-513	2-2.5	04/18/00	Yes	31-VS-513	7439-92-1	Lead	3.3		mg/kg
31-VS-514	2-2.5	04/18/00	Yes	31-VS-514	7440-38-2	Arsenic	2.0		mg/kg
31-VS-514	2-2.5	04/18/00	Yes	31-VS-514	7439-92-1	Lead	2.1		mg/kg
31-VS-515	2-2.5	04/18/00	Yes	31-VS-515	7440-38-2	Arsenic	3.8		mg/kg
31-VS-515	2-2.5	04/18/00	Yes	31-VS-515	7439-92-1	Lead	2.4		mg/kg
31-VS-516	2-2.5	04/18/00	Yes	31-VS-516	7440-38-2	Arsenic	3.9		mg/kg
31-VS-516	2-2.5	04/18/00	Yes	31-VS-516	7439-92-1	Lead	2.9		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-517	2-2.5	04/18/00	Yes	31-VS-517	7440-38-2	Arsenic	3.4		mg/kg
31-VS-517	2-2.5	04/18/00	Yes	31-VS-517	7439-92-1	Lead	2.8		mg/kg
31-VS-518	2-2.5	04/18/00	Yes	31-VS-518-DAVG	7440-38-2	Arsenic	4.8		mg/kg
31-VS-518	2-2.5	04/18/00	Yes	31-VS-518-DAVG	7439-92-1	Lead	5.5		mg/kg
31-VS-520	2-2.5	04/18/00	Yes	31-VS-520	7440-38-2	Arsenic	3.3		mg/kg
31-VS-520	2-2.5	04/18/00	Yes	31-VS-520	7439-92-1	Lead	3.7		mg/kg
31-VS-521	2-2.5	04/18/00	Yes	31-VS-521	7440-38-2	Arsenic	5.4		mg/kg
31-VS-521	2-2.5	04/18/00	Yes	31-VS-521	7439-92-1	Lead	5.7		mg/kg
31-VS-522	2-2.5	04/18/00	Yes	31-VS-522	7440-38-2	Arsenic	5.0		mg/kg
31-VS-522	2-2.5	04/18/00	Yes	31-VS-522	7439-92-1	Lead	4.0		mg/kg
31-VS-523	2-2.5	04/18/00	Yes	31-VS-523	7440-38-2	Arsenic	27.0		mg/kg
31-VS-523	2-2.5	04/18/00	Yes	31-VS-523	7439-92-1	Lead	25.0		mg/kg
31-VS-524	2-2.5	04/18/00	Yes	31-VS-524	7440-38-2	Arsenic	33.0		mg/kg
31-VS-524	2-2.5	04/18/00	Yes	31-VS-524	7439-92-1	Lead	5.9		mg/kg
31-VS-525	2-2.5	04/18/00	Yes	31-VS-525	7440-38-2	Arsenic	9.0		mg/kg
31-VS-525	2-2.5	04/18/00	Yes	31-VS-525	7439-92-1	Lead	7.1		mg/kg
31-VS-526	2-2.5	04/18/00	Yes	31-VS-526-DAVG	7440-38-2	Arsenic	15.0		mg/kg
31-VS-526	2-2.5	04/18/00	Yes	31-VS-526-DAVG	7439-92-1	Lead	7.4		mg/kg
31-VS-529	0-0.5	04/18/00	Yes	31-VS-529	7440-38-2	Arsenic	18.0		mg/kg
31-VS-529	0-0.5	04/18/00	Yes	31-VS-529	7439-92-1	Lead	320.0		mg/kg
31-VS-532	1-1.5	04/18/00	Yes	31-VS-532	7440-38-2	Arsenic	96.0		mg/kg
31-VS-532	1-1.5	04/18/00	Yes	31-VS-532	7439-92-1	Lead	71.0		mg/kg
31-VS-533	0-0.5	04/18/00	Yes	31-VS-533	7440-38-2	Arsenic	38.0		mg/kg
31-VS-533	0-0.5	04/18/00	Yes	31-VS-533	7439-92-1	Lead	53.0		mg/kg
31-VS-534	2-2.5	04/18/00	Yes	31-VS-534	7440-38-2	Arsenic	3.6		mg/kg
31-VS-534	2-2.5	04/18/00	Yes	31-VS-534	7439-92-1	Lead	3.6		mg/kg
31-VS-535	2-2.5	04/18/00	Yes	31-VS-535	7440-38-2	Arsenic	5.2		mg/kg
31-VS-535	2-2.5	04/18/00	Yes	31-VS-535	7439-92-1	Lead	2.9		mg/kg
31-VS-536	0-0.5	04/18/00	Yes	31-VS-536	7440-38-2	Arsenic	19.0		mg/kg
31-VS-536	0-0.5	04/18/00	Yes	31-VS-536	7439-92-1	Lead	140.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-539	2-2.5	04/18/00	Yes	31-VS-539	7440-38-2	Arsenic	6.5		mg/kg
31-VS-539	2-2.5	04/18/00	Yes	31-VS-539	7439-92-1	Lead	2.7		mg/kg
31-VS-540	2-2.5	04/18/00	Yes	31-VS-540-DAVG	7440-38-2	Arsenic	3.1		mg/kg
31-VS-540	2-2.5	04/18/00	Yes	31-VS-540-DAVG	7439-92-1	Lead	2.2	U	mg/kg
31-VS-542	2-2.5	04/19/00	Yes	31-VS-542	7440-38-2	Arsenic	4.4		mg/kg
31-VS-542	2-2.5	04/19/00	Yes	31-VS-542	7439-92-1	Lead	6.3		mg/kg
31-VS-543	2-2.5	04/19/00	Yes	31-VS-543	7440-38-2	Arsenic	8.3		mg/kg
31-VS-543	2-2.5	04/19/00	Yes	31-VS-543	7439-92-1	Lead	6.7		mg/kg
31-VS-544	2-2.5	04/19/00	Yes	31-VS-544	7440-38-2	Arsenic	49.0		mg/kg
31-VS-544	2-2.5	04/19/00	Yes	31-VS-544	7439-92-1	Lead	41.0		mg/kg
31-VS-545	2-2.5	04/19/00	Yes	31-VS-545	7440-38-2	Arsenic	39.0		mg/kg
31-VS-545	2-2.5	04/19/00	Yes	31-VS-545	7439-92-1	Lead	45.0		mg/kg
31-VS-546	2-2.5	04/19/00	Yes	31-VS-546	7440-38-2	Arsenic	100.0		mg/kg
31-VS-546	2-2.5	04/19/00	Yes	31-VS-546	7439-92-1	Lead	150.0		mg/kg
31-VS-547	2-2.5	04/19/00	Yes	31-VS-547	7440-38-2	Arsenic	16.0		mg/kg
31-VS-547	2-2.5	04/19/00	Yes	31-VS-547	7439-92-1	Lead	23.0		mg/kg
31-VS-548	2-2.5	04/19/00	Yes	31-VS-548	7440-38-2	Arsenic	47.0		mg/kg
31-VS-548	2-2.5	04/19/00	Yes	31-VS-548	7439-92-1	Lead	110.0		mg/kg
31-VS-549	2-2.5	04/19/00	Yes	31-VS-549	7440-38-2	Arsenic	3.3		mg/kg
31-VS-549	2-2.5	04/19/00	Yes	31-VS-549	7439-92-1	Lead	5.3		mg/kg
31-VS-550	2-2.5	04/19/00	Yes	31-VS-550	7440-38-2	Arsenic	13.0		mg/kg
31-VS-550	2-2.5	04/19/00	Yes	31-VS-550	7439-92-1	Lead	8.9		mg/kg
31-VS-551	2-2.5	04/19/00	Yes	31-VS-551	7440-38-2	Arsenic	6.1		mg/kg
31-VS-551	2-2.5	04/19/00	Yes	31-VS-551	7439-92-1	Lead	4.9		mg/kg
31-VS-552	2-2.5	04/19/00	Yes	31-VS-552	7440-38-2	Arsenic	5.2		mg/kg
31-VS-552	2-2.5	04/19/00	Yes	31-VS-552	7439-92-1	Lead	4.6		mg/kg
31-VS-553	2-2.5	04/19/00	Yes	31-VS-553	7440-38-2	Arsenic	5.7		mg/kg
31-VS-553	2-2.5	04/19/00	Yes	31-VS-553	7439-92-1	Lead	4.1		mg/kg
31-VS-554	2-2.5	04/19/00	Yes	31-VS-554	7440-38-2	Arsenic	11.0		mg/kg
31-VS-554	2-2.5	04/19/00	Yes	31-VS-554	7439-92-1	Lead	20.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-555	2-2.5	04/19/00	Yes	31-VS-555	7440-38-2	Arsenic	5.9		mg/kg
31-VS-555	2-2.5	04/19/00	Yes	31-VS-555	7439-92-1	Lead	4.3		mg/kg
31-VS-557	2-2.5	04/19/00	Yes	31-VS-557-DAVG	7440-38-2	Arsenic	11.0		mg/kg
31-VS-557	2-2.5	04/19/00	Yes	31-VS-557-DAVG	7439-92-1	Lead	21.7		mg/kg
31-VS-558	2-2.5	04/19/00	Yes	31-VS-558	7440-38-2	Arsenic	11.0		mg/kg
31-VS-558	2-2.5	04/19/00	Yes	31-VS-558	7439-92-1	Lead	14.0		mg/kg
31-VS-559	2-2.5	04/19/00	Yes	31-VS-559	7440-38-2	Arsenic	14.0		mg/kg
31-VS-559	2-2.5	04/19/00	Yes	31-VS-559	7439-92-1	Lead	9.9		mg/kg
31-VS-566	0-0.5	04/19/00	Yes	31-VS-566	7440-38-2	Arsenic	37.0		mg/kg
31-VS-566	0-0.5	04/19/00	Yes	31-VS-566	7439-92-1	Lead	49.0		mg/kg
31-VS-567	0-0.5	04/19/00	Yes	31-VS-567	7440-38-2	Arsenic	9.4		mg/kg
31-VS-567	0-0.5	04/19/00	Yes	31-VS-567	7439-92-1	Lead	16.0		mg/kg
31-VS-573	2-2.5	04/19/00	Yes	31-VS-573	7440-38-2	Arsenic	8.2		mg/kg
31-VS-573	2-2.5	04/19/00	Yes	31-VS-573	7439-92-1	Lead	5.3		mg/kg
31-VS-574	2-2.5	04/19/00	Yes	31-VS-574	7440-38-2	Arsenic	9.3		mg/kg
31-VS-574	2-2.5	04/19/00	Yes	31-VS-574	7439-92-1	Lead	9.0		mg/kg
31-VS-575	2-2.5	04/19/00	Yes	31-VS-575	7440-38-2	Arsenic	7.5		mg/kg
31-VS-575	2-2.5	04/19/00	Yes	31-VS-575	7439-92-1	Lead	4.6		mg/kg
31-VS-576	2-2.5	04/19/00	Yes	31-VS-576	7440-38-2	Arsenic	4.6		mg/kg
31-VS-576	2-2.5	04/19/00	Yes	31-VS-576	7439-92-1	Lead	4.5		mg/kg
31-VS-577	0-0.5	04/19/00	Yes	31-VS-577-DAVG	7440-38-2	Arsenic	10.6		mg/kg
31-VS-577	0-0.5	04/19/00	Yes	31-VS-577-DAVG	7439-92-1	Lead	25.5		mg/kg
31-VS-579	2-2.5	04/19/00	Yes	31-VS-579	7440-38-2	Arsenic	17.0		mg/kg
31-VS-579	2-2.5	04/19/00	Yes	31-VS-579	7439-92-1	Lead	4.6		mg/kg
31-VS-580	0-0.5	04/19/00	Yes	31-VS-580	7440-38-2	Arsenic	68.0		mg/kg
31-VS-580	0-0.5	04/19/00	Yes	31-VS-580	7439-92-1	Lead	70.0		mg/kg
31-VS-581	0-0.5	04/19/00	Yes	31-VS-581	7440-38-2	Arsenic	62.0		mg/kg
31-VS-581	0-0.5	04/19/00	Yes	31-VS-581	7439-92-1	Lead	42.0		mg/kg
31-VS-582	0-0.5	04/19/00	Yes	31-VS-582	7440-38-2	Arsenic	59.0		mg/kg
31-VS-582	0-0.5	04/19/00	Yes	31-VS-582	7439-92-1	Lead	46.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-58	2-2.5	09/13/99	Yes	31-VS-58	7440-38-2	Arsenic	9.0		mg/kg
31-VS-58	2-2.5	09/13/99	Yes	31-VS-58	7439-92-1	Lead	770.0		mg/kg
31-VS-583	2-2.5	04/19/00	Yes	31-VS-583	7440-38-2	Arsenic	9.8		mg/kg
31-VS-583	2-2.5	04/19/00	Yes	31-VS-583	7439-92-1	Lead	3.6		mg/kg
31-VS-584	0-0.5	05/09/00	Yes	31-VS-584	7440-38-2	Arsenic	57.0		mg/kg
31-VS-584	0-0.5	05/09/00	Yes	31-VS-584	7439-92-1	Lead	79.0		mg/kg
31-VS-585	0-0.5	05/09/00	Yes	31-VS-585	7440-38-2	Arsenic	150.0		mg/kg
31-VS-585	0-0.5	05/09/00	Yes	31-VS-585	7439-92-1	Lead	150.0		mg/kg
31-VS-591	0-0.5	05/09/00	Yes	31-VS-591	7440-38-2	Arsenic	75.0		mg/kg
31-VS-591	0-0.5	05/09/00	Yes	31-VS-591	7439-92-1	Lead	570.0		mg/kg
31-VS-592	0-0.5	05/09/00	Yes	31-VS-592	7440-38-2	Arsenic	19.0		mg/kg
31-VS-592	0-0.5	05/09/00	Yes	31-VS-592	7439-92-1	Lead	97.0		mg/kg
31-VS-59	2-2.5	09/13/99	Yes	31-VS-59	7440-38-2	Arsenic	5.3		mg/kg
31-VS-59	2-2.5	09/13/99	Yes	31-VS-59	7439-92-1	Lead	500.0		mg/kg
31-VS-595	0-0.5	05/09/00	Yes	31-VS-595	7440-38-2	Arsenic	22.0		mg/kg
31-VS-595	0-0.5	05/09/00	Yes	31-VS-595	7439-92-1	Lead	43.0		mg/kg
31-VS-596	0-0.5	05/09/00	Yes	31-VS-596	7440-38-2	Arsenic	18.0		mg/kg
31-VS-596	0-0.5	05/09/00	Yes	31-VS-596	7439-92-1	Lead	25.0		mg/kg
31-VS-597	0-0.5	05/09/00	Yes	31-VS-597-DAVG	7440-38-2	Arsenic	14.0		mg/kg
31-VS-597	0-0.5	05/09/00	Yes	31-VS-597-DAVG	7439-92-1	Lead	50.5		mg/kg
31-VS-600	0-0.5	05/09/00	Yes	31-VS-600	7440-38-2	Arsenic	20.0		mg/kg
31-VS-600	0-0.5	05/09/00	Yes	31-VS-600	7439-92-1	Lead	53.0		mg/kg
31-VS-601	0-0.5	05/09/00	Yes	31-VS-601	7440-38-2	Arsenic	27.0		mg/kg
31-VS-601	0-0.5	05/09/00	Yes	31-VS-601	7439-92-1	Lead	59.0		mg/kg
31-VS-606	2-2.5	05/24/00	Yes	31-VS-606	7440-38-2	Arsenic	6.7		mg/kg
31-VS-606	2-2.5	05/24/00	Yes	31-VS-606	7439-92-1	Lead	4.9		mg/kg
31-VS-607	0-0.5	05/24/00	Yes	31-VS-607	7440-38-2	Arsenic	110.0		mg/kg
31-VS-607	0-0.5	05/24/00	Yes	31-VS-607	7439-92-1	Lead	46.0		mg/kg
31-VS-611	1.5-2	05/24/00	Yes	31-VS-611	7440-38-2	Arsenic	33.0		mg/kg
31-VS-611	1.5-2	05/24/00	Yes	31-VS-611	7439-92-1	Lead	11.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-612	1.5-2	05/24/00	Yes	31-VS-612	7440-38-2	Arsenic	9.9		mg/kg
31-VS-612	1.5-2	05/24/00	Yes	31-VS-612	7439-92-1	Lead	23.0		mg/kg
31-VS-61	2-2.5	09/13/99	Yes	31-VS-61	7440-38-2	Arsenic	5.8		mg/kg
31-VS-61	2-2.5	09/13/99	Yes	31-VS-61	7439-92-1	Lead	670.0		mg/kg
31-VS-613	1.5-2	05/24/00	Yes	31-VS-613	7440-38-2	Arsenic	26.0		mg/kg
31-VS-613	1.5-2	05/24/00	Yes	31-VS-613	7439-92-1	Lead	13.0		mg/kg
31-VS-614	1.5-2	05/24/00	Yes	31-VS-614	7440-38-2	Arsenic	17.0		mg/kg
31-VS-614	1.5-2	05/24/00	Yes	31-VS-614	7439-92-1	Lead	7.8		mg/kg
31-VS-615	1.5-2	05/24/00	Yes	31-VS-615-DAVG	7440-38-2	Arsenic	10.5		mg/kg
31-VS-615	1.5-2	05/24/00	Yes	31-VS-615-DAVG	7439-92-1	Lead	13.0		mg/kg
31-VS-616	1.5-2	05/24/00	Yes	31-VS-616	7440-38-2	Arsenic	11.0		mg/kg
31-VS-616	1.5-2	05/24/00	Yes	31-VS-616	7439-92-1	Lead	20.0		mg/kg
31-VS-617	1.5-2	05/24/00	Yes	31-VS-617	7440-38-2	Arsenic	7.9		mg/kg
31-VS-617	1.5-2	05/24/00	Yes	31-VS-617	7439-92-1	Lead	51.0		mg/kg
31-VS-618	1.5-2	05/24/00	Yes	31-VS-618	7440-38-2	Arsenic	13.0		mg/kg
31-VS-618	1.5-2	05/24/00	Yes	31-VS-618	7439-92-1	Lead	9.4		mg/kg
31-VS-619	1.5-2	05/24/00	Yes	31-VS-619-DAVG	7440-38-2	Arsenic	11.0		mg/kg
31-VS-619	1.5-2	05/24/00	Yes	31-VS-619-DAVG	7439-92-1	Lead	12.0		mg/kg
31-VS-621	1.5-2	05/24/00	Yes	31-VS-621	7440-38-2	Arsenic	19.0		mg/kg
31-VS-621	1.5-2	05/24/00	Yes	31-VS-621	7439-92-1	Lead	49.0		mg/kg
31-VS-622	1.5-2	05/24/00	Yes	31-VS-622	7440-38-2	Arsenic	6.2		mg/kg
31-VS-622	1.5-2	05/24/00	Yes	31-VS-622	7439-92-1	Lead	4.6		mg/kg
31-VS-623	1.5-2	05/24/00	Yes	31-VS-623	7440-38-2	Arsenic	7.1		mg/kg
31-VS-623	1.5-2	05/24/00	Yes	31-VS-623	7439-92-1	Lead	3.7		mg/kg
31-VS-624	1.5-2	05/24/00	Yes	31-VS-624-DAVG	7440-38-2	Arsenic	7.0		mg/kg
31-VS-624	1.5-2	05/24/00	Yes	31-VS-624-DAVG	7439-92-1	Lead	5.7		mg/kg
31-VS-625	1.5-2	05/24/00	Yes	31-VS-625	7440-38-2	Arsenic	7.1		mg/kg
31-VS-625	1.5-2	05/24/00	Yes	31-VS-625	7439-92-1	Lead	8.3		mg/kg
31-VS-626	1.5-2	05/24/00	Yes	31-VS-626	7440-38-2	Arsenic	8.2		mg/kg
31-VS-626	1.5-2	05/24/00	Yes	31-VS-626	7439-92-1	Lead	9.4		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-630	1.5-2	06/29/00	Yes	31-VS-630	7440-38-2	Arsenic	7.1		mg/kg
31-VS-630	1.5-2	06/29/00	Yes	31-VS-630	7439-92-1	Lead	6.0		mg/kg
31-VS-631	0-0.5	06/29/00	Yes	31-VS-631	7440-38-2	Arsenic	11.0		mg/kg
31-VS-631	0-0.5	06/29/00	Yes	31-VS-631	7439-92-1	Lead	12.0		mg/kg
31-VS-632	1.5-2	06/29/00	Yes	31-VS-632	7440-38-2	Arsenic	6.5		mg/kg
31-VS-632	1.5-2	06/29/00	Yes	31-VS-632	7439-92-1	Lead	5.5		mg/kg
31-VS-63	2-2.5	09/13/99	Yes	31-VS-63	7440-38-2	Arsenic	4.8		mg/kg
31-VS-63	2-2.5	09/13/99	Yes	31-VS-63	7439-92-1	Lead	83.0		mg/kg
31-VS-633	1.5-2	06/29/00	Yes	31-VS-633	7440-38-2	Arsenic	6.3		mg/kg
31-VS-633	1.5-2	06/29/00	Yes	31-VS-633	7439-92-1	Lead	15.0		mg/kg
31-VS-634	0-0.5	06/29/00	Yes	31-VS-634	7440-38-2	Arsenic	110.0		mg/kg
31-VS-634	0-0.5	06/29/00	Yes	31-VS-634	7439-92-1	Lead	16.0		mg/kg
31-VS-635	0-0.5	06/29/00	Yes	31-VS-635	7440-38-2	Arsenic	6.8		mg/kg
31-VS-635	0-0.5	06/29/00	Yes	31-VS-635	7439-92-1	Lead	7.1		mg/kg
31-VS-636	1.5-2	06/29/00	Yes	31-VS-636	7440-38-2	Arsenic	72.0		mg/kg
31-VS-636	1.5-2	06/29/00	Yes	31-VS-636	7439-92-1	Lead	390.0		mg/kg
31-VS-637	1.5-2	06/29/00	Yes	31-VS-637	7440-38-2	Arsenic	18.0		mg/kg
31-VS-637	1.5-2	06/29/00	Yes	31-VS-637	7439-92-1	Lead	40.0		mg/kg
31-VS-638	1.5-2	06/29/00	Yes	31-VS-638	7440-38-2	Arsenic	8.3		mg/kg
31-VS-638	1.5-2	06/29/00	Yes	31-VS-638	7439-92-1	Lead	7.9		mg/kg
31-VS-639	1.5-2	06/29/00	Yes	31-VS-639-DAVG	7440-38-2	Arsenic	31.0	J	mg/kg
31-VS-639	1.5-2	06/29/00	Yes	31-VS-639-DAVG	7439-92-1	Lead	85.5	J	mg/kg
31-VS-640	1.5-2	06/29/00	Yes	31-VS-640	7440-38-2	Arsenic	7.8		mg/kg
31-VS-640	1.5-2	06/29/00	Yes	31-VS-640	7439-92-1	Lead	6.2		mg/kg
31-VS-641	1.5-2	06/29/00	Yes	31-VS-641	7440-38-2	Arsenic	23.0		mg/kg
31-VS-641	1.5-2	06/29/00	Yes	31-VS-641	7439-92-1	Lead	72.0		mg/kg
31-VS-642	0-0.5	06/29/00	Yes	31-VS-642	7440-38-2	Arsenic	58.0		mg/kg
31-VS-642	0-0.5	06/29/00	Yes	31-VS-642	7439-92-1	Lead	380.0		mg/kg
31-VS-64	2-2.5	09/13/99	Yes	31-VS-64	7440-38-2	Arsenic	4.9		mg/kg
31-VS-64	2-2.5	09/13/99	Yes	31-VS-64	7439-92-1	Lead	120.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-643	0-0.5	06/29/00	Yes	31-VS-643	7440-38-2	Arsenic	98.0		mg/kg
31-VS-643	0-0.5	06/29/00	Yes	31-VS-643	7439-92-1	Lead	160.0		mg/kg
31-VS-644	0-0.5	06/29/00	Yes	31-VS-644	7440-38-2	Arsenic	37.0		mg/kg
31-VS-644	0-0.5	06/29/00	Yes	31-VS-644	7439-92-1	Lead	95.0		mg/kg
31-VS-650	0-0.5	06/29/00	Yes	31-VS-650	7440-38-2	Arsenic	63.0		mg/kg
31-VS-650	0-0.5	06/29/00	Yes	31-VS-650	7439-92-1	Lead	47.0		mg/kg
31-VS-651	0-0.5	06/29/00	Yes	31-VS-651	7440-38-2	Arsenic	75.0		mg/kg
31-VS-651	0-0.5	06/29/00	Yes	31-VS-651	7439-92-1	Lead	27.0		mg/kg
31-VS-65	2-2.5	09/13/99	Yes	31-VS-65	7440-38-2	Arsenic	6.2		mg/kg
31-VS-65	2-2.5	09/13/99	Yes	31-VS-65	7439-92-1	Lead	350.0		mg/kg
31-VS-653	0-0.5	06/29/00	Yes	31-VS-653	7440-38-2	Arsenic	20.0		mg/kg
31-VS-653	0-0.5	06/29/00	Yes	31-VS-653	7439-92-1	Lead	23.0		mg/kg
31-VS-654	1.5-2	06/29/00	Yes	31-VS-654	7440-38-2	Arsenic	8.2		mg/kg
31-VS-654	1.5-2	06/29/00	Yes	31-VS-654	7439-92-1	Lead	5.4		mg/kg
31-VS-655	1.5-2	06/29/00	Yes	31-VS-655	7440-38-2	Arsenic	9.8		mg/kg
31-VS-655	1.5-2	06/29/00	Yes	31-VS-655	7439-92-1	Lead	7.6		mg/kg
31-VS-656	0-0.5	06/29/00	Yes	31-VS-656	7440-38-2	Arsenic	52.0		mg/kg
31-VS-656	0-0.5	06/29/00	Yes	31-VS-656	7439-92-1	Lead	27.0		mg/kg
31-VS-657	1.5-2	06/29/00	Yes	31-VS-657	7440-38-2	Arsenic	4.8		mg/kg
31-VS-657	1.5-2	06/29/00	Yes	31-VS-657	7439-92-1	Lead	7.6		mg/kg
31-VS-658	0-0.5	06/29/00	Yes	31-VS-658	7440-38-2	Arsenic	32.0		mg/kg
31-VS-658	0-0.5	06/29/00	Yes	31-VS-658	7439-92-1	Lead	490.0		mg/kg
31-VS-659	1.5-2	06/29/00	Yes	31-VS-659-DAVG	7440-38-2	Arsenic	4.4		mg/kg
31-VS-659	1.5-2	06/29/00	Yes	31-VS-659-DAVG	7439-92-1	Lead	9.3		mg/kg
31-VS-660	1.5-2	06/29/00	Yes	31-VS-660	7440-38-2	Arsenic	4.0		mg/kg
31-VS-660	1.5-2	06/29/00	Yes	31-VS-660	7439-92-1	Lead	4.9		mg/kg
31-VS-661	1.5-2	06/29/00	Yes	31-VS-661	7440-38-2	Arsenic	4.1		mg/kg
31-VS-661	1.5-2	06/29/00	Yes	31-VS-661	7439-92-1	Lead	4.4		mg/kg
31-VS-662	0-0.5	06/29/00	Yes	31-VS-662	7440-38-2	Arsenic	18.0		mg/kg
31-VS-662	0-0.5	06/29/00	Yes	31-VS-662	7439-92-1	Lead	13.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-66	2-2.5	09/13/99	Yes	31-VS-66	7440-38-2	Arsenic	11.0		mg/kg
31-VS-66	2-2.5	09/13/99	Yes	31-VS-66	7439-92-1	Lead	640.0		mg/kg
31-VS-663	1.5-2	06/29/00	Yes	31-VS-663	7440-38-2	Arsenic	16.0		mg/kg
31-VS-663	1.5-2	06/29/00	Yes	31-VS-663	7439-92-1	Lead	23.0		mg/kg
31-VS-665	1.5-2	06/29/00	Yes	31-VS-665	7440-38-2	Arsenic	14.0		mg/kg
31-VS-665	1.5-2	06/29/00	Yes	31-VS-665	7439-92-1	Lead	13.0		mg/kg
31-VS-666	1.5-2	06/29/00	Yes	31-VS-666	7440-38-2	Arsenic	41.0		mg/kg
31-VS-666	1.5-2	06/29/00	Yes	31-VS-666	7439-92-1	Lead	15.0		mg/kg
31-VS-668	1.5-2	06/29/00	Yes	31-VS-668	7440-38-2	Arsenic	44.0		mg/kg
31-VS-668	1.5-2	06/29/00	Yes	31-VS-668	7439-92-1	Lead	22.0		mg/kg
31-VS-669	1.5-2	06/29/00	Yes	31-VS-669-DAVG	7440-38-2	Arsenic	8.5		mg/kg
31-VS-669	1.5-2	06/29/00	Yes	31-VS-669-DAVG	7439-92-1	Lead	5.5		mg/kg
31-VS-670	0-0.5	06/29/00	Yes	31-VS-670	7440-38-2	Arsenic	16.0		mg/kg
31-VS-670	0-0.5	06/29/00	Yes	31-VS-670	7439-92-1	Lead	7.1		mg/kg
31-VS-671	1.5-2	06/29/00	Yes	31-VS-671	7440-38-2	Arsenic	6.8		mg/kg
31-VS-671	1.5-2	06/29/00	Yes	31-VS-671	7439-92-1	Lead	4.0		mg/kg
31-VS-672	1.5-2	06/29/00	Yes	31-VS-672	7440-38-2	Arsenic	3.8		mg/kg
31-VS-672	1.5-2	06/29/00	Yes	31-VS-672	7439-92-1	Lead	4.0		mg/kg
31-VS-674	1.5-2	06/29/00	Yes	31-VS-674	7440-38-2	Arsenic	37.0		mg/kg
31-VS-674	1.5-2	06/29/00	Yes	31-VS-674	7439-92-1	Lead	5.2		mg/kg
31-VS-675	1.5-2	06/29/00	Yes	31-VS-675	7440-38-2	Arsenic	8.2		mg/kg
31-VS-675	1.5-2	06/29/00	Yes	31-VS-675	7439-92-1	Lead	11.0		mg/kg
31-VS-677	1.5-2	06/29/00	Yes	31-VS-677	7440-38-2	Arsenic	20.0		mg/kg
31-VS-677	1.5-2	06/29/00	Yes	31-VS-677	7439-92-1	Lead	80.0		mg/kg
31-VS-678	1.5-2	06/29/00	Yes	31-VS-678	7440-38-2	Arsenic	6.1		mg/kg
31-VS-678	1.5-2	06/29/00	Yes	31-VS-678	7439-92-1	Lead	19.0		mg/kg
31-VS-679	0-0.5	06/29/00	Yes	31-VS-679-DAVG	7440-38-2	Arsenic	8.0		mg/kg
31-VS-679	0-0.5	06/29/00	Yes	31-VS-679-DAVG	7439-92-1	Lead	8.3		mg/kg
31-VS-680	1.5-2	06/29/00	Yes	31-VS-680	7440-38-2	Arsenic	26.0		mg/kg
31-VS-680	1.5-2	06/29/00	Yes	31-VS-680	7439-92-1	Lead	47.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-681	1.5-2	06/29/00	Yes	31-VS-681	7440-38-2	Arsenic	7.0		mg/kg
31-VS-681	1.5-2	06/29/00	Yes	31-VS-681	7439-92-1	Lead	5.2		mg/kg
31-VS-682	0-0.5	06/29/00	Yes	31-VS-682	7440-38-2	Arsenic	71.0		mg/kg
31-VS-682	0-0.5	06/29/00	Yes	31-VS-682	7439-92-1	Lead	23.0		mg/kg
31-VS-683	1.5-2	06/29/00	Yes	31-VS-683	7440-38-2	Arsenic	11.0		mg/kg
31-VS-683	1.5-2	06/29/00	Yes	31-VS-683	7439-92-1	Lead	11.0		mg/kg
31-VS-684	0-0.5	06/29/00	Yes	31-VS-684	7440-38-2	Arsenic	49.0		mg/kg
31-VS-684	0-0.5	06/29/00	Yes	31-VS-684	7439-92-1	Lead	38.0		mg/kg
31-VS-685	1.5-2	06/29/00	Yes	31-VS-685	7440-38-2	Arsenic	49.0		mg/kg
31-VS-685	1.5-2	06/29/00	Yes	31-VS-685	7439-92-1	Lead	26.0		mg/kg
31-VS-69	2-2.5	09/13/99	Yes	31-VS-69	7440-38-2	Arsenic	14.0		mg/kg
31-VS-69	2-2.5	09/13/99	Yes	31-VS-69	7439-92-1	Lead	450.0		mg/kg
31-VS-700	0-0.5	07/19/00	Yes	31-VS-700	7440-38-2	Arsenic	14.0		mg/kg
31-VS-700	0-0.5	07/19/00	Yes	31-VS-700	7439-92-1	Lead	15.0		mg/kg
31-VS-701	0-0.5	07/19/00	Yes	31-VS-701	7440-38-2	Arsenic	46.0		mg/kg
31-VS-701	0-0.5	07/19/00	Yes	31-VS-701	7439-92-1	Lead	52.0		mg/kg
31-VS-702	0-0.5	07/19/00	Yes	31-VS-702	7440-38-2	Arsenic	34.0		mg/kg
31-VS-702	0-0.5	07/19/00	Yes	31-VS-702	7439-92-1	Lead	27.0		mg/kg
31-VS-70	2-2.5	09/13/99	Yes	31-VS-70	7440-38-2	Arsenic	4.9		mg/kg
31-VS-70	2-2.5	09/13/99	Yes	31-VS-70	7439-92-1	Lead	190.0		mg/kg
31-VS-703	0-0.5	07/19/00	Yes	31-VS-703	7440-38-2	Arsenic	11.0		mg/kg
31-VS-703	0-0.5	07/19/00	Yes	31-VS-703	7439-92-1	Lead	14.0		mg/kg
31-VS-704	0-0.5	07/19/00	Yes	31-VS-704	7440-38-2	Arsenic	8.8		mg/kg
31-VS-704	0-0.5	07/19/00	Yes	31-VS-704	7439-92-1	Lead	4.6		mg/kg
31-VS-705	0-0.5	07/19/00	Yes	31-VS-705	7440-38-2	Arsenic	9.3		mg/kg
31-VS-705	0-0.5	07/19/00	Yes	31-VS-705	7439-92-1	Lead	160.0		mg/kg
31-VS-706	0-0.5	07/19/00	Yes	31-VS-706	7440-38-2	Arsenic	5.9		mg/kg
31-VS-706	0-0.5	07/19/00	Yes	31-VS-706	7439-92-1	Lead	31.0		mg/kg
31-VS-707	0-0.5	07/19/00	Yes	31-VS-707	7440-38-2	Arsenic	22.0		mg/kg
31-VS-707	0-0.5	07/19/00	Yes	31-VS-707	7439-92-1	Lead	95.0		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-708	0-0.5	07/19/00	Yes	31-VS-708	7440-38-2	Arsenic	26.0		mg/kg
31-VS-708	0-0.5	07/19/00	Yes	31-VS-708	7439-92-1	Lead	830.0		mg/kg
31-VS-709	0-0.5	07/19/00	Yes	31-VS-709	7440-38-2	Arsenic	6.1		mg/kg
31-VS-709	0-0.5	07/19/00	Yes	31-VS-709	7439-92-1	Lead	180.0		mg/kg
31-VS-710	0-0.5	07/19/00	Yes	31-VS-710	7440-38-2	Arsenic	15.0		mg/kg
31-VS-710	0-0.5	07/19/00	Yes	31-VS-710	7439-92-1	Lead	36.0		mg/kg
31-VS-711	0-0.5	07/19/00	Yes	31-VS-711	7440-38-2	Arsenic	2.0	U	mg/kg
31-VS-711	0-0.5	07/19/00	Yes	31-VS-711	7439-92-1	Lead	7.2		mg/kg
31-VS-712	0-0.5	07/19/00	Yes	31-VS-712	7440-38-2	Arsenic	3.4		mg/kg
31-VS-712	0-0.5	07/19/00	Yes	31-VS-712	7439-92-1	Lead	6.7		mg/kg
31-VS-71	2-2.5	09/13/99	Yes	31-VS-71	7440-38-2	Arsenic	2.0	U	mg/kg
31-VS-71	2-2.5	09/13/99	Yes	31-VS-71	7439-92-1	Lead	7.8		mg/kg
31-VS-714	1.5-2	07/24/00	Yes	31-VS-714	7440-38-2	Arsenic	3.1		mg/kg
31-VS-714	1.5-2	07/24/00	Yes	31-VS-714	7439-92-1	Lead	3.5		mg/kg
31-VS-715	1.5-2	07/24/00	Yes	31-VS-715	7440-38-2	Arsenic	14.0		mg/kg
31-VS-715	1.5-2	07/24/00	Yes	31-VS-715	7439-92-1	Lead	10.0		mg/kg
31-VS-716	1.5-2	07/24/00	Yes	31-VS-716	7440-38-2	Arsenic	4.1		mg/kg
31-VS-716	1.5-2	07/24/00	Yes	31-VS-716	7439-92-1	Lead	3.5		mg/kg
31-VS-717	1.5-2	07/24/00	Yes	31-VS-717	7440-38-2	Arsenic	5.5		mg/kg
31-VS-717	1.5-2	07/24/00	Yes	31-VS-717	7439-92-1	Lead	4.7		mg/kg
31-VS-718	1.5-2	07/24/00	Yes	31-VS-718	7440-38-2	Arsenic	2.9		mg/kg
31-VS-718	1.5-2	07/24/00	Yes	31-VS-718	7439-92-1	Lead	2.9		mg/kg
31-VS-719	1.5-2	07/24/00	Yes	31-VS-719	7440-38-2	Arsenic	5.7		mg/kg
31-VS-719	1.5-2	07/24/00	Yes	31-VS-719	7439-92-1	Lead	7.6		mg/kg
31-VS-720	1.5-2	07/24/00	Yes	31-VS-720	7440-38-2	Arsenic	8.0		mg/kg
31-VS-720	1.5-2	07/24/00	Yes	31-VS-720	7439-92-1	Lead	6.4		mg/kg
31-VS-721	1.5-2	07/24/00	Yes	31-VS-721	7440-38-2	Arsenic	17.0		mg/kg
31-VS-721	1.5-2	07/24/00	Yes	31-VS-721	7439-92-1	Lead	93.0		mg/kg
31-VS-722	1.5-2	07/24/00	Yes	31-VS-722	7440-38-2	Arsenic	8.5		mg/kg
31-VS-722	1.5-2	07/24/00	Yes	31-VS-722	7439-92-1	Lead	9.2		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-72	2-2.5	09/13/99	Yes	31-VS-72	7440-38-2	Arsenic	4.9		mg/kg
31-VS-72	2-2.5	09/13/99	Yes	31-VS-72	7439-92-1	Lead	31.0		mg/kg
31-VS-723	1.5-2	07/24/00	Yes	31-VS-723	7440-38-2	Arsenic	15.0		mg/kg
31-VS-723	1.5-2	07/24/00	Yes	31-VS-723	7439-92-1	Lead	90.0		mg/kg
31-VS-725	1.5-2	07/24/00	Yes	31-VS-725-DAVG	7440-38-2	Arsenic	4.0		mg/kg
31-VS-725	1.5-2	07/24/00	Yes	31-VS-725-DAVG	7439-92-1	Lead	2.5		mg/kg
31-VS-726	1.5-2	07/24/00	Yes	31-VS-726-DAVG	7440-38-2	Arsenic	13.0		mg/kg
31-VS-726	1.5-2	07/24/00	Yes	31-VS-726-DAVG	7439-92-1	Lead	23.0		mg/kg
31-VS-7	5-5.5	05/10/93	Yes	31-VS-7-DAVG	118-96-7	2,4,6-Trinitrotoluene	0.003	U	mg/kg
31-VS-7	5-5.5	05/10/93	Yes	31-VS-7-DAVG	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-VS-7	5-5.5	05/10/93	Yes	31-VS-7-DAVG	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-VS-7	5-5.5	05/10/93	Yes	31-VS-7-DAVG	7439-92-1	Lead	5.2	U	mg/kg
31-VS-73	2-2.5	09/13/99	Yes	31-VS-73	7440-38-2	Arsenic	3.0		mg/kg
31-VS-73	2-2.5	09/13/99	Yes	31-VS-73	7439-92-1	Lead	33.0		mg/kg
31-VS-76	0-0.5	09/13/99	Yes	31-VS-76	7440-38-2	Arsenic	14.0		mg/kg
31-VS-76	0-0.5	09/13/99	Yes	31-VS-76	7439-92-1	Lead	180.0		mg/kg
31-VS-77	0-0.5	09/13/99	Yes	31-VS-77	7440-38-2	Arsenic	27.0		mg/kg
31-VS-77	0-0.5	09/13/99	Yes	31-VS-77	7439-92-1	Lead	180.0		mg/kg
31-VS-8	5-5.5	05/10/93	Yes	31-VS-8	118-96-7	2,4,6-Trinitrotoluene	0.006		mg/kg
31-VS-8	5-5.5	05/10/93	Yes	31-VS-8	DNT-TOTAL	DNT - Total	0.01	U	mg/kg
31-VS-8	5-5.5	05/10/93	Yes	31-VS-8	98-95-3	Nitrobenzene	0.06	U	mg/kg
31-VS-8	5-5.5	05/10/93	Yes	31-VS-8	7439-92-1	Lead	7.6		mg/kg
31-VS-83	2-2.5	09/13/99	Yes	31-VS-83-DAVG	7440-38-2	Arsenic	13.5		mg/kg
31-VS-83	2-2.5	09/13/99	Yes	31-VS-83-DAVG	7439-92-1	Lead	1050.0		mg/kg
31-VS-88	0-0.5	09/14/99	Yes	31-VS-88	7440-38-2	Arsenic	81.0		mg/kg
31-VS-88	0-0.5	09/14/99	Yes	31-VS-88	7439-92-1	Lead	98.0		mg/kg
31-VS-90	1-1.5	09/14/99	Yes	31-VS-90	7440-38-2	Arsenic	5.5		mg/kg
31-VS-90	1-1.5	09/14/99	Yes	31-VS-90	7439-92-1	Lead	3.5		mg/kg
31-VS-91	1-1.5	09/14/99	Yes	31-VS-91	7440-38-2	Arsenic	7.6		mg/kg
31-VS-91	1-1.5	09/14/99	Yes	31-VS-91	7439-92-1	Lead	5.1		mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-VS-92	1-1.5	09/14/99	Yes	31-VS-92	7440-38-2	Arsenic	47.0		mg/kg
31-VS-92	1-1.5	09/14/99	Yes	31-VS-92	7439-92-1	Lead	13.0		mg/kg
31-VS-93	1-1.5	09/14/99	Yes	31-VS-93	7440-38-2	Arsenic	21.0		mg/kg
31-VS-93	1-1.5	09/14/99	Yes	31-VS-93	7439-92-1	Lead	9.3		mg/kg
31-VS-94	0-0.5	09/14/99	Yes	31-VS-94	7440-38-2	Arsenic	59.0		mg/kg
31-VS-94	0-0.5	09/14/99	Yes	31-VS-94	7439-92-1	Lead	56.0		mg/kg
31-VS-94A	1-1.5	09/30/99	Yes	31-VS-94A	7440-38-2	Arsenic	8.4		mg/kg
31-VS-94A	1-1.5	09/30/99	Yes	31-VS-94A	7439-92-1	Lead	13.0		mg/kg
31-VS-95	0-0.5	09/14/99	Yes	31-VS-95	7440-38-2	Arsenic	30.0		mg/kg
31-VS-95	0-0.5	09/14/99	Yes	31-VS-95	7439-92-1	Lead	66.0		mg/kg
31-VS-96	0-0.5	09/14/99	Yes	31-VS-96	7440-38-2	Arsenic	89.0		mg/kg
31-VS-96	0-0.5	09/14/99	Yes	31-VS-96	7439-92-1	Lead	150.0		mg/kg
31-VS-96A	1-1.5	09/30/99	Yes	31-VS-96A	7440-38-2	Arsenic	39.0		mg/kg
31-VS-96A	1-1.5	09/30/99	Yes	31-VS-96A	7439-92-1	Lead	12.0		mg/kg
31-VS-98	0-0.5	09/14/99	Yes	31-VS-98	7440-38-2	Arsenic	51.0		mg/kg
31-VS-98	0-0.5	09/14/99	Yes	31-VS-98	7439-92-1	Lead	10.0		mg/kg
31-VS-99	0-0.5	09/14/99	Yes	31-VS-99	7440-38-2	Arsenic	47.0		mg/kg
31-VS-99	0-0.5	09/14/99	Yes	31-VS-99	7439-92-1	Lead	50.0		mg/kg
31-VS-99A	1-1.5	09/30/99	Yes	31-VS-99A	7440-38-2	Arsenic	25.0		mg/kg
31-VS-99A	1-1.5	09/30/99	Yes	31-VS-99A	7439-92-1	Lead	12.0		mg/kg
LR-053	0-0.5	11/08/93	Yes	LR-053	7440-38-2	Arsenic	23.0	J	mg/kg
LR-054	0-0.5	11/08/93	Yes	LR-054	7440-38-2	Arsenic	14.0	J	mg/kg
LR-055	0-0.5	11/08/93	Yes	LR-055	7440-38-2	Arsenic	55.0	J	mg/kg
LR-056	0-0.5	11/08/93	Yes	LR-056	7440-38-2	Arsenic	14.0	J	mg/kg
LR-057	0-0.5	11/08/93	Yes	LR-057	7440-38-2	Arsenic	14.0	J	mg/kg
LR-058	0-0.5	11/08/93	Yes	LR-058	7440-38-2	Arsenic	64.0	J	mg/kg
LR-069	0-0.5	11/08/93	Yes	LR-069	7440-38-2	Arsenic	24.0	J	mg/kg
LR-070-1	0-0.5	05/19/92	Yes	LR-070-1	7439-92-1	Lead	114.0		mg/kg
LR-070-2	0-0.5	11/08/93	Yes	LR-070-2	7440-38-2	Arsenic	62.0	J	mg/kg
LR-070S	0-0.5	03/29/93	Yes	LR-070S	7440-38-2	Arsenic	18.0	J	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-071-1	0-0.5	05/19/92	Yes	LR-071-1	7439-92-1	Lead	217.0		mg/kg
LR-071-2	0-0.5	11/08/93	Yes	LR-071-2	7440-38-2	Arsenic	34.0	J	mg/kg
LR-071S	0-0.5	03/29/93	Yes	LR-071S	7440-38-2	Arsenic	55.0	J	mg/kg
LR-072	0-0.5	11/08/93	Yes	LR-072	7440-38-2	Arsenic	42.0	J	mg/kg
LR-073-1	0-0.5	05/19/92	Yes	LR-073-1	7439-92-1	Lead	56.0		mg/kg
LR-073-2	0-0.5	03/29/93	Yes	LR-073-2	7440-38-2	Arsenic	11.0	J	mg/kg
LR-086	0-0.5	11/08/93	Yes	LR-086	7440-38-2	Arsenic	20.0	J	mg/kg
LR-087	0-0.5	11/08/93	Yes	LR-087	7440-38-2	Arsenic	51.0		mg/kg
LR-088	0-0.5	11/08/93	Yes	LR-088	7440-38-2	Arsenic	6.9	J	mg/kg
LR-089	0-0.5	11/08/93	Yes	LR-089	7440-38-2	Arsenic	7.2	J	mg/kg
LR-102N	0-0.5	11/04/92	Yes	LR-102N	7439-92-1	Lead	12.0		mg/kg
LR-102S	0-0.5	11/04/92	Yes	LR-102S	7439-92-1	Lead	59.0		mg/kg
LR-102W	0-0.5	11/04/92	Yes	LR-102W	7439-92-1	Lead	42.0		mg/kg
LR-104 1'-2'	1-2	07/02/93	Yes	LR-104 1'-2'	7440-38-2	Arsenic	7.0		mg/kg
LR-104A	0-0.5	12/15/93	Yes	LR-104A	7440-38-2	Arsenic	100.0	J	mg/kg
LR-121	0-0.5	11/09/93	Yes	LR-121	7440-38-2	Arsenic	54.0		mg/kg
LR-122	0-0.5	11/09/93	Yes	LR-122	7440-38-2	Arsenic	61.0		mg/kg
LR-123	0-0.5	11/09/93	Yes	LR-123	7440-38-2	Arsenic	18.0		mg/kg
MSU-19-VS-10-14.5-E	10-14.5	07/09/03	Yes	01-SB-[MSU-19-VS-10-14.5-E]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-10-14.5-N	10-14.5	07/09/03	Yes	01-SB-[MSU-19-VS-10-14.5-N]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-10-14.5-S	10-14.5	07/09/03	Yes	01-SB-[MSU-19-VS-10-14.5-S]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-10-14.5-W	10-14.5	07/09/03	Yes	01-SB-[MSU-19-VS-10-14.5-W]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-15-19.5-E	15-19.5	07/09/03	Yes	01-SB-[MSU-19-VS-15-19.5-E]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-15-19.5-N	15-19.5	07/09/03	Yes	01-SB-[MSU-19-VS-15-19.5-N]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-15-19.5-S	15-19.5	07/09/03	Yes	01-SB-[MSU-19-VS-15-19.5-S]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-15-19.5-W	15-19.5	07/09/03	Yes	01-SB-[MSU-19-VS-15-19.5-W]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-5-8-E	5-8	07/09/03	Yes	01-SB-[MSU-19-VS-5-8-E]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-5-8-N	5-8	07/09/03	Yes	01-SB-[MSU-19-VS-5-8-N]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-5-8-S	5-8	07/09/03	Yes	01-SB-[MSU-19-VS-5-8-S]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-19-VS-5-8-W	5-8	07/09/03	Yes	01-SB-[MSU-19-VS-5-8-W]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg

Table B.21
Sample Results for IN-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-19-VS-B	17-17.5	07/09/03	Yes	01-SB-[MSU-19-VS-B]-C2_07/09/03_17	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-10-13-E	10-13	07/09/03	Yes	01-SB-[MSU-20-VS-10-13-E]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-10-13-N	10-13	07/09/03	Yes	01-SB-[MSU-20-VS-10-13-N]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-10-13-S	10-13	07/09/03	Yes	01-SB-[MSU-20-VS-10-13-S]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-10-13-W	10-13	07/09/03	Yes	01-SB-[MSU-20-VS-10-13-W]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-4-6.5-E	4-6.5	07/09/03	Yes	01-SB-[MSU-20-VS-4-6.5-E]-C2_AVG_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-4-6.5-N	4-6.5	07/09/03	Yes	01-SB-[MSU-20-VS-4-6.5-N]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-4-6.5-S	4-6.5	07/09/03	Yes	01-SB-[MSU-20-VS-4-6.5-S]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-4-6.5-W	4-6.5	07/09/03	Yes	01-SB-[MSU-20-VS-4-6.5-W]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
MSU-20-VS-B	14-14.5	07/09/03	Yes	01-SB-[MSU-20-VS-B]-C2_07/09/03_14	98-95-3	Nitrobenzene	0.2	U	mg/kg
RR-546-C	0-0.5	07/02/93	Yes	RR-546-C	7440-38-2	Arsenic	46.0		mg/kg
RR-593	0-0.5	12/02/93	Yes	RR-593	7440-38-2	Arsenic	27.0		mg/kg
RR-593	0-0.5	12/02/93	Yes	RR-593	7439-92-1	Lead	46.0	J	mg/kg
RR-594	0-0.5	12/03/93	Yes	RR-594	7440-38-2	Arsenic	180.0		mg/kg
RR-595-S-3	1-2	12/15/93	Yes	RR-595-S-3	7440-38-2	Arsenic	23.0	J	mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.22
Sample Results for OS-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-013	0-0.5	11/04/93	Yes	LR-013	7440-38-2	Arsenic	8.4		mg/kg
MSU-104-E	0-1.5	06/24/03	No	01-SS-[MSU-104-E]-D1_06/24/03_0	7440-38-2	Arsenic	10.7		mg/kg
MSU-104-E	0-1.5	07/29/03	Yes	03-SS-[MSU-104-E]-D1_07/29/03_0	7439-92-1	Lead	75.2		mg/kg
MSU-104-N	0-1.5	06/24/03	Yes	01-SS-[MSU-104-N]-D1_06/24/03_0	7440-38-2	Arsenic	3.5		mg/kg
MSU-104-N	0-1.5	06/24/03	Yes	01-SS-[MSU-104-N]-D1_06/24/03_0	7439-92-1	Lead	97.6		mg/kg
MSU-104-NE	0-1.5	11/12/03	No	06-SS-[MSU-104-NE]-D1_11/12/03_0	7439-92-1	Lead	99.9		mg/kg
MSU-104-S	0-1.5	06/24/03	Yes	01-SS-[MSU-104-S]-D1_06/24/03_0	7440-38-2	Arsenic	2.8		mg/kg
MSU-104-S	0-1.5	06/24/03	Yes	01-SS-[MSU-104-S]-D1_06/24/03_0	7439-92-1	Lead	71.9		mg/kg
MSU-104-VS-B	1.5-2	11/12/03	Yes	01-SS-[MSU-104-VS-B]-C2_11/12/03_1.5	7439-92-1	Lead	70.0		mg/kg
MSU-104-W	0-1.5	06/24/03	Yes	01-SS-[MSU-104-W]-D1_06/24/03_0	7440-38-2	Arsenic	11.1		mg/kg
MSU-104-W	0-1.5	06/24/03	Yes	01-SS-[MSU-104-W]-D1_06/24/03_0	7439-92-1	Lead	81.9		mg/kg
MSU-105-E	0-0.5	06/24/03	No	01-SS-[MSU-105-E]-D1_06/24/03_0	7440-38-2	Arsenic	9.8		mg/kg
MSU-105-E	0-0.5	08/07/03	Yes	05-SS-[MSU-105-E]-D1_08/07/03_0	7439-92-1	Lead	101.0		mg/kg
MSU-105-N	0-1.5	06/24/03	No	01-SS-[MSU-105-N]-D1_06/24/03_0	7440-38-2	Arsenic	37.6		mg/kg
MSU-105-NE	0-1.5	10/16/03	Yes	05-SS-[MSU-105-NE]-D1_10/16/03_0	7439-92-1	Lead	15.8		mg/kg
MSU-105-S	0-1.5	06/24/03	No	01-SS-[MSU-105-S]-D1_06/24/03_0	7440-38-2	Arsenic	18.0		mg/kg
MSU-105-S	0-3	07/29/03	Yes	03-SS-[MSU-105-S]-D1_07/29/03_0	7439-92-1	Lead	56.2		mg/kg
MSU-105-VS-B	3-3.5	12/08/03	Yes	02-SS-[MSU-105-VS-B]-C2_12/08/03_3	7439-92-1	Lead	41.5		mg/kg
MSU-105-W	0-1.5	06/24/03	No	01-SS-[MSU-105-W]-D1_06/24/03_0	7440-38-2	Arsenic	14.6		mg/kg
MSU-105-W	0-3	07/29/03	Yes	03-SS-[MSU-105-W]-D1_07/29/03_0	7439-92-1	Lead	109.0		mg/kg
MSU-106-E	0-1.5	06/24/03	No	01-SS-[MSU-106-E]-D1_06/24/03_0	7440-38-2	Arsenic	3.6		mg/kg
MSU-106-E	0-1.5	07/29/03	Yes	03-SS-[MSU-106-E]-D1_07/29/03_0	7439-92-1	Lead	91.6		mg/kg
MSU-106-N	0-1.5	06/24/03	Yes	01-SS-[MSU-106-N]-D1_06/24/03_0	7440-38-2	Arsenic	10.5		mg/kg
MSU-106-N	0-1.5	06/24/03	Yes	01-SS-[MSU-106-N]-D1_06/24/03_0	7439-92-1	Lead	103.0		mg/kg
MSU-106-S	0-1.5	06/24/03	No	01-SS-[MSU-106-S]-D1_06/24/03_0	7440-38-2	Arsenic	28.4		mg/kg
MSU-106-S	0-1.5	07/10/03	Yes	02-SS-[MSU-106-S]-D1_AVG_07/10/03_0	7439-92-1	Lead	24.0		mg/kg
MSU-106-VS-B	1.5-2	11/12/03	Yes	01-SS-[MSU-106-VS-B]-C2_11/12/03_1.5	7439-92-1	Lead	58.0		mg/kg
MSU-106-W	0-1.5	06/24/03	No	01-SS-[MSU-106-W]-D1_06/24/03_0	7440-38-2	Arsenic	16.9		mg/kg
MSU-106-W	0-1.5	07/10/03	Yes	02-SS-[MSU-106-W]-D1_07/10/03_0	7439-92-1	Lead	44.1		mg/kg
MSU-NGRR-04	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-04-1]-C1_05/27/03_1.5	7440-38-2	Arsenic	2.6		mg/kg

Table B.22
Sample Results for OS-01 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-NGRR-04	1.5-2	05/27/03	Yes	01-SS-[MSU-NGRR-04-1]-C1_05/27/03_1.5	7439-92-1	Lead	24.6		mg/kg
NGRR-179	3.5-4	09/13/01	Yes	03-N01-SS-[NGRR-179-3]-C2-050	7440-38-2	Arsenic	4.8		mg/kg
NGRR-179	3.5-4	09/13/01	Yes	03-N01-SS-[NGRR-179-3]-C2-050	7439-92-1	Lead	87.0		mg/kg
R10C41	1-1.5	04/09/04	Yes	1-R10C41_04/09/04_1	7440-38-2	Arsenic	6.1		mg/kg
R10C41	1-1.5	04/09/04	Yes	1-R10C41_04/09/04_1	7439-92-1	Lead	6.8		mg/kg
R22C51	1-1.5	04/09/04	Yes	1-R22C51_04/09/04_1	7440-38-2	Arsenic	6.8		mg/kg
R22C51	1-1.5	04/09/04	Yes	1-R22C51_04/09/04_1	7439-92-1	Lead	7.6		mg/kg
R22C52	1-1.5	04/27/04	Yes	1-R22C52_04/27/04_1	7440-38-2	Arsenic	7.3		mg/kg
R22C52	1-1.5	04/27/04	Yes	1-R22C52_04/27/04_1	7439-92-1	Lead	8.0		mg/kg
R7C35	1-1.5	04/09/04	Yes	1-R7C35_04/09/04_1	7440-38-2	Arsenic	28.2		mg/kg
R7C35	1-1.5	04/09/04	Yes	1-R7C35_04/09/04_1	7439-92-1	Lead	57.1		mg/kg
R8C36	1-1.5	04/09/04	Yes	1-R8C36_04/09/04_1	7440-38-2	Arsenic	20.8		mg/kg
R8C36	1-1.5	04/09/04	Yes	1-R8C36_04/09/04_1	7439-92-1	Lead	13.7		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.23
Sample Results for OS-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
38-VS-134	1.5-2	05/24/00	No	38-VS-134	7440-38-2	Arsenic	74.0		mg/kg
38-VS-134	1.5-2	05/24/00	No	38-VS-134	7439-92-1	Lead	22.0		mg/kg
38-VS-136	1.5-2	05/24/00	No	38-VS-136	7440-38-2	Arsenic	150.0		mg/kg
38-VS-136	1.5-2	05/24/00	No	38-VS-136	7439-92-1	Lead	11.0		mg/kg
38-VS-16	0-0.5	09/27/99	Yes	38-VS-16	7440-38-2	Arsenic	23.0		mg/kg
38-VS-16	0-0.5	09/27/99	Yes	38-VS-16	7439-92-1	Lead	35.0		mg/kg
38-VS-8	0-0.5	09/27/99	Yes	38-VS-8	7440-38-2	Arsenic	8.7		mg/kg
38-VS-8	0-0.5	09/27/99	Yes	38-VS-8	7439-92-1	Lead	22.0		mg/kg
LR-051	0-0.5	11/04/93	Yes	LR-051	7440-38-2	Arsenic	23.0		mg/kg
LR-100	0-0.5	11/04/93	Yes	LR-100	7440-38-2	Arsenic	5.9		mg/kg
LR-119	0-0.5	11/10/93	Yes	LR-119	7440-38-2	Arsenic	15.0		mg/kg
LR-68-W125	0-0.5	11/04/92	Yes	LR-68-W125	7439-92-1	Lead	29.0		mg/kg
MSU-100-E	0-1.5	06/30/03	Yes	01-SS-[MSU-100-E]-D1_06/30/03_0	7439-92-1	Lead	88.0		mg/kg
MSU-100-N	0-1.5	08/04/03	Yes	04-SS-[MSU-100-N]-D1_08/04/03_0	7440-38-2	Arsenic	50.3		mg/kg
MSU-100-S	0-1.5	11/24/03	Yes	06-SS-[MSU-100-S]-D1_11/24/03_0	7440-38-2	Arsenic	2.3	U	mg/kg
MSU-100-VS-B	1.5-2	10/08/03	Yes	01-SS-[MSU-100-VS-B]-C2_10/08/03_1.5	7440-38-2	Arsenic	2.3	U	mg/kg
MSU-100-VS-E	0-1.5	03/24/06	Yes	03-MSU-100-VS-E-0-0.5	7440-38-2	Arsenic	8.5		mg/Kg
MSU-100-VS-E	0-1.5	03/24/06	Yes	03-MSU-100-VS-E-0-0.5	7439-92-1	Lead	13.0		mg/Kg
MSU-100-VS-W	0-1.5	03/24/06	Yes	03-MSU-100-VS-W-0-0.5	7440-38-2	Arsenic	7.2		mg/Kg
MSU-100-VS-W	0-1.5	03/24/06	Yes	03-MSU-100-VS-W-0-0.5	7439-92-1	Lead	16.0		mg/Kg
MSU-100-W	0-1.5	06/30/03	Yes	01-SS-[MSU-100-W]-D1_06/30/03_0	7439-92-1	Lead	66.5		mg/kg
MSU-102/103-1	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-1-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	7.5		mg/kg
MSU-102/103-1	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-1-VS]-C1_04/06/04_1.5	7439-92-1	Lead	5.7		mg/kg
MSU-102/103-1	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-3-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	14.4		mg/kg
MSU-102/103-1	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-3-VS]-C1_04/06/04_1.5	7439-92-1	Lead	8.2		mg/kg
MSU-102/103-2	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-2-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	16.0		mg/kg
MSU-102/103-2	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-2-VS]-C1_04/06/04_1.5	7439-92-1	Lead	9.5		mg/kg
MSU-102/103-4	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-4-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	6.9		mg/kg
MSU-102/103-4	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-4-VS]-C1_04/06/04_1.5	7439-92-1	Lead	4.1		mg/kg
MSU-102/103-5	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-5-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	6.2		mg/kg

Table B.23
Sample Results for OS-02 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
MSU-102/103-5	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-5-VS]-C1_04/06/04_1.5	7439-92-1	Lead	4.3		mg/kg
MSU-102/103-6	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-6-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	7.5		mg/kg
MSU-102/103-6	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-6-VS]-C1_04/06/04_1.5	7439-92-1	Lead	5.3		mg/kg
MSU-102/103-7	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-7-VS]-C1_04/06/04_1.5	7440-38-2	Arsenic	9.3		mg/kg
MSU-102/103-7	1.5-2	04/06/04	Yes	02-SS-[MSU-102/103-7-VS]-C1_04/06/04_1.5	7439-92-1	Lead	6.1		mg/kg
MSU-103-E	0-1.5	07/29/03	Yes	03-SS-[MSU-103-E]-D1_07/29/03_0	7439-92-1	Lead	63.7		mg/kg
MSU-103-E	0-1.5	08/11/03	No	05-SS-[MSU-103-E]-D1_08/11/03_0	7440-38-2	Arsenic	54.7		mg/kg
MSU-103-E	0-1.5	11/24/03	Yes	06-SS-[MSU-103-E]-D1_11/24/03_0	7440-38-2	Arsenic	29.2		mg/kg
MSU-99-E	0-1.5	07/01/03	No	01-SS[MSU-99-E]-D1_07/01/03_0	7439-92-1	Lead	34.5		mg/kg
MSU-99-E	0-1.5	08/06/03	Yes	02-SS-[MSU-99-E]-D1_08/0603_0	7440-38-2	Arsenic	28.0		mg/kg
MSU-99-N	0-1.5	07/01/03	No	01-SS[MSU-99-N]-D1_07/01/03_0	7439-92-1	Lead	26.5		mg/kg
MSU-99-N	0-1.5	08/06/03	Yes	02-SS-[MSU-99-N]-D1_08/0603_0	7440-38-2	Arsenic	41.9		mg/kg
MSU-99-S	0-1.5	07/01/03	No	01-SS[MSU-99-S]-D1_07/01/03_0	7439-92-1	Lead	65.4		mg/kg
MSU-99-S	0-1.5	11/24/03	No	03-SS-[MSU-99-S]-D1_11/2403_0	7440-38-2	Arsenic	5.3		mg/kg
MSU-99-VS-B	1.5-2	10/08/03	Yes	01-SS-[MSU-99-VS-B]-C2_10/08/03_1.5	7440-38-2	Arsenic	6.0		mg/kg
MSU-99-W	0-1.5	07/01/03	No	01-SS[MSU-99-W]-D1_07/01/03_0	7439-92-1	Lead	51.5		mg/kg
MSU-99-W	0-1.5	03/11/04	Yes	5-MSU-99-W_03/1104_0	7440-38-2	Arsenic	8.0		mg/kg
NGRR-34	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-34]C2-005	7440-38-2	Arsenic	4.5		mg/kg
NGRR-34	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-34]C2-005	7439-92-1	Lead	7.9		mg/kg
NGRR-41	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-41]C2-005	7440-38-2	Arsenic	4.4		mg/kg
NGRR-41	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-41]C2-005	7439-92-1	Lead	3.9		mg/kg
NGRR-42	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-42]C2-005	7440-38-2	Arsenic	5.5		mg/kg
NGRR-42	1.5-2	07/11/01	Yes	01-N01-SS[NGRR-42]C2-005	7439-92-1	Lead	4.0		mg/kg
R50C85_OS_02	1-1.5	03/11/04	No	1-R50C85_03/11/04_1	7439-92-1	Lead	46.9		mg/kg
RR-548-A2	0-0.5	12/17/93	Yes	RR-548-A2	7440-38-2	Arsenic	21.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.24
Sample Results for OS-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
31-SS-402	0-0.5	11/08/93	Yes	31-SS-402	7440-38-2	Arsenic	14.0		mg/kg
31-SS-502	0-0.5	02/14/92	Yes	31-SS-502	7439-92-1	Lead	45.0		mg/kg
31-TP-509	8-10	02/27/92	Yes	31-TP-509-S-3	7440-38-2	Arsenic	2.6		mg/kg
31-TP-509	8-10	02/27/92	Yes	31-TP-509-S-3	7439-92-1	Lead	5.1	UJ	mg/kg
31-VS-432	2-2.5	01/25/00	Yes	31-VS-432	7440-38-2	Arsenic	2.3		mg/kg
31-VS-432	2-2.5	01/25/00	Yes	31-VS-432	7439-92-1	Lead	6.0		mg/kg
31-VS-433	0-0.5	01/25/00	No	31-VS-433	7440-38-2	Arsenic	93.0		mg/kg
31-VS-433	0-0.5	01/25/00	No	31-VS-433	7439-92-1	Lead	32.0		mg/kg
31-VS-528	1-1.5	04/18/00	Yes	31-VS-528	7440-38-2	Arsenic	5.3		mg/kg
31-VS-528	1-1.5	04/18/00	Yes	31-VS-528	7439-92-1	Lead	7.1		mg/kg
31-VS-530	0-0.5	04/18/00	Yes	31-VS-530	7440-38-2	Arsenic	11.0		mg/kg
31-VS-530	0-0.5	04/18/00	Yes	31-VS-530	7439-92-1	Lead	12.0		mg/kg
31-VS-531	1-1.5	04/18/00	Yes	31-VS-531	7440-38-2	Arsenic	16.0		mg/kg
31-VS-531	1-1.5	04/18/00	Yes	31-VS-531	7439-92-1	Lead	32.0		mg/kg
LR-052	0-0.5	11/08/93	Yes	LR-052	7440-38-2	Arsenic	6.3	J	mg/kg
LR-069W	0-0.5	12/15/93	Yes	LR-069W	7440-38-2	Arsenic	18.0	J	mg/kg
LR-085	0-0.5	11/08/93	Yes	LR-085	7440-38-2	Arsenic	7.9	J	mg/kg
LR-101	0-0.5	03/29/93	Yes	LR-101	7440-38-2	Arsenic	15.0	J	mg/kg
LR-101	0-0.5	03/29/93	Yes	LR-101	7439-92-1	Lead	11.0		mg/kg
LR-68-0	1.5-2	08/01/01	No	02-OS02-SS[LR-68-0-02]C02-1.5	7440-38-2	Arsenic	98.0		mg/kg
LR-68-0	1.5-2	08/01/01	No	02-OS02-SS[LR-68-0-02]C02-1.5	7439-92-1	Lead	210.0		mg/kg
LR-68-0	1.5-2	03/23/06	Yes	LR-68-0-VS-04	7440-38-2	Arsenic	24.0		mg/Kg
LR-68-1050E	1-1.5	02/27/04	No	01-LR-68-1050E-VS_02/27/04_1	7439-92-1	Lead	7.7		mg/kg
LR-68-1050E	3-3.5	03/19/04	Yes	03-LR-68-1050E_03/19/04_3	7440-38-2	Arsenic	6.5		mg/kg
LR-68-1125E	1-1.5	02/27/04	No	01-LR-68-1125E-VS_02/27/04_1	7439-92-1	Lead	8.0		mg/kg
LR-68-1125E	2-2.5	03/11/04	Yes	2-LR68-1125E_03/11/04_2	7440-38-2	Arsenic	28.5		mg/kg
LR-68-1200E	1-1.5	02/27/04	Yes	01-LR-68-1200E-VS_02/27/04_1	7440-38-2	Arsenic	31.2		mg/kg
LR-68-1200E	1-1.5	02/27/04	Yes	01-LR-68-1200E-VS_02/27/04_1	7439-92-1	Lead	8.8		mg/kg
LR-68-1275E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-1275E-02]C02-1.5	7440-38-2	Arsenic	29.0		mg/kg
LR-68-1275E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-1275E-02]C02-1.5	7439-92-1	Lead	22.0		mg/kg

Table B.24
Sample Results for OS-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-68-1350E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-1350E-02]C02-1.5	7440-38-2	Arsenic	40.0		mg/kg
LR-68-1350E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-1350E-02]C02-1.5	7439-92-1	Lead	9.1		mg/kg
LR-68-1350E	1.5-2	03/23/06	Yes	LR-68-1350E-VS-04	7440-38-2	Arsenic	5.1	U	mg/Kg
LR-68-1425E	1-1.5	02/27/04	No	01-LR-68-1425E-VS_02/27/04_1	7439-92-1	Lead	5.8		mg/kg
LR-68-1425E	1-1.5	03/23/06	Yes	LR-68-1425E-VS-04	7440-38-2	Arsenic	5.4	U	mg/Kg
LR-68-1500E	1-1.5	02/27/04	Yes	01-LR-68-1500E-VS_02/27/04_1	7440-38-2	Arsenic	16.9		mg/kg
LR-68-1500E	1-1.5	02/27/04	Yes	01-LR-68-1500E-VS_02/27/04_1	7439-92-1	Lead	5.6		mg/kg
LR-68-150E	1-1.5	02/27/04	No	01-LR-68-150E-VS_02/27/04_1	7439-92-1	Lead	4.4		mg/kg
LR-68-150E	1-1.5	03/23/06	Yes	LR-68-150E-VS-04	7440-38-2	Arsenic	23.0		mg/Kg
LR-68-150W	1-1.5	02/27/04	No	01-LR-68-150W-VS_02/27/04_1	7439-92-1	Lead	4.2		mg/kg
LR-68-150W	1-1.5	03/23/06	Yes	LR-68-150W-VS-04	7440-38-2	Arsenic	4.8	U	mg/Kg
LR-68-1575E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-1575E-02]C02-1.5	7440-38-2	Arsenic	67.0		mg/kg
LR-68-1575E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-1575E-02]C02-1.5	7439-92-1	Lead	21.0		mg/kg
LR-68-1650E	1-1.5	02/27/04	Yes	01-LR-68-1650E-VS_02/27/04_1	7440-38-2	Arsenic	19.2		mg/kg
LR-68-1650E	1-1.5	02/27/04	Yes	01-LR-68-1650E-VS_02/27/04_1	7439-92-1	Lead	3.6		mg/kg
LR-68-1725E	1-1.5	02/27/04	Yes	01-LR-68-1725E-VS_02/27/04_1	7440-38-2	Arsenic	31.6		mg/kg
LR-68-1725E	1-1.5	02/27/04	Yes	01-LR-68-1725E-VS_02/27/04_1	7439-92-1	Lead	2.8		mg/kg
LR-68-225E	1-1.5	02/27/04	No	01-LR-68-225E-VS_02/27/04_1	7439-92-1	Lead	3.9		mg/kg
LR-68-225E	2-2.5	03/11/04	Yes	2-LR68-225E_AVG_03/11/04_2	7440-38-2	Arsenic	24.6		mg/kg
LR-68-225W	1-1.5	02/27/04	No	01-LR-68-225W-VS_02/27/04_1	7439-92-1	Lead	6.4		mg/kg
LR-68-225W	2-2.5	03/11/04	Yes	2-LR68-225W_03/11/04_2	7440-38-2	Arsenic	22.4		mg/kg
LR-68-300E	1-1.5	02/27/04	No	01-LR-68-300E-VS_AVG_02/27/04_1	7439-92-1	Lead	7.4		mg/kg
LR-68-300E	3-3.5	03/19/04	Yes	03-LR-68-300E_03/19/04_3	7440-38-2	Arsenic	12.4		mg/kg
LR-68-300W	1-1.5	02/27/04	No	01-LR-68-300W-VS_02/27/04_1	7439-92-1	Lead	4.5		mg/kg
LR-68-300W	3-3.5	03/19/04	Yes	03-LR-68-300W_03/19/04_3	7440-38-2	Arsenic	9.9		mg/kg
LR-68-375E	1-1.5	02/27/04	No	01-LR-68-375E-VS_02/27/04_1	7439-92-1	Lead	7.0		mg/kg
LR-68-375E	3-3.5	03/19/04	Yes	03-LR-68-375E_03/19/04_3	7440-38-2	Arsenic	5.6		mg/kg
LR-68-375W	1-1.5	02/27/04	No	01-LR-68-375W-VS_02/27/04_1	7439-92-1	Lead	7.3		mg/kg
LR-68-375W	2-2.5	03/11/04	Yes	2-LR68-375W_03/11/04_2	7440-38-2	Arsenic	28.8		mg/kg
LR-68-450E	0-0.5	01/10/01	Yes	01-OS02-SS-[LR-68-450E]-C1-000	7440-38-2	Arsenic	30.0		mg/kg

Table B.24
Sample Results for OS-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR-68-450E	0-0.5	01/10/01	Yes	01-OS02-SS-[LR-68-450E]-C1-000	7439-92-1	Lead	19.0		mg/kg
LR-68-450W	1-1.5	02/27/04	Yes	01-LR-68-450W-VS_02/27/04_1	7440-38-2	Arsenic	30.6		mg/kg
LR-68-450W	1-1.5	02/27/04	Yes	01-LR-68-450W-VS_02/27/04_1	7439-92-1	Lead	4.1		mg/kg
LR-68-525E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-525E-02]C02-1.5	7440-38-2	Arsenic	85.0		mg/kg
LR-68-525E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-525E-02]C02-1.5	7439-92-1	Lead	190.0		mg/kg
LR-68-600E-2	0-0.5	09/12/01	No	02-OS02-[LR-68-600E-2-TRANSECT]-D1-000	7440-38-2	Arsenic	33.0		mg/kg
LR-68-600E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-600E-02]C02-1.5	7440-38-2	Arsenic	130.0		mg/kg
LR-68-600E	1.5-2	08/01/01	No	02-OS02-SS[LR-68-600E-02]C02-1.5	7439-92-1	Lead	20.0		mg/kg
LR-68-675E	1-1.5	02/27/04	No	01-LR-68-675E-VS_02/27/04_1	7439-92-1	Lead	4.9		mg/kg
LR-68-675E	1-1.5	03/23/06	Yes	LR-68-675E-VS-04	7440-38-2	Arsenic	5.4	U	mg/Kg
LR-68-75	1.5-2	08/01/01	No	02-OS02-SS[LR-68-75-02]C02-1.5	7440-38-2	Arsenic	99.0		mg/kg
LR-68-75	1.5-2	08/01/01	No	02-OS02-SS[LR-68-75-02]C02-1.5	7439-92-1	Lead	16.0		mg/kg
LR-68-750E	1-1.5	02/27/04	No	01-LR-68-750E-VS_02/27/04_1	7439-92-1	Lead	11.2		mg/kg
LR-68-750E	2-2.5	03/11/04	Yes	2-LR68-750E_03/11/04_2	7440-38-2	Arsenic	4.8		mg/kg
LR-68-825E	1-1.5	02/27/04	No	01-LR-68-825E-VS_02/27/04_1	7439-92-1	Lead	117.0		mg/kg
LR-68-825E	3-3.5	03/19/04	Yes	03-LR-68-825E_03/19/04_3	7440-38-2	Arsenic	8.1		mg/kg
LR-68-900E	1-1.5	02/27/04	No	01-LR-68-900E-VS_02/27/04_1	7439-92-1	Lead	15.2		mg/kg
LR-68-900E	3-3.5	03/19/04	Yes	03-LR-68-900E_03/19/04_3	7440-38-2	Arsenic	11.4		mg/kg
LR-68-975E	0-0.5	01/10/01	Yes	01-OS02-SS-[LR-68-975E]-C1-000	7440-38-2	Arsenic	27.0		mg/kg
LR-68-975E	0-0.5	01/10/01	Yes	01-OS02-SS-[LR-68-975E]-C1-000	7439-92-1	Lead	12.0		mg/kg
LR-68-A-VS-B	1-1.5	08/13/03	Yes	01SS-[LR68-A-VS-B]-C2_08/13/03_1	7440-38-2	Arsenic	12.6		mg/kg
LR-68-A-VS-B	2-2.5	08/28/03	Yes	02-SS-[LR-68-A-VS-B]-C2_08/28/03_2	7439-92-1	Lead	3460.0		mg/kg
LR-68-B-VS-B	2-2.5	08/28/03	Yes	02-SS-[LR-68-B-VS-B]-C2_08/28/03_2	7439-92-1	Lead	368.0		mg/kg
LR-68-C-VS-B	2-2.5	08/28/03	Yes	02-SS-[LR-68-C-VS-B]-C2_08/28/03_2	7439-92-1	Lead	152.0		mg/kg
LR-68-D-VS-B	2-2.5	08/28/03	Yes	02-SS-[LR-68-D-VS-B]-C2_08/28/03_2	7439-92-1	Lead	142.0		mg/kg
LR-68-E125	0-0.5	11/04/92	Yes	LR-68-E125	7439-92-1	Lead	10.0		mg/kg
LR-68-S125	0-0.5	11/04/92	Yes	LR-68-S125	7439-92-1	Lead	17.0		mg/kg
LR-68-S175	0-0.5	05/14/93	Yes	LR-68-S175	7440-38-2	Arsenic	12.0		mg/kg
LR-68-S175	0-0.5	05/14/93	Yes	LR-68-S175	7439-92-1	Lead	11.0		mg/kg
LR-68-S875-VS-B	1-1.5	08/13/03	Yes	01SS-[LR68-S875-VS-B]-C2_08/13/03_1	7439-92-1	Lead	39.4		mg/kg

Table B.24
Sample Results for OS-03 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
LR68-0	1-1.5	02/27/04	No	01-LR-68-0-VS_02/27/04_1	7439-92-1	Lead	2.8		mg/kg
LR68-1275E	1-1.5	02/27/04	Yes	01-LR-68-1275E-VS_02/27/04_1	7440-38-2	Arsenic	19.1		mg/kg
LR68-1275E	1-1.5	02/27/04	Yes	01-LR-68-1275E-VS_02/27/04_1	7439-92-1	Lead	5.8		mg/kg
LR68-1350E	1-1.5	02/27/04	No	01-LR-68-1350E-VS_02/27/04_1	7440-38-2	Arsenic	41.7		mg/kg
LR68-1350E	1-1.5	02/27/04	No	01-LR-68-1350E-VS_02/27/04_1	7439-92-1	Lead	4.6		mg/kg
LR68-1575E	1-1.5	02/27/04	No	01-LR-68-1575E-VS_AVG_02/27/04_1	7439-92-1	Lead	5.6		mg/kg
LR68-1575E	2-2.5	03/11/04	Yes	2-LR68-1575E_03/11/04_2	7440-38-2	Arsenic	22.1		mg/kg
LR68-375E	2-2.5	03/11/04	Yes	2-LR68-375E	7439-92-1	Lead (and compounds)	6.9		mg/kg
LR68-525E	1-1.5	02/27/04	No	01-LR-68-525E-VS_02/27/04_1	7439-92-1	Lead	83.0		mg/kg
LR68-525E	2-2.5	03/11/04	Yes	2-LR68-525E_03/11/04_2	7440-38-2	Arsenic	18.2		mg/kg
LR68-600E	1-1.5	02/27/04	Yes	01-LR-68-600E-VS_02/27/04_1	7440-38-2	Arsenic	26.4		mg/kg
LR68-600E	1-1.5	02/27/04	Yes	01-LR-68-600E-VS_02/27/04_1	7439-92-1	Lead	8.1		mg/kg
LR68-75E	1-1.5	02/27/04	Yes	01-LR-68-75E-VS_02/27/04_1	7440-38-2	Arsenic	27.0		mg/kg
LR68-75E	1-1.5	02/27/04	Yes	01-LR-68-75E-VS_02/27/04_1	7439-92-1	Lead	4.8		mg/kg
LR68-75W	1-1.5	02/27/04	No	01-LR-68-75W-VS_02/27/04_1	7439-92-1	Lead	2.9		mg/kg
LR68-75W	2-2.5	03/11/04	Yes	2-LR68-75W_03/11/04_2	7440-38-2	Arsenic	20.5		mg/kg
MSU-98-E	0-1.5	07/02/03	Yes	01-SS-[MSU-98-E]-D1_07/02/03_0	7440-38-2	Arsenic	4.6		mg/kg
MSU-98-E	0-1.5	07/02/03	Yes	01-SS-[MSU-98-E]-D1_07/02/03_0	7439-92-1	Lead	7.6		mg/kg
MSU-98-N	0-1.5	07/02/03	Yes	01-SS-[MSU-98-N]-D1_07/02/03_0	7440-38-2	Arsenic	7.2		mg/kg
MSU-98-N	0-1.5	07/02/03	Yes	01-SS-[MSU-98-N]-D1_07/02/03_0	7439-92-1	Lead	18.0		mg/kg
MSU-98-S	0-1.5	07/02/03	Yes	01-SS-[MSU-98-S]-D1_07/02/03_0	7440-38-2	Arsenic	6.7		mg/kg
MSU-98-S	0-1.5	07/02/03	Yes	01-SS-[MSU-98-S]-D1_07/02/03_0	7439-92-1	Lead	10.1		mg/kg
MSU-98-VS-B	1.5-2	10/08/03	Yes	01-SS-[MSU-98-VS-B]-C2_10/08/03_1.5	7440-38-2	Arsenic	12.4		mg/kg
MSU-98-W	0-1.5	07/02/03	Yes	01-SS-[MSU-98-W]-D1_07/02/03_0	7440-38-2	Arsenic	12.6		mg/kg
MSU-98-W	0-1.5	07/02/03	Yes	01-SS-[MSU-98-W]-D1_07/02/03_0	7439-92-1	Lead	16.0		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Table B.25
Sample Results for OS-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
18-HA-501	0-1	05/21/92	Yes	18-HA-501-S-1-DAVG	7439-92-1	Lead	46.0		mg/kg
18-HA-501	2-3	05/21/92	Yes	18-HA-501-S-2	7439-92-1	Lead	5.8		mg/kg
18-HA-502	0-1	05/21/92	Yes	18-HA-502-S-1	7439-92-1	Lead	5.0	U	mg/kg
18-HA-502	2-3	05/21/92	Yes	18-HA-502-S-2	7439-92-1	Lead	5.0	U	mg/kg
18-HA-503	0-1	05/21/92	Yes	18-HA-503-S-1	7439-92-1	Lead	74.0		mg/kg
18-HA-503	2-3	05/21/92	Yes	18-HA-503-S-2	7439-92-1	Lead	22.0		mg/kg
18-SS-731	0-0.5	12/18/92	Yes	18-SS-731	7439-92-1	Lead	72.0		mg/kg
18R-443	0-0.5	11/29/93	Yes	18R-443	7440-38-2	Arsenic	25.0		mg/kg
18R-454	0-0.5	11/29/93	Yes	18R-454	7440-38-2	Arsenic	42.0		mg/kg
18R-460	0-0.5	11/29/93	Yes	18R-460	7440-38-2	Arsenic	16.0		mg/kg
18R-469	0-0.5	11/29/93	Yes	18R-469	7440-38-2	Arsenic	22.0		mg/kg
LR-139	0-0.5	11/29/93	Yes	LR-139	7440-38-2	Arsenic	19.0		mg/kg
LR-140	0-0.5	11/29/93	Yes	LR-140	7440-38-2	Arsenic	32.0		mg/kg
LR-141	0-0.5	11/29/93	Yes	LR-141	7440-38-2	Arsenic	10.0		mg/kg
LR-143	0-0.5	11/29/93	Yes	LR-143	7440-38-2	Arsenic	36.0		mg/kg
LR-155	0-0.5	03/25/93	Yes	LR-155	7440-38-2	Arsenic	25.0		mg/kg
LR-155	0-0.5	03/25/93	Yes	LR-155	7439-92-1	Lead	84.0		mg/kg
LR-156	0-0.5	03/24/93	Yes	LR-156	7440-38-2	Arsenic	29.0		mg/kg
LR-156	0-0.5	03/24/93	Yes	LR-156	7439-92-1	Lead	56.0		mg/kg
LR-157-S-2	0.5-1	12/13/93	Yes	LR-157-S-2	7440-38-2	Arsenic	14.0	J	mg/kg
LR-157-S-3	1-2	12/13/93	Yes	LR-157-S-3	7440-38-2	Arsenic	6.2	J	mg/kg
LR-183	0-0.5	11/19/93	Yes	LR-183	7440-38-2	Arsenic	24.0		mg/kg
LR-197	0-0.5	11/19/93	Yes	LR-197	7440-38-2	Arsenic	35.0		mg/kg
LR-214	0-0.5	11/19/93	Yes	LR-214	7440-38-2	Arsenic	59.0		mg/kg
LR-231	0-0.5	11/29/93	Yes	LR-231	7440-38-2	Arsenic	32.0		mg/kg
LR-232	0-0.5	11/17/93	Yes	LR-232	7440-38-2	Arsenic	9.5		mg/kg
LR-246	0-0.5	11/17/93	Yes	LR-246	7440-38-2	Arsenic	22.0	J	mg/kg
LR-247	0-0.5	03/25/93	Yes	LR-247	7440-38-2	Arsenic	32.0		mg/kg
LR-247	0-0.5	03/25/93	Yes	LR-247	7439-92-1	Lead	101.0		mg/kg
PL-14	1-1.5	12/19/02	Yes	OL-SS-[PL-14]-C1	7440-38-2	Arsenic	3.8		mg/kg

Table B.25
Sample Results for OS-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
PL-14	1-1.5	12/19/02	Yes	OL-SS-[PL-14]-C1	7439-92-1	Lead	4.7		mg/kg
PL-15	1-1.5	12/19/02	Yes	OL-SS-[PL-15]-C1	7440-38-2	Arsenic	5.3		mg/kg
PL-15	1-1.5	12/19/02	Yes	OL-SS-[PL-15]-C1	7439-92-1	Lead	4.5		mg/kg
PL-16	1-1.5	12/19/02	Yes	OL-SS-[PL-16]-C1	7440-38-2	Arsenic	5.4		mg/kg
PL-16	1-1.5	12/19/02	Yes	OL-SS-[PL-16]-C1	7439-92-1	Lead	5.9		mg/kg
PL-17	1-1.5	12/19/02	Yes	OL-SS-[PL-17]-C1	7440-38-2	Arsenic	4.0		mg/kg
PL-17	1-1.5	12/19/02	Yes	OL-SS-[PL-17]-C1	7439-92-1	Lead	4.9		mg/kg
PL-18	1-1.5	12/19/02	Yes	OL-SS-[PL-18]-C1	7440-38-2	Arsenic	4.4		mg/kg
PL-18	1-1.5	12/19/02	Yes	OL-SS-[PL-18]-C1	7439-92-1	Lead	4.8		mg/kg
PL-19	1-1.5	12/19/02	Yes	OL-SS-[PL-19]-C1	7440-38-2	Arsenic	2.0	U	mg/kg
PL-19	1-1.5	12/19/02	Yes	OL-SS-[PL-19]-C1	7439-92-1	Lead	2.0	U	mg/kg
R55C56	1-1.5	02/12/04	Yes	1-R55C56_02/12/04_1	7440-38-2	Arsenic	10.9		mg/kg
R55C56	1-1.5	02/12/04	Yes	1-R55C56_02/12/04_1	7439-92-1	Lead	11.1		mg/kg
R56C57	1-1.5	02/12/04	Yes	1-R56C57_02/12/04_1	7440-38-2	Arsenic	8.2		mg/kg
R56C57	1-1.5	02/12/04	Yes	1-R56C57_02/12/04_1	7439-92-1	Lead	6.3		mg/kg
R56C58	1-1.5	02/12/04	Yes	1-R56C58_02/12/04_1	7440-38-2	Arsenic	11.0		mg/kg
R56C58	1-1.5	02/12/04	Yes	1-R56C58_02/12/04_1	7439-92-1	Lead	6.2		mg/kg
R57C58	1-1.5	02/12/04	Yes	1-R57C58_02/12/04_1	7440-38-2	Arsenic	13.4		mg/kg
R57C58	1-1.5	02/12/04	Yes	1-R57C58_02/12/04_1	7439-92-1	Lead	22.6		mg/kg
R57C59	1-1.5	02/12/04	Yes	1-R57C59_02/12/04_1	7440-38-2	Arsenic	7.1		mg/kg
R57C59	1-1.5	02/12/04	Yes	1-R57C59_02/12/04_1	7439-92-1	Lead	5.5		mg/kg
R58C58	1-1.5	02/12/04	Yes	1-R58C58_02/12/04_1	7440-38-2	Arsenic	17.2		mg/kg
R58C58	1-1.5	02/12/04	Yes	1-R58C58_02/12/04_1	7439-92-1	Lead	18.5		mg/kg
R58C59	1-1.5	02/12/04	Yes	1-R58C59_02/12/04_1	7440-38-2	Arsenic	6.0		mg/kg
R58C59	1-1.5	02/12/04	Yes	1-R58C59_02/12/04_1	7439-92-1	Lead	4.5		mg/kg
R59C59	1-1.5	02/12/04	Yes	1-R59C59_02/12/04_1	7440-38-2	Arsenic	7.6		mg/kg
R59C59	1-1.5	02/12/04	Yes	1-R59C59_02/12/04_1	7439-92-1	Lead	6.9		mg/kg
R60C58	1-1.5	10/22/03	Yes	01-SS-[R60C58]-C2_10/22/03_1	7440-38-2	Arsenic	5.7		mg/kg
R60C58	1-1.5	10/22/03	Yes	01-SS-[R60C58]-C2_10/22/03_1	7439-92-1	Lead	16.0		mg/kg
R62C58	1-1.5	10/22/03	Yes	01-SS-[R62C58]-C2_AVG_10/22/03_1	7440-38-2	Arsenic	12.0		mg/kg

Table B.25
Sample Results for OS-04 Remediation Unit
Former DuPont Works: Weyco Site

Site ID	Depth (ft)	Sample Date [1]	Still In Place [2]	Sample No.	Cas No.	Constituent	Result	Qualifier	Units
R62C58	1-1.5	10/22/03	Yes	01-SS-[R62C58]-C2_AVG_10/22/03_1	7439-92-1	Lead	25.2		mg/kg
R62C58A	1-1.5	02/26/04	Yes	01-R62C58A_02/26/04_1	7440-38-2	Arsenic	11.7		mg/kg
R62C58A	1-1.5	02/26/04	Yes	01-R62C58A_02/26/04_1	7439-92-1	Lead	13.0		mg/kg
R64C57	1-1.5	02/04/04	Yes	1-R64C57_02/04/04_1	7440-38-2	Arsenic	7.6		mg/kg
R64C57	1-1.5	02/04/04	Yes	1-R64C57_02/04/04_1	7439-92-1	Lead	4.6		mg/kg
R70C53	1-1.5	01/30/04	Yes	01-SS-[R70C53]-C2_01/30/04_1	7440-38-2	Arsenic	12.0		mg/kg
R70C53	1-1.5	01/30/04	Yes	01-SS-[R70C53]-C2_01/30/04_1	7439-92-1	Lead	10.6		mg/kg
R71C53	1-1.5	01/30/04	Yes	01-SS-[R71C53]-C2_AVG_01/30/04_1	7440-38-2	Arsenic	7.7		mg/kg
R71C53	1-1.5	01/30/04	Yes	01-SS-[R71C53]-C2_AVG_01/30/04_1	7439-92-1	Lead	5.2		mg/kg
R72C52	1-1.5	01/30/04	Yes	01-SS-[R72C52]-C2_01/30/04_1	7440-38-2	Arsenic	13.8		mg/kg
R72C52	1-1.5	01/30/04	Yes	01-SS-[R72C52]-C2_01/30/04_1	7439-92-1	Lead	29.6		mg/kg
R74C51	1-1.5	01/30/04	Yes	01-SS-[R74C51]-C2_01/30/04_1	7440-38-2	Arsenic	6.5		mg/kg
R74C51	1-1.5	01/30/04	Yes	01-SS-[R74C51]-C2_01/30/04_1	7439-92-1	Lead	3.1		mg/kg
R76C53	1-1.5	01/30/04	Yes	01-SS-[R76C53]-C2_AVG_01/30/04_1	7440-38-2	Arsenic	6.1		mg/kg
R76C53	1-1.5	01/30/04	Yes	01-SS-[R76C53]-C2_AVG_01/30/04_1	7439-92-1	Lead	2.9		mg/kg
T188,189	0-0.5	04/03/03	Yes	01-SS-[T188,189]-C1_04/03/03_0	7440-38-2	Arsenic	21.5		mg/kg
T190	0-0.5	04/03/03	Yes	01-SS-[T190]-C1_04/03/03_0	7439-92-1	Lead	62.6		mg/kg
T192	0-0.5	04/03/03	Yes	01-SS-[T192]-C1_04/03/03_0	7440-38-2	Arsenic	10.2		mg/kg
T192	0-0.5	04/03/03	Yes	01-SS-[T192]-C1_04/03/03_0	7439-92-1	Lead	42.1		mg/kg

Note:

1. Exact sample dates were not available for a few historical samples collected in the third quarter of 1993. These were assigned a sample date of 7/2/1993.
2. "Yes" identifies the constituent concentration that met the cleanup goal. This is the last quantified concentration of this constituent at this location. Additional excavation may have occurred at this location to remove another constituent that was present in a concentration higher than the cleanup goal. "No" identifies constituent concentrations that were were above the cleanup goals and were therefore removed in later rounds of excavation.

Legend

- Sample Locations
- Consent Decree Boundary
- Golf Course Placement Area
- Remediation Unit

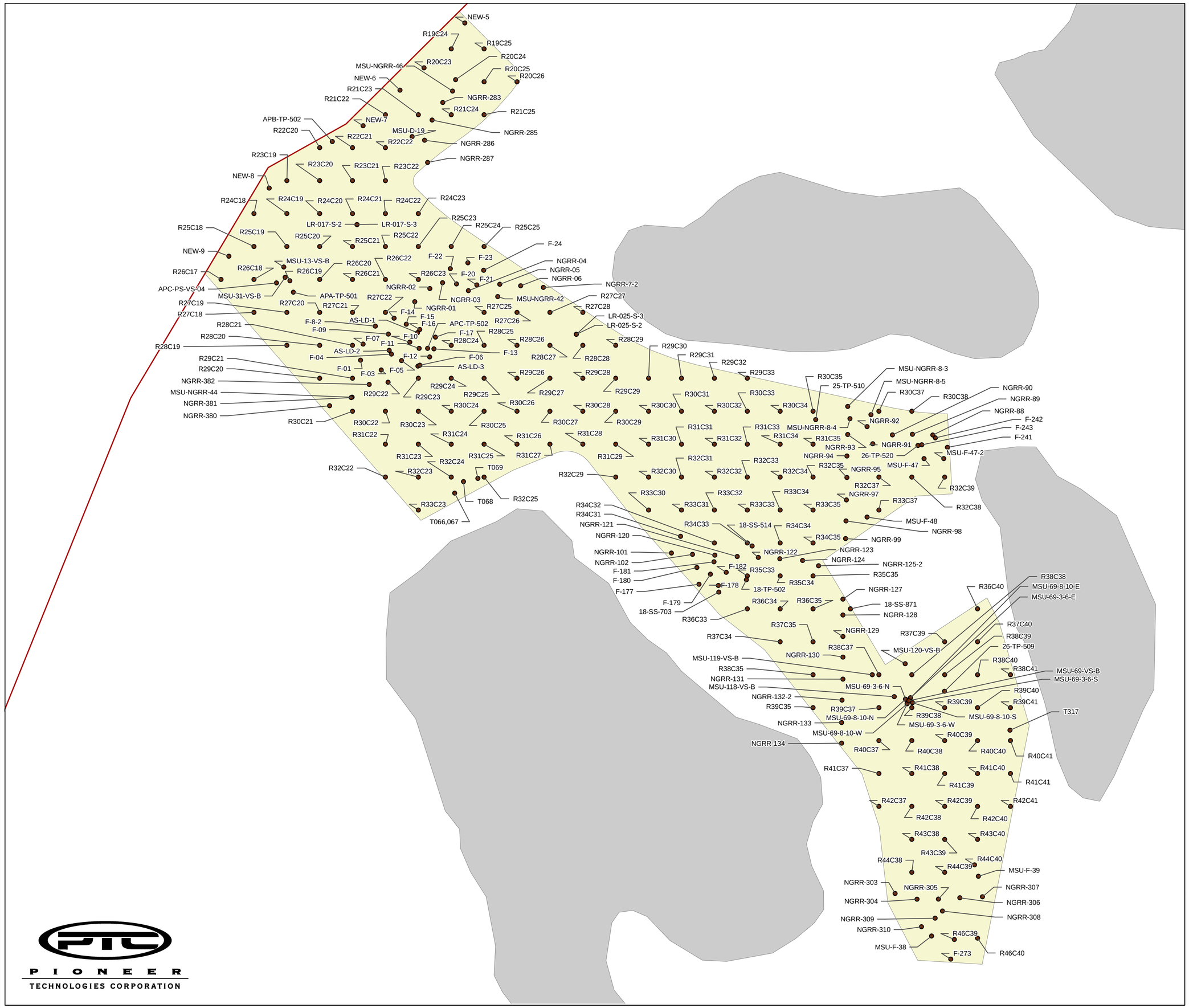
0 45 90 180 Feet

®

Remediation Unit
Commercial 1A
Former DuPont Works Site
March 2007

Figure B-1A

PIONEER TECHNOLOGIES CORPORATION



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

®

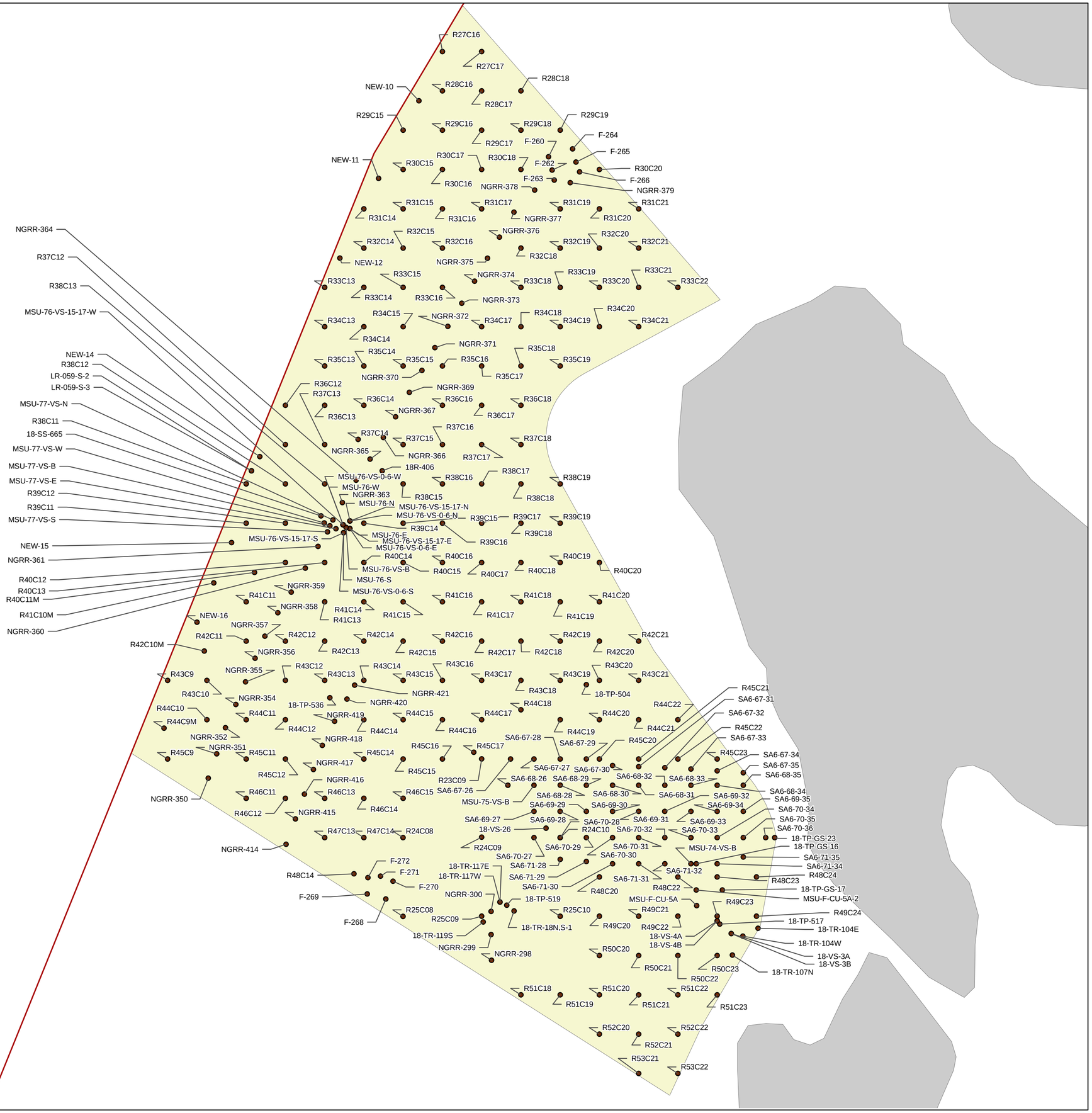
0 75 150 300 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit Commercial 1B

Former DuPont Works Site
March 2007

Figure B-1B



Legend

- Sample Locations
- Consent Decree Boundary
- Golf Course Placement Area
- Remediation Unit

®

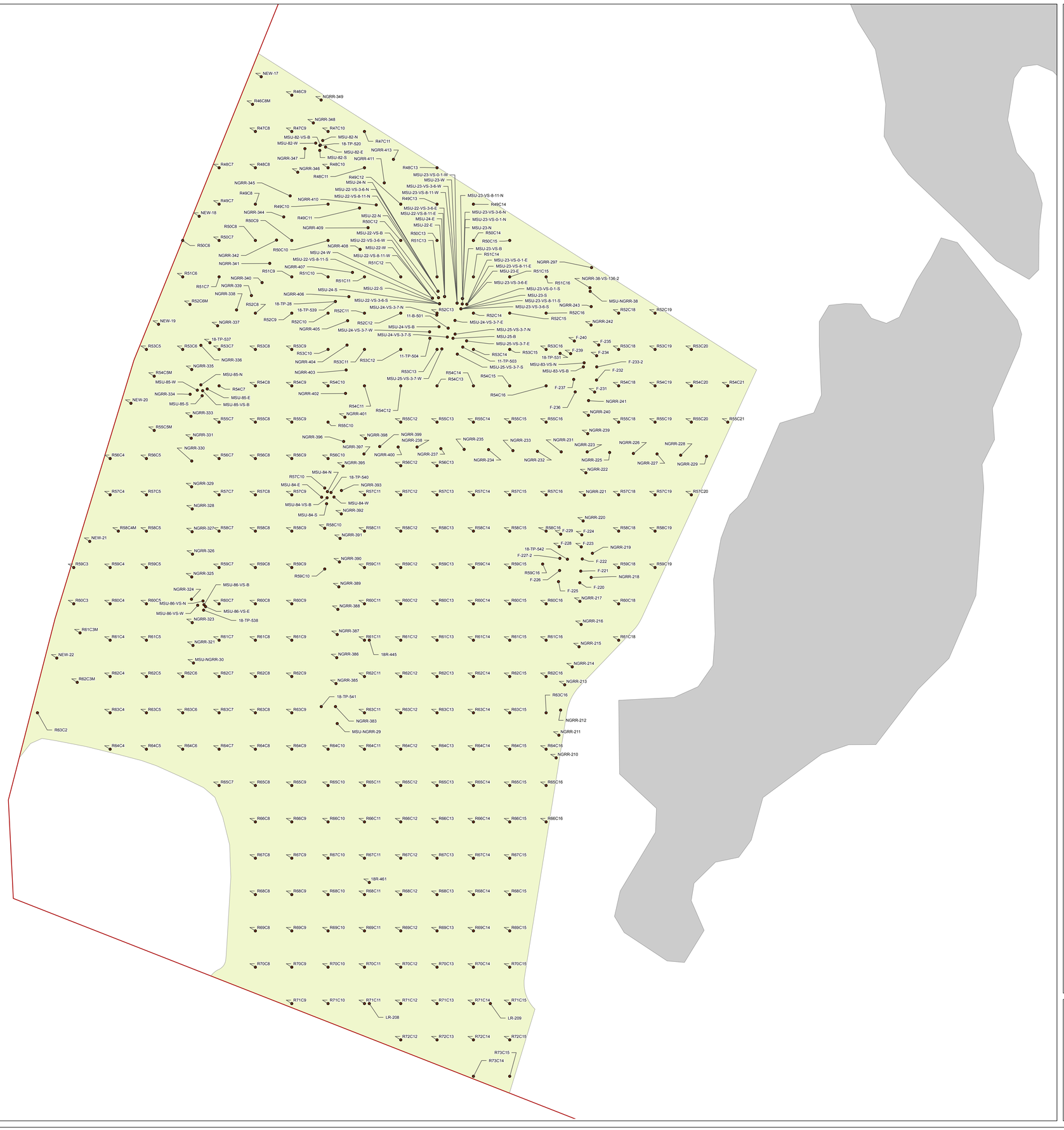
0 80 160 320 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit Commercial 2A

Former DuPont Works Site
March 2007

Figure B-2A



Legend

- Sample Locations
- Consent Decree Boundary
- Golf Course Placement Area
- Remediation Unit

N
W E
S

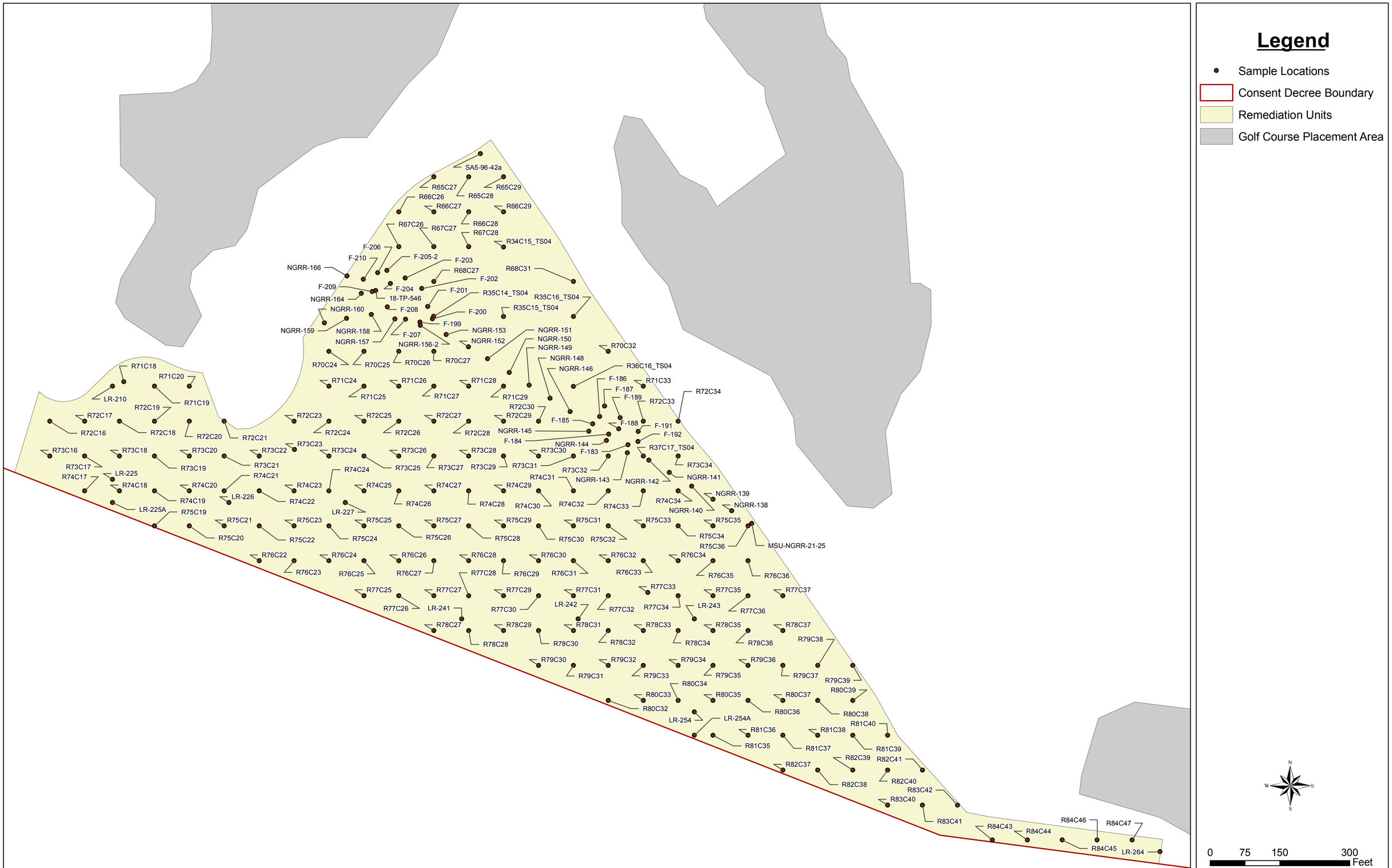
0 90 180 360 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit Commercial 2B

Former DuPont Works Site
March 2007

Figure B-2B



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Units
- Golf Course Placement Area

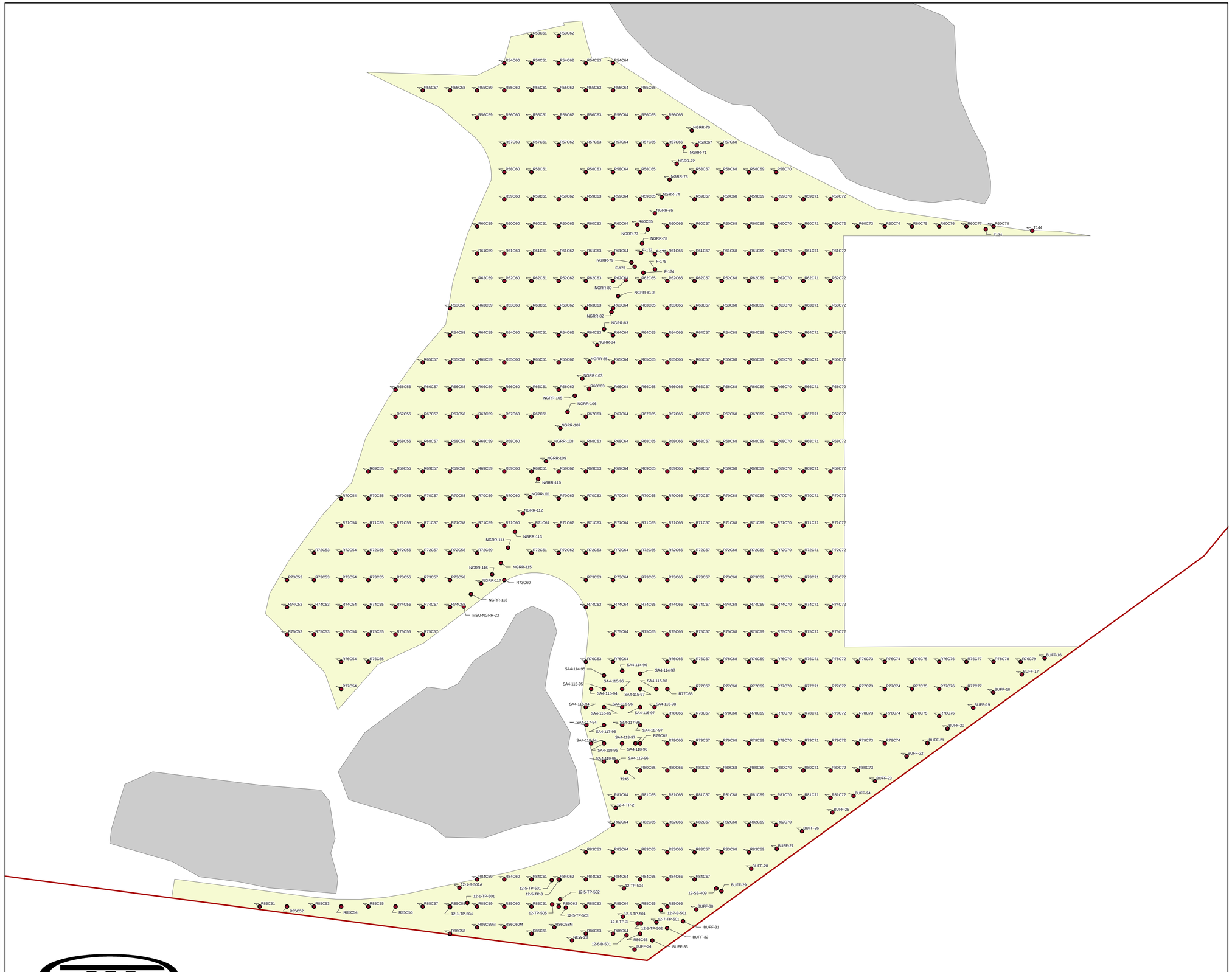
N
W
E
S

0 75 150 300 Feet

PIONEER
TECHNOLOGIES CORPORATION

Remediation Unit
Commercial 3
Former DuPont Works Site
March 2007

Figure B-3



PIONEER
TECHNOLOGIES CORPORATION

Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

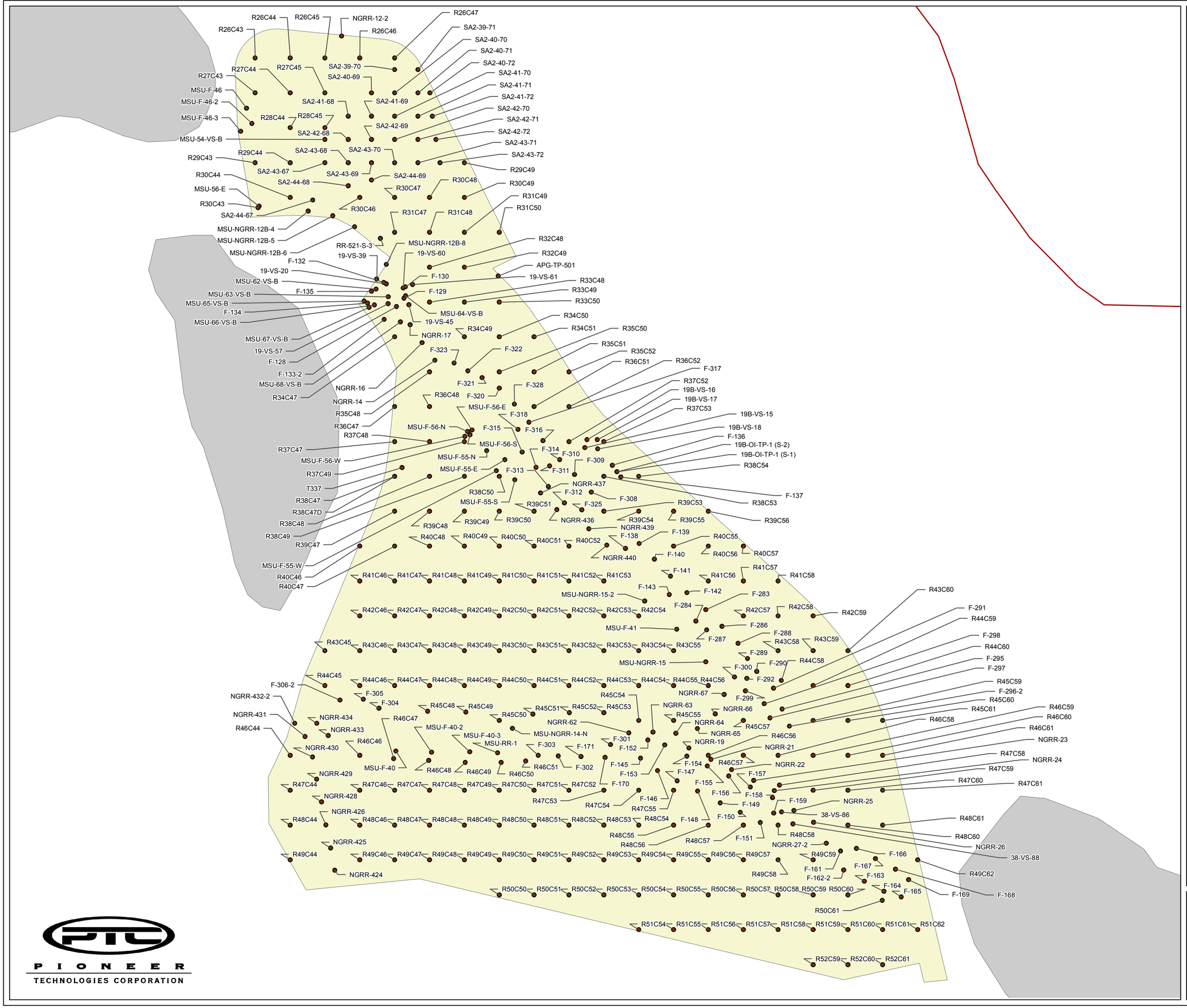
®

0 100 200 400 Feet

Remediation Unit Commercial 4

Former DuPont Works Site
March 2007

Figure B-4



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

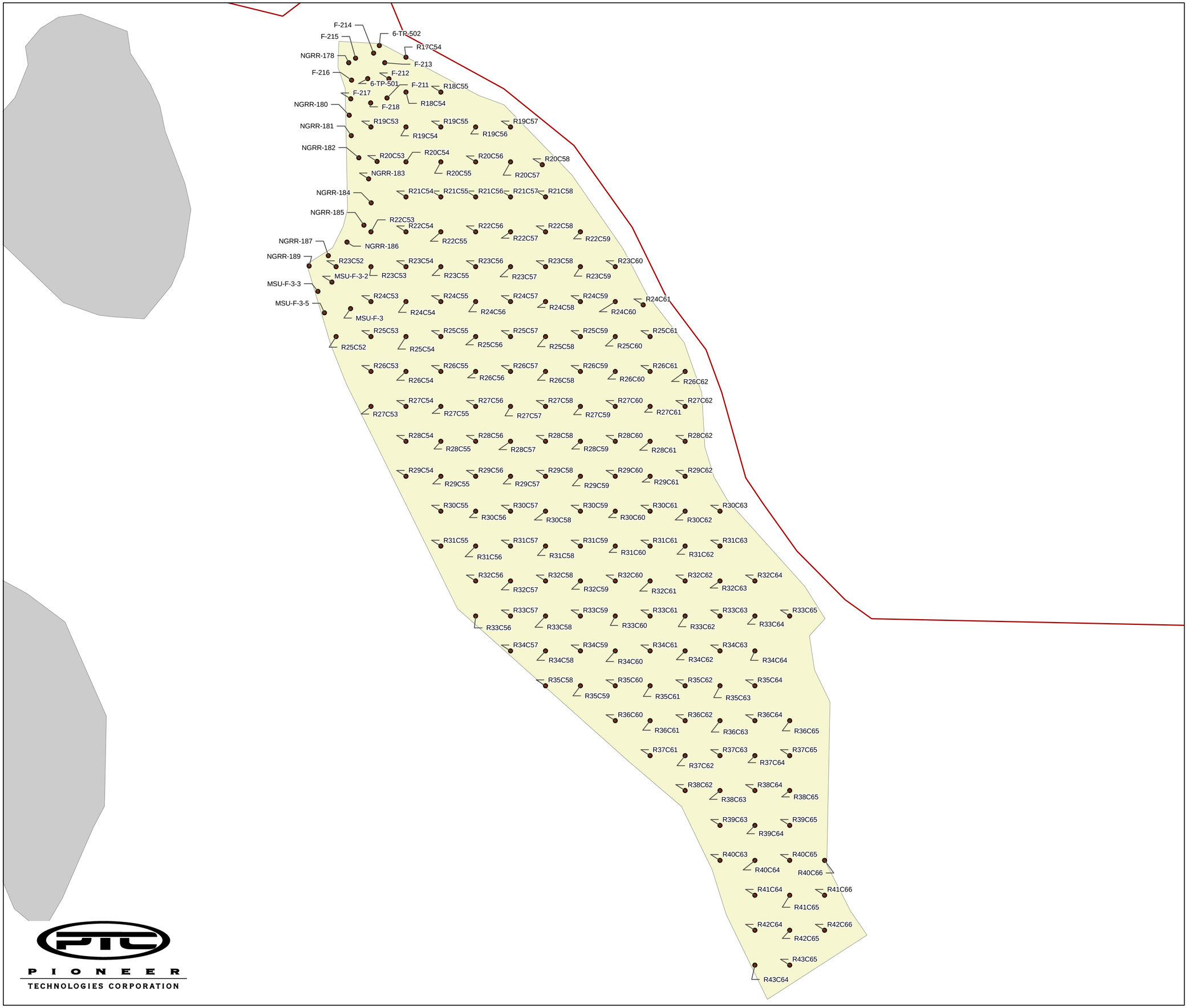
N
W
E
S

0 75 150 300 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Commercial 5
Former DuPont Works Site
March 2007

Figure B-5



PIONEER TECHNOLOGIES CORPORATION

Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

0 75 150 300 Feet

Remediation Unit
Commercial 6
Former DuPont Works Site
March 2007

Figure B-6

Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

N
W E
S

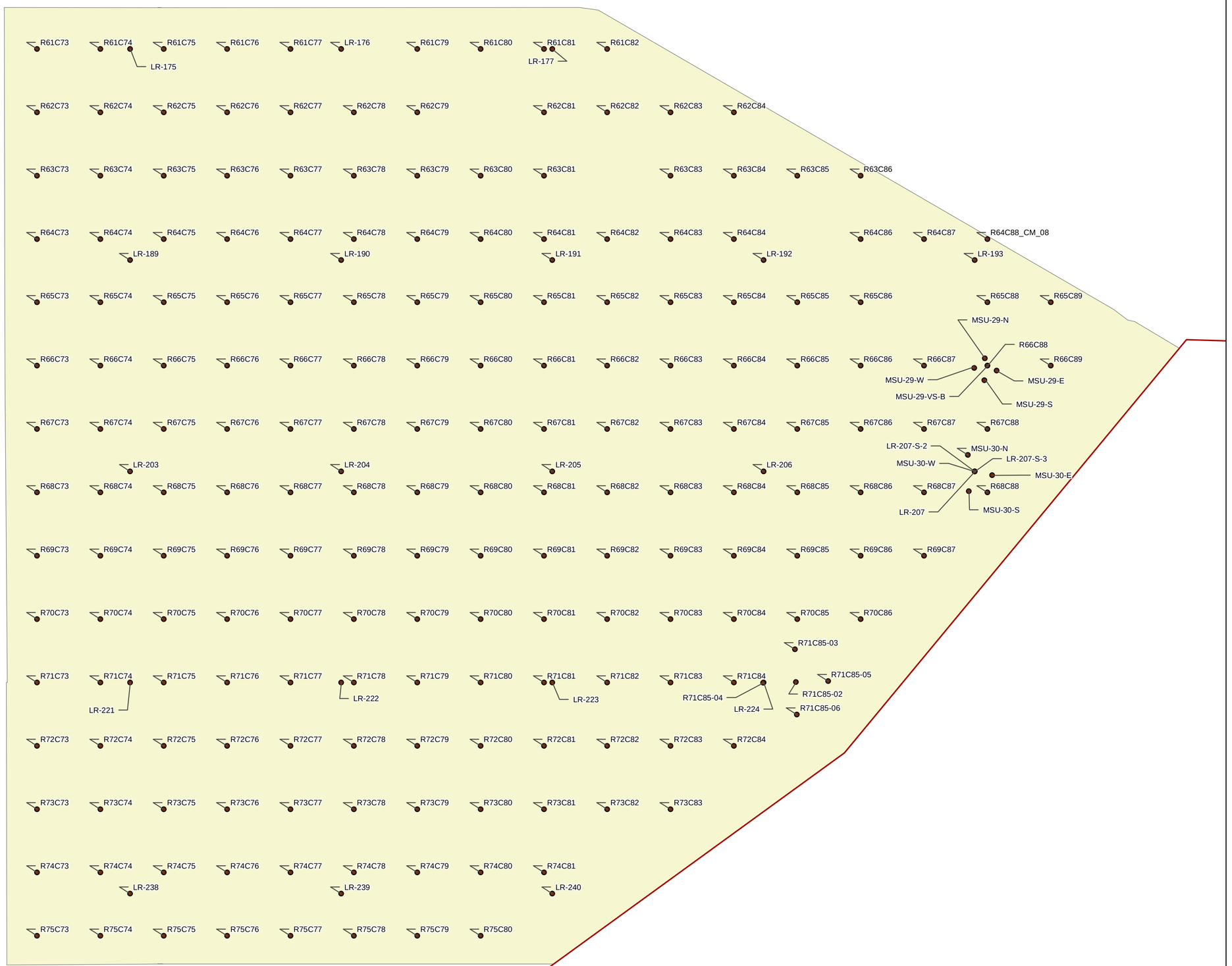
0 75 150 300 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit Commercial 7

Former DuPont Works Site
March 2007

Figure B-7



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

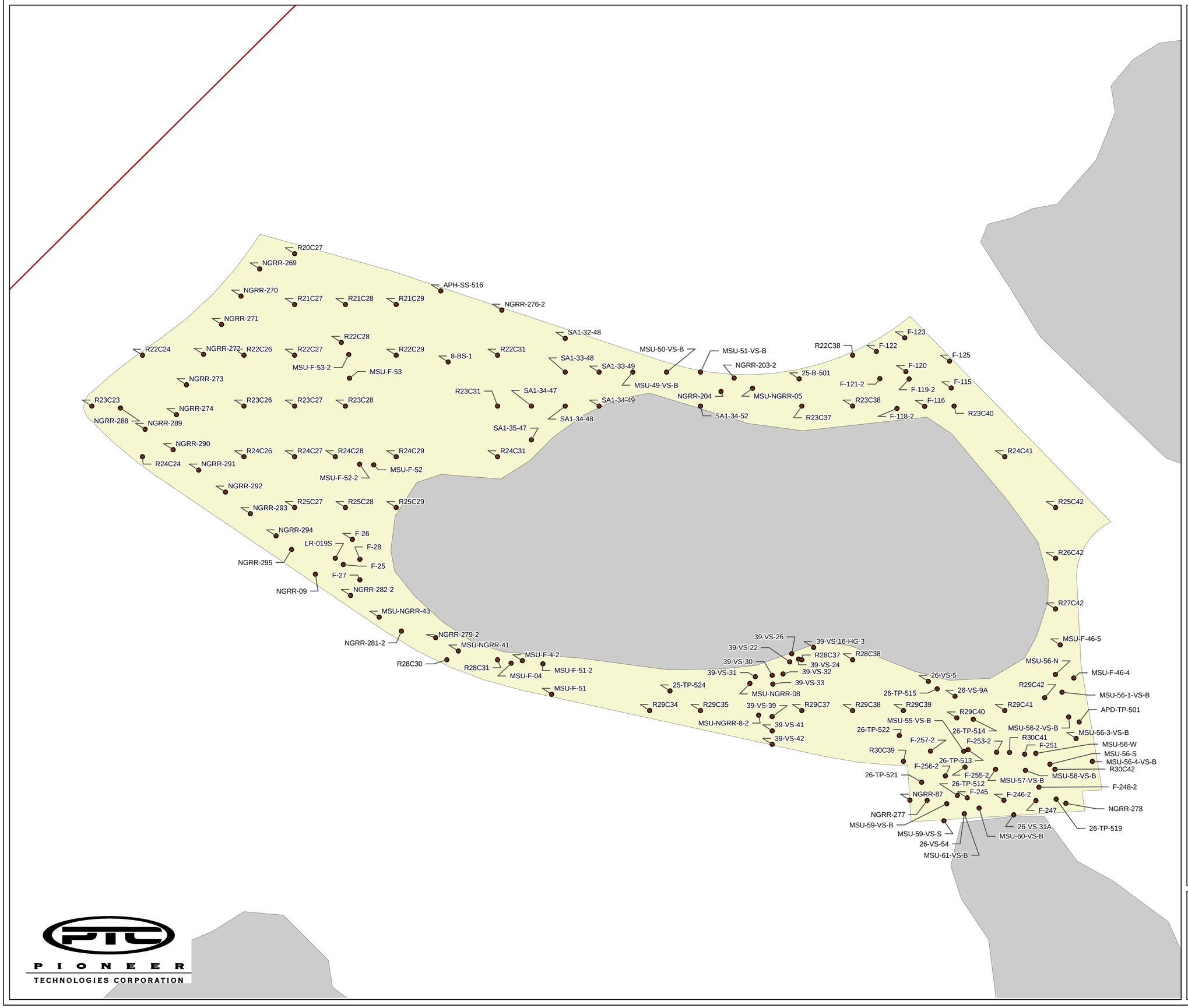
0 50 100 200 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit Commercial 8

Former DuPont Works Site
March 2007

Figure B-8



Legend

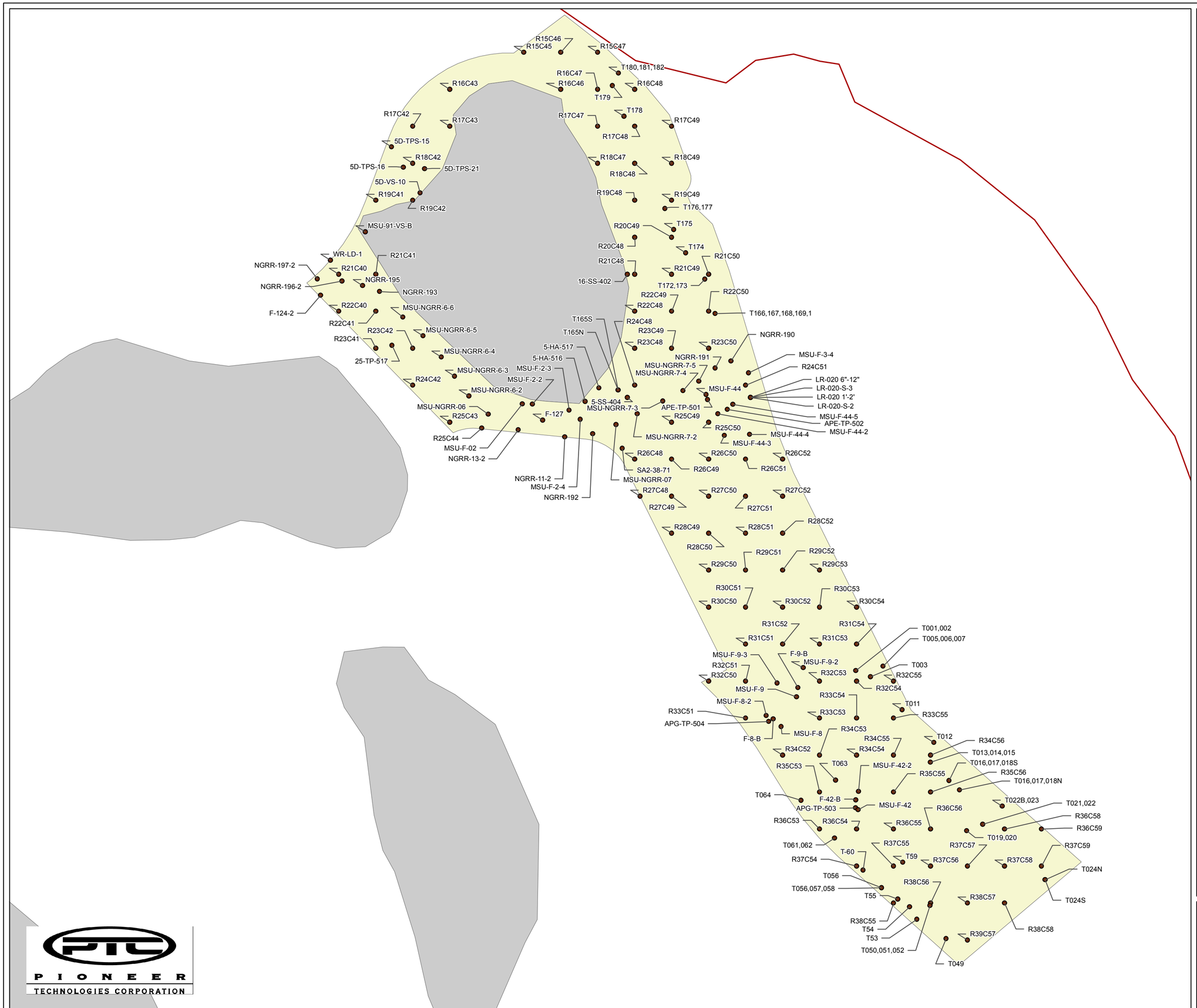
- Sample Locations
- Consent Decree Boundary
- Remediation Units
- Golf Course Placement Area

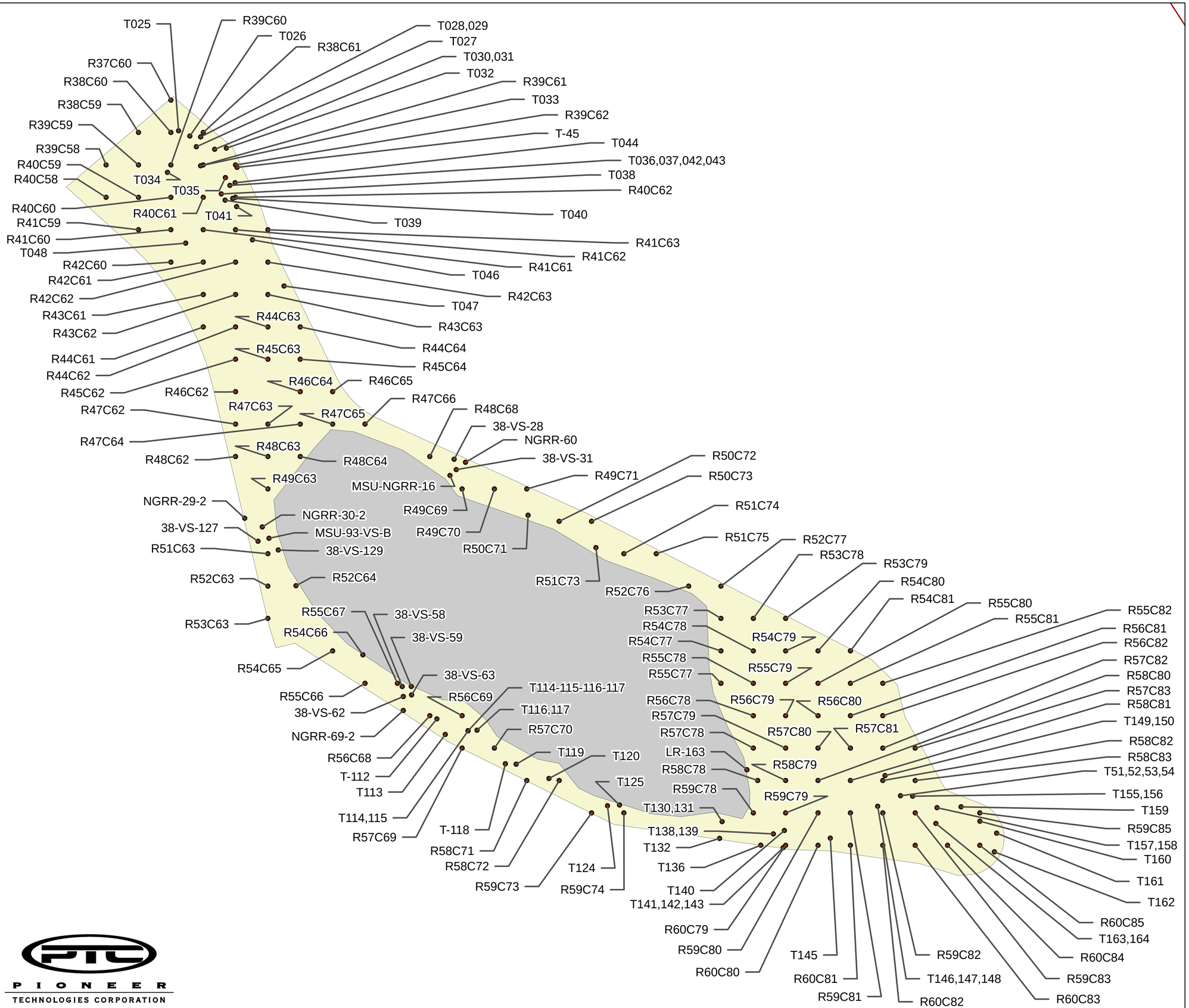
0 50 100 200 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Golf Course 1
Former DuPont Works Site
March 2007

Figure B-9


R15C46
R15C45
R15C47
T180,181,182
R16C47
R16C46
R16C48
R16C43
T179
R17C42
R17C43
R17C47
T178
R17C49
R17C48
5D-TPS-15
R18C42
R18C47
R18C49
5D-TPS-16
5D-TPS-21
R18C48
5D-VS-10
R19C41
R19C48
R19C49
R19C42
T176,177
MSU-91-VS-B
R20C49
T175
R20C48
T174
WR-LD-1
R21C41
R21C50
NGRR-197-2
R21C40
R21C48
R21C49
NGRR-195
16-SS-402
NGRR-196-2
NGRR-193
T172,173
R22C50
R22C49
F-124-2
R22C40
MSU-NGRR-6-6
R22C48
T166,167,168,169,1
R22C41
T165S
R24C48
R23C42
MSU-NGRR-6-5
T165N
R23C49
NGRR-190
R23C41
R23C48
R23C50
5-HA-517
MSU-NGRR-6-4
NGRR-191
MSU-F-3-4
25-TP-517
5-HA-516
MSU-NGRR-7-5
R24C51
MSU-NGRR-6-3
MSU-F-2-3
MSU-NGRR-7-4
R24C42
MSU-F-2-2
MSU-F-44
LR-020 6"-12"
MSU-NGRR-6-2
LR-020-S-3
5-SS-404
LR-020 1'-2'
MSU-NGRR-06
MSU-NGRR-7-3
APE-TP-501
LR-020-S-2
R25C43
F-127
R25C49
MSU-F-44-5
APE-TP-502
R25C50
MSU-F-44-2
R25C44
MSU-NGRR-7-2
MSU-F-44-4
MSU-F-44-3
MSU-F-02
R26C48
R26C50
R26C52
NGRR-13-2
SA2-38-71
R26C49
R26C51
NGRR-11-2
MSU-NGRR-07
MSU-F-2-4
R27C48
R27C50
R27C52
NGRR-192
R27C49
R27C51
R28C49
R28C51
R28C52
R28C50
R29C51
R29C52
R29C50
R29C53
R30C51
R30C53
R30C50
R30C52
R30C54
R31C52
R31C54
T001,002
R31C51
R31C53
T005,006,007
MSU-F-9-3
F-9-B
R32C51
MSU-F-9-2
T003
R32C50
R32C53
R32C55
MSU-F-9
R32C54
R33C54
MSU-F-8-2
T011
R33C51
R33C53
R33C55
APG-TP-504
MSU-F-8
R34C53
F-8-B
R34C55
T012
R34C56
R34C52
R34C54
T013,014,015
T063
T016,017,018S
R35C53
MSU-F-42-2
R35C55
R35C56
T016,017,018N
T064
F-42-B
T022B,023
T021,022
APG-TP-503
MSU-F-42
R36C56
R36C58
R36C53
R36C54
R36C55
R36C59
T019,020
T061,062
R37C55
R37C57
R37C59
T-60
T59
R37C54
R37C56
R37C58
T024N
T056
R38C56
T056,057,058
T55
R38C57
T024S
R38C55
T54
R38C58
T53
R39C57
T050,051,052
T049
Legend
Sample Locations
Consent Decree Boundary
Remediation Unit
Golf Course Placement Area
N
W
E
S
0
70
140
280
Feet
PIONEER
TECHNOLOGIES CORPORATION
Remediation Unit
Golf Course 2
Former DuPont Works Site
March 2007
Figure B-10



Legend

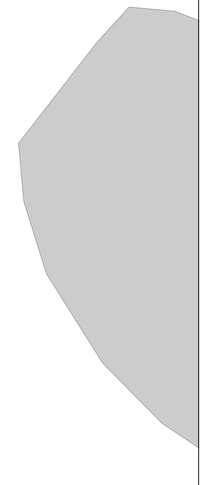
- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

0 87.5 175 350 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Golf Course 3
Former DuPont Works Site
March 2007

Figure B-11



0 75 150 300 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

Remediation Unit
Golf Course 4
Former DuPont Works Site
March 2007

Figure B-12

Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

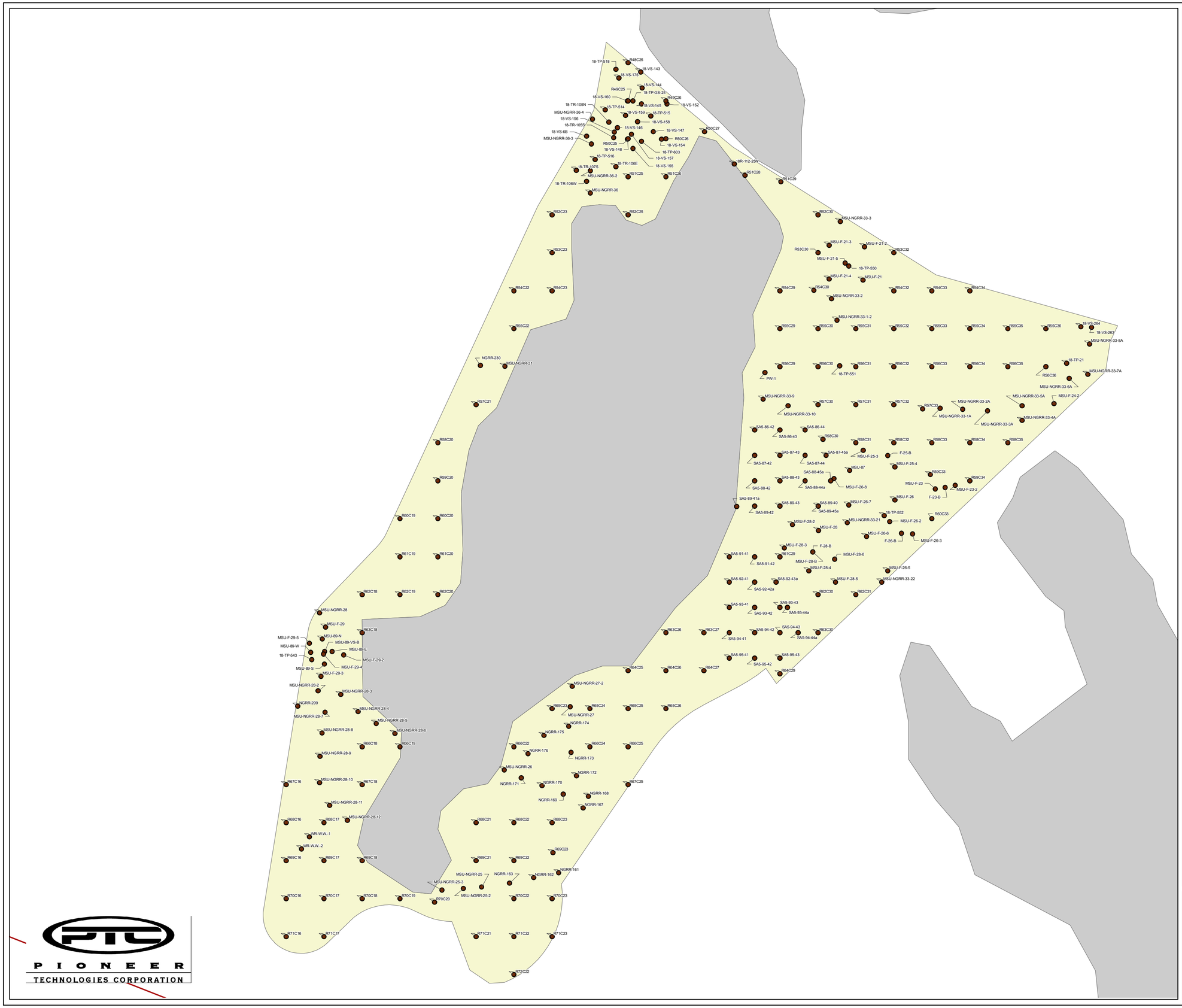
N
W E
S

0 70 140 280 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Golf Course 5
Former DuPont Works Site
March 2007

Figure B-13



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

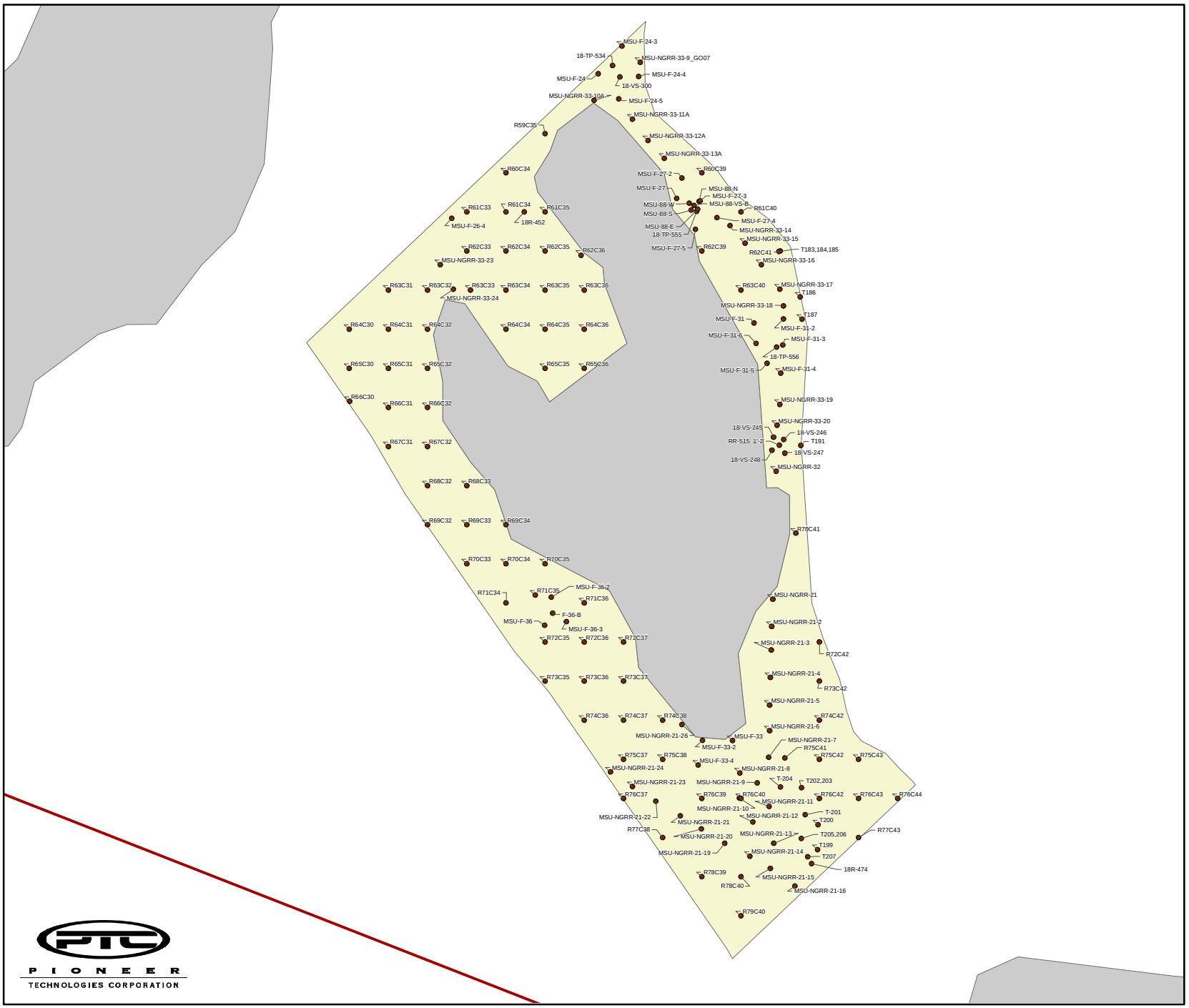
N
W E
S

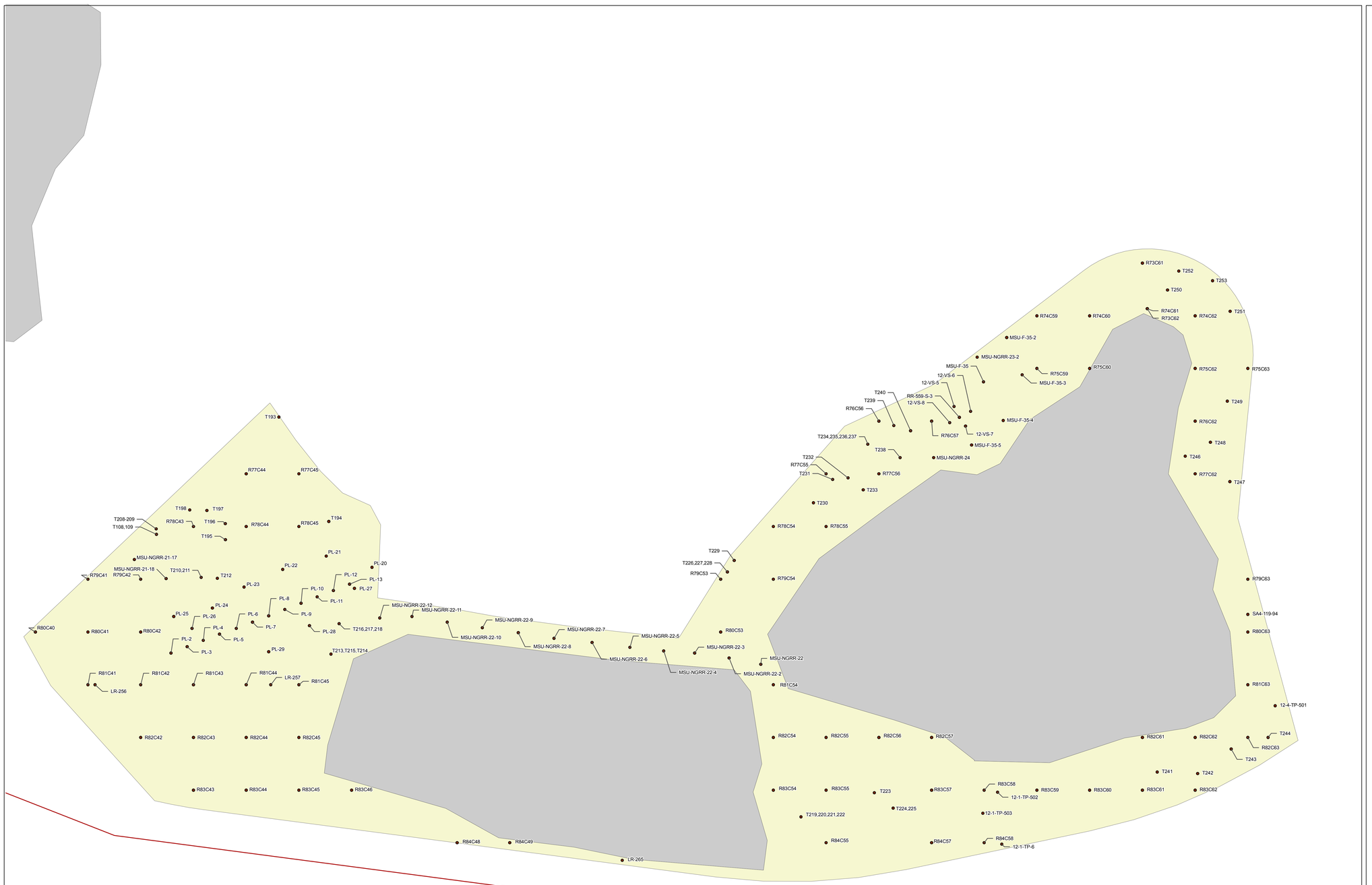
0 70 140 280 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Golf Course 6
Former DuPont Works Site
March 2007

Figure B-14


MSU-F-24-3
18-TP-534
MSU-NGRR-33-9_GO07
MSU-F-24
MSU-F-24-4
18-VS-300
MSU-NGRR-33-10A
MSU-F-24-5
MSU-NGRR-33-11A
R59C35
MSU-NGRR-33-12A
MSU-NGRR-33-13A
R60C34
R60C39
MSU-F-27-2
MSU-F-27
MSU-88-N
MSU-F-27-3
MSU-88-W
MSU-88-VS-B
R61C40
MSU-88-S
MSU-F-27-4
MSU-88-E
MSU-NGRR-33-14
18-TP-555
MSU-NGRR-33-15
MSU-F-27-5
R62C39
T183,184,185
R62C41
MSU-NGRR-33-16
R61C33
R61C34
R61C35
18R-452
MSU-F-26-4
R62C33
R62C34
R62C35
R62C36
MSU-NGRR-33-23
R63C31
R63C32
R63C33
R63C34
R63C35
R63C36
MSU-NGRR-33-24
R63C40
MSU-NGRR-33-17
T186
MSU-NGRR-33-18
T187
MSU-F-31
MSU-F-31-2
MSU-F-31-6
MSU-F-31-3
R64C30
R64C31
R64C32
R64C34
R64C35
R64C36
18-TP-556
R65C30
R65C31
R65C32
R65C35
R65C36
MSU-F-31-5
MSU-F-31-4
R66C30
R66C31
R66C32
MSU-NGRR-33-19
MSU-NGRR-33-20
18-VS-245
18-VS-246
T191
RR-515
18-VS-247
R67C31
R67C32
18-VS-248
MSU-NGRR-32
R68C32
R68C33
R69C32
R69C33
R69C34
R70C41
R70C33
R70C34
R70C35
R71C34
R71C35
MSU-F-36-2
R71C36
MSU-NGRR-21
F-36-B
MSU-F-36
MSU-F-36-3
MSU-NGRR-21-2
R72C35
R72C36
R72C37
MSU-NGRR-21-3
R72C42
MSU-NGRR-21-4
R73C35
R73C36
R73C37
R73C42
MSU-NGRR-21-5
R74C36
R74C37
R74C38
R74C42
MSU-NGRR-21-6
MSU-NGRR-21-26
MSU-F-33
MSU-NGRR-21-7
MSU-F-33-2
R75C41
R75C37
R75C38
R75C42
R75C43
MSU-F-33-4
MSU-NGRR-21-24
MSU-NGRR-21-8
MSU-NGRR-21-23
MSU-NGRR-21-9
T-204
T202,203
R76C37
R76C39
R76C40
R76C42
R76C43
R76C44
MSU-NGRR-21-11
MSU-NGRR-21-10
T-201
MSU-NGRR-21-22
MSU-NGRR-21-12
T200
MSU-NGRR-21-21
R77C38
R77C43
MSU-NGRR-21-20
MSU-NGRR-21-13
T205,206
T199
MSU-NGRR-21-19
MSU-NGRR-21-14
T207
18R-474
R78C39
MSU-NGRR-21-15
R78C40
MSU-NGRR-21-16
R79C40
Legend
Sample Locations
Consent Decree Boundary
Remediation Unit
Golf Course Placement Area
0
70
140
280
Feet
PIONEER
TECHNOLOGIES CORPORATION
Remediation Unit
Golf Course 7
Former DuPont Works Site
March 2007
Figure B-15



Legend

- Sample Locations
- Remediation Unit
- Consent Decree Boundary
- Golf Course Placement Area

N
W E
S

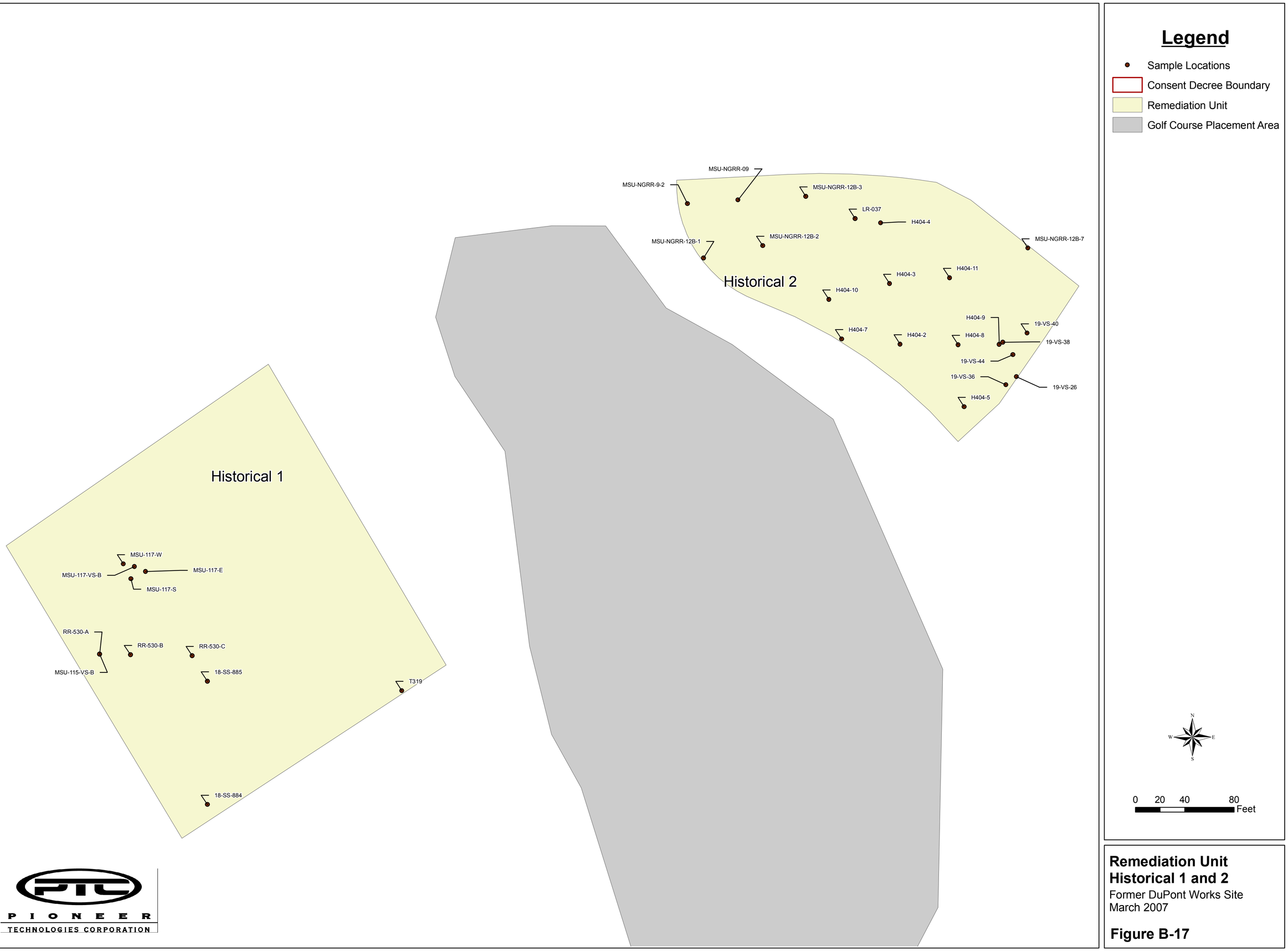
0 60 120 240 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Golf Course 8

Former DuPont Works Site
March 2007

Figure B-16



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

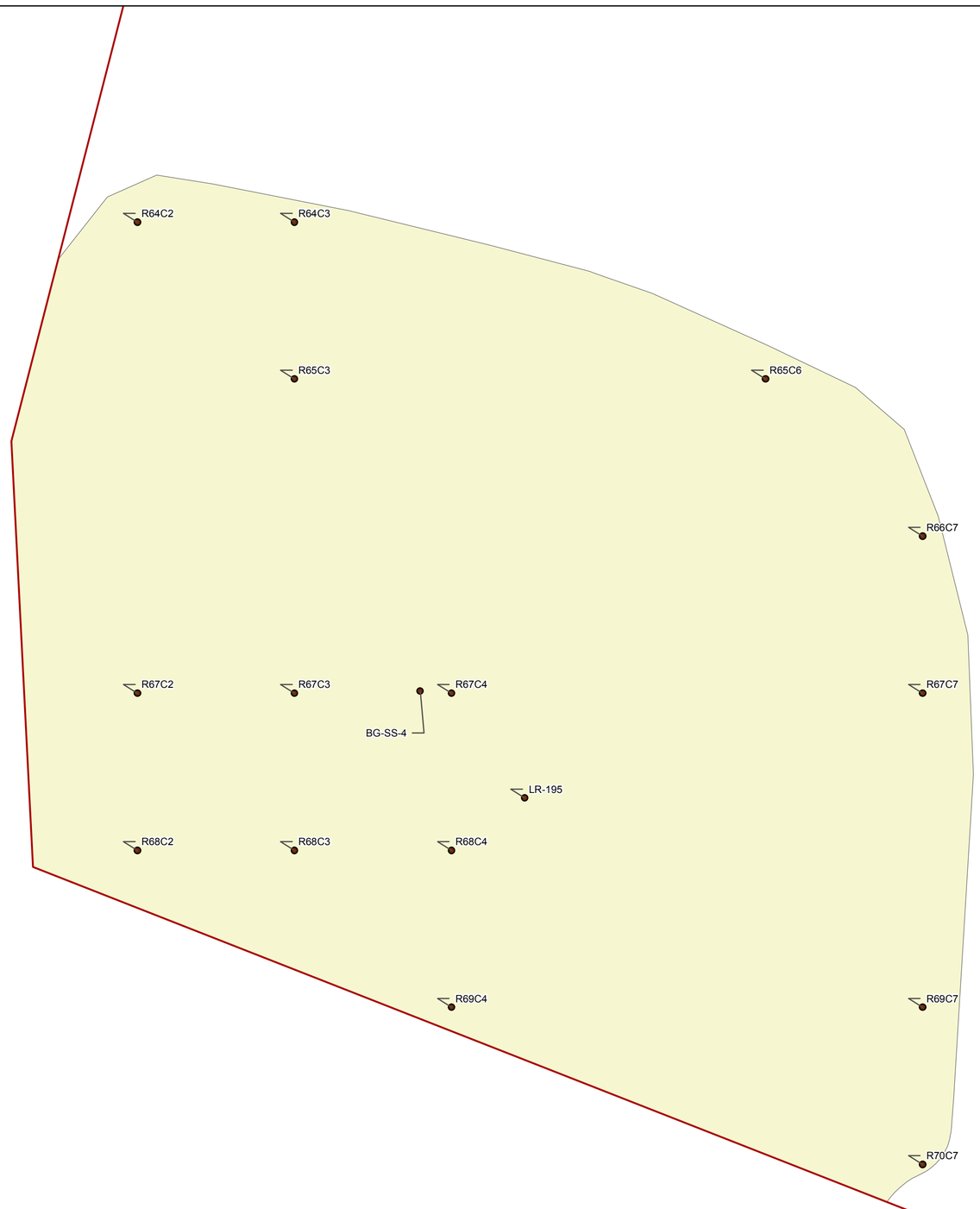
N
W E
S

0 20 40 80
Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Historical 1 and 2
Former DuPont Works Site
March 2007

Figure B-17



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Units
- Golf Course Placement Areas

N
W E
S

0 25 50 100 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit Historical 4
Former DuPont Works Site
March 2007

Figure B-18

Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

N

W E

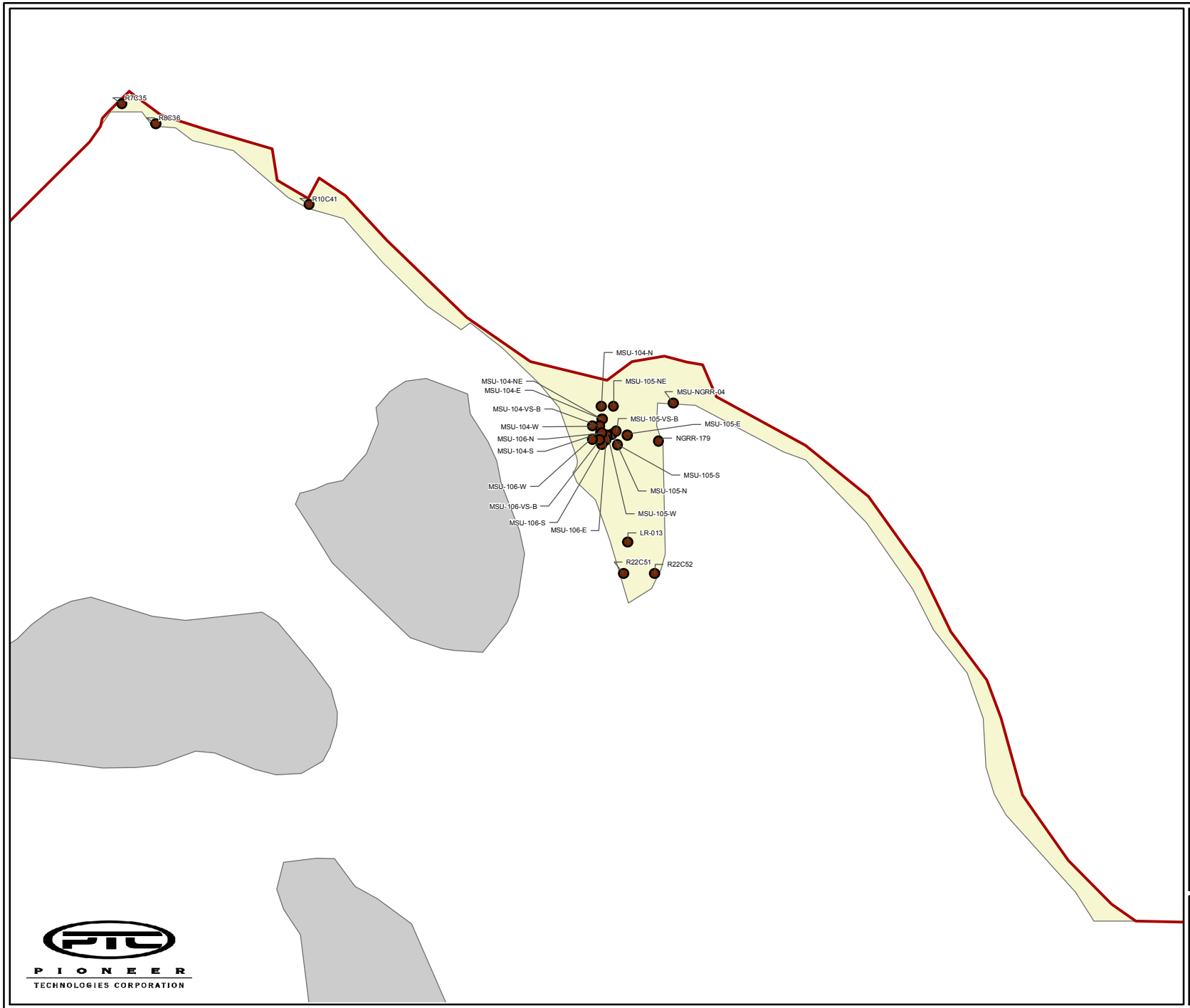
S

0 55 110 220 Feet

Remediation Unit
Industrial
Former DuPont Works Site
March 2007

Figure B-19

PIONEER
TECHNOLOGIES CORPORATION



Legend

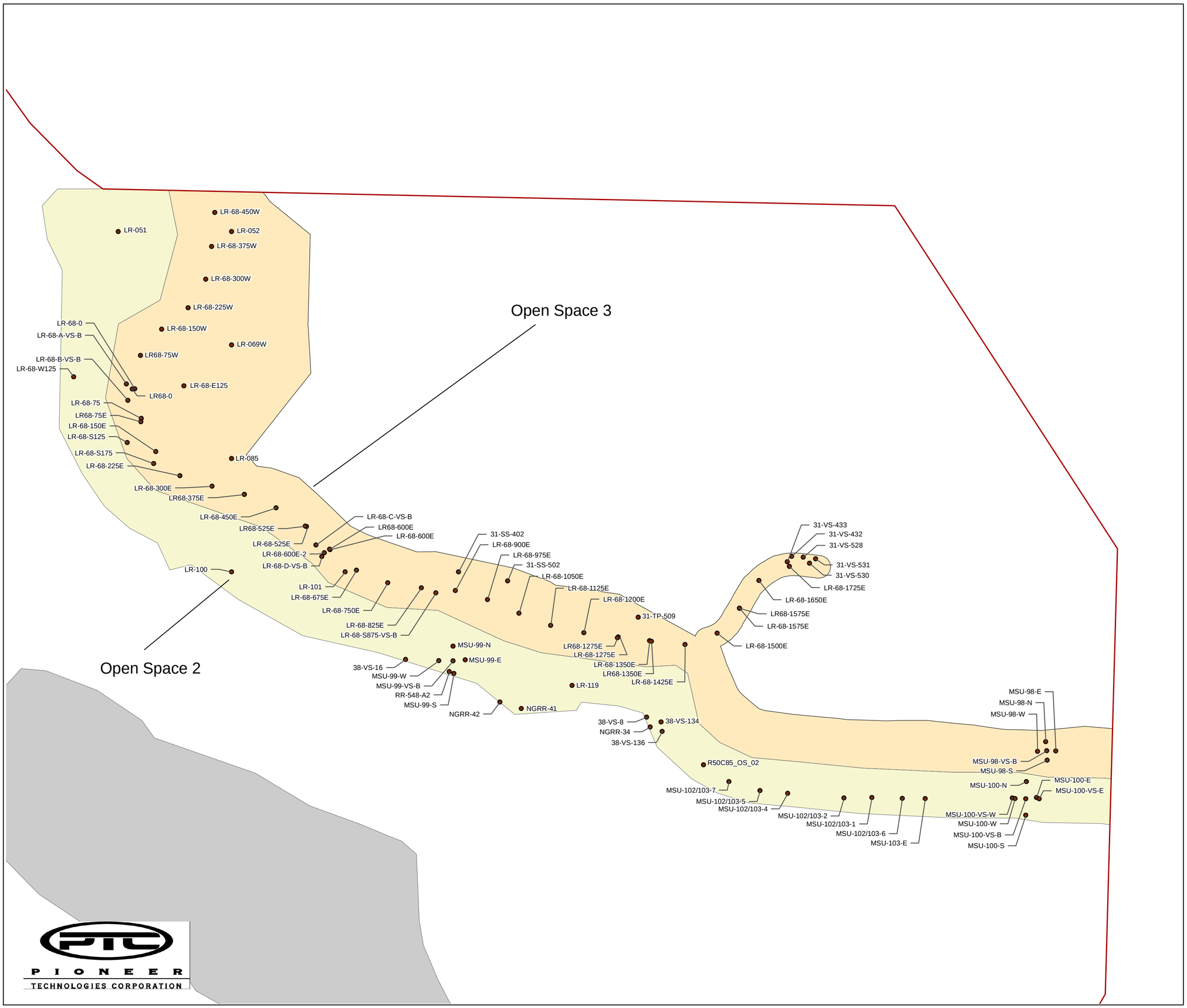
- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

0 90 180 360 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Open Space 1
Former DuPont Works Site
March 2007

Figure B-20



Legend

- Sample Locations
- Consent Decree Boundary
- Golf Course Placement Area

Remediation Units

- Open Space 02
- Open Space 03

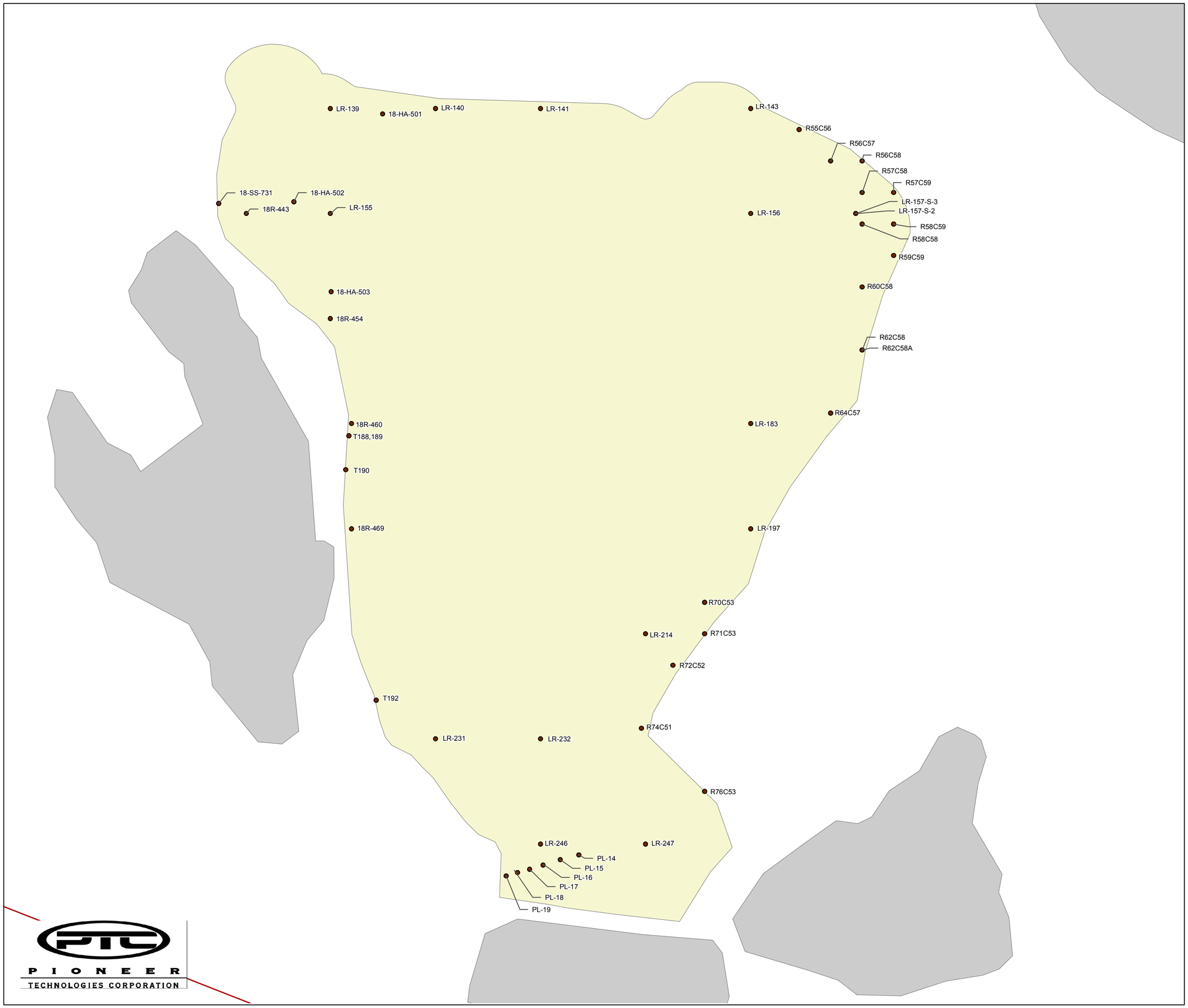
0 75 150 300 Feet

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Open Space 2 and 3

Former DuPont Works Site
March 2007

Figure B-21



Legend

- Sample Locations
- Consent Decree Boundary
- Remediation Unit
- Golf Course Placement Area

PIONEER TECHNOLOGIES CORPORATION

Remediation Unit
Open Space 4

Former DuPont Works Site
March 2007

Figure B-22

APPENDIX C

INTERIM REMEDIAL ACTION MEMORANDA

TABLE OF CONTENTS

C.1 – INTERIM ACTION REPORT – HOTSPOT.PDF (AVAILABLE ON CD)

Memorandum – Hot Spot Interim Action Report, Former DuPont Works Site, DuPont, Washington, October 4, 2000

C.2 – INTERIM ACTION REPORT – SAND LAYDOWN AREA.PDF (AVAILABLE ON CD)

Memorandum – Sand Laydown Area Interim Action Report, Former DuPont Works Site, DuPont Washington, November 16, 2000

C.3 – INTERIM SOURCE REMOVAL ACTIONS – SCREENING PLANT.PDF (AVAILABLE ON CD)

Memorandum – Interim Source Removal Actions: Screening Plant Report, January 22, 2002

C.4 – INTERIM SOURCE REMOVAL ACTIONS – ON-SITE STOCKPILES.PDF

(AVAILABLE ON CD)

Memorandum – Interim Source Removal Actions: On-Sit Stockpiles Report at the Former DuPont Works Site, January 28, 2002

C.5 – INTERIM CORRECTIVE ACTION REPORT – FOUNDATIONS, NARROW GAUGE RAILROAD, AND HOT SPOTS.PDF (AVAILABLE ON CD)

Memorandum - Interim Corrective Action Report, Foundations, Narrow Gauge Railroad, and Hot Spots, April 22, 2002

C.6 – INTERIM CORRECTIVE ACTION REPORT - RUNOFF.PDF (AVAILABLE ON CD)

Perimeter Soil and Storm Water Runoff Overflow Pipeline Interim Corrective Action, November 2002

C.7 – FINAL CLEANUP ACTION PLAN.PDF (AVAILABLE ON CD)

FINAL Cleanup Action Plan, July 2003

C.8 – FINAL FEASIBILITY STUDY.PDF (AVAILABLE ON CD)

FINAL Feasibility Study for the Former DuPont Works Site, July 2003

C.9 – FINAL REMEDIAL INVESTIGATION.PDF (AVAILABLE ON CD)

FINAL Remedial Investigation for the Former DuPont Works Site, July 2003

C.10 – FINAL HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT.PDF

(AVAILABLE ON CD)

FINAL Human Health and Ecological Risk Assessment for the Former DuPont Works Site, July 2003

C.11 – REMEDIAL DESIGN.PDF (AVAILABLE ON CD)

Remedial Design Report, October 2003

C.12 - Area 8 Interim Remedial Action.pdf (AVAILABLE ON CD)

Interim Source Removal Memorandum, Area 8 Pipeline and Former Above-Ground Storage Tanks, Former DuPont Works Site, DuPont Works Site

Hot Spot Interim Action Report
Former DuPont Works Site
DuPont, Washington

Prepared for:

The Weyerhaeuser Company
and
E.I. duPont de Nemours and Company

Prepared by:

PIONEER Technologies Corporation
The West Shore Corporation, NW
URS

October 4, 2000

Table of Contents

1 Introduction....1
1.1 Background....1
1.2 Objectives....1
2 Commercial, Golf Course, and Open Space Areas....2
2.1 Commercial and Golf Course Areas – Historical Data....2
2.2 Commercial and Golf Course Areas – Hot Spot Data....10
2.3 Open Space....10
3 Industrial Area....12
3.1 Hot Spots....12
3.2 Evaluating Compliance With Cleanup Levels....12
4 Conclusions....16
Appendix A – Summary of Sampling Activities....17
A.1 Project Management/Resources....17
A.2 Cultural and Archaeological Management....17
A.3 Site Preparation....17
A.4 Field Construction Activities....17
A.5 Sampling Confirmation Activities....18
A.6 Secondary Excavations....18
Appendix B – Laboratory Analytical Data Validation Results....19
B.1 Summary....19
B.2 Introduction....19
B.3 Sample Case....19
B.4 Laboratory Report and Reporting of Required Analyses....20
B.5 Chain of Custody and Holding Times....20
B.6 Method and Field Blanks....21
B.7 Matrix Spikes/Blank Spikes....21
B.8 Laboratory Duplicates....22
B.9 Field Duplicates....22
B.10 Reporting Limits....24
Appendix C – Analytical Results....25
C.1 Hot Spot Data for Commercial, Golf Course, and Open Space Areas....25
C.2 Hot Spot Data for the Industrial Area....30
C.3 Historical Data in the Industrial Area that Were Removed During the Hot Spot Program....36

List of Tables

Table 1 – Historical Hot Spot Samples in the Commercial, Golf Course, and Open Space Areas 3
Table 2 – Hot Spot Samples Still in Place Greater Than 530 mg/kg for Arsenic.....10
Table 3 – Historical Hot Spot Samples in the Industrial Area.....12
Table 4 – Industrial Area MTCA Compliance Statistics.....13
Table B-1 – Sample Data Groups Included in the Data Review.....20
Table B-2 – Method Blanks 21
Table B-3 – RPD of Detected Compounds.....23
Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas 25
Table C-2 – Hot Spot Data for Burning Ground Excavation 30
Table C-3 – Hot Spot Data for Burning Ground Excavation – Outside Samples.....32
Table C-4 – Hot Spot Data for Narrow Gauge Railroad Excavation 33
Table C-5 – Hot Spot Data for Narrow Gauge Railroad Excavation – Outside Samples 34
Table C-6 – Hot Spot Data for RR-546 Excavation.....35
Table C-7 – Hot Spot Data for Area 10 Excavation.....35
Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program.....36

List of Figures

Figure 1 – Hot Spot Excavations and Soil Results for Arsenic in the Commercial, Golf Course, & Open Space Areas 4
Figure 2 – Hot Spot Excavations and Soil Results for Arsenic in the Commercial, Golf Course, & Open Space Areas 5
Figure 3 – Hot Spot Excavations and Soil Results for Arsenic in the Commercial, Golf Course, & Open Space Areas 6
Figure 4 – Hot Spot Excavations and Soil Results for Lead in the Commercial, Golf Course, & Open Space Areas 7
Figure 5 – Hot Spot Excavations and Soil Results for Lead in the Commercial, Golf Course, & Open Space Areas 8
Figure 6 – Hot Spot Excavations and Soil Results for Lead in the Commercial, Golf Course, & Open Space Areas 9
Figure 7 – Cross Section With Existing Conditions, Sample Locations, and Elevation of Future Placement Area 11
Figure 8 – Hot Spot Excavations and Soil Results for Arsenic and 2,4,6-Trinitrotoluene in the Industrial Area.....14
Figure 9 – Hot Spot Excavations and Soil Results for Lead in the Industrial Area 15

1 Introduction

This report describes the activities that were undertaken in order to excavate hot spot soils at the former DuPont Works Site. This program was done as an interim action as allowed under the July 1991 Consent Decree signed by the Weyerhaeuser Company (Weyerhaeuser), E.I. duPont de Nemours and Company (DuPont) and the Washington State Department of Ecology (Ecology). The program was initiated in September of 1999 and completed in July of 2000.

1.1 Background

Areas with high arsenic and lead concentrations (referred to throughout this report as "hot spots") were discovered in isolated locations during site characterization sampling events at the former DuPont Works Site[1]. The majority of the elevated arsenic locations were along the narrow gauge railroad (NGRR) track while the majority of the elevated lead concentrations were within the immediate vicinity of specific building foundations.

The overall plan for the former DuPont Works Site involves excavating affected soils and placing them in specific areas (i.e., Placement Areas) within the future Golf Course boundary. Remediation Levels (RLs) for arsenic (530 mg/kg) and lead (4,100 mg/kg) have been agreed upon for the Placement Areas[2,3]. Hot Spot soils that have arsenic or lead concentrations greater than these RLs cannot be placed in the Placement areas.

The planned uses for the area within the Parcel 1 Consent Decree Boundary north of Sequalitchew creek are industrial purposes or open space. Additional excavations were completed in the area zoned for industrial use in order to achieve compliance with the Model Toxics Control Act (MTCA) Method C Soil Cleanup Levels (CL) of 90 mg/kg for arsenic, 33 mg/kg for 2,4,6-trinitrotoluene, and 1,000 mg/kg for lead[2].

1.2 Objectives

The two objectives of the hot spot program were:

1. **Commercial, Golf Course, and Open Space Areas** - Remove hot spots in property south of Sequalitchew creek that exceed the Golf Course Placement Area RLs (i.e., 530 mg/kg for arsenic and 4,100 mg/kg for lead).

2. **Industrial Area** - Remove the hot spots and other affected soils in the Industrial Area north of Sequalitchew creek in order to achieve compliance with Industrial CLs (i.e., 90 mg/kg for arsenic, 33 for 2,4,6-Trinitrotoluene and 1,000 mg/kg for lead).

A summary of the field activities is presented in Appendix A. The hot spot soils were excavated and stockpiled for future treatment and disposal which will be done as an interim action during the first half of 2001. Soils removed from the Industrial Area where the concentrations were less than 530 mg/kg arsenic and 4,100 mg/kg lead were placed in Golf Course Placement Area number two. Soils containing 2,4,6-trinitrotoluene were stockpiled separately and will be disposed of off-site during the first half of 2001. These 2,4,6-trinitrotoluene soils were not placed in the Placement Areas.

[1] Hart Crowser. 1994. DRAFT Remedial Investigation, Former DuPont Works Site, DuPont, WA.

[2] Letter from Mike Blum, Washington State Department of Ecology to Vern Moore, Weyerhaeuser Company and Izzy Zanikos, Dupont Specialty Chemicals, Regarding: Non-Residential Remediation Levels at the Former DuPont Works Site, May 3, 1999.

[3] Letter from Mike Blum, Washington State Department of Ecology to Vern Moore, Weyerhaeuser Company and Izzy Zanikos, Dupont Specialty Chemicals, Regarding: Soil Arsenic Non-Residential Remediation Levels, June 25, 1999.

2 Commercial, Golf Course, and Open Space Areas

2.1 Commercial and Golf Course Areas – Historical Data

The historical hot spot samples in the Commercial and Golf Course Areas (i.e., the portion of the property south of Sequalitchew creek) are identified in Table 1. Figures 1, 2, and 3 present the extent of the excavations as well as the post-excavation arsenic confirmation sample locations. Figures 4, 5, and 6 present the extent of the excavations as well as the post-excavation lead confirmation sample locations The sampling results are presented in Appendix C-1.

Sample 26-B-503-S-1 is located in a future Placement Area and was not removed because it will be covered with more than 15 feet of fill. All of the excavation samples and lateral confirmation samples are below the Golf Course Placement Area RLs. These areas will be evaluated further in the Remedial Investigation (RI), Risk Assessment (RA), and Feasibility Study (FS).

Table 1 – Historical Hot Spot Samples in the Commercial, Golf Course, and Open Space Areas

Sample ID	Analyte	Historical Result	Initial Sample Depth (feet)	Final Sample Depth (feet)	Action
1234-TP-510-S-1	Lead	8,200	0	1	Excavated to 1 foot
18-SS-506	Lead	8,200	0	0.5	Excavated to 1 foot
18-SS-700	Lead	12,000	0	0.5	Excavated to 1 foot
18-TP-22,S-1	Lead	4,400	2	4.5	Excavated to 5.5 feet
18R-107-10N	Arsenic	860	0	0.5	Excavated to 1 foot
19A-VS-1	Lead	21,000	0	0.5	Excavated to 1 to 2 feet
19A-VS-2	Lead	5,600	0	0.5	Excavated to 1 to 2 feet
19A-VS-4	Lead	21,000	0	0.5	Excavated to 1 to 2 feet
19C-VS-1	Lead	76,000	0	0.5	Excavated to 1 to 2 feet
19C-VS-2	Lead	5,800	0	0.5	Excavated to 1 to 2 feet
26-B-503-S-1	Lead	25,000	0	1	Still in Place. Will be covered with over 15 feet of fill as a Placement Area.
26-HA-502-S-1	Lead	42,000	0	1	Excavated to 1 to 2 feet
26-HA-502-S-2	Lead	6,100	1	2	Excavated to 1 to 2 feet
26-HA-503-S-1	Lead	4,800	0	1	Excavated to 1 to 2 feet
26-HA-505-S-2	Lead	5,100	1	2	Excavated to 1 to 2 feet
26-TP-511-S-1	Lead	8,200	0	1	Excavated to 1 to 4 feet
26-TP-515-S-1	Lead	22,000	0	1	Excavated to 1 to 2 feet
36-VS-1	Lead	110,000	0	0.5	Excavated to 1 to 2 feet
36-VS-2	Lead	64,000	0	0.5	Excavated to 1 to 2 feet
36-VS-3	Lead	9,300	0	0.5	Excavated to 1 to 2 feet
38-SS-521	Arsenic	550	0	0.5	Excavated to 1 foot
5-VS-27	Arsenic	1,100	0	0.5	Excavated to 1 to 3 feet
5D-VS-64	Arsenic	1,100	0	0.5	Excavated to 1 to 3 feet
5D-VS-67	Arsenic	1,300	0	0.5	Excavated to 1 to 3 feet
7-B-7,S-2	Lead	6,800	6	7.5	Excavated to 8.5 feet
APC-SS-502	Lead	12,000	0	0.5	Excavated to 1 foot
APC-SS-509	Lead	5,100	0	0.5	Excavated to 1 foot
APF-SS-519	Arsenic	560	0	0.5	Excavated to 1 foot
LR-060-10W	Arsenic	560	0	0.5	Excavated to 1 foot
LR-311-25E	Arsenic	740	0	0.5	Excavated to 1 foot
RR-119	Arsenic	590	0	0.5	Excavated to 1 foot
RR-120	Arsenic	670	0	0.5	Excavated to 1 foot
RR-123	Arsenic	1,200	0	0.5	Excavated to 1 foot
RR-124	Arsenic	670	0	0.5	Excavated to 1 to 2 feet
RR-125	Arsenic	570	0	0.5	Excavated to 1 foot
RR-126	Arsenic	1,100	0	0.5	Excavated to 1 foot
RR-127	Arsenic	570	0	0.5	Excavated to 1 foot
RR-132	Arsenic	640	0	0.5	Excavated to 1 foot
RR-515	Arsenic	550	0	0.5	Excavated to 1 foot
RR-541	Arsenic	580	0	0.5	Excavated to 1 foot
RR-547	Arsenic	810	0	0.5	Excavated to 1 foot
RR-559	Arsenic	770	0	0.5	Excavated to 1 foot
RR-565	Arsenic	590	0	0.5	Excavated to 1 foot
RR-585	Arsenic	970	0	0.5	Excavated to 1 foot
RR-590	Arsenic	670	0	0.5	Excavated to 1 foot
RR-591	Arsenic	800	0	0.5	Excavated to 1 to 2 feet

N
W E
S

0 200 400 Feet

DuPont Works Site
October 2000

Legend

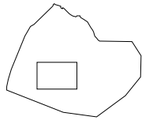
Arsenic Samples (mg/kg)
- 1.9 - 530
- 530 - 1500

Hot Spot Excavations
Parcel 1

Notes

Soil Results for Arsenic in the Commercial, Golf Course, & Open Space Areas

Figure 1



Legend

Arsenic Samples (mg/kg)
- 1.9 - 530
- 530 - 1500

Hot Spot Excavations

Parcel 1

Notes

Soil Results for Arsenic in the Commercial, Golf Course, & Open Space Areas

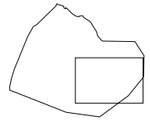
Figure 2

PIONEER

0 200 400 Feet

DuPont Works Site
October 2000

N
W E
S



Legend

Arsenic Samples (mg/kg)
- 1.9 - 530
- 530 - 1500

Hot Spot Excavations

Parcel 1

Notes

Soil Results for Arsenic in the Commercial, Golf Course, & Open Space Areas

Figure 3

0 200 400 Feet

DuPont Works Site
October 2000

PIONEER

N
W E
S

0 200 400 Feet

Legend

Lead Samples (mg/kg)
- 1.9 - 4100

Hot Spot Excavations

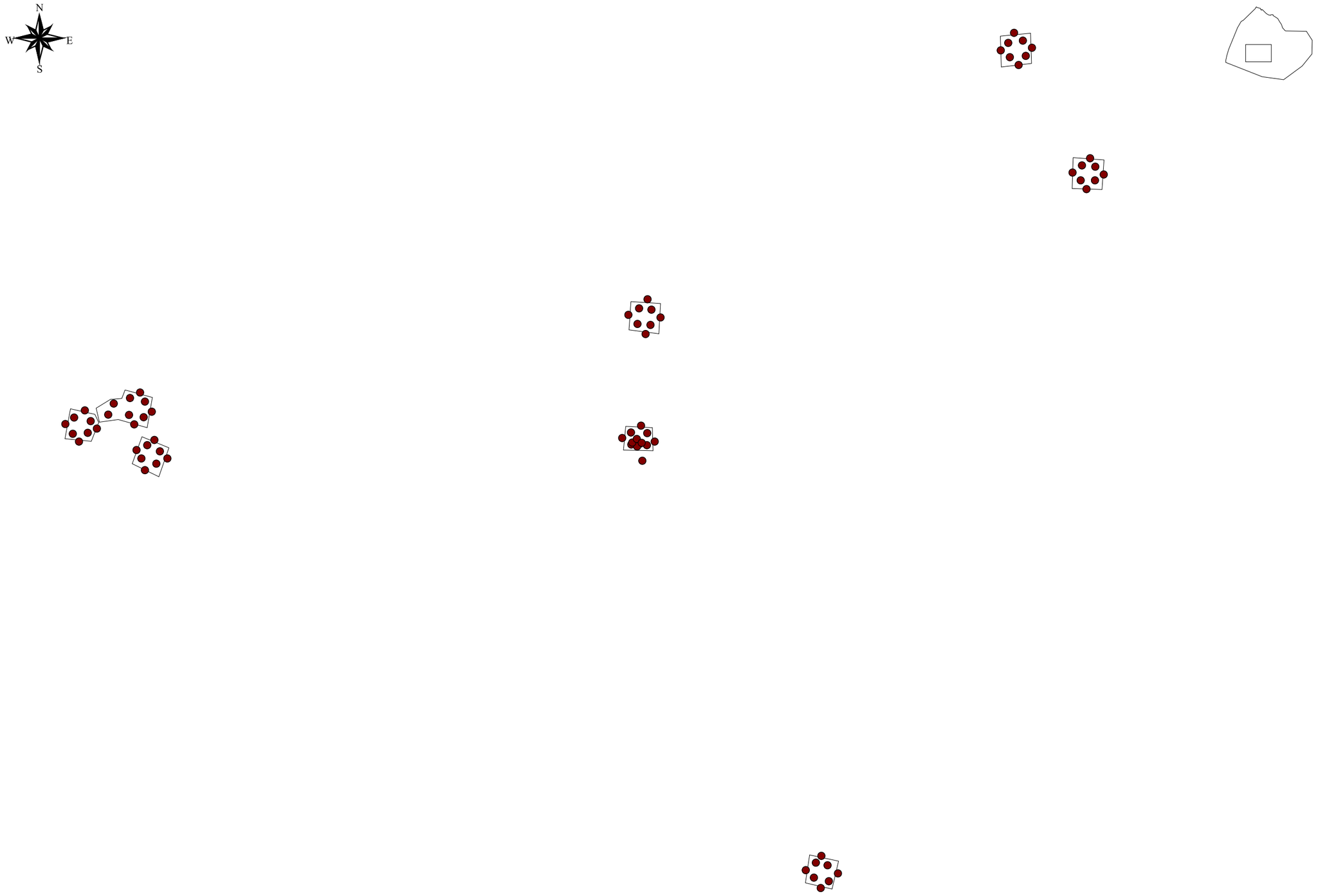
Parcel 1

Notes

Soil Results for Lead in the Commercial, Golf Course, & Open Space Areas

DuPont Works Site
October 2000

Figure 4



Legend

Lead Samples (mg/kg)
- 1.9 - 4100

Hot Spot Excavations

Parcel 1

Notes

Soil Results for Lead in the Commercial, Golf Course, & Open Space Areas

Figure 5

PIONEER

0 200 400 Feet

DuPont Works Site
October 2000

Legend

Lead Samples (mg/kg)
- 1.9 - 4100

Hot Spot Excavations

Parcel 1

Notes

Soil Results for Lead in the Commercial, Golf Course, & Open Space Areas

DuPont Works Site
October 2000

Figure 6

2.2 Commercial and Golf Course Areas – Hot Spot Data

During the hot spot program there were additional locations that were identified where the concentrations of arsenic and/or lead exceeded the Golf Course Placement Area RLs. All of these locations were excavated with the exception of the samples identified in Table 2. Samples 5-VS-125 and 5-VS-126 were not excavated because they are located in a future placement area and will be covered with more than 15 feet of fill. A cross section that identifies the sample locations and the depth of fill in the future placement area is presented in Figure 7.

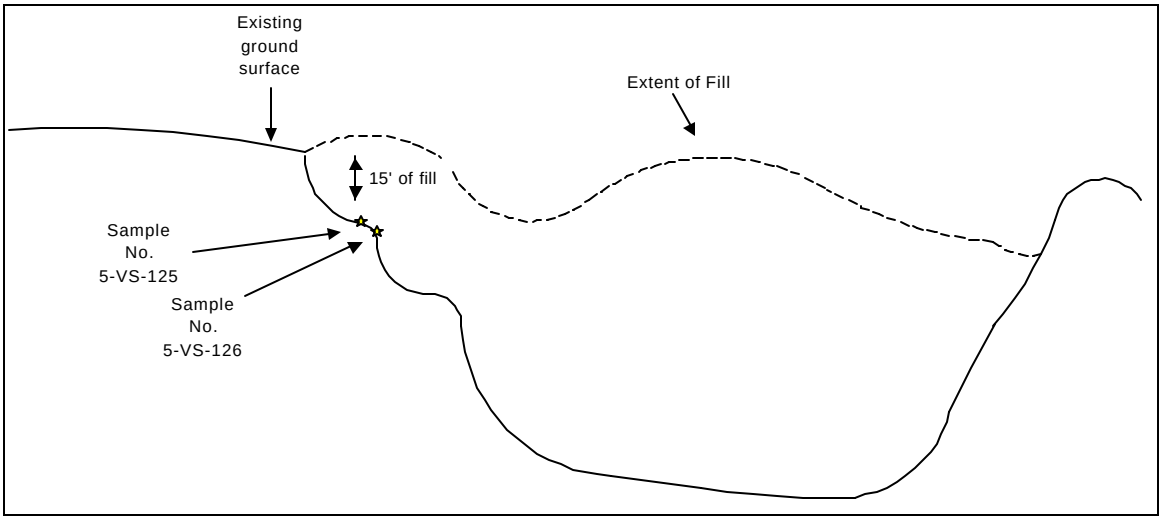
Table 2 – Hot Spot Samples Still in Place Greater Than 530 mg/kg for Arsenic

Sample Number	Analyte	Concentration (mg/kg)	Action
5-VS-125	Arsenic	1500	This sample is in a Placement Area and will be covered with more than 15 feet of fill.
5-VS-126	Arsenic	1500	This sample is in a Placement Area and will be covered with more than 15 feet of fill.
38-VS-56	Arsenic	970	This is a non-excavation confirmation sample result. In order to remove the sample the main haul road would have to be removed. This sample will be removed during site wide corrective action. This sample location will be addressed in the FS.

2.3 Open Space

No hot spot excavations were conducted in open space areas or in areas within or immediately adjacent to known historical sites. This included samples LR-311-25E, LR-68-B, LR-68-C, LR-68-S25, LR-68-S50, LR-68-S575, and LR-68-S75 which are located on or in the immediate vicinity of the NGRR within the Sequalitchew Creek Open Space Area. These and any other elevated sample locations within open space or historical areas will be addressed in the RI, RA and FS and will be remediated as part of the larger site-wide corrective action program.

Figure 7 – Cross Section With Existing Conditions, Sample Locations, and Elevation of Future Placement Area



3 Industrial Area

3.1 Hot Spots

The different historical hot spot samples that were present in the Industrial Area are identified in Table 3. Eight different excavation rounds resulted in the following 4 excavations in the Industrial Area:

- Burning Ground
- Narrow Gauge Railroad (NGRR)
- RR-546
- Area 10

The existing excavation in Area 10 was expanded to remove one 2,4,6-trinitrotoluene sample which exceeded the CL. The post-excavation confirmation sample locations and the associated excavation boundaries for each excavation are presented in Figure 8 for arsenic and 2,4,6-trinitrotoluene, Figure 9 for lead.

Table 3 – Historical Hot Spot Samples in the Industrial Area

Sample ID	Analyte	Historical Result	Initial Historical Sample Depth	Final Historical Sample Depth	Action
31-B-1,S-1	Lead	30,000	2.5	4	Excavated to 15 feet
31-B-501-S-1	Lead	25,000	0	3	Excavated to 2 feet (to gravel)
31-SS-2	Lead	240,000	0	0.5	Excavated to 2 feet (to gravel)
31-TP-10,S-1	Lead	5,500	0	3	Excavated to 2 feet (to gravel)
31-TP-13,S-1	Lead	17,000	0	3	Excavated to 2 feet (to gravel)
31-TP-15,S-1	Lead	6,500	0	3	Excavated to 2 feet (to gravel)
31-TP-16,S-1	Lead	25,000	0	3	Excavated to 2 feet (to gravel)
31-TP-8,S-1	Lead	6,300	0	3	Excavated to 2 feet (to gravel)
31-TP-9,S-1	Lead	28,000	0	3	Excavated to 2 feet (to gravel)
31-VS-13	Lead	29,000	0.5	1	Excavated to 2 feet (to gravel)
31-VS-14	Lead	56,000	0.5	1	Excavated to 2 feet (to gravel)
31-VS-16	Lead	75,000	0.5	1	Excavated to 2 feet (to gravel)
LR-104	Arsenic	690	0	0.5	Excavated to 2 feet
RR-546	Arsenic	950	0	0.5	Excavated to 1 to 2 feet
RR-546-A	Arsenic	640	0	0.5	Excavated to 1 foot
RR-595	Arsenic	570	0	0.5	Excavated to 1 to 2 feet

3.2 Evaluating Compliance With Cleanup Levels

The data for each of the four excavations and the remaining area were compared to the Industrial CLs of 90 mg/kg for arsenic, 33 mg/kg for 2,4,6-trinitrotoluene, and 1,000 mg/kg for lead. At Ecology's suggestion the following data were grouped in the following manner:

- Hot spot data outside each excavation (i.e., samples out to 25 feet from the perimeter of the excavation) were grouped together to demonstrate that the lateral extent of each of the excavations is in compliance with the CLs.
- Samples inside each excavation were grouped together to demonstrate that the vertical extent of each of the excavations are in compliance with CLs.

The compliance statistics are presented in Table 4. All four of the excavations, as well as the Industrial Area as a whole, are in compliance with the MTCA three-fold criteria.

Table 4 – Industrial Area MTCA Compliance Statistics

Analyte	Units	Num. Of Samps.	Num. Of Hits	Max Detect	Mean	95% UCL	Log Mean	95% Log UCL	Distribution type	MTCA UCL	Industrial Cleanup Levels	Number Greater than 2X the Cleanup Level	Percentage of samples greater than the Cleanup Level
All Data in Industrial Area (0 to 15 feet)													
Arsenic	mg/kg	405	380	180	21	23	10	25	Unknown	25	90	0	4.0%
Lead	mg/kg	445	398	2000	96	112	23	125	Unknown	125	1,000	0	1.1%
Industrial Area Non-Excavation Samples													
Arsenic	mg/kg	58	58	180	29	37	13	58	Unknown	58	90	0	8.6%
Lead	mg/kg	98	76	1500	83	115	22	132	Lognormal	132	1,000	0	1.0%
Burning Ground Excavation Samples													
Arsenic	mg/kg	55	55	180	27	34	12	51	Unknown	51	90	0	5.5%
Lead	mg/kg	95	73	1500	71	102	20	106	Lognormal	106	1,000	0	1.1%
Burning Ground Outside Excavation Samples													
Arsenic	mg/kg	42	41	150	42	51	28	66	Lognormal	66	90	0	9.5%
Lead	mg/kg	42	41	2000	211	310	73	623	Lognormal	623	1,000	0	7.1%
Area 10 Excavation Samples													
2,4,6-Trinitrotoluene	mg/kg	1	0	0	NA	NA	NA	NA	Unknown	0.026	33	0	0.0%
Area 10 Outside Excavation Samples													
2,4,6-Trinitrotoluene	mg/kg	1	0	0	NA	NA	NA	NA	Unknown	0.030	33	0	0.0%
RR-546 Excavation Samples													
Arsenic	mg/kg	7	7	54	20	32	16	54	Normal/Lognormal	54	90	0	0.0%
Lead	mg/kg	7	7	35	11	19	8	25	Lognormal	25	1,000	0	0.0%
RR-546 Outside Excavation Samples													
Arsenic	mg/kg	8	8	89	58	70	56	75	Normal/Lognormal	75	90	0	0.0%
Lead	mg/kg	8	8	150	61	88	50	151	Normal/Lognormal	150	1,000	0	0.0%
NGRR Excavation Samples													
Arsenic	mg/kg	101	101	100	16	19	11	18	Lognormal	18	90	0	2.0%
Lead	mg/kg	101	99	390	22	30	11	24	Unknown	24	1,000	0	0.0%
Narrow Gauge Railroad Outside Excavation Samples													
Arsenic	mg/kg	56	55	110	34	40	23	49	Lognormal	49	90	0	7.1%
Lead	mg/kg	56	56	830	93	128	40	133	Lognormal	133	1,000	0	0.0%

Note: The following decision rules were followed for duplicate samples in order to develop a dataset for statistical analysis:

1. If all of the results were detected values, then the two values were averaged.
2. If all the results were non-detects then use the highest non-detected value.
3. If there was a mixture of detects and non-detects, then take the highest detected value.
4. The resulting value was assigned to the primary sample ID and the other duplicate samples were excluded from the data tables and figures.

N
W E
S

Legend

TNT Samples (mg/kg)
- 0.051 - 0.059

Arsenic Samples (mg/kg)
- 1.2 - 90
- 90 - 180

Hot Spot Excavations
Industrial Area
Parcel 1

Notes

Hot spot samples and site characterization samples still in place are presented in the figure.

Soil Results for
Arsenic & TNT
in the Industrial Area

Figure 8

PTC PIONEER

0 300 600 Feet

DuPont Works Site
October 2000

N
W E
S

Legend

Lead Samples (mg/kg)
- 1.2 - 1000
- 1000 - 2000

Hot Spot Excavations
Industrial Area
Parcel 1

Notes

Hot spot samples and site characterization samples still in place are presented in the figure.

Soil Results for Lead in the Industrial Area

Figure 9

PIONEER

0 200 400 Feet

DuPont Works Site
October 2000

4 Conclusions

Based upon the evaluation of the existing and collected data this program met its goals. No known contamination, greater than the chemical concentrations allowed for placement under the golf course, exists on the site other than:

- Two locations that will be buried greater than 15 feet deep during the golf course cap construction. (Ecology has determined that, for metals on the Site, direct contact with contaminated soils is the primary exposure route to humans. Fifteen feet is the depth of exposure, under MTCA, for direct contact.)
- One sample directly adjacent to the paved road that will be addressed in the FS.
- The samples in the Sequalitchew Creek Open Space Area. Addressing these sample locations was not part of this program. These samples locations will be addressed either within the FS or by a separate study.

In addition, the area north of Sequalitchew Creek, known as the Industrial Area, is in compliance with MTCA criteria for that land use. Pending Ecology's agreement, no further work will be done in this area during interim or site wide corrective action.

A greater than expected volume (an estimated 18,500 cubic yards) of soil was removed to meet program goals. The majority of this increased volume was removed from locations within the industrial area.

Appendix A – Summary of Sampling Activities

A.1 Project Management/Resources

This program was performed under the direction of the Site Management Team (ST). Jeff King of the West Shore Corporation, NW (WSNW), performed day-to-day oversight of the project activities. URS performed the confirmation sampling, and Sound Analytical Services, Inc. was the Project laboratory. Active Construction (ACTIVE) of Gig Harbor, Washington was the remediation contractor. PIONEER Technologies Corporation (PTC) managed the analytical data and developed the maps. The Hot Spot Interim Action Report was created collectively by WSNW, PTC, and URS.

A.2 Cultural and Archaeological Management

The program followed the criteria listed in the Projects' Cultural and Archaeological Management Plan. This plan, which is based upon cooperative agreements established between Weyerhaeuser, the Nisqually Tribe, and the Washington State Department of Archaeology and Historic Preservation (OAHP), identifies the terms for compliance for Site construction activities. As a result of this plan the following activities took place:

- All individuals involved in this program were trained by the Project's Archaeology Consultant, Western Heritage, on the identification of items of cultural or historic significance prior to the start of field work.
- Western Heritage was present on the site during the excavation and site preparation phases of the program.

A report describing the findings of, and any observations made, during this program will be issued to Ecology and OAHP within the next month.

A.3 Site Preparation

Phase One of this program included locating and flagging the hot spot locations and clearing and grubbing each work area. ESM Incorporated (ESM) of Federal Way, WA located and flagged the location of each hot spot. A field check of the locations was conducted and the boundaries of the work areas flagged by PTC and WSNW. Olympia Timber cleared and grubbed any trees and vegetation within 50 feet of each hot spot sample location and any other areas needed to safely complete the project. In addition, Olympia Timber removed all the remaining narrow gauge railroad tracks of Site, except those within Sequalitchew Creek canyon. Each area was then re-staked by ESM, to outline the initial excavation limit (to be set at 25 feet in the north, south, east and west directions from the original sample location). This resulted in a 50-foot by 50-foot initial excavation. In select cases where the impacted soils are greater than 1.5 feet deep, the initial excavation was 10 feet by 10 feet.

A.4 Field Construction Activities

The excavation of the hot spots was initiated after the site preparation activities were completed. In general the process consisted of two steps.

1. ACTIVE initially excavated to the perimeter of the staked area to depth of 1 foot except for the burning ground excavation and Area 19 excavations where, due to very high lead concentrations, the initial excavation depth was set at 2 feet. Once an area was excavated ACTIVE moved on to the next excavation. Decisions for further excavation were made once initial laboratory results were available.

2. When confirmation sampling detected *in situ* concentrations greater than CLs or RLs within or along the perimeter of the initial excavation further work was done. If the detection was outside of the excavation an additional 25 feet of soil was removed to the same depth as the excavation. If the detection was within the excavation the quadrangle containing the sample was excavated an additional one foot deeper. Confirmation samples were collected in the secondary excavation in the same manner as original excavation.

A.5 Sampling Confirmation Activities

A Hot Spot Removal Program Work Plan summarizing characterization procedures was prepared before field activities were initiated[4]. This Work Plan was generally consistent with the sampling and analytical activities specified in the 1992 Management Plan[5]. URS prepared a site-specific health and safety plan for use by on-site URS personnel.

Sampling begin once ACTIVE had completed 2 days of work. Samples were collected in accordance with the Work Plan. Soil samples were collected by placing soil into clean stainless steel bowls, mixing the soil with a clean stainless steel spoon to homogenize the sample, and then placing the soil into 4-ounce glass jars. The sampling equipment was decontaminated according to the work plan immediately prior to collecting each. Samples were held under chain-of-custody procedures at all times. The samples were delivered to the Project laboratory on a 3-day turn around basis.

Eight samples were collected for each 50-foot by 50-foot excavation. Excavation perimeter samples (four collected in the north, south, east and west directions from the sample location) were discreet samples. The four remaining samples in the bottom of the excavation were composites of five locations within each of the northwest, northeast, southwest and southeast quadrangles of the excavation. Sample results were issued to the Project Team upon receipt from the laboratory in a non-QA/QC basis. Decisions for further excavation were made based upon these results.

A.6 Secondary Excavations

Confirmation samples were done in the secondary excavation in the same manner as original excavation.

[4] West Shore Corporation, NW and PIONEER Technologies Corporation. 1999. Hot Spot Removal Program Work Plan for the Former DuPont Work Site, DuPont, WA.

[5] HartCrowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study Former DuPont Works Site, DuPont, WA.

Appendix B – Laboratory Analytical Data Validation Results

B.1 Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan[6]. The data may be used to assess analyte concentrations with the stated qualifications.

B.2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil samples from the former DuPont Works Site in Dupont, Washington, from September 10, 1999 through July 17, 2000. Samples were submitted to Sound Analytical Services, Inc. for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits. The samples were analyzed for the following chemicals, using the noted analytical methods.

Arsenic	EPA 6010
Lead	EPA 6010

B.3 Sample Case

The sample data groups identified in Table B-1 were included in this data review.

[6] HartCrowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study Former DuPont Works Site, DuPont, WA.

Table B-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
84030	10 Sep 99
84055	13 Sep 99
84078	14 Sep 99
84117	15 Sep 99
84151	16 Sep 99
84215	20 Sep 99
84245	21 Sep 99
84297	22 Sep 99
84320	23 Sep 99
84401	27 Sep 99
84426	28 Sep 99
84479	29 Sep 99
84508	30 Sep 99
84520	1 Oct 99
84678	7 Oct 99
84745	11 Oct 99
84778	12 Oct 99
84800	13 Oct 99
84832	14 Oct 99
84863	15 Oct 99
84898	18 Oct 99
84932	19 Oct 99
84973	21 Oct 99
85323	4 Nov 99
86405	3 Jan 2000
87040	25 Jan 2000
87119	28 Jan 2000
87987	7 Mar 2000
89042	18 Apr 2000
89069	19 Apr 2000
89529	9 May 2000
89746	17 May 2000
89910	30 May 2000
90806	29 June 2000
91163	18 July 2000
91278	24 July 2000

B.4 Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that URS would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. Comprehensive data validation was not requested for this sampling event. The reports provide all necessary information to complete this review. All analytical methods were reported as requested.

B.5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled until arrival at the laboratory. Sample bottles were in good condition. The samples were extracted and analyzed within the 6 month holding time. Holding times were within specifications of the Management Plan.

B.6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes (see Table B-2). The QC frequency requirement of one laboratory blank per analytical batch was met. Eight rinse blanks were analyzed. The field rinse blanks had detections of lead or arsenic. No data require qualification based on field rinse blank contamination.

Table B-2 – Method Blanks

Sample ID	Batch	Analyte	Result (mg/L)
Rinse Blank (rinsate)	84078	Lead	0.0032
Rinse Blank (rinsate 2)	84117	Lead	0.026
Rinse Blank (rinsate 3)	84117	Lead	0.016
Rinse Blank (rinsate 4)	84151	Lead	0.088
Rinse Blank (rinsate 5)	84215	Lead	0.031
Rinse Blank (rinsate 6)	84245	Arsenic Lead	0.034 0.026
Rinse Blank (rinsate 7)	84297	Lead	0.0061
Rinse Blank (rinsate 8)	84401	Lead	0.0065

B.7 Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS and one blank spike (BS) per analytical batch or one MS and one BS per 20 samples, was met.

The MS and BS results were compared to evaluate the accuracy of laboratory procedures. The spike recoveries ranged from 76 to 125 percent and were within the control limits with the following exceptions.

- Matrix spike 84055-1 (9-15/99): The lead percent recovery was above the control limits. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84055-21 (9-15/99): The lead percent recovery was above the control limits. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84078-42 (9/20/99): The lead matrix spike was not recovered. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84117-1 (9/17/99): The lead matrix spike was not recovered. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84117-21 (9/20/99): The lead matrix spike was not recovered. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84151-1 (9/20/99): The arsenic percent recovery was below the control limits at 74%. The associated blank spike was within the control limits; therefore, no data were qualified.
- Matrix spike 84215-2 (9/22/99): The lead percent recovery was above the control limits. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84215-22 (9/22/99): The lead percent recovery was below the control limits at 74%. The associated blank spike was within the control limits; therefore, no data were qualified.
- Matrix spike 84245-2 (9/21/99): The lead percent recovery was below the control limits at 64%. The associated blank spike was within the control limits; therefore, no data were qualified.

- Matrix spike 84245-40 (9/23/99): The percent recoveries were below the control limits for arsenic at 74% and lead at 72%. The associated blank spike percent recoveries were within the control limits; therefore, no data were qualified.
- Matrix spike 84297-22 (9/27/99): The percent recoveries were below the control limits for arsenic at 73% and lead at 72%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 84297-42 (9/27/99): The percent recoveries were below the control limits for arsenic at 71% and lead at 69%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 84320-1 (9/28/99): The percent recoveries were below the control limits for arsenic at 71% and lead at 66%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 84320-21 (9/28/99): The percent recovery was above the control limit for lead at 133%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 59069-21 (4/21/00): The arsenic and lead matrix spike percent recoveries were not recovered. The associated LCS and an additional matrix spike percent recoveries were within the control limits; therefore, no data were qualified.
- Blank spike S382 (9/20/99): The lead percent recovery was greater than the control limits at 133%. Associated data were qualified as estimated (J).
- Blank spike S392 (9/17/99): The lead percent recovery was greater than the control limits at 130%. Associated data were qualified as estimated (J).

B.8 Laboratory Duplicates

The relative percent differences (RPDs) ranged from 0 to 34 percent and were within the control limits established by the laboratory, with the following exceptions. No data were qualified due to laboratory duplicate RPDs.

- Laboratory duplicate 84030-15 (9/14/99): The lead RPD was above the control limit at 49% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.
- Laboratory duplicate 84078-42 (9/20/99): The lead RPD was above the control limit at 58% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.
- Laboratory duplicate 84508-21 (10/4/99): The arsenic RPD was above the control limit at 200%. The sample and duplicate results were not greater than five times the reporting limit; therefore, no data were qualified.
- Laboratory duplicate 85323-41 (11/5/99): The lead RPD was above the control limit at 46% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.
- Laboratory duplicate 87040-41 (1/27/00): The arsenic RPD was above the control limit at 50% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.

B.9 Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, or one field duplicate per day at a minimum, specified in the Management Plan, was met. Forty-two sets of field duplicate samples were collected. Table B-3 presents the RPD of detected compounds that were calculated for the duplicate pairs. The RPDs were acceptable with the following exceptions:

- Duplicate pair 38-VS-96/117: the arsenic and lead results were qualified as estimated (J) due to the high duplicate RPDs.
- Duplicate pair 31-VS-586/587: the arsenic and lead results were qualified as estimated (J) due to the high duplicate RPDs.

- Duplicate pair 31-VS-639/686: the arsenic and lead results were qualified as estimated (J) due to the high duplicate RPDs.

Table B-3 – RPD of Detected Compounds

SAMPLE ID & DUPLICATE ID	ANALYTE	PRIMARY RESULT (µg/L)	DUPLICATE RESULT (µg/L)	RPD %
31-VS-68/31-VS-83	Arsenic	12	15	22
	Lead	1000	1100	10
31-VS-74/31-VS-84	Arsenic	15	13	14
	Lead	4300	3500	21
31-VS-80/31-VS-85	Arsenic	35	32	9
	Lead	4200	4000	5
31-VS-137/31-VS-162	Arsenic	35	26	30
	Lead	2500	2100	17
31-VS-135/31-VS-163	Arsenic	7.7	7.5	3
	Lead	170	170	0
31-VS-171/31-VS-175	Arsenic	6.1	6.9	12
	Lead	260	280	7
31-VS-196/31-VS-216	--	--	--	--
31-VS-503/31-VS-504	Lead	13	25	63
31-VS-518/31-VS-519	--	--	--	--
31-VS-526/31-VS-527	Arsenic	15	15	0
31-VS-540/31-VS-541	--	--	--	--
31-VS-560/31-VS-561	Arsenic	130	92	34
	Lead	7700	4400	55
31-VS-570/31-VS-570	Arsenic	11	9.7	13
	Lead	26	20	26
31-VS-577/31-VS-578	Arsenic	8.2	13	45
	Lead	19	32	51
31-VS-586/31-VS-587	Arsenic	120	30	**120**
	Lead	74	47	**45**
31-VS-597/31-VS-598	Arsenic	12	16	29
	Lead	39	62	51
31-VS-615/31-VS-627	Arsenic	11	10	10
	Lead	13	13	0
31-VS-619/31-VS-628	Arsenic	11	11	0
	Lead	11	13	17
31-VS-624/31-VS-629	--	--	--	--
31-VS-639/31-VS-686	Arsenic	45	17	**90**
	Lead	130	41	**104**
31-VS-649/31-VS-687	Arsenic	55	60	9
	Lead	52	52	0
31-VS-659/31-VS-688	Lead	11	7.6	37
31-VS-669-/31-VS-689	Arsenic	11	5.9	60
31-VS-679/31-VS-690	--	--	--	--
31-VS-713/31-VS-725	--	--	--	--
31-VS-724/31-VS-726	Arsenic	12	14	15
	Lead	21	25	17
19-VS-37/19-VS-44	Lead	23	25	8
19-VS-30/19-VS-45	Lead	20	17	16
19-VS-42/19-VS-46	Arsenic	56	82	38

Table B-3 – RPD of Detected Compounds

SAMPLE ID & DUPLICATE ID	ANALYTE	PRIMARY RESULT (µg/L)	DUPLICATE RESULT (µg/L)	RPD %
	Lead	140	140	0
19-VS-50/19-VS-55	Arsenic	90	86	5
	Lead	280	310	10
APC-VS-11/APC-VS-17	Arsenic	21	22	5
	Lead	2600	2000	26
5-VS-121/5-VS-116	Arsenic	2100	1600	27
	Lead	15	20	29
26-VS-32/26-VS-35	--	--	--	
26-VS-39/26-VS-44	Arsenic	180	180	0
	Lead	23	25	8
18-VS-219/18-VS-224	--	--	--	--
12-VS-2/12-VS-7	Arsenic	50	59	17
	Lead	58	69	17
LR181-VS-1/LR181-VS-9	Arsenic	51	57	11
	Lead	62	68	9
38-VS-37/38-VS-47	Arsenic	75	65	14
	Lead	24	23	4
38-VS-46/38-VS-48	Arsenic	190	180	5
	Lead	36	35	3
38-VS-74/38-VS-80	Arsenic	380	560	38
	Lead	46	62	30
38-VS-96/38-VS-117	Arsenic	17	38	**76**
	Lead	5.7	16	**95**

B.10 Reporting Limits

To ensure the level of analytical reporting sensitivity meets project goals, reporting limits were reviewed. Reported results are acceptable.

Appendix C – Analytical Results

C.1 Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
12-VS-1	12	14
12-VS-10	29	13
12-VS-11	67	140
12-VS-12	2.5 U	2.5 U
12-VS-13	10	730
12-VS-14	21	15
12-VS-15	6.1	8.8
12-VS-16	9.2	24
12-VS-3	15	13
12-VS-4	20	36
12-VS-5	4.2	6.6
12-VS-6	3.8	6.1
12-VS-7	54.5	63.5
12-VS-8	2.5	5
12-VS-9	220	110
18-VS-195	45	450
18-VS-196	50	40
18-VS-197	17	150
18-VS-198	35	280
18-VS-199	23	380
18-VS-200	32	200
18-VS-201	110	500
18-VS-202	24	580
18-VS-203	13	760
18-VS-204	1.9	310
18-VS-205	10	300
18-VS-206	8.8	560
18-VS-207	12	1600
18-VS-208	24	800
18-VS-209	26	410
18-VS-210	12	2700
18-VS-211	12	15
18-VS-212	2 U	16
18-VS-213	5.8	61
18-VS-214	2.2	62
18-VS-215	2 U	42
18-VS-216	63	44
18-VS-217	15	11
18-VS-218	25	25
18-VS-220	2.8	2.7
18-VS-221	5.3	5.2
18-VS-222	36	22

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
18-VS-223	4.9	3.9
18-VS-224	9.35	6.85
18-VS-225	67	95
18-VS-226	350	25
18-VS-227	40	50
18-VS-229	7.4	3.3
18-VS-230	4.9	2.9
18-VS-231	2.3 U	3.3
18-VS-232	6.9	12
18-VS-233	56	52
18-VS-234	150	99
18-VS-235	36	33
18-VS-236	8	52
18-VS-237	2.4	5.7
18-VS-238	6.7	11
18-VS-239	2.3 U	2.7
18-VS-240	4.8	11
18-VS-240A	5	4.9
18-VS-241	27	11
18-VS-241A	50	5.9
18-VS-242	3.3	3.1
18-VS-243	30	13
18-VS-244	180	110
18-VS-245	36	21
18-VS-246	1.9 U	2
18-VS-247	1.9	1.9
18-VS-248	9.7	14
18-VS-249	27	15
18-VS-250	3.8	38
18-VS-251	3.8	12
18-VS-252	4.8	14
18-VS-253	8.5	110
18-VS-254	6.4	92
18-VS-255	2.7	15
18-VS-256	4.4	49
18-VS-257	120	52
18-VS-258	34	39
18-VS-259	240	80
18-VS-260	35	16
18-VS-261	60	37
18-VS-262	29	12
18-VS-263	16	9.1

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
18-VS-264	6.7	4.8
18-VS-300	2.3 U	11
18-VS-301	2.7 U	48
18-VS-302	2.3 U	1900
18-VS-303	2.5 U	8.3
18-VS-304	2.7 U	27
19-VS-20	3.3	17 J
19-VS-21	34	1500 J
19-VS-22	16	580 J
19-VS-24	3.2	1900 J
19-VS-25	7.9	200 J
19-VS-26	4.8	11 J
19-VS-27	6.1	1100 J
19-VS-28	17	240 J
19-VS-29	9.8	270 J
19-VS-31	380	2500 J
19-VS-34	15	3800 J
19-VS-36	21	180
19-VS-38	5.4	13
19-VS-39	20	53
19-VS-40	18	82
19-VS-41	170	850
19-VS-44	5.8	24
19-VS-45	3.85	18.5
19-VS-46	69	140
19-VS-47	6.5	240
19-VS-47A	210	400
19-VS-48	8.7	360
19-VS-48A	53	40
19-VS-49	6.1	250
19-VS-49A	8.3	7.8
19-VS-50A	88	295
19-VS-51A	79	95
19-VS-52	12	150
19-VS-52A	63	20
19-VS-53	6.5	310
19-VS-53A	11	7.8
19-VS-54	140	160
19-VS-54A	58	270
19-VS-57	2 U	6.1 U
19-VS-58	3.1	190
19-VS-59	4.6	680
19-VS-60	2 U	6.1 U
19-VS-61	1.9 U	5.8 U
19-VS-62	19	110
26-VS-1	7.1	2500 J
26-VS-10	12	1700 J
26-VS-11	13	2400 J

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
26-VS-12	15	430 J
26-VS-13	22	510 J
26-VS-14	8.6	78 J
26-VS-15	25	57 J
26-VS-16	12	2400 J
26-VS-17	9.8	3500
26-VS-18	4.6	1300
26-VS-19	3.6	3400
26-VS-2	22	1100 J
26-VS-20	11	2700
26-VS-21	3.1	160
26-VS-22	2.9	59
26-VS-24	8.5	380
26-VS-25	3.6	1200
26-VS-27	6.9	14
26-VS-27A	4.1	15
26-VS-28	52	43
26-VS-28A	11	3300
26-VS-29	34	73
26-VS-29A	24	2000
26-VS-3	13	660 J
26-VS-30	45	19
26-VS-30A	29	850
26-VS-31	5.3	5.1
26-VS-31A	4.7	110
26-VS-33	28	4.9
26-VS-34	15	5.3
26-VS-35	6	3.7
26-VS-36	220	84
26-VS-37	3	6.9
26-VS-38	17	29
26-VS-4	26	810 J
26-VS-40	4.8	19
26-VS-41	11	8.2
26-VS-42	15	16
26-VS-43	6.3	4
26-VS-44	180	24
26-VS-5	3.7	37 J
26-VS-50	22	430
26-VS-51	16	2400
26-VS-52	89	2100
26-VS-54	2.5 U	2600
26-VS-55	18	3800
26-VS-56	2.95	525
26-VS-58	6.5	470
26-VS-6	4.1	200 J
26-VS-8	4.2	400 J
26-VS-9A	3.8	100

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
36-VS-10	9	1800
36-VS-11	4	100
36-VS-12	2.4	44
36-VS-13	120	93
36-VS-15	47	3800
36-VS-16	91	460
36-VS-17	240	210
36-VS-18	330	14
36-VS-19	28	170
36-VS-20	6.2	11
36-VS-21	4.1 U	6.9
36-VS-22	22	700
36-VS-5	5.9	280
36-VS-6	2.7	9.4
36-VS-8	3	37
36-VS-9	2.1 U	23
38-VS-10	7.7	8
38-VS-100	39	13
38-VS-101a	14	30
38-VS-102a	17	10
38-VS-103	45	63
38-VS-104	20	13
38-VS-105	21	9.9
38-VS-106	110	35
38-VS-107	2 U	2.3
38-VS-108	99	24
38-VS-109	11	10
38-VS-110	160	27
38-VS-111	34	40
38-VS-112	88	37
38-VS-113	430	1500
38-VS-114	15	12
38-VS-115	110	110
38-VS-116	12	49
38-VS-117	27.5 J	10.85 J
38-VS-118	20	13
38-VS-119	51	52
38-VS-12	29	38
38-VS-120	76	77
38-VS-121	35	87
38-VS-122	150	110
38-VS-123	91	73
38-VS-124	24	32
38-VS-125	23	16
38-VS-126	37	13
38-VS-127	21	13
38-VS-128	3.8	4.9
38-VS-129	6.3	6.5

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
38-VS-13	16	15
38-VS-130	20	35
38-VS-131	67	71
38-VS-133	8.1	26
38-VS-134	74	22
38-VS-135	15	590
38-VS-136	150	11
38-VS-14	21	14
38-VS-15	19	15
38-VS-16	23	35
38-VS-17	290	48
38-VS-18	13	20
38-VS-19	53	45
38-VS-20	5.1	6.6
38-VS-21	5.3	5.6
38-VS-22	21	36
38-VS-23	17	22
38-VS-24	76	48
38-VS-25	170	53
38-VS-26	100	8.5
38-VS-27	50	100
38-VS-28	8	6.1
38-VS-29	3.5	5.1
38-VS-30	120	19
38-VS-31	7.2	4.4
38-VS-32	49	64
38-VS-33	4.3	5.6
38-VS-34	51	20
38-VS-35	12	39
38-VS-36	210	47
38-VS-38	21	24
38-VS-39	84	20
38-VS-40	260	110
38-VS-41	10	8
38-VS-42	14	4.9
38-VS-43	5.7	3.2
38-VS-44	20	4.5
38-VS-45	340	56
38-VS-47	70	23.5
38-VS-48	185	35.5
38-VS-50	30	23
38-VS-51	25	12
38-VS-52	38	64
38-VS-53	140	170
38-VS-54	37	20
38-VS-55	120	39
38-VS-56	970	100
38-VS-57	45	44

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
38-VS-58	19	18
38-VS-59	35	19
38-VS-60	39	25
38-VS-61	84	150
38-VS-62	8.9	11
38-VS-63	21	12
38-VS-64	67	60
38-VS-65	170	63
38-VS-66	280	39
38-VS-67	15	11
38-VS-69	120	100
38-VS-70	13	9.6
38-VS-71	110	15
38-VS-72	77	150
38-VS-73	69	100
38-VS-75	150	77
38-VS-77	11	12
38-VS-78	16	10
38-VS-79	370	310
38-VS-8	8.7	22
38-VS-81	290	98
38-VS-82	24	24
38-VS-83	33	140
38-VS-84	5	5.8
38-VS-85	16	15
38-VS-86	11	35
38-VS-87	480	120
38-VS-88	16	21
38-VS-89	270	210
38-VS-90	350	1300
38-VS-91	26	24
38-VS-92	49	210
38-VS-93	16	46
38-VS-94	75	21
38-VS-97	35	60
38-VS-98	310	32
38-VS-99	9.7	4.4
5-VS-100	63	300
5-VS-101	1.9	25
5-VS-102	21	280
5-VS-103	230	49
5-VS-104	320	100
5-VS-105	30	230
5-VS-106	140	160
5-VS-107	21	71
5-VS-108	90	170
5-VS-109	60	130
5-VS-110	130	1200

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
5-VS-111	18	23
5-VS-112	81	86
5-VS-113	370	51
5-VS-114	190	18
5-VS-115	220	190
5-VS-118	94	18
5-VS-120	120	120
5-VS-122	490	28
5-VS-125	1500	4.7
5-VS-126	1500	22
5-VS-99	78	260
7-VS-1	7.6	88
7-VS-2	2.5	110
7-VS-20	3.2	510
7-VS-21	2.2 U	21
7-VS-22	3.2	26
7-VS-23	2.7	38
7-VS-24	2.5	29
7-VS-3	3.6	61
7-VS-4	3.3	66
7-VS-5	2.6	120
7-VS-6	2 U	30
7-VS-7	2.1 U	36
7-VS-8	2.1 U	48
APC-VS-1	27	1000
APC-VS-10	22	2700
APC-VS-12	38	4100
APC-VS-13	3.1	150
APC-VS-14	11	2300
APC-VS-15	6.2	110
APC-VS-16	3.6	250
APC-VS-17	21.5	2300
APC-VS-2	17	38
APC-VS-3	24	67
APC-VS-4	19	210
APC-VS-5	6.2	37
APC-VS-6	3.3	8
APC-VS-7	7.3	140
APC-VS-8	4.9	31
APC-VS-9	4.6	1400
APF-VS-1	250	36
APF-VS-10	180	24
APF-VS-11	26	25
APF-VS-12	300	24
APF-VS-13	29	9.1
APF-VS-14	6.4	2.2
APF-VS-15	2.2	2.8
APF-VS-16	3.7	3.6

Table C-1 – Hot Spot Data for Commercial, Golf Course, and Open Space Areas

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
APF-VS-2	30	32
APF-VS-3	470	29
APF-VS-4	350	59
APF-VS-5	2.8	3.6
APF-VS-6	2 U	2.4
APF-VS-7	2.3 U	2.5
APF-VS-8	4.1	6.5
APF-VS-9	100	66
LR181-VS-2	67	36
LR181-VS-3	29	38
LR181-VS-4	28	42
LR181-VS-5	10	8.3
LR181-VS-6	10	6.1
LR181-VS-7	5.8	5.8
LR181-VS-8	9.8	9.2
LR181-VS-9	54	65

C.2 Hot Spot Data for the Industrial Area

Table C-2 – Hot Spot Data for Burning Ground Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-116	4.5	100
31-VS-117	4.9	10
31-VS-118	5.7	230
31-VS-122	7.5	640
31-VS-123	6.4	170
31-VS-124	4.8	53
31-VS-125	9	300
31-VS-127	5.9	300
31-VS-129	55	400
31-VS-131	5.5	100
31-VS-134	3.8	11
31-VS-138	5.1	29
31-VS-139	4.6	28
31-VS-140	8.7	200
31-VS-141	5.3	87
31-VS-142	6.4	180
31-VS-145	8.2	440
31-VS-147	15	570
31-VS-148	4.3	54
31-VS-150	3.7	43
31-VS-151	4.4	41
31-VS-154	6.5	69
31-VS-155	11	280
31-VS-158	9.4	450
31-VS-159	4.2	190
31-VS-163	7.6	170
31-VS-164	5.5	9.1
31-VS-165	9.2	59
31-VS-166	3.3	15
31-VS-167	4.7	67
31-VS-168	4	74
31-VS-169	3.1	31
31-VS-170	3.9	24
31-VS-172	3.4	5.2
31-VS-173	5.1	17
31-VS-174	5.2	18
31-VS-175	6.5	270
31-VS-177	6.3	33
31-VS-178	1.8 U	1.5
31-VS-179	3.6	3.6
31-VS-180	3.1	4.8
31-VS-181	2.7	6.1 U
31-VS-182	3.5	6.1
31-VS-183	2.3	3

Table C-2 – Hot Spot Data for Burning Ground Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-186	2.5	4.8
31-VS-188	3.1	5.8 U
31-VS-190	2.8	5.6 U
31-VS-192	2.1	5.8 U
31-VS-194	2.6	6.1 U
31-VS-195	3.5	240
31-VS-197	3.1	6.6 U
31-VS-198	3.1	17
31-VS-200	3.8	77
31-VS-201	4.4	500
31-VS-202	2.6	5.8 U
31-VS-203	2.9	6 U
31-VS-205	2.1	6.2 U
31-VS-206	2	5.4 U
31-VS-208	1.8 U	5.5 U
31-VS-209	2.3	90
31-VS-210	2.7	5.5 U
31-VS-216	2.3	6.1 U
31-VS-26	18	94
31-VS-27	14	140
31-VS-28	8.7	140
31-VS-29	21	360
31-VS-32	27	470
31-VS-34	17	230
31-VS-38	8.8	210
31-VS-39	5.8	550
31-VS-40	5.8	730
31-VS-401	2.1 U	10
31-VS-402	3.1	250
31-VS-403	2.1 U	8.8
31-VS-404	2.2 U	2.3
31-VS-405	2 U	42
31-VS-406	2.3 U	3.2
31-VS-407	2 U	2 U
31-VS-408	1.8 U	1.8 U
31-VS-409	2.5	2 U
31-VS-41	4.4	33
31-VS-410	1.8 U	5.9
31-VS-411	2 U	2 U
31-VS-412	2.1 U	2.1 U
31-VS-413	2.2 U	9.8
31-VS-414	2 U	2.1
31-VS-415	2.1 U	5.3
31-VS-416	2.1 U	2.1 U

Table C-2 – Hot Spot Data for Burning Ground Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-417	2.1 U	2.1 U
31-VS-418	2.9	4
31-VS-42	5.3	200
31-VS-43	3.8	220
31-VS-434	2.6 U	2.6 U
31-VS-435	130	3.7
31-VS-436	2.1 U	2.1 U
31-VS-437	2.7	2.5
31-VS-438	2.6	2.6
31-VS-443	4.4	2.5
31-VS-444	2.6	3
31-VS-45	3.2	940
31-VS-46	4.1	1000
31-VS-501	6.3 U	38
31-VS-502	6.2 U	9.4
31-VS-503	6.1 U	19
31-VS-506	4.2	3.4
31-VS-511	4.2	4.2
31-VS-512	4	3.5
31-VS-513	4.1	3.3
31-VS-514	2	2.1
31-VS-515	3.8	2.4
31-VS-516	3.9	2.9
31-VS-517	3.4	2.8
31-VS-518	4.8	5.5
31-VS-520	3.3	3.7
31-VS-521	5.4	5.7
31-VS-522	5	4
31-VS-523	27	25
31-VS-524	33	5.9
31-VS-57	4	280
31-VS-58	9	770
31-VS-59	5.3	500
31-VS-60	3.3	30
31-VS-606	6.7	4.9
31-VS-61	5.8	670
31-VS-63	4.8	83
31-VS-64	4.9	120
31-VS-65	6.2	350
31-VS-66	11	640
31-VS-69	14	450
31-VS-70	4.9	190
31-VS-71	2 U	7.8
31-VS-72	4.9	31

Table C-2 – Hot Spot Data for Burning Ground Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-73	3	33
31-VS-83	13.5	1050

Table C-3 – Hot Spot Data for Burning Ground Excavation – Outside Samples

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-SS-600	26	28
31-SS-601	88	2000
31-SS-602	71	170
31-SS-603	87	36
31-SS-606	63	180
31-SS-608	46	200
31-SS-609	52	250
31-SS-610	12	40
31-SS-614	120	250
31-SS-621	96	220
31-SS-624	63	78
31-SS-626	9.4	77
31-SS-627	4.6 U	4.1
31-SS-628	33	1100
31-SS-629	64	1300
31-SS-631	120	240
31-SS-632	43	160
31-SS-635	25	97
31-SS-639	15	47
31-SS-640	10	15
31-SS-644	68	200
31-SS-645	66	110
31-SS-646	20	3.1
31-SS-650	76	200
31-VS-136	12	49
31-VS-144	23	230
31-VS-149	8.2	180
31-VS-161	33	450
31-VS-211	9.5	93
31-VS-212	45	200
31-VS-439	5.6	2.8 U
31-VS-440	25	20
31-VS-441	30	12
31-VS-442	8.1	9.5
31-VS-446	17	9.7
31-VS-508	15	15
31-VS-509	4.9	7.3
31-VS-510	6.8	9.4
31-VS-584	57	79

Table C-3 – Hot Spot Data for Burning Ground Excavation – Outside Samples

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-585	150	150
31-VS-76	14	180
31-VS-77	27	180

Table C-4 – Hot Spot Data for Narrow Gauge Railroad Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-110	8.6	22 J
31-VS-111	16	39 J
31-VS-217	3.7	6.2 U
31-VS-421	31	25
31-VS-423	8.2	5.1
31-VS-429	44	11
31-VS-432	2.3	6
31-VS-525	9	7.1
31-VS-526	15	7.35
31-VS-528	5.3	7.1
31-VS-531	16	32
31-VS-532	96	71
31-VS-534	3.6	3.6
31-VS-535	5.2	2.9
31-VS-539	6.5	2.7
31-VS-540	3.1	2.15 U
31-VS-542	4.4	6.3
31-VS-543	8.3	6.7
31-VS-544	49	41
31-VS-545	39	45
31-VS-546	100	150
31-VS-547	16	23
31-VS-548	47	110
31-VS-549	3.3	5.3
31-VS-550	13	8.9
31-VS-551	6.1	4.9
31-VS-552	5.2	4.6
31-VS-553	5.7	4.1
31-VS-554	11	20
31-VS-555	5.9	4.3
31-VS-557	10.95	21.65
31-VS-558	11	14
31-VS-559	14	9.9
31-VS-573	8.2	5.3
31-VS-574	9.3	9
31-VS-575	7.5	4.6
31-VS-576	4.6	4.5
31-VS-611	33	11
31-VS-612	9.9	23
31-VS-613	26	13
31-VS-614	17	7.8
31-VS-615	10.5	13
31-VS-616	11	20
31-VS-617	7.9	51

Table C-4 – Hot Spot Data for Narrow Gauge Railroad Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-618	13	9.4
31-VS-619	11	12
31-VS-621	19	49
31-VS-622	6.2	4.6
31-VS-623	7.1	3.7
31-VS-624	7	5.65
31-VS-625	7.1	8.3
31-VS-626	8.2	9.4
31-VS-630	7.1	6
31-VS-632	6.5	5.5
31-VS-633	6.3	15
31-VS-636	72	390
31-VS-637	18	40
31-VS-638	8.3	7.9
31-VS-639	31 J	85.5 J
31-VS-640	7.8	6.2
31-VS-641	23	72
31-VS-654	8.2	5.4
31-VS-655	9.8	7.6
31-VS-657	4.8	7.6
31-VS-659	4.4	9.3
31-VS-660	4	4.9
31-VS-661	4.1	4.4
31-VS-663	16	23
31-VS-665	14	13
31-VS-666	41	15
31-VS-668	44	22
31-VS-669	8.45	5.5
31-VS-671	6.8	4
31-VS-672	3.8	4
31-VS-674	37	5.2
31-VS-675	8.2	11
31-VS-677	20	80
31-VS-678	6.1	19
31-VS-680	26	47
31-VS-681	7	5.2
31-VS-683	11	11
31-VS-685	49	26
31-VS-714	3.1	3.5
31-VS-715	14	10
31-VS-716	4.1	3.5
31-VS-717	5.5	4.7
31-VS-718	2.9	2.9
31-VS-719	5.7	7.6

Table C-4 – Hot Spot Data for Narrow Gauge Railroad Excavation

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-720	8	6.4
31-VS-721	17	93
31-VS-722	8.5	9.2
31-VS-723	15	90
31-VS-725	4	2.45
31-VS-726	13	23
31-VS-90	5.5	3.5
31-VS-91	7.6	5.1
31-VS-92	47	13
31-VS-93	21	9.3
31-VS-94A	8.4	13
31-VS-96A	39	12
31-VS-99A	25	12

Table C-5 – Hot Spot Data for Narrow Gauge Railroad Excavation – Outside Samples

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-107	65	140
31-VS-419	23	9.6
31-VS-420	52	45
31-VS-422	13	360
31-VS-424	46	17
31-VS-425	9.6	28
31-VS-427	9.5	6.3
31-VS-428	36	46
31-VS-430	81	27
31-VS-431	8	26
31-VS-433	93	32
31-VS-529	18	320
31-VS-530	11	12
31-VS-533	38	53
31-VS-536	19	140
31-VS-566	37	49
31-VS-567	9.4	16
31-VS-577	10.6	25.5
31-VS-591	75	570
31-VS-592	19	97
31-VS-595	22	43
31-VS-596	18	25
31-VS-597	14	50.5
31-VS-600	20	53
31-VS-601	27	59
31-VS-607	110	46
31-VS-631	11	12
31-VS-634	110	16
31-VS-635	6.8	7.1
31-VS-642	58	380
31-VS-643	98	160
31-VS-644	37	95
31-VS-650	63	47
31-VS-651	75	27
31-VS-653	20	23
31-VS-656	52	27
31-VS-658	32	490
31-VS-662	18	13
31-VS-670	16	7.1
31-VS-679	8	8.25
31-VS-682	71	23
31-VS-684	49	38
31-VS-700	14	15

Table C-5 – Hot Spot Data for Narrow Gauge Railroad Excavation – Outside Samples

Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
31-VS-701	46	52
31-VS-702	34	27
31-VS-703	11	14
31-VS-704	8.8	4.6
31-VS-705	9.3	160
31-VS-706	5.9	31
31-VS-707	22	95
31-VS-708	26	830
31-VS-709	6.1	180
31-VS-710	15	36
31-VS-711	2 U	7.2
31-VS-712	3.4	6.7
31-VS-88	81	98

Table C-6 – Hot Spot Data for RR-546 Excavation

Data Set	Sample Number	Arsenic (mg/kg)	Lead (mg/kg)
RR-546	31-VS-100	20	7.8
RR-546	31-VS-101	54	35
RR-546	31-VS-102	6.9	8.8
RR-546	31-VS-103	6.8	7.5
RR-546	31-VS-104	27	7.4
RR-546	31-VS-579	17	4.6
RR-546	31-VS-583	9.8	3.6
RR-546 – Outside Samples	31-VS-580	68	70
RR-546 – Outside Samples	31-VS-581	62	42
RR-546 – Outside Samples	31-VS-582	59	46
RR-546 – Outside Samples	31-VS-94	59	56
RR-546 – Outside Samples	31-VS-95	30	66
RR-546 – Outside Samples	31-VS-96	89	150
RR-546 – Outside Samples	31-VS-98	51	10
RR-546 – Outside Samples	31-VS-99	47	50

Table C-7 – Hot Spot Data for Area 10 Excavation

Data Set	Sample Number	Datagroup	2,4,6-Trinitrotoluene (mg/kg)
Area 10	10-VS-1a	Explosive	0.051 U
Area 10 – Outside Samples	10-VS-2a	Explosive	0.059 U

C.3 Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
10-TP-502-S-2	Explosive	1,3,5-Trinitrobenzene	0.17	U	mg/kg
10-TP-502-S-2	Explosive	1,3-Dinitrobenzene	0.22	U	mg/kg
10-TP-502-S-2	Explosive	2,4,6-Trinitrotoluene	0.45		mg/kg
10-TP-502-S-2	Explosive	2,4-Dinitrotoluene	0.033	U	mg/kg
10-TP-502-S-2	Explosive	2,6-Dinitrotoluene	0.033	U	mg/kg
10-TP-502-S-2	Explosive	Monomethylamine Nitrate	5.6	U	mg/kg
10-TP-502-S-2	Explosive	Nitrobenzene	0.33	U	mg/kg
10-TP-502-S-2	Explosive	Nitroglycerine	0.22	U	mg/kg
10-TP-502-S-2	Metal (Total)	Aluminum	14,000		mg/kg
10-TP-502-S-2	Metal (Total)	Antimony	0.26	UJ	mg/kg
10-TP-502-S-2	Metal (Total)	Arsenic	3.7		mg/kg
10-TP-502-S-2	Metal (Total)	Beryllium	0.23		mg/kg
10-TP-502-S-2	Metal (Total)	Cadmium	0.04		mg/kg
10-TP-502-S-2	Metal (Total)	Chromium	22		mg/kg
10-TP-502-S-2	Metal (Total)	Copper	13		mg/kg
10-TP-502-S-2	Metal (Total)	Lead	5.6	U	mg/kg
10-TP-502-S-2	Metal (Total)	Mercury	0.08	U	mg/kg
10-TP-502-S-2	Metal (Total)	Nickel	24		mg/kg
10-TP-502-S-2	Metal (Total)	Selenium	0.27	U	mg/kg
10-TP-502-S-2	Metal (Total)	Silver	0.018	UJ	mg/kg
10-TP-502-S-2	Metal (Total)	Thallium	0.27	U	mg/kg
10-TP-502-S-2	Metal (Total)	Zinc	24		mg/kg
10-TP-502-S-2	PAH (Carc)	Benzo(a)Anthracene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Carc)	Benzo(a)Pyrene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Carc)	Benzo(b)Fluoranthene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Carc)	Benzo(k)Fluoranthene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Carc)	Chrysene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Carc)	Dibenzo(a,h)Anthracene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Carc)	Indeno(1,2,3-c,d)Pyrene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	2-Methylnaphthalene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Acenaphthene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Acenaphthylene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Anthracene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Benzo(g,h,i)Perylene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Fluoranthene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Fluorene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Naphthalene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Phenanthrene	0.18	U	mg/kg
10-TP-502-S-2	PAH (Non-Carc)	Pyrene	0.18	U	mg/kg
10-TP-502-S-2	Semivolati le	1,2,4-Trichlorobenzene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	1,2-Dichlorobenzene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	1,3-Dichlorobenzene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	1,4-Dichlorobenzene	0.18	U	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
10-TP-502-S-2	Semivolatile	2,4,5-Trichlorophenol	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	2,4,6-Trichlorophenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	2,4-Dichlorophenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	2,4-Dimethylphenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	2,4-Dinitrophenol	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	2-Chloronaphthalene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	2-Chlorophenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	2-Methylphenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	2-Nitroaniline	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	2-Nitrophenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	3,3'-Dichlorobenzidine	0.37	U	mg/kg
10-TP-502-S-2	Semivolatile	3-Nitroaniline	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	4,6-Dinitro-2-Methylphenol	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	4-Bromophenyl Phenyl Ether	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	4-Chloroaniline	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	4-Chlorophenyl-Phenylether	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	4-Methylphenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	4-Nitroaniline	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	4-Nitrophenol	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	Aniline	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Benzidine	1.8	U	mg/kg
10-TP-502-S-2	Semivolatile	Benzoic Acid	0.94	U	mg/kg
10-TP-502-S-2	Semivolatile	Benzyl Alcohol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Bis(2-Chloroethoxy) Methane	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Bis(2-Chloroethyl) Ether	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Bis(2-Chloroisopropyl) Ether	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Bis(2-Ethylhexyl)Phthalate	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Butylbenzylphthalate	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Dibenzofuran	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Diethylphthalate	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Dimethylphthalate	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Di-N-Butylphthalate	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Di-N-Octylphthalate	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Hexachlorobenzene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Hexachlorobutadiene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Hexachlorocyclopentadiene	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Hexachloroethane	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Isophorone	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	N-Nitroso-Dimethylamine	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	N-Nitroso-Di-Phenylamine	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	N-Nitroso-Di-Propylamine	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Pentachlorophenol	0.18	U	mg/kg
10-TP-502-S-2	Semivolatile	Phenol	0.18	U	mg/kg
10-VS-3	Explosive	1,3,5-Trinitrobenzene	0.23		mg/kg
10-VS-3	Explosive	1,3-Dinitrobenzene	0.1	U	mg/kg
10-VS-3	Explosive	2,4,6-Trinitrotoluene	130		mg/kg
10-VS-3	Explosive	2,4-Dinitrotoluene	0.97		mg/kg
10-VS-3	Explosive	2,6-Dinitrotoluene	0.018		mg/kg
10-VS-3	Explosive	Nitrobenzene	0.16	U	mg/kg
10-VS-5	Explosive	1,3,5-Trinitrobenzene	0.076	U	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
10-VS-5	Explosive	1,3-Dinitrobenzene	0.1	U	mg/kg
10-VS-5	Explosive	2,4,6-Trinitrotoluene	10		mg/kg
10-VS-5	Explosive	2,4-Dinitrotoluene	0.015	U	mg/kg
10-VS-5	Explosive	2,6-Dinitrotoluene	0.015	U	mg/kg
10-VS-5	Explosive	Nitrobenzene	0.15	U	mg/kg
30-VS-1	Metal (Total)	Aluminum	10,000		mg/kg
30-VS-1	Metal (Total)	Antimony	0.52	J	mg/kg
30-VS-1	Metal (Total)	Arsenic	10	J	mg/kg
30-VS-1	Metal (Total)	Beryllium	0.24		mg/kg
30-VS-1	Metal (Total)	Cadmium	5.6		mg/kg
30-VS-1	Metal (Total)	Chromium	10		mg/kg
30-VS-1	Metal (Total)	Copper	17		mg/kg
30-VS-1	Metal (Total)	Lead	400		mg/kg
30-VS-1	Metal (Total)	Mercury	0.086	U	mg/kg
30-VS-1	Metal (Total)	Nickel	14		mg/kg
30-VS-1	Metal (Total)	Selenium	0.29		mg/kg
30-VS-1	Metal (Total)	Silver	0.14		mg/kg
30-VS-1	Metal (Total)	Thallium	0.29	U	mg/kg
30-VS-1	Metal (Total)	Zinc	740		mg/kg
30-VS-1	TPH-418	TPH (418.1)	33		mg/kg
30-VS-1	TPH-8015	Diesel	25	U	mg/kg
30-VS-1	TPH-8015	Gasoline	14		mg/kg
30-VS-2	Metal (Total)	Aluminum	18,000		mg/kg
30-VS-2	Metal (Total)	Antimony	0.41	J	mg/kg
30-VS-2	Metal (Total)	Arsenic	16	J	mg/kg
30-VS-2	Metal (Total)	Beryllium	0.42		mg/kg
30-VS-2	Metal (Total)	Cadmium	3.6		mg/kg
30-VS-2	Metal (Total)	Chromium	12		mg/kg
30-VS-2	Metal (Total)	Copper	21		mg/kg
30-VS-2	Metal (Total)	Lead	250		mg/kg
30-VS-2	Metal (Total)	Mercury	0.11	U	mg/kg
30-VS-2	Metal (Total)	Nickel	14		mg/kg
30-VS-2	Metal (Total)	Selenium	0.4		mg/kg
30-VS-2	Metal (Total)	Silver	0.14		mg/kg
30-VS-2	Metal (Total)	Thallium	0.32	U	mg/kg
30-VS-2	Metal (Total)	Zinc	780		mg/kg
30-VS-2	TPH-418	TPH (418.1)	26	U	mg/kg
30-VS-2	TPH-8015	Diesel	25	U	mg/kg
30-VS-2	TPH-8015	Gasoline	13		mg/kg
31-B-1,S-1	Explosive	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-B-1,S-1	Explosive	2,4-Dinitrotoluene	0.07	U	mg/kg
31-B-1,S-1	Explosive	2,6-Dinitrotoluene	0.07	U	mg/kg
31-B-1,S-1	Explosive	Nitroglycerine	0.19	U	mg/kg
31-B-1,S-1	General Chem	Moisture	10.7		%
31-B-1,S-1	Metal (Total)	Lead	30,000		mg/kg
31-B-1,S-1	TPH-8015	Oil And Grease	20	X	mg/kg
31-B-1,S-3	Explosive	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-B-1,S-3	Explosive	2,4-Dinitrotoluene	0.07	U	mg/kg
31-B-1,S-3	Explosive	2,6-Dinitrotoluene	0.07	U	mg/kg
31-B-1,S-3	Explosive	Nitroglycerine	0.18	U	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
31-B-1,S-3	General Chem	Moisture	6.5		%
31-B-1,S-3	Metal (Total)	Lead	6	J	mg/kg
31-B-1,S-3	TPH-8015	Oil And Grease	20	UX	mg/kg
31-B-1,S-5	Explosive	2,4,6-Trinitrotoluene	0.07	U	mg/kg
31-B-1,S-5	Explosive	2,4-Dinitrotoluene	0.07	U	mg/kg
31-B-1,S-5	Explosive	2,6-Dinitrotoluene	0.07	U	mg/kg
31-B-1,S-5	Explosive	Nitroglycerine	0.18	U	mg/kg
31-B-1,S-5	General Chem	Moisture	5.9		%
31-B-1,S-5	Metal (Total)	Lead	2,400		mg/kg
31-B-1,S-5	TPH-8015	Oil And Grease	20	UX	mg/kg
31-B-501-S-1	Explosive	1,3,5-Trinitrobenzene	0.037	U	mg/kg
31-B-501-S-1	Explosive	1,3-Dinitrobenzene	0.05	U	mg/kg
31-B-501-S-1	Explosive	2,4,6-Trinitrotoluene	0.0037	U	mg/kg
31-B-501-S-1	Explosive	2,4-Dinitrotoluene	0.0074	U	mg/kg
31-B-501-S-1	Explosive	2,6-Dinitrotoluene	0.25		mg/kg
31-B-501-S-1	Explosive	Nitrobenzene	0.074	U	mg/kg
31-B-501-S-1	Metal (TCLP)	Lead	310		MG/L
31-B-501-S-1	Metal (Total)	Lead	25,000		mg/kg
31-B-503-S-1	Metal (Total)	Lead	110	J	mg/kg
31-B-504-S-1	Metal (Total)	Lead	84		mg/kg
31-HA-501-S-1	Metal (Total)	Lead	30		mg/kg
31-HA-502-S-1	Metal (Total)	Lead	170		mg/kg
31-SS-2	Metal (Total)	Lead	240,000		mg/kg
31-SS-401	Metal (Total)	Arsenic	4.6		mg/kg
31-SS-508	Metal (Total)	Lead	99		mg/kg
31-SS-510	Metal (TCLP)	Lead	7.5		MG/L
31-SS-510	Metal (Total)	Lead	1,900		mg/kg
31-SS-514	Metal (TCLP)	Lead	1.2		MG/L
31-SS-514	Metal (Total)	Lead	1,400		mg/kg
31-SS-515	Metal (TCLP)	Lead	11		MG/L
31-SS-515	Metal (Total)	Lead	3,600		mg/kg
31-SS-516	Metal (Total)	Lead	24		mg/kg
31-SS-517	Metal (Total)	Lead	54		mg/kg
31-SS-531	Metal (Total)	Lead	42		mg/kg
31-SS-532	Metal (Total)	Lead	190		mg/kg
31-SS-534	Metal (Total)	Lead	68		mg/kg
31-TP-10,S-1	Explosive	2,4,6-Trinitrotoluene	0.09	U	mg/kg
31-TP-10,S-1	Explosive	2,4-Dinitrotoluene	0.09	U	mg/kg
31-TP-10,S-1	Explosive	2,6-Dinitrotoluene	0.09	U	mg/kg
31-TP-10,S-1	Explosive	Nitroglycerine	0.23	U	mg/kg
31-TP-10,S-1	General Chem	Moisture	26.1		%
31-TP-10,S-1	Metal (Total)	Lead	5,500		mg/kg
31-TP-10,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-11,S-1	Explosive	2,4,6-Trinitrotoluene	0.09	U	mg/kg
31-TP-11,S-1	Explosive	2,4-Dinitrotoluene	0.09	U	mg/kg
31-TP-11,S-1	Explosive	2,6-Dinitrotoluene	0.07	U	mg/kg
31-TP-11,S-1	Explosive	Nitroglycerine	0.23	U	mg/kg
31-TP-11,S-1	General Chem	Moisture	27.4		%
31-TP-11,S-1	Metal (Total)	Lead	800		mg/kg
31-TP-11,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
31-TP-12,S-1	Explosive	2,4,6-Trinitrotoluene	0.09	U	mg/kg
31-TP-12,S-1	Explosive	2,4-Dinitrotoluene	0.09	U	mg/kg
31-TP-12,S-1	Explosive	2,6-Dinitrotoluene	0.09	U	mg/kg
31-TP-12,S-1	Explosive	Nitroglycerine	0.22	U	mg/kg
31-TP-12,S-1	General Chem	Moisture	23		%
31-TP-12,S-1	Metal (Total)	Lead	530		mg/kg
31-TP-12,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-13,S-1	Explosive	2,4,6-Trinitrotoluene	0.09	U	mg/kg
31-TP-13,S-1	Explosive	2,4-Dinitrotoluene	0.09	U	mg/kg
31-TP-13,S-1	Explosive	2,6-Dinitrotoluene	0.11		mg/kg
31-TP-13,S-1	Explosive	Nitroglycerine	0.23	U	mg/kg
31-TP-13,S-1	General Chem	Moisture	26.2		%
31-TP-13,S-1	Metal (Total)	Lead	17,000		mg/kg
31-TP-13,S-1	TPH-8015	Oil And Grease	130	X	mg/kg
31-TP-14,S-1	Explosive	2,4,6-Trinitrotoluene	0.09	U	mg/kg
31-TP-14,S-1	Explosive	2,4-Dinitrotoluene	0.09	U	mg/kg
31-TP-14,S-1	Explosive	2,6-Dinitrotoluene	0.09	U	mg/kg
31-TP-14,S-1	Explosive	Nitroglycerine	0.22	U	mg/kg
31-TP-14,S-1	General Chem	Moisture	23.8		%
31-TP-14,S-1	Metal (Total)	Lead	1,000		mg/kg
31-TP-14,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-15,S-1	Explosive	2,4,6-Trinitrotoluene	0.08	U	mg/kg
31-TP-15,S-1	Explosive	2,4-Dinitrotoluene	0.08	U	mg/kg
31-TP-15,S-1	Explosive	2,6-Dinitrotoluene	0.08	U	mg/kg
31-TP-15,S-1	Explosive	Nitroglycerine	0.19	U	mg/kg
31-TP-15,S-1	General Chem	Moisture	14.6		%
31-TP-15,S-1	Metal (Total)	Lead	6,500		mg/kg
31-TP-15,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-16,S-1	Explosive	2,4,6-Trinitrotoluene	0.08	U	mg/kg
31-TP-16,S-1	Explosive	2,4-Dinitrotoluene	0.08	U	mg/kg
31-TP-16,S-1	Explosive	2,6-Dinitrotoluene	0.08	U	mg/kg
31-TP-16,S-1	Explosive	Nitroglycerine	0.19	U	mg/kg
31-TP-16,S-1	General Chem	Moisture	12.6		%
31-TP-16,S-1	Metal (Total)	Lead	25,000		mg/kg
31-TP-16,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-17,S-1	Explosive	2,4,6-Trinitrotoluene	0.08	U	mg/kg
31-TP-17,S-1	Explosive	2,4-Dinitrotoluene	0.08	U	mg/kg
31-TP-17,S-1	Explosive	2,6-Dinitrotoluene	0.08	U	mg/kg
31-TP-17,S-1	Explosive	Nitroglycerine	0.19	U	mg/kg
31-TP-17,S-1	General Chem	Moisture	11.8		%
31-TP-17,S-1	Metal (Total)	Lead	50		mg/kg
31-TP-17,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-18,S-1	Explosive	2,4,6-Trinitrotoluene	0.08	U	mg/kg
31-TP-18,S-1	Explosive	2,4-Dinitrotoluene	0.08	U	mg/kg
31-TP-18,S-1	Explosive	2,6-Dinitrotoluene	0.08	U	mg/kg
31-TP-18,S-1	Explosive	Nitroglycerine	0.19	U	mg/kg
31-TP-18,S-1	General Chem	Moisture	11.3		%
31-TP-18,S-1	Metal (Total)	Lead	9	J	mg/kg
31-TP-18,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-20,S-1	Explosive	2,4,6-Trinitrotoluene	0.08	U	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
31-TP-20,S-1	Explosive	2,4-Dinitrotoluene	0.08	U	mg/kg
31-TP-20,S-1	Explosive	2,6-Dinitrotoluene	0.08	U	mg/kg
31-TP-20,S-1	Explosive	Nitroglycerine	0.19	U	mg/kg
31-TP-20,S-1	General Chem	Moisture	13		%
31-TP-20,S-1	Metal (Total)	Lead	7	J	mg/kg
31-TP-20,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-502-S-1	Metal (TCLP)	Lead	4.2		MG/L
31-TP-502-S-1	Metal (Total)	Lead	2,800		mg/kg
31-TP-502-S-1	PCB	PCB-1016	0.042	U	mg/kg
31-TP-502-S-1	PCB	PCB-1221	0.042	U	mg/kg
31-TP-502-S-1	PCB	PCB-1232	0.042	U	mg/kg
31-TP-502-S-1	PCB	PCB-1242	0.042	U	mg/kg
31-TP-502-S-1	PCB	PCB-1248	0.042	U	mg/kg
31-TP-502-S-1	PCB	PCB-1254	0.042	U	mg/kg
31-TP-502-S-1	PCB	PCB-1260	0.042	U	mg/kg
31-TP-504-S-1	Metal (Total)	Lead	190		mg/kg
31-TP-504-S-1	PCB	PCB-1016	0.044	U	mg/kg
31-TP-504-S-1	PCB	PCB-1221	0.044	U	mg/kg
31-TP-504-S-1	PCB	PCB-1232	0.044	U	mg/kg
31-TP-504-S-1	PCB	PCB-1242	0.044	U	mg/kg
31-TP-504-S-1	PCB	PCB-1248	0.044	U	mg/kg
31-TP-504-S-1	PCB	PCB-1254	0.044	U	mg/kg
31-TP-504-S-1	PCB	PCB-1260	0.044	U	mg/kg
31-TP-8,S-1	Explosive	2,4,6-Trinitrotoluene	0.09	U	mg/kg
31-TP-8,S-1	Explosive	2,4-Dinitrotoluene	0.064	J	mg/kg
31-TP-8,S-1	Explosive	2,6-Dinitrotoluene	0.17		mg/kg
31-TP-8,S-1	Explosive	Nitroglycerine	0.23	U	mg/kg
31-TP-8,S-1	General Chem	Moisture	29.1		%
31-TP-8,S-1	Metal (Total)	Lead	6,300		mg/kg
31-TP-8,S-1	TPH-8015	Oil And Grease	20	UX	mg/kg
31-TP-9,S-1	Explosive	2,4,6-Trinitrotoluene	0.1	U	mg/kg
31-TP-9,S-1	Explosive	2,4-Dinitrotoluene	0.75		mg/kg
31-TP-9,S-1	Explosive	2,6-Dinitrotoluene	1.4		mg/kg
31-TP-9,S-1	Explosive	Nitroglycerine	0.25	U	mg/kg
31-TP-9,S-1	General Chem	Moisture	34.2		%
31-TP-9,S-1	Metal (Total)	Lead	28,000		mg/kg
31-TP-9,S-1	TPH-8015	Oil And Grease	47	X	mg/kg
31-VS-1	Explosive	1,3,5-Trinitrobenzene	0.037	U	mg/kg
31-VS-1	Explosive	1,3-Dinitrobenzene	0.049	U	mg/kg
31-VS-1	Explosive	2,4,6-Trinitrotoluene	0.0037	U	mg/kg
31-VS-1	Explosive	2,4-Dinitrotoluene	0.0073	U	mg/kg
31-VS-1	Explosive	2,6-Dinitrotoluene	0.0073	U	mg/kg
31-VS-1	Explosive	Nitrobenzene	0.073	U	mg/kg
31-VS-1	Metal (Total)	Arsenic	2.9		mg/kg
31-VS-1	Metal (Total)	Lead	5.6	UJ	mg/kg
31-VS-1	Metal (Total)	Mercury	0.11	U	mg/kg
31-VS-1	TPH-418	TPH (418.1)	50	U	mg/kg
31-VS-10	Explosive	1,3,5-Trinitrobenzene	0.034	U	mg/kg
31-VS-10	Explosive	1,3-Dinitrobenzene	0.046	U	mg/kg
31-VS-10	Explosive	2,4,6-Trinitrotoluene	0.0034	U	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
31-VS-10	Explosive	2,4-Dinitrotoluene	0.007	U	mg/kg
31-VS-10	Explosive	2,6-Dinitrotoluene	0.007	U	mg/kg
31-VS-10	Explosive	Nitrobenzene	0.068	U	mg/kg
31-VS-10	Metal (Total)	Lead	7.6		mg/kg
31-VS-11	Explosive	1,3,5-Trinitrobenzene	0.036	U	mg/kg
31-VS-11	Explosive	1,3-Dinitrobenzene	0.048	U	mg/kg
31-VS-11	Explosive	2,4,6-Trinitrotoluene	0.0036	U	mg/kg
31-VS-11	Explosive	2,4-Dinitrotoluene	0.007	U	mg/kg
31-VS-11	Explosive	2,6-Dinitrotoluene	0.007	U	mg/kg
31-VS-11	Explosive	Nitrobenzene	0.071	U	mg/kg
31-VS-11	Metal (Total)	Lead	7		mg/kg
31-VS-12	Explosive	1,3,5-Trinitrobenzene	0.034	U	mg/kg
31-VS-12	Explosive	1,3-Dinitrobenzene	0.045	U	mg/kg
31-VS-12	Explosive	2,4,6-Trinitrotoluene	0.0034	U	mg/kg
31-VS-12	Explosive	2,4-Dinitrotoluene	0.007	U	mg/kg
31-VS-12	Explosive	2,6-Dinitrotoluene	0.007	U	mg/kg
31-VS-12	Explosive	Nitrobenzene	0.067	U	mg/kg
31-VS-12	Metal (Total)	Lead	50		mg/kg
31-VS-13	Metal (Total)	Arsenic	53		mg/kg
31-VS-13	Metal (Total)	Cadmium	16		mg/kg
31-VS-13	Metal (Total)	Lead	29,000	J	mg/kg
31-VS-13	Metal (Total)	Mercury	1.6		mg/kg
31-VS-14	Metal (Total)	Arsenic	38		mg/kg
31-VS-14	Metal (Total)	Cadmium	27		mg/kg
31-VS-14	Metal (Total)	Lead	56,000	J	mg/kg
31-VS-14	Metal (Total)	Mercury	5.9		mg/kg
31-VS-16	Explosive	1,3,5-Trinitrobenzene	0.91	U	mg/kg
31-VS-16	Explosive	1,3-Dinitrobenzene	1.2	U	mg/kg
31-VS-16	Explosive	2,4,6-Trinitrotoluene	0.091	U	mg/kg
31-VS-16	Explosive	2,4-Dinitrotoluene	0.18	U	mg/kg
31-VS-16	Explosive	2,6-Dinitrotoluene	0.34		mg/kg
31-VS-16	Explosive	Nitrobenzene	1.8	U	mg/kg
31-VS-16	Metal (Total)	Arsenic	42		mg/kg
31-VS-16	Metal (Total)	Cadmium	7.2		mg/kg
31-VS-16	Metal (Total)	Lead	75,000	J	mg/kg
31-VS-16	Metal (Total)	Mercury	1.1		mg/kg
31-VS-19	Explosive	1,3,5-Trinitrobenzene	0.037	U	mg/kg
31-VS-19	Explosive	1,3-Dinitrobenzene	0.049	U	mg/kg
31-VS-19	Explosive	2,4,6-Trinitrotoluene	0.0037	U	mg/kg
31-VS-19	Explosive	2,4-Dinitrotoluene	0.007	U	mg/kg
31-VS-19	Explosive	2,6-Dinitrotoluene	0.007	U	mg/kg
31-VS-19	Explosive	Nitrobenzene	0.073	U	mg/kg
31-VS-19	Metal (Total)	Arsenic	4.9		mg/kg
31-VS-19	Metal (Total)	Cadmium	0.091		mg/kg
31-VS-19	Metal (Total)	Lead	20		mg/kg
31-VS-19	Metal (Total)	Mercury	0.12	U	mg/kg
31-VS-2	Explosive	1,3,5-Trinitrobenzene	0.033	U	mg/kg
31-VS-2	Explosive	1,3-Dinitrobenzene	0.044	U	mg/kg
31-VS-2	Explosive	2,4,6-Trinitrotoluene	0.0033	U	mg/kg
31-VS-2	Explosive	2,4-Dinitrotoluene	0.0065	U	mg/kg

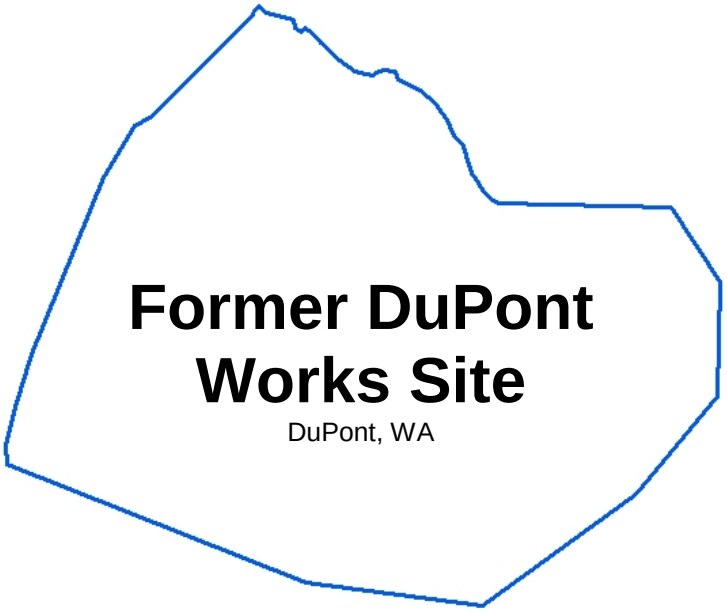
Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
31-VS-2	Explosive	2,6-Dinitrotoluene	0.0065	U	mg/kg
31-VS-2	Explosive	Nitrobenzene	0.065	U	mg/kg
31-VS-2	Metal (Total)	Arsenic	2		mg/kg
31-VS-2	Metal (Total)	Lead	5.5	UJ	mg/kg
31-VS-2	Metal (Total)	Mercury	0.1	U	mg/kg
31-VS-2	TPH-418	TPH (418.1)	50	U	mg/kg
31-VS-3	Explosive	1,3,5-Trinitrobenzene	0.036	U	mg/kg
31-VS-3	Explosive	1,3-Dinitrobenzene	0.048	U	mg/kg
31-VS-3	Explosive	2,4,6-Trinitrotoluene	0.0036	U	mg/kg
31-VS-3	Explosive	2,4-Dinitrotoluene	0.0072	U	mg/kg
31-VS-3	Explosive	2,6-Dinitrotoluene	0.0072	U	mg/kg
31-VS-3	Explosive	Nitrobenzene	0.072	U	mg/kg
31-VS-3	Metal (Total)	Arsenic	4.6		mg/kg
31-VS-3	Metal (Total)	Lead	20	J	mg/kg
31-VS-3	Metal (Total)	Mercury	0.13	U	mg/kg
31-VS-3	TPH-418	TPH (418.1)	50	U	mg/kg
31-VS-4	Explosive	1,3,5-Trinitrobenzene	0.035	U	mg/kg
31-VS-4	Explosive	1,3-Dinitrobenzene	0.047	U	mg/kg
31-VS-4	Explosive	2,4,6-Trinitrotoluene	0.0035	U	mg/kg
31-VS-4	Explosive	2,4-Dinitrotoluene	0.007	U	mg/kg
31-VS-4	Explosive	2,6-Dinitrotoluene	0.007	U	mg/kg
31-VS-4	Explosive	Nitrobenzene	0.069	U	mg/kg
31-VS-4	Metal (Total)	Arsenic	2.5		mg/kg
31-VS-4	Metal (Total)	Lead	6.3	J	mg/kg
31-VS-4	Metal (Total)	Mercury	0.12	U	mg/kg
31-VS-4	PAH (Carc)	Benzo(a)Anthracene	0.019	U	mg/kg
31-VS-4	PAH (Carc)	Benzo(a)Pyrene	0.019	U	mg/kg
31-VS-4	PAH (Carc)	Benzo(b)Fluoranthene	0.019	U	mg/kg
31-VS-4	PAH (Carc)	Benzo(k)Fluoranthene	0.019	U	mg/kg
31-VS-4	PAH (Carc)	Chrysene	0.019	U	mg/kg
31-VS-4	PAH (Carc)	Dibenzo(a,h)Anthracene	0.04	U	mg/kg
31-VS-4	PAH (Carc)	Indeno(1,2,3-c,d)Pyrene	0.019	U	mg/kg
31-VS-4	PAH (Non-Carc)	Acenaphthene	0.19	U	mg/kg
31-VS-4	PAH (Non-Carc)	Acenaphthylene	0.19	U	mg/kg
31-VS-4	PAH (Non-Carc)	Anthracene	0.0097	U	mg/kg
31-VS-4	PAH (Non-Carc)	Benzo(g,h,i)Perylene	0.019	U	mg/kg
31-VS-4	PAH (Non-Carc)	Fluoranthene	0.019	U	mg/kg
31-VS-4	PAH (Non-Carc)	Fluorene	0.019	U	mg/kg
31-VS-4	PAH (Non-Carc)	Naphthalene	0.097	U	mg/kg
31-VS-4	PAH (Non-Carc)	Phenanthrene	0.0097	U	mg/kg
31-VS-4	PAH (Non-Carc)	Pyrene	0.019	U	mg/kg
31-VS-4	TPH-418	TPH (418.1)	24	U	mg/kg
31-VS-5	Explosive	1,3,5-Trinitrobenzene	0.035	U	mg/kg
31-VS-5	Explosive	1,3-Dinitrobenzene	0.047	U	mg/kg
31-VS-5	Explosive	2,4,6-Trinitrotoluene	0.0035	U	mg/kg
31-VS-5	Explosive	2,4-Dinitrotoluene	0.0071	U	mg/kg
31-VS-5	Explosive	2,6-Dinitrotoluene	0.0071	U	mg/kg
31-VS-5	Explosive	Nitrobenzene	0.07	U	mg/kg
31-VS-5	Metal (Total)	Arsenic	1.9		mg/kg
31-VS-5	Metal (Total)	Lead	19	J	mg/kg

Table C-8 – Historical Data in the Industrial Area that Were Removed During the Hot Spot Program

Sample Number	Datagroup	Analyte	Result	Qualifier	Units
31-VS-5	Metal (Total)	Mercury	0.12	U	mg/kg
31-VS-5	TPH-418	TPH (418.1)	72		mg/kg
31-VS-6	Explosive	1,3,5-Trinitrobenzene	0.037	U	mg/kg
31-VS-6	Explosive	1,3-Dinitrobenzene	0.049	U	mg/kg
31-VS-6	Explosive	2,4,6-Trinitrotoluene	0.0037	U	mg/kg
31-VS-6	Explosive	2,4-Dinitrotoluene	0.0073	U	mg/kg
31-VS-6	Explosive	2,6-Dinitrotoluene	0.0073	U	mg/kg
31-VS-6	Explosive	Nitrobenzene	0.073	U	mg/kg
31-VS-6	Metal (Total)	Arsenic	5.3		mg/kg
31-VS-6	Metal (Total)	Lead	220	J	mg/kg
31-VS-6	Metal (Total)	Mercury	0.13	U	mg/kg
31-VS-6	TPH-418	TPH (418.1)	88		mg/kg
31-VS-9	Explosive	1,3,5-Trinitrobenzene	0.034	U	mg/kg
31-VS-9	Explosive	1,3-Dinitrobenzene	0.046	U	mg/kg
31-VS-9	Explosive	2,4,6-Trinitrotoluene	0.0034	U	mg/kg
31-VS-9	Explosive	2,4-Dinitrotoluene	0.007	U	mg/kg
31-VS-9	Explosive	2,6-Dinitrotoluene	0.007	U	mg/kg
31-VS-9	Explosive	Nitrobenzene	0.068	U	mg/kg
31-VS-9	Metal (Total)	Lead	5.5	U	mg/kg
LR-102E	Metal (Total)	Lead	30		mg/kg
LR-103	Metal (Total)	Arsenic	42	J	mg/kg
LR-104	Metal (TCLP)	Arsenic	0.091		MG/L
LR-104	Metal (Total)	Arsenic	690	J	mg/kg
LR-104	Metal (Total)	Lead	36		mg/kg
LR-104 6"-12"	Metal (Total)	Arsenic	58		mg/kg
RR-546	Metal (TCLP)	Arsenic	0.14		MG/L
RR-546	Metal (Total)	Arsenic	950	J	mg/kg
RR-546-A	Metal (Total)	Arsenic	640		mg/kg
RR-546-B	Metal (Total)	Arsenic	81		mg/kg
RR-546-S-2	Metal (Total)	Arsenic	45	J	mg/kg
RR-546-S-3	Metal (Total)	Arsenic	23	J	mg/kg
RR-595	Metal (Total)	Arsenic	570		mg/kg
RR-595	Metal (Total)	Lead	89	J	mg/kg
RR-595-S-2	Metal (Total)	Arsenic	150	J	mg/kg
RR-595-S-2	Metal (Total)	Lead	24		mg/kg

FINAL
Human Health and Ecological Risk Assessment for the Former DuPont Works Site



Prepared For:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared By:

PIONEER TECHNOLOGIES CORPORATION

2612 Yelm Hwy SE, Suite B
Olympia, WA 98501-4826
Phone: 360.570.1700
Fax: 360.570.1777
www.uspioneer.com

July 2003

Preface

P.1 Introduction

These Volumes present information developed as part of the Final Remedial Investigation, Risk Assessment, and Feasibility Study (RI/RA/FS) for the Former DuPont Works Site (Site) located in DuPont, WA (See Figure P-1). These reports were stipulated in a Consent Decree, effective July 1991, between the lead agency, Washington State Department of Ecology (Ecology), and the principle responsible parties, Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont). Per the Consent Decree, the reports were developed in accordance with the Model Toxics Control Act Cleanup Regulation (MTCA). Draft RI/RA/FS reports were completed in 1994 and 1995, submitted to Ecology, and underwent public review. The draft Final RI/RA/FS reports, presented here, have been developed to satisfy comments on the draft reports and to accurately reflect existing conditions and future land use at the Site. In addition, these reports incorporate a variety of agreements that have been reached with Ecology following completion of the draft studies in 1994 and 1995.

P.2 Property History

The Site property was originally used by Native Americans. European settlement began in 1832, when the Hudson's Bay Company established a cabin/storehouse on nearby Puget Sound at the mouth of Sequalitchew Creek, northwest of the Site (City of DuPont, 1995). In 1833, Hudson's Bay built Fort Nisqually, which was located in the northern portion of the Site. Ten years later, a new Fort Nisqually was built at a location adjacent to but outside the eastern edge of the Site.

The DuPont Company acquired the property in 1906 and constructed an explosives plant and the historical Village of DuPont as a company town for plant workers (the historical village area is located approximately 1 mile southeast of the Site). DuPont continued to manufacture explosives at the Site until the mid 1970s, when it sold the property and adjacent areas to the Weyerhaeuser Company. Weyerhaeuser and its subsidiary, Weyerhaeuser Real Estate Company (WRECO), still own the majority of the approximately 2,500 acres in the area, which they named Northwest Landing. Northwest Landing is a planned community in the City of DuPont and includes the Site. WRECO has begun to develop Northwest Landing on some of its lands within the City, but cannot develop the Site until the cleanup has been completed.

P.3 Site Regulatory History

The Site was used for the manufacture of commercial explosives from 1909 to 1976. Production of explosive material ceased and decommissioning of the buildings began in 1976, when Weyerhaeuser purchased the property from DuPont. As part of the cleanup process, asbestos was removed, salvageable materials were taken out, and structures were either burned or demolished. Actions taken at the Site subsequent to the shutdown in 1976 include the following:

- In 1985, Weyerhaeuser initiated studies to determine whether hazardous substances were present.
- In 1986, a Phase I Site Survey and Review was conducted to identify areas on Site that may be of environmental concern.
- In 1986, soil contamination was first documented and reported to Ecology.
- In 1987, a Phase II Site Characterization study was performed, which characterized the type, concentration, and distribution of constituents at 38 areas on the Site.

- In 1989, a Baseline Human Health Risk Assessment was performed using results of the Phase II survey.

- In 1991, Weyerhaeuser and DuPont signed a Consent Decree (No. 91 2 01703 1) with Ecology, where they agreed to study the Site and complete an RI, RA, and FS. The Site was divided into two main areas: Parcel 1 (approximately 636 acres); and Parcel 2 (approximately 205 acres).

- In 1994 and 1995, Draft RI, RA, and FS reports were submitted to Ecology and underwent public review.

- In 1996, based on the result of interim source removal actions, Ecology approved a Cleanup Action Plan (CAP) for Parcel 2 that provided for no further remediation activities except for the institutional controls to maintain the industrial use of Parcel 2.

- In 1997, Parcel 2 was deleted from the Consent Decree, and the deed requiring institutional controls to maintain the industrial use was recorded in the Pierce County Auditor's Office.

- Between 1990 and 2001, while studies and negotiations were ongoing, Weyerhaeuser and DuPont undertook numerous interim source removal actions to clean up soil and/or debris at the Site, in accordance with MTCA and the Consent Decree.

P.4 Description of Reports

In fulfillment of the provisions of the Consent Decree, RI, RA, and FS reports were prepared. A description of the contents of each of these reports is presented below.

- **RI** – The purpose of the RI was to collect sufficient information regarding the Site to enable the completion of the RA and FS. The RI characterizes the nature and extent of contamination based on the existing conditions at the Site. The RI Report presents the analytical data for the media that have been collected at the Site. The data are presented for each RI area, which was defined based on historical manufacturing and production operations at the Site.

- **RA** – In contrast to the RI, the RA evaluates Site conditions in relation to future land uses at the Site. The RA identifies default soil cleanup levels, and presents the methods used to derive Site-specific soil levels that are protective of human health and ecological receptors based on future land use. These cleanup levels and remediation levels are compared to Site constituent concentrations in order to identify which areas require additional evaluation in the FS.

- **FS** – The FS evaluates alternative potential cleanup methods designed to meet the remedial action objectives for the Site. The FS Report provides information for Weyerhaeuser and DuPont to recommend alternatives for remediation of selected areas, including both no action and action alternatives. Ecology will evaluate the FS and select the remedial measures it believes are appropriate. Weyerhaeuser and DuPont will complete the needed detailed design and implementation of the remedy selected by Ecology in the Cleanup Action Plan.

P.5 Report Organization and Documents

This RI/RA/FS report should be reviewed together to better understand the relationship between the Site study activities. The RI/RA/FS are interdependent Reports that are organized as follows:

Volume I – RI and Appendices
Appendix A - Field Procedures
Appendix B - Soil Quality Data
Appendix C - Groundwater, Surface Water and Freshwater Sediment Quality Data
Appendix D - Laboratory Physical Soils Testing

Appendix E - Data Quality Assessment

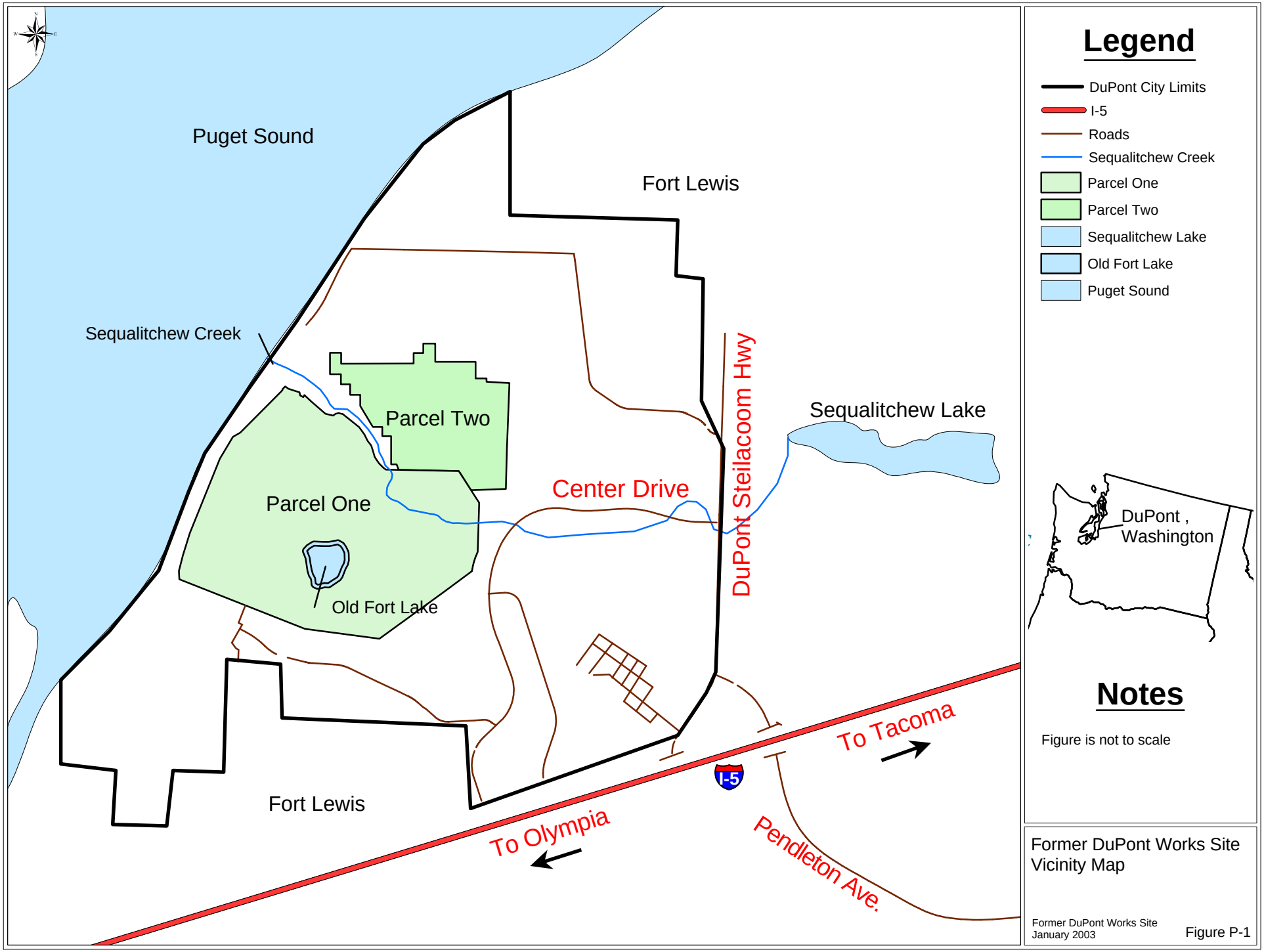
Volume II - RA and Appendices

Appendix A – Ecological Risk Assessment Summary
Appendix B – Evaluation Unit Sample Groupings
Appendix C – Letters and Other Documentation of Site-Specific Determinations
Appendix D – Toxicity Information For Select Constituents
Appendix E – Cleanup Level and Remediation Level Calculations
Appendix F – Summary Statistics and Comparison to Standards

Volume III - FS and Appendices

Appendix A – Description of Remediation Technologies for Soil
Appendix B – Overview of Soil Testing Procedures and Data Interpretation
Appendix C – Lead and Arsenic Soil characterization and Treatability Studies
Appendix D – Arsenic Wet Screening Study
Appendix E – Ranking of Alternatives
Appendix F – Cost Estimate for Remedial Alternatives Analyzed in Detail
Appendix G – Estimation of Minimum Soil Volume Required for Cost-Effective On-Site Treatment
Appendix H – Development of Soil Remediation Levels for the Golf Course Groundskeeper
Appendix I – Impracticability of Groundwater Remediation at the Former DuPont Works Site, DuPont, Washington.

An Executive Summary is included with each Volume.



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure P-1

P.6 References

City of DuPont. 1995 Comprehensive Plan. Adopted July 25, 1995.

MTCA (Model Toxics Control Act Cleanup Regulation). Chapter 173-340 WAC. Feb. 12, 2001. Ecology Publication 94-06.

Table of Contents

EXECUTIVE SUMMARY ES-1
ES.1 Introduction ES-1
ES.2 Background Information ES-1
ES.3 Data Evaluation, Reduction, and Screening ES-1
ES.3.1 Future Land Use ES-1
ES.3.2 Identification of Evaluation Units ES-2
ES.3.3 Media of Concern ES-2
ES.3.4 Preliminary Screening of COPCs ES-2
ES.4 Identification of Soil Cleanup Levels and Remediation Levels ES-2
ES.4.1 Soil Cleanup Levels ES-2
ES.4.2 Soil Remediation Levels ES-3
ES.4.3 Ecological Soil Screening Concentration for Lead ES-3
ES.4.4 Determination of Arsenic Background Level in Soil ES-3
ES.5 Comparison of Site Soil Concentrations to Cleanup Levels and Remediation Levels ES-3
ES.5.1 Comparison of EU Soil Concentrations to Cleanup Levels and Remediation Levels ES-4
ES.5.2 Comparison of EU Constituent Concentrations to MTCA Risk-Based Criteria ES-4
ES.5.3 Identification of EUs With COPCs in Soil That Exceed MTCA Three-Fold Criteria and/or MTCA Risk-Based Criteria ES-4
ES.5.4 Commercial Land Use EUs ES-4
ES.5.5 Golf Course Use EUs ES-4
ES.5.6 Historical Use EUs ES-4
ES.5.7 Industrial Use EUs ES-5
ES.5.8 Open Space Use EUs ES-5
ES.5.9 Summary of Results ES-5

CHAPTER 1 – INTRODUCTION 1-1
1.1 Introduction 1-1
1.2 Location and Setting 1-1
1.2.1 Location and Site Characteristics 1-1
1.2.2 Physical Setting 1-1
1.3 Risk Assessment Report Background 1-2
1.3.1 Preliminary Baseline Risk Assessment 1-2
1.3.2 Draft Risk Assessment Former DuPont Works Site, DuPont Washington 1-2
1.3.3 Final Risk Assessment 1-2
1.4 Overview of the Risk Assessment Process 1-3
1.5 Comparison of the MTCA Risk Assessment Process with the EPA Superfund Risk Assessment Process 1-3
1.6 References 1-7

CHAPTER 2 – FUTURE LAND USE, RA EVALUATION UNITS AND IDENTIFICATION OF COPCS 2-1
2.1 Introduction 2-1
2.2 Future Land Use 2-1
2.2.1 Commercial 2-1
2.2.2 Golf Course 2-1
2.2.3 Historical 2-1
2.2.4 Industrial 2-1
2.2.5 Open Space 2-2
2.3 Identification of Evaluation Units 2-2

2.4 Potentially Affected Media 2-2
2.5 Identification of COPCs 2-2
2.5.1 Screening of Non-Detected COPCs 2-3
2.5.2 Risk-Based Screening of COPCs 2-3
2.6 References 2-25

CHAPTER 3 – IDENTIFICATION OF CLEANUP LEVELS AND REMEDIATION LEVELS 3-1
3.1 Introduction 3-1
3.2 Soil Cleanup Levels 3-1
3.3 Determination of Arsenic Background Level in Soil 3-1
3.4 Ecological Soil Screening Concentration for Lead 3-1
3.5 Determination of Soil Remediation Levels 3-2
3.5.1 Scenarios for Future Site Use 3-2
3.5.2 Remediation Level Equations 3-3
3.5.3 Approach for Derivation of Soil Lead Remediation Levels 3-8
3.6 Summary of Site Cleanup Levels and Remediation Levels 3-11
3.7 References 3-37

CHAPTER 4 – COMPARISON OF SITE CONCENTRATIONS TO CLEANUP AND REMEDIATION LEVELS 4-1
4.1 Introduction 4-1
4.2 Comparison of EU Soil Concentrations to Cleanup and Remediation Levels 4-1
4.2.1 MTCA Three-Fold Criteria 4-1
4.2.2 MTCA Non-Cancer and Cancer Risk-Based Criteria 4-1
4.2.3 Calculation of EU Soil Concentrations 4-2
4.3 Identification of EUs With COPCs That Exceed MTCA Three-Fold Criteria 4-2
4.3.1 Commercial Land Use EUs 4-2
4.3.2 Golf Course Use EUs 4-2
4.3.3 Historical Use EUs 4-2
4.3.4 Industrial Use EUs 4-3
4.3.5 Open Space Use EUs 4-3
4.4 Identification of EUs that Exceed the MTCA Risk-Based Criteria 4-3
4.4.1 Commercial Land Use EUs 4-3
4.4.2 Golf Course Use EUs 4-3
4.4.3 Historical Use EUs 4-3
4.4.4 Industrial Use EUs 4-3
4.4.5 Open Space Use EUs 4-3
4.5 Summary of Screening Results 4-3

CHAPTER 5 – UNCERTAINTY ANALYSIS 5-1
5.1 Introduction 5-1
5.2 Uncertainties 5-1
5.2.1 Future Land Use 5-1
5.2.2 Exposure Factors 5-1
5.2.3 Groundwater as a drinking water source 5-1
5.2.4 Arsenic Area Background Concentration 5-2
5.2.5 Ecological Evaluation 5-2
5.3 Conclusion 5-2
5.4 References 5-5

APPENDIX A – ECOLOGICAL RISK ASSESSMENT SUMMARY A-1
A.1 Introduction A-1
A.2 Nature and Extent of Contamination A-1

A.3 Ecological Risk Assessment A-1
A.3.1 General A-1
A.3.2 Top Down Approach A-2
A.3.3 Bottom Up Approach A-2
A.4 Site-Specific Ecological Studies - A Top Down Approach A-2
A.5 Site-Specific Ecological Studies - A Bottom Up Approach A-3
A.6 Conclusions A-3
A.7 References A-7

APPENDIX B – EVALUATION UNIT SAMPLE GROUPINGS B-1
B.1 Introduction B-1

APPENDIX C – LETTERS AND OTHER DOCUMENTATION OF SITE-SPECIFIC DETERMINATIONS BY ECOLOGY C-1
C.1 Introduction C-1
C.2 Arsenic and Lead Soil Cleanup and Remediation Levels C-3
C.2.1 Cleanup Levels and Remediation Levels for the Former DuPont Works Site C-3
C.2.2 Residential Soil-Lead Cleanup Level and Remediation Level for Former DuPont Works Site C-7
C.2.3 Non-Residential Remediation Levels at the Former DuPont Works Site C-11
C.2.4 Arsenic Non-Residential Soil Remediation Levels C-17
C.2.5 Arsenic Area Background Soil Concentration C-25
C.3 DNT Soil Cleanup Level Protective of Groundwater C-29
C.4 Mercury Cleanup Levels Summary and Mercury/Lead Leaching Study C-47
C.5 TNT Soil Cleanup Level Protective of Groundwater C-53
C.6 TPH Soil Cleanup Level Protective of Groundwater C-57
C.6.1 Review of TPH Soil Cleanup Level Protective of Groundwater C-57
C.6.2 TPH/PAH Cleanup Level Summary C-63

APPENDIX D – TOXICITY INFORMATION FOR SELECT CONSTITUENTS. D-1
D.1 Monomethyl Amine Nitrate – Monomethylamine D-1
D.1.1 Derivation of Oral Reference Dose D-1
D.1.2 References D-1
D.2 Toxicity Profile for Arsenic D-2
D.2.1 Introduction D-2
D.2.2 Health Effects D-2
D.2.3 Basis for Toxicity Values Used in the Risk Assessment D-2
D.2.4 References D-2
D.3 Toxicity Profile for Lead D-3
D.3.1 Introduction D-3
D.3.2 Health Effects D-3
D.3.3 Basis for Toxicity Evaluation in the Risk Assessment D-3
D.3.4 References D-3
D.4 Toxicity Profile for Mercury D-4
D.4.1 Introduction D-4
D.4.2 Health Effects D-4
D.4.3 Basis for Toxicity Value Used in the Risk Assessment D-4
D.4.4 References D-4
D.5 Toxicity Profile for 2,4,6-Trinitrotoluene (TNT) D-5
D.5.1 Introduction D-5
D.5.2 Health Effects D-5
D.5.3 D.5.3 Basis for Toxicity Values Used in the Risk Assessment D-5
D.5.4 References D-5
D.6 Toxicity Profile for Total Petroleum Hydrocarbons (TPH)–as Bunker C Fuel D-6

D.6.1 Introduction D-6
D.6.2 Health Effects D-6
D.6.3 Derivation of a Bunker C Cleanup Level D-6
D.6.4 References D-6

APPENDIX E – SOIL CLEANUP LEVEL AND REMEDIATION LEVEL CALCULATIONS E-1
E.1 Introduction E-1

APPENDIX F – SUMMARY STATISTICS AND COMPARISON TO STANDARDS F-1
F.1 Introduction F-1
F.2 Summary Statistics For Each Evaluation Unit F-1
F.3 Statistical Formulas Used To Calculate the Summary Statistics F-1
F.3.1 Geometric Mean F-1
F.3.2 Logarithmic Upper Confidence Limit for the Mean F-1
F.3.3 Mean (arithmetic) F-2
F.3.4 Median F-2
F.3.5 Maximum Detected Value F-2
F.3.6 Maximum Non-Detected Value F-2
F.3.7 Minimum Detected Value F-2
F.3.8 Minimum Non-Detected Value F-2
F.3.9 Mode F-2
F.3.10 Sample Standard Deviation F-3
F.3.11 Upper Confidence Limit for the Mean F-3
F.3.12 Distribution Tests F-3
F.4 Comparison to Standards F-5

List of Tables

Table ES-1 – Soil Cleanup Levels and Remediation Levels Used for Evaluating EUs.....ES-7
Table ES-2 – Summary of EUs to be Evaluated in the FS.....ES-9
Table 2-1 – Evaluation Unit Size.....2-5
Table 2-2 – Summary of Constituents Detected in Each Depth Interval.....2-7
Table 2-3 – Constituents That Exceed Risk-Based Screening Concentrations for Soil ≤ 1 Foot BGS.....2-9
Table 2-4 – Constituents That Exceed Risk-Based Screening Concentrations for Soil > 1 Foot and ≤ 15 Feet BGS.....2-11
Table 2-5 – Constituents That Exceed Risk-Based Screening Concentrations for Soil > 15 Feet BGS.....2-13
Table 2-6 – Summary of Constituents That Exceeded Soil-to-Groundwater Screening Criteria in Each Depth Interval.....2-15
Table 2-7 – Summary of Constituents to be Evaluated in Risk Assessment for Each Depth Interval.....2-17
Table 3-1 – Human Health Industrial Cleanup Levels.....3-13
Table 3-2 – Site-Specific Soil Cleanup Levels.....3-15
Table 3-3 – Exposure Factors Used to Calculate Site-Specific Soil Remediation Levels.....3-17
Table 3-4 – EPA Weight-of-Evidence Categories for Carcinogenicity.....3-19
Table 3-5 – Toxicity Equivalency Factors (TEF) for Carcinogenic PAHs.....3-21
Table 3-6 – Oral Reference Doses and Carcinogenic Potency Factors Used in Remediation Level Calculations.....3-23
Table 3-7 – Site-Specific Remediation Levels.....3-25
Table 3-8 – Site-Specific Input Parameters and Results of the Adult Lead Model.....3-27
Table 3-9 – Soil Cleanup Levels and Remediation Levels Associated with Future Site Use.....3-29
Table 3-10 – Soil Cleanup and Remediation Levels Used for Evaluating Commercial and Golf Course Land Uses.....3-31
Table 3-11 – Soil Cleanup Levels Used for Evaluating Industrial Land Use.....3-33
Table 3-12 – Soil Cleanup and Remediation Levels Used for Evaluating Historical and Open Space Land Uses.....3-35
Table 4-1 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Commercial EUs.....4-5
Table 4-2 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Golf Course EUs.....4-7
Table 4-3 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Industrial EU.....4-9
Table 4-4 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Open Space EUs.....4-11
Table 4-5 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Historical EUs.....4-13
Table 4-6 – Individual COPC Hazard Quotients and Cancer Risks.....4-15
Table 4-7 – Cumulative Hazard Indices and Cancer Risks for Each EU.....4-17
Table 4-8 – Summary of EUs to be Evaluated in the FS.....4-19
Table 5-1 – Summary of Uncertainties in the Human Health Evaluation and Site-Specific Characteristics.....5-3
Table A-1 – Soil Bioassay Results.....A-5
Table B-1 – Commercial Area Samples <= 1 Foot BGS.....B-3
Table B-2 – Commercial Area Samples >1 Foot and <=15 Feet.....B-17
Table B-3 – Golf Course Area Samples <=1 Foot.....B-21
Table B-4 – Golf Course Samples >1 Foot and <=15 Feet.....B-33
Table B-5 – Historical Area Samples <=1 Foot.....B-39
Table B-6 – Industrial Area Samples <=1 Foot.....B-41
Table B-7 – Industrial Area Samples >1 Foot and <=15 Feet.....B-45
Table B-8 – Open Space Area Samples <=1 Foot.....B-47
Table B-9 – Open Space Area Samples >1 Foot and <=15 Feet.....B-51

Table E-1 – Commercial Land Use Soil Remediation Levels E-3
Table E-2 – Golf Course Land Use Soil Remediation Levels E-5
Table E-3 – Historical Land Use Soil Remediation Levels E-7
Table E-4 – Industrial Land Use Soil Cleanup Levels E-9
Table E-5 – Open Space Land Use Soil Remediation Levels E-11
Table F-1 – Commercial Evaluation Unit 1 (0 to <=1 foot) F-7
Table F-2 – Commercial Evaluation Unit 1 (>1 to <=15 feet) F-9
Table F-3 – Commercial Evaluation Unit 2 (0 to <=1 foot) F-11
Table F-4 – Commercial Evaluation Unit 2 (>1 to <=15 feet) F-13
Table F-5 – Commercial Evaluation Unit 3 (0 to <=1 foot) F-15
Table F-6 – Commercial Evaluation Unit 3 (>1 to <=15 feet) F-17
Table F-7 – Commercial Evaluation Unit 4 (0 to <=1 foot) F-19
Table F-8 – Commercial Evaluation Unit 4 (>1 to <=15 feet) F-21
Table F-9 – Commercial Evaluation Unit 5 (0 to <=1 foot) F-23
Table F-10 – Commercial Evaluation Unit 5 (>1 to <=15 feet) F-25
Table F-11 – Commercial Evaluation Unit 6 (0 to <=1 foot) F-27
Table F-12 – Commercial Evaluation Unit 6 (>1 to <=15 feet) F-29
Table F-13 – Commercial Evaluation Unit 7 (0 to <=1 foot) F-31
Table F-14 – Commercial Evaluation Unit 7 (>1 to <=15 feet) F-33
Table F-15 – Commercial Evaluation Unit 8 (0 to <=1 foot) F-35
Table F-16 – Commercial Evaluation Unit 8 (>1 to <=15 feet) F-37
Table F-17 – Commercial Evaluation Unit 9 (0 to <=1 foot) F-39
Table F-18 – Commercial Evaluation Unit 9 (>1 to <=15 feet) F-41
Table F-19 – Golf Course Evaluation Unit 1 (0 to <=1 foot) F-43
Table F-20 – Golf Course Evaluation Unit 1 (>1 to <=15 feet) F-45
Table F-21 – Golf Course Evaluation Unit 2 (0 to <=1 foot) F-47
Table F-22 – Golf Course Evaluation Unit 2 (>1 to <=15 feet) F-49
Table F-23 – Golf Course Evaluation Unit 3 (0 to <=1 foot) F-51
Table F-24 – Golf Course Evaluation Unit 3 (>1 to <=15 feet) F-53
Table F-25 – Golf Course Evaluation Unit 4 (0 to <=1 foot) F-55
Table F-26 – Golf Course Evaluation Unit 4 (>1 to <=15 feet) F-57
Table F-27 – Golf Course Evaluation Unit 5 (0 to <=1 foot) F-59
Table F-28 – Golf Course Evaluation Unit 5 (>1 to <=15 feet) F-61
Table F-29 – Golf Course Evaluation Unit 6 (0 to <=1 foot) F-63
Table F-30 – Golf Course Evaluation Unit 6 (>1 to <=15 feet) F-65
Table F-31 – Golf Course Evaluation Unit 7 (0 to <=1 foot) F-67
Table F-32 – Golf Course Evaluation Unit 7 (>1 to <=15 feet) F-69
Table F-33 – Golf Course Evaluation Unit 8 (0 to <=1 foot) F-71
Table F-34 – Golf Course Evaluation Unit 8 (>1 to <=15 feet) F-73
Table F-35 – Golf Course Evaluation Unit 9 (0 to <=1 foot) F-75
Table F-36 – Golf Course Evaluation Unit 9 (>1 to <=15 feet) F-77
Table F-37 – Historical Evaluation Unit 1 (0 to <=1 foot) F-79
Table F-38 – Historical Evaluation Unit 2 (0 to <=1 foot) F-81
Table F-39 – Historical Evaluation Unit 3 (0 to <=1 foot) F-83
Table F-40 – Industrial Evaluation Unit 1 (0 to <=1 foot) F-85
Table F-41 – Industrial Evaluation Unit 1 (>1 to <=15 feet) F-87
Table F-42 – Open Space Evaluation Unit 1 (0 to <=1 foot) F-89
Table F-43 – Open Space Evaluation Unit 2 (0 to <=1 foot) F-91
Table F-44 – Open Space Evaluation Unit 2 (>1 to <=15 feet) F-93
Table F-45 – Open Space Evaluation Unit 3 (0 to <=1 foot) F-95
Table F-46 – Open Space Evaluation Unit 3 (>1 to <=15 feet) F-97
Table F-47 – Open Space Evaluation Unit 4 (0 to <=1 foot) F-99
Table F-48 – Open Space Evaluation Unit 4 (>1 to <=15 feet) F-101
Table F-49 – Comparison of Commercial EUs to Soil Cleanup Levels and Remediation Levels F-103

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels F-107
Table F-51 – Comparison of Historical EUs to Soil Cleanup Levels and Remediation Levels F-113
Table F-52 – Comparison of Industrial EU to Soil Cleanup Levels and Remediation Levels F-115
Table F-53 – Comparison of Open Space EUs to Soil Cleanup Levels and Remediation Levels F-117

List of Figures

Figure ES-1 – Former Dupont Works Site Vicinity Map ES-11
Figure ES-2 – Risk Assessment Evaluation Units ES-13
Figure ES-3 – EU Compliance Status for Arsenic and Lead in Surface Soil ES-15
Figure ES-4 – EU Compliance Status for Arsenic and Lead in Subsurface Soil ES-17
Figure 1-1 – Site Vicinity Map 1-5
Figure 2-1 – Parcel 1 Future Land Use 2-19
Figure 2-2 – Risk Assessment Evaluation Units 2-21
Figure 2-3 – Comparison of RI Areas and RA Evaluation Units 2-23
Figure 4-1 – EU Compliance Status for Arsenic and Lead in Surface Soil 4-21
Figure 4-2 – EU Compliance Status for Arsenic and Lead in Subsurface Soil 4-23

Table of Acronyms and Abbreviations

Acronym/Abbreviation	Definition
BGS	Below Ground Surface
COPC	Constituent of Potential Concern
CPAHs	Carcinogenic Polycyclic Aromatic Hydrocarbons
CPF	Cancer Potency Factor
DNT	Dinitrotoluene
DuPont	E.I. duPont de Nemours and Company, Inc.
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EU	Evaluation Unit
FS	Feasibility Study
IEUBK	Integrated Exposure Uptake Biokinetic Model for Lead
MSL	Mean Sea Level
MTCA	Model Toxics Control Act
NGRR	Narrow Gauge Railroad
PAHs	Polycyclic Aromatic Hydrocarbons
RA	Risk Assessment
RfD	Reference Dose for Noncarcinogenic Health Effects
RI	Remedial Investigation
RME	Reasonable Maximum Exposure
Subsurface	Greater than 1 foot to less than or equal to 15 feet below ground surface
Surface	0 to less than or equal to 1 foot below ground surface
TEF	Toxic Equivalency Factor
TNT	2,4,6-Trinitrotoluene
TPH	Total Petroleum Hydrocarbons
UCL	Upper Confidence Limit
WAC	Washington Administrative Code
Weyerhaeuser	Weyerhaeuser Company
WRECO	Weyerhaeuser Real Estate

Executive Summary

ES.1 Introduction

This Risk Assessment (RA) was conducted to evaluate the potential for adverse impacts to human health and the environment associated with the potential exposure to residual constituents present at the former DuPont Works Explosives manufacturing site (Site) located in Pierce County, Washington. Residual constituents are those constituents that remain in the soil, or other media, after the explosives manufacturing facility was decommissioned and after interim source removal of soil and debris. This Executive Summary summarizes the methods, inputs, and assumptions used to determine Site-specific cleanup and remediation levels, and identifies areas on the Site that are not in compliance with these standards, and that will therefore be addressed in the Feasibility Study (FS). The RA was conducted in accordance with a Consent Decree, effective July 1991, between the lead agency, the Washington State Department of Ecology (Ecology), and the principal responsible parties, Weyerhaeuser Corporation (Weyerhaeuser) and E.I duPont de Nemours and Company (DuPont).

The Site initially consisted of two parcels and is located within the limits of the City of DuPont, Pierce County, Washington (See Figure ES-1). Parcel 2 was remediated and is now used for industrial purposes. Parcel 1, which is the focus of this RA, is located in the western part of the City of DuPont.

ES.2 Background Information

Two risk assessment reports for the Site were written prior to this RA. In 1989, a preliminary draft RA was completed, and a second RA was completed in 1994. The 1994 draft RA underwent review cycles with Ecology and others, but was never finalized.

The RA presented here incorporates comments received on the 1994 Draft RA, and agreements and actions completed at the Site subsequent to that report. This RA was prepared in accordance with the Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-430 WAC. Using MTCA guidance, risk-based cleanup and remediation levels were developed for each constituent considering future land use, exposed populations, exposure pathways, and toxicity information, using prescribed noncancer and cancer risk goals. This was accomplished through completion of the following three tasks:

1. Data Evaluation, Reduction, and Screening.

2. Identification/Development of Cleanup Standards.

3. Comparison of Site Media Concentrations to Cleanup Standards.

The results of each of these tasks are presented in the following sections.

ES.3 Data Evaluation, Reduction, and Screening

Future land uses of the Site, evaluation units (EUs), media of concern, and a preliminary list of constituents of potential concern (COPCs), were identified in this task.

ES.3.1 Future Land Use

Based on a restrictive covenant, and in accordance with the Final Environmental Impact Statement, future use of the Site will include commercial, golf course, historical, industrial, and open space use. Commercial use will include development of offices and retail businesses, and will comprise approximately 636 acres of the Site. Most of the soil in commercial areas will be covered by buildings, parking lots, and roads. The remaining soil will be either professionally landscaped or covered with sidewalks. A golf course will cover approximately 187 acres of the Site. Historical areas on the Site include the 1833 Hudson's Bay Fort, the Shell Midden Site, the 404 Burial Site, and the Methodist Mission site (specific location is unkown). In total, the 1833 Fort, the Shell Midden, and the 404 site historical areas comprise approximately 6 acres of the Site. Industrial use may include activities ranging from

mining gravel to development of light industrial facilities. The area proposed for industrial use is north of Sequalitchew Creek and comprises approximately 36 acres of the Site. Open space use, which will occur in four areas of the Site, will encompass a total area of approximately 73 acres. The location of each of these future use areas is presented in Figure ES-2.

ES.3.2 Identification of Evaluation Units

The next step in the RA was identification of EUs. The EUs were developed based on the future Site uses described above, and were approved by Ecology. Future land use areas, such as the historical and open space areas, that were relatively small in size were evaluated without further division. The industrial land use area was also not divided. The commercial and golf course land use areas were divided into smaller EUs such that the smaller EUs were similar in size, consisted of contiguous property, and accounted for potential remedial alternatives. The RA EUs are presented in Figure ES-2.

ES.3.3 Media of Concern

Potentially affected media at the Site include surface soil (0-1 foot below ground surface [BGS]), subsurface soil (1 foot to 15 BGS), subsurface soil greater than 15 feet BGS, surface water (Old Fort Lake and Sequalitchew Creek), sediment (Old Fort Lake and Sequalitchew Creek), and groundwater. Based on the historical RI, preliminary and draft RAs, and ecological evaluations, it was determined that levels of COPCs in surface water and sediment were not of concern for protection of human and ecological receptors. Therefore, Ecology determined that no further action was warranted for these media (for more details see the current RI Report). In groundwater, DNT levels were slightly elevated above applicable groundwater standards.

ES.3.4 Preliminary Screening of COPCs

In the final step of this task, a preliminary list of COPCs was identified for further evaluation in the RA. This screening was conducted on a Site-wide basis (i.e., EUs were not screened individually in this step). In the initial screening step, sample results for all constituents were reviewed, and those constituents that were not detected in any samples were eliminated from further consideration. Following this screening step there were 38 detected constituents in surface soil and 52 detected constituents in subsurface soil >1 foot and $\leq$ 15 feet BGS, and 35 detected constituents in subsurface soil > 15 feet BGS.

In the last screening step, the maximum detected concentration for each constituent was compared to the most conservative (i.e., the lowest) soil cleanup levels and screening concentrations found in MTCA for the protection of groundwater, human health and ecological receptors. Following this screening step, there were 18 COPCs identified for surface soil and 19 COPCs identified for subsurface soil, and 3 COPCs identified for subsurface soil greater than 15 feet BGS. Constituents that did not have available risk-based screening concentrations were retained for further evaluation in the risk assessment. Soil samples analyzed for oil and grease were excluded from the RA due to the non-specificity of the analysis method, which measures both natural oils and greases and petroleum constituents.

ES.4 Identification of Soil Cleanup Levels and Remediation Levels

In this task, soil cleanup levels and remediation levels that are used to characterize potential impacts to human health and the environment, were identified. In addition, an area-specific background arsenic level was derived because the area background concentration is higher than MTCA soil cleanup levels. As previously mentioned, Ecology has determined that, with the exception of groundwater and soil, all media within the Consent Decree Boundary require “No Further Action”. Therefore, the cleanup levels and remediation levels identified were specific to soil. The presence of low levels of DNT in groundwater is addressed in the FS.

ES.4.1 Soil Cleanup Levels

Cleanup levels for soil are published in tables by Ecology, and are default values that can be used at any site. The only area on Site where these default cleanup levels apply is the industrial area located north of Sequalitchew Creek. These levels assume adult workers would be exposed to hazardous constituents through incidental soil ingestion, and were calculated using the algorithm and default exposure

assumptions identified in WAC 173-340-745. The other cleanup level used was 2,000 mg/kg for total petroleum hydrocarbons (TPH/diesel or heavier oils), which was taken from the MTCA Method A Table, in WAC 173-340-900. In addition, Site-specific cleanup levels for mercury, TPH (bunker C), total 2,4-dinitrotoluene and 2,6-dinitrotoluene (DNT), and 2,4,6-trinitrotoluene (TNT) were approved for use at the Site by Ecology (See Appendix C).

ES.4.2 Soil Remediation Levels

Soil remediation levels are site-specific levels based on protection of human health that are developed using exposure assumptions and other media-specific factors that reflect future site conditions. Remediation levels are calculated using human health risk assessment procedures and site-specific information, as specified in WAC 173-340-708. In order to apply remediation levels to site cleanup decisions, institutional controls (such as deed restrictions) are placed on properties with residual contamination to ensure that the exposure conditions applied to the derivation of these levels are maintained at the site in the future. Remediation levels were calculated for all constituents detected in at least one soil sample, unless the constituent did not have available toxicity information and was not directly linked to historical site operations.

The equations used to calculate remediation levels for all constituents except lead were obtained from WAC 173-340-740. Soil remediation levels were calculated using these equations, considering the potential reasonable maximum exposure (RME) for humans under each proposed land use with the exception of industrial use (for industrial use, MTCA default industrial cleanup levels were used, as described above). For lead, EPA has chosen to evaluate the potential adverse health effects using a physiologically-based model. The model currently used by EPA for establishing lead remediation levels in non-residential areas is the Adult Lead Model (EPA, 1996b). Using this model, site-specific remediation levels were developed for golf course worker, commercial landscape worker, and industrial worker scenarios. A hybrid approach using both the Adult Lead Model and the child Integrated Exposure Uptake Biokinetic Model for Lead (IEUBK), was used to derive a remediation level for open space areas.

ES.4.3 Ecological Soil Screening Concentration for Lead

Ecology has performed an evaluation of the Site and determined that lead is the indicator constituent for potential terrestrial ecological impacts. As part of this evaluation, Ecology determined that based on Site-specific information the potential species groups of concern included ground-feeding birds and herbivorous small mammals. The screening level identified by Ecology is 118 mg/kg and is intended to be protective of wildlife, including birds and small mammals. Exceedance of this value does not necessarily indicate that cleanup must occur, but that various other options could be explored to demonstrate that lead does not pose a threat to ecological receptors at the Site.

ES.4.4 Determination of Arsenic Background Level in Soil

In addition to the cleanup levels and remediation levels, an area background soil concentration was calculated for arsenic. As part of the RI investigation, soil samples were collected outside of the Consent Decree boundary to define the "Site Area Background" level of arsenic. As stipulated in WAC 173-340-709, twenty soil samples were collected to statistically establish area background levels. Based on the results of these samples, the site area background concentration for arsenic is 32 mg/kg. This value represents the 90^{th} percentile value of the distribution of the background samples.

A summary of the cleanup levels and remediation levels used for each future use scenario is presented in Table ES-1.

ES.5 Comparison of Site Soil Concentrations to Cleanup Levels and Remediation Levels

In this last task of the RA, soil concentrations for each EU were compared to the cleanup levels and remediation levels identified above. Only those COPCs that were detected in at least one sample and that had maximum concentrations that exceeded conservative risk-based screening criteria were evaluated in this task of the risk assessment.

The steps involved in this comparison included calculating the MTCA 95% Upper Confidence Limit (UCL) of the mean concentration (i.e., a conservative estimate of the mean) for each EU, comparing this concentration and the maximum detected concentration in each EU to cleanup standards applicable to the future use of each EU, and identifying EUs with COPC concentrations that do not comply with MTCA's Three-Fold Criteria [WAC 173-340-740 (7)(c),(d), and (e)]. In addition to the Three-Fold Criteria, constituents in each EU were also compared to MTCA's risk-based criteria.

ES.5.1 Comparison of EU Soil Concentrations to Cleanup Levels and Remediation Levels

The soil concentrations in each EU were compared to the cleanup standards to determine if the concentrations of COPCs in each EU comply with MTCA Three-Fold Criteria. The MTCA Three-Fold Criteria are the following:

1. The maximum soil concentration must be less than or equal to 2 times the site-specific cleanup level or remediation level.
2. The MTCA 95% UCL on the mean must be less than the site-specific cleanup level or remediation level.
3. Less than 10% of individual soil concentrations shall exceed the site-specific cleanup level or remediation level.

If any of these criteria are not met, then the EU is not in compliance, and was designated for evaluation in the FS.

ES.5.2 Comparison of EU Constituent Concentrations to MTCA Risk-Based Criteria

MTCA identifies risk-based criteria for constituents as follows:

1. The human health risk level for individual constituents may not exceed a hazard quotient of 1 or a cancer risk of one-in-a-million (1E-06) for historical, open space, golf course, and commercial EUs. The human health risk level for individual constituents may not exceed a hazard quotient of 1 or a cancer risk of one-in-one-hundred thousand (1E-05) for the industrial EU.
2. The total risk level at the site, based on cumulative exposure to all constituents, may not exceed a hazard index of 1 or a cancer risk of 1 in 100,000 (1E-05).

If an EU exceeds these criteria the EU does not comply with MTCA, and is carried through to the FS.

ES.5.3 Identification of EUs With COPCs in Soil That Exceed MTCA Three-Fold Criteria and/or MTCA Risk-Based Criteria

Each EU was evaluated using the MTCA Three-Fold Criteria and Risk-Based Criteria. Based on the results of this evaluation, the EU was determined to be in compliance or not in compliance with MTCA. The results of this evaluation are summarized below organized by future land use category.

ES.5.4 Commercial Land Use EUs

All commercial EUs were out of compliance with the MTCA Three-Fold Criteria and the Risk-Based Criteria. Arsenic and lead were the COPCs that exceeded the criteria most frequently.

ES.5.5 Golf Course Use EUs

All golf course EUs were out of compliance with the MTCA Three-Fold Criteria and the Risk-Based Criteria. Arsenic and lead were the COPCs that exceeded the criteria most frequently.

ES.5.6 Historical Use EUs

All historical EUs were out of compliance with the MTCA Three-Fold Criteria and the Risk-Based Criteria. Arsenic and lead were the COPCs that exceeded the criteria most frequently.

ES.5.7 Industrial Use EUs

There is only one industrial EU, which was in compliance with both the MTCA Three-Fold Criteria and the Risk-Based Criteria. There are a few instances though, where the soil concentrations exceed the soil-to-groundwater screening criteria.

ES.5.8 Open Space Use EUs

All open space EUs were out of compliance with the MTCA Three-Fold Criteria and the Risk-Based Criteria. Arsenic and lead were the COPCs that exceeded the criteria most frequently

ES.5.9 Summary of Results

All EUs were screened against MTCA's Three-Fold Criteria and Risk-Based Criteria. Using these criteria, all EUs except the industrial EU did not comply, and will require evaluation in the FS. Most criteria exceedances were noted in the surface soil samples. Arsenic and lead were the constituents responsible for almost all criteria exceedances in the EUs.

Table ES-2 presents a summary of the compliance status of each EU. Figures ES-3 and ES-4 present the EUs that did not comply with MTCA Three-Fold criteria and Risk-Based Criteria.

Table ES-1 – Soil Cleanup Levels and Remediation Levels Used for Evaluating EUs

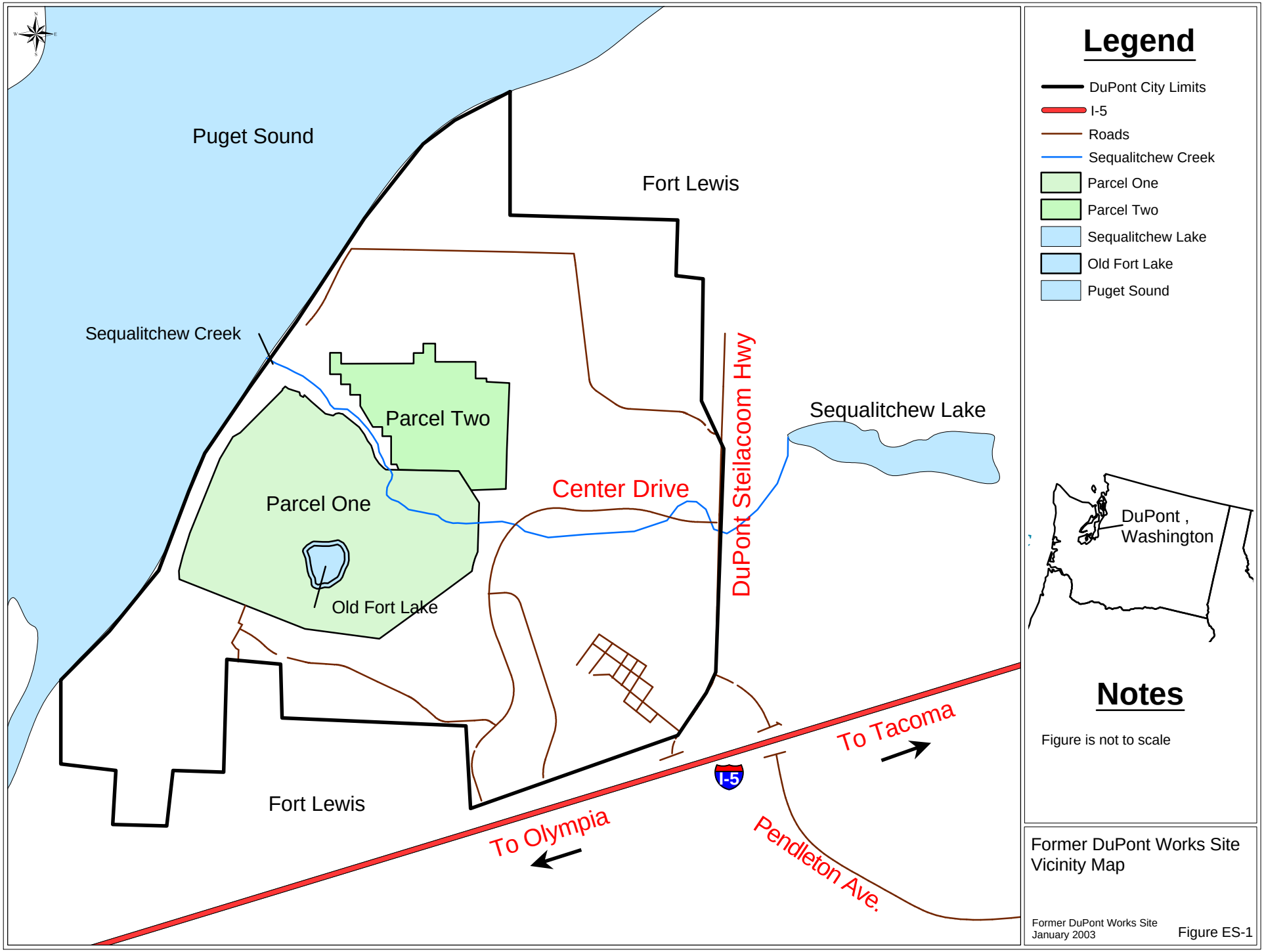
Constituent	Commercial and Golf Course EU Cleanup and Remediation Levels (mg/kg)	Historical and Open Space EU Cleanup and Remediation Levels (mg/kg)	Industrial EU Cleanup Levels (mg/kg)
Explosives			
Monomethylamine Nitrate	19,900[(1)]	6,680[(1)]	28,350
Nitroglycerine	6,580[(1)]	368[(1)]	4,080
2,4,6-Trinitrotoluene	1.75[(2)]	1.75[(2)]	1.75[(2)]
Petroleum Hydrocarbons			
TPH (418.1)	7,600[(2)]	7,600[(4)]	7,600[(2)]
Inorganics			
Aluminum	NC	825,000[(1)]	NC
Arsenic	60[(2)]	32[(2)]	90[(2)]
Copper	90,900[(1)]	30,500[(1)]	130,000
Lead	118[(3)]	118[(3)]	1,000[(5)]
Mercury	24[(2)]	24[(2)]	24[(2)]
PAHs			
Benzo(a)Anthracene	126[(1)]	7.1[(1)]	18
Benzo(a)Pyrene	12.6[(1)]	0.71[(1)]	18
Benzo(b)Fluoranthene	126[(1)]	7.1[(1)]	18
Benzo(k)Fluoranthene	1260[(1)]	71[(1)]	18
Chrysene	12,600[(1)]	710[(1)]	18
Dibenzo(a,h)Anthracene	12.6[(1)]	0.71[(1)]	18
Indeno(1,2,3-c,d)Pyrene	126[(1)]	7.1[(1)]	18
Pesticides/PCBs			
Aldrin	5[(1)]	0.3[(1)]	7.7

Notes:
NC = Not of Concern. Concentration calculated was equivalent to a 100 percent concentration. Therefore, this constituent is not of concern for this future land use.
Cleanup Levels are shaded and are either calculated using MTCA default parameters or measured site-specific information.
[(1)] Calculated using Site-specific parameters.
[(2)] Based on agreement with Ecology.
[(3)] Ecological screening concentration.
[(4)] Ecology agreement for TPH that originated as Bunker C fuel. One Area has TPH that did not originate from Bunker C fuel. Those TPH data were compared to the MTCA Table A value of 2,000 mg/kg for heavy oils.

[(5)] MTCA default value used for Parcel 2.

Table ES-2 – Summary of EUs to be Evaluated in the FS

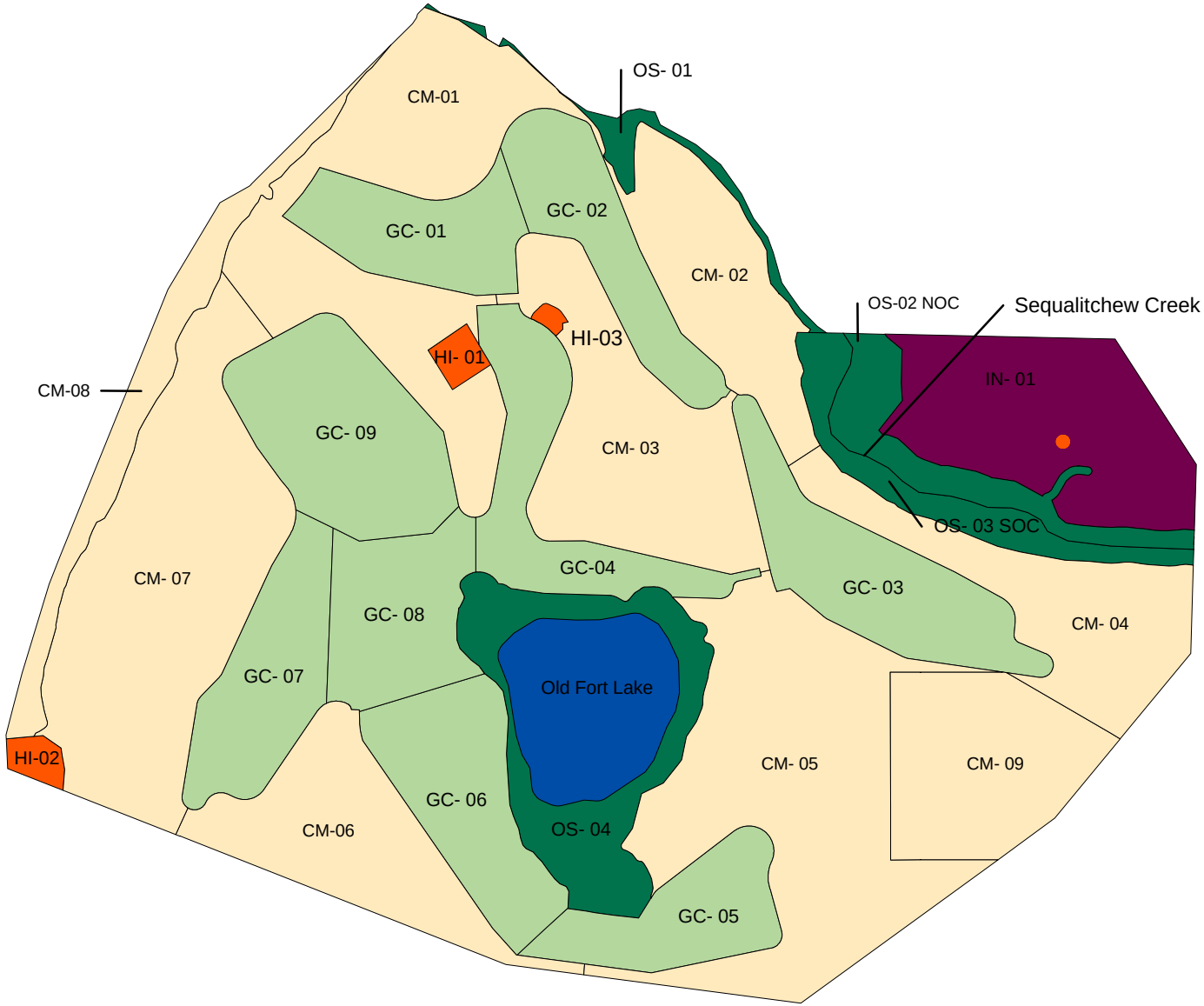
EU	EU to be Evaluated in FS
Commercial 1	Yes
Commercial 2	Yes
Commercial 3	Yes
Commercial 4	Yes
Commercial 5	Yes
Commercial 6	Yes
Commercial 7	Yes
Commercial 8	Yes
Commercial 9	Yes
Golf Course 1	Yes
Golf Course 2	Yes
Golf Course 3	Yes
Golf Course 4	Yes
Golf Course 5	Yes
Golf Course 6	Yes
Golf Course 7	Yes
Golf Course 8	Yes
Golf Course 9	Yes
Industrial 1	Yes
Open Space 1	Yes
Open Space 2	Yes
Open Space 3	Yes
Open Space 4	Yes
Historical 1	Yes
Historical 2	Yes
Historical 3	Yes



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure ES-1



0 250 500 1,000 1,500 2,000 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

- Golf Course
- Historical
- Industrial
- Open Space
- Old Fort Lake
- Commercial

Notes

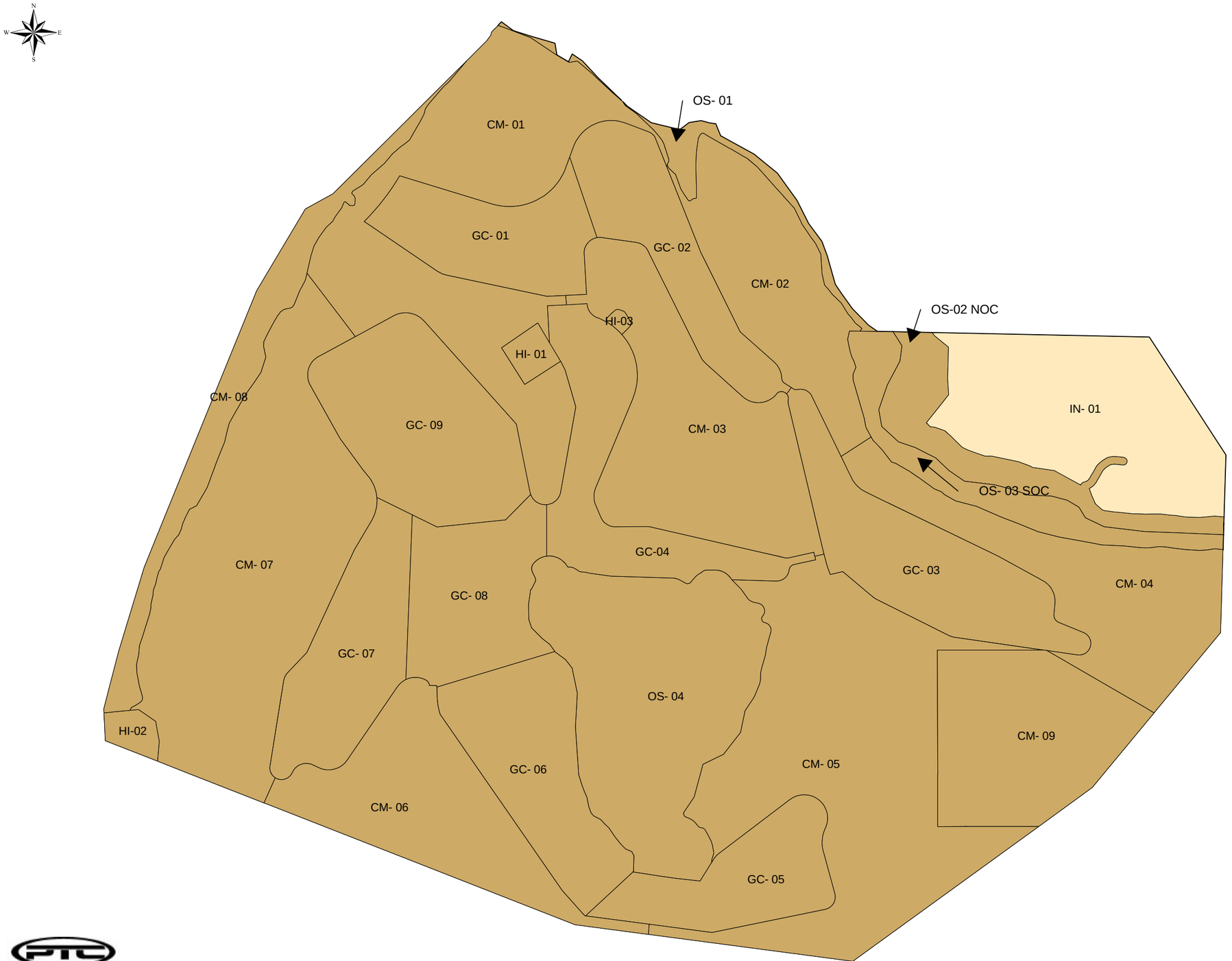
GC - Golf Course
HI - Historical
CM - Commercial
OS - Open Space
NOC - North of Creek
SOC - South of Creek

Historical location in the Industrial area is the Methodist Mission Marker. Actual location of the mission is unknown.

Risk Assessment Evaluation Units

Former DuPont Works Site
July, 2003

Figure ES-2



PIONEER TECHNOLOGIES CORPORATION

Legend

- Eu in Compliance 0 to <1 ft
- EU not in Compliance 0 to <1 ft

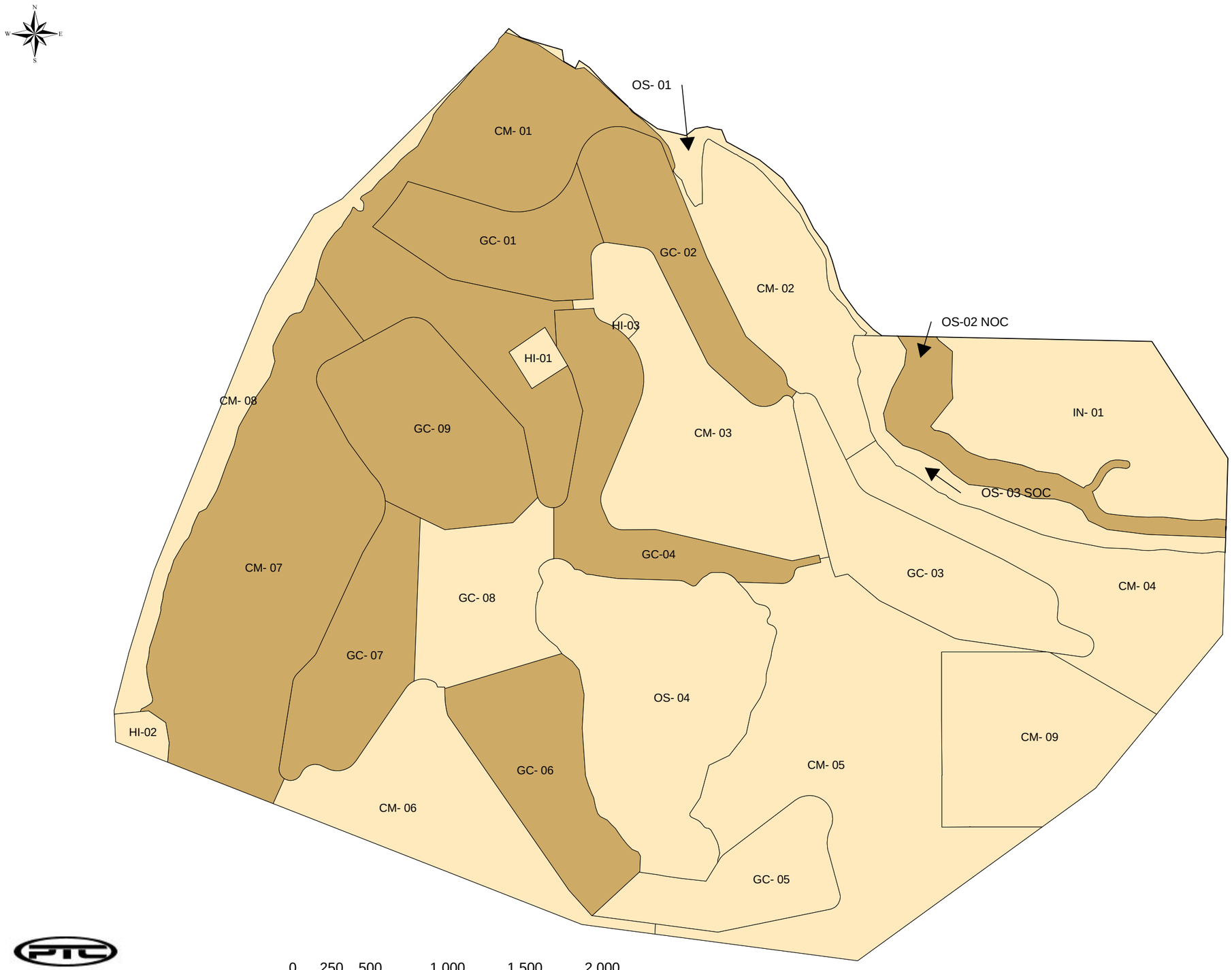
Notes

GC - Golf Course
CM - Commercial
HI - Historical
OS - Open Space
NOC - North of Creek
SOC - South of Creek
IN - Industrial

EU Compliance Status for Arsenic and Lead in Surface Soil

Former DuPont Works Site
September, 2002

Figure ES-3



PIONEER TECHNOLOGIES CORPORATION

Legend

- Eu in Compliance >1 to <15 ft
- EU not in Compliance >1 to <15 ft

Notes

GC - Golf Course
CM - Commercial
HI - Historical
OS - Open Space
NOC - North of Creek
SOC - South of Creek
IN - Industrial

EU Compliance Status for Arsenic and Lead in Subsurface Soil

Former DuPont Works Site
September, 2002

Figure ES-4

Chapter 1 – Introduction

1.1 Introduction

This Risk Assessment (RA) was conducted to evaluate the potential for adverse impacts on human health and the environment associated with potential exposure to residual constituents present at the former DuPont Works Explosives manufacturing site (Site) located in Pierce County, Washington. Residual constituents are those constituents that remain in the soil, or other media, after the explosives manufacturing facility was decommissioned and after interim source removal of soil and debris. This report presents the methods, inputs, and assumptions used to identify areas on the Site with the potential for adverse impacts on human health and the environment that will be evaluated further in the feasibility study (FS). The RA was conducted in accordance with a Consent Decree, effective July 1991, between the lead agency, Washington State Department of Ecology (Ecology) and the principal responsible parties—The Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont).

1.2 Location and Setting

1.2.1 Location and Site Characteristics

The Site initially consisted of two parcels and is located within the limits of the City of DuPont, Pierce County, Washington (see Figure 1-1). Remediation of Parcel 2 has been completed and this parcel was released for development by Ecology in December of 1997. Parcel 1, which is the focus of this RA, is located in the western part of the City of DuPont. The Site is bordered by Weyerhaeuser property to the north and west and Weyerhaeuser Real Estate Company (WRECO) property on the east, and south. Burlington Northern railroad property is adjacent to the Weyerhaeuser open space to the west. Puget Sound is located to the west of the Burlington Northern Railroad property.

1.2.2 Physical Setting

The significant physical features of relief across the Site are numerous glacial kettles (depressions), the east-west trending valley of Sequalitchew Creek, a steep bluff that partially borders Burlington Northern Railroad property, and a small kettle lake in the southern portion of the Site called Old Fort Lake. Site elevations generally range from 200 to 225 feet above mean sea level (MSL), except within the kettles, where elevations are approximately 150 feet above MSL. The Site lies in the Puget Sound area of the wet coniferous forest region and is generally forested with intermittent clearings associated with the former production activities. This document reflects Site conditions as of March 2002. Weyerhaeuser, DuPont, and Ecology recognize that there have been changes to the Site since that point in time.

Site soils consist primarily of Steilacoom gravels. These gravels are comprised of stratified sands and gravels. Soil horizons on top of the Steilacoom gravels consist of gravelly, sandy loam with variable amounts of organic matter.

Two water-bearing zones, or aquifers, occur beneath the Site—the shallow Water Table Aquifer, and the deeper Sea Level Aquifer. Across most of the Site, the relatively impermeable Aquitard within the "Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift sequence (Aquitard)" restricts vertical flow of groundwater, and separates the Water Table Aquifer from the deeper Sea Level Aquifer (Borden and Troost, 2001). Groundwater in the Water Table Aquifer flows toward the west-northwest, with local discharge via springs to upper Sequalitchew Creek. The deeper Sea Level Aquifer flows toward Puget Sound.

Surface water resources on the Site include Sequalitchew Creek and Old Fort Lake. The creek is fed by overflows from Sequalitchew Lake located approximately 1.4 miles east of the Site. The depth of Old Fort

Lake is shallow, and fluctuates with groundwater levels. Similar to Sequalitchew Creek, surface runoff to the lake is limited by rapid soil infiltration of rain water.

1.3 Risk Assessment Report Background

1.3.1 Preliminary Baseline Risk Assessment

In 1989, a preliminary baseline RA was conducted for the Site (ETI and Hart Crowser, 1989). Based on conditions present at the time, the preliminary baseline RA suggested that the estimated non-carcinogenic hazards associated with potential exposure to lead, arsenic and 2,4,6-trinitrotoluene (TNT) in soil were above levels of concern. In addition, the preliminary baseline RA suggested that the estimated cancer risks associated with potential exposure to 2,4-dinitrotoluene and 2,6-dinitrotoluene (DNT) and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) in soil were above levels of concern.

The preliminary RA also evaluated the potential for ecological impacts. The preliminary ecological RA indicated that aquatic organisms were not likely to be exposed to concentrations that could cause adverse impacts. A qualitative evaluation of the potential impacts on terrestrial wildlife indicated that potential impacts might be associated with exposure to constituents in hot spots which were present at the Site. These hot spots have subsequently been removed (PIONEER and West Shore, 2001).

1.3.2 Draft Risk Assessment Former DuPont Works Site, DuPont Washington

In 1994, a draft RA was conducted to evaluate potential exposures at each RI Area (i.e., former production areas and other areas of concern) to constituents detected above MTCA screening levels (DERS and Hart Crowser, 1994). Future land uses evaluated in the draft RA included residential, recreational (including open space and golf course), commercial, and industrial land use. The potential hazards and risks for each land use were evaluated, and the results of the draft human health RA indicated that several residential land use areas required further evaluation in the FS including: Areas 36, 38, 39, AP-C, AP-E, and the narrow gauge railroad (NGRR) based on exposure to arsenic, lead, and/or mercury in soil. The only future golf course or commercial land use areas that were identified in the draft RA as requiring further evaluation in the FS were Area 19 A and C, because of elevated concentrations of lead in soil (The location of these RI areas is shown in Chapter 2, Figure 2-3). No future industrial or open space land use areas required further evaluation based on the results of the draft RA.

A quantitative ecological RA was also conducted following the U.S. Environmental Protection Agency's (EPA) general framework. Historical and current surveys of the Site were used to determine indicator species including blacktail deer, red fox, red-tailed hawk, and Townsend vole. Potential risks to these indicator species were evaluated using available habitat and feeding habit information along with available toxicity data. The results of the draft ecological RA indicated no potential risk to large terrestrial mammals or avian species. Hazard quotients greater than one were calculated for voles in soil based on exposure to arsenic and/or mercury exposure in six areas of the Site (Areas 16, 26, 38, 39, AP-E, and Narrow Gauge Railroad (NGRR)).

1.3.3 Final Risk Assessment

The 1994 draft RA was reviewed by Ecology and others, and comments were provided. Since that time there have been a number of technical work group meetings, and meetings with Ecology, to evaluate and address various issues. The work, agreements, and changes in proposed land uses that resulted from these meetings include the following:

- Comments on the draft RA from Ecology and the Public.

- An agreement with Ecology on soil cleanup levels for total dinitrotoluene (2,4-dinitrotoluene and 2,6-dinitrotoluene) (Ecology, 1996), 2,4,6-trinitrotoluene (Ecology, 2001), mercury (Ecology, 1993), total petroleum hydrocarbons (TPH) and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) (Hart Crowser, 1996).

- An agreement with Ecology on a toxicity value for monomethylamine nitrate (MMAN) (Ecology and PIONEER, 1997).

- An agreement with Ecology on soil lead remediation levels for four land use types including, golf course, commercial, industrial, and open space (Ecology, 1999).

- An agreement with Ecology on soil arsenic remediation levels for three different land use types including, golf course, commercial, and industrial (Ecology, 1999b).

- A site background soil level for arsenic (See the RI).

- An agreement on the configuration of future land use evaluation units.

- A determination by Ecology that lead is the indicator compound for potential terrestrial ecological impacts.

- Extensive work to evaluate potential ecological risks at the Site (see Appendix A). Because no Site-specific agreements were reached regarding a lead cleanup level for ecological receptors, the current assessment utilizes an ecological soil screening concentration for lead developed by Ecology.

- Significant quantities of contaminated soil and debris have been removed and disposed of off-Site as the result of 2000 Hot Spot Removals and 2001 Interim Corrective Actions (PIONEER et al., 2000).

- Additional Site characterization data have been collected, including data for areas not addressed by the preliminary or draft RAs.

- Future land use has changed from what was evaluated in previous RAs.

1.4 Overview of the Risk Assessment Process

Risk assessment is an established approach to evaluate the potential for impacts to human health and the environment associated with exposure to toxic constituents. Risk assessment is a management-decision tool, and does not provide absolute statements about health and environmental impacts, and typically focuses on constituents and exposure pathways directly related to a site. These assessments do not address risks from other sources of exposure (e.g., dietary exposures), or risks from other constituents that are not associated with the site under evaluation. Risk managers use the results of risk assessments to assist in determining if a site, or portion thereof, requires remediation.

1.5 Comparison of the MTCA Risk Assessment Process with the EPA Superfund Risk Assessment Process

The risk assessment process identified in MTCA differs from the traditional EPA Superfund risk assessment process presented in Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (EPA, 1989). Under Superfund, risk assessments are typically comprised of the following five tasks:

1. **Data Evaluation, Reduction, and Screening**. This task identifies potential constituents of concern from analytical data obtained from the field-sampling program. Constituents detected in at least one sample during the field investigation are identified and screened against risk-based screening concentrations to obtain a final list of constituents of potential concern (COPCs) to be evaluated in the risk assessment.

2. **Exposure Assessment**. This task identifies potentially exposed populations (e.g., children, adults, and potentially, plants and animals), exposure scenarios, exposure pathways, and exposure factors. The algorithms used to calculate intake also are presented in this section.

3. **Toxicity Assessment**. This task identifies toxicity values for the COPCs identified in task 1. Toxicity values include noncarcinogenic reference doses and carcinogenic slope factors for humans and noncancer toxicity information for plants and animals.

4. **Risk Characterization**. This task presents the human noncancer and incremental cancer risks, and the ecological hazard quotients associated with exposure to the COPCs that were calculated using the information described in tasks 1 - 3.

5. **Uncertainty Analysis**. This task identifies key uncertainties that should be considered when assessing the risks developed in task 4.

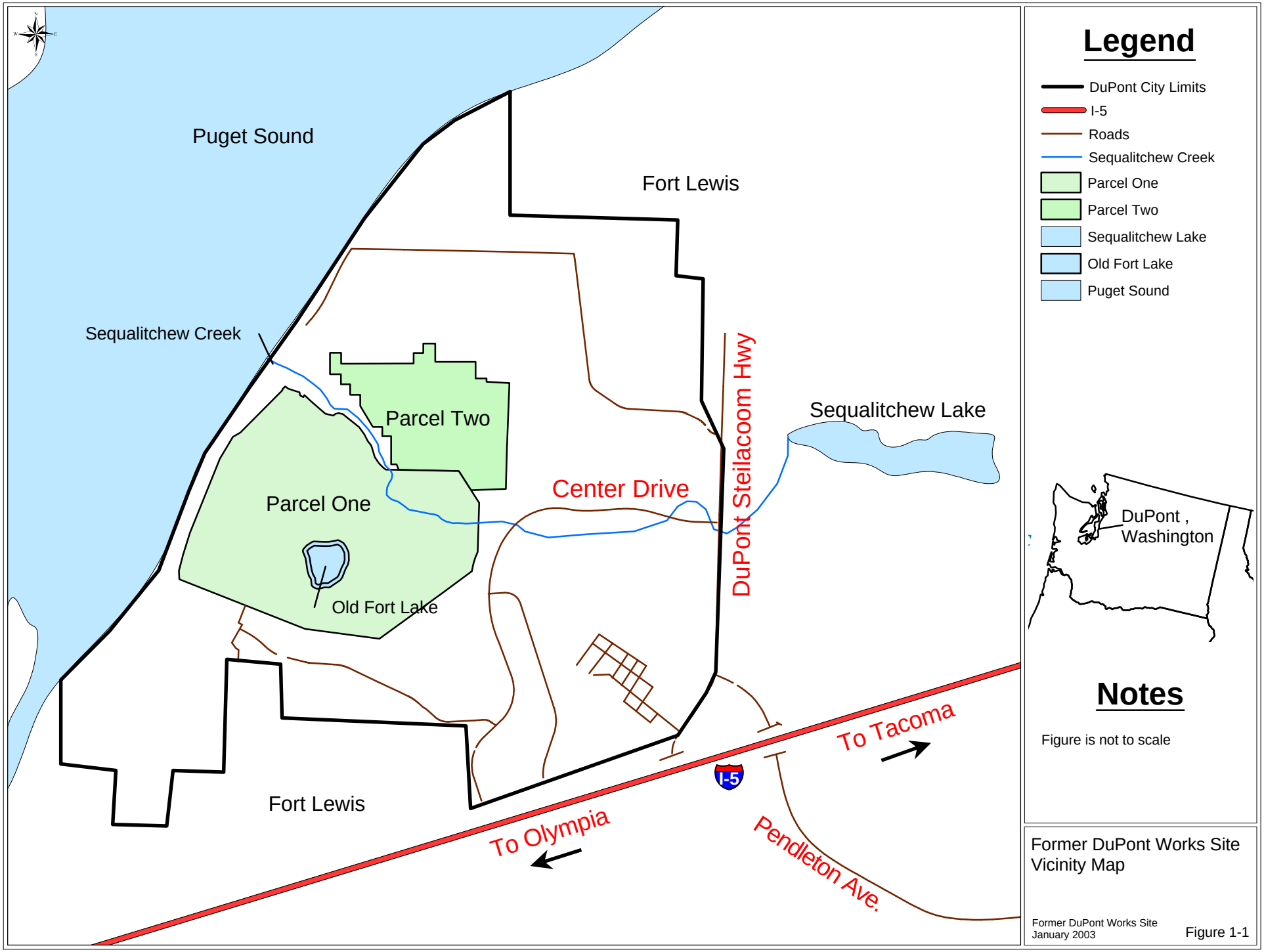
After the initial Data Evaluation, Reduction, and Screening step, which is the first component of any evaluation, the MTCA risk assessment process could be described as performing an EPA Superfund risk assessment in "reverse". That is, risk-based cleanup levels and remediation levels are developed for each constituent considering land-use, exposed populations, exposure pathways, and toxicity information based on prescribed noncancer and incremental cancer risk levels. Under MTCA, human health risk assessments are typically comprised of the following 3 tasks:

1. **Data Evaluation, Reduction, and Screening (Chapter 2)**. This task identifies potential constituents of concern from analytical data obtained from the field-sampling program. Constituents detected in at least one sample during the field investigation are identified for further evaluation in the risk assessment. This is similar to task 1 in the Superfund risk assessment process.

2. **Development of Cleanup Levels and Remediation Levels (Chapter 3)**. This task identifies concentrations for each constituent that are protective of human health and/or the environment. For noncarcinogenic constituents these concentrations are established at levels that would not cause illness in humans. For carcinogenic constituents these concentrations are established at levels that would not cause exceedances of the allowable level of excess cancer risk (as defined in MTCA) in humans. If applicable to a particular site, cleanup levels and remediation levels also are established for each constituent at levels that would be protective of terrestrial or aquatic receptors (e.g., plants and animals). For human health risk assessments, this task generally incorporates elements of task 2 – Exposure Assessment and task 3 – Toxicity Assessment of the Superfund risk assessment process. That is, cleanup levels and remediation levels are developed for specific land-uses, potentially exposed populations, and typically incorporate the most current toxicity information.

3. **Comparison of Site Media Concentrations to Cleanup Levels and Remediation Levels (Chapter 4)**. This task compares the site media concentrations, identified and summarized in task 1, with the cleanup levels and remediation levels identified in task 2. This task is similar to the risk characterization task of the Superfund risk assessment process; but, the results of EPA Superfund risk assessments and MTCA risk assessments are expressed differently. The results of an EPA Superfund risk assessment are expressed as noncancer health effects or incremental cancer risks. In contrast, the results of a MTCA Risk Assessment are expressed as exceedances of the cleanup levels and remediation levels.

Throughout this report, tables and figures are presented at the end of each chapter in which they are discussed. Chapters in this report are supplemented by Appendices, that provide supporting documentation of items discussed in the text.



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure 1-1

1.6 References

Borden, R.K. and K.G. Troost. 2001. Late Pleistocene Stratigraphy in the South-Central Puget Lowland, Pierce County, Washington. (Washington Division of Geology and Earth Resources Report of Investigations 33.

DERS (DuPont Environmental Remediations Services) and Hart Crowser (Hart Crowser, Inc.). 1994. DRAFT Risk Assessment Former DuPont Works Site DuPont Washington.

Ecology (Washington State Department of Ecology). 1993. Mercury Cleanup Levels Summary and Mercury/Lead Leaching Study. Letter from Mike Blum to Vern Moore, Linda Rudisell, and Jack Frazier.

Ecology (Washington State Department of Ecology). 1996. Acceptance of Two Issue Papers – 1) Determination of a DNT Soil Cleanup Level Protective of Groundwater, and 2) Impractability of Groundwater Treatment. Letter from Mike Blum to Vern Moore and Jack Frazier.

Ecology (Washington State Department of Ecology) and PIONEER (PIONEER Technologies Corporation). 1997. MMA/MMAN Toxicity Value and Cleanup Levels. Memo From Craig McCormick and Brad Grimsted to Mike Blum.

Ecology (Washington State Department of Ecology). 1999a. Non-Residential Remediation Levels at the Former DuPont Works Site. Memo from Mike Blum to Vern Moore and Izzy Zanikos. May 3, 1999. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 1999b. Soil Arsenic Non-Residential Remediation Levels. Memo from Mike Blum to Vern Moore and Izzy Zanikos. June 25, 1999. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 2001. Hot Spot Interim Action Report. Letter from Mike Blum to Jim Odendahl and Ron Buchanan.

EPA (United States Environmental Protection Agency). 1989. Risk Assessment Guidance for Superfund: Human Health Evaluation Manual Part A. Interim Final. Office of Emergency and Remedial Response. Washington, D.C. 9285.701A. EPA/540/1-89/002.

ETI (Environmental Toxicology International, Inc) and Hart Crowser (Hart Crowser, Inc), 1989. Baseline Risk Assessment, DuPont Works Property.

Franklin, J.F. and C.T. Dyrness, 1973. Natural Vegetation of Oregon and Washington. Forest Research Paper, PNW-80, U.S. Department of Agriculture, Portland, Oregon.

Hart Crowser. 1996. Review of TPH Soil cleanup Level Protective of Groundwater Former Dupont Works Site, DuPont, Washington.

PIONEER (PIONEER Technologies Corporation), West Shore Corporation, NW, and URS. 2000. Hot Spot Interim Action Report Former DuPont Works Site DuPont, Washington.

Thut, R. N., B. K. Firth, S. Vincent, and D. McGreer, 1978. Water Quality Studies of the DuPont Site and Nisqually Reach. Environmental Technology Department, Weyerhaeuser Co., Tacoma, Washington.

Ward, C.E., 1978. DuPont Environmental Baseline Study: Air Quality Impact Assessment. Report Submitted to Weyerhaeuser Co., Tacoma, Washington.

Chapter 2 – Future Land Use, RA Evaluation Units and Identification of COPCs

2.1 Introduction

The purpose of this Chapter is to identify the future land uses for the Site, delineate evaluation units (EUs), identify media of concern, and to identify COPCs that will be evaluated further in the risk assessment.

2.2 Future Land Use

In October 1999, Weyerhaeuser Company and WRECO filed a Declaration of Restrictive Covenant that specifies allowable land uses for the Site. The Restrictive Covenant was filed with the Pierce County Auditor (document no. 9910290750) and states that none of the property shall be developed or used for residential uses, schools, daycare facilities, parks or other recreational uses – with the exception that the golf course and related amenities shall be allowed. These restrictions on land uses apply to the current landowners and all future landowners, unless determined otherwise in a legal venue and with Ecology's approval.

Future Site use, according to the Final Environmental Impact Statement (Ecology, 2000), will include commercial, golf course, historical, industrial and open space uses (See Figure 2-1). North of Sequalitchew Creek is planned for industrial use and open space. South of Sequalitchew Creek is planned for mixed use. Most of the Site will undergo changes during development, including grading, paving, placement of buildings, addition of topsoil, soil amendments, and landscaping. Future Site use plans, as reflected in this RA, enable an assessment of potential future risk.

2.2.1 Commercial

The majority of the Site property will be used for commercial purposes such as offices and retail businesses. The majority of the soil in this area will be covered by buildings, parking lots, and roads. Areas that are not covered by a building or parking lot will have sidewalks and professionally maintained, landscaped areas. These landscaped areas will be prepared for planting by adding imported topsoil, plants, and shrubs. A layer of mulch, or similar cover, will be added for aesthetic and practical purposes (e.g., weed control). Figure 2-1 identifies the commercial land use areas that comprise approximately 334 acres.

2.2.2 Golf Course

Ecology has agreed that a golf course facility is compatible with the planned future use of the Site (Ecology, 2000). A golf course serves as an effective means to isolate soil on the Site that is contaminated with lead or arsenic. The golf course layout was designed in order to maximize coverage of areas that have elevated soil arsenic and lead concentrations. The golf course, presented in Figure 2-1, covers approximately 187 acres.

2.2.3 Historical

Three historical areas have been identified on the Site, including the Fort Nisqually Cemetery (45Pl404), the Shell Midden (45Pl72), and the 1833 Fort Nisqually Site (45Pl155). The historical areas consist of approximately 6 acres. The Methodist Mission site is an additional historical site (45-PI-66) but, whereas the size and actual location of the site are unknown, a stone marker has been placed in its approximate location. The location of each of these areas is identified in Figure 2-1.

2.2.4 Industrial

The area north of Sequalitchew Creek will be used for industrial purposes. Industrial use may include activities ranging from mining gravel to development of light industrial facilities. This area occupies 36 acres and is identified in Figure 2-1.

2.2.5 Open Space

A number of areas on the Site will be used for open space. The open space area north of Sequalitchew Creek encompasses the creek and the former NGRR bed leading down to Puget Sound. The open space area south of Sequalitchew Creek borders the creek and extends to the northern most portion of the consent decree boundary. The area surrounding Old Fort Lake has also been designated as open space. The open space areas comprise approximately 73 acres, 22 acres of which is the lake itself. The location of each of these areas is identified in Figure 2-1.

2.3 Identification of Evaluation Units

The RI Report presents data by RI Areas. For the purposes of the RI, the Site was separated into different areas based on former production activities or other related activities that may have resulted in releases of COPCs to the environment. For the RA, the Site has been separated into different EUs based on future land use. Figure 2-3 presents both the RI areas and RAs for comparison. In addition, Appendix B of the RA presents the sample numbers for each EU and identifies their associated RI Areas.

The EUs were derived based on future land uses of the Site and were approved by Ecology. Future land use areas such as the historical and open space areas, that are relatively small in size, were evaluated without further division. The industrial land use area also was not divided. The commercial and golf course areas were subdivided into smaller EUs using the following decision rules:

- EUs should be similar in size.
- EUs should consist of contiguous property.
- EU boundaries should take into account potential remedial alternatives. For example, the commercial area on the bluff overlooking Puget Sound would require a different remedial approach than the rest of the Site due to the topography. Therefore, this area was designated, as its own EU. Other small EUs include the 65-foot commercial buffers, which are on the southern, southeastern, and eastern borders of the Site. These areas may be left in their current state as a buffer, depending on the results of the RA.
- EUs for the Golf Course should be divided between groups of golf holes.

The RA EUs are presented in Figure 2-3 and the number of acres for each EU is summarized in Table 2-1.

2.4 Potentially Affected Media

Potentially affected media at the Site include surface soil (0-1 foot below ground surface [BGS]), subsurface soil (1 foot to 15 BGS), subsurface soil (greater than 15 feet BGS), surface water (Old Fort Lake and Sequalitchew Creek), sediment (Old Fort Lake and Sequalitchew Creek), and groundwater. Based on the historical RI, preliminary and draft RAs, and ecological evaluations, it was determined that levels of COPCs in surface water and sediment were not of concern for protection of human and ecological receptors. Therefore, Ecology determined that no further action was warranted for these media (for more details see the RI Report, Volume I). Soil and groundwater are discussed below. COPC concentrations in the RI indicated that, other than low DNT concentrations that were detected in 6 wells, groundwater is not a medium of concern. The presence of low levels of DNT in groundwater is addressed in the FS.

The RI identified elevated levels of COPCs in surface and subsurface soil. COPCs are identified for surface and subsurface soil based on frequency of detection and risk-based screening criteria in the following section.

2.5 Identification of COPCs

In an effort to focus the risk assessment on those constituents most likely to pose risk to human and ecological receptors, preliminary screening was performed. This screening was conducted on a Site-wide

basis (e.g., EUs were not screened individually in this step), and consisted of eliminating COPCs that were not detected in any samples, and eliminating COPCs that had maximum detected concentrations that were below conservative risk-based screening concentrations. These screening steps are discussed below.

Data quality has been assessed and is discussed in the RI (See Appendix E). The data review involved verification that chain-of-custody protocols were followed, verification that the laboratory followed its quality assurance program, and an independent evaluation by URS Inc. of any data quality exceptions noted by the laboratory. Although there were some data quality exceptions indicating that some concentrations are estimates, all of the data presented in the RI were deemed of sufficient quality to retain for use in the risk assessment.

2.5.1 Screening of Non-Detected COPCs

Sample results for all COPCs were reviewed, and those constituents that were not detected in any samples were eliminated from further consideration. A total of 38 detected constituents were detected in surface soil and 52 in subsurface soil. A summary of the COPCs detected in surface and subsurface soil is shown in Table 2-2.

2.5.2 Risk-Based Screening of COPCs

In this last screening step, the maximum detected concentrations of COPCs were compared to the most conservative (i.e., the lowest) soil screening concentrations found in MTCA. These screening criteria were based on the direct exposure to soil for both human and ecological receptors.

For protection of human health, based on direct contact exposure pathways with soil, the screening levels for all constituents except lead, gasoline, and total petroleum hydrocarbons (TPH 418.1) were MTCA Method B residential soil concentrations, obtained from Ecology's *Cleanup Levels and Risk Calculation (CLARC) Tables* (Ecology, 2001*).* These values were chosen because they were the most conservative values found for protection of human health. The screening concentrations for gasoline and TPH 418.1 were obtained from the MTCA Method A tables for soil because there are no corresponding MTCA Method B values. Soil greater than 15 feet BGS was not screened against these values as this depth of soil is not available for human contact.

Surface and subsurface soil COPC concentrations were also compared to MTCA soil screening concentrations that were derived to be protective of groundwater. Even though groundwater monitoring has shown DNT to be the only constituent of concern this screening was performed to identify any areas where leaching of COPCs from soil may potentially impact groundwater. The screening levels used were Ecology's MTCA Method B levels derived for the protection of groundwater, obtained from Ecology's *CLARC Tables* (Ecology, 2001*)*, and Site-specific levels designated for use by Ecology.

Ecology has performed an evaluation of the Site and determined that lead is the indicator compound for potential terrestrial ecological impacts. As part of this evaluation, Ecology determined that, based on site-specific information, the potential species groups of concern included ground-feeding birds and herbivorous small mammals. The soil screening level identified for lead by Ecology is 118 mg/kg, and is intended to be protective of wildlife, including birds and small mammals.

2.5.2.1 Screening Results for Soil-to-Groundwater

Results of this screening step for surface soil are shown in Table 2-3, results for subsurface soil (>1 foot to $\leq$15 feet bgs) are shown in Table 2-4, and results for deep subsurface soil (>15 feet bgs) are shown in Table 2-5. Based on this screening step, there were 5 COPCs that exceeded the soil-to-groundwater screening criteria in surface soil, 5 COPCs that exceeded the criteria in subsurface soil >1 foot to $\leq$15 feet BGS, and 3 COPCs that exceeded the criteria in subsurface soil > 15 feet BGS. A summary of the COPCs that exceeded soil-to-groundwater screening criteria is presented in Table 2-6. Groundwater remediation options for these COPCs are presented in the FS and groundwater was not evaluated further in the risk assessment as a medium of concern.

2.5.2.2 Screening Results for Soil

Results of this screening step for surface soil are shown in Table 2-3, and the results for subsurface soil (>1 foot to ≤15 feet BGS) are shown in Table 2-4. Following this screening step, there were 16 COPCs in surface soil that exceeded the screening criteria and 17 COPCs that exceeded the criteria in subsurface soil >1 foot to ≤15 feet BGS.

A summary of these COPCs identified in surface and subsurface soil is shown in Table 2-7. Those constituents that did not have available risk-based screening concentrations were included as COPCs to be carried through to the risk assessment. These constituents are also identified in Table 2-7. Soil samples analyzed for oil and grease (EPA Method 413.2) were excluded from the RA due to the non-specificity of the analysis method. This method measures natural oils and greases in addition to petroleum constituents.

Table 2-1 – Evaluation Unit Size

Evaluation Unit	Acres
Commercial	
CM-01	47.2
CM-02	24.6
CM-03	37.5
CM-04	28.5
CM-05	64.2
CM-06	28.6
CM-07	60.6
CM-08	15.3
CM-09	27.5
Average	**37.1**
TOTAL	**334.0**
Golf Course	
GC-01	17.1
GC-02	18.3
GC-03	24.7
GC-04	20.5
GC-05	16.1
GC-06	22.8
GC-07	20.5
GC-08	19.1
GC-09	28.4
Average	**20.8**
TOTAL	**187.5**
Historical	
HI-01 - 1843 Fort Site	3.3
HI-02 – Midden	1.9
HI-03 - 404 Site Boundary	0.5
Average	**1.9**
TOTAL	**5.7**
Industrial	
Industrial	35.7
Open Space	
OS-01	4.3
OS-02	12.4
OS-03	11.3
OS-04[(1)]	45.2
Average	**18.3**
TOTAL	**73.2**
Grand Total Acreage for Parcel 1	***636.1***

Notes:
[(1)]Old Fort Lake comprises 22.35 of the acreage of this EU.

Table 2-2 – Summary of Constituents Detected in Each Depth Interval

Constituent	Soil Depth ≤ 1 Foot BGS	Soil Depth >1 Foot and ≤ 15 Feet BGS	Soil Depth > 15 Feet BGS
Explosives			
Dinitrotoluene, 2,4-	✓	✓	✓
Dinitrotoluene, 2,6-	✓	✓	✓
Monomethylamine Nitrate	– –	✓	– –
Nitrobenzene	✓	✓	– –
Nitroglycerine	✓	✓	– –
Trinitrobenzene, 1,3,5-	– –	✓	✓
Trinitrotoluene, 2,4,6-	✓	✓	✓
Petroleum Hydrocarbons			
#2 Diesel	– –	✓	✓
TPH (418.1) [(1)]	✓	✓	✓
Gasoline	✓	✓	– –
Oil and Grease[(2)]	✓	✓	✓
Inorganics			
Aluminum	✓	✓	✓
Antimony (metallic)	✓	✓	– –
Arsenic	✓	✓	✓
Beryllium	✓	✓	✓
Cadmium	✓	✓	✓
Chromium	✓	✓	✓
Copper	✓	✓	✓
Lead	✓	✓	✓
Mercury (inorganic)	✓	✓	✓
Nickel (soluble salts)	✓	✓	✓
Selenium (and compounds)	✓	✓	– –
Silver	✓	✓	✓
Thallium	✓	– –	– –
Zinc and Compounds	✓	✓	✓
PAHs			
Acenaphthene	– –	– –	✓
Anthracene	✓	✓	✓
Benzo(a)Anthracene	✓	✓	✓
Benzo(a)Pyrene	✓	✓	✓
Benzo(b)Fluoranthene	✓	✓	✓
Benzo(g,h,i)Perylene	✓	✓	✓
Benzo(k)Fluoranthene	✓	✓	✓
Chrysene	✓	✓	✓
Dibenz(a,h)anthracene	✓	✓	✓
Fluoranthene	✓	✓	✓
Fluorene	✓	✓	✓
Indeno(1,2,3-cd)pyrene	✓	✓	✓
Methylnaphthalene, 2-	– –	✓	✓
Naphthalene	– –	✓	– –
Phenanthrene	✓	✓	✓
Pyrene	✓	✓	✓
Pesticides/PCBs			
Aroclor 1254	– –	✓	– –
Aldrin	✓	– –	– –

Table 2-2 – Summary of Constituents Detected in Each Depth Interval

Constituent	Soil Depth ≤ 1 Foot BGS	Soil Depth >1 Foot and ≤ 15 Feet BGS	Soil Depth > 15 Feet BGS
Endrin	✓	✓	– –
Semi-Volatiles			
Benzoic Acid	✓	✓	– –
Bis(2-ethylhexyl)Phthalate	– –	✓	✓
Butyl Benzyl Phthalate	– –	✓	– –
Dibutyl Phthalate	– –	✓	– –
Diethyl Phthalate	– –	✓	– –
Di-N-Octylphthalate	– –	✓	✓
Volatiles			
Ethyl Benzene	– –	✓	– –
Methyl Ethyl Ketone	– –	✓	– –
Tetrachloroethene	– –	✓	– –
Xylenes	– –	✓	– –

Notes:
(1) This includes Bunker C and heavy oil.
(2)Oil and Grease data (EPA Method 413.2) were excluded from further evaluation in the risk assessment due to the non-specificity of the analysis method. This method measures natural oils and greases in addition to petroleum constituents.
– – Not detected in this depth interval.

Table 2-3 – Constituents That Exceed Risk-Based Screening Concentrations for Soil ≤ 1 Foot BGS

Constituent	Maximum Detected Concentration (mg/kg)	MTCA Method B Soil Screening Concentration (mg/kg)[1]	MTCA Method B Soil Screening Concentration Protective of Groundwater (mg/kg)[2]	Screening Level Exceeded
Explosives				
Dinitrotoluene, 2,4-	0.87	160	1.5[3]	No
Dinitrotoluene, 2,6-	0.52	80	1.5[3]	No
Nitrobenzene	0.08	40	0.0511	Yes
Nitroglycerine	1.1			NV
Trinitrotoluene, 2,4,6-	0.64	33.3	1.75[3]	No
Petroleum Hydrocarbons				
Gasoline	12	100[4]		No
TPH (418.1)	10,000	2,000[4]		Yes
Inorganics				
Aluminum	24,000			NV
Antimony (metallic)	3.3	32		No
Arsenic (inorganic)	970	0.67	92,400[5]	Yes
Beryllium	0.78	160		No
Cadmium	20	80	2.21	Yes
Chromium	120	120,000		No
Copper	190	2,960		No
Lead (and compounds)	25,000	118[6]	162,000[5]	Yes
Mercury (inorganic)	130	24	24[3]	Yes
Nickel (soluble salts)	26	1,600	417	No
Selenium (and compounds)	2.3	400	8.32	No
Silver	1.2	400		No
Thallium	1.7	5.6		No
Zinc and Compounds	1,700	24,000	5,970	No
PAHs				
Anthracene	1.1	24,000	1,140	No
Benzo(a)Anthracene	8.6	0.14	34.3[3]	Yes
Benzo(a)Pyrene	5.6	0.14	34.3[3]	Yes
Benzo(b)Fluoranthene	7	0.14	34.3[3]	Yes
Benzo(g,h,i)Perylene	4.9			NV
Benzo(k)Fluoranthene	2.6	0.14	34.3[3]	Yes
Chrysene	14	0.14	34.3[3]	Yes
Dibenz(a,h)anthracene	0.51	0.14	34.3[3]	Yes
Fluoranthene	29	3,200	631	No
Fluorene	0.02	3,200	101	No
Indeno(1,2,3-cd)pyrene	1.6	0.14	34.3[3]	Yes
Phenanthrene	7.1			NV
Pyrene	9.1	2,400	655	No
Pesticides/PCBs				

Table 2-3 – Constituents That Exceed Risk-Based Screening Concentrations for Soil ≤ 1 Foot BGS

Constituent	Maximum Detected Concentration (mg/kg)	MTCA Method B Soil Screening Concentration (mg/kg)[(1)]	MTCA Method B Soil Screening Concentration Protective of Groundwater (mg/kg)[(2)]	Screening Level Exceeded
Aldrin	0.6	0.06	0.005	Yes
Endrin	0.02	24	1.06	No
Semi-Volatiles				
Benzoic Acid	0.27	320,000	257	No

Notes:
Shaded rows identify constituents with maximum concentrations that exceed ecological or human health screening values.
NV= No screening value was available.
(1)The derivation of these values is presented in WAC 173-340-740.
(2)The derivation of these values is presented in WAC 173-340-747.
(3)Value is a Site-specific value designated by Ecology for the protection of groundwater. The site-specific value for Total DNT is 3.0 mg/kg. For the purposes of screening the value was divided by 2 and used as a screening criterion for 2,4 and 2,6-dinitrotoluene. For carcinogenic PAHs, the Site-specific value was 240 mg/kg for total carcinogenic PAHs; when this value is divided by 7 (there are seven carcinogenic PAHs), the value for each individual carcinogenic PAH becomes 34.3.
(4)Value is from MTCA Method A Table, presented in WAC 173-340-740.
(5)Value is a Site-specific value based on Site-specific leaching Studies (Hart Crowser, 1996).
(6)Value is an ecological screening concentration identified by Ecology.

Table 2-4 – Constituents That Exceed Risk-Based Screening Concentrations for Soil > 1 Foot and ≤ 15 Feet BGS

Constituent	Maximum Detected Concentration (mg/kg)	MTCA Method B Soil Screening Concentration (mg/kg)[1]	MTCA Method B Soil Screening Concentration Protective of Groundwater (mg/kg)[2]	Screening Level Exceeded
Explosives				
Dinitrotoluene, 2,4-	1	160	1.5[3]	No
Dinitrotoluene, 2,6-	1.1	80	1.5[3]	No
Monomethylamine Nitrate	30,000			NV
Nitrobenzene	0.17	40	0.05	Yes
Nitroglycerine	3.7			NV
Trinitrobenzene, 1,3,5-	0.24	214,000		No
Trinitrotoluene, 2,4,6-	42	33.3	1.75[3]	Yes
Petroleum Hydrocarbons				
#2 Diesel	1,000	2,000[4]		No
Gasoline	87	100[4]		No
TPH (418.1)	36,000	2,000[4]		Yes
Inorganics				
Aluminum	26,200			NV
Antimony (metallic)	4	32		No
Arsenic (inorganic)	1,500	0.667	92,400[5]	Yes
Beryllium	0.7	160		No
Cadmium	2.9	80	2.21	Yes
Chromium	55	120,000		No
Copper	24,000	2,960	263	Yes
Lead (and compounds)	4,000	118[6]	162,000[5]	Yes
Mercury (inorganic)	13	24	24[3]	No
Nickel (soluble salts)	100	1,600	417	No
Selenium (and compounds)	0.27	400	8.32	No
Silver	1.5	400		No
Zinc and Compounds	1,100	24,000	5,970	No
PAHs				
Anthracene	0.07	24,000	1,140	No
Benzo(a)Anthracene	0.23	0.14	34.3[3]	Yes
Benzo(a)Pyrene	0.22	0.14	34.3[3]	Yes
Benzo(b)Fluoranthene	0.15	0.14	34.3[3]	Yes
Benzo(g,h,i)Perylene	0.1			NV
Benzo(k)Fluoranthene	0.17	0.14	34.3[3]	Yes
Chrysene	0.36	0.14	34.3[3]	Yes
Dibenz(a,h)anthracene	0.12	0.14	34.3[3]	No
Fluoranthene	0.36	3,200	631	No
Fluorene	0.01	3,200	101	No
Indeno(1,2,3-cd)pyrene	0.14	0.14	34.3[3]	Yes

Table 2-4 – Constituents That Exceed Risk-Based Screening Concentrations for Soil > 1 Foot and ≤ 15 Feet BGS

Constituent	Maximum Detected Concentration (mg/kg)	MTCA Method B Soil Screening Concentration (mg/kg)[(1)]	MTCA Method B Soil Screening Concentration Protective of Groundwater (mg/kg)[(2)]	Screening Level Exceeded
Methylnaphthalene, 2-	0.04			NV
Naphthalene	0.4	1,600	4.46	No
Phenanthrene	0.2			NV
Pyrene	0.54	2,400	655	No
Pesticides/PCBs				
Aroclor 1254	0.58	1.6		No
Endrin	0.85	24	1.06	No
Semi-Volatiles				
Benzoic Acid	0.08	320,000	257	No
Bis(2-ethylhexyl)Phthalate	6.21	71.4	13.9	No
Butyl Benzyl Phthalate, N-	0.26	16,000	893	No
Dibutyl Phthalate	0.25	8,000	56.5	No
Diethyl Phthalate	2.7	64,000	72.2	No
Di-N-Octylphthalate	0.63	1,600	532,000	No
Volatiles				
Ethyl Benzene	1.5	8,000	6.91	No
Methyl Ethyl Ketone	0.41	48,000		No
Tetrachloroethene	0.06	19.6	0.009	Yes
Xylenes	2.8	160,000	135	No

Notes:
Shaded rows identify constituents with maximum concentrations that exceed ecological or human health screening values.
NV= No screening value was available.
[(1)]The derivation of these values is presented in WAC 173-340-740.
[(2)]The derivation of these values is presented in WAC 173-340-747.
[3)]Value is a Site-specific value designated by Ecology for the protection of groundwater. The site-specific value for Total DNT is 3.0 mg/kg. For the purposes of screening the value was divided by 2 and used as a screening criterion for 2,4 and 2,6-dinitrotoluene. For carcinogenic PAHs, the Site-specific value was 240 mg/kg for total carcinogenic PAHs; when this value is divided by 7 (there are seven carcinogenic PAHs), the value for each individual carcinogenic PAH becomes 34.3.
[(4)]Value is from MTCA Method A Table, presented in WAC 173-340-740.
[(5)]Value is a Site-specific value based on Site-specific leaching Studies (Hart Crowser, 1996).
[(6)]Value is an ecological screening concentration identified by Ecology.

Table 2-5 – Constituents That Exceed Risk-Based Screening Concentrations for Soil > 15 Feet BGS

Constituent	Maximum Detected Concentration (mg/kg)	MTCA Method B Soil Screening Concentration Protective of Groundwater (mg/kg)[1]	Screening Level Exceeded
Explosives			
Dinitrotoluene, 2,4-	0.95	1.5[2]	No
Dinitrotoluene, 2,6-	1.90	1.5[2]	Yes[3]
Trinitrobenzene, 1,3,5-	0.62		NV
Trinitrotoluene, 2,4,6-	7.40	1.75[2]	Yes
Petroleum Hydrocarbons			
#2 Diesel	660		NV
TPH (418.1)	11,000	7,600[4]	Yes
Inorganics			
Aluminum	11,400		NV
Arsenic (inorganic)	18	92,400[5]	No
Beryllium	0.2		NV
Cadmium	0.14	2.21	No
Chromium	13.5		NV
Copper	22	263	No
Lead (and compounds)	1,800	162,000[5]	No
Mercury (inorganic)	0.14	24[2]	No
Nickel (soluble salts)	18	417	No
Silver	0.3		NV
Zinc and Compounds	63	5,970	No
PAHs			
Acenaphthene	0.04	105	No
Anthracene	0.07	1,140	No
Benzo(a)Anthracene	0.20	34.3[2]	No
Benzo(a)Pyrene	0.23	34.3[2]	No
Benzo(b)Fluoranthene	0.16	0.14	No
Benzo(g,h,i)Perylene	0.21		NV
Benzo(k)Fluoranthene	0.10	34.3[2]	No
Chrysene	0.28	34.3[2]	No
Dibenz(a,h)anthracene	0.19	34.3[2]	No
Fluoranthene	0.36	631	No
Fluorene	0.04	101	No
Indeno(1,2,3-cd)pyrene	1.10	34.3[2]	No
Methylnaphthalene, 2-	0.04		NV
Phenanthrene	0.54		NV
Pyrene	0.63	655	No
Semi-Volatiles			
Bis(2-ethylhexyl)Phthalate	0.04	13.9	No

Table 2-5 – Constituents That Exceed Risk-Based Screening Concentrations for Soil > 15 Feet BGS

Constituent	Maximum Detected Concentration (mg/kg)	MTCA Method B Soil Screening Concentration Protective of Groundwater (mg/kg)[1]	Screening Level Exceeded
Di-N-Octylphthalate	0.14	532,000	No

[1]The derivation of these values is presented in WAC 173-340-747.
[2]Value is a Site-specific value designated by Ecology for the protection of groundwater. The site-specific value for Total DNT is 3.0 mg/kg. For the purposes of screening the value was divided by 2 and used as a screening criterion for 2,4 and 2,6-dinitrotoluene. For carcinogenic PAHs, the Site-specific value was 240 mg/kg for total carcinogenic PAHs; when this value is divided by 7 (there are seven carcinogenic PAHs), the value for each individual carcinogenic PAH becomes 34.3.
[3]The site-specific cleanup level that is protective of groundwater and human health for total DNT is 3.0 mg/kg.
[4]Site-specific value that is protective of groundwater and human health for Bunker C fuel oil.
[5]Site-specific value that is protective of groundwater based on site-specific leaching studies (Hart Crowser, 1996).

Table 2-6 – Summary of Constituents That Exceeded Soil-to-Groundwater Screening Criteria in Each Depth Interval

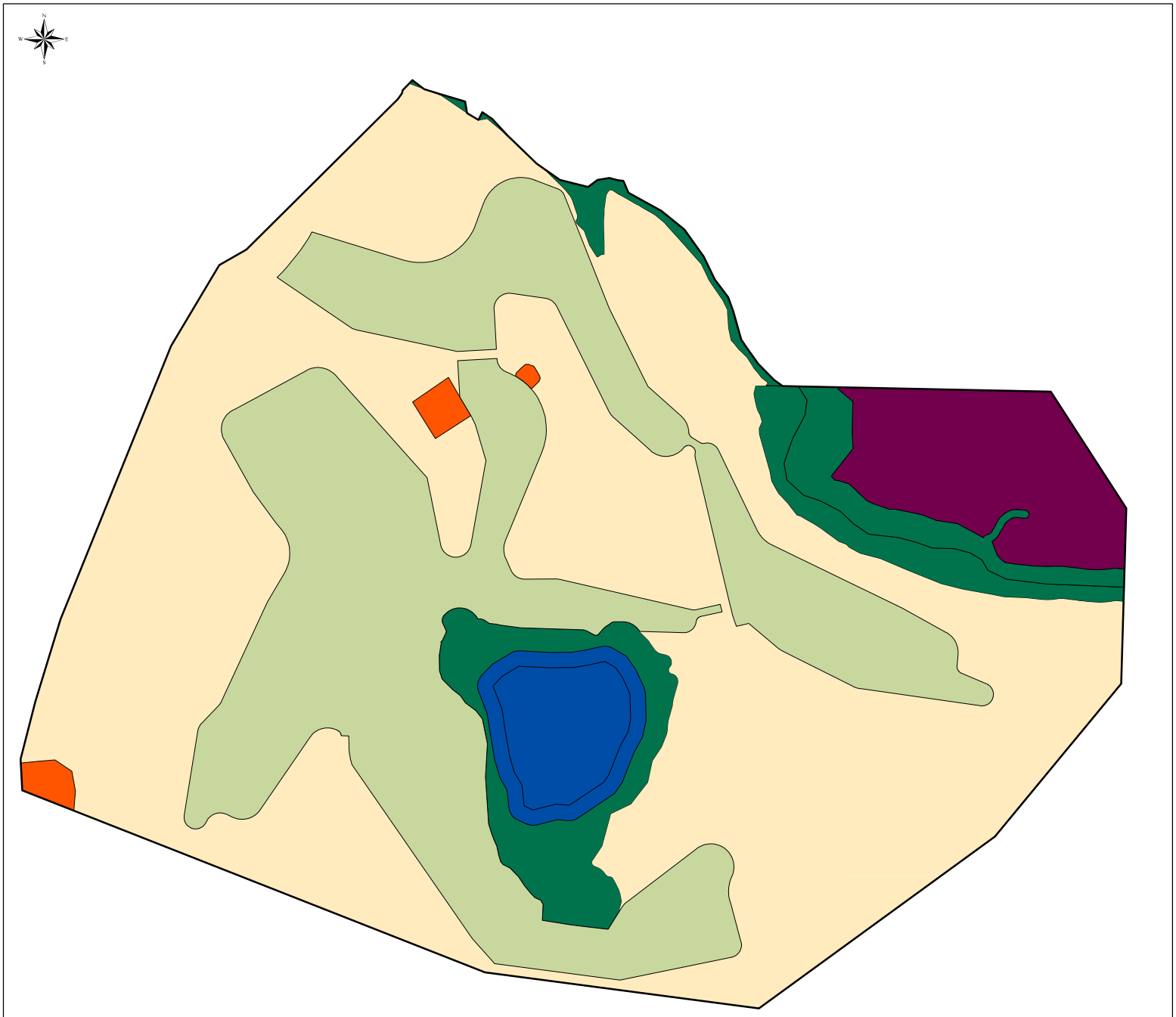
Constituent	Soil Depth ≤ 1 Foot BGS	Soil Depth >1 Foot and ≤ 15 Feet BGS	Soil Depth > 15 Feet BGS
Explosives			
Dinitrotoluene, 2,6-	– –	– –	✓
Nitrobenzene	✓	✓	– –
Trinitrotoluene, 2,4,6-	– –	✓	✓
Inorganics			
Cadmium	✓	✓	– –
Petroleum Hydrocarbons			
TPH (418.1) [Bunker C Fuel Oil]	✓	– –	✓
Copper	– –	✓	– –
Mercury (inorganic)	✓	– –	– –
Pesticides/PCBs			
Aldrin	✓	– –	– –
Volatiles			
Tetrachloroethene	– –	✓	– –

Note:
– – Not a COPC for this depth interval.

Table 2-7 – Summary of Constituents to be Evaluated in Risk Assessment for Each Depth Interval

Constituent	Soil Depth ≤ 1 Foot BGS	Soil Depth > 1 Foot and ≤ 15 Feet BGS
Explosives		
Monomethylamine Nitrate	– –	✓
Nitroglycerine	✓	✓
Trinitrotoluene, 2,4,6-	– –	✓
Petroleum Hydrocarbons		
TPH (418.1)	✓	✓
Inorganics		
Aluminum	✓	✓
Arsenic	✓	✓
Copper	– –	✓
Lead	✓	✓
Mercury	✓	– –
PAHs		
Benzo(a)Anthracene	✓	✓
Benzo(a)Pyrene	✓	✓
Benzo(b)Fluoranthene	✓	✓
Benzo(g,h,i)Perylene	✓	✓
Benzo(k)Fluoranthene	✓	✓
Chrysene	✓	✓
Dibenz(a,h)anthracene	✓	– –
Indeno(1,2,3-cd)pyrene	✓	✓
Methylnaphthalene, 2-	– –	✓
Phenanthrene	✓	✓
Pesticides/PCBs		
Aldrin	✓	– –

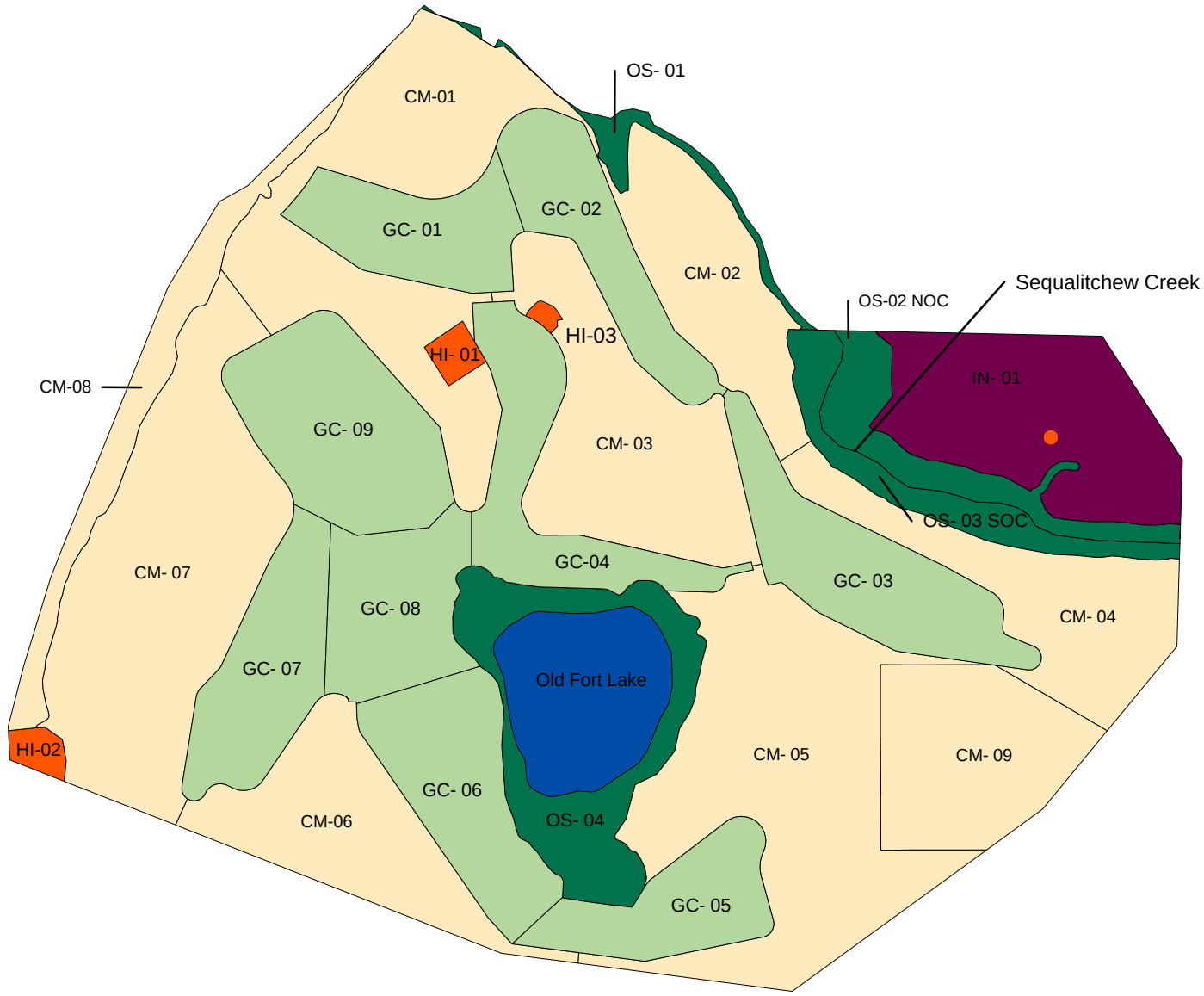
Notes:
Shaded rows identify COPCs with no available MTCA risk-based screening values. These COPCs are carried through the risk assessment.
– – Not a COPC for this depth interval.



Parcel One Future Land Use

Former DuPont Works Site
September, 2002

Figure 2-1



0 250 500 1,000 1,500 2,000 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

- Historical
- Golf Course
- Industrial
- Open Space
- Old Fort Lake
- Commercial

Notes

GC - Golf Course
HI - Historical
CM - Commercial
OS - Open Space
NOC - North of Creek
SOC - South of Creek

Historical location in the Industrial area is the Methodist Mission Marker. Actual location of the mission is unknown.

Risk Assessment
Evaluation Units

Former DuPont Works Site
July, 2003

Figure 2-2

Legend

- Historical RI Areas
- Golf Course
- Commercial
- Historical
- Old Fort Lake
- Industrial
- Open Space

Notes

RI Areas with blue hatch lines allow underlying EU's to be visible.

NOC - North of Creek

Comparison of RI Areas and RA Evaluation Units

Former DuPont Works Site
September, 2002

Figure 2-3

PIONEER TECHNOLOGIES CORPORATION

2.6 References

Ecology (Washington State Department of Ecology). 2001. Cleanup Levels and Risk Calculation (CLARC) Table Updates, Version 3.1, November. 2001.

Ecology (Washington State Department of Ecology). 2000. Final Environmental Impact Statement: Former DuPont Works Site.

Hart Crowser (Hart Crowser, Inc.). 1996. Revised Golf Course Leachability Documents. Appendix III Lead Cleanup Summary. Appendix VII Arsenic Cleanup Summary.

URS (URS, Inc.). 2002. Remedial Investigation Former Dupont Works Site, DuPont, Washington.

Chapter 3 – Identification of Cleanup Levels and Remediation Levels

3.1 Introduction

This chapter identifies the cleanup levels and remediation levels that will be used in Chapter 4 to identify areas of the Site that will require further consideration in the FS. As stated in MTCA, preparation of the RI should involve identification of cleanup levels and remediation levels. Instead of including cleanup levels and remediation levels in the RI, they are presented here, so that their development can be explained in the context of protection of human and ecological receptors. For this Site, numerical criteria include cleanup levels, remediation levels, and an ecological screening concentration for lead.

As discussed in Chapter 2 of the RA, Ecology has determined that, with the exception of groundwater and soil, all media within the Consent Decree Boundary require "No Further Action" (See the RI) (URS, 2002). Groundwater was evaluated in Chapter 2, and carried from there to the FS where remediation options are considered. Therefore, the cleanup levels and remediation levels described below are specific to soil that is available for direct contact by human and ecological receptors.

3.2 Soil Cleanup Levels

Soil cleanup levels are published in tables (i.e., CLARC) by Ecology, and are default values that can be used at any site. Cleanup levels specified in MTCA are concentrations that are protective of humans for specific exposure scenarios (i.e., industrial land use and unrestricted future land use) (WAC 173-340-200). To supplement these MTCA table values, Ecology has approved Site-specific cleanup levels for a select group of constituents.

The only area on the Site where default cleanup levels are used is the industrial area located north of Sequalitchew Creek. These levels assume adult workers would be exposed to hazardous constituents through incidental soil ingestion, and were calculated using the algorithm and default exposure assumptions identified in WAC 173-340-745. These values are presented in Table 3-1. The other cleanup level used was 2,000 mg/kg for total petroleum hydrocarbons (TPH 418.1), which was obtained from the MTCA Method A Table, WAC 173-340-900.

Site-specific cleanup levels for mercury, total petroleum hydrocarbons (TPH), total dinitrotoluenes (DNT), and trinitrotoluene (TNT) are presented in Table 3-2. These Site-specific levels were approved for use at the DuPont Site by Ecology (See Appendix C).

3.3 Determination of Arsenic Background Level in Soil

In addition to the cleanup levels, an area background level was calculated for arsenic in soil because the cleanup level is below the background concentration. As part of the RI, soil samples were collected outside of the Consent Decree boundary to define the "Site Area Background" level of arsenic (See Chapter 2 of the RI). Area background samples are collected to determine the concentration of a constituent that is consistently present in the environment in the vicinity of a site, as a result of human activities unrelated to releases from the site.

As stipulated in MTCA regulations (WAC 173-340-709), twenty soil samples were collected to statistically establish area background levels. Based on the results of these samples, the site area background concentration for arsenic is 32 mg/kg. This value represents the 90^{th} percentile value of the distribution of the background samples. In accordance with MTCA (WAC 173-340-708), the cleanup level established for a constituent shall not be adjusted below the area background level.

3.4 Ecological Soil Screening Concentration for Lead

Ecology performed an evaluation of the Site and determined that lead is the indicator compound for potential terrestrial ecological impacts. As part of this evaluation, Ecology determined that based on site-

specific information, the potential species groups of concern included ground-feeding birds and herbivorous small mammals.

The soil screening level identified for lead by Ecology is 118 mg/kg. This value was obtained from the MTCA site-specific procedures for evaluating potential impacts to populations of terrestrial ecological receptors (WAC 173-340-7493). This value was derived by Ecology, using exposure models and chemical-specific input values for avian and mammalian species. Exceedance of this value does not necessarily indicate that cleanup must occur, but that various other options could be explored to demonstrate that lead does not pose a threat to ecological receptors at the site. Site-specific ecological studies and evaluations that have been performed are summarized in Appendix A.

3.5 Determination of Soil Remediation Levels

Soil remediation levels are site-specific levels based on protection of human health that are developed using exposure assumptions and other media-specific factors that reflect future site conditions. Remediation levels are calculated using human health risk assessment procedures and site-specific information, as specified in WAC 173-340-708. In order to apply remediation levels to site remediation decisions, institutional controls (such as deed restrictions) are placed on properties with residual contamination to ensure that the exposure conditions applied to the derivation of these levels are maintained at the site in the future. Remediation levels were calculated for all constituents detected in at least one soil sample, unless the constituent did not have available toxicity information and was not directly linked to historical site operations.

Remediation levels were calculated assuming exposure via incidental soil ingestion. The other most likely exposure pathway, inhalation of particulates, was not considered based on historical air monitoring conducted at the Site. As part of interim corrective actions on the Site, air monitoring was performed during times of soil excavation, where maximum soil disturbance was occurring in the most contaminated areas (i.e., hot spots) of the Site. Results from this air sampling indicated that airborne concentrations of arsenic and lead (the primary constituents of concern) were below analytical detection limits. The results from the most recent air monitoring activities are presented in *Interim Source Removal Actions: Air Monitoring Report* (PIONEER and West Shore, 2002). In addition, the majority of the Site will be developed and used for commercial purposes, industrial purposes, or for a golf course. The future development will result in very little property being available as a source for wind-blown particulate matter. Dermal contact with soil was not considered because the main constituents of concern at the Site (i.e., arsenic and lead) are not readily absorbed through the skin.

3.5.1 Scenarios for Future Site Use

According to the Final Environmental Impact Statement, future Site use will be commercial, golf course, historical, industrial, and open space (Ecology, 2000). As stated in Chapter 2, a restrictive covenant was filed for this Site stating that none of the property shall be developed or used for residential uses, schools, daycare facilities, parks, or other recreational purposes, aside from golf course use. The soil remediation levels presented below are based on these land uses. Each future Site use, including the potentially exposed populations is described briefly below. A more detailed description of the future land use at the Site is presented in Chapter 2.

3.5.1.1 Commercial Use

Some Site locations are anticipated to contain retail and commercial establishments, including municipal buildings. Most of the soil in these areas will be covered by buildings, parking lots, and roads. The receptor most likely to be exposed to soil in the commercial land use area is a professional adult landscaper who plants and maintains shrubs. The pathway of exposure considered for this worker is incidental soil ingestion.

3.5.1.2 Golf Course

Development of Site areas for a golf course will require addition of topsoil and turf to achieve the proper contouring. The finished golf course will have contouring soil plus turf separating golfers from residual constituents left in surface and subsurface soils. Under conditions of normal use, exposure to

constituents in soil will only occur for adult groundskeepers, who may be exposed while repairing irrigation lines, maintaining drainage ditches, or planting trees. The pathway of exposure considered for this worker is incidental soil ingestion. The FS evaluates a variety of different remedial alternatives including an engineered CAP/Cover. The RLs associated with an engineered cap/cover remedial alternative are discussed in Section 6.5.4 of the FS.

3.5.1.3 Historical Areas

Although access to historical areas on the Site will be limited to preserve any artifacts that remain, older children or adults occasionally may walk through these areas. Exposure to younger children (i.e., less than six years old) is considered unlikely due to access limitations. Exposure to these areas on the Site is assumed to be infrequent, and exposure to constituents in the soil in these areas is unlikely. However, to be conservative, it was assumed that an adolescent (age 7 to 18) could be exposed to constituents in soil in these areas in the same way they could be exposed in open space areas. As with open space areas, the pathway of exposure considered was incidental soil ingestion.

3.5.1.4 Industrial Use

Future industrial use may include activities ranging from mining gravel to development of light industrial facilities. Adult workers may have direct contact with soil containing residual levels of COPCs. As described in Section 3.2, Ecology has already developed soil cleanup levels based on default industrial exposure assumptions. These cleanup levels that were used for Parcel 2 of this Site will also be applied as cleanup levels in Parcel 1.

3.5.1.5 Open Space Areas

Part of the Site will be preserved as open space. Exposure to soil in these areas may occur to adolescents while playing there. Such exposure would be random, occurring primarily during the warmer, drier months. The pathway of exposure considered for the adolescents is incidental soil ingestion.

3.5.2 Remediation Level Equations

The equations used to calculate remediation levels were obtained from WAC 173-340-740. Soil remediation levels were calculated using these equations, considering the potential reasonable maximum exposure for humans under each proposed land use with the exception of industrial use (for industrial use, MTCA default industrial cleanup levels were used, as identified in Section 3.2).

3.5.2.1 Equation for Noncarcinogens

$$\text{Soil Remediation Level (mg/kg)} = \frac{RfD\ x\ ABW\ x UCF\ x HQ\ x AT_n}{SIR\ x AB1\ x EF\ x ED}$$

3.5.2.2 Equation for Carcinogens

$$\text{Soil Remediation Level (mg/kg)} = \frac{RISK\ x\ ABW\ x\ AT_c\ x UCF}{CPF\ x SIR\ x AB1\ x EF\ x ED}$$

Where:

RfD = Reference Dose (oral) for noncarcinogenic health effects (mg/kg-day).
ABW = Average Body Weight for the exposed person exposed (kg).
UCF = Unit Conversion Factor (mg/kg).
HQ = Target Hazard Quotient (unitless).
AT_n = Averaging Time for noncarcinogenic effects (days).
AT_c = Averaging Time for cancer effects (days).
SIR = Soil Ingestion Rate (mg/day).
AB1 = Gastrointestinal Absorption Fraction (unitless).
EF = Exposure Frequency (days/year).

ED = Exposure Duration (years).
RISK = Target Cancer Risk (unitless).
CPF = Carcinogenic Potency Factor $(mg/kg\text{-}day)^{-1}$.

3.5.2.3 Equation Input Values

The input values for these equations consist of exposure factors, which describe the exposure patterns of the receptors (i.e., exposure frequency, exposure duration, ingestion rate, gastrointestinal absorption fraction, body weight, and averaging time); toxicity values (i.e., reference doses and carcinogenic potency factors), and benchmark risks (i.e., target hazard quotients and target cancer risks). These input values are discussed below.

Exposure Factors

Exposure factors are used to estimate the intake level of a constituent. Using this estimated intake and incorporating the other input values, including toxicity values and benchmark risks (as defined in MTCA), soil constituent concentrations that are protective for each future Site use were calculated. Each of the exposure factors has a range of possible values associated with it. The exposure factor values chosen for each receptor (i.e., commercial, golf course, historical, industrial, and open space) were selected so that the combination of all exposure variables resulted in a reasonable maximum exposure (RME) for the given receptor. The six basic exposure factors are described below. All of these values were derived in collaboration with Ecology (Ecology, 1999a and 1999b).

- *Exposure Frequency* – The number of days per year that a person is exposed. For the commercial worker and golf course groundskeeper, exposure is assumed to occur 52 days/year (once per week); for the historical area and open space users, exposure is assumed to occur 104 days/year (2 days/week).

- *Exposure Duration* – The number of years over which exposure is assumed to occur. For the commercial landscaper and the golf course groundskeeper, the exposure duration was assumed to be 20 years, which is the MTCA default value for worker exposure duration. For the historical area and open space users, the exposure duration was assumed to be 12 years, which is the age range of the adolescent receptor.

- *Ingestion Rate* – The amount of soil ingested per day of exposure. For the commercial landscaper, golf course groundskeeper, historical area user, and open space user the soil ingestion rate was assumed to be 200 mg/day. This is a conservative (i.e., health protective) ingestion rate typically assumed for childhood exposure. For comparison, the MTCA default ingestion rate value typically used for adults is 50 mg/day.

- *Gastrointestinal Absorption Fraction* – This is the percentage of a constituent that is available for absorption by the gastrointestinal tract once ingested. This is typically a constituent-specific value, but based on direction given by Ecology this value was conservatively chosen to be 100% for all constituents.

- *Body Weight* – The average body weight, in kilograms, of the receptor being evaluated. For the commercial landscaper and golf course groundskeeper this value was assumed to be the MTCA default of 70 kg, the average weight of an adult (average of both females and males). For the recreational users (both historical and open space areas), this value was assumed to be 47 kg, the average weight of females and males between the ages of 7 and 18 (EPA, 1996a).

- *Averaging Time* – The number of days over which exposure is averaged. Exposure levels for carcinogens are averaged over the lifetime of the exposed individual (i.e., 75 years) while exposure levels for noncarcinogens are averaged over the duration of exposure. Therefore, for carcinogens, the averaging time is calculated as the exposure frequency (days/year) X 75 years lifetime expectancy. The averaging time for noncarcinogens is calculated as the exposure frequency (days/year) X exposure duration (years). The carcinogenic averaging time is calculated using 75 years as the exposure duration because it is assumed that exposure to a

carcinogen can cause cancer at any later time in your life. For noncarcinogens, it is assumed that the effect of exposure will be seen during the period of exposure.

A summary of the exposure factors used to calculate remediation levels is presented in Table 3-3.

3.5.2.4 Toxicity Values

The toxicity values used in this assessment include noncarcinogenic reference doses (RfDs) and carcinogenic potency factors (CPFs). Both carcinogenic and noncarcinogenic health effects must be considered when evaluating potential human health impacts. The potential for producing carcinogenic effects is limited to certain constituents (i.e., carcinogens); conversely, adverse noncarcinogenic health effects can potentially result from exposure to any constituent. Therefore, in many cases a constituent may only have a noncancer toxicity value and no carcinogenic toxicity value.

RfDs and CPFs are derived through an evaluation of the relationship between the amount of a constituent (either administered, absorbed or believed to be effective) and changes in certain aspects of the biological system (usually toxic effects) in the exposed population (animals and/or humans) in response to that chemical. EPA has evaluated numerous chemicals and has published the corresponding toxicity values, which have undergone peer review. The following sources of toxicity information were consulted to identify toxicity values for this assessment:

- The Integrated Risk Information System (IRIS) (EPA, 2001).
- The Health Effects Assessment Summary Tables–Annual Update (HEAST) (EPA, 1997).
- Ecology's Cleanup Levels and Risk Calculation (CLARC) Table Updates (Ecology, 2001b).
- EPA Region IX Preliminary Remediation Goal (PRG) Tables (EPA, 2000).

The values presented in IRIS have been "verified" by either the EPA Reference Dose/Reference Concentration (RfD/RfC) Work Group or the EPA Carcinogen Risk Assessment Verification Endeavor (CRAVE). These agency work groups conduct a verification process that leads to internal agency scientific consensus regarding risk assessment information for a chemical. All of the toxicity values presented in the HEAST document are considered "provisional" by EPA because an agency work group has not verified them. Provisional values are not listed in IRIS. EPA Region IX PRG Tables were consulted because they frequently contain provisional values published internally within EPA, by the National Center for Environmental Assessment (NCEA).

Since multiple toxicity values were available for some chemicals, the sources of toxicity information were prioritized as follows to select the toxicity values used in the risk assessment:

1. IRIS values
2. HEAST values
3. CLARC table values
4. PRG table values

The toxicity of any chemical depends on its route of entry into the body. In some cases a chemical may produce toxicity only at or near a specific route of entry and may not be toxic through other routes of exposure. Only oral toxicity values were used in the derivation of remediation levels because soil ingestion was the only exposure pathway considered. A description of RfDs and CPFs, including an explanation of how they are derived, is provided below.

<u>Reference Doses Definition</u>

The term RfD was developed by EPA to refer to a daily intake of a constituent to which an individual, including sensitive subpopulations, can be exposed without any expectation of adverse noncarcinogenic health effects (e.g., organ damage, biochemical alterations, birth defects). EPA has developed RfDs for

subchronic (i.e., short-term exposures) and chronic exposures (multiple exposures occurring over an extended period of time). An RfD is defined as "an estimate (with uncertainty spanning perhaps an order of magnitude or greater) of a daily exposure level for the human population, including sensitive subgroups, that is likely to be without an appreciable risk of deleterious effects during a portion of the lifetime (EPA, 1989)." RfDs are expressed in units of mg/kg-day.

RfD Derivation

Noncarcinogenic constituents are thought to exhibit threshold characteristics. That is, exposures less than a specific threshold dose will not result in adverse health effects, whereas exposures exceeding the threshold dose may produce adverse health effects. The assumption of a threshold for toxicity is based on the concept that the body has certain protective mechanisms that must be overcome before adverse effects are manifest. For example, there could be a large number of cells performing the same or similar function whose population must be significantly depleted before the effect is seen.

The threshold concept is important in the regulatory context. The individual threshold hypothesis holds that a range of exposures from zero to some finite value can be tolerated by the organism without expression of the toxic effect. Further, it is often prudent to focus on the most sensitive members of the population; therefore, regulatory efforts are generally made to keep exposures below the population threshold, which is defined as the lowest of the thresholds of the individuals within a population (EPA, 2001).

In general, an RfD is derived from a no-observed-adverse-effects-level (NOAEL) or a lowest-observed-adverse-effects-level (LOAEL) obtained from animal studies (however, occasionally they may be derived from human studies) by the application of standard order-of-magnitude uncertainty factors. In certain cases, an additional modifying factor is employed to account for professional assessment of scientific uncertainties in the available data (EPA, 1989).

A NOAEL is an experimentally determined dose at which there was no statistically or biologically significant indication of the toxic effect of concern. The study chosen to establish the NOAEL is based on the criterion that the measured endpoint represents the most sensitive target organ or tissue (i.e., critical organ) for that chemical. In an experiment with several NOAELs, generally the lowest one is chosen as the critical NOAEL. Since many constituents can produce toxic effects on several organ systems, with each toxic effect possibly having a separate threshold dose, the distinction of the critical toxic effect provides added confidence that the NOAEL is protective of human health.

Once the critical NOAEL is identified, the next step is to derive the RfD by dividing the NOAEL by safety factors, as follows:

$$RfD\ (average\ daily\ human\ dose) = \frac{NOAEL_{Experimental\ Dose}}{Safety\ Factors + Modifying\ Factor}$$

Generally, each safety factor represents a specific area of uncertainty inherent in the available data and accounts for uncertainties, such as:

- Differences in responsiveness between humans and animals in prolonged exposure studies (factor of 10) (EPA, 2001).
- Variation in susceptibility among individuals in the human population (factor of 10) (EPA, 2001).
- Incomplete databases (e.g., those for which only the results of subchronic studies are available) (factor of 10) (EPA, 2001).

In addition to the safety factors, EPA applies a modifying factor in some instances. Modifying factors range from 0 to 10 and are included to reflect a qualitative professional assessment of additional uncertainties in the critical study and in the entire database for the chemical not explicitly addressed by the uncertainty factors. The default value for the modifying factor is 1 (EPA, 1997).

Cancer Potency Factors Definition

A cancer potency factor (CPF) is a numerical estimate of the carcinogenic potency of a constituent. CPFs are expressed in units of the inverse of milligrams of constituent per kilogram of body weight per day (kg-day/mg). CPFs were used in this assessment to calculate remediation levels that would result in carcinogenic risks within acceptable benchmark levels (see explanation of benchmark levels presented below).

CPF Derivation

The mechanism for carcinogenesis is considered to be a "non-threshold" process, since any level of exposure to such a constituent is considered to pose a small, but finite, probability of generating a carcinogenic response. Since risk at low exposure levels cannot be measured directly either by animal experiments or by epidemiologic studies, a number of mathematical models and procedures have been developed for use in extrapolating from high to low doses. Different extrapolation models or procedures, while they may reasonably fit the observed data, may lead to large differences in the projected risk at low doses. EPA assumes in developing CPFs that a single interaction with DNA can initiate cancer, so that low-dose extrapolation can be performed to nearly zero exposure. Making zero a data point affects the slope of the extrapolation curve and, therefore affects the CPF. This means that the relatively high doses that are often used in animal studies can be extrapolated downward to extremely small doses, with some incremental risk of cancer always possible. This assumes that even a small number of molecules (possibly a single molecule) of a carcinogen may cause changes in a single cell that could result in the cell dividing in an uncontrolled manner, eventually leading to cancer.

There is some dispute as to whether linear extrapolation to zero is a valid approach since cells have a number of detoxification mechanisms, such as DNA repair enzymes, that can repair damage from carcinogens at low doses. This would result in a threshold below which damage from carcinogens could be rectified. The presence of a threshold would result in a different slope for the extrapolated dose-response curve, and would result in a different CPF.

CPFs are usually derived by EPA using a linearized multistage model and reflect the upper-bound limit of cancer potency of any constituent. As a result, the calculated carcinogenic risk is likely to represent a plausible upper limit to the risk. The actual risk is unknown, but is likely to be lower than the predicted risk, and may be as low as zero (EPA, 1989).

Previously, EPA used a weight-of-evidence approach to classify the likelihood that a constituent is a carcinogen. Each chemical was placed in one of the weight-of-evidence groups presented in Table 3-4. New EPA guidance recommends using a different weight-of-evidence approach for characterizing carcinogens. EPA though, has not made any changes to IRIS reflecting the new weight-of-evidence guidelines.

Toxic Equivalency Factors Used to Derive CPFs

Toxic equivalency factors (TEFs) were used to derive CPFs for the carcinogenic polycyclic aromatic hydrocarbons (PAHs) evaluated in this assessment. TEFs are estimates of the toxicity of carcinogenic PAHs relative to the toxicity of benzo(a)pyrene, which is assigned a TEF of 1.0. The CPF for a carcinogenic PAH was derived by multiplying the CPF of benzo(a)pyrene by the TEF value for the carcinogenic PAH. The TEF values used in this assessment are presented in Table 3-5.

COPCs With No Available Toxicity Values

The COPCs with no available toxicity information were benzo(g,h,i)perylene, 2-methylnaphthalene, monomethylamine nitrate (MMAN), and phenanthrene. With the exception of MMAN, remediation levels were not calculated for these COPCs. Because MMAN is a constituent that was directly linked to explosives manufacturing at the Site, special effort was made to derive a toxicity value for use in this assessment. A description of the steps used to derive the toxicity value for MMAN is presented in Appendix D.

Toxicity Values Used to Calculate Remediation Levels

The toxicity values used to calculate remediation levels for each constituent are presented in Table 3-6.

Risk Benchmark Values

The last category of equation input values are the risk benchmark values that Ecology has used to define the "acceptable" risk level for a person exposed to COPCs. The benchmark values used are the target hazard quotient (HQ), which is the benchmark for noncarcinogenic effects, and the target cancer risk (RISK), which is the benchmark for carcinogenic risk. These are discussed below.

Target Hazard Quotient

The potential for adverse noncarcinogenic effects from exposure to a site-related constituent is quantitatively expressed as a hazard quotient (HQ). The HQ is the ratio of the estimated dose of a particular constituent to the reference dose (RfD) for that constituent:

$$HQ = Estimated\ Dose \div RfD$$

The RfD is the average daily intake of a constituent to which an individual, including members of sensitive subpopulations, can be exposed for a lifetime of 70 years without any expectation of adverse noncarcinogenic health effects (e.g., organ damage, biochemical alterations, birth defects). The average daily intake was calculated using the exposure factors described in this Chapter.

If the HQ for a constituent is less than 1.0, it indicates that adverse noncarcinogenic health effects are unlikely. If the hazard quotient is greater than 1.0, it indicates that adverse health effects are possible but the magnitude of these effects is uncertain. In other words, the hazard quotient does not represent a probability of occurrence or a quantification of the magnitude of noncarcinogenic health effects. In accordance with MTCA guidance (173-340-740 WAC and 173-340-745 WAC) the target HQ for individual constituents was set at 1.0 for all land use scenarios.

Target Cancer Risk

The risk of developing cancer from exposure to a constituent is described in terms of the probability that an exposed individual will develop cancer during a lifetime from that exposure. The risk estimate is calculated by multiplying the estimated dose of a particular constituent over a lifetime by the carcinogenic potency factor.

$$RISK = Estimated\ Dose \times CPF$$

A 1 in 1,000,000 cancer risk (i.e., 1E-06) means that an individual could have an additional 1 in 1,000,000 chance of developing cancer over a 70-year lifetime due to exposure to the constituent. The target RISK for individual constituents was set at 1E-06 for open space and historical land uses (using the target risk for residential exposures set by MTCA in 173-340-740 WAC) and at 1E-05 for commercial and golf course land uses (using the target risk for industrial exposures set by MTCA in 173-340-745 WAC).

3.5.2.5 Site-Specific Remediation Levels

The Site-specific remediation levels calculated for future commercial, golf course, historical, and open space uses are presented in Table 3.7. Spreadsheets containing remediation level calculations are presented in Appendix E.

3.5.3 Approach for Derivation of Soil Lead Remediation Levels

EPA has chosen to evaluate the potential adverse health effects of lead using a physiologically-based model. Therefore, lead has not been assigned toxicity values (i.e., no RfD or CPF is available), which are required to calculate Site-specific remediation levels using the MTCA formulas described above. The model currently used by EPA for establishing lead remediation levels in non-residential areas is the Adult Lead Model (EPA, 1996b). This model utilizes a methodology to estimate a fetal blood lead concentration in women exposed to lead contaminated soils. A developing fetus is considered the most sensitive

receptor associated with adult exposure to lead. The adult lead model is the only currently available tool for the development of non-residential remediation levels that has undergone sufficient peer review and technical refinement to justify its use in Washington State (Ecology, 1998). Using this model, Site-specific remediation levels were developed for golf course worker, commercial worker, and industrial worker scenarios. A hybrid approach using both the Adult Lead Model and the child Integrated Exposure Uptake Biokinetic Model for Lead (IEUBK) (EPA, 1994) was used to derive a remediation level for open space areas. This approach is discussed separately below.

3.5.3.1 Derivation of Commercial, Golf Course, and Industrial Remediation Levels

The adult lead model used to derive commercial, golf course, and industrial remediation levels uses a simplified representation of lead biokinetics to predict quasi-steady state blood lead concentrations among adults (i.e., women of child-bearing age) who have relatively steady patterns of exposure to lead contaminated soil. Fetal blood lead concentrations are then predicted assuming that they are proportional to maternal blood lead concentrations. The acceptable lead concentration in soil is based on limiting the fetal blood lead level to 10 *u*g/dL. The equations used to calculate the risk-based remediation level (RBRL) are the following:

$$RBRL = PbS = \frac{\left(PbB_{adult,central,goal} - PbB_{adult,0}\right) \times AT}{\left(BKSF \times IR_s \times AF_s \times EF_s\right)}$$

and

$$PbB_{adult,central,goal} = \frac{PbB_{fetal,0.95,goal}}{GSD_{i,adult}^{1.645} \times R_{fetal/maternal}}$$

Where:

RBRL	=	Risk-based remediation level for lead (ug/g).
PbS	=	Soil lead concentration that would be expected to result in a protective fetal blood lead concentration (ug/g).
$PbB_{adult,central,goal}$	=	Goal for the central estimate of blood lead concentration (ug/dL) in women of child-bearing age that have site exposures. The goal is intended to ensure that $PbB_{fetal,\ 0.95,goal}$ does not exceed 10 ug/dL.
$PbB_{adult,0}$	=	Typical blood lead concentration (ug/dL) in a woman of child-bearing age who does not receive exposure to lead-contaminated soil at the site.
AT	=	Averaging time; the total period during which soil contact may occur (365 days/year).
BKSF	=	Biokinetic slope factor relating (quasi-steady state) increase in typical adult blood lead concentration to average daily lead uptake (ug/dL blood lead increase per ug/day lead uptake).
IR_S	=	Intake rate of soil, including both outdoor soil and indoor soil-derived dust (g/day).
AF_S	=	Absolute gastrointestinal absorption fraction for ingested lead in soil and lead in dust derived from soil (unitless).
EF_S	=	Exposure frequency for contact with assessed soils and/or dust derived in part from these soils during the averaging time (days/year).
$PbB_{fetal,0.95,goal}$	=	Goal for the 95th percentile blood lead concentration (ug/dL) among fetuses born to women having exposures to the site soil lead.
$GSD_{i,adult}$	=	Estimated value of the geometric standard deviation (unitless) for women of child-bearing age. This value addresses the difference in response (i.e., difference in intakes and biokinetics) among women exposed to similar on-site concentrations. The exponent, 1.645, is the value used to calculate the 95th percentile

$R_{fetal/maternal}$ = Proportionality constant between fetal blood lead concentration and maternal blood lead concentration (unitless).

More detailed information regarding the derivation of this equation and assumptions used in the model are presented in *Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* (EPA, 1996b). The equation input parameters used for each scenario are presented below in Table 3-8.

3.5.3.2 Derivation of Historical and Open Space Use Remediation Level

The historical and open space use remediation level for lead was derived by Ecology, using a hybrid approach that combined results from using the IEUBK with results obtained from using the Adult Lead Model (Ecology, 1999a). A hybrid approach was used for recreational use areas because exposure under this scenario is to a child of age between 7 and 18 years and neither model used is specific for this age group. There is no specific age at which an older child's biokinetics respond similarly to an adult (it is therefore hard to determine how applicable the adult model is), and most researchers agree that young children (0-6 years old- the age that the IEUBK was designed for) absorb lead more readily than an older child. The use of each lead model and the final derivation of the historical and open space use remediation level are described below.

Use of the IEUBK Model

The IEUBK model evaluates childhood residential exposures to lead. The model was developed considering children since they are more sensitive to the neurological effects of lead than adults. The IEUBK model integrates exposure from lead in air, water, soil, dust, diet, and paint with pharmacokinetic modeling to arrive at a "screening level" for lead in residential soils (EPA, 1994). Using Site-specific and standard default input parameters, a soil lead screening level of 450 ug/g was obtained (Ecology, 1997). At this soil concentration, the probability of exceeding a child's target blood lead concentration of 10 ug/dl should be no more than 5 percent.

Using the screening level of 450 mg/kg, an exposure ratioing approach was used to modify this number to reflect the exposure frequency expected for a child playing in the open space areas on the Site (the exposure frequency assumed in derivation of the screening level is 7 days/week, which is much higher than that assumed for a child playing in open space areas). Accordingly, if a child were assumed to play in the open space areas one day per week, the screening level would be modified as follows:

(7 days/week ÷ 1 day/week) * (450 mg/kg) = 3,150 mg/kg

Exposure frequencies of 2 and 3 days per week result in remediation levels of 1,575 and 1,050, respectively.

Use of the Adult Lead Model

The adult lead model is described in detail in Section 3.5.3.1. For use in calculating remediation levels for an older child, the maternal/fetal blood lead ratio was eliminated and the goal of protecting 95% of the older child population from exceeding 10 ug/dl blood lead was retained. The geometric standard deviation and baseline blood lead level input remained unchanged. Using the Adult Lead Model in this manner, and assuming exposure frequencies of 1, 2,and 3 days per week resulted in remediation levels of 3,512 mg/kg, 1,756 mg/kg, and 1,171 mg/kg, respectively.

Historical and Open Space Use Remediation Level

Use of the two different models yielded remediation levels of approximately 1,050 to 3,150 mg/kg (IEUBK Model) and 1,200 to 3,500 mg/kg (Adult Lead Model). Using these ranges, and considering the previously developed site-specific residential cleanup level for lead of 450 mg/kg, Ecology set the soil-lead remediation level for historical and open space areas at 1,500 mg/kg. This decision was based on consideration of the range of calculated values and on best professional judgment regarding risk management at this site. Ecology thought than an exposure frequency of twice a week was appropriate, resulting in remediation levels of 1,575 and 1,750 mg/kg using the ratio approach (IEUBK model) and the Adult Lead Model, respectively.

3.6 Summary of Site Cleanup Levels and Remediation Levels

This chapter identified the soil cleanup levels and remediation levels that will be used to evaluate Site conditions based on future land use in Chapter 4. A summary of the future use scenarios and applicable cleanup and/or remediation levels is presented in Table 3-9.

Because more than one cleanup or remediation level was available for some constituents, some values were given precedence over others. In deciding which value to use for screening constituent concentrations, priority was given to levels that were specifically agreed upon with Ecology (Table 3-2 values). After these values, priority was given to the lowest available cleanup or remediation level applicable to the land use in question. A summary of the specific screening values used for commercial and golf course land uses, industrial land use, and historical and open space land uses are presented in Tables 3-10, 3-11, and 3-12, respectively.

Table 3-1 – Human Health Industrial Cleanup Levels

Constituent	MTCA Method C Industrial Cleanup Level (mg/kg)[(1)]
Explosives	
Monomethylamine Nitrate	28,350
Nitrobenzene	3,500
Nitroglycerine	4,080
2,4,6-Trinitrotoluene	7,000
Inorganics	
Aluminum	NC
Arsenic	90
Copper	130,000
Lead	NA
Mercury	1,050
PAHs	
Benzo(a)Anthracene	18
Benzo(a)Pyrene	18
Benzo(b)Fluoranthene	18
Benzo(k)Fluoranthene	18
Chrysene	18
Dibenzo(a,h)Anthracene	18
Indeno(1,2,3-c,d)Pyrene	18
Pesticides/PCBs	
Aldrin	7.7

Notes:
NA = No toxicity value for lead is available.
NC = Not of Concern: Concentration calculated was equivalent to a 100 percent concentration. Therefore, this constituent is not of concern through this exposure scenario.
[(1)]Industrial cleanup levels were calculated using equations and exposure factors identified for MTCA Method C (WAC 173-340-745), and toxicity factors identified in Table 3-7.

Table 3-2 – Site-Specific Soil Cleanup Levels[(1)]

Constituent	Concentration (mg/kg)
Mercury	24
TPH – Bunker C	7,600
Total DNT	3[(2)]
TNT	1.75

Notes:
[(1)]Information regarding these concentrations can be found in Appendix C.
[(2)]Includes the sum of the concentrations of 2,4-DNT and 2,6-DNT.

Table 3-3 – Exposure Factors Used to Calculate Site-Specific Soil Remediation Levels

Exposure Factor[(1)]		Exposure Scenario			
		Site-Specific Commercial Landscaper	Site-Specific Historical Areas	Site-Specific Open Space Areas	Site-Specific Golf Course Grounds-keeper
		Adult	Adolescent Child	Adolescent Child	Adult
Average Body Weight (kg)	ABW	70	47[(2)]	47[(2)]	70
Unit Conversion Factor (unitless)	UCF	1E+06	1.0E+6	1.0E+6	1.0E+6
Averaging Time (noncarcinogenic) (days)	AT_n	7,300	4,380	4,380	7,300
Averaging Time (carcinogenic) (days)	AT_c	27,375	27,375	27,375	27,375
Soil Ingestion Rate (mg/day)	SIR	200	200	200	200
Gastrointestinal Absorption Rate (unitless)	AB1	100%	100%	100%	100%
Exposure Frequency (days/year)	EF	52	104	104	52
Exposure Duration (years)	ED	20	12	12	20

Notes:
[(1)]Factors were derived in collaboration with Ecology (Ecology 1999a; Ecology 1999b). Memorandums outlining the derivation of these factors are contained in Appendix C.
[(2)]Value is the average weight of females and males between the ages of 6 and 18 (EPA, 1996a).

Table 3-4 – EPA Weight-of-Evidence Categories for Carcinogenicity[(1)]

EPA Group	Description of Group	Description of Evidence
Group A	Human carcinogen.	Sufficient evidence from epidemiological studies to support a causal association between exposure and cancer.
Group B	Probable human carcinogen.	B1: Limited evidence of carcinogenicity in humans from epidemiological studies; sufficient evidence in animals. B2: Sufficient evidence of carcinogenicity in animals and no or inadequate evidence in humans.
Group C	Possible human carcinogen.	Limited evidence of carcinogenicity in animals.
Group D	Not classified.	Inadequate evidence of carcinogenicity in animals.
Group E	No evidence of carcinogenicity in humans.	No evidence of carcinogenicity in at least two adequate animal tests or in both epidemiological and animal studies.

Notes:
[(1)]Carcinogenic classification group information was obtained from IRIS (EPA, 2001).

Table 3-5 – Toxicity Equivalency Factors (TEF) for Carcinogenic PAHs

Constituent	TEF[(1)]	Slope Factor (mg/kg-day)$^{-1}$
Benzo(a)pyrene	1.0	7.3
Benzo(a)anthracene	0.1	0.73
Benzo(b)fluoranthene	0.1	0.73
Benzo(k)fluoranthene	0.01	0.073
Chrysene	0.001	0.0073
Dibenz(a,h)anthracene	1.0	7.3
Indeno(1,2,3-cd)pyrene	0.1	0.73

Notes:
[(1)]Values were taken from the Supplemental Guidance for RAGS, Region IV Bulletins, Human Health Risk Assessment. EPA Region IV, Atlanta, GA 1995.

Table 3-6 – Oral Reference Doses and Carcinogenic Potency Factors Used in Remediation Level Calculations

Constituent	RfD (mg/kg-day)	Source of RfD	CPF $(mg/kg\text{-}day)^{-1}$	EPA Carcinogen Classification Group	Source of CPF
Explosives					
Monomethylamine Nitrate	0.0081	Site-specific value approved by Ecology	ND	NE	--
Nitroglycerine	ND	ND	0.014	Not listed	EPA Region IX
2,4,6-Trinitrotoluene	0.0005	IRIS	0.03	C	IRIS
Inorganics[(1)]					
Aluminum	1.0	EPA Region IX	NA	NE	ND
Arsenic	0.0003	IRIS	1.5	A	IRIS
Copper	0.037	HEAST	NA	D	ND
Mercury	0.0003	IRIS	NA	D	ND
PAHs					
Benzo(a)anthracene	ND	ND	0.73	B2	EPA Region IV
Benzo(a)pyrene	ND	ND	7.3	B2	IRIS
Benzo(b)fluoranthene	ND	ND	0.73	B2	EPA Region IV
Benzo(k)fluoranthene	ND	ND	0.073	B2	EPA Region IV
Chrysene	ND	ND	0.0073	B2	EPA Region IV
Dibenz(a,h)anthracene	ND	ND	7.3	B2	EPA Region IV
Indeno(1,2,3-cd)pyrene	ND	ND	0.73	B2	EPA Region IV
Pesticide					
Aldrin	0.00003	IRIS	17.0	B2	IRIS

Notes:
[(1)]Lead is evaluated using a different approach. See Section 3.5.3.
ND = No toxicity value is available.
NA = Not applicable; this constituent is not classified as a carcinogen.
NE = EPA has not evaluated for carcinogenic potential.
IRIS = EPA's Integrated Risk Information System Database (EPA, 2001).
HEAST = EPA's Health Effects Assessment Summary Tables (EPA, 1997).
EPA Region IV = Supplemental Guidance to RAGS, Region IV Bulletins (EPA, 1995).
EPA Region IX = Region IX PRG Table (EPA, 2000).

Table 3-7 – Site-Specific Remediation Levels[(1)]

Constituent	Commercial Remediation Level (mg/kg)	Golf Course Remediation Level (mg/kg)	Historical and Open Space Use Remediation Level (mg/kg)
Explosives			
Monomethylamine Nitrate	19,900	19,900	6,680
Nitroglycerine	6,580	6,580	368
2,4,6-Trinitrotoluene	1,230	1,230	172
Inorganics			
Aluminum	NC	NC	825,000
Arsenic	60	60	32[(2)]
Copper	90,900	90,900	30,500
Lead[(3)]	2,100	2,100	1,500
Mercury	737[(4)]	737[(4)]	247[(4)]
PAHs			
Benzo(a)Anthracene	126	126	7
Benzo(a)Pyrene	13	13	0.7
Benzo(b)Fluoranthene	126	126	7
Benzo(k)Fluoranthene	1,260	1,260	71
Chrysene	12,600	12,600	706
Dibenzo(a,h)Anthracene	13	13	0.7
Indeno(1,2,3-c,d)Pyrene	126	1,090	7
Pesticides/PCBs			
Aldrin	5	5	0.3

Notes:
NC = Not of Concern: Concentration calculated was equivalent to a 100 percent concentration. Therefore, this constituent is not of concern through this exposure scenario.
[(1)]Where remediation levels were calculated for both carcinogenic and noncarcinogenic effects, the value shown in the table is the lower of the two values.

[(2)]Value is site-specific background level for arsenic. This level was approved for use by Ecology (Ecology, 1999b).
[(3)]Values were derived by Ecology using the lead biokinetic models for children and adults (Ecology, 1999a).
[(4)]These levels represent levels based on direct contact with soil. The site-specific cleanup level of 24 mg/kg takes into account potential impacts to groundwater.

Table 3-8 – Site-Specific Input Parameters[(1)] and Results of the Adult Lead Model

Input Parameter	Units	Commercial Exposure Scenario	Golf Course Exposure Scenario	Industrial Exposure Scenario
$PbB_{fetal,0.95}$	ug/dl	10	10	10
$R_{fetal/maternal}$	(unitless)	0.9	0.9	0.9
BKSF	ug/dl per ug/day	0.4	0.4	0.4
$GSD_{i,adult}$	(unitless)	1.81	1.81	1.81
$PbB_{adult,0}$	ug/dl	1.36	1.36	1.36
IR_S	g/day	0.200	0.200	0.050
AF_S	(unitless)	0.12	0.12	0.12
EF	days/year	52	52	219
AT	days/year	365	365	365
Results				
RBRL	ug/g	2,067[(2)]	2,067[(2)]	1,963[(3)]

Notes:
[(1)]These site-specific values were specified for use by Ecology (Ecology, 1999a).
[(2)]This value was rounded up to 2,100 ug/g.
[(3)]This value was reduced to 1,000 ug/g to match the Model Toxics Control Act Method A industrial cleanup value established for Parcel #2 of the site in the 1997 Cleanup Action Plan.

Table 3-9 – Soil Cleanup Levels and Remediation Levels Associated with Future Site Use

Cleanup Levels and Remediation Levels	Future Site Use			
	Commercial Area	**Golf Course**	**Industrial Area**	**Recreational Area (Historical and Open Space Areas)**
Ecological Indicator Concentrations	**X**	**X**		**X**
Human Health Industrial Cleanup Levels and Remediation Levels (MTCA C)			**X**	
Site-Specific Commercial Remediation Levels	**X**			
Site-Specific Golf Course Remediation Levels		**X**		
Site-Specific Recreational Remediation Levels (for Historical and Open Space Areas)				**X**

Notes:
An "X" identifies the cleanup and/or remediation level that will be compared to soil concentrations in the different future land use areas.

Table 3-10 – Soil Cleanup and Remediation Levels Used for Evaluating Commercial and Golf Course Land Uses

Constituent	Cleanup/Remediation Level (mg/kg)	Source
Explosives		
Monomethylamine Nitrate	19,900	Remediation Level – Calculated Using Site-Specific Parameters
Nitroglycerine	6,580	Remediation Level – Calculated Using Site-Specific Parameters.
2,4,6-Trinitrotoluene	1.75	Cleanup Level – Ecology Agreement.
Petroleum Hydrocarbons		
TPH (418.1)	7,600	Cleanup Level – Ecology Agreement for TPH that originated as Bunker C fuel. One Area (Area 26 in GC-04 has TPH (418.1) that did not originate from Bunker C fuel. Those TPH data were compared to the MTCA value of 2,000 mg/kg for heavy oils.
Inorganics		
Aluminum	NC	Calculated Using Site-Specific Parameters.
Arsenic	60	Remediation Level – Ecology Agreement.
Copper	90,900	Remediation Level – Calculated Using Site-Specific Parameters.
Lead	118	Cleanup Level – Ecological Screening Concentration.
Mercury	24	Cleanup Level – Ecology Agreement.
PAHs		
Benzo(a)Anthracene	126	Remediation Level – Calculated Using Site-Specific Parameters
Benzo(a)Pyrene	12.6	Remediation Level – Calculated Using Site-Specific Parameters.
Benzo(b)Fluoranthene	126	Remediation Level – Calculated Using Site-Specific Parameters
Benzo(k)Fluoranthene	1260	Remediation Level – Calculated Using Site-Specific Parameters.
Chrysene	12,600	Remediation Level – Calculated Using Site-Specific Parameters.
Dibenzo(a,h)Anthracene	12.6	Remediation Level – Calculated Using Site-Specific Parameters.
Indeno(1,2,3-c,d)Pyrene	126	Remediation Level – Calculated Using Site-Specific Parameters.
Pesticide		
Aldrin	5	Remediation Level – Calculated Using Site-Specific Parameters.

Notes:
NC = Not of Concern: Concentration calculated was equivalent to a 100 percent concentration. Therefore, this constituent is not of concern through this exposure scenario.

Table 3-11 – Soil Cleanup Levels Used for Evaluating Industrial Land Use

Constituent	Cleanup/Remediation Level (mg/kg)	Source
Explosives		
Monomethylamine Nitrate	28,350	Remediation Level – Calculated Using MTCA Method C Parameters.
Nitroglycerine	4,080	Remediation Level – Calculated Using MTCA Method C Parameters.
2,4,6-Trinitrotoluene	1.75	Cleanup Level – Ecology Agreement.
Petroleum Hydrocarbons		
TPH (418.1)	7,600	Cleanup Level – Ecology Agreement for TPH that originated as Bunker C fuel.
Inorganics		
Aluminum	NC	Cleanup Level – MTCA Method C Value.
Arsenic	90	Cleanup Level – Ecology Agreement.
Copper	130,000	Cleanup LevelMTCA Method C Value.
Lead	1,000	Cleanup Level – MTCA default value used for Parcel 2.
Mercury	24	Cleanup Level – Ecology Agreement.
PAHs		
Benzo(a)Anthracene	18	Cleanup Level – MTCA Method C Value.
Benzo(a)Pyrene	18	Cleanup Level – MTCA Method CValue.
Benzo(b)Fluoranthene	18	Cleanup Level – MTCA Method CValue.
Benzo(k)Fluoranthene	18	Cleanup Level – MTCA Method CValue.
Chrysene	18	Cleanup Level – MTCA Method CValue.
Dibenzo(a,h)Anthracene	18	Cleanup Level – MTCA Method C Value.
Indeno(1,2,3-c,d)Pyrene	18	Cleanup Level – MTCA Method CValue.
Pesticide		
Aldrin	7.7	Cleanup Level – MTCA Method C Value.

Notes:
NC = Not of Concern: Concentration calculated was equivalent to a 100 percent concentration. Therefore, this constituent is not of concern through this exposure scenario.

Table 3-12 – Soil Cleanup and Remediation Levels Used for Evaluating Historical and Open Space Land Uses

Constituent	Cleanup/Remediation Level (mg/kg)	Source
Explosives		
Monomethylamine Nitrate	6,680	Remediation Level –Calculated Using Site-Specific Parameters.
Nitroglycerine	368	Remediation Level –Calculated Using Site-Specific Parameters.
2,4,6-Trinitrotoluene	1.75	Cleanup Level – Ecology Agreement.
Petroleum Hydrocarbons		
TPH (418.1)	7,600	Cleanup Level – Ecology Agreement for TPH that originated as Bunker C fuel.
Inorganics		
Aluminum	825,000	Remediation Level –Calculated Using Site-Specific Parameters.
Arsenic	32	Cleanup Level – Site Background Level (Ecology Agreement).
Copper	30,500	Remediation Level –Calculated Using Site-Specific Parameters.
Lead	118	Cleanup Level – Ecological Screening Value.
Mercury	24	Cleanup Level – Ecology Agreement.
PAHs		
Benzo(a)Anthracene	7.1	Remediation Level –Calculated Using Site-Specific Parameters.
Benzo(a)Pyrene	0.71	Remediation Level –Calculated Using Site-Specific Parameters.
Benzo(b)Fluoranthene	7.1	Remediation Level –Calculated Using Site-Specific Parameters.
Benzo(k)Fluoranthene	71	Remediation Level –Calculated Using Site-Specific Parameters.
Chrysene	710	Remediation Level –Calculated Using Site-Specific Parameters.
Dibenzo(a,h)Anthracene	0.71	Remediation Level –Calculated Using Site-Specific Parameters.
Indeno(1,2,3-c,d)Pyrene	7.1	Remediation Level –Calculated Using Site-Specific Parameters
Pesticides/PCBs		
Aldrin	0.3	Remediation Level –Calculated Using Site-Specific Parameters.

3.7 References

Ecology (Washington State Department of Ecology). 1997. Residential Soil-Lead Cleanup Standard for Former DuPont Works Site. Memo from Mike Blum to Vern Moore and Jack Frazier. October 1, 1997. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 1998. EPA's Adult Lead Model and Its Use in Washington State to Evaluate Risk. Memo from Mike Blum to the MTCA Science Advisory Board Members. October 27, 1998. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 1999a. Non-Residential Remediation Levels at the Former DuPont Works Site. Memo from Mike Blum to Vern Moore and Izzy Zanikos. May 3, 1999. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 1999b. Soil Arsenic Non-Residential Remediation Levels. Memo from Mike Blum to Vern Moore and Izzy Zanikos. June 25, 1999. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 2000. Final Environmental Impact Statement: Former DuPont Works Site.

Ecology (Washington State Department of Ecology). 2001a. Model Toxics Control Act Cleanup Regulation. Chapter 173-340-WAC. Amended February 12, 2001. Publication No. 94-06.

Ecology (Washington State Department of Ecology). 2001b. Cleanup Levels and Risk Calculation (CLARC) Table Updates, Version 3.1, November, 2001.

EPA (United States Environmental Protection Agency). 1989. Risk Assessment Guidance for Superfund: Human Health Evaluation Manual Part A. Interim Final. Office of Emergency and Remedial Response. Washington, D.C. 9285.701A. EPA/540/1-89/002.

EPA (United States Environmental Protection Agency) 1994. Technical Support Document: Parameters and Equations Used in the Integrated Exposure Uptake Biokinetic Model for Lead in Children (v. 0.99d). Office of Emergency and Remedial Response, Washington, D.C. EPA/540/R-94/040, PB94-963505.

EPA (United States Environmental Protection Agency) 1995. Supplemental Guidance for RAGS, Region IV Bulletins, Human Health Risk Assessment. EPA Region IV, Atlanta, GA.

EPA (United States Environmental Protection Agency). 1996a. U.S. Environmental Protection Agency. Exposure Factors Handbook: Volume I - General Factors. Update to Exposure Factors Handbook EPA/600/8-89/043 - May 1989 PRELIMINARY DRAFT. Office of Research and Development National Center for Environmental Assessment, Washington, DC 20460.

EPA (United States Environmental Protection Agency) 1996b. Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Exposures to Lead in Soil. Technical Review Workgroup for Lead. Adult Risk Assessment Committee.

EPA (United States Environmental Protection Agency) 1997. The Health Effects Assessment Summary Tables- Annual Update (HEAST): FY 1997 Update. EPA/540-R-97-036. PB97-921199. July. OSWER, Washington, D.C.

EPA (United States Environmental Protection Agency) 2000. EPA Region IX Preliminary Remediation Goal (PRG) Tables. 2000 Update. http://www.epa.gov/region09/waste/sfund/prg/.

EPA (United States Environmental Protection Agency) 2001. The Integrated Risk Information System (IRIS). Environmental Criteria and Assessment Office, Cincinnati, Ohio. 4rd Quarter Update.

Hart Crowser 1992. RI Deliverable 1. Remedial Investigation/Feasibility Study, Former DuPont Works Site. Dupont, Washington. Prepared for The Weyerhaeuser Company. August 26, 1992.

PIONEER (PIONEER Technologies Corporation) and West Shore (West Shore Corporation, NW). 2002. Interim Source Removal Actions: Air Monitoring Report at the Former DuPont Works Site, Dupont, Washington.

URS (URS, Inc.). 2002. Remedial Investigation Former Dupont Works Site, DuPont, Washington.

Chapter 4 – Comparison of Site Concentrations to Cleanup and Remediation Levels

4.1 Introduction

In this chapter soil concentrations for each EU (identified in Chapter 2) are compared to cleanup and remediation levels identified in Chapter 3 to determine if the EU is in compliance with the MTCA three-fold criteria [WAC 173-340-740 (7)(d) and (e)]. As noted in Chapter 2, only those COPCs that were detected in at least one sample and had maximum concentrations that exceeded conservative risk-based screening criteria, were evaluated in this chapter of the risk assessment. In addition, EU COPC concentrations are compared to MTCA Risk-Based Criteria to evaluate if individual COPC concentrations and cumulative COPC concentrations in each EU meet risk-based goals.

4.2 Comparison of EU Soil Concentrations to Cleanup and Remediation Levels

4.2.1 MTCA Three-Fold Criteria

The soil concentrations in each EU were compared to the cleanup and remediation levels identified in Chapter 3 to determine if the concentrations of COPCs in each EU comply with MTCA three-fold criteria. The three-fold criteria are:

1. The maximum soil concentration for a COPC must be less than or equal to 2 times the site-specific COPC cleanup or remediation level.
2. The MTCA 95%UCL must be less than the site-specific cleanup or remediation level.
3. Less than 10% of individual soil concentrations shall exceed the site-specific cleanup or remediation level.

A modified version of this three-fold criteria is used when the cleanup level is based on a background concentration (i.e., historical and open space land use areas, for evaluation of arsenic only). The modified three-fold criteria are the following:

1. The maximum allowable concentration depends on the number of samples collected in the EU, the percentile used in development of the background concentration, and the coefficient of variability of the lognormal distribution (for EU samples). For relatively small sample sizes ($n < 30$) the criterion of no sample concentration more that two times the background concentration is suitable. In other cases, a higher factor of exceedance is required (requires consultation with Ecology).
2. The 95% UCL on the mean must be less than the background concentration.
3. For sample sizes less than 30, not more than 20% of the samples should exceed a background concentration that was based on the 90^{th} percentile background concentration. Ecology is consulted for other cases.

If an EU has any COPCs that exceed any element of the three-fold criteria outlined above, then the EU does not comply with MTCA, and is carried through to the FS for evaluation of remediation options. Results of this three-fold criteria evaluation are presented below.

4.2.2 MTCA Non-Cancer and Cancer Risk-Based Criteria

In addition to the three-fold criteria, MTCA identifies risk-based criteria for constituents as follows (WAC 173-340-708(4) and (5):

- The human health risk level for individual constituents may not exceed a hazard quotient of 1 or a cancer risk of one-in-a-million (1E-06) for historical and open space EUs. The human health risk level for individual constituents may not exceed a hazard quotient of 1 or a cancer risk of one-in-one-hundred thousand (1E-05) for the golf course, commercial and industrial EUs.
- The total risk level at the site, based on cumulative exposure to all constituents, may not exceed a hazard index of 1 or a cancer risk of 1 in 100,000 (1E-05).

If an EU exceeds these criteria, the EU does not comply with MTCA and is carried through to the FS.

4.2.3 Calculation of EU Soil Concentrations

Representative soil concentrations for each EU were calculated using SiteSTAT™ Statistical Software. Following combination of duplicate samples, statistical concentrations were calculated. The concentrations used for comparison to cleanup levels and remediation levels were the MTCA 95% Upper Confidence Limit (UCL) concentration and the maximum detected concentration.

The MTCA UCL concentration was calculated based on the following criteria:

1. The 95%UCL of the mean concentration for normally distributed data sets.
2. The Logarithmic 95%UCL (Log 95%UCL) of the mean concentration for all lognormally distributed and non-normally distributed data sets.
3. The maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Before statistical calculations were performed, duplicate samples were combined to produce one concentration for each sample location. The decision rules used for combining duplicate samples were the following:

1. If both results were detected values, then the two values were averaged.
2. If one result was detected and one was not detected, then the highest detected value was used as the concentration for that sample location.
3. If both results were not detected, the highest detection limit value was used as the concentration for that sample.

The MTCA UCL calculations and other summary statistics calculated for the COPCs in each EU are presented in Appendix F. The statistical formulas used by the SiteSTAT are also presented in Appendix F.

4.3 Identification of EUs With COPCs That Exceed MTCA Three-Fold Criteria

Each EU was screened using the MTCA Three-Fold Criteria. Based on the results of this evaluation, the EU was determined to be in compliance or not in compliance with MTCA. Results of this evaluation are summarized below, organized by future land use category of the EUs. A detailed list of all screening results for each EU is presented in Appendix F.

EU evaluations of soils data over a depth interval of 1 to 15 feet are broad and they may not reflect realistic exposure scenarios. In addition, there is the potential to “dilute” exposure point concentrations. For remediation purposes, initial soil excavation depths will be determined based on individual characterization sample results and depths.

4.3.1 Commercial Land Use EUs

The compliance status of each EU is presented below in Table 4-1. As seen in this table, all EUs were out of compliance for at least one depth. Most criteria exceedances were found in surface soil, and arsenic and lead were the COPCs that exceeded the criteria most frequently.

4.3.2 Golf Course Use EUs

The compliance status of each EU is presented below in Table 4-2. As seen in this table, all EUs were out of compliance for at least one depth, and all but 2 EUs were out of compliance at both soil depth intervals. Arsenic and lead were the COPCs that exceeded the criteria most frequently.

4.3.3 Historical Use EUs

The compliance status of each EU is presented below in Table 4-3. As seen in this table, all EUs were out of compliance, and arsenic and lead were the COPCs that exceeded the criteria most frequently. There were no samples collected from subsurface soil, therefore all exceedances pertain to the top foot of soil.

4.3.4 Industrial Use EUs

The compliance status of this EU is presented below in Table 4-4. As seen in this table, the industrial EU passed the MTCA three-fold criteria.

4.3.5 Open Space Use EUs

The compliance status of each EU is presented below in Table 4-5. As seen in this table, all EUs were out of compliance in at least one depth. Most criteria exceedances were found in the surface soil, and arsenic and lead were the only COPCs that exceeded the criteria.

4.4 Identification of EUs that Exceed the MTCA Risk-Based Criteria

Each EU was screened using the MTCA Risk-Based Criteria. Based on the results of this evaluation, the EU was determined to be in compliance or not in compliance with MTCA. Results of this evaluation are summarized below, organized by future land use category of the EUs. Table 4-6 presents the individual hazard quotient and cancer risk for each COPC for each EU. Table 4-7 presents the total hazard index and the cumulative cancer risks for each EU.

4.4.1 Commercial Land Use EUs

When risk due to individual constituents was evaluated, only EU (COM 8) was out of compliance based on the cancer risk associated with arsenic. In addition, the individual non-cancer risk was out of compliance for TPH in one of the EUs. When cumulative risk was evaluated, one EU was out of compliance based on the cumulative non-cancer hazard index, and three were out of compliance based on the cumulative cancer risk.

4.4.2 Golf Course Use EUs

When risk due to individual COPCs was evaluated, all EUs were out of compliance based on the cancer risk associated with arsenic. In two EUs, the individual cancer risk was also out of compliance for benzo(a)pyrene. When cumulative risk was evaluated, nine of the EUs were out of compliance based on the cumulative cancer risk.

4.4.3 Historical Use EUs

When risk due to individual COPCs was evaluated, all EUs were out of compliance based on the cancer risk associated with arsenic. In addition, the individual cancer risk was out of compliance for aldrin in one of the EUs. When cumulative risk was evaluated, all of the EUs were in compliance.

4.4.4 Industrial Use EUs

The industrial EU was in compliance with the MTCA risk-based criteria.

4.4.5 Open Space Use EUs

When risk due to individual COPCs was evaluated, all EUs were out of compliance based on the cancer risk associated with arsenic. When cumulative risk was evaluated, all of the EUs were in compliance.

4.5 Summary of Screening Results

All EUs were screened against MTCA's Three-Fold Criteria and Risk Criteria. Using these criteria, all EUs except the industrial EU were not in compliance, and will require evaluation in the FS. More criteria exceedances were noted in the surface soil samples than in the subsurface soil samples. Arsenic and lead were the COPCs responsible for most criteria exceedances in the EUs.

Table 4-8 presents a summary of the compliance status of each EU. Figure 4-1 presents a map of the Site showing the compliance status of each EU with MTCA criteria arsenic and lead in the surface soil. Figure 4-2 presents a map of the Site showing the compliance status of each EU with MTCA criteria for arsenic and lead in subsurface soil.

Table 4-1 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Commercial EUs

EU	Soil Depth	COPCs Exceeding Criteria	Criteria Exceeded[1]	EU in Compliance with MTCA Three-Fold Criteria
COM 1	≤1 Foot BGS	Arsenic	10%; 2X	No
		Lead	UCL; 10%; 2X	
		TPH	UCL	
	>1 to ≤15 Feet BGS	Lead	UCL; 10%; 2X	No
COM 2	≤1 Foot BGS	Lead	10%; 2X	No
	>1 to ≤15 Feet BGS	None	None	Yes
COM 3	<1 Foot BGS	Arsenic	10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to <15 Feet BGS	None	None	Yes
COM 4	≤1 Foot BGS	Arsenic	10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	None	None	Yes
COM 5	≤1 Foot BGS	Arsenic	10%; 2X	No
		Lead	10%; 2X	
COM 6	≤1 Foot BGS	Lead	UCL; 10%; 2X	No
	>1 to ≤15 Feet BGS	None	None	Yes
COM 7	≤1 Foot BGS	Arsenic	10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	2,4,6-Trinitrotoluene	UCL; 2X	No
		Lead	UCL; 10%; 2X	
COM 8	≤1 Foot BGS	Arsenic	UCL; 10%	No
		Lead	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	None	None	Yes
COM 9	≤1 Foot BGS	Arsenic	2X	No
	>1 to ≤15 Feet BGS	None	None	Yes

Notes:
COM = Commercial Areas.
[1]Criteria Exceeded: UCL = 95% Upper Confidence Limit concentration exceeds the cleanup levels and remediation levels. 10% = Ten percent of the COPC concentrations exceed the cleanup levels and remediation levels. 2X = Maximum concentration is greater than 2 times the cleanup levels and remediation levels.
[2]TPH 418.1 results above the cleanup levels and remediation levels were all associated with paraffin-coated cardboard except in one location where automobile parts were observed. Paraffin wax is generally regarded as biologically inert. Additionally, no CPAHs were detected in samples analyzed from this area. Thus there is no toxic fraction associated with paraffin-derived TPH concentrations.

Table 4-2 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Golf Course EUs

EU	Soil Depth	COPCs Exceeding Criteria	Criteria Exceeded[(1)]	EU in Compliance with MTCA Three-Fold Criteria
GC 1	<1 Foot BGS	Arsenic	UCL;10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to <15 Feet BGS	Arsenic	10%	No
		Lead	UCL; 10%; 2X	
GC 2	<1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
		Mercury	UCL; 10%; 2X	
	>1 to <15 Feet BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
GC 3	<1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
GC 4	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No[(2)]
		Lead	UCL; 10%; 2X	
		TPH	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	Lead	UCL; 10%; 2X	No
GC 5	≤1 Foot BGS	Arsenic	UCL; 2X	No
		Lead	UCL; 2X	
GC 6	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	Lead	UCL; 10%; 2X	No
GC 7	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	2X	
	>1 to ≤15 Feet BGS	Lead	2X	No
GC 8	<1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	10%; 2X	
	>1 to <15 Feet BGS	None	None	Yes
GC 9	<1 Foot BGS	Arsenic	10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to <15 Feet BGS	Lead	2X	No

Notes:
GC = Golf Course Areas
[(1)]Criteria Exceeded: UCL = 95% Upper Confidence Limit concentration exceeds the cleanup levels and remediation levels. 10% = Ten percent of the COPC concentrations exceed the cleanup levels and remediation levels. 2X = Maximum concentration is greater than 2 times the cleanup levels and remediation levels.
[(2)]TPH 418.1 results above the cleanup levels and remediation levels were all associated with paraffin-coated cardboard except in one location where automobile parts were observed. Paraffin wax is generally regarded as biologically inert. Additionally, no CPAHs were detected in samples analyzed from this area. Thus there is no toxic fraction associated with paraffin-derived TPH concentrations.

Table 4-3 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Industrial EU

EU	Soil Depth	COPCs Exceeding Criteria	Criteria Exceeded[1]	EU in Compliance with MTCA Three-Fold Criteria[(1)]
IN 1	≤1 Foot BGS	None	None	Yes
	>1 to ≤15 Feet BGS	None	None	Yes

Notes:
IN = Industrial Areas
[(1)]This EU was also evaluated for compliance using an alternative method in which each interim corrective action excavation was treated as an individual EU. The Industrial Area was also found to be in compliance using alternative EUs. See PIONEER Technologies Corporation, West Shore Corporation, NW, and URS. 2000. Hot Spot Interim Action Report Former DuPont Works Site DuPont, Washington.

Table 4-4 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Open Space EUs

EU	Soil Depth	COPCs Exceeding Criteria	Criteria Exceeded[(1)]	EU in Compliance with MTCA Three-Fold Criteria
OS 1	≤1 Foot BGS	Lead	UCL; 10%; 2X	No
	>1 to ≤15 Feet BGS	None	None	Yes
OS 2	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	Arsenic	UCL; 10%; 2X	No
OS 3	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
	>1 to ≤15 Feet BGS	None	None	Yes
OS 4	≤1 Foot BGS	Arsenic	UCL; 10%	No
	>1 to ≤15 Feet BGS	None	None	Yes

Notes:
OS = Open Space Areas
[(1)]Criteria Exceeded: UCL = 95% Upper Confidence Limit concentration exceeds the cleanup levels and remediation levels. 10% = Ten percent of the COPC concentrations exceed the cleanup levels and remediation levels. 2X = Maximum concentration is greater than 2 times the cleanup levels and remediation levels.

Table 4-5 – Summary of COPCs that Exceed MTCA Three-Fold Criteria for Historical EUs

EU	Soil Depth	COPCs Exceeding Criteria	Criteria Exceeded[(1)]	EU in Compliance with MTCA Three-Fold Criteria
HI 1	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%	
	>1 to ≤15 Feet BGS	No Data in this EU	None	NA
HI 2	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
		Aldrin	UCL; 10%	
	>1 to ≤15 Feet BGS	No Data in this EU	None	NA
HI 3	≤1 Foot BGS	Arsenic	UCL; 10%; 2X	No
		Lead	UCL; 10%; 2X	
	>1 to ≤15 Feet BGS	No Data in this EU	None	NA

Notes:
HI = Historical Areas
[(1)]Criteria Exceeded: UCL = 95% Upper Confidence Limit concentration exceeds the cleanup levels and remediation levels. 10% = Ten percent of the COPC concentrations exceed the cleanup levels and remediation levels. 2X = Maximum concentration is greater than 2 times the cleanup levels and remediation levels.
NA = Not Applicable.

Table 4-6 – Individual COPC Hazard Quotients and Cancer Risks

EU	Depth	Hazard Quotient		Cancer Risk		
		Arsenic	TPH (418_1)	Aldrin	Arsenic	Benzo(a)Pyrene
COM 1	<1 Foot BGS	- -	1.3	- -	7.7E-06	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	1.8E-06	- -
COM 2	≤1 Foot BGS	- -	- -	- -	6.8E-06	- -
COM 3	≤1 Foot BGS	- -	- -	- -	8.1E-06	- -
COM 4	≤1 Foot BGS	- -	- -	- -	1.0E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	4.7E-06	- -
COM 5	≤1 Foot BGS	- -	- -	- -	8.7E-06	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	7.5E-06	- -
COM 6	≤1 Foot BGS	- -	- -	- -	9.4E-06	- -
COM 7	≤1 Foot BGS	- -	- -	- -	9.1E-06	- -
COM 8	≤1 Foot BGS	- -	- -	- -	1.2E-05	- -
COM 9	≤1 Foot BGS	- -	- -	- -	5.9E-06	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	2.2E-06	- -
GC 1	≤1 Foot BGS	- -	- -	- -	1.1E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	8.6E-06	- -
GC 2	≤1 Foot BGS	- -	- -	- -	1.4E-05	2.2E-06
	>1 to ≤15 Feet BGS	- -	- -	- -	7.3E-05	- -
GC 3	≤1 Foot BGS	- -	- -	- -	2.2E-05	- -
GC 4	≤1 Foot BGS	- -	- -	- -	1.4E-05	4.4E-06
	>1 to ≤15 Feet BGS	- -	- -	- -	5.7E-06	- -
GC 5	≤1 Foot BGS	- -	- -	- -	1.1E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	1.7E-06	- -
GC 6	≤1 Foot BGS	- -	- -	- -	2.3E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	7.5E-06	- -
GC 7	≤1 Foot BGS	- -	- -	- -	2.2E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	2.1E-06	- -
GC 8	≤1 Foot BGS	- -	- -	- -	2.0E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	1.2E-06	- -
GC 9	≤1 Foot BGS	- -	- -	- -	1.0E-05	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	1.7E-06	- -
HI 1	≤1 Foot BGS	- -	- -	- -	2.1E-06	- -
HI 2	≤1 Foot BGS	- -	- -	2.0E-06	2.3E-06	- -
HI 3	≤1 Foot BGS	- -	- -	- -	3.4E-06	- -
IN 1	≤1 Foot BGS	- -	- -	- -	5.8E-06	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	1.4E-06	- -
OS 1	≤1 Foot BGS	- -	- -	- -	- -	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	- -	- -
OS 2	≤1 Foot BGS	1.2	- -	- -	9.2E-06	- -
	>1 to ≤15 Feet BGS	- -	- -	- -	3.8E-06	- -
OS 3	≤1 Foot BGS	- -	- -	- -	1.9E-06	- -
OS 4	≤1 Foot BGS	- -	- -	- -	1.1E-06	- -

Notes:
COM = Commerical. GC = Industrial. HI = Historical. IN = Industrial. OS = Open Space.
Shaded values indicate risk levels that exceed MTCA's risk criteria. The EUs associated with these risks will be evaluated in the FS. Non-cancer hazards or risks for EUs and associated COPCs not presented in the table are below a HI of 1 and a cancer risk of 1E-06, respectively.
- - = Constituent has a hazard quotient less than 1, a cancer risk less than 1E-06, or is not a COPC for that EU.
(1)The background soil concentration for arsenic is 32 mg/kg. This Site-specific background concentration, in combination with the different exposure scenarios, results in cancer risks of 5.3E-06 for Commercial and Golf Course Land Use, 1.0E-05 for

Historical and Open Space and 3.6E-06 for Industrial. Consistent with MTCA, these areas would not be considered to be out of compliance unless the cancer risk exceeded these levels.

Table 4-7 – Cumulative Hazard Indices and Cancer Risks for Each EU

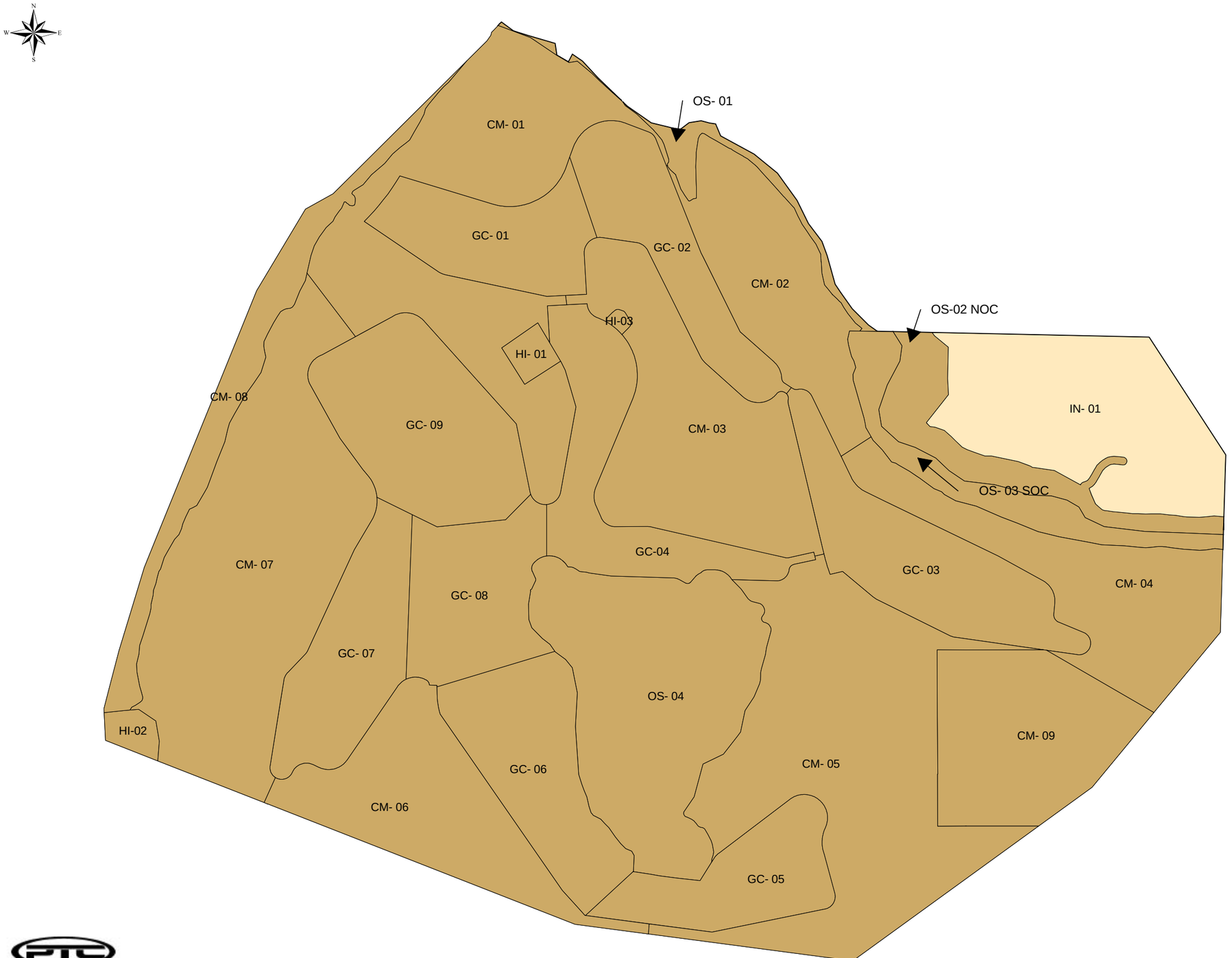
Evaluation Unit	Depth	Hazard Index	Cumulative Cancer Risk
COM 1	≤1 Foot BGS	1.4	2.2E-05
	>1 to ≤15 Feet BGS	0.038	2.0E-06
COM 2	<1 Foot BGS	0.055	6.8E-06
	>1 to <15 Feet BGS	0.024	7.8E-07
COM 3	≤1 Foot BGS	0.13	8.7E-06
	>1 to ≤15 Feet BGS	0.023	6.2E-07
COM 4	≤1 Foot BGS	0.084	1.0E-05
	>1 to ≤15 Feet BGS	0.038	4.7E-06
COM 5	≤1 Foot BGS	0.095	8.7E-06
	>1 to ≤15 Feet BGS	0.23	7.5E-06
COM 6	≤1 Foot BGS	0.077	9.4E-06
	>1 to ≤15 Feet BGS	0.0080	9.7E-07
COM 7	≤1 Foot BGS	0.090	9.1E-06
	>1 to ≤15 Feet BGS	0.061	7.0E-07
COM 8	≤1 Foot BGS	0.10	1.2E-05
	>1 to ≤15 Feet BGS	0.0081	1.0E-06
COM 9	≤1 Foot BGS	0.048	5.9E-06
	>1 to ≤15 Feet BGS	0.018	2.2E-06
GC 1	≤1 Foot BGS	0.087	1.1E-05
	>1 to ≤15 Feet BGS	0.076	8.7E-06
GC 2	≤1 Foot BGS	0.46	2.0E-05
	>1 to ≤15 Feet BGS	0.61	7.3E-05
GC 3	≤1 Foot BGS	0.21	2.2E-05
	>1 to ≤15 Feet BGS	0.022	8.7E-07
GC 4	≤1 Foot BGS	0.86	2.8E-05
	>1 to ≤15 Feet BGS	0.053	5.8E-06
GC 5	≤1 Foot BGS	0.11	1.1E-05
	>1 to ≤15 Feet BGS	0.031	1.7E-06
GC 6	≤1 Foot BGS	0.20	2.3E-05
	>1 to ≤15 Feet BGS	0.061	7.7E-06
GC 7	≤1 Foot BGS	0.18	2.2E-05
	>1 to ≤15 Feet BGS	0.018	2.1E-06
GC 8	≤1 Foot BGS	0.17	2.0E-05
	>1 to ≤15 Feet BGS	0.010	1.2E-06
GC 9	≤1 Foot BGS	0.081	1.0E-05
	>1 to ≤15 Feet BGS	0.014	1.7E-06
HI 1	≤1 Foot BGS	0.28	2.1E-06
HI 2	≤1 Foot BGS	0.34	4.3E-06
HI 3	≤1 Foot BGS	0.44	3.4E-06
IN 1	≤1 Foot BGS	0.050	5.8E-06
	>1 to ≤15 Feet BGS	0.021	1.5E-06
OS 1	≤1 Foot BGS	0.29	2.8E-06
OS 2	≤1 Foot BGS	1.2	9.2E-06
	>1 to ≤15 Feet BGS	0.49	3.8E-06
OS 3	≤1 Foot BGS	0.24	1.9E-06
	>1 to ≤15 Feet BGS	0.015	1.2E-07
OS 4	≤1 Foot BGS	0.14	1.1E-06

Notes:
COM = Commerical. GC = Industrial. HI = Historical. IN = Industrial. OS = Open Space. HI = Hazard Index (i.e., sum of all of the hazard quotients). CR = Cancer Risk (i.e., cumulative cancer risk).
Shaded values indicate levels that exceed MTCA's risk criteria. The EUs associated with these risks will be evaluated in the FS.

Table 4-8 – Summary of EUs to be Evaluated in the FS

EU	Evaluated in FS
COM 1	Yes
COM 2	Yes
COM 3	Yes
COM 4	Yes
COM 5	Yes
COM 6	Yes
COM 7	Yes
COM 8	Yes
COM 9	Yes
GC 1	Yes
GC 2	Yes
GC 3	Yes
GC 4	Yes
GC 5	Yes
GC 6	Yes
GC 7	Yes
GC 8	Yes
GC 9	Yes
IN 1	Yes(1)
OS 1	Yes
OS 2	Yes
OS 3	Yes
OS 4	Yes
HI 1	Yes
HI 2	Yes
HI 3	Yes

Notes:
COM = Commerical. GC = Industrial. HI = Historical. IN = Industrial. OS = Open Space.
(1)Evaluated in the FS based on potential impacts to groundwater.



PIONEER TECHNOLOGIES CORPORATION

Legend

- Eu in Compliance 0 to <1 ft
- EU not in Compliance 0 to <1 ft

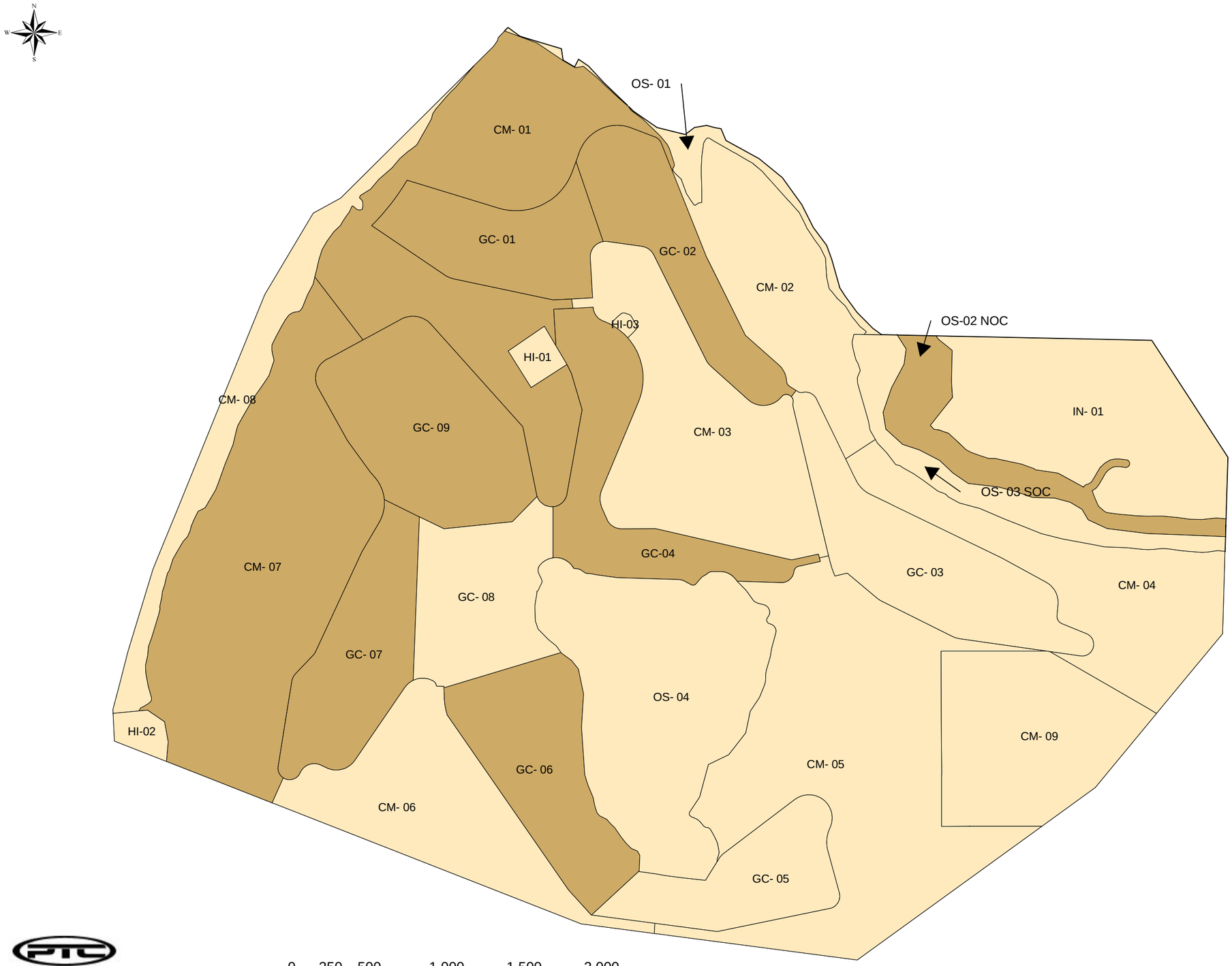
Notes

GC - Golf Course
CM - Commercial
HI - Historical
OS - Open Space
NOC - North of Creek
SOC - South of Creek
IN - Industrial

EU Compliance Status for Arsenic and Lead in Surface Soil

Former DuPont Works Site
September, 2002

Figure 4-1



PIONEER TECHNOLOGIES CORPORATION

Legend

- Eu in Compliance >1 to <15 ft
- EU not in Compliance >1 to <15 ft

Notes

GC - Golf Course
CM - Commercial
HI - Historical
OS - Open Space
NOC - North of Creek
SOC - South of Creek
IN - Industrial

EU Compliance Status for Arsenic and Lead in Subsurface Soil

Former DuPont Works Site
September, 2002

Figure 4-2

Chapter 5 – Uncertainty Analysis

5.1 Introduction

The results presented in this RA depend on a number of factors, including the availability of pertinent scientific information, standard RA practices, exposure assumptions, toxicity assumptions, and Ecology policy decisions.

Uncertainties are introduced into a RA because a range of values could be used for each assumption (i.e., parameter). Typically, more conservative (i.e., upper bound) values are generally chosen for each parameter, while other values (i.e., values closer to the central tendency) may be more representative of site-specific conditions. Choosing upper bound values for each parameter typically results in overly conservative risks that do not reflect site-specific conditions.

5.2 Uncertainties

Sources of uncertainty identified in the human health evaluation and professional judgment regarding the direction and magnitude of the impacts on the risk results are presented in Table 5-1. The direction and magnitude are those assumed to remain after any actions listed in the comment field have been implemented. This is done to qualitatively evaluate how much the risks and associated CLs might change if different values were used or if an alternative assumption or decision was made. In other words this uncertainty analysis provides a qualitative estimate of the confidence that the cleanup and remediation levels presented herein will be protective of the land-use and receptors on which they are based. The key study-specific uncertainties associated with the risk calculations and associated CLs and RLs are discussed in detail below.

5.2.1 Future Land Use

There is uncertainty associated with future land use at the Site. The RA assumed that future land use would include commercial, recreational (i.e., a golf course), historical, and open space for the purposes of developing RLs. If the Site was used for other purposes (e.g., residential) the RLs may not be protective. This uncertainty is very low because there are land use restrictions being imposed on the property to ensure that future land use is consistent with the assumptions made in the RA. Deed restrictions to limit Site uses will be imposed for different land uses including commercial, recreational (golf course), historical, industrial, and open space (Ecology, 2003). The City of DuPont zoning for the Site does not include any areas to be used for residential purposes (City of DuPont, 2001). An additional deed restriction will be required for the property inside the golf course footprint that limits this property to that sole use and places restrictions on activities that could disturb the cap/cover. In addition, the construction of an engineered cap/cover as part of the golf course placement areas also reduces the uncertainty that the property will be used for other purposes which would result in unaccounted for exposures to affected soil. Overall, the confidence that the future land-use will be consistent with what was evaluated in the RA is very high.

5.2.2 Exposure Factors

There is uncertainty associated with the exposure factors used to determine the CLs and RLs including the incidental soil ingestion rates. The default MTCA Method C scenario assumes that an adult industrial worker ingests 50 mg of soil each day. The CLs and RLs identified in this evaluation are based on the assumption that the commercial or golf course worker ingests 200 mg of soil each day. The uncertainty surrounding incidental soil ingestion rates is low due to the fact that a higher ingestion rate was used to develop the CLs and RLs.

5.2.3 Groundwater as a drinking water source

Drinking water was not evaluated in the RA because COPC concentrations in the RI indicated that, other than low DNT concentrations that were detected in 6 wells, groundwater is not a medium of concern. There is though, uncertainty associated with the use of groundwater as a drinking water source. Site groundwater is not currently used as a drinking water source. In the future, a deed restriction will be placed on the Site to restrict the use of groundwater to non-potable uses only, until such time as it meets

CLs. In addition, the capacity of off-Site drinking water supplies (which are located upgradient of the Site) is more than double the capacity needed for the projected population of DuPont through the year 2020 (WSNW, 2003). Therefore, the uncertainty associated with future groundwater use is low.

5.2.4 Arsenic Area Background Concentration

There is uncertainty associated with determining the background arsenic concentration at the Site. This area background concentration was determined after collecting twenty-three soil samples from unbiased locations outside of the Site consent decree boundary to define "Site background" soil quality in accordance with MTCA. The majority of samples were obtained from locations to the south and east of the Site. Ecology approved the use of the 32 mg/kg (i.e., ppm) as the area background concentration for arsenic in 1996. The confidence in this value being representative of area background concentrations is high.

5.2.5 Ecological Evaluation

There is uncertainty associated with ecological evaluation. Ecology performed an evaluation of the Site and determined that lead is the indicator compound for potential terrestrial ecological impacts. As part of this evaluation, Ecology determined that, based on site-specific information, the potential species groups of concern included ground-feeding birds and herbivorous small mammals. The soil screening level identified for lead by Ecology is 118 mg/kg, and is intended to be protective of wildlife, including birds and small mammals. This concentration is based on an exposure scenario which assumes that there are earthworms present in the contaminated soil and that robins are eating the earthworms. Overall, the confidence in this value being protective of ecological receptors is very high.

5.3 Conclusion

The MTCA rule, scientific information, site-specific factors, and the associated uncertainties were considered during the process of developing CLs and RLs. In general, when faced with uncertainty, more stringent assumptions were used in the evaluation so that the final result is CLs and RLs that are more health protective.

Table 5-1
Summary of Uncertainties in the Human Health Evaluation and Site-Specific Characteristics

Source of Uncertainty	Direction[(a)]	Magnitude[(b),(c)]	Comment
Key Uncertainties			
Future Land Use	+/-	0	Deed restrictions, zoning, and physical cap over the placement areas in the golf course together minimize the chance that future land use will be different than what was assumed in the RA.
Incidental Soil Ingestion Rate	+	2	The incidental soil ingestion rate that was used is 4 times higher than the MTCA default value.
Groundwater as a drinking water source.	+/-	0	The groundwater at the Site is not currently used as a drinking water source and deed restrictions will ensure that it is not used as a source in the future.
Area-wide arsenic background concentration	+/-	0	The area-wide concentration was determined according to the methodology prescribed in MTCA and ultimately approved by Ecology for use at the Site.
Ecological Evaluation	+	2	The screening concentration identified by Ecology was used as the cleanup level.
Other Uncertianties			
Quality of Analytical Data	+/-	0	Quality-assured data were used in the evaluation.
Identification and characterization of COCs present in soil.	+/-	0	The Site is well characterized with 21,933 soil sample analyses (5,182 samples), 12,038 groundwater sample analyses (283 samples), and 1,528 surface water sample analyses (344 samples).
Soil samples were not sieved through a < 250 mm screen.	-	1	EPA issued guidance recommending sieving soil samples for lead only. If this was done the lead concentrations in soil would be higher (i.e., the lead concentrations reported by the laboratory would be higher because lead is generally found in the finer soil fraction).
Exposure Frequency and Duration	+	1	MTCA default and Site-specific exposure Factors were used in the evaluation. The exposure frequency assumes that a commercial landscaper is working in the affected soil 2 days/week for 20 years.
Extrapolation from animal studies to human toxicity	+	3	U.S. EPA's conservative approach incorporating safety factors and upper-bound estimates was used in the evaluation.
Historical versus recent RA assumptions impact on CLs and RLs	+/-	0	Site-specific CLs and RLs have been developed over the course of many years and in some cases this results in differences in exposure scenarios and associated assumptions (see Appendix C) between older and newer agreements.

[(a)]Direction of Effect on Risk Calculations + = May result in risks that are overly conservative.
- = May result in risks that are not conservative.

[b]Magnitude of Effect on Risk Calculations
0 = Negligible impact on risk calculations.
1 = Small effect on risks calculations.
2 = Medium effect on risk calculations.
3 = Large effect on risk calculations.

[c]Direction and Magnitude values based on professional judgment.

5.4 References

City of DuPont. 2001. City of DuPont Comprehensive Land Use Plan. Adopted by Ordinance No. 01-698. November 13, 2001.

Ecology. Washington State Department of Ecology. 2003. Cleanup Action Plan for the Former DuPont Works Site, DuPont, WA.

WSNW. West Shore Corporation NW. 2003. Feasibility Study for the Former DuPont Works Site, DuPont, Washington.

Appendix A – Ecological Risk Assessment Summary

A.1 Introduction

In 1991, a Consent Decree between Ecology, Weyerhaeuser, and DuPont was signed. The MTCA regulations, as well as the Consent Decree, require that potential risks to human health and the environment be evaluated at the Site. This memo summarizes the qualitative and quantitative evaluations performed to evaluate the potential impacts to ecological receptors at the Former DuPont Works Site.

A.2 Nature and Extent of Contamination

Soil, groundwater, surface water (fresh and marine), and sediment were all potentially impacted from the activities of the Former DuPont Works. Constituent concentrations in these media (except for soil where there are no published standards) were compared to Federal and State environmental standards that are protective of the environment. No constituent concentrations in surface water and fresh water sediments exceeded any of the standards. Based on these comparisons and other factors such as diversity of species in fresh water sediments, it was determined that surface soil is the only medium of potential ecological concern (Hart Crowser, 1994).

Petroleum, DNT, TNT, mercury, arsenic, and lead were detected in soil at the Site. Petroleum, DNT, TNT, and mercury have been remediated and residual concentrations do not pose a risk to upland species of plants and animals. Human health standards for arsenic are protective of ecological organisms. Therefore, remediating arsenic contamination to meet human health standards will ensure protection for ecological receptors. The only remaining COPC for ecological receptors is lead.

The bulk of lead contamination in surface soil at the Site is, in general, localized around building foundations which will be remediated. The removal of soil around these foundations will reduce significantly the overall lead contamination Site-wide, and therefore, the overall risk to ecological receptors. Nevertheless, as currently envisioned, there will remain relatively small areas on the Site where either remediation or active land development are not planned. It is these areas, such as future Open Space and buffer areas, where the potential for exposure of ecological receptors to lead remains. The concerns raised by potential exposure to lead in these areas, and approaches to addressing these concerns is the focus of the following discussion.

A.3 Ecological Risk Assessment

A.3.1 General

Ecological risk assessment is a process that is used to estimate the likelihood and magnitude of harm to ecological receptors that results from exposure to one or more stressors. It is a tool that helps in the decision making process, hence the results of the ecological risk assessment are one of several considerations involved in making the ultimate decision as to what action might need to be taken at a site. In general, the ecological assessment process follows the concept of tiering. The assessment begins with a relatively simple screening process which allows the risk assessor to determine what receptors and what constituents are of concern. If the potential for ecological impacts are not found during this screening step, the assessment ends. If, however, there are potential ecological risks found, the assessment may progress to more complex and lengthy investigations. In this way, evidence is collected in a stepwise fashion allowing the decision maker to determine whether or not additional information is needed to make a scientifically supportable decision. Where sufficient information is available, such that the decision maker is no longer faced with a high degree of uncertainty, there may be no need for further assessment. There are at least two, perhaps more, approaches to ecological risk assessment: the top down approach, and the bottom up approach.

A.3.2 Top Down Approach

The top down approach takes a macro scale view of the existing conditions on-Site, including the plants, animals and habitats, and considers whether or not there are obvious signs of harm. The judgment as to whether or not harm is present is based on a comparison of the area of interest to a similar nearby area where the stressors of concern, such as metals, are not present. If the comparison suggests that there are no obvious signs of harm (i.e., the nearby site is not substantially different than the site of interest), the assessment can typically be stopped. The strength of the top down approach is that the "sum" of the functioning of the plants and animals is measured, and judged against a similar "sum" from a relatively clean area. It is analogous to "taking a big picture view of potential ecological risks". A weakness of this approach is that the resolution, or ability to see small things clearly, is not great enough to observe subtle, micro scale differences that might be present.

A.3.3 Bottom Up Approach

Conversely, the bottom up approach begins by measuring concentrations of constituents in important media, perhaps conducting toxicological tests on these media, and later attempting to integrate these measures into an estimate of ecological risk. The bottom up approach is analogous to viewing the individual trees in the forest and using that information to determine if there has been harm to the total forest. In contrast, the top down approach does not look at individual trees *per se*, but the total forest, to determine if there is potential harm. The strength of the bottom up approach is that discrete measurements of potential exposure and harm to individual components of the system are made, providing both a qualitative and quantitative estimate of potential risk. A weakness of this approach is that the overall functioning of the plants and animals, the "sum" of the system, may or may not match up with the bottom up information. That is, the overall system may be functioning appropriately even when individual components may not be.

At the former DuPont Works Site, both the top down and the bottom up approaches were applied as discussed below. Taken together, the two approaches complement one another and thus reduce the likelihood that either micro scale or macro scale problems are missed.

A.4 Site-Specific Ecological Studies - A Top Down Approach

A number of Site-specific qualitative and quantitative ecological studies have been conducted at the former DuPont Works Site. These included the following:

- **Biological Survey** – Terrestrial ecology studies were conducted from January 1977 through February 1978 to document existing conditions including the diversity and composition of plant and animal species (Melchiors and Motobu, 1978). The investigations included determining the species composition and extent of plant communities, bird, large and small mammals (e.g., mark-recapture trapping of small mammals), reptiles and amphibian populations.

- **Biological Resources Summary (The Weyerhaeuser Export Facility FEIS)** – This document provides a detailed summary of all previous biological investigation work regarding existing flora, fauna, and associated habitats at and in the vicinity of the Site (U.S. Army Corps of Engineers, 1982). The document also provides a series of maps and tables compiling all of the biotic information related to the Site. These data and observations support the conclusion that the former DuPont Works site is a relatively robust ecological area containing a diverse assemblage of plants and animals common to the Pacific Northwest.

- **Biological Resource Assessment** — To update the FEIS and previous work on Site, a biological resource assessment was performed in 1996 to re-evaluate the diversity of plant and animal species (Adolphsson and Associates, 1996). The studies compared highly contaminated areas within the Consent Decree boundary to similar uncontaminated off-Site reference areas by placing grids over the study areas and identifying and counting plants and wildlife. The majority of plants and animals observed were common to the on-Site and off-Site areas with small differences likely attributable to the higher degree of physical disturbance within the Consent Decree associated with various human activities, such as Site cleanup. There was no indication of plant or animal stress within the Consent

Decree areas. The study concluded that plant and animal populations appear to be healthy. No abnormal growth forms or patterns were observed in either plants or animals in the course of the study. Plant communities appear to be generally healthy and responding to changes in their physical environment that have resulted from initial cleanup and forest thinning activities. Wildlife also are relatively abundant on the Site, and at least some species were observed nesting and/or rearing young within the Consent Decree boundary. This comparative biological assessment found little differences between off-Site and on-Site communities; however, only gross impacts would have been noticed.

A.5 Site-Specific Ecological Studies - A Bottom Up Approach

Quantitative Site-specific studies have been conducted at the former DuPont Works Site as shown below.

- **Screening Soil Bioassays** — The Washington State Department of Ecology performed screening level bioassays on soil samples from the Site as part of its ongoing effort to develop methods to assess potential biological impacts (Norton and Stinson, 1993). The bioassays included (1) *Daphnia magna* percent survival; (2) Plant vigor based on biomass, percent germination, and percent survival; (3) Earthworm percent survival; (4) Fathead Minnow percent survival; (5) FETAX (Frog Embryo Teratogenesis Assay) percent survival, percent malformation, and mean growth of *Xenopus laevis* as presented in Table A-1. These bioassay results suggest that potentially detrimental effects were only observed at the high concentrations (the high concentration was 110,000 ppm). During 1999, 2000, and 2001 the areas with the highest lead concentrations (i.e., any sample where the lead concentration exceeded 4,100 mg/kg) have been removed from the Site (See the RI).

- **Draft Ecological Risk Assessment** — This study evaluated the impacts of Site-related COPCs on the environment (DERS and Hart Crowser, 1994). The assessment employed a food web model to quantify potential exposure of larger animals to contaminants in the soil and compared surface water and sediment constituent concentrations to standards. The assessment concluded that: (1) the potential risk to avian species under current Site conditions was minimal; (2) cleanup of lead to levels protective of human health would be reasonably protective of ecological receptors; and (3) that no potential risks to aquatic species were indicated under current Site conditions. Results of the food web modeling analysis indicated that no potential risk to large terrestrial mammals exists (deer and fox). Potential risks to herbivorous rodents (voles) were identified for some areas. A short coming of this study was that it did not take into account future land use (i.e., what habitat will remain after remediation and development).

- **Food Web Modeling** — A nationally recognized ecological risk assessor selected by Ecology and the PLPs initiated the development of a food web model which focused on highly exposed indicator species found at the site and taking into account the COPCs (Greg Linder, 1996). Ecology and the PLPs came to separate but similar conclusions that future land use was becoming an overriding factor with respect to potential ecological risk: hence this evaluation was no longer needed for making a final decision at the Site.

A.6 Conclusions

A variety of different studies, using both the top down and bottom up approaches to ecological risk assessment, have been conducted at the Site in order to provide information for making an ecologically-based, risk management decision. The conclusions that can be drawn from these studies include:

- The only constituent and medium of potential ecological concern is lead in surface soil. Ecology has performed an evaluation of the Site and determined that lead is the indicator compound for potential terrestrial ecological impacts. As part of this evaluation, Ecology determined that based on site-specific information, the potential species groups of concern included ground-feeding birds and herbivorous small mammals. The conclusion that lead is the only constituent of concern is supported by the fact that the value for arsenic (see Table 749-3 of MTCA) that is protective of wildlife is higher than any of the proposed soil arsenic remediation levels (except for the golf course placement area

remediation levels where an ecological exposure barrier will be present) that are protective of human health.

- Areas that will not be developed in the future are the only areas of concern for evaluating the potential impacts to ecological receptors.
- Lead contamination in surface soil at the Site is primarily localized around building foundations. The soil around these foundations will be remediated, reducing or eliminating exposure to lead.
- No differences in the numbers or condition of plants and animals in contaminated and uncontaminated areas were observed in the qualitative environmental evaluations at the Site. Generations of plants and animals have lived at the Site in the current state since the plant began operating in 1909.
- Screening bioassays performed at the Site suggest that some impacts might be expected to occur to ecological receptors of concern where concentrations of lead are greater than 500 mg/kg. With the exception of soils adjacent to the building foundations, there are minimal areas on site where this level of contamination is present.
- The potential ecological concerns at the site have diminished as development plans have become more concrete and as a result of the Interim Source Removals and Interim Corrective Actions.

As discussed previously, the results of the ecological risk assessment are but one of several pieces of information used by decision makers in reaching risk management decisions. In the case of the former DuPont Works Site, there are healthy and robust flora and fauna Site-wide. Remedial actions planned to protect human health will substantially reduce or eliminate further risk to ecological receptors in many areas of the Site, except in relatively small areas which will remain as Open Space or buffers. In these latter areas, based on the Site-specific data generated to date, the potential risk to ecological receptors is believed to be minimal. Two lines of evidence support this conclusion: 1) the presence of viable, healthy flora and fauna; and, 2) the comparatively small areas where soil lead is in excess of 500 mg/kg. Based on planned land use, it is also evident that these viable and valued habitats will remain so in the future. Overall, the incremental reduction of ecological risk that might be gained by active remediation in the Open Space and buffers is insufficient to outweigh the ecological costs that would result. Therefore, not pursuing additional remedial action in the Open Space and bugger areas will result in a net environmental benefit.

Table A-1 – Soil Bioassay Results

COPC Concentrations	Lead (mg/kg)	Results
Low	8.8	No significant effects.
Medium	490	Four of five bioassay results indicated no significant effects. FETAX results were different from the controls for percent survival and percent malformations.
High	110,000	Three of five bioassay results indicated effects different from the controls. These included percent survival in the *Daphnia magna* and Earthworms, and percent survival and percent malformations for the FETAX bioassay.

A.7 References

Adolphson and Associates. 1996. Biological Resources Assessment. The Weyerhaeuser/DuPont Site. DuPont, Washington.

DERS (DuPont Environmental Remediation Services) and Hart Crowser. 1994. Draft Risk Assessment, Former DuPont Works Site. DuPont, Washington.

Greg Linder, 1996

Hart Crowser. 1994. DRAFT Remedial Investigation, Former DuPont Works site, DuPont, Washington.

Melchiors, M.A. and D.T. Motobu. 1978. Final Report: Terrestrial Ecology of the DuPont Site, Washington. Weyerhaeuser Company. Western Forestry Research Center. Centralia, WA.

Norton, D. and M. Stinson. 1993. Soil Bioassay Pilot Study: Evaluation of Screening Levels Bioassays for Use in Soil Toxicity Assessments at Hazardous Waste Sites Under the Model Toxics Control Act. Olympia, Washington.

U.S. Army Corps of Engineers. 1982. Final Environmental Impact Statement, Weyerhaeuser Export Facility at DuPont, DuPont, Washington.

Appendix B – Evaluation Unit Sample Groupings

B.1 Introduction

This appendix presents all of the samples that were included in each evaluation unit. The short sample identifier, and the RI evaluation are presented for each sample. This provides a way to examine specific samples that are presented in the RI. Note that verification samples (i.e., data that were collected after soil was excavated) were excluded from the RA to ensure that the summary statistics were not biased low.

The following Tables are presented in Appendix B:

- Table B-1 – Commercial Area Samples <= 1 Foot BGS.
- Table B-2 Commercial Area Samples >1 Foot and <=15 Feet BGS.
- Table B-3 – Golf Course Area Samples <=1 Foot BGS.
- Table B-4 – Golf Course Samples >1 Foot and <=15 Feet BGS.
- Table B-5 – Historical Area Samples <=1 Foot BGS.
- Table B-6 – Industrial Area Samples <=1 Foot BGS.
- Table B-7 – Industrial Area Samples >1 Foot and <=15 Feet BGS.
- Table B-8 – Open Space Area Samples <=1 Foot BGS.
- Table B-9 – Open Space Area Samples >1 Foot and <=15 Feet BGS.

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
Commercial Area 1 (0 to <=1foot)		
1234-TP-517-S-1	1234-TP-517-S-1	1234
18-SS-514	18-SS-514	18 North
18-SS-515	18-SS-515	18 North
18-SS-516	18-SS-516	18 North
18-SS-518	18-SS-518	18 North
18-SS-519	18-SS-519	18 North
18-SS-520	18-SS-520	18 North
18-SS-699	18-SS-699	18 North
18-SS-701	18-SS-701	18 North
18-SS-702-DAVG	18-SS-702-DAVG	18 North
18-SS-703	18-SS-703	18 North
18-SS-711	18-SS-711	18 North
18-SS-713	18-SS-713	18 North
18-SS-870	18-SS-870	18 North
18-SS-871	18-SS-871	18 North
18-SS-880	18-SS-880	18 North
18-SS-881	18-SS-881	18 North
18-SS-882	18-SS-882	18 North
18-SS-883	18-SS-883	18 North
18-SS-915	18-SS-915	18 North
18-SS-920	18-SS-920	18 North
18-SS-921	18-SS-921	18 North
18-SS-922	18-SS-922	18 North
18-SS-924	18-SS-924	18 North
18-SS-925	18-SS-925	18 North
18-SS-926	18-SS-926	18 North
18-SS-932	18-SS-932	18 North
18-SS-933	18-SS-933	18 North
18-SS-934	18-SS-934	18 North
18-SS-935	18-SS-935	18 North
18-SS-GS-55	18-SS-GS-55	18
18-SS-GS-56	18-SS-GS-56	18
18-TP-502-S-1	18-TP-502-S-1	18 North
18R-404	18R-404	18-REF
18R-404A-DAVG	18R-404A-DAVG	18-REF
18R-405	18R-405	18-REF
18R-409	18R-409	18-REF
25-SS-503	25-SS-503	25
25-SS-510	25-SS-510	25
25-SS-511	25-SS-511	25

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
25-TP-509-S-1	25-TP-509-S-1	25
25-TP-510-S-1	25-TP-510-S-1	25
26-SS-405-DAVG	26-SS-405-DAVG	26
26-TP-520-S-1	26-TP-520-S-1	26
26-TP-521-S-1	26-TP-521-S-1	26
36-SS-29	36-SS-29	36
36-SS-30	36-SS-30	36
5-SS-401	5-SS-401	5
7-B-501-S-1	7-B-501-S-1	7
7-B-502-S-1	7-B-502-S-1	7
7-B-503-S-1	7-B-503-S-1	7
7-B-504-S-1-DAVG	7-B-504-S-1-DAVG	7
7-HA-501-S-1-DAVG	7-HA-501-S-1-DAVG	7
7-HA-503-S-1	7-HA-503-S-1	7
7-HA-504-S-1	7-HA-504-S-1	7
7-SS-401	7-SS-401	7
7-SS-402	7-SS-402	7
7-SS-501	7-SS-501	7
7-SS-502	7-SS-502	7
7-SS-503	7-SS-503	7
7-SS-504	7-SS-504	7
7-SS-505	7-SS-505	7
7-SS-506	7-SS-506	7
7-TP-501-S-1	7-TP-501-S-1	7
7-TP-502-S-1	7-TP-502-S-1	7
7-TP-503-S-1	7-TP-503-S-1	7
7-TP-504-S-1	7-TP-504-S-1	7
7-VS-1	7-VS-1	7
7-VS-2	7-VS-2	7
7-VS-3	7-VS-3	7
7-VS-4	7-VS-4	7
APA-SS-502	APA-SS-502	LR
APA-TP-501-S-1-DAVG	APA-TP-501-S-1-DAVG	LR
APC-SS-401	APC-SS-401	AP-C
APC-SS-501	APC-SS-501	AP-C
APC-SS-510	APC-SS-510	AP-C
APC-SS-511	APC-SS-511	AP-C
APC-SS-512	APC-SS-512	AP-C
APC-SS-513	APC-SS-513	AP-C
APC-SS-514	APC-SS-514	AP-C
APH-SS-516	APH-SS-516	25

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
APH-SS-518	APH-SS-518	25
APH-SS-519	APH-SS-519	25
LR-001	LR-001	LR
LR-002	LR-002	LR
LR-003	LR-003	LR
LR-004	LR-004	LR
LR-005	LR-005	LR
LR-006	LR-006	LR
LR-007	LR-007	LR
LR-009-1	LR-009-1	LR
LR-009-2	LR-009-2	LR
LR-010-DAVG	LR-010-DAVG	LR
LR-017-1	LR-017-1	LR
LR-017-2	LR-017-2	LR
LR-017-S-2	LR-017-S-2	LR
LR-024	LR-024	LR
LR-025	LR-025	LR
LR-025-S-2	LR-025-S-2	LR
LR-035-1	LR-035-1	LR
LR-035-2	LR-035-2	LR
LR-036-DAVG	LR-036-DAVG	LR
LR-036E	LR-036E	LR
LR-036E2	LR-036E2	LR
LR-075	LR-075	LR
LR-090	LR-090	LR
LR-12W	LR-12W	LR
LR-301	LR-301	LR
LR-302	LR-302	LR
LR-303	LR-303	LR
LR-306	LR-306	LR
LR-307	LR-307	LR
RR-506	RR-506	LR
RR-507	RR-507	LR
RR-509	RR-509	LR
RR-510-DAVG	RR-510-DAVG	25
RR-530	RR-530	RR-N
RR-589	RR-589	RR-N
Commercial Area 2 (0 to <=1foot)		
01-C011-SS-[R19C55]-D1-000	01-C011-SS-[R19C55]-D1-000	AFAS
01-C011-SS-[R20C55]-D1-000	01-C011-SS-[R20C55]-D1-000	AFAS
01-C011-SS-[R20C56]-D1-000	01-C011-SS-[R20C56]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C011-SS-[R21C55]-D1-000	01-C011-SS-[R21C55]-D1-000	AFAS
01-C011-SS-[R21C56]-D1-000	01-C011-SS-[R21C56]-D1-000	AFAS
01-C011-SS-[R21C57]-D1-000	01-C011-SS-[R21C57]-D1-000	AFAS
01-C011-SS-[R21C58]-D1-000	01-C011-SS-[R21C58]-D1-000	AFAS
01-C011-SS-[R22C55]-D1-000	01-C011-SS-[R22C55]-D1-000	AFAS
01-C011-SS-[R22C56]-D1-000-DAVG	01-C011-SS-[R22C56]-D1-000-DAVG	AFAS
01-C011-SS-[R22C57]-D1-000	01-C011-SS-[R22C57]-D1-000	AFAS
01-C011-SS-[R22C58]-D1-000	01-C011-SS-[R22C58]-D1-000	AFAS
01-C011-SS-[R22C59]-D1-000	01-C011-SS-[R22C59]-D1-000	AFAS
01-C011-SS-[R23C55]-D1-000	01-C011-SS-[R23C55]-D1-000	AFAS
01-C011-SS-[R23C56]-D1-000	01-C011-SS-[R23C56]-D1-000	AFAS
01-C011-SS-[R23C57]-D1-000	01-C011-SS-[R23C57]-D1-000	AFAS
01-C011-SS-[R23C58]-D1-000	01-C011-SS-[R23C58]-D1-000	AFAS
01-C011-SS-[R23C59]-D1-000	01-C011-SS-[R23C59]-D1-000	AFAS
01-C011-SS-[R24C55]-D1-000	01-C011-SS-[R24C55]-D1-000	AFAS
01-C011-SS-[R24C56]-D1-000	01-C011-SS-[R24C56]-D1-000	AFAS
01-C011-SS-[R24C57]-D1-000	01-C011-SS-[R24C57]-D1-000	AFAS
01-C011-SS-[R24C58]-D1-000	01-C011-SS-[R24C58]-D1-000	AFAS
01-C011-SS-[R24C59]-D1-000	01-C011-SS-[R24C59]-D1-000	AFAS
01-C011-SS-[R24C60]-D1-000	01-C011-SS-[R24C60]-D1-000	AFAS
01-C011-SS-[R25C55]-D1-000	01-C011-SS-[R25C55]-D1-000	AFAS
01-C011-SS-[R25C56]-D1-000	01-C011-SS-[R25C56]-D1-000	AFAS
01-C011-SS-[R25C57]-D1-000	01-C011-SS-[R25C57]-D1-000	AFAS
01-C011-SS-[R25C58]-D1-000	01-C011-SS-[R25C58]-D1-000	AFAS
01-C011-SS-[R25C59]-D1-000	01-C011-SS-[R25C59]-D1-000	AFAS
01-C011-SS-[R25C60]-D1-000	01-C011-SS-[R25C60]-D1-000	AFAS
01-C011-SS-[R26C55]-D1-000	01-C011-SS-[R26C55]-D1-000	AFAS
01-C011-SS-[R26C56]-D1-000	01-C011-SS-[R26C56]-D1-000	AFAS
01-C011-SS-[R26C57]-D1-000	01-C011-SS-[R26C57]-D1-000	AFAS
01-C011-SS-[R26C58]-D1-000	01-C011-SS-[R26C58]-D1-000	AFAS
01-C011-SS-[R26C59]-D1-000	01-C011-SS-[R26C59]-D1-000	AFAS
01-C011-SS-[R26C60]-D1-000	01-C011-SS-[R26C60]-D1-000	AFAS
01-C011-SS-[R26C61]-D1-000	01-C011-SS-[R26C61]-D1-000	AFAS
01-C011-SS-[R27C55]-D1-000	01-C011-SS-[R27C55]-D1-000	AFAS
01-C011-SS-[R27C56]-D1-000	01-C011-SS-[R27C56]-D1-000	AFAS
01-C011-SS-[R27C57]-D1-000	01-C011-SS-[R27C57]-D1-000	AFAS
01-C011-SS-[R27C58]-D1-000	01-C011-SS-[R27C58]-D1-000	AFAS
01-C011-SS-[R27C59]-D1-000	01-C011-SS-[R27C59]-D1-000	AFAS
01-C011-SS-[R27C60]-D1-000	01-C011-SS-[R27C60]-D1-000	AFAS
01-C011-SS-[R27C61]-D1-000	01-C011-SS-[R27C61]-D1-000	AFAS
01-C011-SS-[R28C55]-D1-000	01-C011-SS-[R28C55]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C011-SS-[R28C56]-D1-000	01-C011-SS-[R28C56]-D1-000	AFAS
01-C011-SS-[R28C57]-D1-000	01-C011-SS-[R28C57]-D1-000	AFAS
01-C011-SS-[R28C58]-D1-000	01-C011-SS-[R28C58]-D1-000	AFAS
01-C011-SS-[R28C59]-D1-000	01-C011-SS-[R28C59]-D1-000	AFAS
01-C011-SS-[R28C60]-D1-000	01-C011-SS-[R28C60]-D1-000	AFAS
01-C011-SS-[R28C61]-D1-000	01-C011-SS-[R28C61]-D1-000	AFAS
01-C011-SS-[R28C62]-D1-000	01-C011-SS-[R28C62]-D1-000	AFAS
01-C011-SS-[R29C55]-D1-000-DAVG	01-C011-SS-[R29C55]-D1-000-DAVG	AFAS
01-C011-SS-[R29C56]-D1-000	01-C011-SS-[R29C56]-D1-000	AFAS
01-C011-SS-[R29C57]-D1-000	01-C011-SS-[R29C57]-D1-000	AFAS
01-C011-SS-[R29C59]-D1-000	01-C011-SS-[R29C59]-D1-000	AFAS
01-C011-SS-[R29C60]-D1-000	01-C011-SS-[R29C60]-D1-000	AFAS
01-C011-SS-[R29C61]-D1-000-DAVG	01-C011-SS-[R29C61]-D1-000-DAVG	AFAS
01-C011-SS-[R29C62]-D1-000	01-C011-SS-[R29C62]-D1-000	AFAS
01-C011-SS-[R30C55]-D1-000-DAVG	01-C011-SS-[R30C55]-D1-000-DAVG	AFAS
01-C011-SS-[R30C56]-D1-000	01-C011-SS-[R30C56]-D1-000	AFAS
01-C011-SS-[R30C57]-D1-000	01-C011-SS-[R30C57]-D1-000	AFAS
01-C011-SS-[R30C58]-D1-000	01-C011-SS-[R30C58]-D1-000	AFAS
01-C011-SS-[R30C59]-D1-000	01-C011-SS-[R30C59]-D1-000	AFAS
01-C011-SS-[R30C60]-D1-000	01-C011-SS-[R30C60]-D1-000	AFAS
01-C011-SS-[R30C61]-D1-000	01-C011-SS-[R30C61]-D1-000	AFAS
01-C011-SS-[R30C62]-D1-000	01-C011-SS-[R30C62]-D1-000	AFAS
01-C011-SS-[R31C55]-D1-000-DAVG	01-C011-SS-[R31C55]-D1-000-DAVG	AFAS
01-C011-SS-[R31C56]-D1-000	01-C011-SS-[R31C56]-D1-000	AFAS
01-C011-SS-[R31C57]-D1-000	01-C011-SS-[R31C57]-D1-000	AFAS
01-C011-SS-[R31C58]-D1-000	01-C011-SS-[R31C58]-D1-000	AFAS
01-C011-SS-[R31C59]-D1-000	01-C011-SS-[R31C59]-D1-000	AFAS
01-C011-SS-[R31C60]-D1-000	01-C011-SS-[R31C60]-D1-000	AFAS
01-C011-SS-[R31C61]-D1-000	01-C011-SS-[R31C61]-D1-000	AFAS
01-C011-SS-[R31C62]-D1-000	01-C011-SS-[R31C62]-D1-000	AFAS
01-C011-SS-[R31C63]-D1-000	01-C011-SS-[R31C63]-D1-000	AFAS
01-C011-SS-[R32C56]-D1-000	01-C011-SS-[R32C56]-D1-000	AFAS
01-C011-SS-[R32C57]-D1-000	01-C011-SS-[R32C57]-D1-000	AFAS
01-C011-SS-[R32C58]-D1-000	01-C011-SS-[R32C58]-D1-000	AFAS
01-C011-SS-[R32C59]-D1-000	01-C011-SS-[R32C59]-D1-000	AFAS
01-C011-SS-[R32C60]-D1-000	01-C011-SS-[R32C60]-D1-000	AFAS
01-C011-SS-[R32C61]-D1-000	01-C011-SS-[R32C61]-D1-000	AFAS
01-C011-SS-[R32C62]-D1-000	01-C011-SS-[R32C62]-D1-000	AFAS
01-C011-SS-[R32C63]-D1-000	01-C011-SS-[R32C63]-D1-000	AFAS
01-C011-SS-[R32C64]-D1-000	01-C011-SS-[R32C64]-D1-000	AFAS
01-C011-SS-[R33C56]-D1-000	01-C011-SS-[R33C56]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C011-SS-[R33C57]-D1-000	01-C011-SS-[R33C57]-D1-000	AFAS
01-C011-SS-[R33C58]-D1-000	01-C011-SS-[R33C58]-D1-000	AFAS
01-C011-SS-[R33C59]-D1-000	01-C011-SS-[R33C59]-D1-000	AFAS
01-C011-SS-[R33C60]-D1-000	01-C011-SS-[R33C60]-D1-000	AFAS
01-C011-SS-[R33C61]-D1-000	01-C011-SS-[R33C61]-D1-000	AFAS
01-C011-SS-[R33C62]-D1-000	01-C011-SS-[R33C62]-D1-000	AFAS
01-C011-SS-[R33C63]-D1-000	01-C011-SS-[R33C63]-D1-000	AFAS
01-C011-SS-[R33C64]-D1-000	01-C011-SS-[R33C64]-D1-000	AFAS
01-C011-SS-[R34C57]-D1-000	01-C011-SS-[R34C57]-D1-000	AFAS
01-C011-SS-[R34C58]-D1-000	01-C011-SS-[R34C58]-D1-000	AFAS
01-C011-SS-[R34C59]-D1-000	01-C011-SS-[R34C59]-D1-000	AFAS
01-C011-SS-[R34C60]-D1-000	01-C011-SS-[R34C60]-D1-000	AFAS
01-C011-SS-[R34C61]-D1-000	01-C011-SS-[R34C61]-D1-000	AFAS
01-C011-SS-[R34C62]-D1-000	01-C011-SS-[R34C62]-D1-000	AFAS
01-C011-SS-[R34C63]-D1-000	01-C011-SS-[R34C63]-D1-000	AFAS
01-C011-SS-[R34C64]-D1-000	01-C011-SS-[R34C64]-D1-000	AFAS
01-C011-SS-[R35C58]-D1-000	01-C011-SS-[R35C58]-D1-000	AFAS
01-C011-SS-[R35C59]-D1-000	01-C011-SS-[R35C59]-D1-000	AFAS
01-C011-SS-[R35C60]-D1-000	01-C011-SS-[R35C60]-D1-000	AFAS
01-C011-SS-[R35C61]-D1-000	01-C011-SS-[R35C61]-D1-000	AFAS
01-C011-SS-[R35C62]-D1-000	01-C011-SS-[R35C62]-D1-000	AFAS
01-C011-SS-[R35C63]-D1-000	01-C011-SS-[R35C63]-D1-000	AFAS
01-C011-SS-[R35C64]-D1-000	01-C011-SS-[R35C64]-D1-000	AFAS
01-C011-SS-[R35C65]-D1-000	01-C011-SS-[R35C65]-D1-000	AFAS
01-C011-SS-[R36C59]-D1-000	01-C011-SS-[R36C59]-D1-000	AFAS
01-C011-SS-[R36C60]-D1-000	01-C011-SS-[R36C60]-D1-000	AFAS
01-C011-SS-[R36C61]-D1-000	01-C011-SS-[R36C61]-D1-000	AFAS
01-C011-SS-[R36C62]-D1-000	01-C011-SS-[R36C62]-D1-000	AFAS
01-C011-SS-[R36C63]-D1-000	01-C011-SS-[R36C63]-D1-000	AFAS
01-C011-SS-[R36C64]-D1-000	01-C011-SS-[R36C64]-D1-000	AFAS
01-C011-SS-[R36C65]-D1-000	01-C011-SS-[R36C65]-D1-000	AFAS
01-C011-SS-[R37C60]-D1-000	01-C011-SS-[R37C60]-D1-000	AFAS
01-C011-SS-[R37C61]-D1-000	01-C011-SS-[R37C61]-D1-000	AFAS
01-C011-SS-[R37C62]-D1-000-DAVG	01-C011-SS-[R37C62]-D1-000-DAVG	AFAS
01-C011-SS-[R37C63]-D1-000-DAVG	01-C011-SS-[R37C63]-D1-000-DAVG	AFAS
01-C011-SS-[R37C64]-D1-000	01-C011-SS-[R37C64]-D1-000	AFAS
01-C011-SS-[R37C65]-D1-000	01-C011-SS-[R37C65]-D1-000	AFAS
01-C011-SS-[R38C62]-D1-000	01-C011-SS-[R38C62]-D1-000	AFAS
01-C011-SS-[R38C63]-D1-000	01-C011-SS-[R38C63]-D1-000	AFAS
01-C011-SS-[R38C64]-D1-000	01-C011-SS-[R38C64]-D1-000	AFAS
01-C011-SS-[R38C65]-D1-000	01-C011-SS-[R38C65]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C011-SS-[R39C62]-D1-000	01-C011-SS-[R39C62]-D1-000	AFAS
01-C011-SS-[R39C63]-D1-000	01-C011-SS-[R39C63]-D1-000	AFAS
01-C011-SS-[R39C64]-D1-000	01-C011-SS-[R39C64]-D1-000	AFAS
01-C011-SS-[R39C65]-D1-000	01-C011-SS-[R39C65]-D1-000	AFAS
01-C011-SS-[R40C63]-D1-000	01-C011-SS-[R40C63]-D1-000	AFAS
01-C011-SS-[R40C64]-D1-000	01-C011-SS-[R40C64]-D1-000	AFAS
01-C011-SS-[R40C65]-D1-000	01-C011-SS-[R40C65]-D1-000	AFAS
01-C011-SS-[R40C66]-D1-000	01-C011-SS-[R40C66]-D1-000	AFAS
01-C011-SS-[R41C63]-D1-000	01-C011-SS-[R41C63]-D1-000	AFAS
01-C011-SS-[R41C64]-D1-000	01-C011-SS-[R41C64]-D1-000	AFAS
01-C011-SS-[R41C65]-D1-000	01-C011-SS-[R41C65]-D1-000	AFAS
01-C011-SS-[R41C66]-D1-000	01-C011-SS-[R41C66]-D1-000	AFAS
01-C011-SS-[R42C64]-D1-000-DAVG	01-C011-SS-[R42C64]-D1-000-DAVG	AFAS
01-C011-SS-[R42C65]-D1-000	01-C011-SS-[R42C65]-D1-000	AFAS
01-C011-SS-[R42C66]-D1-000	01-C011-SS-[R42C66]-D1-000	AFAS
01-C011-SS-[R43C64]-D1-000	01-C011-SS-[R43C64]-D1-000	AFAS
01-C011-SS-[R43C65]-D1-000	01-C011-SS-[R43C65]-D1-000	AFAS
01-C011-SS-[R43C66]-D1-000	01-C011-SS-[R43C66]-D1-000	AFAS
01-C011-SS-[R44C65]-D1-000	01-C011-SS-[R44C65]-D1-000	AFAS
01-C011-SS-[R45C65]-D1-000	01-C011-SS-[R45C65]-D1-000	AFAS
6-SS-402	6-SS-402	6
6-TP-502-S-1	6-TP-502-S-1	6
LR-014	LR-014	LR
LR-015	LR-015	LR
LR-021	LR-021	LR
LR-022-1	LR-022-1	LR
LR-022-2	LR-022-2	LR
LR-023	LR-023	LR
LR-029	LR-029	LR
LR-030	LR-030	LR
LR-031	LR-031	LR
LR-040-DAVG	LR-040-DAVG	LR
LR-041	LR-041	LR
LR-042	LR-042	LR
LR-048	LR-048	LR
LR-049	LR-049	LR
LR-050	LR-050	LR
LR-065	LR-065	LR
LR-066-1	LR-066-1	LR
LR-066-2	LR-066-2	LR
LR-083-DAVG	LR-083-DAVG	LR

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
Commercial Area 3 (0 to <=1foot)		
01-H404-SS[10]D1-005	H404-10	MISC
01-H404-SS[4]D1-005	H404-4	MISC
01-H404-SS[6]D1-005	H404-6	MISC
19-VS-28	19-VS-28	19a
19-VS-34	19-VS-34	MISC
19-VS-36	19-VS-36	MISC
19-VS-40	19-VS-40	MISC
19-VS-41	19-VS-41	MISC
19-VS-46-DAVG	19-VS-46-DAVG	19a
19-VS-48	19-VS-48	MISC
19-VS-54	19-VS-54	MISC
19-VS-62	19-VS-62	19c
38-VS-86	38-VS-86	MISC
38-VS-88	38-VS-88	MISC
APD-TP-501-S-1	APD-TP-501-S-1	26
APF-SS-522	APF-SS-522	APF
APF-SS-523	APF-SS-523	APF
APF-VS-2	APF-VS-2	MISC
APF-VS-4	APF-VS-4	MISC
APG-TP-501-S-1	APG-TP-501-S-1	LR
APH-SS-501	APH-SS-501	26
APH-SS-502	APH-SS-502	26
APH-SS-503-DAVG	APH-SS-503-DAVG	26
APH-SS-504	APH-SS-504	26
APH-SS-506	APH-SS-506	25
LR-037	LR-037	LR
LR-038-DAVG	LR-038-DAVG	LR
LR-038E-DAVG	LR-038E-DAVG	LR
LR-038S	LR-038S	LR
LR-038W	LR-038W	LR
LR-045A	LR-045A	LR
LR-046	LR-046	LR
LR-062E	LR-062E	LR
LR-062N	LR-062N	LR
LR-062S	LR-062S	RR-N
LR-062W	LR-062W	RR-N
LR-063	LR-063	LR
LR-078	LR-078	LR
LR-079	LR-079	LR
LR-081	LR-081	LR

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
LR-093-1	LR-093-1	LR
LR-093-2	LR-093-2	LR
LR-094	LR-094	LR
LR-095-1	LR-095-1	LR
LR-095-2	LR-095-2	LR
LR-108	LR-108	LR
LR-109	LR-109	LR
LR-110	LR-110	LR
LR-111	LR-111	LR
LR-113	LR-113	LR
LR-127	LR-127	LR
LR-128	LR-128	LR
LR-129	LR-129	LR
LR-315	LR-315	LR
LR-38	LR-38	LR
RR-134-DAVG	RR-134-DAVG	LR
RR-135	RR-135	LR
RR-136	RR-136	LR
RR-140-A1	RR-140-A1	LR
RR-140-B1	RR-140-B1	LR
RR-142	RR-142	LR
RR-511-DAVG	RR-511-DAVG	LR
RR-512	RR-512	LR
RR-520-DAVG	RR-520-DAVG	LR
RR-521	RR-521	LR
RR-521-S-2-DAVG	RR-521-S-2-DAVG	LR
RR-522	RR-522	LR
RR-542-A1	RR-542-A1	LR
RR-542-B1	RR-542-B1	LR
RR-543-A1	RR-543-A1	LR
RR-543-B1	RR-543-B1	LR
RR-558	RR-558	LR
RR-558-A1	RR-558-A1	LR
RR-558-B1	RR-558-B1	LR
RR-583	RR-583	RR-N
Commercial Area 4 (0 to <=1foot)		
01-C011-SS-[R43C67]-D1-000	01-C011-SS-[R43C67]-D1-000	AFAS
01-C011-SS-[R44C66]-D1-000	01-C011-SS-[R44C66]-D1-000	AFAS
01-C011-SS-[R44C67]-D1-000	01-C011-SS-[R44C67]-D1-000	AFAS
01-C011-SS-[R44C68]-D1-000	01-C011-SS-[R44C68]-D1-000	AFAS
01-C011-SS-[R45C66]-D1-000	01-C011-SS-[R45C66]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C011-SS-[R45C67]-D1-000	01-C011-SS-[R45C67]-D1-000	AFAS
01-C011-SS-[R45C68]-D1-000	01-C011-SS-[R45C68]-D1-000	AFAS
01-C011-SS-[R45C69]-D1-000	01-C011-SS-[R45C69]-D1-000	AFAS
01-C011-SS-[R45C70]-D1-000	01-C011-SS-[R45C70]-D1-000	AFAS
01-C011-SS-[R46C66]-D1-000	01-C011-SS-[R46C66]-D1-000	AFAS
01-C011-SS-[R46C67]-D1-000	01-C011-SS-[R46C67]-D1-000	AFAS
01-C011-SS-[R46C68]-D1-000	01-C011-SS-[R46C68]-D1-000	AFAS
01-C011-SS-[R46C69]-D1-000	01-C011-SS-[R46C69]-D1-000	AFAS
01-C011-SS-[R46C70]-D1-000	01-C011-SS-[R46C70]-D1-000	AFAS
01-C011-SS-[R46C71]-D1-000	01-C011-SS-[R46C71]-D1-000	AFAS
01-C011-SS-[R47C67]-D1-000	01-C011-SS-[R47C67]-D1-000	AFAS
01-C011-SS-[R47C68]-D1-000	01-C011-SS-[R47C68]-D1-000	AFAS
01-C011-SS-[R47C69]-D1-000	01-C011-SS-[R47C69]-D1-000	AFAS
01-C011-SS-[R47C70]-D1-000	01-C011-SS-[R47C70]-D1-000	AFAS
01-C011-SS-[R48C69]-D1-000	01-C011-SS-[R48C69]-D1-000	AFAS
01-C011-SS-[R48C70]-D1-000	01-C011-SS-[R48C70]-D1-000	AFAS
38-VS-24	38-VS-24	MISC
LR-099-1	LR-099-1	LR
LR-099-2	LR-099-2	LR
LR-116	LR-116	RR-N
LR-116A	LR-116A	LR
LR-131	LR-131	LR
LR-132	LR-132	LR
LR-133	LR-133	LR
LR-133-S-2	LR-133-S-2	LR
LR-134	LR-134	LR
LR-150	LR-150	LR
LR-151	LR-151	LR
LR-152	LR-152	LR
LR-153	LR-153	LR
LR-165	LR-165	LR
LR-166	LR-166	LR
LR-167	LR-167	LR
LR-168	LR-168	LR
LR-178	LR-178	LR
LR-179	LR-179	LR
LR-180	LR-180	LR
LR-194	LR-194	LR
LR181-VS-2	LR181-VS-2	MISC
LR181-VS-3	LR181-VS-3	MISC
LR181-VS-4	LR181-VS-4	MISC

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
LR181-VS-9-DAVG	LR181-VS-9-DAVG	MISC
RR-144	RR-144	LR
RR-145	RR-145	LR
RR-146	RR-146	LR
RR-147	RR-147	LR
RR-148	RR-148	LR
RR-149	RR-149	LR
RR-150	RR-150	LR
RR-151	RR-151	LR
RR-152	RR-152	LR
RR-153	RR-153	LR
RR-504	RR-504	LR
RR-516	RR-516	LR
RR-517-A2	RR-517-A2	LR
RR-517-B2	RR-517-B2	LR
RR-555-A1	RR-555-A1	LR
RR-555-A2	RR-555-A2	LR
RR-555-B1	RR-555-B1	LR
RR-555-DAVG	RR-555-DAVG	LR
Commercial Area 5 (0 to <=1foot)		
01-C012-SS-[R61C69]-D1-000	01-C012-SS-[R61C69]-D1-000	AFAS
01-C012-SS-[R61C70]-D1-000	01-C012-SS-[R61C70]-D1-000	AFAS
01-C012-SS-[R61C71]-D1-000	01-C012-SS-[R61C71]-D1-000	AFAS
01-C012-SS-[R61C72]-D1-000	01-C012-SS-[R61C72]-D1-000	AFAS
01-C012-SS-[R62C67]-D1-000	01-C012-SS-[R62C67]-D1-000	AFAS
01-C012-SS-[R62C68]-D1-000	01-C012-SS-[R62C68]-D1-000	AFAS
01-C012-SS-[R62C69]-D1-000	01-C012-SS-[R62C69]-D1-000	AFAS
01-C012-SS-[R62C70]-D1-000	01-C012-SS-[R62C70]-D1-000	AFAS
01-C012-SS-[R62C71]-D1-000	01-C012-SS-[R62C71]-D1-000	AFAS
01-C012-SS-[R62C72]-D1-000	01-C012-SS-[R62C72]-D1-000	AFAS
01-C012-SS-[R63C67]-D1-000	01-C012-SS-[R63C67]-D1-000	AFAS
01-C012-SS-[R63C68]-D1-000	01-C012-SS-[R63C68]-D1-000	AFAS
01-C012-SS-[R63C69]-D1-000	01-C012-SS-[R63C69]-D1-000	AFAS
01-C012-SS-[R63C70]-D1-000	01-C012-SS-[R63C70]-D1-000	AFAS
01-C012-SS-[R63C71]-D1-000	01-C012-SS-[R63C71]-D1-000	AFAS
01-C012-SS-[R63C72]-D1-000	01-C012-SS-[R63C72]-D1-000	AFAS
01-C012-SS-[R64C67]-D1-000	01-C012-SS-[R64C67]-D1-000	AFAS
01-C012-SS-[R64C68]-D1-000	01-C012-SS-[R64C68]-D1-000	AFAS
01-C012-SS-[R64C69]-D1-000	01-C012-SS-[R64C69]-D1-000	AFAS
01-C012-SS-[R64C70]-D1-000	01-C012-SS-[R64C70]-D1-000	AFAS
01-C012-SS-[R64C71]-D1-000	01-C012-SS-[R64C71]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C012-SS-[R64C72]-D1-000	01-C012-SS-[R64C72]-D1-000	AFAS
01-C012-SS-[R65C67]-D1-000	01-C012-SS-[R65C67]-D1-000	AFAS
01-C012-SS-[R65C68]-D1-000	01-C012-SS-[R65C68]-D1-000	AFAS
01-C012-SS-[R65C69]-D1-000	01-C012-SS-[R65C69]-D1-000	AFAS
01-C012-SS-[R65C70]-D1-000	01-C012-SS-[R65C70]-D1-000	AFAS
01-C012-SS-[R65C71]-D1-000	01-C012-SS-[R65C71]-D1-000	AFAS
01-C012-SS-[R65C72]-D1-000	01-C012-SS-[R65C72]-D1-000	AFAS
01-C012-SS-[R66C67]-D1-000	01-C012-SS-[R66C67]-D1-000	AFAS
01-C012-SS-[R66C68]-D1-000	01-C012-SS-[R66C68]-D1-000	AFAS
01-C012-SS-[R66C69]-D1-000	01-C012-SS-[R66C69]-D1-000	AFAS
01-C012-SS-[R66C70]-D1-000	01-C012-SS-[R66C70]-D1-000	AFAS
01-C012-SS-[R66C71]-D1-000	01-C012-SS-[R66C71]-D1-000	AFAS
01-C012-SS-[R66C72]-D1-000	01-C012-SS-[R66C72]-D1-000	AFAS
01-C012-SS-[R67C67]-D1-000	01-C012-SS-[R67C67]-D1-000	AFAS
01-C012-SS-[R67C68]-D1-000	01-C012-SS-[R67C68]-D1-000	AFAS
01-C012-SS-[R67C69]-D1-000	01-C012-SS-[R67C69]-D1-000	AFAS
01-C012-SS-[R67C70]-D1-000	01-C012-SS-[R67C70]-D1-000	AFAS
01-C012-SS-[R67C71]-D1-000	01-C012-SS-[R67C71]-D1-000	AFAS
01-C012-SS-[R67C72]-D1-000	01-C012-SS-[R67C72]-D1-000	AFAS
01-C012-SS-[R68C67]-D1-000	01-C012-SS-[R68C67]-D1-000	AFAS
01-C012-SS-[R68C68]-D1-000	01-C012-SS-[R68C68]-D1-000	AFAS
01-C012-SS-[R68C69]-D1-000	01-C012-SS-[R68C69]-D1-000	AFAS
01-C012-SS-[R68C70]-D1-000	01-C012-SS-[R68C70]-D1-000	AFAS
01-C012-SS-[R68C71]-D1-000	01-C012-SS-[R68C71]-D1-000	AFAS
01-C012-SS-[R68C72]-D1-000	01-C012-SS-[R68C72]-D1-000	AFAS
01-C012-SS-[R69C67]-D1-000	01-C012-SS-[R69C67]-D1-000	AFAS
01-C012-SS-[R69C68]-D1-000	01-C012-SS-[R69C68]-D1-000	AFAS
01-C012-SS-[R69C69]-D1-000	01-C012-SS-[R69C69]-D1-000	AFAS
01-C012-SS-[R69C70]-D1-000	01-C012-SS-[R69C70]-D1-000	AFAS
01-C012-SS-[R69C71]-D1-000	01-C012-SS-[R69C71]-D1-000	AFAS
01-C012-SS-[R69C72]-D1-000-DAVG	01-C012-SS-[R69C72]-D1-000-DAVG	AFAS
01-C012-SS-[R70C67]-D1-000	01-C012-SS-[R70C67]-D1-000	AFAS
01-C012-SS-[R70C68]-D1-000	01-C012-SS-[R70C68]-D1-000	AFAS
01-C012-SS-[R70C69]-D1-000	01-C012-SS-[R70C69]-D1-000	AFAS
01-C012-SS-[R70C70]-D1-000	01-C012-SS-[R70C70]-D1-000	AFAS
01-C012-SS-[R70C71]-D1-000	01-C012-SS-[R70C71]-D1-000	AFAS
01-C012-SS-[R70C72]-D1-000	01-C012-SS-[R70C72]-D1-000	AFAS
01-C012-SS-[R71C67]-D1-000	01-C012-SS-[R71C67]-D1-000	AFAS
01-C012-SS-[R71C68]-D1-000	01-C012-SS-[R71C68]-D1-000	AFAS
01-C012-SS-[R71C69]-D1-000	01-C012-SS-[R71C69]-D1-000	AFAS
01-C012-SS-[R71C70]-D1-000	01-C012-SS-[R71C70]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C012-SS-[R71C71]-D1-000	01-C012-SS-[R71C71]-D1-000	AFAS
01-C012-SS-[R71C72]-D1-000	01-C012-SS-[R71C72]-D1-000	AFAS
01-C012-SS-[R72C67]-D1-000	01-C012-SS-[R72C67]-D1-000	AFAS
01-C012-SS-[R72C68]-D1-000	01-C012-SS-[R72C68]-D1-000	AFAS
01-C012-SS-[R72C69]-D1-000	01-C012-SS-[R72C69]-D1-000	AFAS
01-C012-SS-[R72C70]-D1-000	01-C012-SS-[R72C70]-D1-000	AFAS
01-C012-SS-[R72C71]-D1-000-DAVG	01-C012-SS-[R72C71]-D1-000-DAVG	AFAS
01-C012-SS-[R72C72]-D1-000	01-C012-SS-[R72C72]-D1-000	AFAS
01-C012-SS-[R73C67]-D1-000	01-C012-SS-[R73C67]-D1-000	AFAS
01-C012-SS-[R73C68]-D1-000	01-C012-SS-[R73C68]-D1-000	AFAS
01-C012-SS-[R73C69]-D1-000	01-C012-SS-[R73C69]-D1-000	AFAS
01-C012-SS-[R73C70]-D1-000	01-C012-SS-[R73C70]-D1-000	AFAS
01-C012-SS-[R73C71]-D1-000	01-C012-SS-[R73C71]-D1-000	AFAS
01-C012-SS-[R73C72]-D1-000	01-C012-SS-[R73C72]-D1-000	AFAS
01-C012-SS-[R74C67]-D1-000-DAVG	01-C012-SS-[R74C67]-D1-000-DAVG	AFAS
01-C012-SS-[R74C68]-D1-000	01-C012-SS-[R74C68]-D1-000	AFAS
01-C012-SS-[R74C69]-D1-000-DAVG	01-C012-SS-[R74C69]-D1-000-DAVG	AFAS
01-C012-SS-[R74C70]-D1-000	01-C012-SS-[R74C70]-D1-000	AFAS
01-C012-SS-[R74C71]-D1-000	01-C012-SS-[R74C71]-D1-000	AFAS
01-C012-SS-[R74C72]-D1-000	01-C012-SS-[R74C72]-D1-000	AFAS
01-C012-SS-[R75C67]-D1-000	01-C012-SS-[R75C67]-D1-000	AFAS
01-C012-SS-[R75C68]-D1-000	01-C012-SS-[R75C68]-D1-000	AFAS
01-C012-SS-[R75C69]-D1-000	01-C012-SS-[R75C69]-D1-000	AFAS
01-C012-SS-[R75C70]-D1-000	01-C012-SS-[R75C70]-D1-000	AFAS
01-C012-SS-[R75C71]-D1-000	01-C012-SS-[R75C71]-D1-000	AFAS
01-C012-SS-[R75C72]-D1-000	01-C012-SS-[R75C72]-D1-000	AFAS
01-C012-SS-[R76C67]-D1-000	01-C012-SS-[R76C67]-D1-000	AFAS
01-C012-SS-[R76C68]-D1-000	01-C012-SS-[R76C68]-D1-000	AFAS
01-C012-SS-[R76C69]-D1-000	01-C012-SS-[R76C69]-D1-000	AFAS
01-C012-SS-[R76C70]-D1-000	01-C012-SS-[R76C70]-D1-000	AFAS
01-C012-SS-[R76C71]-D1-000	01-C012-SS-[R76C71]-D1-000	AFAS
01-C012-SS-[R76C72]-D1-000	01-C012-SS-[R76C72]-D1-000	AFAS
01-C012-SS-[R76C73]-D1-000	01-C012-SS-[R76C73]-D1-000	AFAS
01-C012-SS-[R76C74]-D1-000	01-C012-SS-[R76C74]-D1-000	AFAS
01-C012-SS-[R77C67]-D1-000	01-C012-SS-[R77C67]-D1-000	AFAS
01-C012-SS-[R77C68]-D1-000	01-C012-SS-[R77C68]-D1-000	AFAS
01-C012-SS-[R77C69]-D1-000	01-C012-SS-[R77C69]-D1-000	AFAS
01-C012-SS-[R77C70]-D1-000	01-C012-SS-[R77C70]-D1-000	AFAS
01-C012-SS-[R77C71]-D1-000	01-C012-SS-[R77C71]-D1-000	AFAS
01-C012-SS-[R77C72]-D1-000	01-C012-SS-[R77C72]-D1-000	AFAS
01-C012-SS-[R77C73]-D1-000-DAVG	01-C012-SS-[R77C73]-D1-000-DAVG	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C012-SS-[R77C74]-D1-000	01-C012-SS-[R77C74]-D1-000	AFAS
01-C012-SS-[R78C67]-D1-000	01-C012-SS-[R78C67]-D1-000	AFAS
01-C012-SS-[R78C68]-D1-000	01-C012-SS-[R78C68]-D1-000	AFAS
01-C012-SS-[R78C69]-D1-000	01-C012-SS-[R78C69]-D1-000	AFAS
01-C012-SS-[R78C70]-D1-000	01-C012-SS-[R78C70]-D1-000	AFAS
01-C012-SS-[R78C71]-D1-000	01-C012-SS-[R78C71]-D1-000	AFAS
01-C012-SS-[R78C72]-D1-000	01-C012-SS-[R78C72]-D1-000	AFAS
01-C012-SS-[R78C73]-D1-000	01-C012-SS-[R78C73]-D1-000	AFAS
01-C012-SS-[R78C74]-D1-000	01-C012-SS-[R78C74]-D1-000	AFAS
01-C012-SS-[R79C67]-D1-000	01-C012-SS-[R79C67]-D1-000	AFAS
01-C012-SS-[R79C68]-D1-000	01-C012-SS-[R79C68]-D1-000	AFAS
01-C012-SS-[R79C69]-D1-000	01-C012-SS-[R79C69]-D1-000	AFAS
01-C012-SS-[R79C70]-D1-000	01-C012-SS-[R79C70]-D1-000	AFAS
01-C012-SS-[R79C71]-D1-000	01-C012-SS-[R79C71]-D1-000	AFAS
01-C012-SS-[R79C72]-D1-000	01-C012-SS-[R79C72]-D1-000	AFAS
01-C012-SS-[R79C73]-D1-000	01-C012-SS-[R79C73]-D1-000	AFAS
01-C012-SS-[R79C74]-D1-000-DAVG	01-C012-SS-[R79C74]-D1-000-DAVG	AFAS
01-C012-SS-[R80C67]-D1-000	01-C012-SS-[R80C67]-D1-000	AFAS
01-C012-SS-[R80C68]-D1-000	01-C012-SS-[R80C68]-D1-000	AFAS
01-C012-SS-[R80C69]-D1-000	01-C012-SS-[R80C69]-D1-000	AFAS
01-C012-SS-[R80C70]-D1-000	01-C012-SS-[R80C70]-D1-000	AFAS
01-C012-SS-[R80C71]-D1-000	01-C012-SS-[R80C71]-D1-000	AFAS
01-C012-SS-[R80C72]-D1-000	01-C012-SS-[R80C72]-D1-000	AFAS
01-C012-SS-[R80C73]-D1-000	01-C012-SS-[R80C73]-D1-000	AFAS
01-C012-SS-[R81C67]-D1-000	01-C012-SS-[R81C67]-D1-000	AFAS
01-C012-SS-[R81C68]-D1-000	01-C012-SS-[R81C68]-D1-000	AFAS
01-C012-SS-[R81C69]-D1-000	01-C012-SS-[R81C69]-D1-000	AFAS
01-C012-SS-[R81C70]-D1-000	01-C012-SS-[R81C70]-D1-000	AFAS
01-C012-SS-[R81C71]-D1-000	01-C012-SS-[R81C71]-D1-000	AFAS
01-C012-SS-[R81C72]-D1-000	01-C012-SS-[R81C72]-D1-000	AFAS
01-C012-SS-[R82C67]-D1-000	01-C012-SS-[R82C67]-D1-000	AFAS
01-C012-SS-[R82C68]-D1-000	01-C012-SS-[R82C68]-D1-000	AFAS
01-C012-SS-[R82C69]-D1-000	01-C012-SS-[R82C69]-D1-000	AFAS
01-C012-SS-[R82C70]-D1-000	01-C012-SS-[R82C70]-D1-000	AFAS
01-C012-SS-[R83C67]-D1-000	01-C012-SS-[R83C67]-D1-000	AFAS
01-C012-SS-[R83C68]-D1-000	01-C012-SS-[R83C68]-D1-000	AFAS
01-C012-SS-[R83C69]-D1-000	01-C012-SS-[R83C69]-D1-000	AFAS
01-C012-SS-[R84C67]-D1-000	01-C012-SS-[R84C67]-D1-000	AFAS
01-C013-SS-[R76C75]-D1-000	01-C013-SS-[R76C75]-D1-000	AFAS
01-C013-SS-[R76C76]-D1-000	01-C013-SS-[R76C76]-D1-000	AFAS
01-C013-SS-[R76C77]-D1-000	01-C013-SS-[R76C77]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C013-SS-[R76C78]-D1-000	01-C013-SS-[R76C78]-D1-000	AFAS
01-C013-SS-[R77C75]-D1-000	01-C013-SS-[R77C75]-D1-000	AFAS
01-C013-SS-[R77C76]-D1-000	01-C013-SS-[R77C76]-D1-000	AFAS
01-C013-SS-[R77C77]-D1-000	01-C013-SS-[R77C77]-D1-000	AFAS
01-C013-SS-[R78C75]-D1-000	01-C013-SS-[R78C75]-D1-000	AFAS
01-C013-SS-[R78C76]-D1-000	01-C013-SS-[R78C76]-D1-000	AFAS
12-1-B-501A-S-1	12-1-B-501A-S-1	12
12-6-B-501-S-1	12-6-B-501-S-1	12
12-6-TP-501-S-1	12-6-TP-501-S-1	12
12-6-TP-502-S-1	12-6-TP-502-S-1	12
12-7-B-501-S-1	12-7-B-501-S-1	12
12-7-TP-501-S-1-DAVG	12-7-TP-501-S-1-DAVG	12
12-SS-402	12-SS-402	12
12-SS-406	12-SS-406	12
12-SS-407	12-SS-407	12
12-SS-408	12-SS-408	12
12-SS-409	12-SS-409	12
12-TP-504-S-1-DAVG	12-TP-504-S-1-DAVG	12
12-TP-505-S-1-DAVG	12-TP-505-S-1-DAVG	12
12-VS-10	12-VS-10	MISC
LR-145	LR-145	LR
LR-146	LR-146	LR
LR-157-DAVG	LR-157-DAVG	LR
LR-157-S-2	LR-157-S-2	LR
LR-158	LR-158	LR
LR-159	LR-159	LR
LR-160	LR-160	LR
LR-170	LR-170	LR
LR-171	LR-171	LR
LR-172	LR-172	LR
LR-173-DAVG	LR-173-DAVG	LR
LR-174	LR-174	LR
LR-184	LR-184	LR
LR-185	LR-185	LR
LR-186	LR-186	LR
LR-187	LR-187	LR
LR-188	LR-188	LR
LR-198	LR-198	LR
LR-199	LR-199	LR
LR-200	LR-200	LR
LR-201	LR-201	LR

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
LR-202	LR-202	LR
LR-215	LR-215	LR
LR-216	LR-216	LR
LR-217	LR-217	LR
LR-218	LR-218	LR
LR-219	LR-219	LR
LR-220	LR-220	LR
LR-233	LR-233	LR
LR-234	LR-234	LR
LR-235	LR-235	LR
LR-236	LR-236	LR
LR-237-DAVG	LR-237-DAVG	LR
LR-250	LR-250	LR
LR-251	LR-251	LR
LR-252	LR-252	LR
LR-253	LR-253	LR
LR-262	LR-262	LR
LR-263	LR-263	LR
LR-265	LR-265	LR
LR-266	LR-266	LR
LR-267	LR-267	LR
RR-102	RR-102	RR-N
RR-502	RR-502	LR
RR-544-A2	RR-544-A2	RR-N
RR-544-B1	RR-544-B1	LR
RR-544-B2	RR-544-B2	LR
RR-545-A2	RR-545-A2	RR-N
RR-545-B1	RR-545-B1	LR
RR-545-B2	RR-545-B2	LR
Commercial Area 6 (0 to <=1foot)		
18R-458	18R-458	18-REF
18R-464E	18R-464E	18-REF
18R-465	18R-465	18-REF
18R-466	18R-466	18-REF
LR-210	LR-210	LR
LR-211	LR-211	LR
LR-212	LR-212	LR
LR-213	LR-213	LR
LR-225-DAVG	LR-225-DAVG	LR
LR-225A	LR-225A	LR
LR-226	LR-226	LR

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
LR-227	LR-227	LR
LR-228	LR-228	LR
LR-229	LR-229	LR
LR-230	LR-230	LR
LR-241	LR-241	LR
LR-242	LR-242	LR
LR-243	LR-243	LR
LR-244	LR-244	LR
LR-254	LR-254	LR
LR-254A	LR-254A	LR
LR-255	LR-255	LR
LR-264	LR-264	LR
RR-538-A	RR-538-A	RR-N
RR-538-B	RR-538-B	LR
RR-538-C	RR-538-C	LR
Commercial Area 7 (0 to <=1foot)		
11-B-501-S-1	11-B-501-S-1	11
11-TP-501-S-1	11-TP-501-S-1	11
11-TP-502-S-1	11-TP-502-S-1	11
11-TP-503-S-1-DAVG	11-TP-503-S-1-DAVG	11
11-TP-504-S-1	11-TP-504-S-1	11
18-SS-501-DAVG	18-SS-501-DAVG	18 North
18-SS-502	18-SS-502	18 North
18-SS-503	18-SS-503	18 North
18-SS-510	18-SS-510	18 North
18-SS-511	18-SS-511	18 North
18-SS-529	18-SS-529	18 North
18-SS-530	18-SS-530	18 North
18-SS-531	18-SS-531	18 North
18-SS-532	18-SS-532	18 North
18-SS-533	18-SS-533	18
18-SS-534	18-SS-534	18
18-SS-536	18-SS-536	18 North
18-SS-537	18-SS-537	18 North
18-SS-538	18-SS-538	18 North
18-SS-546	18-SS-546	18
18-SS-547	18-SS-547	18
18-SS-548	18-SS-548	18
18-SS-551	18-SS-551	18
18-SS-560-DAVG	18-SS-560-DAVG	18
18-SS-561	18-SS-561	18

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
18-SS-575	18-SS-575	18
18-SS-576	18-SS-576	18
18-SS-595	18-SS-595	18
18-SS-630	18-SS-630	18
18-SS-636	18-SS-636	18 North
18-SS-664-DAVG	18-SS-664-DAVG	18 North
18-SS-665	18-SS-665	18 North
18-SS-667	18-SS-667	18
18-SS-671	18-SS-671	18
18-SS-672	18-SS-672	18
18-SS-673	18-SS-673	18
18-SS-674	18-SS-674	18
18-SS-675	18-SS-675	18
18-SS-676	18-SS-676	18
18-SS-677	18-SS-677	18
18-SS-678	18-SS-678	18
18-SS-679	18-SS-679	18
18-SS-680	18-SS-680	18
18-SS-681	18-SS-681	18
18-SS-682	18-SS-682	18
18-SS-691	18-SS-691	18
18-SS-802	18-SS-802	18 North
18-SS-803	18-SS-803	18
18-SS-804	18-SS-804	18
18-SS-806	18-SS-806	18
18-SS-807	18-SS-807	18
18-SS-808	18-SS-808	18 North
18-SS-809	18-SS-809	18 North
18-SS-810	18-SS-810	18 North
18-SS-811	18-SS-811	18 North
18-SS-812	18-SS-812	18 North
18-SS-813	18-SS-813	18 North
18-SS-814	18-SS-814	18 North
18-SS-815-DAVG	18-SS-815-DAVG	18
18-SS-816	18-SS-816	18
18-SS-817	18-SS-817	18
18-SS-819	18-SS-819	18
18-SS-820	18-SS-820	18
18-SS-821	18-SS-821	18 North
18-SS-822	18-SS-822	18 North
18-SS-823	18-SS-823	18 North

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
18-SS-824	18-SS-824	18 North
18-SS-825	18-SS-825	18 North
18-SS-826	18-SS-826	18 North
18-SS-827	18-SS-827	18 North
18-SS-828	18-SS-828	18 North
18-SS-829	18-SS-829	18
18-SS-831	18-SS-831	18 North
18-SS-832	18-SS-832	18 North
18-SS-833	18-SS-833	18 North
18-SS-834	18-SS-834	18 North
18-SS-GS-05	18-SS-GS-05	18
18-SS-GS-06	18-SS-GS-06	18
18-SS-GS-11	18-SS-GS-11	18
18-SS-GS-12	18-SS-GS-12	18
18-SS-GS-14	18-SS-GS-14	18
18-SS-GS-18	18-SS-GS-18	18
18-TP-504-S-1	18-TP-504-S-1	18 North
18-TP-517-S-1	18-TP-517-S-1	18
18-TP-520-S-1	18-TP-520-S-1	18
18-TP-531-S-1-DAVG	18-TP-531-S-1-DAVG	18
18-TP-535-S-1-DAVG	18-TP-535-S-1-DAVG	18 North
18-TP-536-S-1	18-TP-536-S-1	18 North
18-TP-538-S-1	18-TP-538-S-1	18
18-TP-539-S-1	18-TP-539-S-1	18
18-TP-541-S-1	18-TP-541-S-1	18
18-TP-GS-17-S-1	18-TP-GS-17-S-1	18
18-TP-GS-23-S-1	18-TP-GS-23-S-1	18
18-TR-104W,S-1	18-TR-104W,S-1	18
18-TR-107N,S-1	18-TR-107N,S-1	18
18-TR-117E,S-3	18-TR-117E,S-3	18
18R-01-DAVG	18R-01-DAVG	18-REF
18R-04	18R-04	18-REF
18R-05	18R-05	18-REF
18R-08	18R-08	18-REF
18R-102	18R-102	18-REF
18R-13-DAVG	18R-13-DAVG	18-REF
18R-17	18R-17	18-REF
18R-24	18R-24	18-REF
18R-401	18R-401	18-REF
18R-406	18R-406	18-REF
18R-406-S-2	18R-406-S-2	18-REF

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
18R-410	18R-410	18-REF
18R-411	18R-411	18-REF
18R-417	18R-417	18-REF
18R-421	18R-421	18-REF
18R-429	18R-429	18-REF
18R-430	18R-430	18-REF
18R-431	18R-431	18-REF
18R-433	18R-433	18-REF
18R-434	18R-434	18-REF
18R-435	18R-435	18-REF
18R-436	18R-436	18-REF
18R-437	18R-437	18-REF
18R-440	18R-440	18-REF
18R-441	18R-441	18-REF
18R-444-DAVG	18R-444-DAVG	18-REF
18R-445	18R-445	18-REF
18R-445-S-2	18R-445-S-2	18-REF
18R-446	18R-446	18-REF
18R-447	18R-447	18-REF
18R-455	18R-455	18-REF
18R-456	18R-456	18-REF
18R-461	18R-461	18-REF
18R-461-S-2	18R-461-S-2	18-REF
18R-462	18R-462	18-REF
LR-034	LR-034	LR
LR-044	LR-044	LR
LR-169	LR-169	LR
LR-196	LR-196	LR
LR-208	LR-208	LR
LR-209-DAVG	LR-209-DAVG	LR
Commercial Area 8 (0 to <=1foot)		
18-SS-550	18-SS-550	18
APA-SS-401-DAVG	APA-SS-401-DAVG	LR
APB-TP-502-S-1	APB-TP-502-S-1	LR
LR-003W	LR-003W	LR
LR-008W	LR-008W	LR
LR-016	LR-016	LR
LR-032	LR-032	LR
LR-043	LR-043	LR
LR-059-1	LR-059-1	LR
LR-059-2	LR-059-2	LR

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
LR-059-S-2	LR-059-S-2	LR
LR-074	LR-074	LR
LR-105-DAVG	LR-105-DAVG	LR
LR-138	LR-138	LR
LR-154	LR-154	LR
LR-17N	LR-17N	LR
LR-182	LR-182	LR
UC-10	UC-10	LR
UC-11	UC-11	LR
UC-12	UC-12	LR
UC-13	UC-13	LR
UC-14	UC-14	LR
UC-15	UC-15	LR
UC-16	UC-16	LR
UC-2	UC-2	LR
UC-5	UC-5	LR
UC-6	UC-6	LR
UC-7	UC-7	LR
UC-8	UC-8	LR
UC-9	UC-9	LR
Commercial Area 9 (0 to <=1foot)		
01-C012-SS-[R61C73]-D1-000	01-C012-SS-[R61C73]-D1-000	AFAS
01-C012-SS-[R61C74]-D1-000	01-C012-SS-[R61C74]-D1-000	AFAS
01-C012-SS-[R62C73]-D1-000	01-C012-SS-[R62C73]-D1-000	AFAS
01-C012-SS-[R62C74]-D1-000	01-C012-SS-[R62C74]-D1-000	AFAS
01-C012-SS-[R63C73]-D1-000	01-C012-SS-[R63C73]-D1-000	AFAS
01-C012-SS-[R63C74]-D1-000-DAVG	01-C012-SS-[R63C74]-D1-000-DAVG	AFAS
01-C012-SS-[R64C73]-D1-000	01-C012-SS-[R64C73]-D1-000	AFAS
01-C012-SS-[R64C74]-D1-000	01-C012-SS-[R64C74]-D1-000	AFAS
01-C012-SS-[R65C73]-D1-000	01-C012-SS-[R65C73]-D1-000	AFAS
01-C012-SS-[R65C74]-D1-000	01-C012-SS-[R65C74]-D1-000	AFAS
01-C012-SS-[R66C73]-D1-000	01-C012-SS-[R66C73]-D1-000	AFAS
01-C012-SS-[R66C74]-D1-000	01-C012-SS-[R66C74]-D1-000	AFAS
01-C012-SS-[R67C73]-D1-000	01-C012-SS-[R67C73]-D1-000	AFAS
01-C012-SS-[R67C74]-D1-000	01-C012-SS-[R67C74]-D1-000	AFAS
01-C012-SS-[R68C73]-D1-000	01-C012-SS-[R68C73]-D1-000	AFAS
01-C012-SS-[R68C74]-D1-000	01-C012-SS-[R68C74]-D1-000	AFAS
01-C012-SS-[R69C73]-D1-000	01-C012-SS-[R69C73]-D1-000	AFAS
01-C012-SS-[R69C74]-D1-000	01-C012-SS-[R69C74]-D1-000	AFAS
01-C012-SS-[R70C73]-D1-000	01-C012-SS-[R70C73]-D1-000	AFAS
01-C012-SS-[R70C74]-D1-000	01-C012-SS-[R70C74]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C012-SS-[R71C73]-D1-000	01-C012-SS-[R71C73]-D1-000	AFAS
01-C012-SS-[R71C74]-D1-000	01-C012-SS-[R71C74]-D1-000	AFAS
01-C012-SS-[R72C73]-D1-000	01-C012-SS-[R72C73]-D1-000	AFAS
01-C012-SS-[R72C74]-D1-000-DAVG	01-C012-SS-[R72C74]-D1-000-DAVG	AFAS
01-C012-SS-[R73C73]-D1-000	01-C012-SS-[R73C73]-D1-000	AFAS
01-C012-SS-[R73C74]-D1-000	01-C012-SS-[R73C74]-D1-000	AFAS
01-C012-SS-[R74C73]-D1-000	01-C012-SS-[R74C73]-D1-000	AFAS
01-C012-SS-[R74C74]-D1-000	01-C012-SS-[R74C74]-D1-000	AFAS
01-C012-SS-[R75C73]-D1-000	01-C012-SS-[R75C73]-D1-000	AFAS
01-C012-SS-[R75C74]-D1-000	01-C012-SS-[R75C74]-D1-000	AFAS
01-C013-SS-[R61C75]-D1-000	01-C013-SS-[R61C75]-D1-000	AFAS
01-C013-SS-[R61C76]-D1-000	01-C013-SS-[R61C76]-D1-000	AFAS
01-C013-SS-[R61C77]-D1-000	01-C013-SS-[R61C77]-D1-000	AFAS
01-C013-SS-[R61C79]-D1-000	01-C013-SS-[R61C79]-D1-000	AFAS
01-C013-SS-[R61C80]-D1-000	01-C013-SS-[R61C80]-D1-000	AFAS
01-C013-SS-[R61C81]-D1-000	01-C013-SS-[R61C81]-D1-000	AFAS
01-C013-SS-[R61C82]-D1-000	01-C013-SS-[R61C82]-D1-000	AFAS
01-C013-SS-[R62C75]-D1-000	01-C013-SS-[R62C75]-D1-000	AFAS
01-C013-SS-[R62C76]-D1-000-DAVG	01-C013-SS-[R62C76]-D1-000-DAVG	AFAS
01-C013-SS-[R62C77]-D1-000	01-C013-SS-[R62C77]-D1-000	AFAS
01-C013-SS-[R62C78]-D1-000	01-C013-SS-[R62C78]-D1-000	AFAS
01-C013-SS-[R62C79]-D1-000	01-C013-SS-[R62C79]-D1-000	AFAS
01-C013-SS-[R62C81]-D1-000	01-C013-SS-[R62C81]-D1-000	AFAS
01-C013-SS-[R62C82]-D1-000	01-C013-SS-[R62C82]-D1-000	AFAS
01-C013-SS-[R62C83]-D1-000	01-C013-SS-[R62C83]-D1-000	AFAS
01-C013-SS-[R62C84]-D1-000	01-C013-SS-[R62C84]-D1-000	AFAS
01-C013-SS-[R63C75]-D1-000	01-C013-SS-[R63C75]-D1-000	AFAS
01-C013-SS-[R63C76]-D1-000	01-C013-SS-[R63C76]-D1-000	AFAS
01-C013-SS-[R63C77]-D1-000	01-C013-SS-[R63C77]-D1-000	AFAS
01-C013-SS-[R63C78]-D1-000	01-C013-SS-[R63C78]-D1-000	AFAS
01-C013-SS-[R63C79]-D1-000	01-C013-SS-[R63C79]-D1-000	AFAS
01-C013-SS-[R63C80]-D1-000	01-C013-SS-[R63C80]-D1-000	AFAS
01-C013-SS-[R63C81]-D1-000	01-C013-SS-[R63C81]-D1-000	AFAS
01-C013-SS-[R63C83]-D1-000	01-C013-SS-[R63C83]-D1-000	AFAS
01-C013-SS-[R63C84]-D1-000	01-C013-SS-[R63C84]-D1-000	AFAS
01-C013-SS-[R63C85]-D1-000	01-C013-SS-[R63C85]-D1-000	AFAS
01-C013-SS-[R63C86]-D1-000-DAVG	01-C013-SS-[R63C86]-D1-000-DAVG	AFAS
01-C013-SS-[R64C75]-D1-000	01-C013-SS-[R64C75]-D1-000	AFAS
01-C013-SS-[R64C76]-D1-000	01-C013-SS-[R64C76]-D1-000	AFAS
01-C013-SS-[R64C77]-D1-000	01-C013-SS-[R64C77]-D1-000	AFAS
01-C013-SS-[R64C78]-D1-000	01-C013-SS-[R64C78]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C013-SS-[R64C79]-D1-000	01-C013-SS-[R64C79]-D1-000	AFAS
01-C013-SS-[R64C80]-D1-000	01-C013-SS-[R64C80]-D1-000	AFAS
01-C013-SS-[R64C81]-D1-000	01-C013-SS-[R64C81]-D1-000	AFAS
01-C013-SS-[R64C82]-D1-000	01-C013-SS-[R64C82]-D1-000	AFAS
01-C013-SS-[R64C83]-D1-000	01-C013-SS-[R64C83]-D1-000	AFAS
01-C013-SS-[R64C84]-D1-000	01-C013-SS-[R64C84]-D1-000	AFAS
01-C013-SS-[R64C86]-D1-000	01-C013-SS-[R64C86]-D1-000	AFAS
01-C013-SS-[R64C87]-D1-000-DAVG	01-C013-SS-[R64C87]-D1-000-DAVG	AFAS
01-C013-SS-[R64C88]-D1-000	01-C013-SS-[R64C88]-D1-000	AFAS
01-C013-SS-[R65C75]-D1-000	01-C013-SS-[R65C75]-D1-000	AFAS
01-C013-SS-[R65C76]-D1-000	01-C013-SS-[R65C76]-D1-000	AFAS
01-C013-SS-[R65C77]-D1-000	01-C013-SS-[R65C77]-D1-000	AFAS
01-C013-SS-[R65C78]-D1-000	01-C013-SS-[R65C78]-D1-000	AFAS
01-C013-SS-[R65C79]-D1-000	01-C013-SS-[R65C79]-D1-000	AFAS
01-C013-SS-[R65C80]-D1-000	01-C013-SS-[R65C80]-D1-000	AFAS
01-C013-SS-[R65C81]-D1-000-DAVG	01-C013-SS-[R65C81]-D1-000-DAVG	AFAS
01-C013-SS-[R65C82]-D1-000	01-C013-SS-[R65C82]-D1-000	AFAS
01-C013-SS-[R65C83]-D1-000	01-C013-SS-[R65C83]-D1-000	AFAS
01-C013-SS-[R65C84]-D1-000	01-C013-SS-[R65C84]-D1-000	AFAS
01-C013-SS-[R65C85]-D1-000	01-C013-SS-[R65C85]-D1-000	AFAS
01-C013-SS-[R65C86]-D1-000	01-C013-SS-[R65C86]-D1-000	AFAS
01-C013-SS-[R65C88]-D1-000	01-C013-SS-[R65C88]-D1-000	AFAS
01-C013-SS-[R65C89]-D1-000-DAVG	01-C013-SS-[R65C89]-D1-000-DAVG	AFAS
01-C013-SS-[R66C75]-D1-000	01-C013-SS-[R66C75]-D1-000	AFAS
01-C013-SS-[R66C76]-D1-000	01-C013-SS-[R66C76]-D1-000	AFAS
01-C013-SS-[R66C77]-D1-000	01-C013-SS-[R66C77]-D1-000	AFAS
01-C013-SS-[R66C78]-D1-000	01-C013-SS-[R66C78]-D1-000	AFAS
01-C013-SS-[R66C79]-D1-000	01-C013-SS-[R66C79]-D1-000	AFAS
01-C013-SS-[R66C80]-D1-000	01-C013-SS-[R66C80]-D1-000	AFAS
01-C013-SS-[R66C81]-D1-000	01-C013-SS-[R66C81]-D1-000	AFAS
01-C013-SS-[R66C82]-D1-000	01-C013-SS-[R66C82]-D1-000	AFAS
01-C013-SS-[R66C83]-D1-000	01-C013-SS-[R66C83]-D1-000	AFAS
01-C013-SS-[R66C84]-D1-000	01-C013-SS-[R66C84]-D1-000	AFAS
01-C013-SS-[R66C85]-D1-000	01-C013-SS-[R66C85]-D1-000	AFAS
01-C013-SS-[R66C86]-D1-000	01-C013-SS-[R66C86]-D1-000	AFAS
01-C013-SS-[R66C87]-D1-000	01-C013-SS-[R66C87]-D1-000	AFAS
01-C013-SS-[R66C88]-D1-000	01-C013-SS-[R66C88]-D1-000	AFAS
01-C013-SS-[R66C89]-D1-000-DAVG	01-C013-SS-[R66C89]-D1-000-DAVG	AFAS
01-C013-SS-[R67C75]-D1-000	01-C013-SS-[R67C75]-D1-000	AFAS
01-C013-SS-[R67C76]-D1-000	01-C013-SS-[R67C76]-D1-000	AFAS
01-C013-SS-[R67C77]-D1-000	01-C013-SS-[R67C77]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C013-SS-[R67C78]-D1-000	01-C013-SS-[R67C78]-D1-000	AFAS
01-C013-SS-[R67C79]-D1-000	01-C013-SS-[R67C79]-D1-000	AFAS
01-C013-SS-[R67C80]-D1-000	01-C013-SS-[R67C80]-D1-000	AFAS
01-C013-SS-[R67C81]-D1-000	01-C013-SS-[R67C81]-D1-000	AFAS
01-C013-SS-[R67C82]-D1-000	01-C013-SS-[R67C82]-D1-000	AFAS
01-C013-SS-[R67C83]-D1-000	01-C013-SS-[R67C83]-D1-000	AFAS
01-C013-SS-[R67C84]-D1-000	01-C013-SS-[R67C84]-D1-000	AFAS
01-C013-SS-[R67C85]-D1-000	01-C013-SS-[R67C85]-D1-000	AFAS
01-C013-SS-[R67C86]-D1-000	01-C013-SS-[R67C86]-D1-000	AFAS
01-C013-SS-[R67C87]-D1-000	01-C013-SS-[R67C87]-D1-000	AFAS
01-C013-SS-[R67C88]-D1-000	01-C013-SS-[R67C88]-D1-000	AFAS
01-C013-SS-[R68C75]-D1-000	01-C013-SS-[R68C75]-D1-000	AFAS
01-C013-SS-[R68C76]-D1-000	01-C013-SS-[R68C76]-D1-000	AFAS
01-C013-SS-[R68C77]-D1-000	01-C013-SS-[R68C77]-D1-000	AFAS
01-C013-SS-[R68C78]-D1-000	01-C013-SS-[R68C78]-D1-000	AFAS
01-C013-SS-[R68C79]-D1-000	01-C013-SS-[R68C79]-D1-000	AFAS
01-C013-SS-[R68C80]-D1-000	01-C013-SS-[R68C80]-D1-000	AFAS
01-C013-SS-[R68C81]-D1-000	01-C013-SS-[R68C81]-D1-000	AFAS
01-C013-SS-[R68C82]-D1-000	01-C013-SS-[R68C82]-D1-000	AFAS
01-C013-SS-[R68C83]-D1-000	01-C013-SS-[R68C83]-D1-000	AFAS
01-C013-SS-[R68C84]-D1-000	01-C013-SS-[R68C84]-D1-000	AFAS
01-C013-SS-[R68C85]-D1-000	01-C013-SS-[R68C85]-D1-000	AFAS
01-C013-SS-[R68C86]-D1-000	01-C013-SS-[R68C86]-D1-000	AFAS
01-C013-SS-[R68C87]-D1-000	01-C013-SS-[R68C87]-D1-000	AFAS
01-C013-SS-[R68C88]-D1-000-DAVG	01-C013-SS-[R68C88]-D1-000-DAVG	AFAS
01-C013-SS-[R69C75]-D1-000	01-C013-SS-[R69C75]-D1-000	AFAS
01-C013-SS-[R69C76]-D1-000	01-C013-SS-[R69C76]-D1-000	AFAS
01-C013-SS-[R69C77]-D1-000	01-C013-SS-[R69C77]-D1-000	AFAS
01-C013-SS-[R69C78]-D1-000	01-C013-SS-[R69C78]-D1-000	AFAS
01-C013-SS-[R69C79]-D1-000	01-C013-SS-[R69C79]-D1-000	AFAS
01-C013-SS-[R69C80]-D1-000	01-C013-SS-[R69C80]-D1-000	AFAS
01-C013-SS-[R69C81]-D1-000	01-C013-SS-[R69C81]-D1-000	AFAS
01-C013-SS-[R69C82]-D1-000	01-C013-SS-[R69C82]-D1-000	AFAS
01-C013-SS-[R69C83]-D1-000	01-C013-SS-[R69C83]-D1-000	AFAS
01-C013-SS-[R69C84]-D1-000	01-C013-SS-[R69C84]-D1-000	AFAS
01-C013-SS-[R69C85]-D1-000	01-C013-SS-[R69C85]-D1-000	AFAS
01-C013-SS-[R69C86]-D1-000	01-C013-SS-[R69C86]-D1-000	AFAS
01-C013-SS-[R69C87]-D1-000	01-C013-SS-[R69C87]-D1-000	AFAS
01-C013-SS-[R70C75]-D1-000	01-C013-SS-[R70C75]-D1-000	AFAS
01-C013-SS-[R70C76]-D1-000	01-C013-SS-[R70C76]-D1-000	AFAS
01-C013-SS-[R70C77]-D1-000	01-C013-SS-[R70C77]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C013-SS-[R70C78]-D1-000	01-C013-SS-[R70C78]-D1-000	AFAS
01-C013-SS-[R70C79]-D1-000	01-C013-SS-[R70C79]-D1-000	AFAS
01-C013-SS-[R70C80]-D1-000	01-C013-SS-[R70C80]-D1-000	AFAS
01-C013-SS-[R70C81]-D1-000	01-C013-SS-[R70C81]-D1-000	AFAS
01-C013-SS-[R70C82]-D1-000	01-C013-SS-[R70C82]-D1-000	AFAS
01-C013-SS-[R70C83]-D1-000	01-C013-SS-[R70C83]-D1-000	AFAS
01-C013-SS-[R70C84]-D1-000	01-C013-SS-[R70C84]-D1-000	AFAS
01-C013-SS-[R70C85]-D1-000	01-C013-SS-[R70C85]-D1-000	AFAS
01-C013-SS-[R70C86]-D1-000	01-C013-SS-[R70C86]-D1-000	AFAS
01-C013-SS-[R71C75]-D1-000	01-C013-SS-[R71C75]-D1-000	AFAS
01-C013-SS-[R71C76]-D1-000	01-C013-SS-[R71C76]-D1-000	AFAS
01-C013-SS-[R71C77]-D1-000	01-C013-SS-[R71C77]-D1-000	AFAS
01-C013-SS-[R71C78]-D1-000	01-C013-SS-[R71C78]-D1-000	AFAS
01-C013-SS-[R71C79]-D1-000	01-C013-SS-[R71C79]-D1-000	AFAS
01-C013-SS-[R71C80]-D1-000	01-C013-SS-[R71C80]-D1-000	AFAS
01-C013-SS-[R71C81]-D1-000	01-C013-SS-[R71C81]-D1-000	AFAS
01-C013-SS-[R71C82]-D1-000	01-C013-SS-[R71C82]-D1-000	AFAS
01-C013-SS-[R71C83]-D1-000	01-C013-SS-[R71C83]-D1-000	AFAS
01-C013-SS-[R71C84]-D1-000	01-C013-SS-[R71C84]-D1-000	AFAS
01-C013-SS-[R72C75]-D1-000	01-C013-SS-[R72C75]-D1-000	AFAS
01-C013-SS-[R72C76]-D1-000	01-C013-SS-[R72C76]-D1-000	AFAS
01-C013-SS-[R72C77]-D1-000	01-C013-SS-[R72C77]-D1-000	AFAS
01-C013-SS-[R72C78]-D1-000	01-C013-SS-[R72C78]-D1-000	AFAS
01-C013-SS-[R72C79]-D1-000	01-C013-SS-[R72C79]-D1-000	AFAS
01-C013-SS-[R72C80]-D1-000	01-C013-SS-[R72C80]-D1-000	AFAS
01-C013-SS-[R72C81]-D1-000	01-C013-SS-[R72C81]-D1-000	AFAS
01-C013-SS-[R72C82]-D1-000	01-C013-SS-[R72C82]-D1-000	AFAS
01-C013-SS-[R72C83]-D1-000	01-C013-SS-[R72C83]-D1-000	AFAS
01-C013-SS-[R72C84]-D1-000-DAVG	01-C013-SS-[R72C84]-D1-000-DAVG	AFAS
01-C013-SS-[R73C75]-D1-000	01-C013-SS-[R73C75]-D1-000	AFAS
01-C013-SS-[R73C76]-D1-000	01-C013-SS-[R73C76]-D1-000	AFAS
01-C013-SS-[R73C77]-D1-000	01-C013-SS-[R73C77]-D1-000	AFAS
01-C013-SS-[R73C78]-D1-000	01-C013-SS-[R73C78]-D1-000	AFAS
01-C013-SS-[R73C79]-D1-000	01-C013-SS-[R73C79]-D1-000	AFAS
01-C013-SS-[R73C80]-D1-000	01-C013-SS-[R73C80]-D1-000	AFAS
01-C013-SS-[R73C81]-D1-000	01-C013-SS-[R73C81]-D1-000	AFAS
01-C013-SS-[R73C82]-D1-000	01-C013-SS-[R73C82]-D1-000	AFAS
01-C013-SS-[R73C83]-D1-000-DAVG	01-C013-SS-[R73C83]-D1-000-DAVG	AFAS
01-C013-SS-[R74C75]-D1-000	01-C013-SS-[R74C75]-D1-000	AFAS
01-C013-SS-[R74C76]-D1-000	01-C013-SS-[R74C76]-D1-000	AFAS
01-C013-SS-[R74C77]-D1-000	01-C013-SS-[R74C77]-D1-000	AFAS

Table B-1 – Commercial Area Samples <= 1 Foot BGS

Sample ID	Short Sample ID	RI Area
01-C013-SS-[R74C78]-D1-000	01-C013-SS-[R74C78]-D1-000	AFAS
01-C013-SS-[R74C79]-D1-000	01-C013-SS-[R74C79]-D1-000	AFAS
01-C013-SS-[R74C80]-D1-000	01-C013-SS-[R74C80]-D1-000	AFAS
01-C013-SS-[R74C81]-D1-000	01-C013-SS-[R74C81]-D1-000	AFAS
01-C013-SS-[R75C75]-D1-000	01-C013-SS-[R75C75]-D1-000	AFAS
01-C013-SS-[R75C76]-D1-000	01-C013-SS-[R75C76]-D1-000	AFAS
01-C013-SS-[R75C77]-D1-000	01-C013-SS-[R75C77]-D1-000	AFAS
01-C013-SS-[R75C78]-D1-000	01-C013-SS-[R75C78]-D1-000	AFAS
01-C013-SS-[R75C79]-D1-000	01-C013-SS-[R75C79]-D1-000	AFAS
01-C013-SS-[R75C80]-D1-000	01-C013-SS-[R75C80]-D1-000	AFAS
02-C013-SS[R71C85-03]D1-000	R71C85-03	AFAS
02-C013-SS[R71C85-04]D1-000	R71C85-04	AFAS
02-C013-SS[R71C85-05]D1-000	R71C85-05	AFAS
02-C013-SS[R71C85-06]D1-000	R71C85-06	AFAS
LR-175	LR-175	LR
LR-176	LR-176	LR
LR-177	LR-177	LR
LR-189	LR-189	LR
LR-190	LR-190	LR
LR-191	LR-191	LR
LR-192	LR-192	LR
LR-193	LR-193	LR
LR-203	LR-203	LR
LR-204	LR-204	LR
LR-205	LR-205	LR
LR-206	LR-206	LR
LR-207	LR-207	LR
LR-207-S-2	LR-207-S-2	LR
LR-221	LR-221	LR
LR-222	LR-222	LR
LR-223	LR-223	LR
LR-224	LR-224	LR
LR-238	LR-238	LR
LR-239	LR-239	LR
LR-240	LR-240	LR

Table B-2 – Commercial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
Commercial Area 1 (1 to <=15 feet)		
1234-TP-517-S-2	1234-TP-517-S-2	1234
1234-TP-517-S-3	1234-TP-517-S-3	1234
18-TP-502-S-2	18-TP-502-S-2	18 North
18-TP-502-S-3	18-TP-502-S-3	18 North
25-TP-509-S-2	25-TP-509-S-2	25
25-TP-510-S-2	25-TP-510-S-2	25
25-TP-514-S-3	25-TP-514-S-3	25
25-TP-514-S-4	25-TP-514-S-4	25
25-TP-518-S-2	25-TP-518-S-2	25
26-TP-508-S-2	26-TP-508-S-2	26
26-TP-508-S-3	26-TP-508-S-3	26
26-TP-509-S-2	26-TP-509-S-2	26
26-TP-509-S-3	26-TP-509-S-3	26
26-TP-512-S-2	26-TP-512-S-2	26
26-TP-512-S-3	26-TP-512-S-3	26
26-TP-520-S-2	26-TP-520-S-2	26
26-TP-521-S-2	26-TP-521-S-2	26
7-B-1,S-1	7-B-1,S-1	7
7-B-3,S-1	7-B-3,S-1	7
7-B-3,S-3	7-B-3,S-3	7
7-B-3,S-5	7-B-3,S-5	7
7-B-4,S-1-DAVG	7-B-4,S-1-DAVG	7
7-B-4,S-3	7-B-4,S-3	7
7-B-4,S-5	7-B-4,S-5	7
7-B-5,S-1-DAVG	7-B-5,S-1-DAVG	7
7-B-5,S-3	7-B-5,S-3	7
7-B-5,S-5	7-B-5,S-5	7
7-B-501-S-1A	7-B-501-S-1A	7
7-B-501-S-2-DAVG	7-B-501-S-2-DAVG	7
7-B-501-S-3-DAVG	7-B-501-S-3-DAVG	7
7-B-502-S-1A	7-B-502-S-1A	7
7-B-502-S-2	7-B-502-S-2	7
7-B-502-S-3	7-B-502-S-3	7
7-B-503-S-1C-DAVG	7-B-503-S-1C-DAVG	7
7-B-503-S-2-DAVG	7-B-503-S-2-DAVG	7
7-B-503-S-2A	7-B-503-S-2A	7
7-B-503-S-3	7-B-503-S-3	7
7-B-504-S-2	7-B-504-S-2	7

Table B-2 – Commercial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
7-B-504-S-3A	7-B-504-S-3A	7
7-B-6,S-1	7-B-6,S-1	7
7-B-6,S-3	7-B-6,S-3	7
7-B-6,S-5	7-B-6,S-5	7
7-B-7,S-4-DAVG	7-B-7,S-4-DAVG	7
7-HA-501-S-2	7-HA-501-S-2	7
7-HA-502-S-2-DAVG	7-HA-502-S-2-DAVG	7
7-HA-502-S-3	7-HA-502-S-3	7
7-HA-503-S-2	7-HA-503-S-2	7
7-HA-504-S-2	7-HA-504-S-2	7
7-TP-501-S-2-DAVG	7-TP-501-S-2-DAVG	7
7-TP-501-S-3	7-TP-501-S-3	7
7-TP-502-S-2	7-TP-502-S-2	7
7-TP-502-S-3	7-TP-502-S-3	7
7-TP-503-S-2	7-TP-503-S-2	7
7-TP-503-S-3	7-TP-503-S-3	7
7-TP-504-S-2	7-TP-504-S-2	7
7-TP-504-S-3	7-TP-504-S-3	7
8-TPS-04-S-1	8-TPS-04-S-1	8
APA-TP-501-S-2	APA-TP-501-S-2	LR
APC-TP-502-S-3	APC-TP-502-S-3	AP-C
LR-017-S-3	LR-017-S-3	LR
LR-025-S-3	LR-025-S-3	LR
Commercial Area 2 (1 to <=15 feet)		
6-TP-501-S-2	6-TP-501-S-2	6
6-TP-501-S-3	6-TP-501-S-3	6
6-TP-502-S-2	6-TP-502-S-2	6
6-TP-502-S-3	6-TP-502-S-3	6
Commercial Area 3 (1 to <=15 feet)		
19B-OI-TP-1 (S-1)	19B-OI-TP-1 (S-1)	19B
19B-OI-TP-1 (S-2)	19B-OI-TP-1 (S-2)	19B
APD-TP-501-S-2	APD-TP-501-S-2	26
APG-TP-501-S-2	APG-TP-501-S-2	LR
RR-521-S-3	RR-521-S-3	LR
Commercial Area 4 (1 to <=15 feet)		
LR-133-S-3	LR-133-S-3	LR
LR-181-S-3	LR-181-S-3	LR
Commercial Area 5 (1 to <=15 feet)		
01-C012-SS-[R61C68]-D1-000-DAVG	01-C012-SS-[R61C68]-D1-000-DAVG	AFAS
12-1-B-501A-S-2	12-1-B-501A-S-2	12

Table B-2 – Commercial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
12-1-B-501A-S-3	12-1-B-501A-S-3	12
12-1-TP-501-S-2	12-1-TP-501-S-2	12
12-1-TP-504-S-2	12-1-TP-504-S-2	12
12-1-TP-6,S-1	12-1-TP-6,S-1	12
12-1-TP-6,S-2	12-1-TP-6,S-2	12
12-4-TP-2,S-1	12-4-TP-2,S-1	12
12-5-TP-3,S-1	12-5-TP-3,S-1	12
12-5-TP-3,S-2	12-5-TP-3,S-2	12
12-5-TP-501-S-2	12-5-TP-501-S-2	12
12-5-TP-501-S-3	12-5-TP-501-S-3	12
12-5-TP-502-S-2-DAVG	12-5-TP-502-S-2-DAVG	12
12-5-TP-502-S-3-DAVG	12-5-TP-502-S-3-DAVG	12
12-5-TP-503-S-2	12-5-TP-503-S-2	12
12-5-TP-503-S-3	12-5-TP-503-S-3	12
12-5-TP-503-S-4	12-5-TP-503-S-4	12
12-6-B-501-S-2	12-6-B-501-S-2	12
12-6-B-501-S-3	12-6-B-501-S-3	12
12-6-TP-3,S-1	12-6-TP-3,S-1	12
12-6-TP-3,S-2-DAVG	12-6-TP-3,S-2-DAVG	12
12-6-TP-501-S-2	12-6-TP-501-S-2	12
12-6-TP-501-S-3	12-6-TP-501-S-3	12
12-6-TP-502-S-2	12-6-TP-502-S-2	12
12-6-TP-502-S-3	12-6-TP-502-S-3	12
12-7-B-501-S-2	12-7-B-501-S-2	12
12-7-B-501-S-3	12-7-B-501-S-3	12
12-7-TP-501-S-2	12-7-TP-501-S-2	12
12-7-TP-501-S-3	12-7-TP-501-S-3	12
12-TP-504-S-2-DAVG	12-TP-504-S-2-DAVG	12
12-TP-504-S-3	12-TP-504-S-3	12
12-TP-505-S-2-DAVG	12-TP-505-S-2-DAVG	12
12-TP-505-S-3	12-TP-505-S-3	12
LR-157-S-3	LR-157-S-3	LR
Commercial Area 6 (1 to <=15 feet)		
18-TP-546-S-2	18-TP-546-S-2	18
18-TP-546-S-3	18-TP-546-S-3	18
Commercial Area 7 (1 to <=15 feet)		
11-B-501-S-2	11-B-501-S-2	11
11-B-501-S-3	11-B-501-S-3	11
11-TP-1,S-2	11-TP-1,S-2	11
11-TP-5,S-1	11-TP-5,S-1	11
11-TP-5,S-2-DAVG	11-TP-5,S-2-DAVG	11

Table B-2 – Commercial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
11-TP-501-S-2	11-TP-501-S-2	11
11-TP-501-S-3	11-TP-501-S-3	11
11-TP-502-S-2	11-TP-502-S-2	11
11-TP-502-S-3	11-TP-502-S-3	11
11-TP-503-S-2	11-TP-503-S-2	11
11-TP-503-S-3	11-TP-503-S-3	11
11-TP-504-S-2	11-TP-504-S-2	11
11-TP-504-S-3	11-TP-504-S-3	11
11-TP-6,S-1	11-TP-6,S-1	11
11-TP-6,S-2	11-TP-6,S-2	11
18-TP-25,S-1	18-TP-25,S-1	18
18-TP-26,S-1	18-TP-26,S-1	18
18-TP-27,S-1	18-TP-27,S-1	18
18-TP-28,S-1	18-TP-28,S-1	18
18-TP-29,S-1	18-TP-29,S-1	18
18-TP-30,S-1	18-TP-30,S-1	18 North
18-TP-31,S-1	18-TP-31,S-1	18 North
18-TP-33,S-1-DAVG	18-TP-33,S-1-DAVG	18
18-TP-504-S-2	18-TP-504-S-2	18 North
18-TP-504-S-3	18-TP-504-S-3	18 North
18-TP-517-S-2	18-TP-517-S-2	18
18-TP-517-S-3	18-TP-517-S-3	18
18-TP-519-S-2-DAVG	18-TP-519-S-2-DAVG	18
18-TP-519-S-3	18-TP-519-S-3	18
18-TP-520-S-2-DAVG	18-TP-520-S-2-DAVG	18
18-TP-520-S-3	18-TP-520-S-3	18
18-TP-531-S-2	18-TP-531-S-2	18
18-TP-531-S-3	18-TP-531-S-3	18
18-TP-535-S-2	18-TP-535-S-2	18 North
18-TP-535-S-3	18-TP-535-S-3	18 North
18-TP-536-S-2	18-TP-536-S-2	18 North
18-TP-536-S-3	18-TP-536-S-3	18 North
18-TP-537-S-2	18-TP-537-S-2	18
18-TP-537-S-3	18-TP-537-S-3	18
18-TP-538-S-2	18-TP-538-S-2	18
18-TP-538-S-3	18-TP-538-S-3	18
18-TP-539-S-2	18-TP-539-S-2	18
18-TP-539-S-3	18-TP-539-S-3	18

Table B-2 – Commercial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
18-TP-540-S-2-DAVG	18-TP-540-S-2-DAVG	18
18-TP-540-S-3	18-TP-540-S-3	18
18-TP-541-S-2	18-TP-541-S-2	18
18-TP-541-S-3	18-TP-541-S-3	18
18-TP-542-S-2-DAVG	18-TP-542-S-2-DAVG	18
18-TP-542-S-3	18-TP-542-S-3	18
18-TP-GS-16-S-2	18-TP-GS-16-S-2	18
18-TP-GS-17-S-2	18-TP-GS-17-S-2	18
18-TP-GS-23-S-2	18-TP-GS-23-S-2	18
18-TR-104E,S-3	18-TR-104E,S-3	18
18-TR-104E,S-4	18-TR-104E,S-4	18
18-TR-104W,S-2	18-TR-104W,S-2	18
18-TR-107N,S-2	18-TR-107N,S-2	18
18-TR-117E,S-4	18-TR-117E,S-4	18
18-TR-117W,S-1	18-TR-117W,S-1	18
18-TR-117W,S-2	18-TR-117W,S-2	18
18-TR-119S,S-4	18-TR-119S,S-4	18
18R-406-S-3	18R-406-S-3	18-REF
18R-445-S-3	18R-445-S-3	18-REF
18R-461-S-3	18R-461-S-3	18-REF
Commercial Area 8 (1 to <=15 feet)		
APB-TP-502-S-2	APB-TP-502-S-2	LR
LR-059-S-3	LR-059-S-3	LR
Commercial Area 9 (1 to <=15 feet)		
LR-207-S-3	LR-207-S-3	LR

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
Golf Course Area 1 (0 to <=1 foot)		
25-SS-514	25-SS-514	25
25-SS-516	25-SS-516	25
25-SS-518	25-SS-518	25
25-SS-519	25-SS-519	25
25-SS-520	25-SS-520	25
25-SS-521	25-SS-521	25
25-SS-522	25-SS-522	25
25-SS-523	25-SS-523	25
25-SS-524	25-SS-524	25
25-SS-525	25-SS-525	25
25-SS-526	25-SS-526	25
25-SS-527	25-SS-527	25
25-SS-528-DAVG	25-SS-528-DAVG	25
25-SS-529	25-SS-529	25
25-SS-530-DAVG	25-SS-530-DAVG	25
25-TP-502-S-1	25-TP-502-S-1	25
25-TP-506-S-1	25-TP-506-S-1	25
25-TP-511-S-1-DAVG	25-TP-511-S-1-DAVG	25
25-TP-515-S-1	25-TP-515-S-1	25
25-TP-516-S-1	25-TP-516-S-1	25
25-TP-517-S-1	25-TP-517-S-1	25
25-TP-524-S-1	25-TP-524-S-1	25
26-TP-514-S-1	26-TP-514-S-1	26
26-TP-517-S-1	26-TP-517-S-1	26
26-TP-518-S-1	26-TP-518-S-1	26
26-TP-522-S-1-DAVG	26-TP-522-S-1-DAVG	26
26-VS-1	26-VS-1	25
26-VS-2	26-VS-2	26
26-VS-3	26-VS-3	26
26-VS-4	26-VS-4	26
36-SS-07	36-SS-07	36
36-SS-10	36-SS-10	36
36-SS-18	36-SS-18	36
36-SS-20	36-SS-20	36
36-SS-21	36-SS-21	36
36-SS-24	36-SS-24	36
36-SS-25	36-SS-25	36
36-SS-26	36-SS-26	36
36-SS-27	36-SS-27	36
36-SS-31	36-SS-31	36

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
36-SS-32	36-SS-32	36
36-TP-6-S-1	36-TP-6-S-1	36
36-VS-13	36-VS-13	25
36-VS-16	36-VS-16	25
36-VS-17	36-VS-17	25
36-VS-19	36-VS-19	25
36-VS-5	36-VS-5	25
36-VS-6	36-VS-6	36
36-VS-9	36-VS-9	25
39-SS-01	39-SS-01	39
39-SS-03	39-SS-03	39
39-SS-04	39-SS-04	39
39-SS-05	39-SS-05	39
39-SS-06	39-SS-06	39
39-SS-08	39-SS-08	39
39-SS-12	39-SS-12	39
39-SS-16	39-SS-16	39
5-SS-402	5-SS-402	5
5-VS-107	5-VS-107	5
5-VS-108	5-VS-108	5
5-VS-109	5-VS-109	5
5-VS-110	5-VS-110	5
5-VS-111	5-VS-111	5
5-VS-112	5-VS-112	5
APH-SS-510	APH-SS-510	25
APH-SS-512	APH-SS-512	25
APH-SS-515	APH-SS-515	25
LR-012	LR-012	LR
LR-018	LR-018	LR
LR-019	LR-019	LR
LR-019E	LR-019E	LR
LR-019N	LR-019N	LR
LR-019S	LR-019S	LR
LR-019W	LR-019W	LR
RR-524	RR-524	LR
RR-525	RR-525	25
RR-526	RR-526	25
RR-582	RR-582	LR
Golf Course Area 2 (0 to <=1 foot)		
5-HA-513-S-1	5-HA-513-S-1	5
5-HA-514-S-1	5-HA-514-S-1	5

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
5-HA-515-S-1	5-HA-515-S-1	5
5-HA-516-S-1	5-HA-516-S-1	5
5-HA-517-S-1	5-HA-517-S-1	5
5-SS-403	5-SS-403	5
5-SS-404	5-SS-404	5
5-VS-100	5-VS-100	5
5-VS-101	5-VS-101	5
5-VS-102	5-VS-102	5
5-VS-99	5-VS-99	5
5D-TPS-11-S-3	5D-TPS-11-S-3	5D
5D-TPS-12-S-3	5D-TPS-12-S-3	5D
5D-TPS-15-S-2	5D-TPS-15-S-2	5D
5D-TPS-18-S-4	5D-TPS-18-S-4	5D
5D-TPS-19-S-2	5D-TPS-19-S-2	5D
5D-TPS-6-S-3	5D-TPS-6-S-3	5D
5D-TPS-7-S-3	5D-TPS-7-S-3	5D
5D-TPS-9-S-3	5D-TPS-9-S-3	5D
APE-SS-501-DAVG	APE-SS-501-DAVG	APE
APE-SS-502-DAVG	APE-SS-502-DAVG	APE
APE-SS-503	APE-SS-503	APE
APE-SS-504-DAVG	APE-SS-504-DAVG	APE
APE-SS-505	APE-SS-505	APE
APE-SS-506	APE-SS-506	APE
APE-SS-507	APE-SS-507	APE
APE-SS-509	APE-SS-509	APE
APE-SS-510	APE-SS-510	APE
APE-SS-511	APE-SS-511	APE
APE-SS-512	APE-SS-512	APE
APE-TP-501-S-1-DAVG	APE-TP-501-S-1-DAVG	APE
APE-TP-502-S-1-DAVG	APE-TP-502-S-1-DAVG	APE
APG-SS-401	APG-SS-401	LR
APG-SS-501	APG-SS-501	LR
APG-SS-502	APG-SS-502	LR
APG-SS-503	APG-SS-503	LR
APG-TP-503-S-1	APG-TP-503-S-1	LR
APG-TP-504-S-1	APG-TP-504-S-1	LR
LR-011-1	LR-011-1	LR
LR-011-2	LR-011-2	LR
LR-020 6"-12"	LR-020 6"-12"	LR
LR-020-1	LR-020-1	LR
LR-020-2	LR-020-2	LR

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
LR-020-S-2	LR-020-S-2	LR
LR-028	LR-028	LR
LR-039-1	LR-039-1	LR
LR-039-2	LR-039-2	LR
LR-047	LR-047	LR
LR-064-1	LR-064-1	LR
LR-064-2	LR-064-2	LR
16-B-501-S-1-DAVG	16-B-501-S-1-DAVG	16
16-B-505-S-1-DAVG	16-B-505-S-1-DAVG	16
16-SS-401	16-SS-401	16
16-SS-402	16-SS-402	16
16-SS-504	16-SS-504	16
16-SS-505	16-SS-505	16
16-SS-506	16-SS-506	16
16-SS-507	16-SS-507	16
16-SS-508	16-SS-508	16
16-SS-509	16-SS-509	16
16-SS-510	16-SS-510	16
16-SS-511	16-SS-511	16
16-SS-512	16-SS-512	16
16-SS-513	16-SS-513	16
16-SS-514	16-SS-514	16
16-SS-515	16-SS-515	16
16-SS-517	16-SS-517	16
16-SS-518	16-SS-518	16
16-SS-519	16-SS-519	16
16-SS-520	16-SS-520	16
16-SS-521	16-SS-521	16
16-SS-522	16-SS-522	16
16-SS-523	16-SS-523	16
16-SS-524-DAVG	16-SS-524-DAVG	16
16-TP-501-S-1	16-TP-501-S-1	16
RR-622	RR-622	RR-N
Golf Course Area 3 (0 to <=1 foot)		
38-HA-501-DAVG	38-HA-501-DAVG	38
38-HA-502-S-1	38-HA-502-S-1	38
38-HA-503-S-1	38-HA-503-S-1	38
38-SS-401	38-SS-401	38
38-SS-501	38-SS-501	38
38-SS-505	38-SS-505	38
38-SS-507	38-SS-507	38

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
38-SS-508	38-SS-508	38
38-SS-509	38-SS-509	38
38-SS-510	38-SS-510	38
38-SS-511	38-SS-511	38
38-SS-512	38-SS-512	38
38-SS-514	38-SS-514	38
38-SS-515	38-SS-515	38
38-SS-516-DAVG	38-SS-516-DAVG	38
38-SS-517	38-SS-517	38
38-SS-518	38-SS-518	38
38-SS-519	38-SS-519	38
38-SS-520	38-SS-520	38
38-VS-119	38-VS-119	MISC
38-VS-130	38-VS-130	MISC
38-VS-26	38-VS-26	MISC
38-VS-27	38-VS-27	MISC
38-VS-32	38-VS-32	MISC
38-VS-35	38-VS-35	MISC
38-VS-36	38-VS-36	MISC
38-VS-39	38-VS-39	MISC
38-VS-40	38-VS-40	MISC
38-VS-45	38-VS-45	MISC
38-VS-48-DAVG	38-VS-48-DAVG	MISC
38-VS-52	38-VS-52	MISC
38-VS-53	38-VS-53	MISC
38-VS-56	38-VS-56	MISC
38-VS-57	38-VS-57	38
38-VS-60	38-VS-60	38
38-VS-61	38-VS-61	38
38-VS-65	38-VS-65	MISC
38-VS-69	38-VS-69	38
38-VS-72	38-VS-72	38
38-VS-73	38-VS-73	MISC
LR-082	LR-082	LR
LR-097-1	LR-097-1	LR
LR-097-2	LR-097-2	LR
LR-098	LR-098	LR
LR-114	LR-114	LR
LR-115	LR-115	LR
LR-131W	LR-131W	LR
LR-147	LR-147	LR

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
LR-148-DAVG	LR-148-DAVG	LR
LR-149	LR-149	LR
LR-161-DAVG	LR-161-DAVG	LR
LR-162-DAVG	LR-162-DAVG	LR
LR-163	LR-163	LR
LR-164	LR-164	LR
RR-503	RR-503	LR
RR-513	RR-513	LR
RR-518	RR-518	LR
RR-557	RR-557	38
01-C004-SS[38-VS-151]C2-2.00	38-VS-151	MISC
01-C004-SS[38-VS-152]C2-2.00	38-VS-152	38
01-C004-SS[38-VS-153]C2-2.00	38-VS-153	MISC
01-C011-SS-[R47C66]-D1-000-DAVG	01-C011-SS-[R47C66]-D1-000-DAVG	AFAS
01-C011-SS-[R48C66]-D1-000	01-C011-SS-[R48C66]-D1-000	AFAS
RR-591-B1-DAVG	RR-591-B1-DAVG	LR
RR-591-B2	RR-591-B2	LR
Golf Course Area 4 (0 to <=1 foot)		
18-SS-GS-67	18-SS-GS-67	18
26-B-501-S-1-DAVG	26-B-501-S-1-DAVG	26
26-B-502-S-1	26-B-502-S-1	26
26-B-503-S-1-DAVG	26-B-503-S-1-DAVG	26
26-HA-501-S-1	26-HA-501-S-1	26
26-HA-504-S-1	26-HA-504-S-1	26
26-SS-403	26-SS-403	26
26-SS-404	26-SS-404	26
26-SS-501	26-SS-501	26
26-SS-502-DAVG	26-SS-502-DAVG	26
26-SS-503	26-SS-503	26
26-SS-504	26-SS-504	26
26-SS-506	26-SS-506	26
26-SS-507	26-SS-507	26
26-SS-509	26-SS-509	26
26-SS-510-DAVG	26-SS-510-DAVG	26
26-TP-501-S-1-DAVG	26-TP-501-S-1-DAVG	26
26-TP-502-S-1	26-TP-502-S-1	26
26-TP-503-S-1	26-TP-503-S-1	26
26-TP-504-S-1	26-TP-504-S-1	26
26-TP-505-S-1	26-TP-505-S-1	26
26-TP-506-S-1	26-TP-506-S-1	26
26-TP-507-S-1	26-TP-507-S-1	26

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
26-TP-510-S-1-DAVG	26-TP-510-S-1-DAVG	26
26-TP-516-S-1	26-TP-516-S-1	26
26-TP-519-S-1	26-TP-519-S-1	26
26-VS-10	26-VS-10	26
26-VS-11	26-VS-11	26
26-VS-12	26-VS-12	26
26-VS-13	26-VS-13	26
26-VS-14	26-VS-14	26
26-VS-15	26-VS-15	26
26-VS-16	26-VS-16	26
26-VS-27	26-VS-27	MISC
26-VS-28	26-VS-28	MISC
26-VS-29	26-VS-29	MISC
26-VS-30	26-VS-30	MISC
26-VS-36	26-VS-36	MISC
26-VS-37	26-VS-37	MISC
26-VS-38	26-VS-38	MISC
26-VS-44-DAVG	26-VS-44-DAVG	MISC
26-VS-50	26-VS-50	26
26-VS-51	26-VS-51	26
APF-HA-501-S-1	APF-HA-501-S-1	APF
APF-SS-501	APF-SS-501	APF
APF-SS-502	APF-SS-502	APF
APF-SS-503	APF-SS-503	APF
APF-SS-504	APF-SS-504	APF
APF-SS-505	APF-SS-505	APF
APF-SS-506	APF-SS-506	APF
APF-SS-507	APF-SS-507	APF
APF-SS-508	APF-SS-508	APF
APF-SS-509	APF-SS-509	APF
APF-SS-510-DAVG	APF-SS-510-DAVG	APF
APF-SS-511	APF-SS-511	APF
APF-SS-512	APF-SS-512	APF
APF-SS-513	APF-SS-513	APF
APF-SS-514	APF-SS-514	APF
APF-SS-515	APF-SS-515	APF
APF-SS-516	APF-SS-516	APF
APF-SS-517	APF-SS-517	APF
APF-SS-518	APF-SS-518	APF
APF-SS-520-DAVG	APF-SS-520-DAVG	APF
APF-SS-521	APF-SS-521	APF

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
APF-TP-501-S-1	APF-TP-501-S-1	APF
APF-VS-10	APF-VS-10	APF
APF-VS-11	APF-VS-11	MISC
APF-VS-12	APF-VS-12	MISC
APF-VS-9	APF-VS-9	MISC
APH-SS-507	APH-SS-507	26
APH-SS-508	APH-SS-508	26
APH-SS-509	APH-SS-509	26
LR-060-100E	LR-060-100E	LR
LR-060-100N	LR-060-100N	LR
LR-060-100W	LR-060-100W	LR
LR-060-25E	LR-060-25E	LR
LR-060-50E	LR-060-50E	LR
LR-060-50N	LR-060-50N	LR
LR-060-50W	LR-060-50W	LR
LR-060-75E	LR-060-75E	LR
LR-060-75N	LR-060-75N	LR
LR-060-75W	LR-060-75W	LR
LR-091-1	LR-091-1	LR
LR-091-2	LR-091-2	LR
LR-107	LR-107	LR
LR-124	LR-124	LR
LR-125	LR-125	LR
LR-125E	LR-125E	LR
LR-125E-S-2-DAVG	LR-125E-S-2-DAVG	LR
LR-126	LR-126	LR
LR-142-DAVG	LR-142-DAVG	LR
LR-144	LR-144	LR
LR-304	LR-304	LR
LR-305	LR-305	LR
LR-308	LR-308	LR
LR-309	LR-309	LR
LR-310-DAVG	LR-310-DAVG	LR
LR-311	LR-311	LR
LR-311-100E	LR-311-100E	LR
LR-311-100N	LR-311-100N	LR
LR-311-100S	LR-311-100S	LR
LR-311-100W	LR-311-100W	LR
LR-311-10S	LR-311-10S	LR
LR-311-10W	LR-311-10W	LR
LR-311-25S	LR-311-25S	LR

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
LR-311-25W	LR-311-25W	LR
LR-311-50N	LR-311-50N	LR
LR-311-50S	LR-311-50S	LR
LR-311-50W-DAVG	LR-311-50W-DAVG	LR
LR-311-75E	LR-311-75E	LR
LR-311-75N	LR-311-75N	LR
LR-311-75S	LR-311-75S	LR
LR-311-75W	LR-311-75W	LR
LR-311-S-2	LR-311-S-2	LR
LR-312	LR-312	LR
LR-313	LR-313	LR
LR-314	LR-314	LR
LR-316	LR-316	LR
LR-317	LR-317	LR
LR-318	LR-318	LR
LR-318-100E	LR-318-100E	LR
LR-318-100N	LR-318-100N	LR
LR-318-100S	LR-318-100S	LR
LR-318-100W	LR-318-100W	LR
LR-318-10E	LR-318-10E	LR
LR-318-10N	LR-318-10N	LR
LR-318-10S	LR-318-10S	LR
LR-318-10W	LR-318-10W	LR
LR-318-25E	LR-318-25E	LR
LR-318-25N	LR-318-25N	LR
LR-318-25S	LR-318-25S	LR
LR-318-25W	LR-318-25W	LR
LR-318-50E	LR-318-50E	LR
LR-318-50N	LR-318-50N	LR
LR-318-50S	LR-318-50S	LR
LR-318-50W	LR-318-50W	LR
LR-318-75E-DAVG	LR-318-75E-DAVG	LR
LR-318-75N	LR-318-75N	LR
LR-318-75S	LR-318-75S	LR
LR-318-75W	LR-318-75W	LR
LR-318-S-2	LR-318-S-2	LR
LR-319	LR-319	LR
LR-320	LR-320	LR
LR-321	LR-321	LR
LR-322	LR-322	LR
01-H404-SS[1]D1-005	H404-1	MISC

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-SS-594-DAVG	18-SS-594-DAVG	18
RR-588	RR-588	RR-N
Golf Course Area 5 (0 to <=1 foot)		
LR-248	LR-248	LR
LR-249	LR-249	LR
LR-258	LR-258	LR
LR-259	LR-259	LR
LR-260	LR-260	LR
LR-261	LR-261	LR
RR-556	RR-556	LR
12-2-B-501-S-1	12-2-B-501-S-1	12
12-2-B-502-S-1-DAVG	12-2-B-502-S-1-DAVG	12
12-2-TP-505-S-1	12-2-TP-505-S-1	12
12-SS-401	12-SS-401	12
12-SS-403	12-SS-403	12
12-SS-405	12-SS-405	12
12-TP-501-S-1-DAVG	12-TP-501-S-1-DAVG	12
12-TP-502-S-1-DAVG	12-TP-502-S-1-DAVG	12
12-TP-503-S-1	12-TP-503-S-1	12
12-VS-1	12-VS-1	MISC
12-VS-3	12-VS-3	MISC
12-VS-4	12-VS-4	MISC
RR-560	RR-560	RR-N
RR-561	RR-561	RR-N
Golf Course Area 6 (0 to <=1 foot)		
18-TP-553-S-1	18-TP-553-S-1	18
18-TP-554-S-1	18-TP-554-S-1	18
18-TP-555-S-1-DAVG	18-TP-555-S-1-DAVG	18
18-TP-556-S-1	18-TP-556-S-1	18
18-TP-557-S-1	18-TP-557-S-1	18
18-TP-558-S-1	18-TP-558-S-1	18
18-VS-241	18-VS-241	18
18-VS-242	18-VS-242	18
18-VS-243	18-VS-243	18
18-VS-244	18-VS-244	18
18R-20	18R-20	18-REF
18R-21	18R-21	18-REF
18R-22	18R-22	18-REF
18R-23	18R-23	18-REF
18R-459	18R-459	18-REF
18R-467	18R-467	18-REF

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18R-468	18R-468	18-REF
18R-471	18R-471	18-REF
18R-472	18R-472	18-REF
18R-474-DAVG	18R-474-DAVG	18-REF
18R-474-S-2	18R-474-S-2	18-REF
LR-245-DAVG	LR-245-DAVG	LR
LR-256	LR-256	LR
LR-257	LR-257	LR
RR-537	RR-537	RR-N
RR-539	RR-539	RR-N
RR-540-DAVG	RR-540-DAVG	RR-N
18-MH-2	18-MH-2	18
18-MH-3	18-MH-3	18
18-MH-7	18-MH-7	18
18-SS-591	18-SS-591	18
18-SS-592	18-SS-592	18
18-SS-694	18-SS-694	18
18-SS-695	18-SS-695	18
RR-562	RR-562	RR-N
Golf Course Area 7 (0 to <=1 foot)		
18-TP-514-S-1-DAVG	18-TP-514-S-1-DAVG	18
18-TP-516-S-1	18-TP-516-S-1	18
18-TP-518-S-1	18-TP-518-S-1	18
18-TP-532-S-1	18-TP-532-S-1	18
18-TP-533-S-1-DAVG	18-TP-533-S-1-DAVG	18
18-TP-543-S-1	18-TP-543-S-1	18
18-TP-544-S-1	18-TP-544-S-1	18
18-TP-545-S-1	18-TP-545-S-1	18
18-TP-548-S-1	18-TP-548-S-1	18
18-TP-DEP,S-1	18-TP-DEP,S-1	18
18-TP-GS-25-S-1	18-TP-GS-25-S-1	18
18-TR-105N,S-1	18-TR-105N,S-1	18
18-TR-105S,S-3	18-TR-105S,S-3	18
18-TR-106E,S-3	18-TR-106E,S-3	18
18-TR-106W,S-1	18-TR-106W,S-1	18
18-TR-107S,S-3	18-TR-107S,S-3	18
18-VS-216	18-VS-216	18
18-VS-217	18-VS-217	18
18-VS-218	18-VS-218	18
18-VS-224-DAVG	18-VS-224-DAVG	18
18-VS-225	18-VS-225	18

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-VS-226	18-VS-226	18
18-VS-227	18-VS-227	18
18-VS-233	18-VS-233	18
18-VS-234	18-VS-234	18
18-VS-235	18-VS-235	18
18-VS-236	18-VS-236	18
18R-10	18R-10	18-REF
18R-101	18R-101	18-REF
18R-103	18R-103	18-REF
18R-104	18R-104	18-REF
18R-105-DAVG	18R-105-DAVG	18-REF
18R-106	18R-106	18-REF
18R-107-100S	18R-107-100S	18-REF
18R-107-100W	18R-107-100W	18-REF
18R-107-125W	18R-107-125W	18-REF
18R-107-25E	18R-107-25E	18-REF
18R-107-25S	18R-107-25S	18-REF
18R-107-50E	18R-107-50E	18-REF
18R-107-50N-DAVG	18R-107-50N-DAVG	18-REF
18R-107-50S	18R-107-50S	18-REF
18R-107-50W	18R-107-50W	18-REF
18R-107-75S	18R-107-75S	18-REF
18R-107-75W	18R-107-75W	18-REF
18R-108	18R-108	18-REF
18R-109	18R-109	18-REF
18R-110	18R-110	18-REF
18R-111	18R-111	18-REF
18R-14	18R-14	18-REF
18R-18	18R-18	18-REF
18R-19	18R-19	18-REF
18R-448	18R-448	18-REF
18R-449	18R-449	18-REF
18R-457	18R-457	18-REF
18R-463	18R-463	18-REF
18R-464	18R-464	18-REF
RR-114	RR-114	RR-N
RR-115-DAVG	RR-115-DAVG	RR-N
RR-116	RR-116	RR-N
RR-117	RR-117	RR-N
RR-118	RR-118	RR-N
RR-533	RR-533	RR-N

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-MH-4	18-MH-4	18
18-SS-562	18-SS-562	18
18-SS-563	18-SS-563	18
18-SS-564	18-SS-564	18
18-SS-565	18-SS-565	18
18-SS-578	18-SS-578	18
18-SS-580	18-SS-580	18
18-SS-581	18-SS-581	18
18-SS-584-2	18-SS-584-2	18
18-SS-585	18-SS-585	18
18-SS-586	18-SS-586	18
18-SS-587	18-SS-587	18
18-SS-588	18-SS-588	18
18-SS-625	18-SS-625	18
18-SS-627	18-SS-627	18
18-SS-628	18-SS-628	18
18-SS-629	18-SS-629	18
18-SS-668	18-SS-668	18
18-SS-683	18-SS-683	18
18-SS-685	18-SS-685	18
18-SS-686-DAVG	18-SS-686-DAVG	18
RR-563	RR-563	RR-N
RR-564	RR-564	RR-N
Golf Course Area 8 (0 to <=1 foot)		
18-SS-GS-68	18-SS-GS-68	18
18-SS-GS-69	18-SS-GS-69	18
18-SS-GS-71	18-SS-GS-71	18
18-SS-GS-73	18-SS-GS-73	18
18-SS-GS-74	18-SS-GS-74	18
18-SS-GS-75	18-SS-GS-75	18
18-SS-GS-76	18-SS-GS-76	18
18-SS-GS-79	18-SS-GS-79	18
18-SS-GS-80	18-SS-GS-80	18
18-TP-524-S-1	18-TP-524-S-1	18
18-TP-526-S-1	18-TP-526-S-1	18
18-TP-527-S-1-DAVG	18-TP-527-S-1-DAVG	18
18-TP-528-S-1	18-TP-528-S-1	18
18-TP-529-S-1	18-TP-529-S-1	18
18-TP-530-S-1	18-TP-530-S-1	18
18-TP-550-S-1	18-TP-550-S-1	18
18-TP-551-S-1	18-TP-551-S-1	18

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-TP-552-S-1	18-TP-552-S-1	18
18-TP-GS-62-S-1	18-TP-GS-62-S-1	18
18-TP-GS-70-S-1	18-TP-GS-70-S-1	18
18-TP-GS-72-S-1	18-TP-GS-72-S-1	18
18-TR-102W,S-3	18-TR-102W,S-3	18
18-TR-109E,S-3	18-TR-109E,S-3	18
18-TR-109W,S-1	18-TR-109W,S-1	18
18-TR-110N,S-1	18-TR-110N,S-1	18
18-TR-110S,S-3	18-TR-110S,S-3	18
18-TR-111E,S-1	18-TR-111E,S-1	18
18-TR-111W,S-3	18-TR-111W,S-3	18
18-TR-112N,S-3	18-TR-112N,S-3	18
18-TR-112S,S-1	18-TR-112S,S-1	18
18-TR-113N,S-3	18-TR-113N,S-3	18
18-TR-114W,S-3	18-TR-114W,S-3	18
18-TR-115N,S-1	18-TR-115N,S-1	18
18-TR-115S,S-3	18-TR-115S,S-3	18
18-TR-116E,S-1	18-TR-116E,S-1	18
18-TR-116W,S-3	18-TR-116W,S-3	18
18-VS-249	18-VS-249	18
18-VS-250	18-VS-250	18
18-VS-251	18-VS-251	18
18-VS-252	18-VS-252	18
18-VS-257	18-VS-257	18
18-VS-258	18-VS-258	18
18-VS-259	18-VS-259	18
18-VS-260	18-VS-260	18
18R-107-75E	18R-107-75E	18-REF
18R-11	18R-11	18-REF
18R-112	18R-112	18-REF
18R-112-100E	18R-112-100E	18-REF
18R-112-100N	18R-112-100N	18-REF
18R-112-10E-DAVG	18R-112-10E-DAVG	18-REF
18R-112-10N	18R-112-10N	18-REF
18R-112-125N	18R-112-125N	18-REF
18R-112-25E	18R-112-25E	18-REF
18R-112-25N	18R-112-25N	18-REF
18R-112-50E	18R-112-50E	18-REF
18R-112-50N	18R-112-50N	18-REF
18R-112-75E	18R-112-75E	18-REF
18R-112-75N	18R-112-75N	18-REF

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18R-112-S-2	18R-112-S-2	18-REF
18R-113	18R-113	18-REF
18R-114	18R-114	18-REF
18R-115	18R-115	18-REF
18R-119	18R-119	18-REF
18R-12	18R-12	18-REF
18R-120-DAVG	18R-120-DAVG	18-REF
18R-121	18R-121	18-REF
18R-121-100N	18R-121-100N	18-REF
18R-121-100W-DAVG	18R-121-100W-DAVG	18-REF
18R-121-10N	18R-121-10N	18-REF
18R-121-10W	18R-121-10W	18-REF
18R-121-25N	18R-121-25N	18-REF
18R-121-25W	18R-121-25W	18-REF
18R-121-50N	18R-121-50N	18-REF
18R-121-50W	18R-121-50W	18-REF
18R-121-75N	18R-121-75N	18-REF
18R-121-75W	18R-121-75W	18-REF
18R-122	18R-122	18-REF
18R-123	18R-123	18-REF
18R-124	18R-124	18-REF
18R-125	18R-125	18-REF
18R-126	18R-126	18-REF
18R-127	18R-127	18-REF
18R-15	18R-15	18-REF
18R-15 6"-12"	18R-15 6"-12"	18-REF
18R-15-100N-DAVG	18R-15-100N-DAVG	18-REF
18R-15-10N	18R-15-10N	18-REF
18R-15-10W	18R-15-10W	18-REF
18R-15-25N	18R-15-25N	18-REF
18R-15-50N	18R-15-50N	18-REF
18R-15-75N	18R-15-75N	18-REF
18R-16	18R-16	18-REF
18R-432	18R-432	18-REF
18R-438	18R-438	18-REF
18R-439	18R-439	18-REF
18R-442	18R-442	18-REF
18R-451	18R-451	18-REF
18R-452	18R-452	18-REF
18R-452-S-2	18R-452-S-2	18-REF
18R-453	18R-453	18-REF

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
LR-106	LR-106	LR
LR-106-S-2	LR-106-S-2	LR
RR-121	RR-121	RR-N
RR-534	RR-534	RR-N
RR-535	RR-535	RR-N
18-MH-1	18-MH-1	18
18-MH-6	18-MH-6	18
18-SS-566	18-SS-566	18
18-SS-568	18-SS-568	18
18-SS-569	18-SS-569	18
18-SS-570	18-SS-570	18
18-SS-571	18-SS-571	18
18-SS-577	18-SS-577	18
18-SS-583-DAVG	18-SS-583-DAVG	18
18-SS-590	18-SS-590	18
18-SS-593	18-SS-593	18
18-SS-647	18-SS-647	18
18-SS-648	18-SS-648	18
18-SS-649	18-SS-649	18
18-SS-650	18-SS-650	18
18-SS-652	18-SS-652	18
18-SS-653	18-SS-653	18
18-SS-654	18-SS-654	18
18-SS-656	18-SS-656	18
18-SS-657	18-SS-657	18
18-SS-658	18-SS-658	18
18-SS-659	18-SS-659	18
18-SS-660	18-SS-660	18
18-SS-661	18-SS-661	18
18-SS-662	18-SS-662	18
18-SS-663-DAVG	18-SS-663-DAVG	18
18-SS-692-DAVG	18-SS-692-DAVG	18
18-SS-693	18-SS-693	18
18-SS-715	18-SS-715	18
18-SS-730	18-SS-730	18
18-SS-732	18-SS-732	18
18-SS-733-DAVG	18-SS-733-DAVG	18
18-SS-865	18-SS-865	18
18-SS-866	18-SS-866	18
18-SS-879	18-SS-879	18
18-SS-GS-34	18-SS-GS-34	18

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-SS-GS-35	18-SS-GS-35	18
18-SS-GS-36	18-SS-GS-36	18
18-SS-GS-37	18-SS-GS-37	18
18-SS-GS-63	18-SS-GS-63	18
18-SS-GS-65	18-SS-GS-65	18
18-SS-GS-66	18-SS-GS-66	18
RR-566	RR-566	RR-N
RR-567	RR-567	RR-N
RR-567-A1	RR-567-A1	RR-N
RR-567-A2	RR-567-A2	RR-N
RR-567-B1	RR-567-B1	LR
RR-567-B2	RR-567-B2	LR
RR-567-S-2	RR-567-S-2	RR-N
Golf Course Area 9 (0 to <=1 foot)		
18-TP-41-S-1	18-TP-41-S-1	18
18-TP-501-S-1-DAVG	18-TP-501-S-1-DAVG	18 North
18-TP-503-S-1	18-TP-503-S-1	18 North
18-TP-505-S-1	18-TP-505-S-1	18 North
18-TP-506-S-1	18-TP-506-S-1	18 North
18-TP-507-S-1	18-TP-507-S-1	18 North
18-TP-508-S-1	18-TP-508-S-1	18 North
18-TP-509-S-1	18-TP-509-S-1	18
18-TP-512-S-1	18-TP-512-S-1	18
18-TP-513-S-1	18-TP-513-S-1	18
18-TP-53-S-1	18-TP-53-S-1	18
18-TP-547-S-1-DAVG	18-TP-547-S-1-DAVG	18 North
18-TP-549-S-1	18-TP-549-S-1	18
18-TP-559-S-1-DAVG	18-TP-559-S-1-DAVG	18 North
18-TP-GS-27-S-1	18-TP-GS-27-S-1	18
18-TP-GS-28-S-1	18-TP-GS-28-S-1	18
18-TP-GS-32-S-1	18-TP-GS-32-S-1	18
18-TP-GS-33-S-1	18-TP-GS-33-S-1	18
18-TP-GS-38-S-1	18-TP-GS-38-S-1	18
18-TP-GS-40-S-1	18-TP-GS-40-S-1	18
18-TP-GS-41-S-1	18-TP-GS-41-S-1	18
18-TP-GS-42-S-1	18-TP-GS-42-S-1	18
18-TP-GS-43-S-1	18-TP-GS-43-S-1	18
18-TP-GS-47-S-1	18-TP-GS-47-S-1	18
18-TP-GS-49-S-1	18-TP-GS-49-S-1	18
18-TP-GS-53-S-1	18-TP-GS-53-S-1	18
18-TP-GS-54-S-1	18-TP-GS-54-S-1	18

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-TP-GS-59-S-1	18-TP-GS-59-S-1	18
18-TP-GS-81-S-1	18-TP-GS-81-S-1	18
18-TR-101N,S-3	18-TR-101N,S-3	18
18-TR-101S,S-1	18-TR-101S,S-1	18
18-TR-102E,S-1	18-TR-102E,S-1	18
18-TR-103S,S-1	18-TR-103S,S-1	18
18-VS-195	18-VS-195	1234
18-VS-196	18-VS-196	1234
18-VS-197	18-VS-197	1234
18-VS-198	18-VS-198	1234
18-VS-203	18-VS-203	1234
18-VS-204	18-VS-204	1234
18-VS-205	18-VS-205	1234
18-VS-208	18-VS-208	1234
18-VS-209	18-VS-209	1234
18-VS-210	18-VS-210	1234
18-VS-211	18-VS-211	1234
18R-02	18R-02	18-REF
18R-03	18R-03	18-REF
18R-06	18R-06	18-REF
18R-07	18R-07	18-REF
18R-402	18R-402	18-REF
18R-403	18R-403	18-REF
18R-407	18R-407	18-REF
18R-408	18R-408	18-REF
18R-412	18R-412	18-REF
18R-413	18R-413	18-REF
18R-414	18R-414	18-REF
18R-415	18R-415	18-REF
18R-416	18R-416	18-REF
18R-419	18R-419	18-REF
18R-420	18R-420	18-REF
18R-426	18R-426	18-REF
18R-428-DAVG	18R-428-DAVG	18-REF
RR-528	RR-528	RR-N
RR-528-S-2	RR-528-S-2	RR-N
RR-529	RR-529	RR-N
RR-531	RR-531	RR-N
1234-SS-501	1234-SS-501	1234
1234-SS-502	1234-SS-502	1234
1234-SS-503	1234-SS-503	1234

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
1234-SS-504	1234-SS-504	1234
1234-SS-505	1234-SS-505	1234
1234-SS-506	1234-SS-506	1234
1234-SS-507	1234-SS-507	1234
1234-SS-508	1234-SS-508	1234
1234-SS-509	1234-SS-509	1234
1234-SS-510	1234-SS-510	1234
1234-SS-511	1234-SS-511	1234
1234-SS-512	1234-SS-512	1234
1234-SS-513-DAVG	1234-SS-513-DAVG	1234
1234-SS-514-DAVG	1234-SS-514-DAVG	1234
1234-SS-515	1234-SS-515	1234
1234-TP-501-S-1	1234-TP-501-S-1	1234
1234-TP-502-S-1	1234-TP-502-S-1	1234
1234-TP-503-S-1	1234-TP-503-S-1	1234
1234-TP-504-S-1-DAVG	1234-TP-504-S-1-DAVG	1234
1234-TP-505-S-1	1234-TP-505-S-1	1234
1234-TP-506-S-1	1234-TP-506-S-1	1234
1234-TP-507-S-1	1234-TP-507-S-1	1234
1234-TP-508-S-1	1234-TP-508-S-1	1234
1234-TP-509-S-1	1234-TP-509-S-1	1234
1234-TP-511-S-1	1234-TP-511-S-1	1234
1234-TP-512-S-1	1234-TP-512-S-1	1234
1234-TP-513-S-1	1234-TP-513-S-1	1234
1234-TP-514-S-1	1234-TP-514-S-1	1234
1234-TP-515-S-1	1234-TP-515-S-1	1234
1234-TP-516-S-1-DAVG	1234-TP-516-S-1-DAVG	1234
1234-TP-518-S-1	1234-TP-518-S-1	1234
1234-TP-519-S-1	1234-TP-519-S-1	1234
1234-TP-520-S-1	1234-TP-520-S-1	1234
1234-TP-521-S-1	1234-TP-521-S-1	1234
1234-TP-522-S-1-DAVG	1234-TP-522-S-1-DAVG	1234
1234-TP-523-S-1	1234-TP-523-S-1	1234
1234-TP-524-S-1	1234-TP-524-S-1	1234
1234-TP-525-S-1	1234-TP-525-S-1	1234
1234-TP-526-S-1-DAVG	1234-TP-526-S-1-DAVG	1234
1234-TP-527-S-1	1234-TP-527-S-1	1234
18-SS-504	18-SS-504	18 North
18-SS-505	18-SS-505	18 North
18-SS-507	18-SS-507	18 North
18-SS-508	18-SS-508	18 North

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-SS-509	18-SS-509	18 North
18-SS-521-DAVG	18-SS-521-DAVG	18 North
18-SS-522	18-SS-522	18 North
18-SS-523	18-SS-523	18 North
18-SS-524	18-SS-524	18 North
18-SS-525	18-SS-525	18 North
18-SS-527	18-SS-527	18 North
18-SS-528	18-SS-528	18 North
18-SS-539	18-SS-539	18 North
18-SS-540-DAVG	18-SS-540-DAVG	18 North
18-SS-541	18-SS-541	18 North
18-SS-542	18-SS-542	18 North
18-SS-543	18-SS-543	18 North
18-SS-614	18-SS-614	18
18-SS-624	18-SS-624	18
18-SS-639	18-SS-639	18
18-SS-640	18-SS-640	18
18-SS-644	18-SS-644	18
18-SS-645	18-SS-645	18
18-SS-646	18-SS-646	18
18-SS-666	18-SS-666	18 North
18-SS-670	18-SS-670	18 North
18-SS-687	18-SS-687	18 North
18-SS-688	18-SS-688	18 North
18-SS-689	18-SS-689	18
18-SS-690	18-SS-690	18 North
18-SS-696	18-SS-696	18 North
18-SS-697	18-SS-697	18 North
18-SS-698	18-SS-698	18 North
18-SS-705	18-SS-705	18 North
18-SS-706	18-SS-706	18 North
18-SS-707	18-SS-707	18 North
18-SS-708	18-SS-708	18 North
18-SS-709	18-SS-709	18 North
18-SS-716	18-SS-716	18
18-SS-725	18-SS-725	18
18-SS-726	18-SS-726	18
18-SS-727	18-SS-727	18
18-SS-729	18-SS-729	18
18-SS-835	18-SS-835	18 North
18-SS-836	18-SS-836	18 North

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-SS-839	18-SS-839	18 North
18-SS-840	18-SS-840	18 North
18-SS-841	18-SS-841	18 North
18-SS-842	18-SS-842	18 North
18-SS-843-DAVG	18-SS-843-DAVG	18 North
18-SS-844	18-SS-844	18 North
18-SS-845	18-SS-845	18 North
18-SS-846	18-SS-846	18 North
18-SS-847	18-SS-847	18 North
18-SS-852	18-SS-852	18 North
18-SS-853	18-SS-853	18 North
18-SS-854	18-SS-854	18 North
18-SS-856	18-SS-856	18
18-SS-857	18-SS-857	18 North
18-SS-858	18-SS-858	18 North
18-SS-859	18-SS-859	18 North
18-SS-860-DAVG	18-SS-860-DAVG	18
18-SS-861	18-SS-861	18
18-SS-862	18-SS-862	18 North
18-SS-863	18-SS-863	18 North
18-SS-864	18-SS-864	18 North
18-SS-867	18-SS-867	18
18-SS-868	18-SS-868	18 North
18-SS-869	18-SS-869	18 North
18-SS-874	18-SS-874	18 North
18-SS-875-DAVG	18-SS-875-DAVG	18
18-SS-876	18-SS-876	18
18-SS-877	18-SS-877	18
18-SS-878	18-SS-878	18
18-SS-887	18-SS-887	18 North
18-SS-888	18-SS-888	18 North
18-SS-889	18-SS-889	18 North
18-SS-891	18-SS-891	18 North
18-SS-892	18-SS-892	18 North
18-SS-893	18-SS-893	18 North
18-SS-894	18-SS-894	18 North
18-SS-896	18-SS-896	18 North
18-SS-897	18-SS-897	18
18-SS-898	18-SS-898	18 North
18-SS-899	18-SS-899	18 North
18-SS-900	18-SS-900	18 North

Table B-3 – Golf Course Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
18-SS-901	18-SS-901	18 North
18-SS-902	18-SS-902	18 North
18-SS-903	18-SS-903	18 North
18-SS-904	18-SS-904	18 North
18-SS-905	18-SS-905	18 North
18-SS-906	18-SS-906	18 North
18-SS-909	18-SS-909	18 North
18-SS-910	18-SS-910	18 North
18-SS-917	18-SS-917	18 North
18-SS-918	18-SS-918	18 North
18-SS-919	18-SS-919	18 North
18-SS-927	18-SS-927	18 North
18-SS-GS-13	18-SS-GS-13	18
18-SS-GS-20	18-SS-GS-20	18
18-SS-GS-21	18-SS-GS-21	18
18-SS-GS-26	18-SS-GS-26	18
18-SS-GS-29	18-SS-GS-29	18
18-SS-GS-30	18-SS-GS-30	18
18-SS-GS-31	18-SS-GS-31	18
18-SS-GS-39	18-SS-GS-39	18
18-SS-GS-44	18-SS-GS-44	18
18-SS-GS-45	18-SS-GS-45	18
18-SS-GS-46	18-SS-GS-46	18
18-SS-GS-48	18-SS-GS-48	18
18-SS-GS-50	18-SS-GS-50	18
18-SS-GS-51	18-SS-GS-51	18
18-SS-GS-52	18-SS-GS-52	18
18-SS-GS-57	18-SS-GS-57	18
18-SS-GS-58	18-SS-GS-58	18
18-SS-GS-60	18-SS-GS-60	18
18-SS-GS-61	18-SS-GS-61	18
18-SS-GS-64	18-SS-GS-64	18

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
Golf Course Area 1 (1 to <=15 feet)		
25-B-501-S-4-DAVG	25-B-501-S-4-DAVG	25
25-TP-10,S-1	25-TP-10,S-1	25
25-TP-10,S-2	25-TP-10,S-2	25
25-TP-11,S-1	25-TP-11,S-1	25
25-TP-11,S-2	25-TP-11,S-2	25
25-TP-501-S-2-DAVG	25-TP-501-S-2-DAVG	25
25-TP-501-S-3	25-TP-501-S-3	25
25-TP-502-S-2	25-TP-502-S-2	25
25-TP-502-S-3	25-TP-502-S-3	25
25-TP-503-S-3	25-TP-503-S-3	25
25-TP-503-S-4	25-TP-503-S-4	25
25-TP-505-S-2	25-TP-505-S-2	25
25-TP-506-S-2	25-TP-506-S-2	25
25-TP-511-S-2	25-TP-511-S-2	25
25-TP-511-S-3	25-TP-511-S-3	25
25-TP-515-S-2	25-TP-515-S-2	25
25-TP-516-S-3	25-TP-516-S-3	25
25-TP-517-S-2	25-TP-517-S-2	25
25-TP-524-S-2	25-TP-524-S-2	25
25-TP-524-S-3	25-TP-524-S-3	25
25-TP-7,S-1	25-TP-7,S-1	25
25-TP-7,S-2	25-TP-7,S-2	25
25-TP-8,S-1	25-TP-8,S-1	25
25-TP-8,S-2	25-TP-8,S-2	25
25-TP-9,S-1	25-TP-9,S-1	25
25-TP-9,S-2	25-TP-9,S-2	25
26-TP-513-S-2	26-TP-513-S-2	26
26-TP-513-S-3	26-TP-513-S-3	26
26-TP-514-S-2	26-TP-514-S-2	26
26-TP-514-S-3	26-TP-514-S-3	26
26-TP-515-S-2	26-TP-515-S-2	26
26-TP-515-S-3	26-TP-515-S-3	26
26-TP-517-S-2	26-TP-517-S-2	26
26-TP-518-S-2	26-TP-518-S-2	26
26-TP-518-S-3	26-TP-518-S-3	26
26-TP-522-S-2	26-TP-522-S-2	26
36-TP-1-S-3	36-TP-1-S-3	36
36-TP-2-S-3	36-TP-2-S-3	36
36-TP-4-S-3	36-TP-4-S-3	36
36-TP-5-S-3	36-TP-5-S-3	36

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
36-TP-6-S-2	36-TP-6-S-2	36
36-TP-6-S-3	36-TP-6-S-3	36
39-B-1-S-6	39-B-1-S-6	39
39-B-1-S-7	39-B-1-S-7	39
5-TP-513-S-3	5-TP-513-S-3	5
Golf Course Area 2 (1 to <=15 feet)		
16-B-3,S-1	16-B-3,S-1	16
16-B-3,S-3	16-B-3,S-3	16
16-B-3,S-5-DAVG	16-B-3,S-5-DAVG	16
16-B-4,S-1	16-B-4,S-1	16
16-B-4,S-3	16-B-4,S-3	16
16-B-4,S-4-DAVG	16-B-4,S-4-DAVG	16
16-B-4,S-5	16-B-4,S-5	16
16-B-5,S-3	16-B-5,S-3	16
16-B-501-S-1B	16-B-501-S-1B	16
16-B-501-S-1C	16-B-501-S-1C	16
16-B-501-S-2A	16-B-501-S-2A	16
16-B-501-S-3	16-B-501-S-3	16
16-B-501-S-3A	16-B-501-S-3A	16
16-B-502-S-2	16-B-502-S-2	16
16-B-503-S-2	16-B-503-S-2	16
16-B-503-S-3	16-B-503-S-3	16
16-B-503-S-4	16-B-503-S-4	16
16-B-504-S-1A	16-B-504-S-1A	16
16-B-504-S-2	16-B-504-S-2	16
16-B-504-S-2A	16-B-504-S-2A	16
16-B-504-S-3	16-B-504-S-3	16
16-B-505-S-1C	16-B-505-S-1C	16
16-B-505-S-2	16-B-505-S-2	16
16-B-505-S-2A	16-B-505-S-2A	16
16-B-505-S-3	16-B-505-S-3	16
16-TP-10,S-2	16-TP-10,S-2	16
16-TP-11,S-2	16-TP-11,S-2	16
16-TP-12,S-2	16-TP-12,S-2	16
16-TP-14,S-2	16-TP-14,S-2	16
16-TP-16,S-2	16-TP-16,S-2	16
16-TP-3,S-2	16-TP-3,S-2	16
16-TP-501-S-2	16-TP-501-S-2	16
16-TP-501-S-3	16-TP-501-S-3	16
16-TP-502-S-2	16-TP-502-S-2	16
16-TP-502-S-3	16-TP-502-S-3	16

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
16-TP-503-S-2	16-TP-503-S-2	16
16-TP-503-S-3	16-TP-503-S-3	16
16-TP-504-S-2	16-TP-504-S-2	16
16-TP-504-S-3	16-TP-504-S-3	16
16-TP-505-S-2	16-TP-505-S-2	16
16-TP-505-S-3	16-TP-505-S-3	16
16-TP-507-S-2	16-TP-507-S-2	16
16-TP-507-S-3	16-TP-507-S-3	16
16-TP-508-S-2	16-TP-508-S-2	16
16-TP-508-S-3	16-TP-508-S-3	16
16-TP-509-S-2	16-TP-509-S-2	16
16-TP-509-S-3	16-TP-509-S-3	16
16-TP-6,S-2	16-TP-6,S-2	16
16-TP-7,S-2	16-TP-7,S-2	16
16-TP-8,S-2	16-TP-8,S-2	16
16-TP-9,S-2	16-TP-9,S-2	16
5-HA-513-S-2	5-HA-513-S-2	5
5-HA-514-S-2	5-HA-514-S-2	5
5-HA-515-S-2	5-HA-515-S-2	5
5-HA-516-S-2	5-HA-516-S-2	5
5-HA-517-S-2	5-HA-517-S-2	5
5-TP-511-S-3	5-TP-511-S-3	5
5-TP-512-S-3	5-TP-512-S-3	5
5D-TPS-13-S-3	5D-TPS-13-S-3	5D
5D-TPS-15-S-3	5D-TPS-15-S-3	5D
5D-TPS-16-S-3	5D-TPS-16-S-3	5D
5D-TPS-17-S-3	5D-TPS-17-S-3	5D
5D-TPS-19-S-3	5D-TPS-19-S-3	5D
5D-TPS-21-S-2-DAVG	5D-TPS-21-S-2-DAVG	5D
5D-TPS-21-S-3	5D-TPS-21-S-3	5D
5D-TPS-8-S-3	5D-TPS-8-S-3	5D
APE-TP-501-S-2	APE-TP-501-S-2	APE
APE-TP-502-S-3	APE-TP-502-S-3	APE
APG-TP-503-S-2	APG-TP-503-S-2	LR
APG-TP-504-S-2	APG-TP-504-S-2	LR
LR-020 1'-2'	LR-020 1'-2'	LR
LR-020-S-3	LR-020-S-3	LR
Golf Course Area 3 (1 to <=15 feet)		
38-B-501-S-2	38-B-501-S-2	38
38-B-501-S-3	38-B-501-S-3	38
38-HA-502-S-2	38-HA-502-S-2	38

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
38-HA-503-S-2	38-HA-503-S-2	38
Golf Course Area 4 (1 to <=15 feet)		
26-B-1,S-2	26-B-1,S-2	26
26-B-2,S-1	26-B-2,S-1	26
26-B-2,S-3	26-B-2,S-3	26
26-B-2,S-4-DAVG	26-B-2,S-4-DAVG	26
26-B-2,S-6	26-B-2,S-6	26
26-B-3,S-1	26-B-3,S-1	26
26-B-3,S-2	26-B-3,S-2	26
26-B-3,S-4	26-B-3,S-4	26
26-B-4,S-1	26-B-4,S-1	26
26-B-4,S-2	26-B-4,S-2	26
26-B-4,S-4	26-B-4,S-4	26
26-B-4,S-5-DAVG	26-B-4,S-5-DAVG	26
26-B-5,S-1	26-B-5,S-1	26
26-B-5,S-2	26-B-5,S-2	26
26-B-5,S-4	26-B-5,S-4	26
26-B-501-S-1A	26-B-501-S-1A	26
26-B-501-S-2-DAVG	26-B-501-S-2-DAVG	26
26-B-501-S-3	26-B-501-S-3	26
26-B-502-S-1A	26-B-502-S-1A	26
26-B-502-S-2	26-B-502-S-2	26
26-B-502-S-3	26-B-502-S-3	26
26-B-503-S-1A	26-B-503-S-1A	26
26-B-503-S-2A	26-B-503-S-2A	26
26-B-503-S-2C	26-B-503-S-2C	26
26-B-503-S-3	26-B-503-S-3	26
26-B-6,S-1	26-B-6,S-1	26
26-B-6,S-2	26-B-6,S-2	26
26-B-6,S-4	26-B-6,S-4	26
26-HA-501-S-2	26-HA-501-S-2	26
26-HA-503-S-2	26-HA-503-S-2	26
26-HA-504-S-2	26-HA-504-S-2	26
26-TP-501-S-2-DAVG	26-TP-501-S-2-DAVG	26
26-TP-501-S-3	26-TP-501-S-3	26
26-TP-502-S-2-DAVG	26-TP-502-S-2-DAVG	26
26-TP-502-S-3	26-TP-502-S-3	26
26-TP-503-S-2	26-TP-503-S-2	26
26-TP-503-S-3	26-TP-503-S-3	26
26-TP-504-S-2	26-TP-504-S-2	26
26-TP-504-S-3	26-TP-504-S-3	26

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
26-TP-505-S-2	26-TP-505-S-2	26
26-TP-505-S-3	26-TP-505-S-3	26
26-TP-506-S-2	26-TP-506-S-2	26
26-TP-506-S-3	26-TP-506-S-3	26
26-TP-507-S-2	26-TP-507-S-2	26
26-TP-507-S-3	26-TP-507-S-3	26
26-TP-510-S-2	26-TP-510-S-2	26
26-TP-510-S-3	26-TP-510-S-3	26
26-TP-511-S-2A	26-TP-511-S-2A	26
26-TP-511-S-3	26-TP-511-S-3	26
26-TP-516-S-2	26-TP-516-S-2	26
26-TP-519-S-2	26-TP-519-S-2	26
APF-HA-501-S-3	APF-HA-501-S-3	APF
APF-TP-501-S-2	APF-TP-501-S-2	APF
LR-060 1'-2'	LR-060 1'-2'	LR
LR-060-S-3	LR-060-S-3	LR
LR-125E-S-3	LR-125E-S-3	LR
LR-311-S-3	LR-311-S-3	LR
LR-318-S-3	LR-318-S-3	LR
Golf Course Area 5 (1 to <=15 feet)		
12-1-TP-502-S-2-DAVG	12-1-TP-502-S-2-DAVG	12
12-1-TP-503-S-2-DAVG	12-1-TP-503-S-2-DAVG	12
12-2-B-501-S-2-DAVG	12-2-B-501-S-2-DAVG	12
12-2-B-501-S-2A	12-2-B-501-S-2A	12
12-2-B-501-S-3A	12-2-B-501-S-3A	12
12-2-B-502-S-2-DAVG	12-2-B-502-S-2-DAVG	12
12-2-B-502-S-3	12-2-B-502-S-3	12
12-2-OBTP-504-S-2	12-2-OBTP-504-S-2	12
12-2-OBTP-505-S-2	12-2-OBTP-505-S-2	12
12-2-OBTP-505-S-3	12-2-OBTP-505-S-3	12
12-2-TP-10,S-1	12-2-TP-10,S-1	12
12-2-TP-10,S-2	12-2-TP-10,S-2	12
12-2-TP-501-S-2	12-2-TP-501-S-2	12
12-2-TP-501-S-3	12-2-TP-501-S-3	12
12-2-TP-502-S-2	12-2-TP-502-S-2	12
12-2-TP-503-S-2	12-2-TP-503-S-2	12
12-2-TP-503-S-3-DAVG	12-2-TP-503-S-3-DAVG	12
12-2-TP-503-S-4	12-2-TP-503-S-4	12
12-2-TP-504-S-2-DAVG	12-2-TP-504-S-2-DAVG	12
12-2-TP-505-S-2-DAVG	12-2-TP-505-S-2-DAVG	12
12-2-TP-505-S-3	12-2-TP-505-S-3	12

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
12-2-TP-506-S-2	12-2-TP-506-S-2	12
12-2-TP-9,S-1	12-2-TP-9,S-1	12
12-2-TP-9,S-2	12-2-TP-9,S-2	12
12-3-TP-3,S-1	12-3-TP-3,S-1	12
12-3-TP-3,S-2	12-3-TP-3,S-2	12
12-3-TP-501-S-2-DAVG	12-3-TP-501-S-2-DAVG	12
12-3-TP-501-S-3	12-3-TP-501-S-3	12
12-3-TP-502-S-2	12-3-TP-502-S-2	12
12-3-TP-502-S-3	12-3-TP-502-S-3	12
12-3-TP-503-S-2	12-3-TP-503-S-2	12
12-3-TP-503-S-3	12-3-TP-503-S-3	12
12-4-TP-501-S-2	12-4-TP-501-S-2	12
12-TP-501-S-2-DAVG	12-TP-501-S-2-DAVG	12
12-TP-501-S-3	12-TP-501-S-3	12
12-TP-502-S-2-DAVG	12-TP-502-S-2-DAVG	12
12-TP-502-S-3	12-TP-502-S-3	12
12-TP-503-S-2	12-TP-503-S-2	12
12-TP-503-S-3	12-TP-503-S-3	12
RR-559-S-3	RR-559-S-3	RR-N
Golf Course Area 6 (1 to <=15 feet)		
18-TP-553-S-2	18-TP-553-S-2	18
18-TP-554-S-2	18-TP-554-S-2	18
18-TP-554-S-3	18-TP-554-S-3	18
18-TP-555-S-2-DAVG	18-TP-555-S-2-DAVG	18
18-TP-555-S-3	18-TP-555-S-3	18
18-TP-556-S-2	18-TP-556-S-2	18
18-TP-556-S-3	18-TP-556-S-3	18
18-TP-557-S-2	18-TP-557-S-2	18
18-TP-557-S-3	18-TP-557-S-3	18
18-TP-558-S-3	18-TP-558-S-3	18
18-TP-558-S-4	18-TP-558-S-4	18
18R-474-S-3	18R-474-S-3	18-REF
RR-515 1'-2'	RR-515 1'-2'	RR-N
Golf Course Area 7 (1 to <=15 feet)		
18-TP-34,S-1	18-TP-34,S-1	18
18-TP-514-S-2	18-TP-514-S-2	18
18-TP-514-S-3	18-TP-514-S-3	18
18-TP-515-S-2	18-TP-515-S-2	18
18-TP-515-S-3	18-TP-515-S-3	18
18-TP-516-S-2	18-TP-516-S-2	18
18-TP-516-S-3	18-TP-516-S-3	18

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
18-TP-518-S-2	18-TP-518-S-2	18
18-TP-518-S-3	18-TP-518-S-3	18
18-TP-532-S-2	18-TP-532-S-2	18
18-TP-532-S-3	18-TP-532-S-3	18
18-TP-533-S-2-DAVG	18-TP-533-S-2-DAVG	18
18-TP-533-S-4	18-TP-533-S-4	18
18-TP-543-S-2	18-TP-543-S-2	18
18-TP-543-S-3	18-TP-543-S-3	18
18-TP-544-S-2	18-TP-544-S-2	18
18-TP-544-S-3	18-TP-544-S-3	18
18-TP-545-S-2	18-TP-545-S-2	18
18-TP-545-S-3	18-TP-545-S-3	18
18-TP-548-S-2	18-TP-548-S-2	18
18-TP-548-S-3	18-TP-548-S-3	18
18-TP-603-S-2-DAVG	18-TP-603-S-2-DAVG	18
18-TP-603-S-3	18-TP-603-S-3	18
18-TP-DEP,S-2	18-TP-DEP,S-2	18
18-TP-GS-24-S-2	18-TP-GS-24-S-2	18
18-TP-GS-25-S-2	18-TP-GS-25-S-2	18
18-TR-105N,S-2	18-TR-105N,S-2	18
18-TR-105S,S-4	18-TR-105S,S-4	18
18-TR-106E,S-4	18-TR-106E,S-4	18
18-TR-106W,S-2	18-TR-106W,S-2	18
18-TR-107S,S-4	18-TR-107S,S-4	18
18R-107-S-3	18R-107-S-3	18-REF
Golf Course Area 8 (1 to <=15 feet)		
18-TP-21,S-1	18-TP-21,S-1	18
18-TP-521-S-3	18-TP-521-S-3	18
18-TP-522-S-3	18-TP-522-S-3	18
18-TP-523-S-2	18-TP-523-S-2	18
18-TP-523-S-3	18-TP-523-S-3	18
18-TP-524-S-2	18-TP-524-S-2	18
18-TP-524-S-3	18-TP-524-S-3	18
18-TP-525-S-2	18-TP-525-S-2	18
18-TP-525-S-3	18-TP-525-S-3	18
18-TP-526-S-2	18-TP-526-S-2	18
18-TP-526-S-3	18-TP-526-S-3	18
18-TP-527-S-2-DAVG	18-TP-527-S-2-DAVG	18
18-TP-527-S-3	18-TP-527-S-3	18
18-TP-528-S-2	18-TP-528-S-2	18
18-TP-528-S-3	18-TP-528-S-3	18

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
18-TP-529-S-2	18-TP-529-S-2	18
18-TP-529-S-3	18-TP-529-S-3	18
18-TP-530-S-2	18-TP-530-S-2	18
18-TP-530-S-3	18-TP-530-S-3	18
18-TP-534-S-2	18-TP-534-S-2	18
18-TP-534-S-3	18-TP-534-S-3	18
18-TP-550-S-2	18-TP-550-S-2	18
18-TP-550-S-3	18-TP-550-S-3	18
18-TP-551-S-2	18-TP-551-S-2	18
18-TP-551-S-3	18-TP-551-S-3	18
18-TP-552-S-2	18-TP-552-S-2	18
18-TP-552-S-3	18-TP-552-S-3	18
18-TP-604-S-1	18-TP-604-S-1	18
18-TP-604-S-2	18-TP-604-S-2	18
18-TP-GS-62-S-2	18-TP-GS-62-S-2	18
18-TP-GS-70-S-2	18-TP-GS-70-S-2	18
18-TP-GS-72-S-2	18-TP-GS-72-S-2	18
18-TR-102W,S-4	18-TR-102W,S-4	18
18-TR-109E,S-4	18-TR-109E,S-4	18
18-TR-109W,S-2	18-TR-109W,S-2	18
18-TR-110N,S-2	18-TR-110N,S-2	18
18-TR-110S,S-4	18-TR-110S,S-4	18
18-TR-111E,S-2	18-TR-111E,S-2	18
18-TR-111W,S-4	18-TR-111W,S-4	18
18-TR-112N,S-4	18-TR-112N,S-4	18
18-TR-112S,S-2	18-TR-112S,S-2	18
18-TR-113N,S-4	18-TR-113N,S-4	18
18-TR-114-S-2	18-TR-114-S-2	18
18-TR-114W,S-4	18-TR-114W,S-4	18
18-TR-115N,S-2	18-TR-115N,S-2	18
18-TR-115S,S-4	18-TR-115S,S-4	18
18-TR-116E,S-2	18-TR-116E,S-2	18
18-TR-116W,S-4	18-TR-116W,S-4	18
18R-112-S-3	18R-112-S-3	18-REF
18R-15 1'-2'-DAVG	18R-15 1'-2'-DAVG	18-REF
18R-452-S-3	18R-452-S-3	18-REF
LR-106-S-3	LR-106-S-3	LR
RR-567-S-3	RR-567-S-3	RR-N
Golf Course Area 9 (1 to <=15 feet)		
1-TP-14,S-1	1-TP-14,S-1	1234
1-TP-15,S-1	1-TP-15,S-1	1234

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
1-TP-15,S-2	1-TP-15,S-2	1234
1-TP-2,S-1	1-TP-2,S-1	1234
1-TP-4,S-1	1-TP-4,S-1	1234
1-TP-6,S-1	1-TP-6,S-1	1234
1-TP-8,S-1	1-TP-8,S-1	1234
1234-TP-501-S-2	1234-TP-501-S-2	1234
1234-TP-501-S-3	1234-TP-501-S-3	1234
1234-TP-502-S-2	1234-TP-502-S-2	1234
1234-TP-502-S-3	1234-TP-502-S-3	1234
1234-TP-503-S-2	1234-TP-503-S-2	1234
1234-TP-503-S-3	1234-TP-503-S-3	1234
1234-TP-504-S-2	1234-TP-504-S-2	1234
1234-TP-504-S-3	1234-TP-504-S-3	1234
1234-TP-505-S-2	1234-TP-505-S-2	1234
1234-TP-505-S-3	1234-TP-505-S-3	1234
1234-TP-506-S-2	1234-TP-506-S-2	1234
1234-TP-506-S-3	1234-TP-506-S-3	1234
1234-TP-507-S-2	1234-TP-507-S-2	1234
1234-TP-507-S-3	1234-TP-507-S-3	1234
1234-TP-508-S-2	1234-TP-508-S-2	1234
1234-TP-508-S-3	1234-TP-508-S-3	1234
1234-TP-509-S-2	1234-TP-509-S-2	1234
1234-TP-509-S-3	1234-TP-509-S-3	1234
1234-TP-510-S-2-DAVG	1234-TP-510-S-2-DAVG	1234
1234-TP-510-S-3	1234-TP-510-S-3	1234
1234-TP-511-S-2	1234-TP-511-S-2	1234
1234-TP-511-S-3	1234-TP-511-S-3	1234
1234-TP-512-S-2	1234-TP-512-S-2	1234
1234-TP-512-S-3	1234-TP-512-S-3	1234
1234-TP-513-S-2	1234-TP-513-S-2	1234
1234-TP-513-S-3	1234-TP-513-S-3	1234
1234-TP-514-S-2	1234-TP-514-S-2	1234
1234-TP-514-S-3	1234-TP-514-S-3	1234
1234-TP-515-S-2	1234-TP-515-S-2	1234
1234-TP-515-S-3	1234-TP-515-S-3	1234
1234-TP-516-S-2	1234-TP-516-S-2	1234
1234-TP-516-S-3	1234-TP-516-S-3	1234
1234-TP-518-S-2	1234-TP-518-S-2	1234
1234-TP-518-S-3	1234-TP-518-S-3	1234
1234-TP-519-S-2	1234-TP-519-S-2	1234
1234-TP-519-S-3	1234-TP-519-S-3	1234

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
1234-TP-520-S-2	1234-TP-520-S-2	1234
1234-TP-520-S-3	1234-TP-520-S-3	1234
1234-TP-521-S-2	1234-TP-521-S-2	1234
1234-TP-521-S-3	1234-TP-521-S-3	1234
1234-TP-522-S-2-DAVG	1234-TP-522-S-2-DAVG	1234
1234-TP-522-S-3	1234-TP-522-S-3	1234
1234-TP-523-S-2	1234-TP-523-S-2	1234
1234-TP-523-S-3	1234-TP-523-S-3	1234
1234-TP-524-S-2	1234-TP-524-S-2	1234
1234-TP-524-S-3	1234-TP-524-S-3	1234
1234-TP-525-S-2	1234-TP-525-S-2	1234
1234-TP-525-S-3	1234-TP-525-S-3	1234
1234-TP-526-S-2-DAVG	1234-TP-526-S-2-DAVG	1234
1234-TP-526-S-3	1234-TP-526-S-3	1234
1234-TP-527-S-2	1234-TP-527-S-2	1234
1234-TP-527-S-3	1234-TP-527-S-3	1234
18-B-501-S-1	18-B-501-S-1	18
18-B-501-S-2	18-B-501-S-2	18
18-TP-501-S-2-DAVG	18-TP-501-S-2-DAVG	18 North
18-TP-501-S-3	18-TP-501-S-3	18 North
18-TP-503-S-2	18-TP-503-S-2	18 North
18-TP-503-S-3	18-TP-503-S-3	18 North
18-TP-505-S-2	18-TP-505-S-2	18 North
18-TP-505-S-3	18-TP-505-S-3	18 North
18-TP-506-S-2	18-TP-506-S-2	18 North
18-TP-506-S-3	18-TP-506-S-3	18 North
18-TP-507-S-2	18-TP-507-S-2	18 North
18-TP-507-S-3	18-TP-507-S-3	18 North
18-TP-508-S-2	18-TP-508-S-2	18 North
18-TP-508-S-3	18-TP-508-S-3	18 North
18-TP-509-S-2	18-TP-509-S-2	18
18-TP-509-S-3	18-TP-509-S-3	18
18-TP-510-S-2-DAVG	18-TP-510-S-2-DAVG	18
18-TP-510-S-3	18-TP-510-S-3	18
18-TP-512-S-2	18-TP-512-S-2	18
18-TP-512-S-3	18-TP-512-S-3	18
18-TP-513-S-2	18-TP-513-S-2	18
18-TP-513-S-3	18-TP-513-S-3	18
18-TP-547-S-2-DAVG	18-TP-547-S-2-DAVG	18 North
18-TP-547-S-3	18-TP-547-S-3	18 North
18-TP-549-S-2	18-TP-549-S-2	18

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
18-TP-549-S-3	18-TP-549-S-3	18
18-TP-559-S-2-DAVG	18-TP-559-S-2-DAVG	18 North
18-TP-559-S-3	18-TP-559-S-3	18 North
18-TP-600-S-1	18-TP-600-S-1	18
18-TP-600-S-2	18-TP-600-S-2	18
18-TP-601-S-2	18-TP-601-S-2	18
18-TP-601-S-3	18-TP-601-S-3	18
18-TP-602-S-2	18-TP-602-S-2	18
18-TP-602-S-3	18-TP-602-S-3	18
18-TP-GS-22-S-2	18-TP-GS-22-S-2	18
18-TP-GS-27-S-2	18-TP-GS-27-S-2	18
18-TP-GS-28-S-2	18-TP-GS-28-S-2	18
18-TP-GS-32-S-2	18-TP-GS-32-S-2	18
18-TP-GS-33-S-2	18-TP-GS-33-S-2	18
18-TP-GS-38-S-2	18-TP-GS-38-S-2	18
18-TP-GS-40-S-2	18-TP-GS-40-S-2	18
18-TP-GS-41-S-2	18-TP-GS-41-S-2	18
18-TP-GS-42-S-2	18-TP-GS-42-S-2	18
18-TP-GS-43-S-2	18-TP-GS-43-S-2	18
18-TP-GS-47-S-2	18-TP-GS-47-S-2	18
18-TP-GS-49-S-2	18-TP-GS-49-S-2	18
18-TP-GS-53-S-2	18-TP-GS-53-S-2	18
18-TP-GS-54-S-2	18-TP-GS-54-S-2	18
18-TP-GS-59-S-2	18-TP-GS-59-S-2	18
18-TP-GS-81-S-2	18-TP-GS-81-S-2	18
18-TR-101N,S-4	18-TR-101N,S-4	18
18-TR-101S,S-2	18-TR-101S,S-2	18
18-TR-102E,S-2	18-TR-102E,S-2	18
18-TR-103S,S-2	18-TR-103S,S-2	18
3-TP-1,S-1-DAVG	3-TP-1,S-1-DAVG	1234
3-TP-1,S-2	3-TP-1,S-2	1234
3-TP-2,S-1	3-TP-2,S-1	1234
3-TP-2,S-2	3-TP-2,S-2	1234
3-TP-3,S-1	3-TP-3,S-1	1234
3-TP-3,S-2	3-TP-3,S-2	1234
3-TP-4,S-1-DAVG	3-TP-4,S-1-DAVG	1234
3-TP-4,S-2	3-TP-4,S-2	1234
3-TP-5,S-1	3-TP-5,S-1	1234
3-TP-5,S-2-DAVG	3-TP-5,S-2-DAVG	1234
3-TP-6,S-1	3-TP-6,S-1	1234
3-TP-6,S-2	3-TP-6,S-2	1234

Table B-4 – Golf Course Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
RR-528-S-3	RR-528-S-3	RR-N

Table B-5 – Historical Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
Historical Area 1 (0 to <=1 foot)		
18-SS-517	18-SS-517	18 North
18-SS-884	18-SS-884	18 North
18-SS-885	18-SS-885	18 North
RR-530-A	RR-530-A	RR-N
RR-530-B	RR-530-B	LR
RR-530-C	RR-530-C	LR
Historical Area 2 (0 to <=1 foot)		
01-SM-SS-[R67C2]-D1-005	R67C2	MISC
01-SM-SS-[R67C3]-D1-005	R67C3	MISC
01-SM-SS-[R67C4]-D1-005	R67C4	MISC
01-SM-SS-[R68C2]-D1-005	R68C2	MISC
01-SM-SS-[R68C3]-D1-005	R68C3	MISC
01-SM-SS-[R68C4]-D1-005	R68C4	MISC
01-SM-SS-[R69C4]-D1-005	R69C4	MISC
BG-SS-4	BG-SS-4	LR
LR-195	LR-195	LR
Historical Area 3 (0 to <=1 foot)		
01-H404-SS[11]D1-005-DAVG	H404-11	MISC
01-H404-SS[2]D1-005	H404-2	MISC
01-H404-SS[3]D1-005	H404-3	MISC
01-H404-SS[5]D1-005	H404-5	MISC
01-H404-SS[7]D1-005	H404-7	MISC
01-H404-SS[8]D1-005	H404-8	MISC
01-H404-SS[9]D1-005	H404-9	MISC
19-VS-38	19-VS-38	MISC

Table B-6 – Industrial Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
Industrial Area (0 to <=1 foot)		
10-SS-401	10-SS-401	10
10-VS-2a	10-VS-2a	10
31-SS-403	31-SS-403	31-REF
31-SS-404	31-SS-404	31-REF
31-SS-501-DAVG	31-SS-501-DAVG	31-REF
31-SS-503	31-SS-503	31-REF
31-SS-504	31-SS-504	31-REF
31-SS-505	31-SS-505	31-REF
31-SS-506	31-SS-506	31-REF
31-SS-507	31-SS-507	31-REF
31-SS-509	31-SS-509	31-REF
31-SS-511	31-SS-511	31-REF
31-SS-512	31-SS-512	31-REF
31-SS-513	31-SS-513	31-REF
31-SS-518	31-SS-518	31-REF
31-SS-519	31-SS-519	31-REF
31-SS-520	31-SS-520	31-REF
31-SS-521	31-SS-521	31-REF
31-SS-522	31-SS-522	31-REF
31-SS-523	31-SS-523	31-REF
31-SS-524	31-SS-524	31-REF
31-SS-525	31-SS-525	31-REF
31-SS-526	31-SS-526	31-REF
31-SS-527-DAVG	31-SS-527-DAVG	31-REF
31-SS-528	31-SS-528	31-REF
31-SS-529	31-SS-529	31-REF
31-SS-530	31-SS-530	31-REF
31-SS-533	31-SS-533	31-REF
31-SS-535-DAVG	31-SS-535-DAVG	31-REF
31-SS-536	31-SS-536	31-REF
31-SS-600	31-SS-600	31
31-SS-601	31-SS-601	31
31-SS-602	31-SS-602	31
31-SS-603	31-SS-603	31
31-SS-606	31-SS-606	31
31-SS-608	31-SS-608	31
31-SS-609	31-SS-609	31
31-SS-610	31-SS-610	31
31-SS-614	31-SS-614	31
31-SS-621	31-SS-621	31

Table B-6 – Industrial Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
31-SS-624	31-SS-624	31
31-SS-626	31-SS-626	31
31-SS-627	31-SS-627	31
31-SS-628	31-SS-628	31
31-SS-629	31-SS-629	31
31-SS-631	31-SS-631	31
31-SS-632	31-SS-632	31
31-SS-635	31-SS-635	31
31-SS-639	31-SS-639	31
31-SS-640	31-SS-640	31
31-SS-644	31-SS-644	31
31-SS-645	31-SS-645	31
31-SS-646	31-SS-646	31
31-SS-649	31-SS-649	31
31-SS-650	31-SS-650	31
31-SS-651	31-SS-651	31
31-SS-658	31-SS-658	31
31-TP-503-S-1	31-TP-503-S-1	31-REF
31-TP-505-S-1-DAVG	31-TP-505-S-1-DAVG	31-REF
31-TP-506-S-1	31-TP-506-S-1	31-REF
31-TP-507-S-1	31-TP-507-S-1	31-REF
31-VS-107	31-VS-107	PARC_1_NOC
31-VS-136	31-VS-136	31
31-VS-144	31-VS-144	31
31-VS-149	31-VS-149	31
31-VS-161	31-VS-161	31
31-VS-211	31-VS-211	31
31-VS-212	31-VS-212	31
31-VS-419	31-VS-419	31
31-VS-420	31-VS-420	31
31-VS-422	31-VS-422	31
31-VS-424	31-VS-424	31
31-VS-425	31-VS-425	PARC_1_NOC
31-VS-427	31-VS-427	PARC_1_NOC
31-VS-428	31-VS-428	PARC_1_NOC
31-VS-430	31-VS-430	PARC_1_NOC
31-VS-431	31-VS-431	PARC_1_NOC
31-VS-439	31-VS-439	31
31-VS-440	31-VS-440	31
31-VS-441	31-VS-441	31
31-VS-442	31-VS-442	31

Table B-6 – Industrial Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
31-VS-446	31-VS-446	31
31-VS-508	31-VS-508	PARC_1_NOC
31-VS-509	31-VS-509	31
31-VS-510	31-VS-510	31
31-VS-529	31-VS-529	PARC_1_NOC
31-VS-533	31-VS-533	PARC_1_NOC
31-VS-536	31-VS-536	PARC_1_NOC
31-VS-566	31-VS-566	PARC_1_NOC
31-VS-567	31-VS-567	PARC_1_NOC
31-VS-577-DAVG	31-VS-577-DAVG	PARC_1_NOC
31-VS-580	31-VS-580	PARC_1_NOC
31-VS-581	31-VS-581	PARC_1_NOC
31-VS-582	31-VS-582	PARC_1_NOC
31-VS-584	31-VS-584	31
31-VS-585	31-VS-585	31
31-VS-591	31-VS-591	PARC_1_NOC
31-VS-592	31-VS-592	PARC_1_NOC
31-VS-595	31-VS-595	PARC_1_NOC
31-VS-596	31-VS-596	PARC_1_NOC
31-VS-597-DAVG	31-VS-597-DAVG	PARC_1_NOC
31-VS-600	31-VS-600	PARC_1_NOC
31-VS-601	31-VS-601	PARC_1_NOC
31-VS-607	31-VS-607	PARC_1_NOC
31-VS-631	31-VS-631	PARC_1_NOC
31-VS-634	31-VS-634	PARC_1_NOC
31-VS-635	31-VS-635	PARC_1_NOC
31-VS-642	31-VS-642	PARC_1_NOC
31-VS-643	31-VS-643	PARC_1_NOC
31-VS-644	31-VS-644	PARC_1_NOC
31-VS-650	31-VS-650	PARC_1_NOC
31-VS-651	31-VS-651	PARC_1_NOC
31-VS-653	31-VS-653	PARC_1_NOC
31-VS-656	31-VS-656	PARC_1_NOC
31-VS-658	31-VS-658	PARC_1_NOC
31-VS-662	31-VS-662	PARC_1_NOC
31-VS-670	31-VS-670	PARC_1_NOC
31-VS-679-DAVG	31-VS-679-DAVG	PARC_1_NOC
31-VS-682	31-VS-682	PARC_1_NOC
31-VS-684	31-VS-684	PARC_1_NOC
31-VS-700	31-VS-700	PARC_1_NOC
31-VS-701	31-VS-701	PARC_1_NOC

Table B-6 – Industrial Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
31-VS-702	31-VS-702	PARC_1_NOC
31-VS-703	31-VS-703	PARC_1_NOC
31-VS-704	31-VS-704	PARC_1_NOC
31-VS-705	31-VS-705	PARC_1_NOC
31-VS-706	31-VS-706	PARC_1_NOC
31-VS-707	31-VS-707	PARC_1_NOC
31-VS-708	31-VS-708	PARC_1_NOC
31-VS-709	31-VS-709	PARC_1_NOC
31-VS-710	31-VS-710	PARC_1_NOC
31-VS-711	31-VS-711	PARC_1_NOC
31-VS-712	31-VS-712	PARC_1_NOC
31-VS-76	31-VS-76	31
31-VS-77	31-VS-77	31
31-VS-88	31-VS-88	PARC_1_NOC
31-VS-94	31-VS-94	PARC_1_NOC
31-VS-95	31-VS-95	PARC_1_NOC
31-VS-96	31-VS-96	PARC_1_NOC
31-VS-98	31-VS-98	PARC_1_NOC
31-VS-99	31-VS-99	PARC_1_NOC
LR-053	LR-053	LR
LR-054	LR-054	LR
LR-055	LR-055	LR
LR-056	LR-056	LR
LR-057	LR-057	LR
LR-058	LR-058	LR
LR-069	LR-069	LR
LR-070-1	LR-070-1	LR
LR-070-2	LR-070-2	LR
LR-070S	LR-070S	31-REF
LR-071-1	LR-071-1	LR
LR-071-2	LR-071-2	LR
LR-071S	LR-071S	31-REF
LR-072	LR-072	LR
LR-073-1	LR-073-1	LR
LR-073-2	LR-073-2	LR
LR-086	LR-086	LR
LR-087	LR-087	LR
LR-088	LR-088	LR
LR-089	LR-089	LR
LR-102N	LR-102N	LR
LR-102S	LR-102S	LR

Table B-6 – Industrial Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
LR-102W	LR-102W	LR
LR-104A	LR-104A	LR
LR-121	LR-121	LR
LR-122	LR-122	LR
LR-123	LR-123	LR
RR-546-C	RR-546-C	LR
RR-593	RR-593	LR
RR-594	RR-594	RR-N

Table B-7 – Industrial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
Industrial Area (1 to <= 15 feet)		
10-TP-501-S-2	10-TP-501-S-2	10
10-TP-501-S-3	10-TP-501-S-3	10
10-TP-503-S-2	10-TP-503-S-2	10
10-TP-503-S-3	10-TP-503-S-3	10
31-B-501-S-2	31-B-501-S-2	31
31-B-501-S-3	31-B-501-S-3	31
31-B-502-S-2	31-B-502-S-2	31
31-B-502-S-3	31-B-502-S-3	31
31-B-503-S-2	31-B-503-S-2	31-REF
31-B-503-S-3	31-B-503-S-3	31-REF
31-B-504-S-2	31-B-504-S-2	31-REF
31-B-504-S-3	31-B-504-S-3	31-REF
31-HA-501-S-3	31-HA-501-S-3	31-REF
31-HA-502-S-3	31-HA-502-S-3	31-REF
31-TP-10,S-2	31-TP-10,S-2	31
31-TP-11,S-2	31-TP-11,S-2	31
31-TP-12,S-2	31-TP-12,S-2	31
31-TP-13,S-2	31-TP-13,S-2	31
31-TP-14,S-2	31-TP-14,S-2	31
31-TP-15,S-2	31-TP-15,S-2	31
31-TP-16,S-2	31-TP-16,S-2	31
31-TP-17,S-2	31-TP-17,S-2	31-REF
31-TP-18,S-2	31-TP-18,S-2	31-REF
31-TP-19,S-1	31-TP-19,S-1	31-REF
31-TP-19,S-2	31-TP-19,S-2	31-REF
31-TP-21,S-1-DAVG	31-TP-21,S-1-DAVG	31-REF
31-TP-21,S-2	31-TP-21,S-2	31-REF
31-TP-501-S-2-DAVG	31-TP-501-S-2-DAVG	31
31-TP-501-S-3	31-TP-501-S-3	31
31-TP-502-S-2	31-TP-502-S-2	31
31-TP-502-S-3	31-TP-502-S-3	31
31-TP-503-S-2	31-TP-503-S-2	31-REF
31-TP-503-S-3	31-TP-503-S-3	31-REF
31-TP-504-S-2	31-TP-504-S-2	31
31-TP-504-S-3	31-TP-504-S-3	31
31-TP-505-S-2	31-TP-505-S-2	31-REF
31-TP-505-S-3	31-TP-505-S-3	31-REF
31-TP-506-S-2	31-TP-506-S-2	31-REF
31-TP-506-S-3	31-TP-506-S-3	31-REF

Table B-7 – Industrial Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
31-TP-507-S-2	31-TP-507-S-2	31-REF
31-TP-507-S-3	31-TP-507-S-3	31-REF
31-TP-508-S-2	31-TP-508-S-2	31-REF
31-TP-508-S-3	31-TP-508-S-3	31-REF
31-TP-7,S-2	31-TP-7,S-2	31-REF
31-TP-8,S-2	31-TP-8,S-2	31
31-TP-9,S-2	31-TP-9,S-2	31
LR-104 1'-2'	LR-104 1'-2'	RR-N
RR-595-S-3	RR-595-S-3	RR-N

Table B-8 – Open Space Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
Open Space Area 1 (0 to <= 1 Foot BGS)		
6-SS-501	6-SS-501	6
6-SS-502	6-SS-502	6
6-SS-503	6-SS-503	6
LR-013	LR-013	LR
Open Space Area 4 (0 to <= 1 Foot BGS)		
18-HA-501-S-1-DAVG	18-HA-501-S-1-DAVG	18
18-HA-502-S-1	18-HA-502-S-1	18
18-HA-503-S-1	18-HA-503-S-1	18
18-SS-731	18-SS-731	18
18-SS-GS-77	18-SS-GS-77	18
18-SS-GS-78	18-SS-GS-78	18
18R-443	18R-443	18-REF
18R-454	18R-454	18-REF
18R-460	18R-460	18-REF
18R-469	18R-469	18-REF
LR-139	LR-139	LR
LR-140	LR-140	LR
LR-141	LR-141	LR
LR-143	LR-143	LR
LR-155	LR-155	LR
LR-156	LR-156	LR
LR-183	LR-183	LR
LR-197	LR-197	LR
LR-214	LR-214	LR
LR-231	LR-231	LR
LR-232	LR-232	LR
LR-246	LR-246	LR
LR-247	LR-247	LR
Open Space Area NOC (0 to <= 1 Foot BGS)		
01-OS02-SS-[LR-68-1050E]-C1-000	LR-68-1050E	Creek
01-OS02-SS-[LR-68-1125E]-C1-000	LR-68-1125E	Creek
01-OS02-SS-[LR-68-1200E]-C1-000	LR-68-1200E	Creek
01-OS02-SS-[LR-68-1425E]-C1-000	LR-68-1425E	Creek
01-OS02-SS-[LR-68-1500E]-C1-000	LR-68-1500E	Creek
01-OS02-SS-[LR-68-150E]-C1-000	LR-68-150E	Creek
01-OS02-SS-[LR-68-150W]-C1-000	LR-68-150W	Creek
01-OS02-SS-[LR-68-1650E]-C1-000	LR-68-1650E	Creek
01-OS02-SS-[LR-68-1725E]-C1-000	LR-68-1725E	Creek
01-OS02-SS-[LR-68-225E]-C1-000	LR-68-225E	Creek
01-OS02-SS-[LR-68-225W]-C1-000	LR-68-225W	Creek

Table B-8 – Open Space Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
01-OS02-SS-[LR-68-300E]-C1-000	LR-68-300E	Creek
01-OS02-SS-[LR-68-300W]-C1-000	LR-68-300W	Creek
01-OS02-SS-[LR-68-375E]-C1-000	LR-68-375E	Creek
01-OS02-SS-[LR-68-375W]-C1-000	LR-68-375W	Creek
01-OS02-SS-[LR-68-450E]-C1-000	LR-68-450E	Creek
01-OS02-SS-[LR-68-450W]-C1-000	LR-68-450W	Creek
01-OS02-SS-[LR-68-675E]-C1-000	LR-68-675E	Creek
01-OS02-SS-[LR-68-750E]-C1-000	LR-68-750E	Creek
01-OS02-SS-[LR-68-825E]-C1-000	LR-68-825E	Creek
01-OS02-SS-[LR-68-900E]-C1-000	LR-68-900E	Creek
01-OS02-SS-[LR-68-975E]-C1-000	LR-68-975E	Creek
01-OS02-SS[LR-68-300W-TRANSECT]-C1-000	LR-68-300W-TRANSECT	Creek
01-OS02-SS[LR-68-600E-TRANSECT]-C1-000	LR-68-600E-TRANSECT	Creek
02-OS02-[LR-68-600E-2-TRANSECT]-D1-000	LR-68-600E-2-TRANSECT	Creek
02-OS02-[LR-68-600E-3-TRANSECT]-D1-000	LR-68-600E-3-TRANSECT	Creek
02-OS02-[LR-68-600E-4-TRANSECT]-D1-000	LR-68-600E-4-TRANSECT	Creek
02-OS02-[LR-68-600E-5-TRANSECT]-D1-000	LR-68-600E-5-TRANSECT	Creek
02-OS02-[LR-68-600E-6-TRANSECT]-D1-000	LR-68-600E-6-TRANSECT	Creek
31-SS-402	31-SS-402	Creek
31-SS-502	31-SS-502	Creek
31-TP-509-S-1	31-TP-509-S-1	Creek
31-VS-433	31-VS-433	Creek
31-VS-530	31-VS-530	Creek
LR-052	LR-052	Creek
LR-069W	LR-069W	Creek
LR-085	LR-085	Creek
LR-101	LR-101	Creek
LR-102	LR-102	Creek
LR-120	LR-120	Creek
LR-68-E125	LR-68-E125	Creek
LR-68-N125-DAVG	LR-68-N125-DAVG	Creek
LR-68-S125	LR-68-S125	Creek
LR-68-S175	LR-68-S175	Creek
LR-68-S275	LR-68-S275	Creek
LR-68-S375	LR-68-S375	Creek
LR-68-S475-DAVG	LR-68-S475-DAVG	Creek
LR-68-S575	LR-68-S575	Creek
LR-68-S675	LR-68-S675	Creek
LR-68-S775	LR-68-S775	Creek
LR-68-S875	LR-68-S875	Creek
LR-68-W25	LR-68-W25	Creek

Table B-8 – Open Space Area Samples <=1 Foot

Sample ID	Short Sample ID	RI Area
RR-592	RR-592	Creek
RR-596	RR-596	Creek
RR-596-S-2	RR-596-S-2	Creek
RR-597	RR-597	Creek
RR-598-DAVG	RR-598-DAVG	Creek
RR-599	RR-599	Creek
Open Space Area SOC (0 to <= 1 Foot BGS)		
38-VS-12	38-VS-12	MISC
38-VS-16	38-VS-16	MISC
38-VS-18	38-VS-18	MISC
38-VS-8	38-VS-8	MISC
LR-051	LR-051	LR
LR-100	LR-100	LR
LR-117	LR-117	LR
LR-117-S-2	LR-117-S-2	LR
LR-119	LR-119	LR
LR-135	LR-135	LR
LR-136	LR-136	LR
LR-137	LR-137	LR
LR-68-W125	LR-68-W125	MISC
RR-548-A2	RR-548-A2	RR-N
RR-548-B1	RR-548-B1	LR
RR-548-B2	RR-548-B2	LR
RR-555-B2	RR-555-B2	LR

Table B-9 – Open Space Area Samples >1 Foot and <=15 Feet

Sample ID	Short Sample ID	RI Area
Open Space Area 4 (1 to <=15 feet)		
18-HA-501-S-2	18-HA-501-S-2	18
18-HA-502-S-2	18-HA-502-S-2	18
18-HA-503-S-2	18-HA-503-S-2	18
Open Space Area NOC (1 to <=15 feet)		
31-TP-509-S-2	31-TP-509-S-2	Creek
31-TP-509-S-3	31-TP-509-S-3	Creek
RR-596-S-3	RR-596-S-3	Creek
Open Space Area SOC (1 to <=15 feet)		
LR-117-S-3	LR-117-S-3	LR

Appendix C – Letters and Other Documentation of Site-Specific Determinations by Ecology

C.1 Introduction

The purpose of this appendix is to document the letters and other documentation of site-specific determinations that have been provided by the Department of Ecology.

This appendix contains letters and other documentation organized as follows:

- C.2 Arsenic and Lead Soil Cleanup and Remediation Levels
- C.2.1 Cleanup Levels and Remediation Levels for the Former DuPont Works Site
- C.2.2 Residential Soil-Lead Cleanup Level and Remediation Level for Former DuPont Works Site
- C.2.3 Non-Residential Remediation Levels at the Former DuPont Works Site
- C.2.4 Soil Arsenic Non-Residential Remediation Levels
- C.2.5 Arsenic in Soil – Area Background Levels
- C.3 DNT Soil Cleanup Level Protective of Groundwater
- C.4 Mercury Cleanup Levels Summary and Mercury/Lead Leaching Study
- C.5 TNT Soil Cleanup Level Protective of Groundwater
- C.6 TPH Soil Cleanup Level Protective of Groundwater
- C.6.1 Review of TPH Soil Cleanup Level Protective of Groundwater
- C.6.2 TPH/PAH Cleanup Level Summary

C.2 Arsenic and Lead Soil Cleanup and Remediation Levels

C.2.1 Cleanup Levels and Remediation Levels for the Former DuPont Works Site

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

April 21, 2000

Dennis Clark
DuPont City Hall
303 Barksdale
DuPont WA 98327

Hello Dennis,

Re: Cleanup Standards and Remediation Levels for the Former DuPont Works Site

Thank you for spending time with me yesterday talking about land use and the cleanup site. I have enclosed a copy of three letters from Ecology to Weyerhaeuser and DuPont companies, per our discussion. The City of DuPont (former Mayor Shenkel) had received copies of these letters in the past.

Letter #1 (10/1/97) establishes a soil-lead cleanup standard for residential property at 450 parts per million (ppm). This cleanup standard is specific for the DuPont site and was developed using an EPA risk and exposure model and site-specific information. This cleanup standard was developed back when residential development was still being considered within Parcel 1.

Letter #2 (5/3/99) establishes soil-lead remediation levels for 4 different land use types:

1) golf course – 4,100 ppm
2) commercial – 2,100 ppm
3) Industrial – 1,000 ppm
4) Open space – 1,500 ppm

These remediation levels were developed using an EPA risk exposure model. The first three are based on adult worker exposure assumptions and the open space land use is based on an older child (7 to 18 years of age) exposure assumption. The soil-lead cleanup standard is still 450 ppm. That does not change. Any location where contaminants are left behind above the cleanup standard must be addressed through engineering and/or institutional controls, which includes deed restrictions.

Letter #3 (6/25/99) establishes soil-arsenic remediation levels for 3 different land use types:

1) golf course – 530 ppm
2) commercial – 60 ppm
3) industrial – 90 ppm
4) open space – to be determined

These remediation levels were developed using the standard Model Toxics Control Act risk formula and making adjustments to the exposure frequency parameter. Like the soil-lead remediation levels, the first three are for adult workers and the open space will be based on the older child exposure assumption. The open space soil-arsenic remediation level will probably be set at 32 ppm, the same average concentration identified in the twenty background soil samples collected outside the cleanup site boundary many years

ago. The cleanup standard for soil-arsenic is 20 ppm, based on the Model Toxics Control Act Method A number. The likely source of the elevated area-wide arsenic concentrations is the former ASARCO smelter in Ruston.

If you have any questions about the enclosed letters or want more detail on how the numbers (remediation levels and cleanup standards) were developed, please give me a call and I will provide you with that information.

On another subject, yesterday we discussed the City's year 2000 comprehensive land use plan being developed and the proposed location of future residential development. You were aware of the existing deed restrictions covering Parcels 1 and 2 of the cleanup site, which precludes residential development, now and into the future. You mentioned that conditions might change allowing for residential development within the cleanup site. Those changes included further cleanup might be conducted in the future, Weyerhaeuser might change its mind on the restrictive covenant, new technologies might be developed for easier and cheaper cleanups, etc. While I heard what you were saying yesterday, I am not sure that identifying deed restricted property for future residential development is a wise decision. The companies (Weyerhaeuser and DuPont) have stated to me, numerous times, that they have no intention of every allowing residences within the cleanup site due to long-term liability concerns. If you need additional copies of the restrictive covenants, let me know. A copy was provided most recently to former Mayor Shenkel in a letter dated 11/15/99. They are also on file with the Pierce County Assessor's office.

One last item. Sometime in the not too distant future, I would like to set up a meeting with you and Mayor Krill and whoever else is necessary from the City and Ecology (and the companies if appropriate) to discuss the DuPont Works Environmental Impact Statement before the final version is released. Before having the meeting, I need more time to go through all the comments Ecology received on the draft and determine how we will address them. The responses to the comments will be contained in a Responsiveness Summary. I am hoping that the final EIS will be ready for release in about 6 weeks.

If you have any questions about this letter or the enclosures, please give me a telephone call at (360) 407-6262. I understand that City Hall staff are now "on line". I can also be contacted at the following e-mail address mblu461@ecy.wa.gov .

Sincerely,

Mike Blum

Mike Blum
Toxics Cleanup Program
Southwest Regional Office

Enclosures (3)

cc: Judy Krill, City of DuPont
Jim Odendahl, Weyerhaeuser Co
Jeff King, West Shores Corp.
Ron Buchanan, DuPont Co.
David Brentlinger, Weyerhaeuser Real Estate Co.
Ecology's Weyerhaeuser DuPont Project Team
Sue Mauermann, Ecology Regional

C.2.2 Residential Soil-Lead Cleanup Level and Remediation Level for Former DuPont Works Site

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

October 1, 1997

Mr. Vern Moore
Weyerhaeuser Company
PO Box 100
DuPont, WA 98327-0100

Mr. Jack Frazier
The DuPont Company
Barley Mill Plaza Bldg. 27-1162
PO Box 80027
Wilmington, DE 19880-0027

Re: Residential Soil-Lead Cleanup Standard for Former DuPont Works Site

Dear Vern and Jack:

This letter is in reply to Tim Bingman's August 25, 1997, letter to me regarding site-specific inputs to the Integrated Exposure Uptake BioKinetic (IEUBK) model for determining residential soil-lead cleanup levels. I will also summarize our recent discussions about soil-lead cleanup in the future residential areas of the former DuPont Works Site and provide you with a decision regarding a site-specific soil cleanup standard for lead. As you know, Ecology is adopting the use of the Environmental Protection Agency's IEUBK model as a basis for setting site-specific residential cleanup levels for the protection of children. The Model Toxics Control Act (MTCA) Science Advisory Board has also concurred in the use of the model for making site-specific decisions.

Over the past several years, the Ecology Team has reviewed numerous submissions from Weyerhaeuser and DuPont Companies related to the topic of soil-lead cleanup standards, most of which dealt with the development of site-specific inputs into the IEUBK model. The most recent discussions on this topic have dealt with the soil-to-dust transfer coefficient input to the model. The standard default value for the soil-to-dust transfer coefficient is seventy percent (70%). We all agreed that 70% may not be a reasonable value to use for the Site, however, we needed adequate site-specific justification to change the default value.

Ecology used the services of Dr. Terri Bowers of Gradient Corporation to review the current literature for information that could provide a value for the soil-to-dust transfer coefficient that would be appropriate for the former DuPont Works Site. Terri provided Ecology with a report dated February 12, 1997 entitled Estimating the Soil-to-Dust Transfer Coefficient, and a memo regarding the Review of Leadville and Sandy Soil-to-Dust Relationships, dated June 24, 1997. On July 11, 1997, after initial review by the Ecology Team, I sent those same materials to Dr. Greg Glass for peer review. Greg is knowledgeable about risk assessment and has familiarity with the issue of soil-to-dust transfer at other cleanup sites. Greg responded on August 12, 1997, to my July 11 letter, which included a list of questions needing his response.

Based on the work by Terri and Greg, it appears that the 70% default value for the soil-to-dust transfer coefficient is an overestimate for this parameter at the former DuPont Works Site. This conclusion is mostly based on the fact that 1) the new homes to be constructed at the Site will not contain lead-based paint, 2) leaded gasoline will not be used in motor vehicles in the future, and 3) the future roads in the area will not have been impacted by past leaded gasoline use. Both consultants provided similar ranges of soil-to-dust transfer coefficients that would be defensible for use at the Site.

As noted in Tim's letter, Terri recommended using a soil-to-dust transfer coefficient on the order of 15 to 45%. Greg's opinion was that the range was 15 to 50% "with relatively high confidence", or 20 to 45% "with somewhat lesser but still appreciable confidence." The Ecology Team has selected 45%, a value from the upper portion of the soil-to-dust transfer coefficient range, to account for uncertainties in the underlying data, and its application at this site. The Ecology Team then applied the 45% transfer coefficient along with a site-specific ground water lead level of 2.0 ug/l to the IEUBK model. Using these inputs, the Ecology Team determined the residential soil cleanup level that would be protective of 95% of the child population (0 to 84 months of age) at a blood-lead level of 10 ug/dl.

Using the input parameters noted above, the IEUBK model estimates a soil-lead cleanup value of 443 mg/kg as protective. The proposed future development of the residential areas of the Site includes removal of the lead-contaminated topsoil prior to home construction, followed by replacement with clean topsoil and sod after the new homes are constructed. Considering the proposed future conditions at the Site, and the accuracy of the soil-to-dust transfer coefficient estimate, Ecology approves a risk management concentration of 450 mg/kg as protective of human health in the future residential areas at the former DuPont Works Site.

The Ecology Team recognizes that agreement on this issue marks a significant milestone in the project. We look forward to resolving the remaining technical issues including a soil-lead cleanup standard for the non-residential areas of the Site. If you or any of your team have any questions regarding this letter, please give me a telephone call at (360) 407-6262.

Sincerely,

Mike Blum

Mike Blum
Site Manager
Toxics Cleanup Program

MB:td

cc: Distribution list

cc: Tim Bingman, DuPont Company
Terri Bowers, Gradient Corporation
Mary Burg, Ecology Toxics Cleanup Program Manager
Greg Glass, Greg Glass Consulting
Mark Jobson, Assistant Attorney General
Jeff King, DuPont Company
Roseanne Lorenzana, Environmental Protection Agency
Craig McCormack, Ecology Toxics Cleanup Program
Pamela Meitner, DuPont Company Legal Department
Ralph Palumbo, Summit Law Group
Willard Shenkel, City of DuPont
Jim White, Washington State Department of Health
Marian Wineman, Woodward Clyde Consultants
Ecology's Weyerhaeuser/DuPont Site Team

C.2.3 Non-Residential Remediation Levels at the Former DuPont Works Site

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

May 3, 1999

Mr. Vern Moore
Weyerhaeuser Company
Post Office Box 100
DuPont, WA 98327-0100

Mr. Izzy Zanikos
DuPont Specialty Chemicals
Barley Mill Plaza Building 27
Post Office Box 80027
Wilmington, DE 19880-0027

Dear Vern and Izzy:

Re: Non-Residential Remediation Levels at the Former DuPont Works Site

The Department of Ecology (Ecology) Team working on this project has made some decisions regarding remediation levels for lead in soil at the site. These remediation levels, formerly known as action levels, are for land uses other than residential. These remediation levels are levels at which we believe there is limited threat to human health and the environment based on assumed exposure scenarios and the implementation of various institutional controls and property deed restrictions. As a reminder, remediation levels are not synonymous with cleanup levels or cleanup standards.

I received Tim Bingman's letter of December 18, 1998 on the 21st of December. That letter proposed remediation levels for lead and arsenic in soils for the future golf course, industrial, commercial, and open-space land use areas. Remediation levels for arsenic in soil will be addressed in another letter in the near future.

First let me identify the site-specific soil-lead remediation levels to be established by Ecology and then explain how we arrived at those levels. Some levels are the same or slightly higher than what you proposed, while others have been reduced based on different exposure assumptions.

Table #1
Summary of Ecology-Derived Remediation Levels
For the Former DuPont Works Site

Future Land Use Area	Lead in Soil
Golf Course	4,100 ppm
Commercial	2,100 ppm
Industrial	1,000 ppm[1]
Open Space	1,500 ppm

[1] Use same soil-lead remediation level as in Parcel 2 as opposed to Adult Lead model value of 1,963 ppm.

Tim Bingman and I made a presentation to the Model Toxics Control Act Science Advisory Board in November 1998 regarding the use of EPA's Adult Lead model to develop soil-lead remediation levels at cleanup sites in Washington. They gave their approval to the use of the model and the model's guidance document. As proposed in Tim's December 1998 letter, Ecology concurs with the use of the region-specific baseline blood-lead level (Washington State) and blood-lead geometric standard deviation (Western U.S.); 1.36 micrograms per deciliter (ug/dl) and 1.81, respectively. Table #2 below outlines the specific input parameters to the Adult Lead Model equation and the values selected by Ecology as appropriate for the former DuPont Works site.

Table #2 - Adult Lead Model Input Variables

Description of Input Variables	Equation Variables	Units	Commercial Exposure Scenario	Golf Course Exposure Scenario	Industrial Exposure Scenario
95th Percentile PbB (Blood Lead) in Fetus	$PbB_{fetal,0.95}$	ug/dl	10	10	10
Fetal/Maternal PbB Ratio	$R_{fetal/maternal}$	----	0.9	0.9	0.9
Biokinetic Slope Factor	BKSF	ug/dl per ug/day	0.4	0.4	0.4
Geometric Standard Deviation PbB	$GSD_{i,adult}$	----	1.81	1.81	1.81
Baseline PbB	$PbB_{adult,0}$	ug/dl	1.36	1.36	1.36
Soil Ingestion Rate	IRs	g/day	**0.200**	0.100	0.050
Absorption Fraction	AFs	----	0.12	0.12	0.12
Exposure Frequency	EF	days/year	52	52	**219**
Averaging Time	AT	days/year	365	365	365
Remediation Levels	PbS	mg/kg	**2,067**	4,134	**1,963**

(The values in **bold** are different from those proposed by Weyerhaeuser and DuPont)

The Ecology Team considered the input variables proposed by the companies. The choice of input variables is a risk management decision and is based on best professional

judgement, unless of course site-specific data is available. We decided that the above variables should be used for the following reasons:

1. The golf course cap is an engineered containment facility. As such, greater controls, both physical and institutional, can and will be implemented.

2. The commercial areas worked in by landscapers may not have the same protective measures as the golf course, nor will workers necessarily be aware that the areas they are working in are part of a hazardous waste site with possible residual soil contamination. Draft EPA Region 10 guidance recommends 200 mg/day as an adult soil ingestion rate for occupational exposures involving soil contact activities. The golf course worker will be better informed about the site being a hazardous waste containment facility, and as such, will be required to take better precautions to reduce exposure to (ingestion of) contaminated soils, as compared to commercial area landscape workers. That is why we have chosen 100 mg/day as the appropriate ingestion rate for the golf course worker versus the 200 mg/day recommended by EPA. To further reduce exposures, the companies have stated that the irrigation lines at the golf course will be located either in clean backfill or above the contaminated soil layer. This can be ensured through course design, which will occur with Ecology oversight.

3. The frequency of contact for the industrial land use scenario was changed to match the default value in the Adult Lead Model. The 40% value (146 days) from the Model Toxics Control Act soil/carcinogen risk formula is not appropriate for use in this model.

4. The exposure frequency for the golf course worker is set at 52 days per year. As noted in Tim's letter and the attached appendices, the Ecology Team agrees that an appropriate estimate for the exposure frequency is 36 days per year (possibly even less, depending upon site layout and engineering controls), however a minimum value of 52 days per year must be used to avoid "violating" the adult lead model assumptions (steady-state blood lead levels).

5. The industrial land use remediation level has been reduced from 1,963 to 1,000 ppm to match the Model Toxics Control Act Method A industrial cleanup value established for Parcel #2 in the 1997 Cleanup Action Plan, as recommended by the companies.

6. The Adult Lead Model is set to be protective of the fetus of a pregnant woman, the most susceptible sub-population. To be protective of an adult (non-pregnant worker), the remediation levels for each land use scenario would be considerably higher. The target blood lead level of 10 ug/dl was established to be protective of the fetus as well as very young children.

Next let me describe how the Ecology Team selected 1,500 ppm as the soil-lead remediation level for open space areas. The companies proposed a ratio approach based on using the results of the site-specific residential cleanup levels established for the site - 450 ppm. That level was determined using EPA's Integrated Exposure Uptake Biokinetic (IEUBK) Model and is based on young children up to 84 months old. The most frequently exposed population in the open space areas, which are the natural areas and not developed parks or ball fields, would most frequently be the "older child". The older child is somewhere between 7 and 18 years of age. There is no specific age at which the older child's biokinetics responds similarly to an adult, especially in terms of absorption of lead. Most researchers agree that the younger child absorbs lead more readily than the older child or the adult. So, how does one develop a remediation level when no soil-lead exposure model exists for the older child? As noted above, the companies proposed an "exposure ratioing" approach that results in a remediation level of 3,159 ppm. That level is based on a once a week exposure compared to daily exposure at the residential cleanup level of 450 ppm. [(7 days/week ÷ 1 day/week) * (450 ppm) = 3,150 ppm] (The difference between Ecology's (3,150 ppm) and the companies' (3,159 ppm) remediation level is the minor difference between the use of a 1 day per week ratio versus a 52 days per year ratio.) The goal of the IEUBK model is to protect 95% of the children from exceeding a blood lead level of 10 ug/dl. Exposure frequencies of 2 and 3 days per week result in remediation levels of 1575 ppm and 1050 ppm respectively.

Using the Adult Lead Model to develop remediation levels for the older child is another approach. Using the adult lead model with exposure frequencies of 1, 2, and 3 days per week results in remediation levels of 3512 ppm, 1756 ppm, and 1171 ppm respectively.

Under all scenarios, the maternal/fetal blood lead ratio was eliminated and the goal of protecting 95% of the older child population from exceeding 10 ug/dl blood lead level was retained. As a point of reference, the adult blood lead level goal ("not to exceed" value) is based on industrial exposures and is generally set at 25 to 30 ug/dl for males. The geometric standard deviation and baseline blood lead level input remained unchanged.

The two approaches yield ranges of approximately 1,050 to 3,150 ppm and 1,200 to 3,500 ppm. The site-specific residential cleanup level for lead in soil is 450 ppm. The value for open space proposed by the companies was 3,159 ppm. The upper bound is dependent on the assumed exposure scenario and the input parameters. The Ecology Team has set the soil-lead remediation level for the open space as 1,500 ppm based on consideration of the above criteria and best professional judgement regarding this risk management decision. As you know, most of the open space areas are relatively clean, with some isolated areas of elevated contaminant concentrations (e.g., hot spots). The Team carefully thought about exposure frequency and considered twice a week as appropriate, resulting in remediation levels of 1575 and 1750 ppm using the ratio approach and the adult lead model, respectively. In making this risk management decision, the Ecology Team also considered the older child transporting lead

contamination back home on their shoes and clothes, which could create additional exposures to themselves and/or to other/younger children in the house.

One last issue. The Toxics Cleanup Program is currently in the midst of a major change to the Model Toxics Control Act. The program is also wrestling with some significant issues related to arsenic in soil. Those things will affect how we address arsenic remediation levels at the former DuPont Works site. Due to the above changes as well as ongoing discussions with the companies, the Ecology Team is addressing arsenic issues separate from lead. Site-specific arsenic remediation levels will be established in a letter that will follow in the near future.

In conclusion, the Ecology Team has spent considerable time considering your remediation levels proposal contained in Tim Bingman's December 1998 letter. We feel that the input variables chosen by Ecology are reasonable and protective. As stated earlier in this letter, we feel that the golf course cap/containment facility provides the best physical and institutional controls on future exposure to contaminated soils. As in the past, this project's cleanup Team (Weyerhaeuser, DuPont, and Ecology) is once again breaking new ground, this time with use of EPA's Adult Lead Model. These innovative approaches take more time to evaluate than following the well-worn path others have used. We are comfortable that the soil-lead remediation level decisions Ecology has made will stand up to public scrutiny, when we get to that point. There is adequate conservatism built into the assumptions used, while not being overly conservative.

If you have any questions regarding this letter or the calculations and risk management decisions regarding remediation levels, please give me a call at (360) 407-6262.

Sincerely,

Mike Blum

Mike Blum
Site Manager
Toxics Cleanup Program
Southwest Regional Office

cc: Tim Bingman, DuPont Company
Ralph Palumbo, Summit Law Group
Pamela Meitner, DuPont Company Legal Department
Mark Jobson, Assistant Attorney General
Jeff King, West Shores Corporation
Willard Shenkel, City of DuPont
Ecology's Weyerhaeuser/DuPont Site Team
David Jansen, Toxics Cleanup Program Section Supervisor

C.2.4 Arsenic Non-Residential Soil Remediation Levels

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

June 25, 1999

Mr. Vern Moore
Weyerhaeuser Company
P.O. Box 100
DuPont, WA 98327-0100

Mr. Izzy Zanikos
DuPont Specialty Chemicals
Barley Mill Plaza Building 27
P.O. Box 80027
Wilmington, DE 19880-0027

Dear Vern and Izzy:

Re: Soil Arsenic Non-Residential Remediation Levels

The Department of Ecology (Ecology) Team received Tim Bingman's letter dated June 1, 1999, regarding the development of non-residential remediation levels for arsenic in soil at the former DuPont Works cleanup site. Tim's letter was received on June 2nd. The letter incorporated the issues we had discussed during our May 25, 1999, meeting at the site as well as some issues related to open space land use areas that were not discussed that day. The Ecology Team (Dan Alexanian, Kelly Susewind, and myself) is in concurrence with the proposed remediation levels with the proviso that engineering controls will be used to limit exposure to golf course workers. The assumed exposed individual based on that particular land use is the basis for the associated remediation level, which are as follows:

PROPOSED LAND USE	POTENTIALLY EXPOSED INDIVIDUAL	REMEDIATION LEVEL
Commercial	Adult landscape worker	60 milligrams per kilogram (mg/kg) or parts per million
Golf Course	Adult golf course worker	530 mg/kg
Industrial	Adult worker	90 mg/kg

I have included the specific input variables as an attachment to this letter, which I copied directly from Tim's letter.

The open space land use areas do not have a proposed soil-arsenic remediation level. A "combination of engineering solutions" was proposed in Tim's letter that includes some soil removal and some in-place capping/containment. Ecology believes that the soil-arsenic remediation goal for the open space areas should be 32 mg/kg, which is the same as the area background for the site. In working towards that goal, Ecology also wants to ensure that the net environmental benefit of any proposed action is positive. We have talked numerous times about the issue of net environmental benefit of cleanup in open space areas.

That includes the impacts of either excavation and/or capping of contaminated soils versus leaving the contaminants in place and not disrupting the environment. Our teams have collectively reached a verbal understanding of generally what needs to occur and why. What is lacking is that reasoning written down in a more formal manner. Your request needs to be a "stand alone" document, like most of the past proposals you have submitted. When someone outside our respective team reads your request letter as well as Ecology's response, they should have a clear understanding of the issues and the reasoning behind your request and Ecology's response.

In general, as well as specifically in terms of the open space areas, a goal of Ecology and the companies is to safeguard water quality in Sequalitchew Creek, Old Fort Lake and Puget Sound. A couple protective measures includes limiting work on steep slopes and creating erosion problems as well as saving trees and habitat where possible - especially in the designated open spaces. As we have discussed, specific open space locations needing remediation will be made on a case by case basis. As discussed in Tim's letter, remediation of arsenic impacted soils along the narrow gauge railroad corridor, within the Sequalitchew Creek canyon open space area (Open Space #1), will be capped with gravel. That action will serve as both a physical barrier to exposure as well as creating part of the planned walking trail down the Sequalitchew Creek canyon to Puget Sound. Your request letter should discuss why other more permanent options are not feasible, such as excavation and off-site disposal or on-site treatment, and why those options may cause more harm than good.

I would like to point out a few things about the gravel capping approach for the narrow gauge railroad corridor mentioned in Tim's letter. There are some difficulties, or potential opportunities, depending on how one looks at it. In reviewing the existing narrow gauge sampling data within Open Space #1, it appears that there were four or five samples collected (RR-596, RR-597, RR-598, RR-599, and LR-68), all of which exceeded the area background arsenic concentration of 32 ppm. Therefore, that entire section of track would need to be covered with gravel. Tim's letter proposed a "six-inch thick layer of gravel extending five feet on either side of the railroad centerline". Why five feet? That proposal needs to be justified. The railroad corridor data from the site includes samples collected along the centerline and some samples 25 and 50 feet on either side of the centerline. Further "downstream" of Open Space #1, there were no samples collected along the narrow gauge railroad. That area is outside the consent decree boundary. When we established the boundary, it was based on soil-lead contamination. At that time, 1991, arsenic was not known to be a contaminant at the site. Do you have any information about whether that section of track was sprayed with arsenic-based herbicides in the past? I understand that there is a mitigation agreement between the City of DuPont (City) and Lone Star Northwest (Lonestar) regarding conversion of a portion of the railroad corridor to a trail along Sequalitchew Creek canyon. I have not yet seen or read that agreement, so I do not know the details. I understand that section of track/railroad corridor is to be covered with wood chips. Is there a possibility of working with the City and Lonestar to pave or gravel the entire railroad corridor down the canyon, thereby addressing both remediation concerns and gravel mining mitigation at the same time? Also, gravel would make a better (more permanent) path than wood chips.

A couple other final comments and questions. In Open Space Area #3, the buffer zone along the southern and eastern site perimeter, a 75-foot strip of vegetation will be left. Does the 75-foot border start at the fence line or the inside edge of the existing dirt road? If the existing dirt road is part of that open space, do you think vegetation will be planted or will it in be naturally re-vegetated? Capping in the open space areas will reduce the exposure potential by cutting off or reducing that exposure pathway. It does not however reduce the contaminant concentration remaining, as mistakenly stated in Tim's letter.

It is Ecology's desire to work with the companies to protect the open spaces and the ecological resources to the extent practicable. If you have any questions regarding this letter or what the Ecology Team is expecting regarding the open space areas and additional net environmental benefit evaluation, please give me a call at (360) 407-6262.

Sincerely,

Mike Blum

Mike Blum
Site Manager
Toxics Cleanup Program
Southwest Regional Office

MB:mf(1/tcp)
Attachment

cc: Mark Jobson, Assistant Attorney General
Pamela Meitner, DuPont Company Legal Department
Ralph Palumbo, Summit Law Group
Willard Shenkel, City of DuPont
Ronald Summers, Lone Star Northwest
Jeff King, West Shores Corporation
Marian Wineman, Woodward Clyde
Ecology's Weyerhaeuser/DuPont Site Team
David Jansen, Ecology

Attachment #1

Bases for Input Variables Used to Calculate Non-Residential Arsenic Remediation Levels

A description of the major inputs to the MTCA intake equation, as well as an explanation for values used in calculating arsenic remediation levels, is described below.

RISK – Represents the acceptable incremental carcinogenic risk level. In the case of all three land use scenarios, this value is 1×10^{-5}. The 1×10^{-5} value is codified for industrial settings in the MTCA at WAC 173-340-745 (4)(a)(iii)(B). The policy to use a value of 1×10^{-5} for the commercial areas (which is also applicable to the golf course area) was established by Pete Kmet in a memorandum dated February 14, 1995.

ABW – Describes the average body weight for the potentially exposed population under consideration. For the commercial, golf course and industrial areas, this would be an adult, with an average body weight of 70 kg.

LIFE – Represents the duration of a human lifetime over which the exposure is averaged. Per WAC 173-340-740 (3)(a)(iii)(B), the default value is 75 years.

UCF – This is a unit conversion factor of 1×10^{6} applied to calculate remediation levels in units of mg/kg.

CPF – This describes the carcinogenic potency factor for arsenic. The current value for arsenic in USEPA's IRIS database is 1.5 $mg/kg/day^{-1}$.

SIR – Represents the soil ingestion rate for exposure to site soils. Ecology has recommended a value of 200 mg/day for establishing remediation levels for the future commercial land use area. A value of 100 mg/day has been recommended by Ecology for use in the golf course area, in light of the training that golf course workers receive. The 50 mg/day value is the MTCA default for industrial exposure.

AB – Represents the gastrointestinal absorption rate. DuPont and Weyerhaeuser believe that current scientific evidence supports the value of 0.4 (40%) as specified for arsenic in the MTCA "Cleanup Levels and Risk Calculation" document. However, we understand that Ecology anticipates modification of this value as a matter of policy to 100% absorption in the near future. Hence, the updated value has been used in these calculations.

DUR – Describes the duration of exposure in years. The value of 20 years for industrial exposure is the MTCA default value. The value of 20 years for the commercial and golf course areas is specified in Pete Kmet's memorandum of February 14, 1995, and is appropriate, given that adults represent the potentially exposed population.

FOC – Represents the frequency of contact term. Frequency of contact, as used in the MTCA equation, is calculated from the exposure frequency for the commercial, industrial and golf course land use scenarios. The value of 52 days/year represents a once-per-week exposure in the commercial area. The 12 days/year value for the golf course worker is based on a combination of interviews of golf course managers describing the approximate frequency for subsurface soil exposure during maintenance activities, and the anticipated use of clean backfill material around irrigation main lines at the golf course. The 40% frequency of contact for the industrial areas (corresponding to an exposure frequency of 146 days/year) is the MTCA default for industrial exposure.

C.2.5 Arsenic in Soil – Area Background levels

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

March 11, 1996

Mr. Vern Moore
Weyerhaeuser Company
P.O. Box 100
DuPont, WA 98327-0100

Mr. Jack Frazier
The DuPont Company
DuPont Chemicals, B-12230
1007 Market Street
Wilmington, DE 19898

Dear Vern and Jack:

Re: Arsenic in Soil - Area Background Levels - 32 Parts Per Million

This letter is to confirm our recent discussions about arsenic and the area background soil concentration that has been determined for the former DuPont Works Site. The Ecology Team has reviewed the data submitted in the draft Remedial Investigation (RI) report dated December 22, 1994, as well as a separate but similar undated 6 page paper entitled Area Background Arsenic Levels, both prepared by Hart Crowser. The conclusion reached by Hart Crowser is that the area background concentration is 32 mg/kg, following the Model Toxic Control Act (MTCA) regulations and associated guidance. The Ecology Team concurs with the determination of 32 parts per millions (ppm) as the area background concentration for arsenic in soil.

So, what does that 32 ppm determination mean in terms of site cleanup decisions? Ecology will not require any soil cleanups to be more stringent than 32 ppm, irrespective of land use. Site-specific cleanup standards and action levels for arsenic in soil have not been determined for this Site. You and your consultant, Sciences International, Inc., are currently working on a proposal to reassess the toxicity of arsenic, which may affect soil-arsenic cleanup levels for this Site. As a point of reference, at this point in time, the arsenic cleanup standard for the Site would be 32 ppm for residential land use and 200 ppm for industrial land use. Cleanup standards for other land uses such as commercial, recreational, open space, etc., would fall somewhere in between 32 and 200 ppm.

It is interesting to note a couple points about natural background concentrations of arsenic in surficial soil throughout Washington State. Sampling conducted by the United States Geological Survey, under a project[1] through Ecology, found the following results:

Areas of the State	Arsenic (GFAA[2] Lab Method)	Arsenic (ICP[3] Lab Method)
Puget Sound Area	7.30 mg/kg	22.80 mg/kg
Western Washington	6.37 mg/kg	46.21 mg/kg
Statewide	6.99 mg/kg	41.81 mg/kg

[1] Ecology, Natural Background Soil Metals Concentrations in Washington State October 1994, publication #94-115
[2] Graphite Furnace Atomic Absorption (GFAA), EPA Methods 7060 & 7740
[3] Inductively Coupled Plasma (ICP) Atomic Emission Spectroscopy, EPA Methods 3050 & 6010

Mr. Vern Moore
Mr. Jack Frazier
March 11, 1996
Page 2

As shown above and noted in the 1994 Ecology report, using GFAA for arsenic analysis allows one to achieve lower detection limits than using ICP methods and is therefore more accurate at lower levels. ICP analysis can produce higher values for arsenic because of iron (iron acts as an interferant and is difficult to correct for when analyzing for arsenic using ICP Methods).

One last point that we all need to keep in mind. All future characterization and confirmation/verification analyses should use the same analytical methods that we have been using to date. We need to ensure all the data, past and future, is comparable. The original Quality Assurance Project Plan identified GFAA as the primary methodology for soil-metals analyses, with the exception of mercury.

If you have any questions regarding this letter and area background levels for arsenic in soil, please give me a call at (360) 407-6262.

Sincerely,

Dan Abey for

Mike Blum
Site Manager
Toxics Cleanup Program
Southwest Regional Office

MB:jr

cc: Ecology's Weyerhaeuser/DuPont Site Team
Greg Glass, Greg Glass Consulting
David Jansen, Ecology
Ed Kenney, DuPont Toxics Citizen Oversight Project
Jeff King, DuPont Environmental Remediation Services
John Kreiter, DuPont Company Legal Department
Ralph Palumbo, Heller, Ehrman, White, & McAuliffe
Willard Schenkel, City of DuPont
Tom Skjervold, DuPont Toxics Citizen Oversight Project
Steve Thiele, Assistant Attorney General
Marian Wineman, Hart Crowser, Inc.

C.3 DNT Soil Cleanup Level Protective of Groundwater

RECEIVED JAN 1 6 1996

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

January 12, 1996

Mr. Vern Moore
Weyerhaeuser Company
P.O. Box 100
DuPont, WA 98327-0100

Mr. Jack Frazier
The DuPont Company
DuPont Chemicals, B-12230
1007 Market Street
Wilmington, DE 19898

Dear Vern and Jack:

Re: Acceptance of Two Issue Papers - 1) Determination of a DNT Soil Cleanup Level Protective of Groundwater, and 2) Impracticability of Groundwater Treatment

The Ecology Team reviewed the two latest drafts of the above mentioned documents for the Former DuPont Works Site as drafted by Hart Crowser. We find them to be acceptable and agree with the conclusions contained in those issue papers. No further rewrites are necessary nor should other changes be made to them prior to their incorporation as is into the final draft remedial investigation and feasibility study reports.

The Ecology Team is still reviewing numerous other issues and/or papers submitted or raised at previous meetings. Some of those issues are listed below. Of course, this is not an exhaustive list:

1) The paper entitled Summary - Potential Leachability of Lead and Arsenic in Golf Course Use Areas.
2) The question of leachability of Bunker C in Area 8 and whether the excavations can be backfilled.
3) Exposure units.
4) Arsenic background concentrations.
5) Arsenic cleanup standards and Sciences International, Inc., work.
6) MTCA Lead cleanup standards using the IEUBK model.
7) Site-specific lead bioavailability study.
8) Statistics
9) Ecological risk assessment and Greg Linder's work, just to name a few.

The Ecology Team is close to finalizing or making a decision on more than half of the above mentioned items.

If you have any questions regarding this letter, please give me a call at (360) 407-6262.

Sincerely,

Mike Blum

Mike Blum
Site Manager
Toxics Cleanup Program
Southwest Regional Office

MB:jr

cc: Ecology's Weyerhaeuser/DuPont Site Team
David Jansen, Ecology
Jeff King, DuPont Environmental Remediation Services
John Kreiter, DuPont Company Legal Department
Ralph Palumbo, Heller, Ehrman, White, & McAuliffe
Steve Thiele, Attorney General's Office
Marian Wineman, Hart Crowser, Inc.

**DETERMINATION OF A DNT SOIL CLEANUP LEVEL
PROTECTIVE OF GROUNDWATER
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON**

Conservative evaluations of Site conditions indicate that a soil cleanup level for dinitrotoluene (DNT) of 3 mg/kg provides a high level of protection to groundwater at the Former DuPont Works Site (Site), assuming a hypothetical drinking water exposure.

Soil Cleanup Level Determination

The DNT soil cleanup level for drinking water protection was calculated probabilistically using the following method with conservative input assumptions:

soil cleanup level (mg/kg) = drinking water screening level (mg/L) * DAF (unitless)* K_d (L/kg) (1)

where

- the MTCA drinking water screening level for DNT is 0.00013 mg/L;
- DAF is the dilution/attenuation factor, which, for this evaluation, considered only dilution occurring as a result of natural mixing of infiltration with groundwater flow in the upper ten feet of Site aquifers; and
- K_d is the Site-specific DNT soil:water desorption coefficient determined from toxicity characteristic leaching procedure (TCLP) testing.

Equation (1) was run as a Monte Carlo simulation using Crystal Ball software, a forecasting and risk analysis add-on to Excel software. In the Monte Carlo simulation, equation (1) was solved 5,000 times using input parameter values picked randomly from probability distributions for K_d and DAF developed from Site-specific and regional information. The soil cleanup level results determined from the 5,000 iterations were compiled automatically into a probability distribution for which percentiles were generated. The 5th percentile value of that distribution represents a conservative estimate of a DNT soil cleanup level protective of Site groundwater under a hypothetical drinking water exposure scenario, i.e., there is 95 percent probability that a 3 mg/kg DNT soil cleanup level is protective of Site groundwater.

Cleanup Level Determination Assumptions

Because the DNT drinking water screening level was set as a constant in equation (1), assumptions were required only for the desorption coefficient (K_d) and DAF in determining a Site-specific soil cleanup level for DNT. The assumptions follow, and supporting information is provided in Attachment A.

Desorption Coefficient (K_d) for DNT. A Site-specific DNT soil:water desorption coefficient (K_d) was developed from TCLP results for 27 samples of Site soils. Informal discussions with the Washington State Department of Ecology (Ecology - Charles San Juan, personal communication, August 1995) indicate that TCLP is an acceptable method for obtaining desorption coefficient (K_d) estimates for organic compounds like DNT. Statistical evaluation of the K_d values indicates that they are lognormally distributed with a geometric mean of 20 L/kg and geometric standard deviation of 4.0 L/kg (see Table 1). The geometric standard deviation was decreased, such that the K_d probability distribution in the Monte Carlo simulation was constrained within the range of Site-specific values determined from TCLP testing. Without the adjustment of standard deviation, the modeled distribution projected well outside the range of measured values. The resulting K_d probability distribution extends from 2 to 190 L/kg (refer to page A-5 in Attachment A [values are in natural logs]), which encompasses all but the single lowest and single highest measured values (0.2 and 248 L/kg, respectively; see Table 1). Figure 1 provides a comparison of the modeled and measured probability distributions for K_d for DNT at the Site.

Dilution/Attenuation Factor (DAF). A dilution/attenuation factor (DAF) represents the reduction in concentration occurring during transport from the bottom of the impacted soil, through the vadose zone, to a monitoring point within the aquifer. The DAF includes dilution (e.g., mixing and dispersion) and attenuation (e.g., sorption, reaction, and degradation) occurring both in the vadose zone and in the aquifer. Consistently low DNT concentrations detected in Site monitoring wells located downgradient of areas where high DNT soil concentrations existed prior to interim source removal may suggest a large DAF for DNT at the Site.

For this evaluation, the DAF was limited to reflect only the natural dilution occurring in the upper ten feet of Site aquifers (i.e., all other dilution/attenuation processes were not considered). A ten-foot thickness of aquifer was selected as a conservative assumption based on protecting a hypothetical drinking water exposure. Groundwater discharging at the sea level seeps is not a potential drinking water source because of salinity (per WAC 173-340-720-[1][a][ii][B]; refer to Hart Crowser, 1994), and the

seeps are submerged daily by high tides. DNT was not detected in freshwater springs discharging to Sequalitchew Creek in four years of monitoring. Therefore, a drinking water exposure at the Site could only occur by constructing and operating a water supply well. In practice, a well would be installed as far below the water table as practical to provide for pump clearance and well losses, and to maximize available drawdown and thus well yield. A well completed deeper in the aquifer would draw water from a greater aquifer thickness, and thus allow greater mixing to occur. Considering dilution in only the upper ten feet of aquifer, corresponding to a small (ten-foot) well penetration, provides an additional conservative assumption in developing a DAF for the Site. Because this DAF considers only physical mixing of the infiltration water with groundwater in the aquifer, and does not include any chemical attenuation processes, it is applicable for all constituents at the Site.

The dilution factor represents the ratio of the groundwater flux (through a one-foot-wide by ten-feet-thick vertical cross sectional area of aquifer) to the infiltration flux (through a one-square-foot surface area). The assumptions used in estimating the aquifer flux and infiltration flux in the Monte Carlo simulation are listed below.

Infiltration flux was calculated as follows:

$$Q_i = (P - ET - RO) * A_{surface} * (\text{foot}/12 \text{ inches}) * (7.48 \text{ gal}/\text{ft}^3) * (\text{year}/525{,}600 \text{ min})$$

where

Q_i = infiltration flux in gpm;
P = precipitation in inches/yr;
ET = evapotranspiration in inches/yr;
RO = runoff in inches/yr;
$A_{surface}$ = surface area of 1 ft^2; and
The last three terms on the right side of the equation are units conversion factors as indicated.

- For the Monte Carlo simulation, precipitation was assigned a triangular distribution with minimum, most likely, and maximum values of 25.6, 37.8, and 50.0 inches per year, respectively, based on annual precipitation data from the Tacoma station. The measured annual values ranged from 24.9 to 46.9 inches per year. The average (37.8 in/yr) and standard deviation (6.1 in/yr) of the annual precipitation values were calculated, and the average value was used as the most likely value in the triangular distribution. The average plus and minus two standard deviations represented the maximum and minimum values, respectively, in the distribution (see page A-5 in Attachment A).

- Evapotranspiration was assigned a uniform distribution with minimum and maximum values of 19.9 and 20.1 inches per year, respectively, based on estimated evapotranspiration values from the Tacoma (19.9 inches/yr) and Puyallup (20.1 inches/yr) stations reported in Washington State University (1968) (see page A-5 in Attachment A).

- Runoff was assigned a uniform distribution within minimum and maximum values of 0 and 5.0 inches per year (see page A-6 in Attachment A). Although regional measurements of surface runoff were not obtained (data are rarely measured), Thorthwaite and Mather (1957) suggest 10 percent of precipitation as a reasonable estimate for many soils. Because of the permeable Site soils and limited observable runoff at the Site, runoff was assumed to range from 0 in/yr (most conservative assumption) to 10 percent (reasonable upper-bound value) of the maximum precipitation value (10 percent of 50 in/yr = 5.0 in/yr).

Groundwater flux in the aquifer was calculated using Darcy's Law of the form:

$$Q_{gw} = (K * i * A_{aquifer}) * (\text{foot}/30.48\ \text{cm}) * (60\ \text{sec/min.}) * (7.48\ \text{gal/ft}^3)$$

where

Q_{gw} = flux of groundwater in gpm within the upper 10 feet of aquifer;
K = aquifer hydraulic conductivity in cm/sec;
i = hydraulic gradient in ft/ft;
$A_{aquifer}$ = aquifer vertical cross sectional area in ft^2 normal to groundwater flow; and

The last three terms on the right side of the equation are units conversion factors as indicated.

For the dilution factor to be applicable across the Site, probability distributions for hydraulic parameters were developed to represent both the Water Table Aquifer and unconfined Sea Level Aquifer at the Site.

- Hydraulic conductivity (K) was assigned a lognormal distribution with geometric mean of 5×10^{-2} cm/sec and a standard deviation of 25 percent of the mean. The mean value provides a reasonable conservative estimate for representing both Site aquifers based on available data (Hart Crowser, 1994). Because the aquifer dilution factor will be most sensitive to uncertainty in K, a standard deviation of 25 percent of the mean value was selected to provide a relatively constrained, thus useful, range of groundwater fluxes while encompassing the reasonable range of expected values for K in both

Site aquifers (5×10^{-3} to 5×10^{-1} cm/sec; refer to page A-6 in Attachment A [values are in natural logs]).

- Hydraulic gradient (i) was assigned a triangular distribution with minimum, most likely, and maximum values of 0.005, 0.028 (midpoint of range), and 0.05 ft/ft, respectively. The range of gradient values encompasses values measured in both Site aquifers (Hart Crowser, 1994).

- Aquifer cross sectional area was set at 10 ft^2, which is a one-foot width of aquifer by the 10-foot thickness of aquifer considered in this evaluation.

This probabilistic evaluation indicates that there is a 95 percent probability that the aquifer dilution factor (representing a minimum DAF for all constituents at the Site) is at least 2,400 (5th percentile value; refer to the dilution factor forecast statistics on page A-4 of Attachment A).

Soil Cleanup Level Determination Results

The results of the Monte Carlo simulation run with the aforementioned input assumptions indicates there is a 95 percent probability that a DNT soil concentration of 3 mg/kg is protective of Site groundwater under a drinking water scenario. The mean value in the DNT soil cleanup level distribution was 59 mg/kg and the most likely value (mode) was 20 mg/kg. Attachment A provides supporting information for the soil cleanup level determination, including forecasts with statistical output (pages A-1 through A-4) and assumptions (pages A-5 and A-6).

Conclusion

There is a high probability that a DNT soil cleanup level of 3 mg/kg will be protective of Site groundwater assuming a hypothetical drinking water exposure. The 3 mg/kg cleanup level was determined from a probabilistic evaluation which incorporated Site-specific data and their inherent uncertainty, while maintaining a high level of conservatism (e.g., not considering any of the dilution or attenuation processes occurring in the thick vadose zone at the Site). Because Site groundwater will not be used for drinking water supply under future use of the Site, higher DNT concentrations than 3 mg/kg in soil would be protective of the highest beneficial use of Site groundwater, which is discharge to surface water.

REFERENCES

Hart Crowser, 1994. Draft Remedial Investigation/Feasibility Study, Former DuPont Works Site, Dupont, Washington. December 22, 1994.

Thorthwaite, C.W., and J.R. Mather, 1957. Instructions and Tables for Computing Potential Evapotranspiration for Water Balance. Publications in Climatology, v. 10, no. 3. Drexel Institute of Technology, Laboratory of Climatology. Centerton, NJ.

Washington State University, 1968. Washington Climate Data for King, Kitsap, Mason, and Pierce Counties. WSU Cooperative Extension Service, College of Agriculture. Prepared in cooperation with US Department of Agriculture. EM 2734.

DNTSOIL.rev

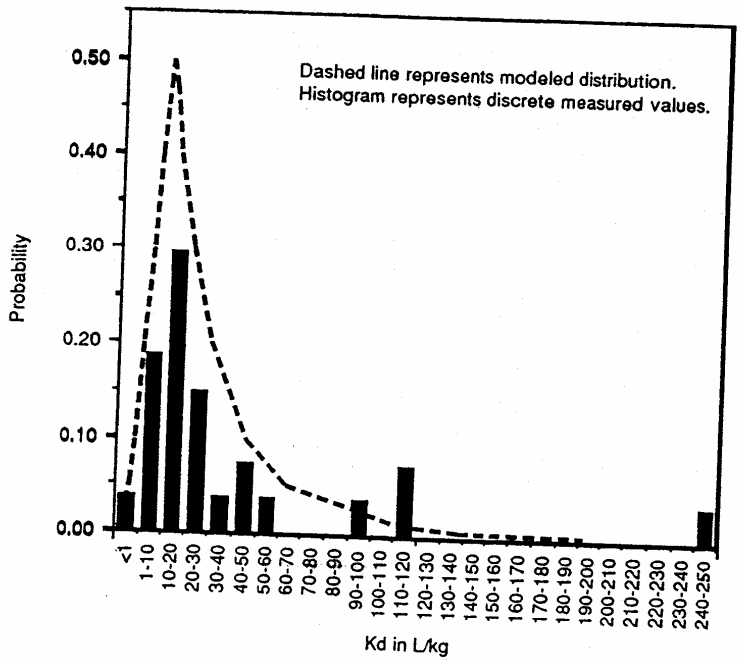
Table 1 - TCLP DNT Data and Desorption Coefficient (Kd) Estimates

SMPL-ID	Total DNT (1/2 U) Soil Concentration in mg/kg	Total DNT TCLP Leachate Concentration in mg/L	Desorption Coefficient (Kd) in L/kg
5D-DS-5	330	3.40	97
18-DS-SC-1	113	4.16	27
18-DS-SC-10	96	50	2
5D-DS-4	35	1.74	20
5D-DS-1	30	0.26	117
5D-DS-3	20.6	0.08	248
5-DH-TP-2-S-1	13.2	0.31	43
5D-TP-DS-6-S-3	10.8	44	0.2
18-DS-SC-11	8.7	1.32	7
5D-DS-2	8.6	0.57	15
5D-TP-DS-2-S-3	8.2	0.07	111
18-DS-SC-18	6.7	0.96	7
18-DS-SC-63	6.5	0.19	34
5D-TP-DS-6-S-2	6.2	0.53	12
18-DS-SC-5	6.1	0.13	46
18-DS-48	5.6	0.06	95
18-DS-SC-65	4.1	0.23	18
5D-TP-DS-6-S-4	3.4	0.25	14
5D-TP-DS-2-S-4	2.7	0.16	17
18-DS-SC-79	2.0	0.21	10
5D-TP-DS-3-S-3	1.5	0.06	25
18-DS-SC-68	1.3	0.15	9
18-DS-SC-28	0.3	0.01	24
5-DH-TP-2-S-2	0.07	0.001	52
5-DH-TP-3-S-1	0.04 U	0.002 U	20
5-DH-TP-4-S-1	0.03 U	0.002 U	19
5-DH-TP-1-S-1	0.02	0.002 U	10

No. of Samples:	27
Geometric Mean:	20 L/kg
Geometric Std. Dev:	4.0 L/kg

426101/DNTSOIL.xls

Comparison of Modeled and Measured Probability Distributions for Kd



HARTCROWSER
J-4261-01 10/95
Figure 1

ATTACHMENT A
SUPPORTING INFORMATION FOR DNT SOIL CLEANUP LEVEL

Crystal Ball Report

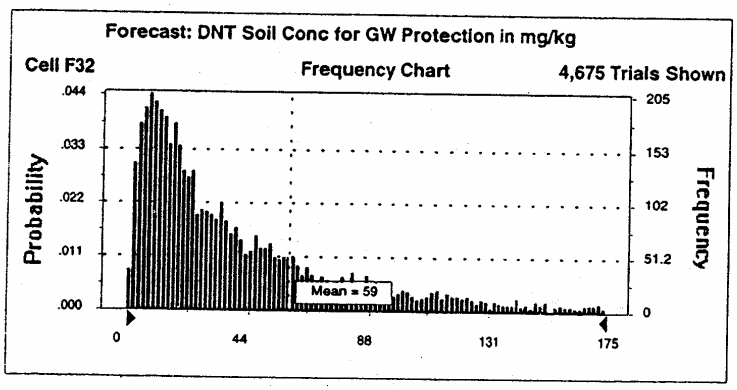
Forecast: DNT Soil Conc for GW Protection in mg/kg **Cell: F32**

Summary:

Display Range is from 0 to 175
Entire Range is from 0 to 4011
After 5,000 Trials, the Std. Error of the Mean is 2

Statistics:

	Value
Trials	5000
Mean	59
Median (approx.)	30
Mode (approx.)	20
Standard Deviation	116
Variance	13444
Skewness	15.37
Kurtosis	430.59
Coeff. of Variability	1.97
Range Minimum	0
Range Maximum	4011
Range Width	4010
Mean Std. Error	1.64



Forecast: DNT Soil Conc for GW Protection in mg/kg (cont'd) **Cell: F32**

Percentiles:

Percentile	Value (approx.)
0%	0
5%	3
25%	13
50%	30
75%	65
95%	200
100%	4011

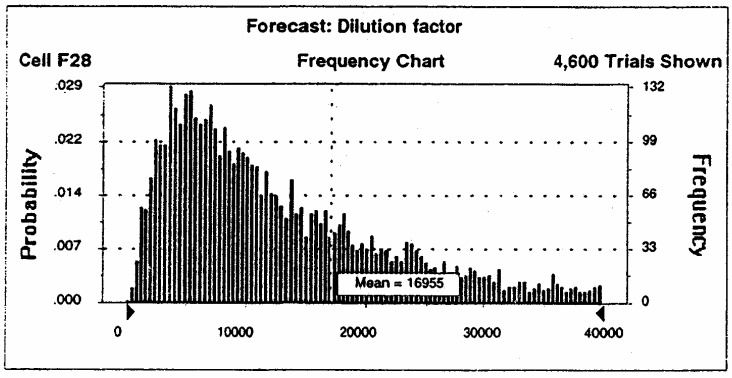
End of Forecast

Forecast: Dilution factor **Cell: F28**

Summary:

Display Range is from 0 to 40000
Entire Range is from 255 to 382050
After 5,000 Trials, the Std. Error of the Mean is 278

Statistics:	Value
Trials	5000
Mean	16955
Median (approx.)	11140
Mode (approx.)	5981
Standard Deviation	19652
Variance	386216865
Skewness	4.99
Kurtosis	54.30
Coeff. of Variability	1.16
Range Minimum	255
Range Maximum	382050
Range Width	381796
Mean Std. Error	277.93



Forecast: Dilution factor (cont'd) **Cell: F28**

Percentiles:

Percentile	Value (approx.)
0%	255
5%	2396
25%	6019
50%	11140
75%	20737
95%	49824
100%	382050

End of Forecast

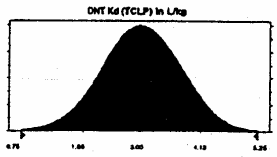
Assumptions

Assumption: DNT Kd (TCLP) in L/kg **Cell: F29**

Lognormal distribution with parameters:

Mean	3.00	(log space)
Standard Dev.	0.75	(log space)

Selected range is from -Infinity to +Infinity
Mean value in simulation was 26.73

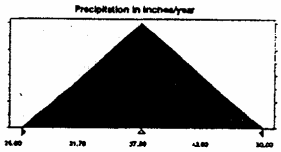


Assumption: Precipitation in Inches/year **Cell: F18**

Triangular distribution with parameters:

Minimum	25.60
Likeliest	37.80
Maximum	50.00

Selected range is from 25.60 to 50.00
Mean value in simulation was 37.72

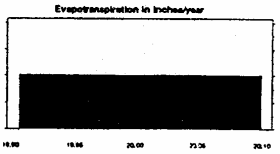


Assumption: Evapotranspiration in Inches/year **Cell: F19**

Uniform distribution with parameters:

Minimum	19.90
Maximum	20.10

Mean value in simulation was 20.00

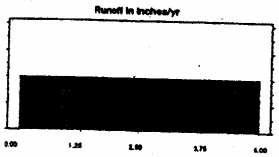


Assumption: Runoff in Inches/yr **Cell: F20**

Uniform distribution with parameters:

Minimum	0.00
Maximum	5.00

Mean value in simulation was 2.48

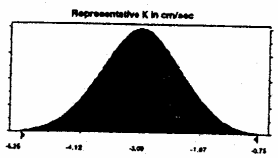


Assumption: Representative K in cm/sec **Cell: B18**

Lognormal distribution with parameters:

Mean	-3.00	(log space)
Standard Dev.	0.75	(log space)

Selected range is from -Infinity to +Infinity
Mean value in simulation was 0.07

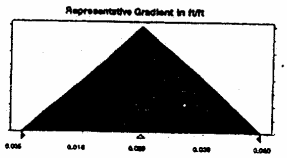


Assumption: Representative Gradient in ft/ft **Cell: B19**

Triangular distribution with parameters:

Minimum	0.005
Likeliest	0.028
Maximum	0.050

Selected range is from 0.005 to 0.050
Mean value in simulation was 0.028



End of Assumptions

C.4 Mercury Cleanup Levels Summary and Mercury/Lead Leaching Study

XXXXXXXXXXXXXXXXX
CHRISTINE O. GREGOIRE
Director

mercury C

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

August 12, 1993

Mr. Vern Moore
Weyerhaeuser Company
Post Office Box 100
DuPont, Washington 98327-0100

Ms. Linda Rudisell
The DuPont Company
DuPont Environmental Remediation Services
Post Office Box 100
DuPont, Washington 98327-0100

Mr. Jack Frazier
The DuPont Company
DuPont Chemicals, B-12230
1007 Market Street
Wilmington, Deleware 19898

Re: Mercury Cleanup Levels Summary and Mercury/Lead Leaching Study

Dear Vern, Linda, and Jack:

This letter transmits the Department of Ecology's (Ecology) comments on the above reports dated July 19, 1993. The Ecology team (Dan Alexanian, Kelly Susewind, and myself) reviewed them and our approval/comments follow.

MERCURY CLEANUP LEVELS SUMMARY:

The Mercury Cleanup Levels Summary report is hereby accepted and approved. The Ecology team agrees with the approaches taken to establish site specific cleanup levels for mercury in soil. Based upon the work conducted by Hart Crowser, the soil cleanup level for mercury is 24.0 mg/kg (equivalent to parts per million (ppm)). That concentration of mercury, which is the Model Toxics Control Act Method "B" soil cleanup level, is protective of human health and the environment, including ground water and surface water. It should be noted that 24 mg/kg is the individual cleanup level for mercury, which may be adjusted downward depending on cumulative site risks associated with multiple hazardous substances or exposure pathways.

We do have comments on a couple statements made in the summary report. The summary report states, "...mercury concentration below 24 mg/kg in site soils will not leach to ground water..." and "...ground water and surface water have not and will not be impacted." These statements are overly definitive in relation to reality. More appropriate would have been statements such as the following, "...mercury concentrations below 24 mg/kg in site soils will not leach to ground water at harmful levels..." and "...ground water and surface water have not and will not be adversely impacted." Over time, be it geologic time, the mercury will eventually leach to ground water or surface water.

P 4, p 4: Flow rate varied between columns due to variations in dry soil density (compactness), and therefore "K".

Page 5, Table 3: Correct the location of the comma in the second column, third row from the top; 8,190 instead of 81,90.

P 6, p 2: The statement that the metals concentration in the leachate was proportional to the initial soil concentration is "a little strong." A preferable statement would be: metals concentration in the leachate increased with increasing initial soil concentrations.

P 6, p 3: "COL-3 ran for approximately twice as long as COL-1 and nearly ~~six~~ 5 times as long as COL-5." In that same paragraph, it refers to other columns with similar soil concentrations. Were other samples with similar concentrations tested? If not, it would be preferable to say "K_d was greater, indicating less leaching" or " K_d was same order of magnitude indicating similar leaching" or some other statement to indicate that the increased contact time did not adversely affect the results.

P 7, Table 5: The table needs to be modified to include another column showing averages. In our connotation, partition coefficient implies some sort of equilibrium, which is better represented by an average. The averages would be: column #1 is 32,000 L/kg, column #2 is 61,000 L/kg, and column #3 is 41,000 L/kg.

P 7, p 1: In that paragraph, please include the TCLP value for lead.

P 8, p 1: What is the "bonding/binding energy values from leaching solution thermodynamics" that is mentioned in that paragraph?

P 8, p 2: "Soil samples were leached using a 1:20 solid to liquid ratio." Is that ratio based upon weight? If by weight, the column tests used an average of 10.98 pounds (4.99 kilograms (kgs)) of soil and 10.28 kgs of water, therefore approximately a 1:2 ratio. Since all column tests reached or approached the detection limit of 0.2 ug/L, it is not too surprising that diluting the leachate ten fold in the ELP tests resulted in mostly non-detects, even with the increased contact. A brief comparison of the solid to liquid ratio for both tests would seem appropriate for the report.

P 10, Table 7: Is sample #ELP-IS-1 a TCLP test sample rather than an extraction leaching procedure sample? It is footnoted in Table 6 that #ELP-IS-1 is a TCLP sample. In general, the Tables need to be "cleaned up" to clearly identify or separate ELP results from TCLP results.

P 10, p 1: The first sentence states that the ELP data ranged from 16,000 to 36,000 L/mg for mercury. It is difficult to call that a "range," especially since those are only two data points and they are duplicate tests. Also, "This is also consistent with observed results from the column testing, indicating that both mercury and lead are preferentially adsorbed to site soils." Please explain how the underlined part of that sentence relates to the rest of that paragraph.

P 10, p 3: It states that a ratio of average leachate concentrations to initial concentrations was used. On page 9, it states soil:water partition coefficients were calculated from leachate and final soil concentrations. Which is it? Also, how did you calculate the lead ELP value of 2.6×10^{-5}?

P 11, p 1: We calculated that column test contact times ranged from 2 to 6 hours, based on pore volumes. How did you calculate contact times to get a range from 4.5 to 22 hours?

Because of the importance of these two reports, we want to ensure that they are as accurate and error-free as possible. If you have any questions or would like to arrange a meeting to discuss our comments and your responses on the two reports, please give me a telephone call at (206) 586-0364.

Sincerely,

Mike Blum

Mike Blum
Site Manager
Toxics Cleanup Program

cc: Marian Wineman, Hart Crowser, Inc.
Ralph Palumbo, Heller, Ehrman, White, & McAuliffe
Charles Hunter, DuPont Company Legal Department
Jay Manning, Senior Assistant Attorney General
Ken Johnson, Weyerhaeuser Company
Bob Shedd, Weyerhaeuser Company
Jeff King, DuPont Environmental Remediation Services
William Gorgensen, City of DuPont
Ecology's Weyerhaeuser/DuPont Site Team
Megan White, Toxics Cleanup Program Section Supervisor

Admittedly, the mercury concentrations would be extremely low and the impact would probably be imperceptible, though the mercury will leach.

Also, in one of the footnotes, it states, "If mercury were leachable to groundwater it would have shown up in the groundwater sampling data since mercury sources have existed at the Site since the early 1900s." Mercury may have been used at the DuPont Works since the early 1900s, but when it was first released (spilled/discharged) into the environment and exposed to leaching and/or gravity is unknown.

MERCURY/LEAD LEACHING STUDY:

The Mercury/Lead Leaching Study report, as explained to me by Marian Wineman, is to be "viewed" as a reference document. Contained within that report is the backup information used or quoted in the Mercury Cleanup Levels Summary as well as information on lead leaching studies conducted at the same time as the mercury work. Currently, the lead leaching study results are not being used for purposes like the mercury data is. The Ecology team kept the above in mind while reviewing the report. Our detailed comments are as follows:

Page (P) 2, paragraph (p) 3: The text says the permeameter can accommodate 8-inch diameter samples up to 18 inches long. The schematic (Figure A-1) says a sample length of up to 12 inches. Which is it?

P 3, p 2: A hydraulic conductivity (K) of 3 x 10^{-5} cm/sec puts the recompacted sample in the silt range or the bottom of the silty sand range. In the Mercury Cleanup Levels Summary report (page V-2), it states that a K of 10^{-3} is at the lower end of the range of K estimates. It seems that the test material has an artificially low permeability. What potential effect (under estimated leachability? over estimated leachability?) does this decreased hydraulic conductivity have on the results? Does the over-compacted (lower permeability) sample increase contact times? Does it create preferential flow paths thereby decreasing contact time? A different effect? A couple other related issues (possible discrepancies or errors) were noted in the document.

> In that paragraph and Attachment B, it refers to COL-IS-5. Figure B-2 identifies the sample as COL-IS-5. On Table C-1, it refers to sample COL-IS-3 (with the same hydraulic conductivity as COL-IS-5) . Are the samples identified correctly or are they all really COL-IS-5?
>
> On Table C-1, shouldn't the ratio between before and after results be the same for "water content" and "saturation"?
>
> Is the hydraulic conductivity of sample COL-IS-5 actually 3 X 10^{-5}. That seems low for a sample containing 85% gravel and sands and only 16% silts and clays? It would be helpful to see the raw data sheets for computing hydraulic conductivity. Were hydraulic conductivities calculated for the other samples?

P 4, p 3: It states that the actual conditions for each column are summarized in Table 2. Table 2 only has a permeability number for Column #3 and none for columns 1 and 5. Are those permeabilities available?

P 4, Table 2: Columns 1 and 5 have the same dimensions but differ in weight by greater than 8%, therefore the density should also differ by 8%. Shouldn't the density for column 5 be 98 lb/ft^3 instead of 105? [18.48 / 19.99 (106) = 98 lb/ft^3.]

Also, on Table 2: The dry density for column 3 should be 117 rather than 116 lb/ft^3.

C.5 TNT Soil Cleanup Level Protective of Groundwater

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

January 11, 2001

Mr. Jim Odendahl
Weyerhaeuser Company
Post Office Box 100
DuPont, WA 98327-0100

Mr. Ron Buchanan
DuPont Specialty Chemicals
Barley Mill Plaza Building 27
Post Office Box 80027
Wilmington, DE 19880-0027

Re: Hot Spot Interim Action Report

Dear Jim and Ron:

The Ecology Team has reviewed the report entitled Hot Spot Interim Action Report dated October 4, 2000 and we have the following comments. I apologize for my delay in getting your our comments, as Dan Alexanian provided me with his comments a while ago.

1. Page 1, Section 1.1, Third paragraph: The Method C industrial soil cleanup level for trinitrotoluene (TNT) is identified in the report as 33 mg/kg. That level is the Method B concentration based on direct contact as a carcinogen. The Method C industrial cleanup levels are as follows:
Direct contact as a carcinogen - 4,380 mg/kg
Direct contact as a non-carcinogen - 1,750 mg/kg
Protective of groundwater as a carcinogen (100x the groundwater standard) - 2.92 mg/kg
Protective of groundwater as a non-carcinogen (100x the groundwater value)- 1.75 mg/kg
Based on protection of groundwater, the cleanup level would be 1.75 mg/kg, not 33 mg/kg. If you have some site-specific data on TNT and the leachability, that cleanup level might increase or decrease. It does look however, based on the existing sampling data, that TNT is not an issue anymore in the industrial area located north of Sequalitchew Creek. Prior sampling revealed higher TNT concentrations in Area 10 north of the creek.

2. Page 2, 2nd paragraph (and other locations in the report): "Sample 26-B-503-S-1 is located in a future Placement Area and was not removed because it will be covered with more than 15 feet of fill." The Ecology Team has some philosophical concerns about burying high levels of hazardous substances (25,000 mg/kg lead, for example), even when it is buried 15 feet or more and does not pose a threat to ground water. We should discuss this more in the near future. While it does comply with the Model Toxics Control Act regulations, it seems that if the material is easily accessible, it should be dealt with rather than just covering it over. If you continue with your proposal, you need to ensure that a minimum of 15 feet of fill is placed over those locations with "higher" contaminant concentration.

3. Page 17, Section A3: "In selected cases where the impacted soils are greater than 1.5 feet deep, the initial excavation was 10 feet by 10 feet." Why was 10 by 10 chosen rather than 50 by 50?

4. Pages 21 and 22, Section B7, the bullets: Please explain the statement "...therefore, no data were qualified." I appears from the various statements that there were problems in the lab with lead matrix spike recovery or control limits, but "no data were qualified". Only 2 of 17 bullets identified data that were qualified, though it appears that all the matrix spikes/blank spikes had problems.

5. General comment: It is hard to figure out how to compare original samples with post-excavation confirmational samples.

If you have any questions regarding the above comments, please give me a telephone call at (360) 407-6262.

Sincerely,

Mike Blum

Mike Blum
Site Manager
Toxics Cleanup Program

MB:dj

cc: Izzy Zanikos, DuPont Company
Marian Wineman, URS
Jeff King, West Shores Corporation
Brad Grimsted, Pioneer Technologies Corporation
Ecology's Weyerhaeuser/DuPont Site Team

C.6 TPH Soil Cleanup Level Protective of Groundwater

C.6.1 Review of TPH Soil Cleanup Level Protective of Groundwater

**REVIEW OF TPH SOIL CLEANUP LEVEL
PROTECTIVE OF GROUNDWATER
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON
FEBRUARY 12, 1996**

In recent discussions regarding residual Bunker C-derived TPH concentrations and backfilling of the Area 8 pipeline excavation (January 18, 1996, meeting), Ecology stated that they perceived inconsistencies in the TPH/PAH Cleanup Level Summary regarding a TPH concentration protective of Site groundwater (7,600 mg/kg vs. 11,000 mg/kg).

Response

There is evidence to support a Bunker C-derived TPH soil concentration of 30,000 mg/kg as protective of Site groundwater. The evidence is summarized below.

- Because the risk posed by Bunker C-derived TPH at the Site is associated with its cPAH content, a groundwater protection soil cleanup level for Bunker C-derived TPH was derived based on cPAH content in the TPH/PAH Cleanup Level Summary. In Appendix VI of that document, a Bunker C-derived TPH concentration of 7,600 mg/kg was determined by calculating a cPAH concentration protective of groundwater and back-calculating the corresponding TPH concentration from the TPH/cPAH regression (with 95% confidence; Appendix V of the TPH/PAH Cleanup Level Summary). A cPAH concentration of 12 mg/kg was initially calculated as protective of groundwater using the most stringent MTCA cPAH drinking water screening level (0.000012 mg/L), a conservative literature-derived value for cPAH partition coefficient (9,600 L/kg), and a conservative default dilution/attenuation factor (DAF) of 100.

  Applying the Site-specific DAF of 2,100 (refer to DNT Soil Cleanup Level Determination; October 1995) rather than a default DAF of 100 indicates that a cPAH concentration of 240 mg/kg is protective of Site groundwater. This corresponds to a Bunker C-derived TPH concentration above 30,000 mg/kg (as protective of Site groundwater). This value is consistent with preliminary findings from the Total Petroleum Hydrocarbon Criteria Working Group (TPHCWG). In the January 17, 1996, meeting of Ecology's Risk Assessment Forum TPH subcommittee, the TPHCWG presented example risk-based

groundwater protection cleanup goals of 35,000 mg/kg for motor oil, and higher (soil saturation [e.g., 25 percent TPH]) for weathered motor oil which is more representative of Bunker C-derived TPH at the Site.

- Leachable TPH was not detected in TCLP testing of Site soil samples with Bunker C-derived TPH concentrations up to 11,000 mg/kg. Leachable TPH was detected (16 mg/L) in a sample of Site soil with 19,000 mg/kg TPH, as reported in Appendix VI of the TPH/PAH Cleanup Level Summary and the Area 8 Interim Status Memorandum. Applying the Site-specific DAF of 2,100 to this leachate concentration produces a resultant estimated groundwater concentration of only 0.008 mg/L, well below the MTCA groundwater screening level of 1 mg/L. Alternatively, a Bunker C-derived TPH groundwater protection soil cleanup level which represents a soil saturated with Bunker C-derived TPH is determined from these data by multiplying a TPH desorption coefficient (K_d) of 1,200 L/kg (19,000 mg/kg ÷ 16 mg/L) by the DAF of 2,100 (MTCA groundwater screening level is 1 mg/L). As stated above, the TPHCWG's preliminary findings likewise indicate that soils fully saturated with high molecular weight hydrocarbons (like Bunker C) pose no risk to groundwater.

- After decades of rainwater leaching of residual TPH in Site soils, detection of TPH and cPAHs has not been confirmed in Site groundwater.

Conclusion

Site-specific data, corroborated by the findings of the TPHCWG, indicate that Bunker C-derived TPH concentrations of 30,000 mg/kg in Site soils will not adversely impact Site groundwater. This value is higher than the previous determination because it includes a more realistic assessment of the substantial natural dilution/attenuation occurring at the Site (Site-specific DAF of 2,100 compared to a default of 100).

SG/rkb
tph.rpt

ECOLOGY MEETING
February 15, 1996

Attendees: Mike Blum, Dan Alexanian, Kelly Susewind, Vern Moore, Jeff King, Steve Germiat, Marian Wineman, Geneva Smith

Paraffin Investigation

The Weyerhaeuser/DuPont team reported they had conducted additional sampling in Areas 6, 12, and 38 in order to verify the presence of paraffin wax-derived TPH. A Paraffin Investigation report was presented to Ecology which outlined details of the soil sampling, analysis results, and exploration location maps.

Area 6, Crystallizer Drum Area

Oil was detected in the two surface soil samples that were taken. The results did not confirm paraffin as the source of TPH.

Area 12, Works Magazine Landfill

Fourteen confirmation soil samples were collected from RI and pre-RI sampling locations where elevated TPH and/or oil and grease were detected. It was determined that paraffin associated with waxed cardboard boxes most likely accounted for the majority of TPH detected during the RI sampling. Low concentrations of diesel were detected in three of the samples.

Mike Blum of Ecology stated that the samples taken from Unit 12-2 did not necessarily confirm that all the TPH was paraffin-based. Additional sampling might provide extra support.

Marian Wineman of the Weyerhaeuser/DuPont team stated there were many variabilities in Area 12 and paraffin was very patchy throughout the area, which could result in patch hits. Three monitoring wells in the location have not detected TPH. She also stated that the chromatogram for paraffin was nearly identical to the chromatograms from Area 12.

Area 38, Carton Production Area and Drywell

TPH concentrations above the MTCA screening level were detected in three RI samples in Area 38. Interim source removal was conducted in October 1995 and verification samples were taken. Paraffin was not detected in any of the samples. Oil and diesel were detected.

Path Forward:

Ecology will review Paraffin Report and decide whether or not additional sampling will be needed.

Review of TPH Soil Cleanup Level Protective of Groundwater

Discussion on residual Bunker C-derived TPH concentrations and the backfilling of Area 8 pipeline excavation. The Weyerhaeuser/DuPont team responded to Ecology questions regarding inconsistencies in the TPH/PAH Cleanup Level Summary regarding a TPH concentration protective of Site groundwater. Steve Germiat of the Weyerhaeuser/DuPont team stated that site-specific data indicated that Bunker C-derived TPH concentrations of 30,000 mg/kg in Site soils would not adversely impact the groundwater.

Mike Blum of Ecology stated that Ecology did not necessarily agree with the 30,000 mg/kg number. He stated that in general, the TPH values were probably protective of groundwater using the DAF. There is concern about the PAH's since chrysene is showing up in some of the monitoring wells.

Dan Alexanian of Ecology stated that the proposed monitoring well would be down-gradient from Area 8 and could be used to monitor PAHs, as well as DNT. Mike Blum gave approval for Area 8 to be backfilled, but stated the PAH in groundwater still needed to be dealt with in determining TPH soil cleanup levels protective of groundwater. Dan Alexanian agreed with this on the condition that if necessary (after the PAC decision), the Weyerhaeuser/DuPont team would come back in and clean up locations which exceed the PAC's number.

Path Forward:

- *Area 8 to be backfilled.*
- *Ecology to review TPH/cPAH data with regards to establishing Site TPH soil cleanup levels.*
- *Weyerhaeuser/DuPont team to tabulate all sample concentrations exceeding MTCA screening levels at depths below 15 feet.*

Other Issues

Discussion on arsenic background number of 32 ppm. Ecology agrees with the work that has been done and with the 32 ppm number.

Path Forward:

- *Parcel 2 draft RI package to Ecology. (22 March 1996)*
- *W/D will initiate first draft of Parcel 2 CAP.*

Schedule for remainder of the Site was discussed. It could take more than two years for the PAC to come up with recommendations, for Ecology to put together some policies, and get changes made in the regulations. Mike Blum stated Ecology would like to begin making some decisions for this site.

Vern Moore stated that the golf course alternate plan would be submitted to the City of DuPont around the middle of March. It is grandfathered under the City's 1985 Comprehensive Plan. The Weyerhaeuser/DuPont team would like to see the Department of Ecology sponsor the EIS, lending more efficiency and speed to the

project. The Weyerhaeuser/DuPont team gave Ecology a 2001 to 2002 estimate for completion of the cleanup.

Ecology will confirm with the Weyerhaeuser/DuPont team a date for a general meeting with everyone invited. (This has been confirmed for 3/19/96 8:30 am - 12 noon at DuPont field office).

C.6.2 TPH/PAH Cleanup Level Summary

tile: Final Draft

DRAFT

TPH/PAH CLEANUP LEVEL SUMMARY

INTRODUCTION

The appropriate soil cleanup levels for total carcinogenic polycyclic aromatic hydrocarbons (cPAH) in each land use area at the Former DuPont Works Site (the "Site") are as follows:[1]

Land Use	cPAH
Residential	1 to 10 mg/kg
Open Space	5 to 50 mg/kg
Golf Course	20 to 220 mg/kg
Industrial	30 to 300 mg/kg

The appropriate soil cleanup levels for Bunker C fuel-derived total petroleum hydrocarbons (TPH) are 3,100 to 27,000 mg/kg.

TPH/cPAH cleanup levels for groundwater are not established because groundwater and surface water at the Site are in compliance with MTCA screening levels.

---

[1] Soil cleanup levels apply to soils from 0 to 15 feet in depth. WAC 173-340-740(6)(c).

TPH AND cPAH DETECTED AT THE SITE

TPH and/or cPAH concentrations above MTCA screening levels were detected at 15 areas of the Site. Interim source removal actions have been conducted in eight of those areas. TPH and/or cPAH concentrations above MTCA screening levels remain only in two of these interim source removal areas: Area 5 (mixed petroleum products) and Area 8 (Bunker C fuel-derived TPH). An interim source removal action in Area 24 will be conducted in 1994, and verification data will determine whether TPH/cPAH concentrations above MTCA screening levels remain.

Six additional (non-source removal) areas contain TPH and/or cPAH concentrations above MTCA screening levels. Areas 7 and 16 contain Bunker C fuel-derived TPH. Area 26 contains mixed petroleum products. Areas 6, 12 and 38 contain non-hazardous paraffin-derived TPH. No toxic fraction is associated with paraffin-derived TPH, and no cPAHs were detected in any of these three areas. Accordingly, no further action based on petroleum constituent concentrations is proposed for the three areas with nonhazardous paraffin-derived petroleum constituents.

Appendix I summarizes TPH and cPAH concentrations in soil in each area of the Site that has had concentrations above MTCA screening levels, and provides information regarding the source of petroleum constituents for each area. Appendix II describes

the TPH/cPAH composition of the Bunker C fuels present at the Site.

CLEANUP LEVELS FOR TPH/cPAH IN SOILS

1. Soil cleanup levels for cPAH. The MTCA Cleanup Regulation requires establishment of cleanup levels based on estimates of the reasonable exposures expected to occur under both current and future site use conditions. WAC 173-340-740(1)(a).

The City of Dupont 1985 Comprehensive Land Use Plan for the area South of Sequalitchew Creek will result in that area being used exclusively for residential, recreational and commercial uses. Recreational uses may include an 18-hole golf course (that will cover a significant portion of the area South of Sequalitchew Creek) and open space, or "green belts," along the Creek, in the kettle areas, and around Old Fort Lake. Commercial uses will cover the remaining areas that are not specifically developed as residential neighborhoods. The cPAH cleanup levels were developed for each planned residential and recreational land use area.[2] Cleanup levels were also developed for the industrial areas of the Site that are located North of Sequalitchew Creek.

---

[2] Residential cleanup levels will apply in the commercial areas because many commercial areas will have mixed commercial and residential uses.

The cPAH cleanup levels for residential land use are derived using exposure assumptions that are representative of chronic exposures with children as the sensitive receptor population. (Note, however, that cPAH has not been detected above MTCA screening levels in areas currently planned for residential development.)

The cPAH cleanup levels for open space land use are derived using reasonable exposure assumptions representative of children in a recreational setting. Soils in the areas of the Site planned for open space uses will not be disturbed by activities typical in residential areas such as gardening and landscaping. Landscaping and vegetative ground cover will further reduce the availability of surface soils for direct contact. However, incidental soil ingestion by children has been considered in setting the cleanup levels for cPAH in open space areas.

The cPAH cleanup levels for golf course land use are derived using exposure assumptions appropriate to golf course maintenance workers. Golfers (and other persons with access to the golf course) would not be potentially exposed to residual constituents in native soils because the entire golf course area will be covered by 1 to 2 feet of topsoil and golf course turf grasses.[3]

---

[3] Some golf course areas may also be covered by concrete or asphalt roads, parking lots, golf cart paths, and by structures such as a club house, maintenance and storage buildings, etc.

Thus, the only potentially exposed persons would be golf course workers (adults) who occasionally may come into contact with native soils during maintenance of the golf course. Exposure in these circumstances would be infrequent and of limited duration.

The cPAH cleanup levels for industrial land use are derived using exposure assumptions appropriate to protect an adult worker that might have daily contact with Site soils.

In accordance with WAC 173-340-708(3)(c), documentation for the use of Site-specific exposure scenarios is provided in Appendix III.

2. Soil cleanup levels for TPH. The risk presented by the Bunker C fuel constituents detected at the Site is attributable to its cPAH components. See Appendix IV. Accordingly, correlation analyses were performed to assess the statistical relationship between cPAH and TPH concentrations, and to establish TPH cleanup levels for Bunker C fuel-derived TPH detected in Areas 7, 8 and 16.[4] See WAC 173-340-702(6) (Ecology "**shall** consider new scientific information when establishing cleanup levels for individual sites").

---

[4] No TPH cleanup level is established for Areas 5 and 26 that have mixed petroleum products because cleanup of metals contamination in those areas will also cleanup soils with petroleum constituents. Verification testing will be done in those areas to confirm that no TPH concentrations remain above MTCA screening levels.

The results indicate that cleanup levels of 3,100 to 27,000 mg/kg for Bunker C fuel-derived TPH will correspond to the residential cleanup goal of 1 to 10 mg/kg for cPAH. Appendix V explains the analysis used to establish TPH cleanup levels. See also, WAC 173-340-740(3)(ii)(B).

TPH/cPAH CONCENTRATIONS IN SITE GROUNDWATER AND SURFACE WATER DO NOT POSE A RISK TO HUMAN HEALTH

TPH/cPAH cleanup levels are not established for groundwater because TPH/cPAH concentrations are not present above MTCA screening levels in groundwater or surface water at the Site. Appendix VI sets forth TPH/cPAH concentrations detected in Site groundwater and surface water during RI sampling.

- TPH was not detected in any groundwater or surface water sample collected during the four rounds of RI water sampling;
- no groundwater samples had detections of any noncarcinogenic PAH above the MTCA drinking water screening levels;
- no groundwater sample had detections of total cPAH above the MTCA screening level, except a single unconfirmed detection in one well that is not considered representative of groundwater quality;

- no TPH or noncarcinogenic PAHs were detected above MTCA screening levels in any surface water samples; and
- no cPAH were detected in any surface water sample, except a single detection which was the result of elevated sample turbidity and which is not representative of surface water quality at the Site.

TPH/PAH CONCENTRATIONS IN SITE SOILS, GROUNDWATER AND SURFACE WATER ARE PROTECTIVE OF ECOLOGICAL RECEPTORS

A quantitative ecological risk assessment was performed to estimate the potential risk posed by TPH/cPAH in soils at the Site. See Appendix VII.

The results of the ecological risk assessment indicate that cPAH concentrations in soil below 30 mg/kg are protective of ecological receptors at the Site. No cPAH-related ecological risks would be present in the residential areas of the Site at the TPH cleanup levels ranging from 1 to 10 mg/kg. cPAH concentrations in the open space areas of the Site are less than 30 mg/kg. Finally, there will be no risk to ecological receptors in the golf course area because the topsoil cover, golf course turf grasses and golf course maintenance will minimize small mammal exposure to the underlying subsurface soils.

The risk to ecological receptors from exposure to Bunker C fuel-related TPH is attributable to its cPAH components. The cPAH concentration of 30 mg/kg determined to be protective of ecological resources corresponds to a TPH soil concentration of 76,000 mg/kg. Thus, at the cleanup levels established for TPH (3,100 to 27,000 mg/kg), Site soils will not present a risk to ecological receptors.

CONCLUSION

The following soil cleanup levels for cPAH/TPH are established based on land use:

1. For residential land use, the appropriate cPAH cleanup level is 1 to 10 mg/kg;

2. For open space land use, the appropriate cPAH cleanup level is 5 to 50 mg/kg;

3. For golf course land use, the appropriate cPAH cleanup level is 20 to 220 mg/kg;

4. For industrial land use, the appropriate cPAH cleanup level is 30 to 300 mg/kg.

5. For soils that contain Bunker C fuel-derived TPH, the appropriate cleanup level is 3,100 to 27,000 mg/kg.

The cPAH/PAH cleanup levels set forth above are protective of ecological receptors. No groundwater risk is present at the Site because TPH/cPAH concentrations in groundwater are well below MTCA screening levels.

H:\RHP\WEYERH\EXEC3.TPH

LIST OF TECHNICAL APPENDICES

TPH/PAH CLEANUP LEVEL SUMMARY

I. Summary of TPH/PAH in Soils

II. Bunker C TPH/PAH Composition

III. Development of cPAH Soil Cleanup Levels for Designated Land Uses at the Site

IV. Human Health Toxicity of TPH/PAHs

V. Bunker C TPH Cleanup Level

VI. Groundwater, Surface Water, and Leachability Data for TPH and cPAHs

VII. Potential Ecological Risk of TPH/cPAH

APPENDIX I
SUMMARY OF TPH/PAH IN SOILS

Total petroleum hydrocarbons (TPH) have been detected in soil samples collected from 15 areas of the Site. Based on historical records and chemical fingerprinting (chromatogram) analyses, the primary source of the TPH on the Site is Bunker C fuel. However, a few Site areas have TPH detections associated with sources other than Bunker C fuel, including mixed petroleum types (gasoline, kerosene, and diesel formerly occurred in former UST locations) and paraffin.

Because MTCA allows for the evaluation of the toxic fraction of TPH (WAC 173-340-730[3][ii][B]), TPH-containing soils were also analyzed for polycyclic aromatic hydrocarbons (PAHs) and/or benzene, toluene, ethylbenzene, or xylenes (BTEX) depending on the petroleum type.

Of the 15 areas where TPH has been detected, interim source removal has been conducted in eight areas, and interim source removal is planned for a ninth area (Area 24, Main Powerhouse) in 1994. Ecology has reviewed verification sampling data for three of these areas and has determined that No Further Action (NFA) is needed in these areas.

Interim Source Removal Areas Approved by Ecology for No Further Action

- **Area 20—Underground Storage Tanks.** Four underground storage tanks which formerly contained kerosene, diesel, or gasoline, have been removed and the associated petroleum-containing soils overexcavated (Hart Crowser, 1991);

- **Area 38—Box Production Area Underground Storage Tank.** Diesel and/or Bunker C were identified in one underground storage tank, which has been removed, and the associated petroleum-containing soils overexcavated (Hart Crowser, 1993); and

- **Area 39—Laboratory Underground Storage Tank.** Gasoline was identified in one underground storage tank, which has been removed, and the associated petroleum-containing soils overexcavated (Hart Crowser, 1993).

These three areas, which have been approved by Ecology for NFA, will not be addressed further. Area 24, the Main Powerhouse, is scheduled for interim source removal during 1994.

The remaining eleven areas are addressed below according to the petroleum type identified in each area.

Bunker C-Derived TPH

Analysis of Bunker C-Derived TPH

Fourteen soil and product samples from the Area 8 pipeline were analyzed for fuel identification (EPA Method 8015 Modified) or volatile organic compounds (EPA Method 8240). Bunker C was identified in eight of these samples. No BTEX was detected in any of the samples where Bunker C was identified.

Based on these results, it was determined that BTEX was not representative of the toxic fraction of Bunker C-derived TPH (WAC 173-340-740[3][ii][B]).

Carcinogenic PAHs (cPAHs) were detected in each area with elevated concentrations of Bunker C-derived TPH. Non-carcinogenic PAHs were not detected at the Site above MTCA screening levels, and therefore will not be addressed further.

Areas where Bunker C occurs include Areas 7, 8, 16, and 24. The appropriate cleanup level for TPH in these areas was determined on the basis of a correlation evaluation of the TPH and corresponding total cPAH concentration (toxic fraction per WAC 173-340-740[3][ii][B]) and future land use, as described in Appendix V.

Additional discussion of Bunker C-derived TPH in Areas 7, 8, and 16 is provided below. Area 24 is not discussed because interim source removal is planned for later in 1994.

Interim Source Removal of Bunker C-Derived TPH in Area 8

The objective of the Area 8 interim source removal was to excavate soils containing total cPAH concentrations above 1 mg/kg to a depth of 15 feet (WAC 173-340-740[6][c]).

Post-removal TPH concentrations in the upper 15 feet of soil ranged from not detected (ND) to 200 mg/kg. Post-removal cPAH concentrations in samples in the upper 15 feet of soil were all below detection limits. Post-removal TPH concentrations of soil at depths greater than 15 feet ranged from not detected to 11,000 mg/kg. Post-removal total cPAH concentrations of soil at depths greater than 15 feet ranged from not detected to 4.4 mg/kg. Based on the total cPAH/TPH correlation and

considerations of TPH leachability, all targets associated with cPAH and groundwater protection have been achieved by the interim source removal. The cPAH/TPH correlation evaluation is discussed in Appendix V. TPH leachability is discussed in Appendix VI. Table I-1 summarizes TPH/cPAH concentrations in Area 8.

Table I-1 - TPH and cPAH Concentrations in Area 8 Following Interim Source Removal

Area	Range of Concentrations in mg/kg	Detection Frequency	Arithmetic Mean in mg/kg	95 Percent UCL in mg/kg
TPH				
8 (< 15 ft)	ND to 200	6/17	40	200
8 (all depths)	ND to 11,000	32/48	1,300	11,000
Total cPAH				
8 (< 15 ft)	ND	0/6	ND	ND
8 (all depths)	ND to 4.4	2/13	0.4	4.4

ND: Not detected. TPH detection limit of 21 mg/kg; cPAH detection limit of 0.06 mg/kg.

Bunker C-Derived TPH in Areas 7 and 16 (Non-Interim Source Removal Areas)

A surficial layer of Bunker C residue is present in portions of the bottoms of the Area 7 and Area 16 kettles (Hart Crowser, 1992a). Fuel identification analyses performed on samples of the residue from each of these areas confirm that weathered and unweathered Bunker C residue is present in each area, and the residues in each area are similar (refer to Appendix II). Table I-2 presents TPH and cPAH data for Areas 7 and 16.

Table I-2 - TPH and cPAH Concentrations in Areas 7 and 16 (Bunker C-Derived TPH)

Area[1]	Range of Concentrations in mg/kg	Detection Frequency	Arithmetic Mean in mg/kg	95 Percent UCL in mg/kg
TPH				
7	ND to 10,000	15/29	960	10,000
16	ND to 2,500	29/51	310	2,200
Total cPAH				
7	ND to 2.9	5/7	0.8	2.9
16	ND to 17.9	8/19	1.5	17.9

ND: Not detected. TPH detection limit of 21 mg/kg; cPAH detection limit of 0.06 mg/kg.

(1) Concentrations are summarized for samples above 15 feet because, where sampled, no detections of TPH or cPAH occurred below 15 feet in these areas with the exception of one sample with 28 ppm TPH in Area 16.

Mixed Petroleum-Derived TPH

Analysis of Mixed Petroleum-Derived TPH

BTEX was detected in soils formerly associated with USTs, which have been removed during interim source removal in Areas 20, 38, and 39. Ecology has determined that NFA is required in these areas (see above).

Areas found to contain mixed petroleum products are Areas 5, 19, 35, 26, 40, and one subunit of Area 12, Area 12-2. These areas are discussed below, with the exception of subunit Area 12-2 which is discussed in the ***Non-Hazardous Paraffin-Derived TPH*** section below.

Interim Source Removal Areas - Mixed Petroleum-Derived TPH

Area 5. Area 5 formerly contained debris deposited and partially buried on the western slope of the Area 16 kettle. The area has been used since at least the 1940s for disposal of non-burnable materials. Prior to debris removal activities in the area, the debris included a variety of containers including drums, demolition debris, and general refuse. The majority of the drums removed were apparently empty and non-hazardous. However,

85 drums contained mixed petroleum products (oil, tar, grease, and asphalt), which contributed to elevated TPH concentrations in this area.

Area 5 interim source removal was based on excavating soils with elevated concentrations of DNT, metals, TPH, and PAHs. Following the interim source removal, verification soil samples collected from the area contained TPH concentrations ranging from not detected to 1,900 mg/kg. Verification data for cPAHs indicated concentrations ranging from 0.3 to 2.4 mg/kg.

The mixed petroleum products detected in Area 5 are associated with concentrations of other constituents above MTCA screening levels, mainly lead and arsenic. Cleanup of soils for lead and arsenic will remove all TPH-containing soils above the MTCA screening level, therefore, it is unnecessary to establish cleanup levels for TPH in this area.

Area 19. Petroleum-containing soil from the area around the Oil House was excavated and removed. Verification soil sample results indicated concentrations in samples ranging from below detection limits to 29 mg/kg, well below the MTCA screening level. Therefore, TPH will not be addressed further in this area.

Area 35. Three drums containing a solidified tar-like substance were removed. Verification soil sample results indicated TPH concentrations were below detection limits. Therefore, TPH will not be addressed further in this area.

Area 40. Soils from a drywell at the Press House in Area 40, which previously contained TPH and PAH concentrations above screening levels, were excavated during interim source removal. Verification soil sample results indicated that concentrations of TPH were below detection limits. Therefore, TPH will not be addressed further in this area.

Table I-3 provides TPH and cPAH data for interim source removal Areas 5, 19, 35, and 40.

Table I-3 - TPH and cPAH Concentrations in Mixed Petroleum-Derived TPH Areas Following Interim Source Removal

Area[1]	Range of Concentrations in mg/kg	Detection Frequency	Arithmetic Mean in mg/kg	95 Percent UCL in mg/kg
TPH				
5	ND to 1,900	45/85	130	330
19	ND to 70	2/13	19	70
35	ND	0/3	ND	ND
40	ND	0/2	ND	ND
Total cPAH				
5	0.33 to 2.4	8/8	1.3	2.4
19	0.28	1/1	—	—

ND: Not detected. TPH detection limits of 20 to 50 mg/kg; cPAH detection limit of 0.06 mg/kg.

(1) Concentrations are summarized for samples above 15 feet because, where sampled, no detections of TPH or cPAH occurred below 15 feet in these areas.

Mixed Petroleum-Derived TPH in Area 26 (Non-Interim Source Removal Area)

Area 26 (Unit 26A) Kettle. Area 26 includes the facilities used for reconstruction of spent acids returning from the nitroglycerin production area. One of the two kettles (Unit 26A) located south of the recovery facilities reportedly received liquid discharge from several sources, including the vehicle maintenance and truck wash facility. TPH concentrations above the MTCA direct contact screening level were detected in surface soil samples collected from several locations on the northern portion of the kettle floor, and are a mixture of petroleum products derived from the vehicle maintenance facility (Table I-4). Fuel fingerprint analysis (EPA Method 8015 Modified) identified the substance as heavy oil. The results are distinctly different from Area 7 and Area 16 (kettles) fuel identification results, which indicated Bunker C. No Bunker C residue is evident in the Unit 26A kettle.

Soil samples, which contained TPH above MTCA screening levels, also contained concentrations of other constituents, mainly lead. Cleanup of

soils for lead will remove TPH-containing soils above the MTCA screening level, therefore, it is unnecessary to establish cleanup levels for TPH in this area.

Table I-4 - TPH and cPAH Concentrations in Area 26 (Mixed Petroleum-Derived TPH)

Area[1]	Range of concentrations in mg/kg	Detection Frequency	Arithmetic Mean in mg/kg	95 Percent UCL in mg/kg
TPH				
26	ND to 5,600	15/47	380	810
Total cPAH				
26	ND to 37.0	9/11	4.1	37.0

ND: Not detected. TPH detection limit of 21 mg/kg; cPAH detection limit of 0.06 mg/kg.

(1) Concentrations are summarized for samples above 15 feet because, where sampled, no detections of TPH or cPAH occurred below 15 feet in these areas.

Non-Hazardous Paraffin-Derived TPH

Analysis of Paraffin-Derived TPH

Paraffin wax is a white, semi-translucent, flammable, odorless solid (Clayton and Clayton, 1982). It is a mixture of solid, high molecular weight (C-30 to C-40 range) hydrocarbons, primarily alkanes derived from petroleum sources (Sax, 1987). Paraffin is insoluble in water and is soluble in organic solvents and oils (Sax, 1987). Paraffin wax is used for coating paper and food containers, medicinal agents, candles, sealant, and chewing gum base. Paraffin wax is biologically inert for the Site exposure routes (RTECS, 1994).

The TPH analysis (EPA Method 418.1) does not distinguish between paraffins and other petroleum-derived products; however, historical Site use and field observations conducted during the RI confirm that only waxes and paraffins are present in Areas 6, 12, and 38. Historical information indicates that paraffin was used as a protective coating on boxes and cartons used to pack and ship Site products. Paraffin-containing drums or paraffin-coated boxes were found in each of these three areas. In addition, no cPAHs were detected in any of these three areas. Since cPAHs were

not detected in soil samples collected from the three areas (Areas 6, 12, and 38) and there is no toxic fraction associated with the paraffin-derived TPH, the TPH will not be addressed further in these areas.

Area 6. Area 6 was used for disposal of defective 55-gallon ammonium nitrate drums used at the ammonium nitrate plant. A total of 1,600 drums were removed from this area during interim source removal. Except for seven drums, the drums were empty. The non-empty drums contained residual ammonia salts and paraffin, as identified by field screening analysis. Soil samples above the MTCA screening level were confined to surface samples (0 to 1 foot in depth). The soil TPH detections in this area are associated with residue from the paraffin-containing drums. No other potential TPH sources were identified in the historical records or field observations for this area.

Area 12. Wastes related to explosives packaging activities in the Works Magazine were buried in shallow excavations in several areas of the Works Magazine landfill. Waste materials buried include explosives packaging, auto shop wastes, empty ammonium nitrate drums, and residual monomethylamine nitrate (MMAN). Five of seven Area 12 landfill units contain elevated TPH concentrations. The highest concentrations of TPH were detected in samples from locations containing paraffin-coated cardboard, residual MMAN, and mixed solid waste. Mixed solid waste found in Area 12 consisted of various materials, including metal strapping, miscellaneous plastic bags, foam rubber, wood debris, cloth, and rubber hose. The TPH detections are associated with the paraffin coating on the cardboard packaging.

cPAHs were not detected in any of the 22 soil samples analyzed for Area 12. Of the landfill units with elevated TPH, autobody parts and waste oil were observed in only one (Unit 12-2) of the five units with elevated TPH concentrations during the excavation of test pits. All soil samples in this unit containing elevated TPH concentrations also contained residual MMAN concentrations above MTCA screening levels. Cleanup of soils for MMAN will remove TPH-containing soils above the MTCA screening level, therefore, it is unnecessary to establish cleanup levels for TPH in this unit of Area 12.

Area 38. Area 38 encompasses the buildings used for production and labeling of boxes and cartons used to package and ship products from the Site. Packaging materials were originally wooden boxes, which, over time, were replaced by paraffin-coated cardboard cartons. Both cardboard printing and paraffin coating activities occurred in this area. Water and/or solvents used to clean printing equipment in the box factory drained through a wooden trough from the building into a drywell located

approximately 15 feet south of the box factory. TPH concentrations above the MTCA screening level were detected in the three soil samples collected from the trough (two samples) and drywell (one sample). No cPAHs were detected in these samples although four of the ten samples had detection limits greater than 1 mg/kg due to sample matrix interference. Benzene and xylene, associated with historical use of solvents for cleaning printing equipment, were detected at concentrations well below MTCA screening levels in the surficial sample collected within the drywell. No BTEX were detected in deeper samples from the drywell.

A UST (containing diesel and/or Bunker C) was removed approximately 15 feet from the drywell in Area 38. All soils containing TPH above MTCA screening levels were removed in association with the UST removal (Hart Crowser, 1992b).

Residual paraffin was likely washed down the trough to the drywell from in the box factory, therefore the source of the TPH detected in Area 38 (limited to the trough and drywell) is most likely the paraffin. Because the analytical method for TPH (EPA Method 418.1) does not detect BTEX, and the detected TPH concentration (1,400 mg/kg) in the surficial sample from the drywell was substantially higher than the detected total BTEX concentration (1.9 mg/kg) in that sample, the TPH does not appear to be associated with the BTEX.

Regardless, all elevated TPH concentrations detected at the trough and drywell were limited to samples collected from 0 to 1.5 foot and were associated with concentrations of other constituents above MTCA screening levels, including arsenic, mercury, and lead. These other constituents were also detected at greater depths (2 to 4 feet) than TPH at these locations. Cleanup of soils for lead, arsenic, and mercury will remove all TPH-containing soils above the MTCA screening level, therefore, it is unnecessary to establish cleanup levels for TPH in this area.

Table I-5 provides data on Paraffin-Derived TPH concentrations in Areas 6, 12, and 38.

Table I-5 - TPH Data for Areas 6, 12, and 38 (Paraffin-Derived TPH)

Area[1]	Range of Concentrations in mg/kg	Detection Frequency	Arithmetic Mean in mg/kg	95 Percent UCL in mg/kg
TPH				
6	ND to 1,900	6/9	450	1,900
12	ND to 36,000	14/43	1,500	9,400
38	ND to 1,400	15/19	180	950

ND: Not detected. TPH detection limit of 20 mg/kg.
(1) Concentrations are summarized for samples above 15 feet because, where sampled, no detections of TPH or cPAH occurred below 15 feet in these areas.

Conclusions

TPH and cPAHs detected in several Site areas are associated with three different sources. The primary Site petroleum source, Bunker C, is confined to four areas (7, 8, 16, and 24) which have either undergone interim source removal or will be addressed subsequently. Mixed petroleum types were identified in five areas (5, 19, 26, 35, and 40) and one Area subunit (Unit 12-2). Interim source removal has been conducted in Areas 19, 35, and 40. Further action to address other constituents in Areas 5, 12-2, and 26 will concurrently address the remaining TPH concentrations above screening levels. Additionally, no further action, based on TPH concentrations, is proposed for the three areas with non-hazardous paraffin-derived TPH and no detected cPAHs (Areas 6, 12, and 38).

References for Appendix I

Clayton and Clayton, 1982. Patty's Industrial Hygiene and Toxicology, Vols. 2A-2C, 3rd Edition. John Wiley and Sons, New York, 1981-82.

Hart Crowser, 1992a. RI Deliverable I, Remedial Investigation/Feasibility Study, Former DuPont Works Site, Dupont, Washington. October 7, 1992.

Hart Crowser, 1992b. Soil Sampling and Analytical Results, Underground Storage Tank (UST) Removal and Closure Results, Area 38, Former DuPont Works Site, Dupont, Washington, October 8, 1992.

RTECS Database, 1994. Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, OH (CD-ROM version). Micromedex, Inc. Denver, CO (Edition Expires 4/30/94).

Sax, N. Irving, and Richard J. Lewis, Sr., 1987. Hawley's Condensed Chemical Dictionary, Eleventh Edition.

tph\tph1.new

APPENDIX II
BUNKER C TPH/PAH COMPOSITION

As summarized in Appendix I, TPH on the Site has been detected in several forms. The composition of TPH determines its mobility and its potential to impact groundwater, as well as its toxicity. Bunker C fuel, associated primarily with the powerhouse and pipeline, is the predominant form of TPH on site (Appendix I). Bunker C and paraffin tend to adsorb tightly to soils and are not mobile. In support of this, TPH has not been detected in site groundwater (Appendix VI).

TPH composition also determines toxicity (Appendix IV). The toxicity of Bunker C, composed of heavier hydrocarbons, is associated primarily with cPAHs. No toxic fraction has been identified for paraffin. Because Bunker C is the predominant form of TPH found on site, its composition and how its composition effects mobility and toxicity is discussed in this Appendix.

Bunker C - Derived TPH

In general, Bunker C fuels, or heavy fuel oils, consist of a wide variety of formulations. The primary components of Bunker fuels are naphthenes, asphaltenes, saturated hydrocarbons, and aromatic hydrocarbons. Naphthenes, or cycloparaffins, are saturated cycloalkanes consisting primarily of 3 carbon-ring (cyclopropane), 4 carbon-ring (cyclobutane), 5 carbon-ring (cyclopentane), and 6 carbon-ring (cyclohexane) compounds. These ring structures may have a variety of saturated side chains. Asphaltenes are the heavier petroleum component of Bunker C and consist of primarily saturated longer chain compounds. Saturated hydrocarbons are represented by the long chain alkane compounds. Finally, the aromatics are primarily composed of PAHs. cPAHs have been determined to be the toxic fraction of Bunker C fuels.

Different formulations of Bunker C fuel oil are composed of varying concentrations of each of these components. A study by Bobra and Callaghan (1990) demonstrated the degree of variation in Bunker C compositions:

Component	% Content
Naphthenes	45
Asphaltenes	6 to 14
Saturates	15 to 24
Aromatics	25 to 55

Chromatograms of Bunker C product show that as much as 70 percent of its composition is hydrocarbons in the C-20 or higher range (refer to Figures II-1 and II-2).

Bunker C has been found in two forms on the Site. A viscous product is present in two areas (the Powerhouse - Area 24 and the Bunker C pipeline - Area 8), while a hardened tar-like residue was found at the bottom of Area 7 and Area 16 kettles.

Soils in Area 8, which contain elevated concentrations of Bunker C, have been removed to achieve the cPAH screening level of 1.0 mg/kg throughout the upper 15 feet of soil. Area 24 is scheduled for further action in 1994.

Kettle area soils are typically visibly stained and may have a hardened residue resulting from weathering of residual Bunker C. GC-FID fuel identification scans were performed on samples of the viscous and tar-like materials collected from these areas. Analysis of the chromatograms for these samples indicate that the viscous product from Areas 8 and 24 is unweathered Bunker C, and the hardened product from Areas 7 and 16 is weathered Bunker C. Weathered products typically do not show lighter-end hydrocarbons that show up in the unweathered samples. Lighter-end hydrocarbons have a greater tendency than heavier compounds to volatilize, degrade, or mobilize when exposed to the environment. Chromatograms for one weathered sample (16-SS-502) and one unweathered sample (16-SS-503) are included on Figures II-1 and II-2, respectively.

The limited mobility of weathered Bunker C was confirmed by subsurface explorations in Areas 7 and 16. TPH detections in explorations within the kettles correspond to a distribution of a thin layer (typically 1 to 6 inches) of hydrocarbons across the bottom of the kettles. Data from Area 7 subsurface explorations indicate that elevated TPH concentrations are vertically bounded to the upper 3 feet of material. Elevated TPH concentrations in Area 16 are vertically bounded to the upper 1 foot of material.

Bunker C product from the pipeline (Area 8) exhibits greater mobility than the weathered product. The practice of heating the fuel prior to pumping it through the pipeline may have increased mobility of Bunker C from the pipeline. Leakage from pipeline joints over time, pressurizing the pipe to improve transport, and the large volumes of product transported, all contributed to the mobilization of Bunker C in this area. Bunker C product from the pipeline was detected up to 35 feet below the ground surface. However, the pipeline has not been used since the mid-1960s. Interim

source removal in Area 8 has further controlled the TPH source in this area and also achieved cPAH screening levels. Based on soil leachability testing (TCLP) performed on soil samples collected from Area 8 (Appendix VI), residual TPH present in this area at the conclusion of interim source removal is not a possible TPH source to groundwater.

Bunker C-Derived cPAH

Locations where TPH was detected were evaluated for PAH composition. Soil samples from Area 8 analyzed for PAHs indicate the presence of 12 of 16 PAHs analyzed. Characterization of PAHs was performed on 52 soil samples from Area 8 with cPAHs detected in 31 of the 52 samples.

Site-wide soil testing demonstrated that the seven cPAHs were present in different areas. Chrysene is the predominant cPAH appearing in 40 out of 121 soil samples tested for PAHs, with a maximum concentration of 14 mg/kg. However, chrysene is the least potent cPAH, exhibiting a relative potency of 0.1 percent that of benzo(a)pyrene (BAP; EPA, 1993) (Appendix IV). Benzo(b)fluoranthene and BAP were the second and third most frequently detected cPAHs, appearing in 27/121 and 24/121 soil samples, respectively. The concentrations of these compounds were lower than chrysene, with maximum concentrations of only 7.0 mg/kg for benzo(b)fluoranthene and 4.8 mg/kg for BAP. Benzo(b)fluoranthene exhibits a relative potency 10 percent that of BAP. Table II-1 summarizes the relative detection frequencies of cPAHs.

Table II-1 - Concentrations and Occurrence of Individual cPAHs

cPAH[1]	Detection Frequency	Maximum Concentration in mg/kg
Benzo(a)anthracene	22/121	8.6
Benzo(a)pyrene	24/121	4.8
Benzo(b)fluoranthene	27/121	7.0
Benzo(k)fluoranthene	17/121	2.3
Chrysene	40/121	14.0
Dibenzo(a,h)anthracene	8/121	0.5
Indeno(1,2,3-c,d)pyrene	19/121	1.6
Total cPAHs	48/121	37.0

Note:
[1] These seven PAHs are considered probable human carcinogens by EPA (IRIS, 1994).

Conclusions

Bunker C detected on the Site was found in two forms, a viscous product associated with the powerhouse and pipeline, and weathered Bunker C found in the Area 7 and Area 16 kettles. Interim source removal has removed the majority of Bunker C product associated with the pipeline. Weathered Bunker C was confined to surficial soils in Areas 7 and 16.

Based on soil leachability testing, residual TPH is low mobility and does not represent a TPH source to groundwater.

Although all seven cPAHs were detected in various site samples with elevated Bunker C, chrysene, one of the least potent of the cPAHs, exhibiting a potency of 0.1 percent of that of BAP, was the predominant cPAH detected on the Site.

Thus, the Bunker C at the Site is comprised of predominantly less mobile and less toxic cPAHs (Appendix IV).

References for Appendix II

Bobra, M., and S. Callaghan, 1990. A Catalogue of Crude Oil and Oil Product Properties. Environment Canada Environment Protection Directorate. River Road Environmental Technology Centre, Ottawa. KIA OH3, September, 1990.

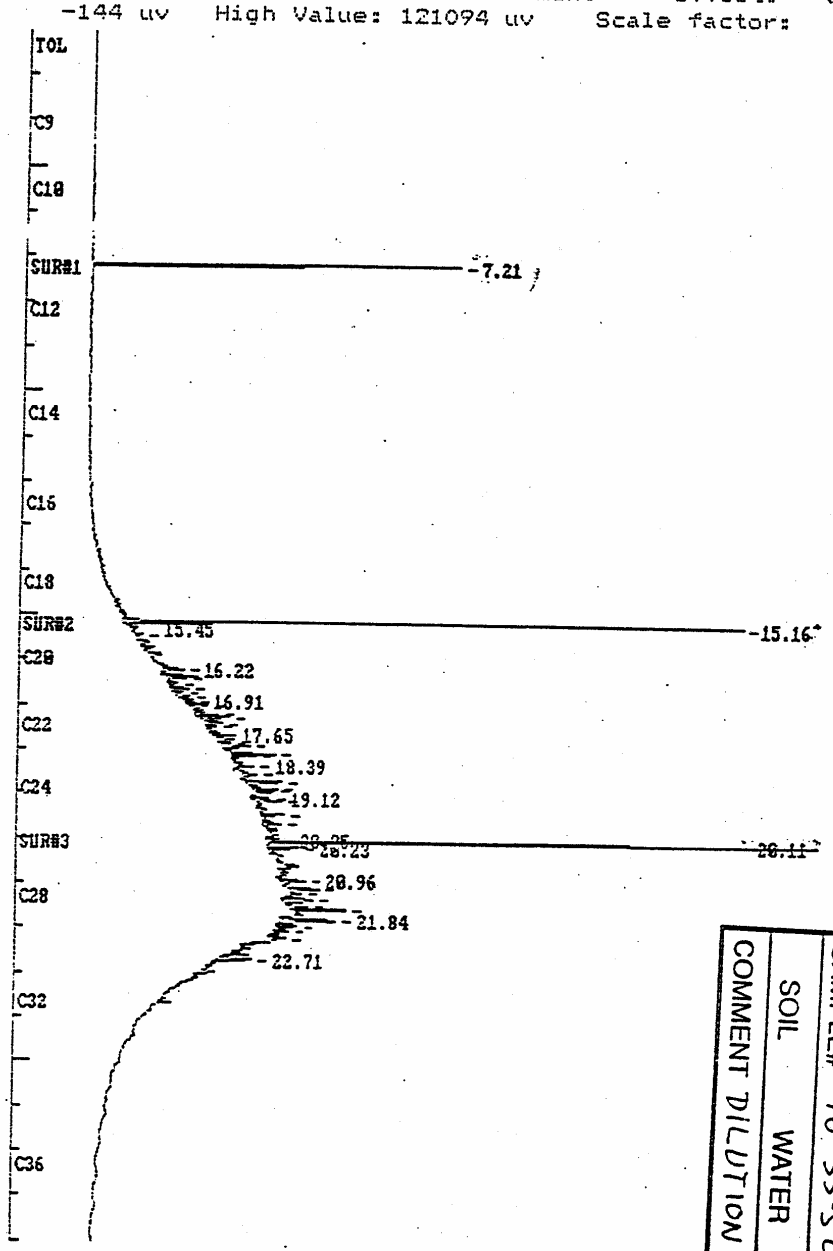
EPA, 1993. Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons, Washington DC, EPA/600/R-93/089.

EPA, 1994. IRIS Integrated Risk Information System, Database 1994.

Attachments:
Figure II-1 - Chromatogram for Sample 16-SS-502
Figure II-2 - Chromatogram for Sample 16-SS-503
Figure II-3 - Chromatogram for Sample 7-SS-507
Figure II-4 - Chromatogram for Sample 7-SS-508

tph\tph2.new

ta File = E:SUB22.PTS Printed on 07-17-1992 at 09:20:56
rt time: 2.00 min. Stop time: 29.00 min. Offset: 0 mv.
w Value: -144 uv High Value: 121094 uv Scale factor: 1.0



HART CROWSER LABORATORY
JOB# 3534-00
SAMPLE# 16-SS-502
SOIL WATER Product
COMMENT DILUTION 1:100

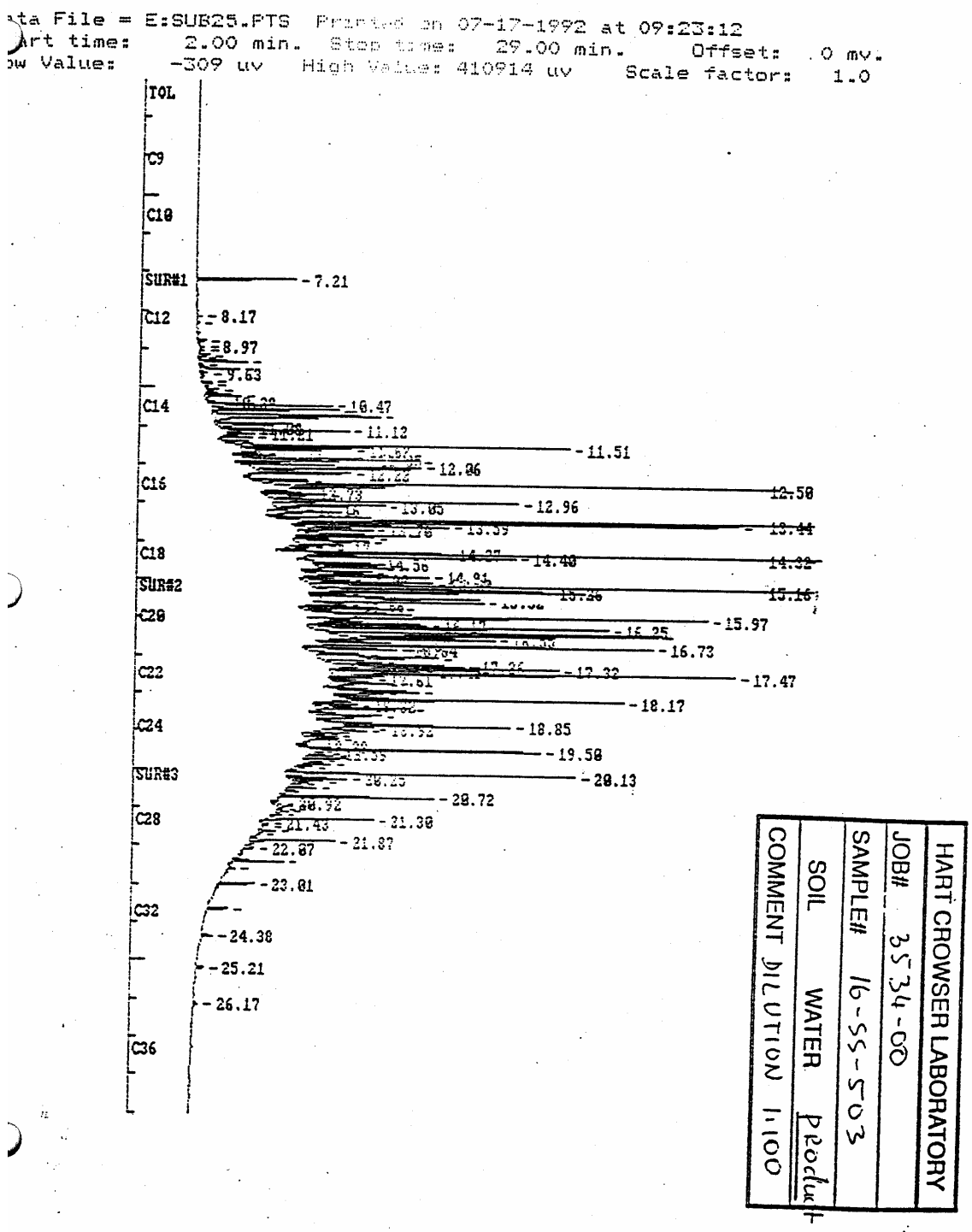

ata File = E:SUB25.PTS Printed on 07-17-1992 at 09:23:12
Start time: 2.00 min. Stop time: 29.00 min. Offset: .0 mv.
Low Value: -309 uv High Value: 410914 uv Scale factor: 1.0
TOL
C9
C10
SUR#1
C12
C14
C16
C18
SUR#2
C20
C22
C24
SUR#3
C28
C32
C36
7.21
8.17
8.97
9.63
10.47
11.12
11.51
12.06
12.50
12.96
13.44
14.32
15.16
15.97
16.73
17.47
18.17
18.85
19.58
20.13
20.72
21.30
21.87
23.01
24.38
25.21
26.17
HART CROWSER LABORATORY
JOB# 3534-00
SAMPLE# 16-55-503
SOIL WATER Product
COMMENT DILUTION 1:100

Figure II-2

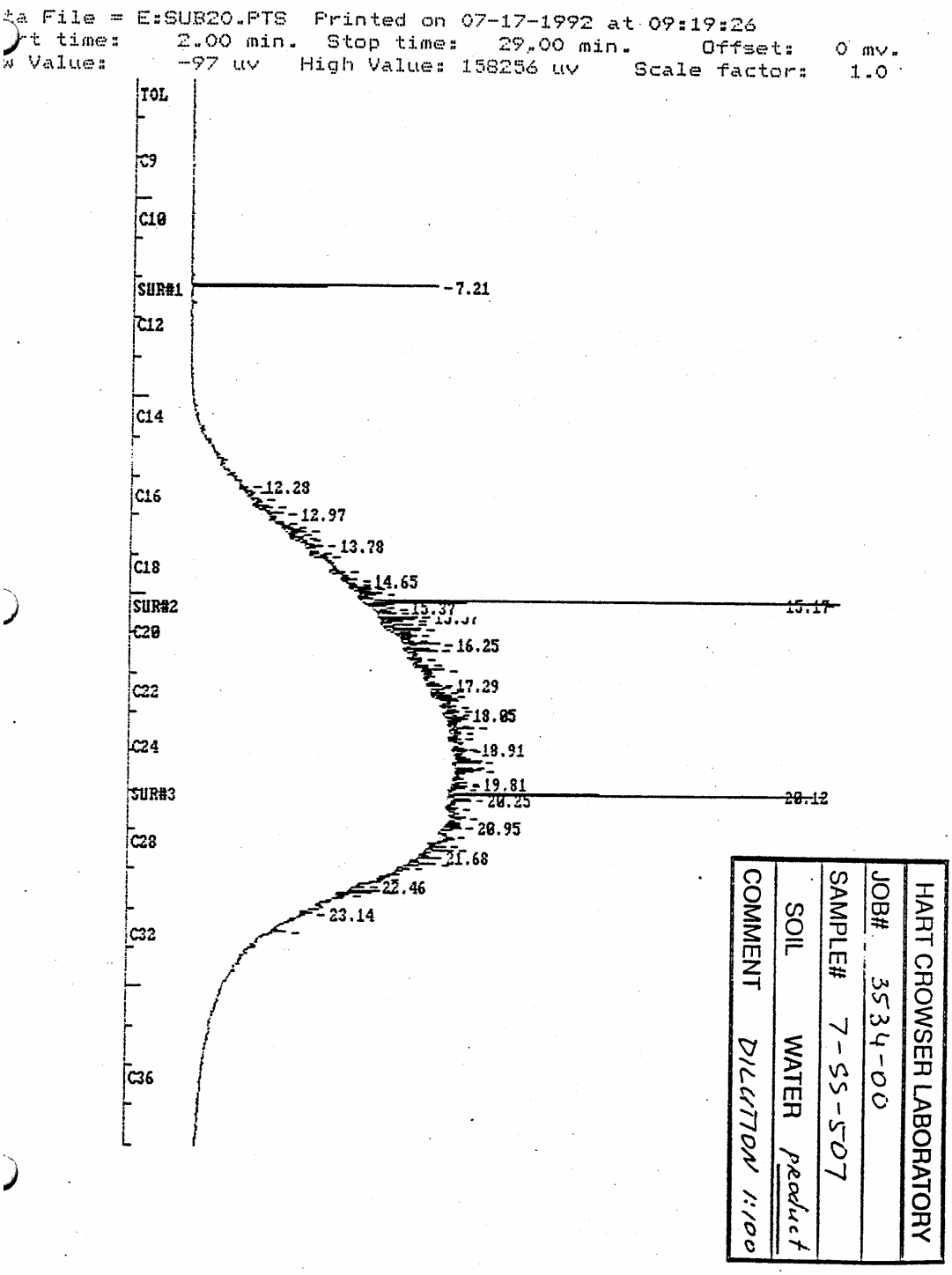
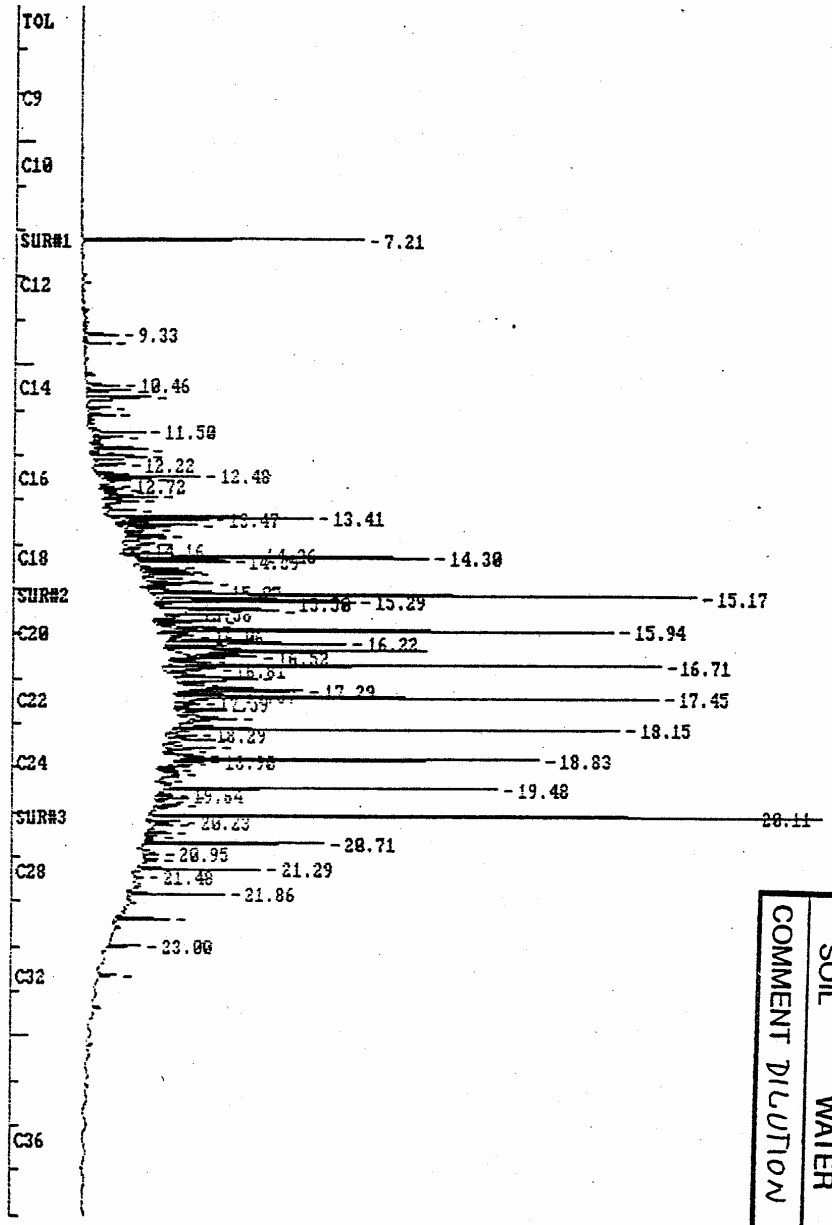

ta File = E:SUB20.PTS Printed on 07-17-1992 at 09:19:26
t time: 2.00 min. Stop time: 29.00 min. Offset: 0 mv.
Value: -97 uv High Value: 158256 uv Scale factor: 1.0
TOL
C9
C10
SUR#1
7.21
C12
C14
C16
12.28
12.97
13.78
C18
14.65
SUR#2
15.17
C20
16.25
C22
17.29
18.05
C24
18.91
SUR#3
19.81
20.12
20.25
C28
20.95
21.68
22.46
23.14
C32
C36
HART CROWSER LABORATORY
JOB# 3534-00
SAMPLE# 7-55-507
SOIL WATER product
COMMENT DILUTION 1:100

Figure II-3

Data File = E:SUB21.PTS Printed on 07-17-1992 at 09:20:09
Start time: 2.00 min. Stop time: 29.00 min. Offset: 0 mv.
Low Value: -154 uv High Value: 158713 uv Scale factor: 1.0



HART CROWSER LABORATORY
JOB# 3534-00
SAMPLE# 7-SS-SOS
SOIL WATER Product
COMMENT DILUTION 1:100

Figure II-4

APPENDIX III
DEVELOPMENT OF cPAH SOIL CLEANUP LEVELS FOR DESIGNATED LAND USES AT THE SITE

Soils with residual TPH/cPAH are contained within areas where the future land use may be either residential or recreational (although TPH/cPAH has not been detected in the zoned industrial areas of the Site, an industrial cleanup level has been developed in this appendix). This appendix describes the rationale and procedures used to develop cleanup levels for cPAH that will be protective of human health for these land uses.

Basis for Exposure Assumptions

Land Use. Following Site development, the non-industrial areas will include residential and recreational use areas. Recreational land use will include both a golf course and open space.

cPAH cleanup levels were generated for an industrial scenario and three exposure scenarios: golf course, open space, and residential. Note, however, that current development plans do not include residential areas where cPAH has been detected. Different exposure assumptions are applied in each scenario to account for the most likely individuals and activities producing the potential for exposure.

During golf course development, residual constituents in soil will be covered by one to two feet of topsoil in order to support course turf against the extremely rapid drainage of the native soils (Cummock, 1993; D'Aboy, 1993; Griswold, 1993). The only potential for exposure to the subsoils beneath the turf and imported topsoil would be infrequent activities requiring maintenance workers to dig through the barrier into the subsoils. Golfers and other visitors (e.g., trespassers) would not have contact with the subsoils. The cPAH cleanup level for golf course land use is derived from assumptions appropriate to a golf course maintenance worker.

In open space or green belt areas, residual soils may be available for direct contact, but not through activities typically associated with soil contact such as gardening, landscaping, or incidental ingestion by very young children (i.e., children less than six years old, who are typically assumed to incur the greatest levels of intake through soil contact, will be less likely to roam unattended through open space areas). Older children may represent the most likely, potentially exposed subpopulation, since they may roam through open space areas more freely than younger children. The DNT cleanup level for open space land use is intended to protect all children visiting open space areas, so the cleanup level was calculated using

parameters for a younger (0-6 year old) child in a recreational setting. This will be conservative for the older child.

The cPAH cleanup level for residential land use is intended to protect the younger (0-6 year old) child as a sensitive receptor, so the cleanup level was calculated using parameters typical for a child resident. Note again that cPAH has not been detected in areas currently planned for residential development.

The cPAH cleanup level for industrial land use is intended to protect an adult worker assumed to have regular and frequent (daily, occupational) contact with Site soils.

Ranges in risk-based cleanup levels. Recent risk assessment policy guidance (EPA 1992a) recommends development of risk ranges to describe potential risks from constituents at hazardous waste sites, and to inform risk management decisions for those sites. Risk ranges describe and account for uncertainty in risk assessment methods, and provide perspective on the upper-bound estimates of risk conventionally presented in risk assessments. Risk management is considered appropriate when predicted carcinogenic risks are in the range between one-in-one-million (10^{-6}) and one-in-ten-thousand (10^{-4}). In general, management of risks below the one-in-one-million threshold is unwarranted, whereas abatement of risks above the one-in-ten-thousand level is (usually) considered unnecessary.

Similarly, risk-based cleanup levels may be derived by rearranging equations used to estimate risk, and solving the equations for the concentration term associated with a pre-specified risk threshold (e.g., one-in-one-million). The concentration term is then regarded as the cleanup level associated with that threshold. Cleanup levels derived from rearranged risk algorithms are subject to the same types and degrees of uncertainty that apply to estimates of risk. Therefore, it is appropriate to generate a range of cleanup levels for consideration in the risk management process. The ranges of cleanup levels established in this document are based on a risk threshold between 10^{-6} and 10^{-5} for residential, open space, and golf course land use, and 10^{-5} and 10^{-4} for industrial land use.

Derivation of the Cleanup Levels

Soil cleanup levels for BAP are based on protection against potential carcinogenic effects. The carcinogenic potential of cPAH is conservatively represented by benzo(a)pyrene (BAP), the most potent cPAH (see below).

Two exposure routes are considered in the development of cleanup levels for cPAH: soil ingestion and dermal contact with soil. The cleanup levels

are calculated using equation 1. This equation is developed from exposure equations provided in Exhibits 6-14 and 6-15 in RAGS (EPA, 1989) by simultaneously solving the equations for the concentration in soil.

$$CS = \frac{Risk \times BW \times AT}{CPF \times CF \times FI \times EF \times ED \times \left[\left(IR \times ABS_i\right) + \left(SA \times AF \times ABS_d\right)\right]} \quad (1)$$

Tables 1 and 2 define the parameters in equation 1, and provide the values and references used for each land use. Values are based on estimates of central tendency for most parameters such that exposure, averaged over a lifetime, will produce an incrementally increased risk of cancer equal to the risk management threshold given as the "risk" parameter.

Table 1: Parameters Used to Calculate Cleanup Levels.

PARAMETER	DESCRIPTION		ECT RES	a	ECT OS	b	ECT GC	c	ECT IND	d
Risk	Acceptable risk level (unitless)	e	←		1E-5 to 1E-6		→		1E-4 to 1E-5	
BW	Body weight (kg)	f	15		15		70		70	
AT	Averaging time – carcinogens (days)	f	25550		25550		25550		25550	
CF	Conversion factor (mg/kg)	g	1E-6		1E-6		1E-6		1E-6	
FI	Freqency of intake (percent)	h	100		100		100		100	
EF	Exposure frequency (days/year)		275	i	52	j	36	k	250	f
ED	Exposure duration (years)		3	l	3	l	9	m	9	m
IR	Soil ingestion rate (mg/day)		63	n	63	n	26	o	26	o
SA	Skin surface area (cm2)	p	800		800		2000		2000	
AF	Soil to skin adherence factor (mg/cm2)	p	0.2		0.2		0.2		0.2	

NOTES

a. RES represents residential land use. The most exposed individual is a child.
b. OS represents open space land use. The most exposed individual is a child.
c. GC represents golf course land use. The most exposed individual is an adult.
d. IND represents industrial land use. The most exposed individual is an adult.
e. Two iterations were completed for RES, OS and GC: one at a risk threshold of 10^-5, and one at 10^-6. For IND, iterations were at 10^-4 and 10^-5.
f. From EPA 1991a.
g. Converts kg soil to mg soil.
h. Set at the maximum value to be conservative.
i. From EPA Region X, 1991.
j. ASARCO. 1993.
k. Cupit, 1993; D'Aboy, 1993; McCarthy, 1993.
l. Use 3 as the mid-point of a 0-6 year uniform distribution.
m. From RAGS (EPA, 1989).
n. Thompson and Burmaster 1991.
o. From D.O.E. 1993.
p. From EPA 1992b.

Table 2: cPAH-specific Parameters Used to Calculate Cleanup Levels.

PARAMETER	DESCRIPTION	cPAH	
CPF	Cancer potency factor (mg/kg-day)^-1	7.30	a
ABSi	Gastrointestinal absorption factor (percent)	100	
ABSd	Dermal absorption factor (percent)	2.3	b

NOTES
a. From Huether (1993).
b. EPA Region 10, February, 1991 as cited in Eagle Harbor Revised Risk Assessment, 1991.

The U.S. EPA has acknowledged the use of certain average exposure assumptions in managing potential risks from carcinogens (EPA, 1991b). The basis of this recommendation is that protection against carcinogenic effects relies on a model of long-term exposure. Long-term exposure is best approximated using average values rather than extreme values, since the latter have "no consistent relationship" with long-term exposure. In order to account for uncertainty in some exposure parameters, upper-bound values are used for these parameters to assure a conservative approach to human health protection. Several sources of uncertainty for which conservatism is maintained are discussed below.

cPAH Potency. The carcinogenic potency of cPAH as a class is conservatively represented by the toxicity of benzo(a)pyrene (BAP). However, of the seven PAHs considered to be carcinogenic, BAP is the most potent. One cPAH is as potent as BAP; the other five are substantially less potent (10 to 1,000 times less potent). Because of this, toxicity equivalence factors (TEFs) may be applied in risk assessments when specific cPAHs are identified (EPA 1993).

The carcinogenic potency factor for BAP was used to develop cleanup levels at the Site. However, the predominant cPAH at the Site is chrysene, which is one-thousand times less potent than BAP. Therefore, use of the BAP potency factor is very conservative.

Fractional Intake from Specific Source Areas. The FI term as provided in Risk Assessment Guidance for Superfund (RAGS; EPA 1989) accounts for the fractional amount of soil that may be ingested on a daily basis from different sources. As applied in the Site risk assessment, the FI term describes the frequency of soil contact by an individual at the golf course or open space areas (FI in residential and industrial scenarios was assumed to be 100 %). The term accounts for the fact that only a portion of the surface area designated for golf course and open space use overlies Site areas with residual constituents in the soil. Furthermore, exposure at the

golf course will be limited to maintenance workers, who occasionally may be required to excavate soils to a depth penetrating the 1-2 foot barrier of amended topsoil that will overlie native soils. This barrier will prevent exposure to individuals walking over the golf course.

In the Site risk assessment, exposure to subsurface soils at the golf course or surface soils in open space areas was assumed to be random, occurring with a frequency of contact equal to the percentage of total land use surface area represented by a given Site area (e.g., the surface area of Area 16 equals 2% of the total, planned open space area; therefore, the probability of contacting surface soils in Area 16 during an open space visit is assumed to be 2%).

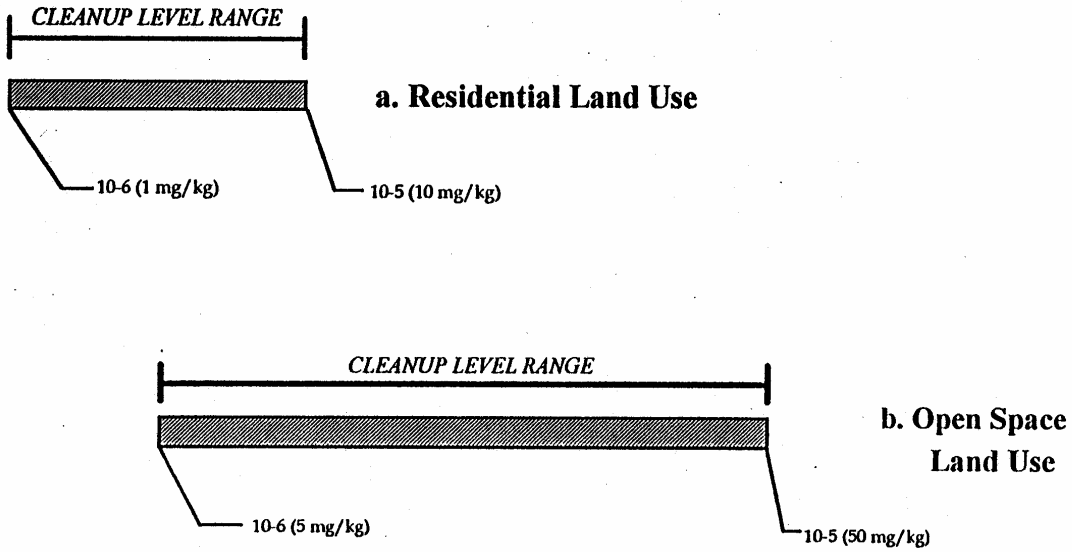
However, to derive cleanup levels for the Site, FI is assumed equal to 100% for both the open space and golf course scenarios. This is conservative, since it is highly unlikely that an individual will visit the same location (or all locations) during each visit, or that each excavation by a golf course worker will occur in the same place.

Using the parameters provided in the tables, the following cPAH cleanup level ranges are calculated for each land use:

- 1-10 mg/kg for residential land use;
- 5-50 mg/kg for open space land use;
- 20-220 mg/kg for golf course land use; and
- 30-300 mg/kg for industrial land use.

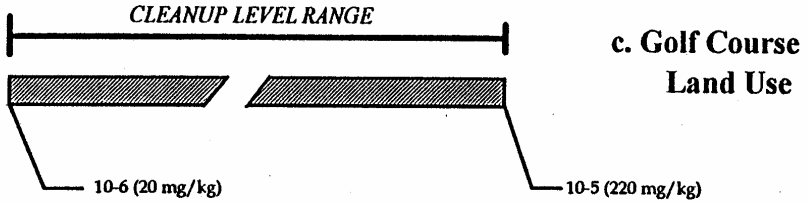
The ranges for residential, open space and golf course land use correspond to a risk threshold range between 10^{-6} and 10^{-5}; the range for industrial land use corresponds to a risk threshold range between 10^{-5} and 10^{-4}. These ranges are depicted graphically in Figure 1.

FIGURE 1: CLEANUP LEVEL RANGES FOR cPAH[1]

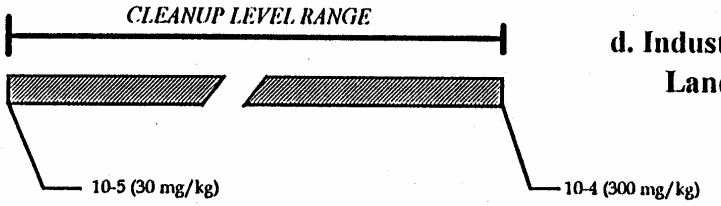


[1]Scaling is relative.

FIGURE 1: CLEANUP LEVEL RANGES FOR cPAH (continued)



c. Golf Course Land Use



d. Industrial Land Use

REFERENCES FOR APPENDIX III

Cummock, Bret, 1993. Vice President. ESM, Inc. Personal communication.

Cupit, Mark, 1993. Superintendent, Canterwood Golf Course. Personal communication.

D'Aboy, Jim, 1993. D'Aboy Engineering. Personal communication.

DOE, 1993. Probabilistic Risk Assessment Workshop. Department of Energy. Hanford, Washington.

EPA, 1989. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A). EPA/540/1-89/002.

EPA, 1991a. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual, Supplemental Guidance, " Standard Default Exposure Assumptions," Interim Final. OSWER Directive: 9285.6-03.

EPA, 1991b. Technical Support Document for Water Quality-Based Toxics Control. U.S. Environmental Protection Agency, Office of Water Enforcement and Permits, Office of Water Regulations and Standards, Washington, DC.

EPA, 1992a. Guidance on Risk Characterization for Risk Managers and Risk Assessors. Memorandum from F. Henry Habicht II, Deputy Administrator, to Assistant and Regional Administrators. U.S. Environmental Protection Agency, February 26, 1992.

EPA, 1992b. Dermal Exposure Assessment: Principles and Applications. Interim Report. Office of Research and Development, Washington, DC. EPA/600/8-91/01 lB. January, 1992.

EPA, 1993. Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons, Washington DC, EPA/600/R93/089.

EPA Region X, 1991. Supplemental Risk Assessment Guidance for Superfund. EPA Region X.

EPA Region 10, February, 1991 as cited in Eagle Harbor Revised Risk Assessment, 1991.

Griswold, Charlie, 1993. Senior Designer, Gage Davis Associates. Personal communication.

Huether, B., 1993. July 1993 Update to the Model Toxics Control Act (MTCA) Cleanup Standards Database. Washington Department of Ecology, Toxics Cleanup Program.

McCarthy, Tom, 1993. Superintendent, Indian Summers Golf Course. Personal communication.

Thompson, K.M. and D.E. Burmaster, 1991. Parametric Distributions for Soil Ingestion by Children. Risk Analysis 11 :2 (339-342).

Tsuji, Joyce, PhD and Sharon Quiring, CIH, 1992. Draft On-Property Baseline Human Health Risk Assessment, Asarco Tacoma Plant, Tacoma, Washington, Kleinfelder Project No. 60-1217-01, Prepared for ASARCO Incorporated, Tacoma, Washington, December 7, 1992.

353408\APPENDIX.REF

APPENDIX IV
HUMAN HEALTH TOXICITY OF TPH/PAHS

Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) are the most toxic component of Bunker C petroleum hydrocarbons. The MTCA regulation states that the cleanup level for TPH can be based upon the toxic fraction of the petroleum compound (WAC 173-340-740 (3)(a)(ii)(B)). As summarized in Appendix II, the most commonly detected cPAH was chrysene, one of the least potent of the cPAHs. Few studies are available concerning the toxicity of specific petroleum products; therefore, the following literature has been reviewed and relevant information compiled in the following section.

Bunker C Toxicity

Acute Toxicity. The American Petroleum Institute (API) commissioned Elars Bioresearch to study the acute toxicity of a variety of fuel petroleums (Beck et al., 1984). Four types of Bunker C fuel oils were studied. They were identified by specific gravity (sp) and sulfur content (%S): sp 0.99/2.7%S; sp 0.95/0.8%S; sp 0.92/0.2%S; and sp 1.04/1.2%S. Tests were performed to determine acute dermal and oral toxicity. Oral exposure to the Bunker C fuels with specific gravities of less than 1.0 demonstrated little toxicity with no increase in mortality associated with dosages up to 25 ml/kg body weight. The final Bunker C fuel, sp 1.04/1.2 %S, however, demonstrated measurable toxicity with an oral LD_{50} of 5 ml/kg body weight. Similar results were reported concerning dermal toxicity. These experiments illustrate the variability of toxicity associated with different formulations of Bunker C.

Acute Toxicity of Bunker C Components. Bunker C fuel oil is composed primarily of naphthenes, asphaltenes, saturated hydrocarbons, and aromatics (PAHs) (see Appendix II). cPAHs, the toxic component of Bunker C fuel oil, will be addressed separately.

Saturates, i.e., the saturated hydrocarbon chains with 9 or more carbons, have relatively little toxicity data. None of the long-chain (C-15 or greater) hydrocarbons are believed to be teratogenic, mutagenic, or carcinogenic (Clayton and Clayton, 1982). Extremely long chain compounds such as N-Pentadecane (C-15), 1-Octadecanol (C-18), and 1-Eicosanol (C-20) are considered relatively non-toxic with LD_{50}s greater than 15,000 mg/kg.

Asphaltenes also are considered to be relatively non-toxic. The International Agency for Research on Cancer (IARC) has evaluated the

data for asphaltenes and determined the data to be insufficient to classify these compounds as carcinogens (IARC, 1989). These compounds have also not been found to be mutagenic in mouse skin models (HSDB, 1994). In general, these compounds have little or no toxicity associated with them, even among road workers who used asphalt as a chewing-gum material (HSDB, 1994).

As with the other Bunker C components, naphthenes have very limited acute toxicity data. These data suggest that naphthenes are relatively non-toxic as well. Toxicity data on cyclopropanes, cyclobutanes, and cyclopentanes describe these compounds to only be toxic as simple asphixiants, although there is some evidence that cyclopropane may be carcinogenic (Lewis, 1992). Cyclohexane and ethylcyclohexane were demonstrated to have LD_{50}s of 30,000 and 64,000 mg/kg, respectively. These data suggest that the longer chain naphthenes will be relatively non-toxic compared with other components of Bunker C.

Carcinogenicity. The IARC has reviewed information concerning the carcinogenicity of a variety of petroleum fuels (IARC, 1989). Bunker C has not been demonstrated to be mutagenic in either bacterial or whole cell models. Bunker C has both positive and negative results in tumorigenic studies. Human epidemiology data are hard to interpret because of mixed exposures. As a result, the IARC has given Bunker C fuel a Group 2B ranking, possible human carcinogen. No ranking by the EPA is available at this time.

Bingham et al. (1980) linked the carcinogenicity of Bunker C with the fuel's PAH content. C3H mice were given dermal applications of 20 mg Bunker C twice weekly for an unspecified period of time (at least 59 weeks). Bunker C fuel containing 0.01 percent benzo(a)pyrene resulted in 2 out of 19 mice developing tumors over 59 weeks. In mice treated with Bunker C fuel containing 0.16 percent benzo(a)pyrene, 21 out of 25 developed tumors over 59 weeks (of which 12 were malignant). This study indicates that the carcinogenicity of Bunker C is largely dependent upon the PAH content of the particular fuel.

cPAH Toxicity

Carcinogenicity. Chrysene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene, and benzo(a)pyrene have all been determined to be complete carcinogens in animals by multiple routes of exposure. These seven cPAHs have been classified by the EPA as Group B2, probable human carcinogens (IRIS, 1994).

Benzo(a)pyrene is typically used as the representative PAH based on the availability of data. Neal and Rigdon (1967) reported a dose-related incidence of forestomach tumors in mice orally exposed to benzo(a)pyrene. An additional study by Brune et al. (1981) also demonstrated a dose-related incidence of tumors in sprague-Dawley rats. Slope factors for benzo(a)pyrene have been calculated using both a linear multi-stage model of carcinogenesis and a two-stage model. Four slopes, from 4.5 to 11.7, have been calculated. The EPA has presently established an oral carcinogenic slope factor of 7.3 $(mg/kg\text{-}day)^{-1}$ based on the geometric mean of these four previous slope factors (IRIS, 1994).

Relative Potencies of cPAHs. Benzo(a)pyrene (BAP) has been determined to be one of the most potent carcinogens of the cPAHs (EPA, 1986). Clement Associates (1988) used the two-staged carcinogenic model to develop potency estimates for various cPAHs that have demonstrated lesser carcinogenic potential than BAP. Quantitative risk estimates for mixtures of PAHs have often assumed that all cPAHs are as toxic as BAP, and that the carcinogenic effect of the mixture can be estimated by the sum of the effects of each individual cPAH. However, it has been documented that five of the seven cPAHs are less carcinogenic in animal studies than BAP (the toxicity of dibenzo(a,h)anthracene is assumed to be equal to BAP). Thus, assuming all cPAHs to be as toxic as BAP can result in an overestimation of risk (EPA, 1993a).

In 1993, based on the EPA's Office of Health and Environmental Assessment (OHEA) review of the Clement Associates (1988) report, OHEA issued provisional guidance for quantitative risk assessment of PAHs (EPA, 1993a), which is considered interim guidance. However, a recent memorandum originating from EPA Region 10 (EPA, 1993b) indicates that all the EPA regions agree that the new PAH policy would be formally adopted by EPA in the near future and that all the regions would use the policy as interim guidance for risk assessment of PAH compounds. Included in this guidance is an order of magnitude ranking of relative potency values for the individual PAHs that are recommended in order to provide a consistent approach in risk assessment.

Assessment of the risk of mixtures, using the relative potency approach, involves the following steps:

- Analytical determination of cPAHs;
- Multiplication of sample concentrations by their relative potencies to express concentration in terms of BAP equivalents, or relative potency concentrations (RPC);

- Summation of the RPCs to obtain total BAP equivalents in the sample;
- Determination of human exposure (expressed in terms of BAP equivalents); and
- Combining exposure with cancer potency information on BAP to estimate the cancer risk associated with exposure to the PAH mixture.

Table IV-1 summarizes the relative potencies for cPAHs (as presented in EPA, 1993a) detected at the Site.

Table IV-1 - Relative Potencies for cPAHs

cPAH	Relative Potency Factors
Benzo(a)Anthracene	0.1
Benzo(a)Pyrene	1.0
Benzo(b)Fluoranthene	0.1
Benzo(k)Fluoranthene	0.01
Chrysene	0.001
Dibenzo(a,h)Anthracene	1.0
Indeno(1,2,3c,d)Pyrene	0.1

As discussed in Appendix II, chrysene—the least potent of the seven cPAHs—is also the most prevalent cPAH at the Site. Therefore, sample cPAH results from Areas 7, 8, and 16 were normalized to total BAP equivalents using RPFs in order to more accurately reflect the relative potency of the cPAHs associated with the Bunker C detected on the Site. Normalized cPAH results were used to derive a cleanup level for TPH based on a correlation between TPH and cPAH concentrations (Appendix V).

Conclusions

The toxic fraction of the Bunker C product on Site is related to cPAHs. Much of the remaining content of Bunker C fuels is relatively non-toxic because it is composed of non-aromatic straight chain hydrocarbons. Because chrysene is the most prevalent but least potent of the cPAHs present at the site, it is appropriate to use EPA's interim relative potency

factors to estimate the potential cancer risk associated with exposure to these substances at the Site.

References for Appendix IV

Becks, L.S., D.L. Helper, and K.L. Hansen, 1984. The acute toxicology of selected petroleum hydrocarbons. In Macfarland, HN, Holdsworth, CE, MacGregor, JA, Call, RW and Lane, ML, eds., Advances in modern environmental toxicology, vol. VI, Appl Toxicol Petrol Hydrocar, NJ, Princeton Scientific Publishers, 1-6.

Bingham, E., R.P. Trosset, and D. Warshaawsky, 1980. Carcinogenic activity of petroleum hydrocarbons. A critical review of the literature. J Environ Pathol Toxicol. 3: 483-563.

Brune, H., R.P. Deutsch-Wenzel, S. Habs, S. Ivankovic, and D. Schmudhl, 1981. Investigation of tumorigenic response to benzo(a)pyrene in aqueous caffeine solution applied orally to Sprague-Dawley rats. J Cancer Res Clin Oncol, 102 (2): 153-157.

Clayton, G.D. and F.E. Clayton, 1982. Patty's Industrial Hygiene and Toxicology, Vols 2A-2C, 3rd Ed. John Wiley & Sons, New York 1981-1982.

Clements Associates, 1988. Comparative potency approach for estimating the cancer risk associated with exposure to mixtures of polycyclic aromatic hydrocarbons. EPA Control No. 68-02-4403.

EPA, 1986. The Risk Assessment Guidelines of 1986. Office of Health and Environmental Assessment Washington D.C. EPA/600/8-87/045.

EPA, 1993a. Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons. Washington, D.C. EPA/600/R-93/089.

EPA, 1993b. Memorandum from C. Sweeney, Health and Environmental Assessment Program, to S. Thomas, Superfund Remedial Branch, dated November 16, 1993, regarding risk assessment for PAH mixtures. EPA, Region 10, Seattle, Washington.

HSDB, 1994. Hazardous Substances Data Bank. National Library of Medicine, Bethesda, Maryland (CD-ROM version). Micromedex, Inc. Denver, Colorado (Edition expires 4/30/94).

IARC, 1989. IARC monographs on evaluation of carcinogenic risk of chemicals to humans: Occupational exposures to petroleum. vol. 45: 140-271.

Lewis, Richard J., 1992. Sax's Dangerous Properties of Industrial Materials. Eighth Edition, New York, Van Nostrand Reinhold, 1992.

Neal, J. and R.H. Rigdon, 1967. Gastric tumors in mice fed benzo(a)pyrene: a qualitative study. Tex Rep Biol Med, 25 (4): 553-557.

tph\tph4.new

APPENDIX V
BUNKER C TPH CLEANUP LEVEL

In order to determine a cleanup level for Bunker C TPH detected on the Site, and recognizing that the risk posed by Bunker C is largely attributable to its cPAH components, correlation analyses were performed to assess the statistical relationship between cPAH and TPH concentrations. A correlation analysis was performed to determine an appropriate Site-wide cleanup level for Bunker C-derived TPH.

Regression Analysis to Determine Site-Wide Bunker C TPH Cleanup Level

An evaluation of the correlation between TPH and cPAHs was performed on samples collected from areas known to contain elevated concentrations of Bunker C. Regression analysis was performed on data collected from Areas 7, 8, and 16 combined. Data were combined from all Bunker C areas because: 1) there was limited cPAH data for area-specific correlations; 2) no significant differences were observed between area-specific correlations; and 3) the same product has been demonstrated to occur in all three areas (see Appendix II).

Cumulative total cPAH concentrations were assessed in the regression analyses. Sample cPAH results were normalized to total BAP equivalents in order to more accurately reflect the potency of individual cPAHs (see Appendix IV). The TPH concentrations associated with normalized cPAH concentrations of 1.0 and 10.0 mg/kg, the range of acceptable residential cleanup levels based on the toxicity of BAP, were calculated for the 95 percent upper confidence level.

Based on the regression analysis ($r^2=0.52$), normalized total cPAH concentrations of 1.0 and 10.0 mg/kg are equivalent to TPH residential cleanup levels of 3,100 to 27,000 mg/kg at the 95 percent confidence level (see Figure V-1).

Conclusions

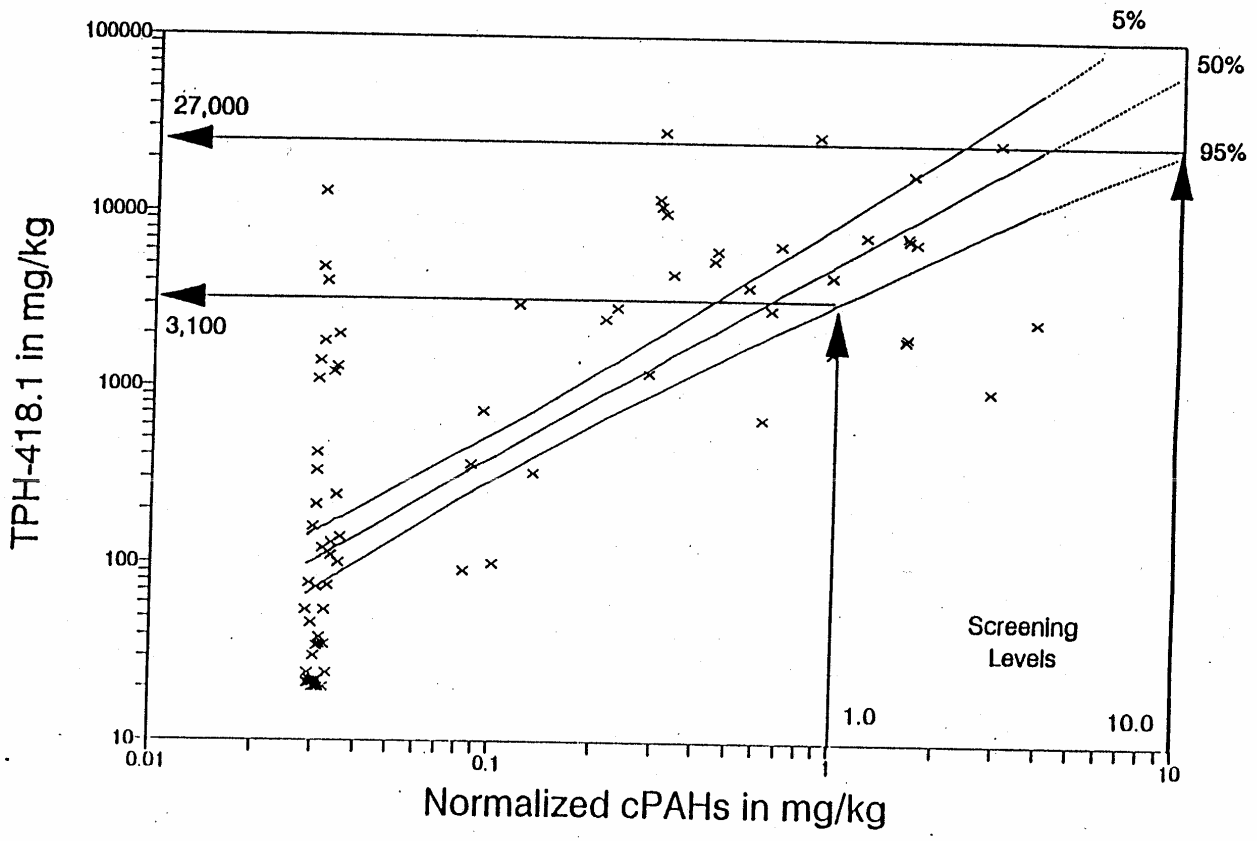
Results indicate that cleanup levels of 3,100 to 27,000 mg/kg for Bunker C-derived TPH will achieve the cleanup goal of 1.0 to 10.0 mg/kg for cPAHs (residential land use) in Areas 7, 8, and 16. Normalized cPAH data accurately reflect the toxicity associated with the cPAHs detected on Site (see Appendix IV) and represent an accurate method for deriving a Bunker C cleanup level.

Attachments:

Figure V-1 Correlation Between cPAHs and TPH-418.1
Bunker C Areas 7, 8, and 16

tph\tph5.new

Correlation Between cPAHs and TPH-418.1
Bunker C Areas 7, 8, and 16



HARTCROWSER
J-3534-08 4/94
Figure F-1

APPENDIX VI
GROUNDWATER, SURFACE WATER, AND LEACHABILITY DATA FOR TPH AND cPAHs

Groundwater Data

TPH Data for Groundwater. Total petroleum hydrocarbons (TPH; WTPH 418.1 analysis) have not been detected in any groundwater sample collected during the four rounds of RI groundwater sampling. The TPH data for groundwater are presented in Table VI-1.

Non-Carcinogenic PAH Data for Groundwater. Of the 129 groundwater samples collected during four rounds of RI groundwater sampling, no sample had confirmed detections of any PAH above the MTCA drinking water screening levels for non-carcinogenic (e.g., chronic toxicity) effects.

cPAH Data for Groundwater. One of the 129 groundwater samples collected during four rounds of RI groundwater sampling had an unconfirmed detection of total cPAHs above the 0.0001 mg/L MTCA screening level for total cPAHs (Table VI-2). During the September 1992 sampling round, one of two samples collected from monitoring well MW-8 had a reported total cPAH concentration of 0.0016 mg/L. However, this result was not confirmed by the field duplicate sample collected concurrently from MW-8, which had only a single cPAH (chrysene) detected at the detection limit (0.00001 mg/L). The discrepancy in results between this set of duplicate samples suggests possible sample contamination during sample handling in the field or laboratory. This is further supported by the lack of cPAH detections in groundwater samples or field duplicates from MW-8 in any of the other groundwater sampling rounds, either before or after the September 1992 sampling round. Detected total cPAH concentrations also have not exceeded the 0.0001 mg/L screening level in any other groundwater samples collected during the RI. Based on these data, the single unconfirmed detection of cPAHs in MW-8 above the screening level is not considered representative of groundwater quality at this location or elsewhere at the Site.

Chrysene has been detected inconsistently in groundwater samples from 11 monitoring wells (excluding the September 1992 sample from MW-8) at concentrations marginally above the MTCA Method B screening level of 0.000012 mg/L (Table VI-2). As discussed in Appendix IV, the individual cPAH screening levels are based on benzo(a)pyrene toxicity. Because benzo(a)pyrene is a more potent carcinogen than chrysene (by three orders of magnitude), the individual cPAH screening level is highly conservative for chrysene, which is the least potent of the seven cPAHs.

The chrysene detections occur infrequently in different monitoring wells, including well MW-14 located along the eastern (hydraulically upgradient) edge of the Site. The detected concentrations are very low, ranging from 0.00002 to 0.0001 mg/L, with an average of 0.00003 mg/L relative to the detection limit of 0.00001 mg/L. Furthermore, chrysene is not detected consistently at a given well over time (detected in only one of the 11 wells in more than one of the four sampling rounds). Statistical testing (a Fisher's Exact Test) indicates that the proportion of chrysene detections in on-site monitoring wells (16/129) is not significantly different (at $p = 0.05$; 95% confidence level) than the proportion of detections in background wells (0/12).

Benzo(b)fluoranthene and dibenzo(a,h)anthracene were also each detected in one groundwater sample (other than the September 1992 sample from MW-8) at concentrations marginally above the individual cPAH screening level (Table VI-2).

It should be noted that the RI analyses' very low-level detection limits for individual cPAHs in water (0.00001 mg/L) are essentially the same as the screening level for individual cPAHs (0.000012 mg/L). As a result, almost any detection of an individual cPAH in groundwater is above the screening level. Furthermore, the individual cPAH screening levels are below practical quantitation limits (PQLs) of 0.0002 to 0.002 mg/L as defined by Ecology (Ecology, 1993).

In any event, all samples in which an individual cPAH was detected (other than the September 1992 sample from MW-8), had a total cPAH concentration at or below the 0.0001 mg/L screening level for total cPAHs.

The screening levels for individual cPAHs are highly conservative since they are based on benzo(a)pyrene toxicity (discussed in Appendix IV). Chrysene, not benzo(a)pyrene, is the only cPAH detected in more than one groundwater sample collected from the Site (excluding anomalous September 1992 sample from MW-8). Because a screening level based on chrysene toxicity would be 0.012 mg/L (0.000012 mg/L/0.001 Relative Potency Factor [RPF]; refer to Appendix IV), the MTCA drinking water screening level for total cPAHs (0.0001 mg/L) is protective of human health and the environment at the Site.

Surface Water Data

TPH and ncPAH Data for Surface Water. No TPH or non-carcinogenic PAHs were detected above MTCA screening levels in any of the four rounds of RI surface water sampling.

cPAH Data for Surface Water. cPAHs were detected at a concentration above the most stringent surface water screening level in one surface water sample; however, the data indicate that the single exceedence was the result of elevated sample turbidity created during sampling.

In the December 1992 sampling round, low concentrations of cPAHs were detected in the surface water sample from sampling location SW-1 near the mouth of Sequalitchew Creek (Table VI-2). Six of seven individual cPAH concentrations (0.00006 to 0.00023 mg/L) were above MTCA screening levels (0.000031 mg/L based on benzo(a)pyrene toxicity). Because seasonally low water conditions occurred at SW-1 during the December 1992 sampling round, greater than usual sediment was stirred up during sampling, resulting in elevated total suspended solids (TSS) in the sample. The TSS value in this sample was 160 mg/L, an order of magnitude higher than all other TSS values measured from the SW-1 location. Because cPAHs have relatively low solubilities, the low level cPAH detections are likely related to the higher levels of particulate matter (TSS) in the sample.

No cPAHs were detected in any other surface water sample from the four rounds of sampling, indicating that the single detection is not representative of surface water quality at the Site.

Leachability Data

The lack of petroleum compounds (TPH and PAH) detected in groundwater or surface water is consistent with the low degree of leachability measured during toxicity characteristics leaching procedure (TCLP) testing for these compounds in Site soils.

Nine soil samples collected from Area 8 (Bunker C-derived) were tested for TPH leachability using the TCLP test (EPA Methods 1311/418.1). The TPH concentrations in the nine soil samples submitted for TCLP analysis ranged from 800 to 19,000 mg/kg. In addition, one of the samples was tested for TCLP PAHs. The TCLP test employs a much more rigorous leaching procedure than would be representative of natural site conditions (e.g., leaching due to rainwater infiltration). As a result, the TCLP results are conservative since they overestimate leachability relative to actual site conditions. The TCLP TPH and PAH results are summarized in Table VI-3.

Leachable total petroleum hydrocarbons (TPH), under the rigorous TCLP procedure, were not detected in samples with TPH concentrations up to 11,000 mg/kg. The only detected leachable TPH (16 mg/L) of the nine samples tested occurred in the sample containing the highest TPH

concentration of 19,000 mg/kg. No leachable cPAHs were detected in the Area 8 soil sample containing 6,900 mg/kg TPH.

Literature-derived values for cPAH partition coefficients provide additional support that residual hydrocarbon concentrations at the Site are protective of groundwater. Table VI-4 provides literature values for log K_{oc} (normalized organic carbon partition coefficient) for the cPAH compounds and an average measured organic carbon content for Site soils (fractional organic carbon content, f_{oc}). The soil:water partition coefficients (K_d values) for cPAHs were estimated by the expression $K_d = K_{oc} \times f_{oc}$. The estimated cPAH K_d values range from 9,600 to 1,205,000 (Table VI-4). Using the lowest estimated K_d value of 9,600 L/kg, a cPAH soil screening level for protection of groundwater (based on the conservative benzo(a)pyrene screening level) can be calculated as follows:

Soil conc. (mg/kg) = groundwater screening level (mg/L) x K_d (L/kg) x DAF
= (0.000012 mg/L) (9,600 L/kg) (100)
= 12 mg/kg

As discussed in the lead cleanup summary, EPA determined during its development of the TCLP regulations (55 FR 11803) that a dilution/ attenuation factor (DAF) of 100 is appropriate for the full range of constituents in the TCLP list, many of which are more mobile in the subsurface than cPAHs.

A total cPAH concentration of 12 mg/kg corresponds to a Bunker C-derived TPH concentration of 7,600 mg/kg (with 95% confidence; refer to Appendix V for TPH/cPAH regression analysis). This calculated TPH concentration is consistent with the fact that no leachable cPAHs were detected in a sample with 6,900 mg/kg Bunker C-derived TPH. This evaluation, with the TCLP data, supports 7,600 mg/kg TPH (Bunker C-derived) as protective of groundwater at the Site. All areas with Bunker C TPH sources have average concentrations (arithmetic mean and 95% UCL) below 7,600 mg/kg (refer to Tables I-1 and I-2 in Appendix I).

No areas of the Site have an average (arithmetic mean) cPAH concentration above 12 mg/kg. In fact, only two of 111 samples collected from the Site have detected cPAH concentrations above 12 mg/kg (one from Area 16 and one from Area 26). Because of the numbers of PAH samples and proportions of detections, the 95% UCL for cPAHs in these areas default to the maximum concentration according to MTCA statistical guidance (18 mg/kg in Area 16, and 37 mg/kg in Area 26; Table I-3 in Appendix I). Groundwater quality data from monitoring wells located immediately downgradient of Area 16 (MW-2, MW-3, and MW-5) and

Area 26 (MW-6) indicate no adverse impact to groundwater from TPH or cPAHs in these areas. Furthermore, cPAH results from samples collected below a depth of 1 foot in Area 16 (results provided in RI Deliverable I; Hart Crowser, 1992) indicate that the cPAHs, like the TPH, is limited to surficial soils impacted by Bunker C residue, i.e., there has been negligible vertical transport of cPAHs.

Although current MTCA guidance requires a single maximum sample result to represent average cPAH concentrations in Areas 16 and 26, all available data indicate that cPAHs in these areas, or in any area of the Site, do not pose a risk to groundwater or surface water.

Conclusions

Historical (pre-interim source removal) TPH and cPAH concentrations in soil have not adversely impacted groundwater or surface water at the Site. Evaluation of site-specific TCLP data and cPAH partition coefficients (K_d) supports a TPH concentration for Bunker C-derived petroleum concentrations of 7,600 mg/kg for protection of groundwater. Following interim source removal, no average concentrations of Bunker C-derived TPH are above 7,600 mg/kg. Furthermore, cPAH concentrations in soil do not pose a risk to groundwater or surface water. Therefore, remaining soils will not adversely impact groundwater or surface water quality at the Site in the future.

References for Appendix VI

Ecology, 1993. Washington State Department of Ecology Implementation Memo No. 3, PQLs as Cleanup Standards. Dated November 24, 1993.

Hart Crowser, 1992. RI Deliverable I, Remedial Investigation/Feasibility Study, Former DuPont Works Site, Dupont, Washington. October 7, 1992.

Montgomery & Welkom, 1991. Groundwater Chemical Desk Reference, Lewis Publishers, 1991.

tph\TPH6.new

Attachments:

Table VI-1 - Total Petroleum Hydrocarbon (TPH) Concentrations in mg/L in Groundwater and Surface Water

Table VI-2 - Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Table VI-3 - Summary of Soil Petroleum Hydrocarbon Leachability Data

Table VI-4 - Estimated Partition Coefficients (K_d) for cPAHs

tph\TPH6.new

Table VI-1 – Total Petroleum Hydrocarbon (TPH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Location	TPH 418.1 in mg/L
Groundwater		
MW-1-12-92	MW-1	ND
MW-1-3-92	MW-1	ND
MW-1-6-92	MW-1	ND
MW-1-9-92	MW-1	ND
MW-2-12-92	MW-2	ND
MW-2-3-92	MW-2	ND
MW-2-6-92	MW-2	NDE
MW-2-9-92	MW-2	ND
MW-3-12-92	MW-3	ND
MW-3-3-92	MW-3	ND
MW-3-6-92	MW-3	NDE
MW-3-9-92	MW-3	ND
MW-4-12-92	MW-4	ND
MW-4-3-92	MW-4	ND
MW-4-6-92	MW-4	ND
MW-4-9-92	MW-4	ND
MW-5-12-92	MW-5	NDE
MW-5-3-92	MW-5	ND
MW-5-6-92	MW-5	ND
MW-5-9-92	MW-5	ND
MW-6-12-92	MW-6	ND
MW-6-3-92	MW-6	ND
MW-6-6-92	MW-6	ND
MW-6-9-92	MW-6	ND
MW-7-12-92	MW-7	ND
MW-7-3-92	MW-7	ND
MW-7-6-92	MW-7	NDE
MW-7-9-92	MW-7	ND
MW-8-12-92	MW-8	ND
MW-8-3-92	MW-8	ND
MW-8-6-92	MW-8	NDE
MW-8-9-92	MW-8	ND
MW-9-12-92	MW-9	ND
MW-9-3-92	MW-9	ND
MW-9-6-92	MW-9	NDE
MW-9-9-92	MW-9	ND
MW-11-12-92	MW-11	ND
MW-11-3-92	MW-11	ND
MW-11-6-92	MW-11	NDE
MW-11-9-92	MW-11	ND
MW-12-12-92	MW-12	ND
MW-12-3-92	MW-12	ND
MW-12-6-92	MW-12	NDE
MW-12-9-92	MW-12	ND
MW-13-12-92	MW-13	ND
MW-13-3-92	MW-13	ND
MW-13-6-92	MW-13	NDE
MW-13-9-92	MW-13	ND
MW-14-12-92	MW-14	ND
MW-14-3-92	MW-14	ND
MW-14-6-92	MW-14	ND

Table VI-1 - Total Petroleum Hydrocarbon (TPH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Location	TPH 418.1 in mg/L
MW-14-9-92	MW-14	ND
MW-15-1-93	MW-15	ND
MW-15-12-92	MW-15	ND
MW-15-3-92	MW-15	ND
MW-16-12-92	MW-16	ND
MW-16-3-92	MW-16	ND
MW-16-6-92	MW-16	NDE
MW-16-9-92	MW-16	ND
MW-17-12-92	MW-17	ND
MW-17-3-92	MW-17	ND
MW-17-6-92	MW-17	ND
MW-17-9-92	MW-17	ND
MW-18-12-92	MW-18	ND
MW-18-3-92	MW-18	ND
MW-18-6-92	MW-18	NDE
MW-18-9-92	MW-18	ND
MW-19-12-92	MW-19	ND
MW-19-3-92	MW-19	ND
MW-19-6-92	MW-19	NDE
MW-19-9-92	MW-19	ND
MW-20-12-92	MW-20	ND
MW-20-3-92	MW-20	ND
MW-20-6-92	MW-20	ND
MW-20-9-92	MW-20	ND
MW-21-12-92	MW-21	ND
MW-21-3-92	MW-21	ND
MW-21-6-92	MW-21	ND
MW-21-9-92	MW-21	ND
MW-22-12-92	MW-22	ND
MW-22-3-92	MW-22	ND
MW-22-6-92	MW-22	NDE
MW-22-9-92	MW-22	ND
MW-23-12-92	MW-23	ND
MW-23-3-92	MW-23	ND
MW-23-6-92	MW-23	NDE
MW-23-9-92	MW-23	ND
MW-24-12-92	MW-24	ND
MW-24-3-92	MW-24	ND
MW-24-6-92	MW-24	NDE
MW-24-9-92	MW-24	ND
MW-25-1-93	MW-25	ND
MW-25-12-92	MW-25	ND
MW-25-7-92	MW-25	ND
MW-25-9-92	MW-25	ND
MW-26-1-93	MW-26	ND
MW-26-12-92	MW-26	ND
MW-26-7-92	MW-26	ND
MW-26-9-92	MW-26	ND
MW-27-3-92	MW-27	ND
SEEP-1-12-92	SEEP-1	ND
SEEP-1-3-92	SEEP-1	ND
SEEP-1-6-92	SEEP-1	ND

Table VI-1 – Total Petroleum Hydrocarbon (TPH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Location	TPH 418.1 in mg/L
SEEP-1-9-92	SEEP-1	ND
SEEP-2-12-92	SEEP-2	ND
SEEP-2-3-92	SEEP-2	ND
SEEP-2-6-92	SEEP-2	ND
SEEP-2-9-92	SEEP-2	ND
SPR-3-12-92	SPR-3	ND
SPR-3-3-92	SPR-3	ND
SPR-3-9-92	SPR-3	ND
SPR-4-12-92	SPR-4	ND
SPR-4-3-92	SPR-4	ND
SPR-4-6-92	SPR-4	ND
SPR-4-9-92	SPR-4	ND
83-93-3-92	83-93	ND
83-94-3-92	83-94	ND
Surface Water		
SW-1-12-92	SW-1	ND
SW-1-3-92	SW-1	ND
SW-1-6-92	SW-1	ND
SW-2-12-92	SW-2	ND
SW-2-3-92	SW-2	ND
SW-2-6-92	SW-2	ND
SW-2-9-92	SW-2	ND
SW-3-12-92	SW-3	ND
SW-3-3-92	SW-3	ND
SW-3-6-92	SW-3	ND
SW-3-9-92	SW-3	ND
SW-4-3-92	SW-4	ND
SW-4-6-92	SW-4	ND
SW-5-12-92	SW-5	ND
SW-5-3-92	SW-5	ND
SW-5-6-92	SW-5	ND
SW-5-9-92	SW-5	ND
SW-6-12-92	SW-6	ND
SW-6-3-92	SW-6	ND
SW-6-6-92	SW-6	ND
SW-6-9-92	SW-6	ND
SW-7-12-92	SW-7	ND
SW-7-3-92	SW-7	ND
SW-7-6-92	SW-7	ND
SW-7-9-92	SW-7	ND

Notes:

ND Not detected at detection limit of 1 mg/L.

NDE Not detected at estimated detection limit of 1 mg/L. Sample MW-5-12-92 not detected at estimated detection limit of 3 mg/L.

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Benzo(a)-Anthracene	Benzo(a)-Pyrene	Benzo(b)-Fluoran-thene	Benzo(k)-Fluoran-thene	Chrysene	Dibenzo-(a,h)Antra-cene	Indeno-(1,2,3-c,d)-Pyrene	Total cPAHs (a)
Groundwater								
7-B-503	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-1-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-1-3-92	ND	ND	ND	ND	ND	0.000015	ND	0.000015
MW-1-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-1-9-92	ND	ND	ND	ND	0.0001	ND	ND	0.0001
MW-2-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-2-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-2-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-2-9-92	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-3-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-3-3-92	ND	ND	0.000025	ND	ND	ND	ND	0.000025
MW-3-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-3-9-92	ND	ND	0.00001	ND	ND	ND	ND	0.00001
MW-4-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-4-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-4-6-92	ND	ND	ND	ND	0.00002	ND	ND	0.00002
MW-4-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-5-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-5-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-5-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-5-9-92	ND	ND	ND	ND	0.00003	ND	ND	0.00003
MW-6-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-6-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-6-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-6-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-7-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-7-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-7-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-7-9-92	ND	ND	ND	ND	0.00001 J	ND	ND	0.00001
MW-8-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-8-3-92	ND	ND	ND	ND	ND	ND	ND	

Hart Crowser
J-3534-08

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Benzo(a)-Anthracene	Benzo(a)-Pyrene	Benzo(b)-Fluoranthene	Benzo(k)-Fluoranthene	Chrysene	Dibenzo-(a,h)Anthracene	Indeno-(1,2,3-c,d)-Pyrene	Total cPAHs (a)
MW-8-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-8-9-92	0.00016	0.00008	0.00028	0.00025	0.00045	ND	0.00034	0.00156
MW-9-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-9-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-9-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-9-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-11-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-11-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-11-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-11-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-12-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-12-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-12-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-12-9-92	ND	ND	ND	ND	0.00002	ND	ND	0.00002
MW-13-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-13-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-13-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-13-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-14-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-14-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-14-6-92	ND	ND	ND	ND	0.00002	ND	ND	0.00002
MW-14-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-15-1-93	ND	ND	ND	ND	0.00003	ND	ND	0.00003
MW-15-12-92	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-15-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-15-7-92	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-16-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-16-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-16-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-16-9-92	ND	ND	ND	ND	0.00002	ND	ND	0.00002
MW-17-12-92	ND	ND	ND	ND	0.00004	ND	ND	0.00004
MW-17-3-92	ND	ND	ND	ND	ND	ND	ND	

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Benzo(a)-Anthracene	Benzo(a)-Pyrene	Benzo(b)-Fluoran-thene	Benzo(k)-Fluoran-thene	Chrysene	Dibenzo-(a,h)Antra-cene	Indeno-(1,2,3-c,d)-Pyrene	Total cPAHs (a)
MW-17-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-17-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-18-12-92	ND	ND	ND	ND	0.00007	ND	ND	0.00007
MW-18-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-18-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-18-9-92	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-19-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-19-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-19-6-92	ND	ND	ND	ND	0.00002	ND	ND	0.00002
MW-19-9-92	ND	ND	ND	ND	0.00001	ND	ND	0.00001
MW-20-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-20-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-20-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-20-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-21-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-21-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-21-6-92	ND	ND	ND	ND	0.00001	ND	ND	0.00001
MW-21-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-22-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-22-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-22-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-22-9-92	ND	ND	ND	ND	0.00001	ND	ND	0.00001
MW-23-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-23-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-23-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-23-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-24-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-24-3-92	ND	ND	ND	ND	ND	ND	ND	
MW-24-6-92	ND	ND	ND	ND	ND	ND	ND	
MW-24-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-25-1-93	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-25-12-92	ND	ND	ND	ND	ND	ND	ND	

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Benzo(a)-Anthracene	Benzo(a)-Pyrene	Benzo(b)-Fluoranthene	Benzo(k)-Fluoranthene	Chrysene	Dibenzo-(a,h)Anthracene	Indeno-(1,2,3-c,d)-Pyrene	Total cPAHs (a)
MW-25-7-92	ND	ND	ND	ND	ND	ND	ND	
MW-25-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-26-1-93	ND	ND	ND	ND	0.00002	ND	ND	0.00002
MW-26-12-92	ND	ND	ND	ND	ND	ND	ND	
MW-26-7-92	ND	ND	ND	ND	ND	ND	ND	
MW-26-9-92	ND	ND	ND	ND	ND	ND	ND	
MW-27-3-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-1-12-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-1-3-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-1-6-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-1-9-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-2-12-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-2-3-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-2-6-92	ND	ND	ND	ND	ND	ND	ND	
SEEP-2-9-92	ND	ND	ND	ND	ND	ND	ND	
SPR-3-12-92	ND	ND	ND	ND	ND	ND	ND	
SPR-3-3-92	ND	ND	ND	ND	ND	ND	ND	
SPR-3-9-92	ND	ND	ND	ND	ND	ND	ND	
SPR-4-12-92	ND	ND	ND	ND	ND	ND	ND	
SPR-4-3-92	ND	ND	ND	ND	ND	ND	ND	
SPR-4-6-92	ND	ND	ND	ND	ND	ND	ND	
SPR-4-9-92	ND	ND	ND	ND	ND	ND	ND	

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Benzo(a)-Anthracene	Benzo(a)-Pyrene	Benzo(b)-Fluoranthene	Benzo(k)-Fluoranthene	Chrysene	Dibenzo-(a,h)Anthracene	Indeno-(1,2,3-c,d)-Pyrene	Total cPAHs (a)
Surface Water								
SW-1-12-92	0.00009	0.00009	0.00017	0.00006 J	0.00023	ND	0.00007	0.00071
SW-1-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-1-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-2-12-92	ND	ND	ND	ND	ND	ND	ND	
SW-2-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-2-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-2-9-92	ND	ND	ND	ND	ND	ND	ND	
SW-3-12-92	ND	ND	ND	ND	ND	ND	ND	
SW-3-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-3-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-3-9-92	ND	ND	ND	ND	ND	ND	ND	
SW-4-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-4-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-5-12-92	ND	ND	ND	ND	ND	ND	ND	
SW-5-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-5-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-5-9-92	ND	ND	ND	ND	ND	ND	ND	
SW-6-12-92	ND	ND	ND	ND	ND	ND	ND	
SW-6-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-6-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-6-9-92	ND	ND	ND	ND	ND	ND	ND	
SW-7-12-92	ND	ND	ND	ND	ND	ND	ND	
SW-7-3-92	ND	ND	ND	ND	ND	ND	ND	
SW-7-6-92	ND	ND	ND	ND	ND	ND	ND	
SW-7-9-92	ND	ND	ND	ND	ND	ND	ND	

Notes:
- ND — Not detected (cPAH detection limits ranging from 0.00001 to 0.00005 mg/L; ncPAH detection limits ranging from 0.00001 to 0.00002 mg/L).
- NDE — Not detected (estimated cPAH detection limits ranging from 0.00001 to 0.00005 mg/L; estimated ncPAH detection limits ranging from 0.00001 to 0.00002 mg/L).
- J — Estimated value.
- (a) — Total represents the sum of detected values only.

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo (g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	Total ncPAHs (a)
Groundwater										
7-B-503	NDE	NDE	NDE	0.00006 J	NDE	NDE	NDE	0.00031 J	NDE	0.00037
MW-1-12-92	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
MW-1-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-1-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-1-9-92	ND	ND	0.00006	ND	ND	0.0011	0.0016	0.00041	ND	0.00317
MW-2-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-2-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-2-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-2-9-92	NDE	NDE	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-3-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-3-3-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
MW-3-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-3-9-92	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
MW-4-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-4-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-4-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-4-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5-12-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
MW-5-3-92	ND	ND	ND	ND	ND	ND	ND	0.000015	ND	0.000015
MW-5-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-5-9-92	ND	ND	ND	ND	ND	ND	0.00033	0.00013	ND	0.00046
MW-6-12-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
MW-6-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-6-6-92	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
MW-6-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-7-12-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
MW-7-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-7-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-7-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-8-12-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
MW-8-3-92	ND	ND	ND	ND	ND	ND	ND	0.000015	ND	0.000015

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo (g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	Total ncPAHs (a)
MW-8-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-8-9-92	ND	ND	ND	0.00018	0.00015	ND	0.00016	0.00008	0.00014	0.00071
MW-9-12-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
MW-9-3-92	ND	ND	ND	ND	ND	ND	ND	0.000025	ND	0.000025
MW-9-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-9-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-11-12-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
MW-11-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-11-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-11-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-12-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-12-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-12-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-12-9-92	ND	ND	ND	ND	ND	ND	ND	0.00008	ND	0.00008
MW-13-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-13-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-13-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-13-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-14-12-92	ND	ND	ND	ND	ND	ND	ND	0.00006	ND	0.00006
MW-14-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-14-6-92	ND	ND	ND	ND	ND	ND	ND	0.00001	ND	0.00001
MW-14-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-15-1-93	ND	ND	ND	ND	0.00002	ND	ND	0.00003	ND	0.00005
MW-15-12-92	NDE	NDE	NDE	NDE	0.00004 J	NDE	NDE	0.00008 J	0.00005 J	0.00017
MW-15-3-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
MW-15-7-92	NDE	NDE	NDE	NDE	0.00011 J	NDE	NDE	0.00003 J	NDE	0.00014
MW-16-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-16-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-16-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-16-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-17-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-17-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo (g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	Total ncPAHs (a)
MW-17-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-17-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-18-12-92	ND	ND	ND	ND	0.00004	ND	ND	0.00009	ND	0.00013
MW-18-3-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
MW-18-6-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
MW-18-9-92	NDE	NDE	NDE	NDE	NDE	NDE	NDE	NDE	NDE	
MW-19-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-19-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-19-6-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
MW-19-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-20-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-20-3-92	ND	ND	ND	ND	ND	ND	ND	0.000022	ND	0.000022
MW-20-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-20-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-21-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-21-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-21-6-92	ND	ND	ND	ND	ND	ND	ND	0.00001	ND	0.00001
MW-21-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-22-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-22-3-92	ND	ND	ND	ND	0.00007	ND	ND	0.000035	ND	0.000105
MW-22-6-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
MW-22-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-23-12-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
MW-23-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-23-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-23-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-24-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-24-3-92	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
MW-24-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-24-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-25-1-93	NDE	NDE	NDE	NDE	NDE	NDE	NDE	0.00002 J	NDE	0.00002
MW-25-12-92	ND	ND	ND	ND	ND	ND	ND	0.00006	ND	0.00006

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo (g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	Total ncPAHs (a)
MW-25-7-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-25-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-26-1-93	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
MW-26-12-92	ND	ND	ND	ND	ND	ND	ND	0.00006	ND	0.00006
MW-26-7-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-26-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
MW-27-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SEEP-1-12-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
SEEP-1-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SEEP-1-6-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
SEEP-1-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SEEP-2-12-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
SEEP-2-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SEEP-2-6-92	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
SEEP-2-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SPR-3-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SPR-3-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SPR-3-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SPR-4-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SPR-4-3-92	ND	ND	ND	ND	ND	ND	ND	0.000015	ND	0.000015
SPR-4-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SPR-4-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Table VI-2 – Polycyclic Aromatic Hydrocarbon (PAH) Concentrations in mg/L in Groundwater and Surface Water

Sample ID	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo (g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	Total ncPAHs (a)
Surface Water										
SW-1-12-92	ND	ND	0.00003	0.00014	0.00038	ND	ND	ND	0.00016 J	0.00071
SW-1-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-1-6-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
SW-2-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-2-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-2-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-2-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-3-12-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-3-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-3-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-3-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-4-3-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-4-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-5-12-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
SW-5-3-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
SW-5-6-92	ND	ND	ND	ND	ND	ND	ND	0.00004	ND	0.00004
SW-5-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-6-12-92	ND	ND	ND	ND	ND	ND	ND	0.00005	ND	0.00005
SW-6-3-92	ND	ND	ND	ND	ND	ND	ND	0.000025	ND	0.000025
SW-6-6-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
SW-6-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-7-12-92	ND	ND	ND	ND	ND	ND	ND	0.00003	ND	0.00003
SW-7-3-92	ND	ND	ND	ND	ND	ND	ND	0.00002	ND	0.00002
SW-7-6-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SW-7-9-92	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:
- ND – Not detected (cPAH detection limits ranging from 0.00001 to 0.00005 mg/L; ncPAH detection limits ranging from 0.00001 to 0.00002 mg/L.).
- NDE – Not detected (estimated cPAH detection limits ranging from 0.00001 to 0.00005 mg/L; estimated ncPAH detection limits ranging from 0.00001 to 0.00002 mg/L.).
- J – Estimated value.
- (a) – Total represents the sum of detected values only.

3534081\gwsappv2.wk1

Hart Crowser
J-3534-08

Table VI-3 – Summary of Soil Petroleum Hydrocarbon Leachability Data

Sample ID:	8-VS-SC-224	8-VS-SC-112	8-VS-SC-152	8-VS-SC-170
Station No:	2+82	12+90	8+93	7+12
Sampling Date:	6/10/93	6/07/93	6/08/93	6/08/93 (3)
Sample Depth in Feet:	15	15	15	15
TPH 418.1 in mg/kg (ppm)	6,900 (2)	5,400	2,340 (1)	6,000 (2)
TCLP TPH 418.1 in mg/L (ppm)	ND	ND	ND	ND
TCLP cPAHs in mg/L (ppm)				
Benzo(a)anthracene	ND	NA	NA	NA
Benzo(a)pyrene	ND	NA	NA	NA
Benzo(b)fluoranthene	ND	NA	NA	NA
Benzo(k)fluoranthene	ND	NA	NA	NA
Chrysene	ND	NA	NA	NA
Dibenzo(a,h)anthracene	ND	NA	NA	NA
Indeno(1,2,3,c,d)pyrene	ND	NA	NA	NA
Total cPAHs (a)	ND	—	—	—
Total cPAHs (b)	0.004	—	—	—
TCLP ncPAHs in mg/L (ppm)				
Acenaphthene	ND	NA	NA	NA
Acenaphthylene	ND	NA	NA	NA
Anthracene	ND	NA	NA	NA
Benzo(g,h,i)perylene	ND	NA	NA	NA
Fluoranthene	ND	NA	NA	NA
Fluorene	ND	NA	NA	NA
Naphthalene	ND	NA	NA	NA
Phenanthrene	ND	NA	NA	NA
Pyrene	ND	NA	NA	NA
Total ncPAHs (b)	0.015	—	—	—

355408\tphcmppr5.wk1

Notes:

ND Not detected (cPAH detection limits ranging from 0.001 to 0.0021 mg/L; ncPAH detection limits ranging from 0.0005 to 0.005 mg/L; TCLP TPH 418.1 not detected at detection limit of 1 mg/L).

NA Not analyzed.

(a) Total represents the sum of detected values only.

(b) Total includes one-half the detection limit of non-detected compounds.

(1) TPH Screening in mg/kg dry weight.

(2) TPH Screening in mg/kg wet weight.

(3) Sample location was excavated during subsequent source removal.

Table VI-3 – Summary of Soil Petroleum Hydrocarbon Leachability Data

Sample ID:	8-VS-SC-208	8-VS-SC-296A	8-VS-SC-297A	8-VS-59	8-VS-81
Station No:	3+73	10+74	6+88	2+00	10+74
Sampling Date:	6/09/93	7/2/93 (3)	7/2/93 (3)	7/12/93	7/28/93
Sample Depth in Feet:	15	15	15	15	20
TPH 418.1 in mg/kg (ppm)	819 (1)	19,000	9,500	7,200	11,000
TCLP TPH 418.1 in mg/L (ppm)	ND	16	ND	ND	ND
TCLP cPAHs in mg/L (ppm)					
Benzo(a)anthracene	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA
Indeno(1,2,3,c,d)pyrene	NA	NA	NA	NA	NA
Total cPAHs (a)	—	—	—	—	—
Total cPAHs (b)	—	—	—	—	—
TCLP ncPAHs in mg/L (ppm)					
Acenaphthene	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA
Total ncPAHs (b)	—	—	—	—	—

Notes:

ND Not detected (cPAH detection limits ranging from 0.001 to 0.0021 mg/L; ncPAH detection limits ranging from 0.0005 to 0.005 mg/L; TCLP TPH 418.1 not detected at detection limit of 1 mg/L).

NA Not analyzed.

(a) Total represents the sum of detected values only.

(b) Total includes one-half the detection limit of non-detected compounds.

(1) TPH Screening in mg/kg dry weight.

(2) TPH Screening in mg/kg wet weight.

(3) Sample location was excavated during subsequent source removal.

Table VI-4 - Estimated Partition Coefficients (Kd) for cPAHs

cPAH Compound	log Koc (a)	Koc	Average foc (b)	Estimated Kd (c)
Chrysene	5.39	245,000	0.039	9,600
Benzo(b)fluoranthene	5.74	550,000	0.039	21,500
Benzo(a)anthracene	6.14	1,380,000	0.039	53,800
Dibenzo(a,h)anthracene	6.22	1,660,000	0.039	64,700
Benzo(a)pyrene	5.6 to 6.29	398,000 to 1,950,000	0.039	15,500 to 76,100
Benzo(k)fluoranthene	6.64	4,365,000	0.039	170,200
Ideno(1,2,3-cd)pyrene	7.49	30,903,000	0.039	1,205,200

Notes:
(a) Literature data from Montgomery and Welkom, 1991.
(b) Average fractional organic carbon value from large-volume soil samples used for treatability studies.
(c) Kd = Koc * foc

353408\TPHAPPV4.wk1

APPENDIX VII
POTENTIAL ECOLOGICAL RISK OF TPH/cPAH

A quantitative ecological risk assessment was performed to estimate the potential risk posed by TPH/cPAH in soils at the Site to ecological receptors.

cPAHs

The ecological risk assessment for cPAHs used conservative models to approximate plant and animal uptake of cPAHs to derive potential doses for indicator species and evaluate risk. These methods are briefly summarized below.

Soil total cPAH concentrations were used as model inputs, and different exposure scenarios were simulated using a weighted statistical model. Soil cPAH concentrations were first normalized to benzo(a)pyrene equivalents (Appendix IV). Exposure concentrations for smaller animals were determined by calculating the upper confidence limit on the arithmetic mean (95% UCL) for individual areas of concern. Exposure concentrations for higher trophic animals were modeled by calculating the area weighted average for normalized cPAHs from sections of the Former DuPont Works Site and from the Site as a whole. The 95% UCL was then calculated for each weighted average. The area weighted approach provides a quantitative method for estimating cPAH exposure from animal foraging behavior.

The indicator species selected for the risk assessment included the Townsend Vole, Blacktail Deer, Red Fox, Red-tailed Hawk, and the Mallard Duck. Tasca et al. (1989) developed equations and assumptions to estimate daily intake of food, water, and incidentally ingested soil. The Department of Agriculture (DOA, 1985) catalogued the ranges and behaviors of indicator species. Plant uptake factors were derived from algorithms developed by Travis and Arms (1988) using benzo(a)pyrene as the modeled compound.

Based on this approach, daily chemical intakes of cPAHs were calculated for individual indicator species. These daily chemical intakes were compared against a laboratory No Observable Adverse Effects Level (NOAEL) for benzo(a)pyrene reported by Neal and Rigdon (1967). A hazard quotient was calculated for each indicator species by dividing the daily cPAH uptake by the reported NOAEL.

Results of this risk assessment indicate that higher trophic mammals such as foxes and deer have hazard quotients less than 0.1 and therefore are not at risk of cPAH toxicity. Avian species have hazard quotients below 1.0, demonstrating that Site conditions do not impact these species. Finally, smaller animals were demonstrated not to have any potential risks associated with cPAHs. Hazard quotients for cPAHs in voles ranged from less than 0.1 to a maximum of 1.2 in Area 26. The assumed cPAH exposure concentration in soil at Area 26 was 37 mg/kg (Appendix I). The results of the ecological risk assessment indicate that cPAH concentrations in individual areas below approximately 30 mg/kg (37 mg/kg/1.2) are protective of ecological receptors at the Site. This level is greater than the acceptable range of human health based cleanup levels established for total cPAHs of 1.0 to 10.0 mg/kg; therefore, cleanup based on human health risk would also be protective of ecological receptors on the Site.

TPH

Bunker C fuels are the primary petroleum constituent on the Site. Limited toxicity data are available for Bunker C in mammalian species. Recognizing that the risk posed by Bunker C is largely attributable to its cPAH components, the risk to ecological receptors from exposure to Bunker C-derived TPH was evaluated based on normalized cPAH concentrations.

The results of the ecological risk assessment indicate that cPAH concentrations in individual areas below approximately 30 mg/kg are protective of ecological receptors at the Site. This level corresponds to a TPH concentration of 76,000 mg/kg based on the regression analysis of the combined Bunker C-impacted areas (Appendix V). This level is greater than the range of cleanup levels established for the Site of 3,100 and 27,000 mg/kg, and therefore cleanup based on human health risk would be protective of ecological receptors on the Site.

Conclusions

Results of the ecological risk assessment indicate that a cPAH concentration of 30 mg/kg would be protective of ecological receptors on the Site. This level corresponds to a TPH concentration of 76,000 mg/kg, much greater than the range of cleanup levels for the Site of 3,100 and 27,000 mg/kg based on human health risk. Therefore cleanup to these levels would also be protective of ecological receptors on Site.

References for Appendix VII

API, 1992. Results of Toxicological Studies. American Petroleum Institute, Health and Environmental Sciences Department, Washington D.C. January 1992.

DOA, 1985. Management of Wildlife and Fish Habitats in Forests of Western Oregon and Washington. U.S. Department of Agriculture. Forest Service, Pacific Northwest Region, Portland, OR, R6-F&WL-192-1985. June 1985.

Neal, J. and R.H. Rigdon, 1967. Gastric Tumors in Mice Fed Benzo(a)pyrene: A Quantitative Study. Tex. Rep. Biol. Med. 25: 553-557.

Tasca, J.J, M.F. Saunders, and R.S. Prann, 1989. Terrestrial food-chain model for risk assessment, pp. 111-116. In: Superfund '89, Hazardous Materials Control Research Institute's Tenth National Conference and Exhibition, Washington, D.C.

Travis, C. and A.D. Arms, 1988. Bioconcentration of Organics in Beef, Milk, and Vegetation. Environmental Science and Technology, 22(3): 271-273.

tph\tph7.new

Appendix D – Toxicity Information for Select Constituents

D.1 Monomethyl Amine Nitrate – Monomethylamine

D.1.1 Derivation of Oral Reference Dose

Monomethylamine nitrate (MMAN) was produced by DuPont for use as a sensitizer with water gel explosive formulations. There are no other industrial applications for MMAN. MMAN readily dissociates in water to monomethylamine (MMA) and nitrate, and is not expected to be persistent in the environment. Current analytical methods do not distinguish MMAN from MMA.

EPA has not published toxicity information or toxicity values (e.g., RfD) for MMAN or MMA. MMAN/MMA are not considered carcinogens by EPA. Chronic studies of the toxicological effects of MMA were not found in the current literature. Evidence from occupational studies have shown no long-lasting health effects when workers were exposed to MMAN via inhalation and dermal contact (ACGIH, 1988).

In the absence of human or animal toxicity dose-response studies, the RfD in the draft final RA was derived using an alternative approach. MMA is a natural ingredient in many foods including vegetables (e.g., average concentration in several different types of vegetables was 21.95 ppm) and seafood (Neurath et al., 1977). The RfD was derived based on the amount of MMA an individual consumes daily via ingestion of vegetables. It is assumed that consuming MMA in the diet does not result in any adverse health effects.

The RfD represents the amount of MMA that the average adult and child consumes daily as part of their normal diet (i.e., vegetables only) and then the dose is determined by dividing these values by the child and adult body weights, respectively. These doses are conservative approximations of the average doses of MMA in the diet because (1) the vegetables considered represent a small part of the American diet which contains other sources of MMA (e.g., seafood), (2) the ingestion rate of vegetables used was a U.S. population average which may underestimate the intake of vegetables and MMA by some groups such as vegetarians, and (3) the measurements of MMA in uncooked vegetables are underestimates of the amount consumed because cooking and canning increase MMA content of foods (Lin et al.,1983).

The derived oral RfD is 0.0175 mg/kg-day for a child and 0.0081 mg/kg-day for an adult. The RfD for the adult is lower (i.e., more protective when used in a risk evaluation) than the RfD for the child because the average adult eats less MMA each day per kilogram of body weight. These RfDs are adequate (protective) for evaluating potential risks associated with human exposure to MMAN or MMA. The lower, more protective RfD (i.e., 0.0081) was selected for the Dupont Works Site and approved by Ecology (PIONEER, 1997).

D.1.2 References

ACGIH (American Conference of Governmental and Industrial Hygienists). 1988. Documentation of the Threshold Limit Values and Biological Exposure Indies. Cincinnati, Ohio. American Conference of Governmental and Industrial Hygienists.

Neurath , G. B. et al. 1977. Primary and secondary amines in the human environment. Food and Cosmetic Toxicology. 15:275-282.

Lin, J.K., Lee, Y.J., and H.W. Chang. 1983. High concentrations of dimethylamine and methylamine in squid and octopus and their implications in tumor etiology. Food and Chemical Toxicology. 21(2):143-149.

PIONEER (PIONEER Technologies Corporation). 1997. Letter from Brad Grimsted to Mike Blum.

D.2 Toxicity Profile for Arsenic

D.2.1 Introduction

Arsenic is a naturally occurring element that is widely distributed in the earth's crust. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. It is released into the air by volcanoes, the weathering of arsenic-containing minerals and ores, and by commercial or industrial processes (EPA, 2002a). Arsenic is persistent and does not breakdown in the environment. It can only change its form. Once it is released into the air, it will settle to the ground or be washed out of the air by rain. Once in soil, arsenic can be taken up and converted to organic arsenic by plants and animals.

The primary commercial use of inorganic arsenic is as a wood preservative, while organic arsenic compounds are typically used in pesticides (ATSDR, 2001). At the Site, arsenic is most likely present due to its use as a pesticide to control vegetation along the narrow gauge railroad. Speciation of arsenic at the Site has shown it to be present primarily in the inorganic form.

D.2.2 Health Effects

Inorganic arsenic compounds are generally more toxic to humans than organic arsenic compounds. Breathing high levels of inorganic arsenic can cause a sore throat or irritated lungs. Inhalation of lower levels of arsenic over a long time can cause darkening of the skin and appearance of small "corns" or "warts" on the body (ATSDR, 2001). Inhalation of arsenic has also been associated with development of lung cancer (EPA, 2002a).

Ingestion of high levels of inorganic arsenic can cause death, while ingestion of lower levels can cause nausea, vomiting, anemia, abnormal heart rhythm, and circulatory system damage (ATSDR, 2001). Ingestion of inorganic arsenic has been linked to a form of skin cancer and also to bladder, liver, and lung cancer (EPA, 1994). The World Health Organization, the Department of Health and Human Services, and the EPA have determined that inorganic arsenic is a human carcinogen (ATSDR, 2001).

D.2.3 Basis for Toxicity Values Used in the Risk Assessment

Toxicity values for both cancer and non-cancer health effects were used in the RA to calculate remediation levels. The value used to calculate a remediation level based on non-cancer health effects was an oral reference dose (RfD) of 0.0003 mg/kg-day, based on the observance of hyperpigmentation, ketatosis, and possible vascular complications in people exposed to inorganic arsenic in drinking water. The value used to calculate a cleanup levels and remediation levels based on cancer risk was a cancer potency factor (CPF) of 1.5 $(mg/kg\text{-}day)^{-1}$, based on the occurrence of skin cancer in humans exposed to inorganic arsenic in drinking water (EPA, 2002b).

D.2.4 References

ATSDR (Agency for Toxic Substances and Disease Registry). 2001. ToxFAQs for Arsenic, July, 2001.

EPA (United States Environmental Protection Agency). 2002a. Hazard Summary for Arsenic and Compounds. Unified Air Toxics Website. Office of Air Quality Planning & Standards.

EPA (United States Environmental Protection Agency). 2002b. EPA's Integrated Risk Information System Database, 1st Quarter Update, 2002.

D.3 Toxicity Profile for Lead

D.3.1 Introduction

Lead is a naturally occurring metal found in small amounts in the earth's crust. Lead is also present due to human activities such as burning fossil fuels, mining, and manufacturing. Manufacturing uses of lead include the production of batteries, ammunition, metal products, and devices used to shield x-rays (ATSDR, 2001).

Lead does not breakdown in the environment. It can only change its form. When lead is released to the air, it may travel long distances before it settles out and sticks to soil particles.

Because of health concerns, the lead content in gasoline, paints, ceramic products, caulking, and pipe solder has been dramatically reduced or eliminated in recent years (ATSDR, 2001).

Human exposure to lead occurs through a combination of inhalation and oral exposure, with the oral route generally contributing a greater proportion of the dose for the general population. The effects associated with exposure to lead are the same regardless of the route of exposure (inhalation and oral) (EPA, 2002).

D.3.2 Health Effects

Lead effects almost every organ and system in the body. The most sensitive system is the central nervous system, particularly in children, where slow cognitive development and delayed growth have been noted following chronic exposure (EPA, 2002). Lead also damages kidneys and the reproductive system. At high levels, lead may decrease reaction time, cause weakness in fingers, wrists, or ankles, and possibly affect memory. Lead may also cause anemia.

Although there is evidence that lead can cause cancer in laboratory animals, there is inadequate evidence to clearly determine that it causes cancer in humans (ATSDR, 2001).

D.3.3 Basis for Toxicity Evaluation in the Risk Assessment

The EPA has chosen to evaluate potential adverse health effects of lead using a physiologically-based model that takes into account lead consumption through diet and environmental sources such as air, soil, and water. The model used for establishing lead remediation levels in non-residential areas like the DuPont Site is the Adult Lead Model (EPA, 1996). This model estimates fetal blood lead concentrations in women exposed to lead in soil. A developing fetus is considered the most sensitive receptor associated with adult exposure to lead. The soil cleanup levels and remediation levels presented in the RA for lead were based on limiting the fetal blood lead level to 10 ug/dl.

D.3.4 References

ATSDR (Agency for Toxic Substances and Disease Registry). 2001. ToxFAQs for Lead, Updated June 11, 2001.

EPA (United States Environmental Protection Agency). 1996. Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated With Exposures to Lead in Soil. Technical Review Workgroup for Lead. Adult Risk Assessment Committee.

EPA (United States Environmental Protection Agency). 2002. Hazard Summary for Lead and Compounds. Unified Air Toxics Website. Office of Air Quality Planning & Standards.

D.4 Toxicity Profile for Mercury

D.4.1 Introduction

Mercury is a naturally occurring metal found in the environment. Mercury enters the environment as the result of the normal breakdown of minerals in rocks and soil from exposure to wind and water. Human activities have also resulted in the release of mercury to the environment. Most of the mercury released from human activities comes from the burning of fossil fuels, mining, smelting, and from solid waste incineration (ATSDR, 1999). Mercury can exist in three general forms: as metallic mercury, inorganic mercury, and organic mercury.

Mercury is persistent and does not breakdown in the environment. Once it is released into the air, mercury will settle to the ground or be washed out of the air by rain. Once in soil, mercury combines with other elements, such as chlorine, sulfur, or oxygen, to form inorganic mercury compounds or "salts". Alternatively, mercury deposited on the soil may be taken up by microorganisms and converted to organic mercury (ATSDR, 1999). Metallic mercury is not typically found in the environment.

Exposure to organic mercury is generally only of concern when consumption of fish and other aquatic organisms is considered likely, due to the ability of methyl mercury to concentrate in animal tissues. At the DuPont Site, potential exposure to mercury is through direct contact with soil. Therefore, the focus of this toxicity profile is on the health effects associated with inorganic mercury.

D.4.2 Health Effects

In general, exposure to inorganic mercury is less harmful than exposure to the other forms of mercury because inorganic mercury is less able to reach the brain. Inhalation of inorganic mercury is not associated with adverse health effects. However, ingestion of high levels of inorganic mercury can permanently damage the brain, kidneys, and developing fetuses. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory loss (ATSDR, 2001).

Although there is evidence that inorganic mercury can cause cancer in laboratory animals, there is inadequate evidence to clearly determine that it causes cancer in humans (ATSDR, 2001).

D.4.3 Basis for Toxicity Value Used in the Risk Assessment

The toxicity value used to calculate cleanup and remediation levels based on non-cancer health effects was an oral reference dose (RfD) of 0.0003 mg/kg-day. This value was calculated from a study showing immune system effects in rats fed inorganic mercury in their diet (EPA, 2002).

D.4.4 References

ATSDR (Agency for Toxic Substances and Disease Registry). 1999. Toxicological Profile for Mercury. U.S. Dept of Health and Human Services.

ATSDR (Agency for Toxic Substances and Disease Registry). 2001. ToxFAQs for Mercury, Updated June 11, 2001.

EPA (United States Environmental Protection Agency). 2002. EPA's Integrated Risk Information System Database, 1st Quarter Update, 2002.

D.5 Toxicity Profile for 2,4,6-Trinitrotoluene (TNT)

D.5.1 Introduction

2,3,6-Trinitrotoluene (TNT) is a yellow, odorless solid that does not occur naturally in the environment. It is an explosive used in military shells, bombs, grenades, for industrial uses, and in underwater blasting. TNT enters the environment resulting from manufacturing activities, processing and destruction of bombs, and the recycling of explosives (ATSDR, 2001). Once in the environment, it is rapidly broken down by sunlight. It can also be broken down by microorganisms, but this is a much slower process. TNT can accumulate in small amounts in fish and plants, but potential exposure to humans at the DuPont Site is through accidental ingestion of soil.

D.5.2 Health Effects

Workers who were exposed to high airborne levels of TNT during production of explosives experienced health effects such as anemia and abnormal liver function. Other effects seen in humans include skin irritation after prolonged skin contact, and cataract development after more than one year of exposure (ATSDR, 2001).

Although there is evidence that TNT can cause cancer in laboratory animals, there is inadequate evidence to clearly determine that it causes cancer in humans (ATSDR, 2001).

D.5.3 D.5.3 Basis for Toxicity Values Used in the Risk Assessment

Toxicity values for both cancer and non-cancer health effects were used in the RA to calculate remediation levels. The value used to calculate cleanup levels and remediation levels based on non-cancer health effects was an oral reference dose (RfD) of 0.0005 mg/kg-day, based on the observance of liver effects in dogs exposed to TNT in their diet. The value used to calculate a remediation level based on cancer risk was a cancer potency factor (CPF) of 0.03 $(mg/kg\text{-}day)^{-1}$, based on the occurrence of bladder tumors in rats exposed to TNT in their diet (EPA, 2002).

D.5.4 References

ATSDR (Agency for Toxic Substances and Disease Registry). 2001. ToxFAQs for 2,4,6-Trinitrotoluene (TNT), Updated June 11, 2001.

EPA (United States Environmental Protection Agency). 2002. EPA's Integrated Risk Information System Database, 1st Quarter Update, 2002.

D.6 Toxicity Profile for Total Petroleum Hydrocarbons (TPH)–as Bunker C Fuel

D.6.1 Introduction

Total petroleum hydrocarbons (TPH) is a term used to describe a large family of several hundred chemical compounds that originally come from crude oil. Crude oil is used to make petroleum products. These products contain so many individual compounds that it is not practical to quantify each one. Instead, identification is made by performing chemical analysis of a category of TPH, as defined by weight of product. Some compounds that may be found in TPH are hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, and fluorine, as well as other petroleum products and gasoline components. However, it is likely that any given sample of TPH will only contain a subset of these compounds (ATSDR, 2001).

TPH may enter the environment through accidental spills, from industrial releases, or as byproducts from commercial or private uses. Once in the environment, certain fractions of TPH may be broken down by microorganisms, while other fractions may move into soil where they may persist for a long time (ATSDR, 2001).

The TPH product used at the DuPont Site was Bunker C fuel. Therefore, the discussion of health effects will pertain to those associated with exposure to this TPH product.

D.6.2 Health Effects

Human contact with Bunker C fuel has been associated with skin irritation. In addition, ingestion can cause nausea, vomiting, diarrhea, and central nervous system effects such as restlessness (U.S. Oil & Refining Co., 1998).

Bunker C Fuel may also contain some polycyclic aromatic hydrocarbons (PAHs), that have been shown to cause skin cancer in laboratory animals, however, there is inadequate evidence to clearly determine that they cause cancer in humans.

D.6.3 Derivation of a Bunker C Cleanup Level

Recognizing that the risk posed by Bunker C is largely attributable to its carcinogenic polycyclic aromatic hydrocarbon (cPAH) components, a Site-specific correlation analyses were performed to assess the statistical relationship between cPAH and TPH concentrations. Thus the Bunker C cleanup level is based on the cPAH toxicity values. See Appendix C for details on how this information was used to derive the cleanup level.

D.6.4 References

ATSDR (Agency for Toxic Substances and Disease Registry). 2001. ToxFAQs for Total Petroleum Hydrocarbons (TPH), Updated June 11, 2001.

U.S. Oil & Refining Company. 1998. Material Safety Data Sheet for Bunker C. Revised August 8, 1998.

Appendix E – Soil Cleanup Level and Remediation Level Calculations

E.1 Introduction

This appendix presents the calculations that were performed to develop the cleanup levels and remediation levels presented in Chapter 3. The equations used to calculate soil cleanup and remediation levels were obtained from the WAC 173-340-745. The EPA has chosen to evaluate the potential health effects of lead using a physiologically based model and the model equations and inputs are discussed in Chapter 3 of the RA.

The equations, inputs, and resulting cleanup or remediation levels are presented in the following tables:

- Table E-1 – Commercial Land Use Soil Remediation Levels.
- Table E-2 – Golf Course Land Use Soil Remediation Levels.
- Table E-3 – Historical Land Use Soil Remediation Levels.
- Table E-4 – Industrial Land Use Soil Cleanup Levels.
- Table E-5 – Open Space Land Use Soil Remediation Levels.

Table E-1 – Commercial Land Use Soil Remediation Levels

Constituent	RfD	CPF	ABW	Atn	Atc	UCF	SIR	AB1	EF	ED	Target HQ	Target Risk	Remediation Level (Noncarcinogenic) (mg/kg)	Remediation Level (Carcinogenic) (mg/kg)
Monomethylamine Nitrate	0.0081	NTV	70	7,300		1.0E+06	200	100%	52	20	1		19,900	NTV
Nitroglycerine	NTV	0.014	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	6,580
2,4,6-Trinitrotoluene	0.0005	0.03	70	7,300	27,375	1.0E+06	200	100%	52	20	1	1.0E-05	1,230	3,071
Aluminum	1	NTV	70	7,300		1.0E+06	200	100%	52	20	1		2,457,000	NTV
Arsenic (inorganic)	0.0003	1.5	70	7,300	27,375	1.0E+06	200	100%	52	20	1	1.0E-05	737	61
Copper	0.037	NTV	70	7,300		1.0E+06	200	100%	52	20	1		90,900	NTV
Mercury	0.0003	NTV	70	7,300		1.0E+06	200	100%	52	20	1		737	NTV
Benzo(a)anthracene	NTV	0.73	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	126
Benzo(a)pyrene	NTV	7.3	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	12
Benzo(b)fluoranthene	NTV	0.73	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	126
Benzo(k)fluoranthene	NTV	0.073	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	1,262
Chrysene	NTV	0.0073	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	12,620
Dibenz(a,h)anthracene	NTV	7.3	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	12
Indeno(1,2,3-cd)pyrene	NTV	0.73	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	126
Aldrin	3E-05	17	70	7,300	27,375	1.0E+06	200	100%	52	20	1	1.0E-05	73	5

Equation Input Values:

Input	Definition	Units
RfD	Noncancer Reference Dose	(mg/kg-day)
CPF	Cancer Potency Factor	(mg/kg-day)-1
ABW	Average Body Weight	(kg)
Atn	Averaging Time for Noncarcinogenic Effects	(days)
Atc	Averaging Time for Carcinogenic Effects	(days)
UCF	Unit Conversion Factor	(unitless)
SIR	Soil Ingestion Rate	(mg/day)
AB1	Gastrointestinal Absorption Rate	(unitless)
EF	Exposure Frequency	(days/year)
ED	Exposure Duration	(years)
Target HQ	Target Hazard Quotient for Noncarcinogenic Health Effects	(unitless)
Target Risk	Target Cancer Risk for Carcinogenic Health Effects	(unitless)

Equations:

Noncarcinogenic Soil Remediation Level (mg/kg):

$$\frac{RfD \times ABW \times UCF \times HQ \times AT_n}{SIR \times AB1 \times EF \times ED}$$

Carcinogenic Soil Remediation Level:

$$\frac{Risk \times ABW \times UCF \times AT_c}{CPF \times ASIR \times B1 \times EF \times ED}$$

Notes:
NTV = No Toxicity Value. Not toxicity value was available from the sources presented in Chapter 3. Therefore, a remediation level could not be calculated.

Table E-2 – Golf Course Land Use Soil Remediation Levels

Constituent	RfD	CPF	ABW	Atn	Atc	UCF	SIR	AB1	EF	ED	Target HQ	Target Risk	Remediation Level (Noncarcinogenic) (mg/kg)	Remediation Level (Carcinogenic) (mg/kg)
Monomethylamine Nitrate	0.0081	NTV	70	7,300		1.0E+06	200	100%	52	20	1		19,900	NTV
Nitroglycerine	NTV	0.014	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	6,580
2,4,6-Trinitrotoluene	0.0005	0.03	70	7,300	27,375	1.0E+06	200	100%	52	20	1	1.0E-05	1,230	3,071
Aluminum	1	NTV	70	7,300		1.0E+06	200	100%	52	20	1		2,457,000	NTV
Arsenic (inorganic)	0.0003	1.5	70	7,300	27,375	1.0E+06	200	100%	52	20	1	1.0E-05	737	61
Copper	0.037	NTV	70	7,300		1.0E+06	200	100%	52	20	1		90,900	NTV
Mercury	0.0003	NTV	70	7,300		1.0E+06	200	100%	52	20	1		737	NTV
Benzo(a)anthracene	NTV	0.73	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	126
Benzo(a)pyrene	NTV	7.3	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	12
Benzo(b)fluoranthene	NTV	0.73	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	126
Benzo(k)fluoranthene	NTV	0.073	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	1,262
Chrysene	NTV	0.0073	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	12,620
Dibenz(a,h)anthracene	NTV	7.3	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	12
Indeno(1,2,3-cd)pyrene	NTV	0.73	70		27,375	1.0E+06	200	100%	52	20		1.0E-05	NTV	126
Aldrin	3E-05	17	70	7,300	27,375	1.0E+06	200	100%	52	20	1	1.0E-05	73	5

Equation Input Values:

Input	Definition	Units
RfD	Noncancer Reference Dose	(mg/kg-day)
CPF	Cancer Potency Factor	(mg/kg-day)-1
ABW	Average Body Weight	(kg)
Atn	Averaging Time for Noncarcinogenic Effects	(days)
Atc	Averaging Time for Carcinogenic Effects	(days)
UCF	Unit Conversion Factor	(unitless)
SIR	Soil Ingestion Rate	(mg/day)
AB1	Gastrointestinal Absorption Rate	(unitless)
EF	Exposure Frequency	(days/year)
ED	Exposure Duration	(years)
Target HQ	Target Hazard Quotient for Noncarcinogenic Health Effects	(unitless)
Target Risk	Target Cancer Risk for Carcinogenic Health Effects	(unitless)

Equations:

Noncarcinogenic Soil Remediation Level (mg/kg):

$$\frac{RfD \times ABW \times UCF \times HQ \times AT_n}{SIR \times AB1 \times EF \times ED}$$

Carcinogenic Soil Remediation Level:

$$\frac{Risk \times ABW \times UCF \times AT_c}{CPF \times ASIR \times B1 \times EF \times ED}$$

Notes:
NTV = No Toxicity Value. Not toxicity value was available from the sources presented in Chapter 3. Therefore, a remediation level could not be calculated.

Table E-3 – Historical Land Use Soil Remediation Levels

Constituent	RfD	CPF	ABW	Atn	Atc	UCF	SIR	AB1	EF	ED	Target HQ	Target Risk	Remediation Level (Noncarcinogenic) (mg/kg)	Remediation Level (Carcinogenic) (mg/kg)
Monomethylamine Nitrate	0.0081	NTV	47	4,380		1.0E+06	200	100%	104	12	1		6,681	NTV
Nitroglycerine	NTV	0.014	47	NTV	2,7375	1.0E+06	200	100%	104	12		1.0E-06	NTV	368
2,4,6-Trinitrotoluene	0.0005	0.03	47	4,380	2,7375	1.0E+06	200	100%	104	12	1	1.0E-06	412	172
Aluminum	1	NTV	47	4,380		1.0E+06	200	100%	104	12	1		825,000	NTV
Arsenic (inorganic)	0.0003	1.5	47	4,380	27,375	1.0E+06	200	100%	104	12	1	1.0E-06	247	3
Copper	0.037	NTV	47	4,380		1.0E+06	200	100%	104	12	1		30,516	NTV
Mercury	0.0003	NTV	47	4,380		1.0E+06	200	100%	104	12	1		247	NTV
Benzo(a)anthracene	NTV	0.73	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	7
Benzo(a)pyrene	NTV	7.3	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	0.71
Benzo(b)fluoranthene	NTV	0.73	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	7
Benzo(k)fluoranthene	NTV	0.073	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	70
Chrysene	NTV	0.0073	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	706
Dibenz(a,h)anthracene	NTV	7.3	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	0.71
Indeno(1,2,3-cd)pyrene	NTV	0.73	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	7
Aldrin	0.00003	17	47	4,380	27,375	1.0E+06	200	100%	104	12	1	1.0E-06	24	0.30

Equation Input Values:

Input	Definition	Units
RfD	Noncancer Reference Dose	(mg/kg-day)
CPF	Cancer Potency Factor	(mg/kg-day)-1
ABW	Average Body Weight	(kg)
Atn	Averaging Time for Noncarcinogenic Effects	(days)
Atc	Averaging Time for Carcinogenic Effects	(days)
UCF	Unit Conversion Factor	(unitless)
SIR	Soil Ingestion Rate	(mg/day)
AB1	Gastrointestinal Absorption Rate	(unitless)
EF	Exposure Frequency	(days/year)
ED	Exposure Duration	(years)
Target HQ	Target Hazard Quotient for Noncarcinogenic Health Effects	(unitless)
Target Risk	Target Cancer Risk for Carcinogenic Health Effects	(unitless)

Equations:

Noncarcinogenic Soil Remediation Level (mg/kg):

$$\frac{RfD \times ABW \times UCF \times HQ \times AT_n}{SIR \times AB1 \times EF \times ED}$$

Carcinogenic Soil Remediation Level:

$$\frac{Risk \times ABW \times UCF \times AT_c}{CPF \times ASIR \times B1 \times EF \times ED}$$

Notes:
NTV = No Toxicity Value. Not toxicity value was available from the sources presented in Chapter 3. Therefore, a remediation level could not be calculated.

Table E-4 – Industrial Land Use Soil Cleanup Levels

Constituent	RfD	CPF	ABW	Atn	Atc	UCF	SIR	AB1	EF	ED	Target HQ	Target Risk	Remediation Level (Noncarcinogenic) (mg/kg)	Remediation Level (Carcinogenic) (mg/kg)
Monomethylamine Nitrate	0.0081	NTV	70	7,300		1.0E+06	50	100%	145	20	1		28,546	NTV
Nitroglycerine	NTV	0.014	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	9,440
2,4,6-Trinitrotoluene	0.0005	0.03	70	7,300	27,375	1.0E+06	50	100%	145	20	1	1.0E-05	1,762	4,405
Aluminum	1	NTV	70	7,300		1.0E+06	50	100%	145	20	1		3,524,137	NTV
Arsenic (inorganic)	0.0003	1.5	70	7,300	27,375	1.0E+06	50	100%	145	20	1	1.0E-05	1,057	88
Copper	0.037	NTV	70	7,300		1.0E+06	50	100%	145	20	1		130,393	NTV
Mercury	0.0003	NTV	70	7,300		1.0E+06	50	100%	145	20	1		1,057	NTV
Benzo(a)anthracene	NTV	0.73	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	181
Benzo(a)pyrene	NTV	7.3	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	18
Benzo(b)fluoranthene	NTV	0.73	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	181
Benzo(k)fluoranthene	NTV	0.073	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	1,810
Chrysene	NTV	0.0073	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	18,103
Dibenz(a,h)anthracene	NTV	7.3	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	18
Indeno(1,2,3-cd)pyrene	NTV	0.73	70		27,375	1.0E+06	50	100%	145	20		1.0E-05	NTV	181
Aldrin	0.00003	17	70	7,300	27,375	1.0E+06	50	100%	145	20	1	1.0E-05	105	7

Equation Input Values:

Input	Definition	Units
RfD	Noncancer Reference Dose	(mg/kg-day)
CPF	Cancer Potency Factor	(mg/kg-day)-1
ABW	Average Body Weight	(kg)
Atn	Averaging Time for Noncarcinogenic Effects	(days)
Atc	Averaging Time for Carcinogenic Effects	(days)
UCF	Unit Conversion Factor	(unitless)
SIR	Soil Ingestion Rate	(mg/day)
AB1	Gastrointestinal Absorption Rate	(unitless)
EF	Exposure Frequency	(days/year)
ED	Exposure Duration	(years)
Target HQ	Target Hazard Quotient for Noncarcinogenic Health Effects	(unitless)
Target Risk	Target Cancer Risk for Carcinogenic Health Effects	(unitless)

Equations:

Noncarcinogenic Soil Remediation Level (mg/kg):

$$\frac{RfD \times ABW \times UCF \times HQ \times AT_n}{SIR \times AB1 \times EF \times ED}$$

Carcinogenic Soil Remediation Level:

$$\frac{Risk \times ABW \times UCF \times AT_c}{CPF \times ASIR \times B1 \times EF \times ED}$$

Notes:
NTV = No Toxicity Value. Not toxicity value was available from the sources presented in Chapter 3. Therefore, a remediation level could not be calculated.

Table E-5 – Open Space Land Use Soil Remediation Levels

Constituent	RfD	CPF	ABW	Atn	Atc	UCF	SIR	AB1	EF	ED	Target HQ	Target Risk	Remediation Level (Noncarcinogenic) (mg/kg)	Remediation Level (Carcinogenic) (mg/kg)
Monomethylamine Nitrate	0.0081	NTV	47	4,380		1.0E+06	200	100%	104	12	1		6,681	NTV
Nitroglycerine	NTV	0.014	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	368
2,4,6-Trinitrotoluene	0.0005	0.03	47	4,380	27,375	1.0E+06	200	100%	104	12	1	1.0E-06	412	172
Aluminum	1	NTV	47	4,380		1.0E+06	200	100%	104	12	1		824,759	NTV
Arsenic (inorganic)	0.0003	1.5	47	4,380	27,375	1.0E+06	200	100%	104	12	1	1.0E-06	247	3
Copper	0.037	NTV	47	4,380		1.0E+06	200	100%	104	12	1		30,516	NTV
Mercury	0.0003	NTV	47	4,380		1.0E+06	200	100%	104	12	1		247	NTV
Benzo(a)anthracene	NTV	0.73	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	7
Benzo(a)pyrene	NTV	7.3	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	0.71
Benzo(b)fluoranthene	NTV	0.73	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	7
Benzo(k)fluoranthene	NTV	0.073	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	70
Chrysene	NTV	0.0073	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	706
Dibenz(a,h)anthracene	NTV	7.3	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	0.71
Indeno(1,2,3-cd)pyrene	NTV	0.73	47		27,375	1.0E+06	200	100%	104	12		1.0E-06	NTV	7
Aldrin	0.00003	17	47	4,380	27,375	1.0E+06	200	100%	104	12	1	1.0E-06	24	0.30

Equation Input Values:

Input	Defiinition	Units
RfD	Noncancer Reference Dose	(mg/kg-day)
CPF	Cancer Potency Factor	(mg/kg-day)-1
ABW	Average Body Weight	(kg)
Atn	Averaging Time for Noncarcinogenic Effects	(days)
Atc	Averaging Time for Carcinogenic Effects	(days)
UCF	Unit Conversion Factor	(unitless)
SIR	Soil Ingestion Rate	(mg/day)
AB1	Gastrointestinal Absorption Rate	(unitless)
EF	Exposure Frequency	(days/year)
ED	Exposure Duration	(years)
Target HQ	Target Hazard Quotient for Noncarcinogenic Health Effects	unitless)
Target Risk	Target Cancer Risk for Carcinogenic Health Effects	(unitless)

Equations:

Noncarcinogenic Soil Remediation Level (mg/kg):

$$\frac{RfD \times ABW \times UCF \times HQ \times AT_n}{SIR \times AB1 \times EF \times ED}$$

Carcinogenic Soil Remediation Level:

$$\frac{Risk \times ABW \times UCF \times AT_c}{CPF \times ASIR \times B1 \times EF \times ED}$$

Notes:
NTV = No Toxicity Value. Not toxicity value was available from the sources presented in Chapter 3. Therefore, a remediation level could not be calculated.

Appendix F – Summary Statistics and Comparison to Standards

F.1 Introduction

This Appendix presents the summary statistics that were calculated for each EU as well as the comparison between of the resulting exposure point concentrations and the cleanup levels and remediation levels which are described in Chapter 3.

F.2 Summary Statistics For Each Evaluation Unit

The summary statistics for each EU are presented in Tables F-1 through F-48 as follows:

Table F-1 – Commercial Evaluation Unit 1 (0 to <=1 foot)
Table F-2 – Commercial Evaluation Unit 1 (>1 to <=15 feet)
Table F-3 – Commercial Evaluation Unit 2 (0 to <=1 foot)
Table F-4 – Commercial Evaluation Unit 2 (>1 to <=15 feet)
Table F-5 – Commercial Evaluation Unit 3 (0 to <=1 foot)
Table F-6 – Commercial Evaluation Unit 3 (>1 to <=15 feet)
Table F-7 – Commercial Evaluation Unit 4 (0 to <=1 foot)
Table F-8 – Commercial Evaluation Unit 4 (>1 to <=15 feet)
Table F-9 – Commercial Evaluation Unit 5 (0 to <=1 foot)
Table F-10 – Commercial Evaluation Unit 5 (>1 to <=15 feet)
Table F-11 – Commercial Evaluation Unit 6 (0 to <=1 foot)
Table F-12 – Commercial Evaluation Unit 6 (>1 to <=15 feet)
Table F-13 – Commercial Evaluation Unit 7 (0 to <=1 foot)
Table F-14 – Commercial Evaluation Unit 7 (>1 to <=15 feet)
Table F-15 – Commercial Evaluation Unit 8 (0 to <=1 foot)
Table F-16 – Commercial Evaluation Unit 8 (>1 to <=15 feet)
Table F-17 – Commercial Evaluation Unit 9 (0 to <=1 foot)
Table F-18 – Commercial Evaluation Unit 9 (>1 to <=15 feet)
Table F-19 – Golf Course Evaluation Unit 1 (0 to <=1 foot)
Table F-20 – Golf Course Evaluation Unit 1 (>1 to <=15 feet)
Table F-21 – Golf Course Evaluation Unit 2 (0 to <=1 foot)
Table F-22 – Golf Course Evaluation Unit 2 (>1 to <=15 feet)
Table F-23 – Golf Course Evaluation Unit 3 (0 to <=1 foot)
Table F-24 – Golf Course Evaluation Unit 3 (>1 to <=15 feet)
Table F-25 – Golf Course Evaluation Unit 4 (0 to <=1 foot)
Table F-26 – Golf Course Evaluation Unit 4 (>1 to <=15 feet)
Table F-27 – Golf Course Evaluation Unit 5 (0 to <=1 foot)
Table F-28 – Golf Course Evaluation Unit 5 (>1 to <=15 feet)
Table F-29 – Golf Course Evaluation Unit 6 (0 to <=1 foot)
Table F-30 – Golf Course Evaluation Unit 6 (>1 to <=15 feet)
Table F-31 – Golf Course Evaluation Unit 7 (0 to <=1 foot)
Table F-32 – Golf Course Evaluation Unit 7 (>1 to <=15 feet)
Table F-33 – Golf Course Evaluation Unit 8 (0 to <=1 foot)
Table F-34 – Golf Course Evaluation Unit 8 (>1 to <=15 feet)
Table F-35 – Golf Course Evaluation Unit 9 (0 to <=1 foot)
Table F-36 – Golf Course Evaluation Unit 9 (>1 to <=15 feet)
Table F-37 – Historical Evaluation Unit 1 (0 to <=1 foot)
Table F-38 – Historical Evaluation Unit 2 (0 to <=1 foot)
Table F-39 – Historical Evaluation Unit 3 (0 to <=1 foot)
Table F-40 – Industrial Evaluation Unit 1 (0 to <=1 foot)
Table F-41 – Industrial Evaluation Unit 1 (>1 to <=15 feet)
Table F-42 – Open Space Evaluation Unit 1 (0 to <=1 foot)
Table F-43 – Open Space Evaluation Unit 2 (0 to <=1 foot)
Table F-44 – Open Space Evaluation Unit 2 (>1 to <=15 feet)
Table F-45 – Open Space Evaluation Unit 3 (0 to <=1 foot)
Table F-46 – Open Space Evaluation Unit 3 (>1 to <=15 feet)
Table F-47 – Open Space Evaluation Unit 4 (0 to <=1 foot)
Table F-48 – Open Space Evaluation Unit 4 (>1 to <=15 feet)

F.3 Statistical Formulas Used To Calculate the Summary Statistics

This section presents the statistical formulas that were used to calculate the summary statistics presented in Tables F-1 through F-48.

F.3.1 Geometric Mean

Returns the mean value of the natural logarithm transformed values. The geometric mean is calculated as follows:

$$\hat{m} = e\left(\bar{y} + \frac{s_y^2}{2} \right)$$

F.3.2 Logarithmic Upper Confidence Limit for the Mean

Returns the one-sided natural logarithm upper confidence limit on the mean. The upper confidence limit on the lognormal mean is calculated as follows:

$$UL_{1-a} = e\left(\bar{y} + 0.5 s_y^2 + \frac{s_y H_{1-a}}{\sqrt{n-1}} \right)$$

Values of the H statistic not found in the lookup table were calculated using 4-Point Lagrangian Interpolation. Lagrangian interpolation is calculated as follows:

$$y_i = \sum_{i=0}^{n} \frac{II_n(X)}{(X - X_{i)} II'(X_i)} y_i, \quad i = 0,1,\cdots n,$$

$$II(x) = (X - X_o)(X - X_1)\cdots(X - X_n)$$

$$II'(X) = \frac{d}{d_x} II_n(X)$$

F.3.3 Mean (arithmetic)

Returns the arithmetic mean of the values. The mean is calculated as follows:

$$\overline{X} = \sum \frac{X_i}{n}$$

F.3.4 Median

Returns the median value of the distribution. The median is the value that divides a distribution exactly in half. The median is also referred to as the 50th percentile. The median is calculated as follows:

1. Order data from lowest to highest to obtain sample order statistics.

   $X_{[1]} \le X_{[2]} \le \cdots \le X_{[n]}$

2. If n is odd the sample median is the $\frac{(n+1)}{2} th$ value.
3. If n is even the sample median is the average of the $\frac{n}{2} th$ and the $\frac{(n+2)}{2} th$ values.

F.3.5 Maximum Detected Value

Returns the maximum detected value in the distribution.

F.3.6 Maximum Non-Detected Value

Returns the maximum non-detected value in the distribution.

F.3.7 Minimum Detected Value

Returns the minimum detected value in the distribution.

F.3.8 Minimum Non-Detected Value

Returns the minimum non-detected value in the distribution.

F.3.9 Mode

Returns the most frequently occurring score in the distribution.

F.3.10 Sample Standard Deviation

The standard deviation returns the deviation of the sample distribution. The sample standard deviation is calculated as follows:

$$s = \sqrt{\frac{SS}{n-1}}$$

Where,

s	=	Sample standard deviation
SS	=	Sum of Squared deviations
n	=	Number of scores in the sample

The sum of squared deviations is calculated using the following formula:

$$SS = \sum X_i^{\,2} - \frac{(\sum X_i)^2}{N}$$

F.3.11 Upper Confidence Limit for the Mean

Returns the one-sided upper confidence limit on the mean using the following formula. The t-statistic is used to estimate the location of the mean in a sample distribution when the population standard deviation (s) and the population mean (μ) are unknown. The t-statistic is calculated as follows:

$$\mu = \overline{X} \pm t s_{\overline{x}}$$

The standard error of a distribution of sample means is calculated as follows.

$$s_{\overline{X}} = \frac{s}{\sqrt{n}}$$

How well the sample standard deviation (s) estimates the population standard deviation depends mainly on sample size, which is described in terms of degrees of freedom. The degrees of freedom describes the number of scores in a sample that are free to vary. The degrees of freedom is calculated as follows.

$$df = n - 1$$

F.3.12 Distribution Tests

Shapiro and Wilk Test (W Test)

The W statistic tests the null hypothesis (H_0) that the data have been drawn from a normal distribution. The alternative (H_1) is that the underlying population is not normally distributed. This test is applicable when the sample size is ≤ 50. The W statistic is calculated as follows:

1. Compute the denominator of the W test statistic

$$d = \sum_{i=1}^{n} (X_i - \overline{X})^2$$

2. Order data from lowest to highest to obtain sample order statistics.

$$X_{[1]} \le X_{[2]} \le \cdots \le X_{[n]}$$

Where,

$X_{[1]}$	=	Lowest score

$X_{[n]}$ = Highest score

3. Compute K.

   $K = \frac{n}{2}$ if n is even

   $K = \frac{n-1}{2}$ if n is odd

4. Get coefficients for a_i from a lookup table based on the K value.

5. Compute W statistic

$$W = \frac{1}{d}\left[\sum_{i=1}^{K} a_i\left(X_{[n-i+1]} - X_{[i]}\right)\right]^2$$

6. Reject H_o at the α significance level (an α of 0.05 was used) if W is less than the quantile provided in the lookup table.

Note: To test the Null Hypothesis

H_o: The population has a lognormal distribution

versus

H_1: The population does not have a lognormal distribution

The W Test can also be used to test the null hypothesis (H_o) that the data have been drawn from a lognormal distribution by using $Y_i = \ln X_i$ in place of X_i in the calculations.

D'Agostino's Test

The D statistic is a compliment to the W Test in that it also tests the null hypothesis of normality or lognormality. However the D statistic is applicable to sample sizes between 50 and 1,000. The D statistic is calculated as follows:

1. Order data from lowest to highest to obtain sample order statistics.

$$X_{[1]} \le X_{[2]} \le \cdots \le X_{[n]}$$

Where,

$X_{[1]}$ = Lowest score

$X_{[n]}$ = Highest score

2. Compute the D statistic.

$$D = \frac{\sum_{i=1}^{n}\left[i - \frac{1}{2}(n+1)\right]X_{[i]}}{n^2 S}$$

Where,

$$S = \left[\frac{1}{n} \sum_{i=1}^{n} \left(X_i - \overline{X} \right)^2 \right]^{\frac{1}{2}}$$

3. Transform D to the Y statistic by performing the following computation.

$$Y = \frac{D - 0.28209479}{0.02998598 \div \sqrt{n}}$$

4. Reject at the α significance level (an α of 0.05 was used) the null hypothesis that the data were drawn from a normal distribution if Y is less than $\frac{\alpha}{2}$ quantile or greater than the $1 - \frac{\alpha}{2}$ quantile distribution of Y. The quantiles are obtained from a lookup table.

Values of quantities of the y statistic not found in the lookup table are calculated using linear interpolation. Linear interpolation is performed as follows:

$$fp = (1 - p) f_o + p f_1,$$

$$p = \frac{(X - X_o)}{(X_1 - X_o)}$$

Note: The Y statistic can also be used to test the null hypothesis of a lognormal population by using $Y_i = \ln X_i$ in place of X_i in the calculations.

F.4 Comparison to Standards

The MTCA RME concentrations that are presented in Tables F-1 through F-48 were compared to land use specific cleanup levels and remediation levels. Only constituents of concern that were evaluated in Chapter 4 of the RA were compared to the cleanup levels and remediation levels. Tables F-49 through F-53 present the EU and constituent-specific evaluation of the MTCA RME concentrations to the cleanup levels and remediation levels as well as an evaluation of the MTCA three-fold criteria. The tables are organized as follows:

- Table F-49 – Comparison of Commercial EUs to Soil Cleanup Levels and Remediation Levels
- Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels
- Table F-51 – Comparison of Historical EUs to Soil Cleanup Levels and Remediation Levels
- Table F-52 – Comparison of Industrial EU to Soil Cleanup Levels and Remediation Levels
- Table F-53 – Comparison of Open Space EUs to Soil Cleanup Levels and Remediation Levels

Table F-1 - Commercial Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Nitroglycerine	mg/kg	3	33.33	0.24	8.50	1.10	1.10	1.82	1.10	
Metals (Total)										
Arsenic (inorganic)	mg/kg	58	100.00			1.70	370.00	34.62	18.00	
Copper	mg/kg	10	100.00			2.20	37.00	15.81	11.50	
Lead (and compounds) (inorganic)	mg/kg	74	95.95	5.00	6.40	7.40	3300.00	266.02	130.00	
Mercury (inorganic)	mg/kg	11	63.64	0.08	0.11	0.10	3.20	1.11	0.32	
PAHs										
Benzo(a)Pyrene	mg/kg	4	75.00	0.02	0.02	0.07	1.10	0.47	0.39	
Benzo(b)Fluoranthene	mg/kg	4	75.00	0.02	0.02	0.06	0.79	0.36	0.31	
Benzo(g,h,i)Perylene	mg/kg	4	100.00			0.08	4.90	2.31	2.13	
Benzo(k)Fluoranthene	mg/kg	4	25.00	0.02	0.37	0.03	0.03	0.08	0.06	
Chrysene	mg/kg	4	75.00	0.18	0.18	0.10	0.70	0.25	0.11	
Phenanthrene	mg/kg	4	25.00	0.01	0.19	0.03	0.03	0.04	0.04	
TPH - 418										
TPH (418.1)	mg/kg	14	57.14	20.00	20.00	24.00	10000.00	1826.00	62.00	10.00

Table F-1 - Commercial Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Nitroglycerine	mg/kg	2.16	2.84	1.10	0.82	5.46	434018116032	Normal/Lognormal
Metals (Total)								
Arsenic (inorganic)	mg/kg	61.22	40.09	46.05	17.58	48.16	46.05	Lognormal
Copper	mg/kg	12.28	18.54	37.00	11.29	22.93	43.29	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	470.00	303.11	451.12	117.23	357.31	451.12	Unknown
Mercury (inorganic)	mg/kg	1.34	1.39	3.20	0.33	1.84	33.01	Unknown
PAHs								
Benzo(a)Pyrene	mg/kg	0.52	0.67	1.10	0.16	1.09	69392546.79	Normal/Lognormal
Benzo(b)Fluoranthene	mg/kg	0.38	0.50	0.79	0.13	0.80	4990707.82	Normal/Lognormal
Benzo(g,h,i)Perylene	mg/kg	2.55	3.28	4.90	0.70	5.31	304566161.71	Normal/Lognormal
Benzo(k)Fluoranthene	mg/kg	0.08	0.11	0.03	0.05	0.17	50.14	Normal/Lognormal
Chrysene	mg/kg	0.30	0.37	0.70	0.17	0.60	9.58	Lognormal
Phenanthrene	mg/kg	0.04	0.06	0.03	0.03	0.09	25.34	Normal/Lognormal
TPH - 418								
TPH (418.1)	mg/kg	3246.25	2428.11	10000.00	122.40	3362.51	871054.56	Unknown

Table F-2 - Commercial Evaluation Unit 1 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Monomethylamine Nitrate	mg/kg	7	0.00	5.20	5.90			2.76	2.75	
Nitroglycerine	mg/kg	11	0.00	0.21	0.23			0.11	0.11	0.11
Trinitrotoluene, 2,4,6-	mg/kg	17	0.00	0.003	0.006			0.002	0.002	0.002
Arsenic (inorganic)	mg/kg	14	100.00			0.94	21.00	5.56	2.65	
Copper	mg/kg	8	100.00			0.96	47.00	11.70	9.05	
Lead (and compounds) (inorganic)	mg/kg	54	79.63	4.20	10.00	5.80	1300.00	103.36	37.50	
Mercury (inorganic)	mg/kg	12	25.00	0.08	0.11	0.13	0.93	0.14	0.05	
Aldrin	mg/kg	1	0.00	2.39	2.39			1.20	1.20	
Benzo(a)Anthracene	mg/kg	6	0.00	0.02	0.37			0.07	0.05	
Benzo(a)Pyrene	mg/kg	6	0.00	0.02	0.37			0.07	0.05	
Benzo(b)Fluoranthene	mg/kg	6	0.00	0.02	0.37			0.07	0.05	
Benzo(g,h,i)Perylene	mg/kg	6	0.00	0.02	0.37			0.07	0.05	
Benzo(k)Fluoranthene	mg/kg	6	0.00	0.02	0.37			0.07	0.05	
Chrysene	mg/kg	6	16.67	0.02	0.37	0.02	0.02	0.07	0.06	
Dibenz(a,h)anthracene	mg/kg	6	0.00	0.04	0.37			0.07	0.06	
Indeno(1,2,3-cd)pyrene	mg/kg	6	0.00	0.02	0.37			0.07	0.05	
Methylnaphthalene, 2-	mg/kg	3	0.00	0.18	0.37			0.12	0.10	
Phenanthrene	mg/kg	6	0.00	0.009	0.37			0.06	0.05	
Motor Oil	mg/kg	1	100.00			3000.00	3000.00	3000.00	3000.00	
TPH (418.1)	mg/kg	19	36.84	20.00	22.00	30.00	1800.00	126.08	10.00	10.00
Oil And Grease	mg/kg	14	35.71	20.00	27.00	26.00	630.00	106.75	10.00	10.00

Table F-2 - Commercial Evaluation Unit 1 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Monomethylamine Nitrate	mg/kg	0.11	2.79		2.76	2.84	2.84	Normal/Lognormal
Nitroglycerine	mg/kg	0.003	0.11		0.11	0.11	0.11	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	0.0003	0.002		0.002	0.002	0.002	Unknown
Arsenic (inorganic)	mg/kg	6.30	6.73	10.53	3.58	8.54	10.53	Lognormal
Copper	mg/kg	14.75	15.40	47.00	6.74	21.58	67.84	Lognormal
Lead (and compounds) (inorganic)	mg/kg	210.43	122.86	236.79	30.20	151.59	236.79	Lognormal
Mercury (inorganic)	mg/kg	0.25	0.19	0.24	0.07	0.27	0.24	Unknown
Aldrin	mg/kg				1.20			Unknown
Benzo(a)Anthracene	mg/kg	0.07	0.09		0.03	0.12	2.95	Normal/Lognormal
Benzo(a)Pyrene	mg/kg	0.07	0.09		0.03	0.12	2.95	Normal/Lognormal
Benzo(b)Fluoranthene	mg/kg	0.07	0.09		0.03	0.12	2.95	Normal/Lognormal
Benzo(g,h,i)Perylene	mg/kg	0.07	0.09		0.03	0.12	2.95	Normal/Lognormal
Benzo(k)Fluoranthene	mg/kg	0.07	0.09		0.03	0.12	2.95	Normal/Lognormal
Chrysene	mg/kg	0.07	0.09	0.02	0.04	0.13	1.54	Normal/Lognormal
Dibenz(a,h)anthracene	mg/kg	0.07	0.09		0.05	0.13	0.54	Normal/Lognormal
Indeno(1,2,3-cd)pyrene	mg/kg	0.07	0.09		0.03	0.12	2.95	Normal/Lognormal
Methylnaphthalene, 2-	mg/kg	0.05	0.15		0.12	0.21	0.56	Normal/Lognormal
Phenanthrene	mg/kg	0.07	0.09		0.02	0.12	28.29	Normal
Motor Oil	mg/kg			3000.00	3000.00			Unknown
TPH (418.1)	mg/kg	408.88	190.62	178.62	23.08	288.73	178.62	Unknown
Oil And Grease	mg/kg	210.17	145.73	417.52	26.36	206.23	417.52	Unknown

Table F-3 - Commercial Evaluation Unit2 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Arsenic (inorganic)	mg/kg	165	98.18	2.00	2.50	1.60	120.00	32.57	30.00	
Copper	mg/kg	2	100.00			14.00	42.00	28.00	28.00	
Lead (and compounds) (inorganic)	mg/kg	150	100.00			4.40	330.00	55.07	38.00	
Mercury (inorganic)	mg/kg	2	50.00	0.08	0.08	0.50	0.50	0.27	0.27	
TPH (418.1)	mg/kg	1	0.00	21.00	21.00			10.50	10.50	

Table F-3 - Commercial Evaluation Unit2 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Arsenic (inorganic)	mg/kg	21.04	33.68	40.51	25.24	35.28	40.51	Unknown
Copper	mg/kg	19.80	42.00	42.00	24.25	116.40	522469290.24	Unknown
Lead (and compounds) (inorganic)	mg/kg	52.06	57.95	64.36	38.46	62.12	64.36	Lognormal
Mercury (inorganic)	mg/kg	0.32	0.50	0.50	0.14	1.72	.11346667365	Unknown
TPH (418.1)	mg/kg				10.50			Unknown

Table F-4 - Commercial Evaluation Unit 2 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Arsenic (inorganic)	mg/kg	4	100.00			1.20	3.60	2.03	1.65	
Copper	mg/kg	4	100.00			13.00	18.00	14.75	14.00	13.00
Lead (and compounds) (inorgan	mg/kg	4	75.00	5.30	5.30	16.00	39.00	19.41	18.00	
Mercury (inorganic)	mg/kg	4	0.00	0.08	0.10			0.04	0.04	
TPH (418.1)	mg/kg	4	50.00	22.00	22.00	39.00	140.00	50.25	25.00	11.00

Table F-4 - Commercial Evaluation Unit 2 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Arsenic (inorganic)	mg/kg	1.08	2.44	3.60	1.85	3.29	5.44	Normal/Lognormal
Copper	mg/kg	2.36	15.65	18.00	14.62	17.53	18.23	Normal/Lognormal
Lead (and compounds) (inorgan	mg/kg	15.02	25.16	39.00	13.49	37.08	4079.32	Normal/Lognormal
Mercury (inorganic)	mg/kg	0.004	0.05		0.04	0.05	0.05	Normal/Lognormal
TPH (418.1)	mg/kg	61.27	73.69	140.00	28.51	122.34	17175.50	Normal/Lognormal

Table F-5 - Commercial Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	59	100.00			7.00	350.00	40.44	21.00	
Copper	mg/kg	2	100.00			16.00	66.00	41.00	41.00	
Lead (and compounds) (inorganic)	mg/kg	33	96.97	7.00	7.00	20.00	3800.00	367.86	140.00	
Mercury (inorganic)	mg/kg	2	50.00	0.11	0.11	0.36	0.36	0.21	0.21	
PAHs										
Benzo(a)Pyrene	mg/kg	1	100.00			0.10	0.10	0.10	0.10	
Benzo(b)Fluoranthene	mg/kg	1	100.00			0.14	0.14	0.14	0.14	
Benzo(g,h,i)Perylene	mg/kg	1	100.00			0.09	0.09	0.09	0.09	
Benzo(k)Fluoranthene	mg/kg	1	100.00			0.04	0.04	0.04	0.04	
Chrysene	mg/kg	1	100.00			0.12	0.12	0.12	0.12	
Indeno(1,2,3-cd)pyrene	mg/kg	1	100.00			0.07	0.07	0.07	0.07	
Phenanthrene	mg/kg	1	100.00			0.09	0.09	0.09	0.09	
TPH - 418										
TPH (418.1)	mg/kg	1	100.00			450.00	450.00	450.00	450.00	

Table F-5 - Commercial Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	51.71	45.03	48.36	26.90	51.78	48.36	Lognormal
Copper	mg/kg	35.36	66.00	66.00	32.50	198.85	630645422379	Unknown
Lead (and compounds) (inorganic)	mg/kg	682.54	449.01	852.32	142.12	569.49	852.32	Lognormal
Mercury (inorganic)	mg/kg	0.22	0.36	0.36	0.14	1.17	.70757628715	Unknown
PAHs								
Benzo(a)Pyrene	mg/kg			0.10	0.10			Unknown
Benzo(b)Fluoranthene	mg/kg			0.14	0.14			Unknown
Benzo(g,h,i)Perylene	mg/kg			0.09	0.09			Unknown
Benzo(k)Fluoranthene	mg/kg			0.04	0.04			Unknown
Chrysene	mg/kg			0.12	0.12			Unknown
Indeno(1,2,3-cd)pyrene	mg/kg			0.07	0.07			Unknown
Phenanthrene	mg/kg			0.09	0.09			Unknown
TPH - 418								
TPH (418.1)	mg/kg			450.00	450.00			Unknown

Table F-6 - Commercial Evaluation Unit 3 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Aluminum	mg/kg	2	100.00			12000.00	13000.00	12500.00	12500.00	
Arsenic (inorganic)	mg/kg	4	100.00			2.00	3.38	2.82	2.95	
Copper	mg/kg	3	100.00			4.80	21.90	12.57	11.00	
Lead (and compounds) (inorganic)	mg/kg	3	66.67	5.10	5.10	6.50	11.00	6.68	6.50	
TPH - 418										
TPH (418.1)	mg/kg	3	33.33	21.00	21.00	42.00	42.00	21.00	10.50	10.50

Table F-6 - Commercial Evaluation Unit 3 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Aluminum	mg/kg	707.11	13000.00	13000.00	12490.00	15657.00	15289.30	Unknown
Arsenic (inorganic)	mg/kg	0.65	3.07	3.38	2.76	3.58	4.11	Normal/Lognormal
Copper	mg/kg	8.66	16.65	21.90	10.50	27.16	2874.69	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	4.23	8.68	11.00	5.67	13.81	1165.96	Normal/Lognormal
TPH - 418								
TPH (418.1)	mg/kg	18.19	29.57	42.00	16.67	51.66	8429.19	Unknown

Table F-7 Commercial Evaluation Unit4 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	64	100.00			3.30	390.00	50.02	41.50	
Copper	mg/kg	1	100.00			22.00	22.00	22.00	22.00	
Lead (and compounds) (inorganic)	mg/kg	33	100.00			4.70	450.00	86.17	59.00	

Table F-7 Commercial Evaluation Unit4 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	50.34	54.29	61.68	37.95	60.54	61.68	Unknown
Copper	mg/kg			22.00	22.00			Unknown
Lead (and compounds) (inorganic)	mg/kg	100.33	98.10	131.85	53.35	115.81	131.85	Lognormal

Table F-8 - Commercial Evaluation Unit 4 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	2	100.00			6.30	28.00	17.15	17.15	

Table F-8 - Commercial Evaluation Unit 4 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	15.34	28.00	28.00	13.28	85.66	567342019392	Unknown

Table F-9 - Commercial Evaluation Unit 5 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Aluminum	mg/kg	2	100.00			17000.00	24000.00	20500.00	20500.00	
Arsenic (inorganic)	mg/kg	208	100.00			4.50	370.00	48.28	35.50	
Copper	mg/kg	4	100.00			16.00	21.00	19.00	19.50	
Lead (and compounds) (inorganic)	mg/kg	164	99.39	6.60	6.60	9.20	410.00	75.06	57.00	
TPH - 418										
TPH (418.1)	mg/kg	3	33.33	20.00	26.00	39.00	39.00	20.67	13.00	

Table F-9 - Commercial Evaluation Unit 5 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Aluminum	mg/kg	4949.75	24000.00	24000.00	20199.01	42599.00	88067.88	Unknown
Arsenic (inorganic)	mg/kg	50.32	50.65	52.00	35.63	54.07	52.00	Unknown
Copper	mg/kg	2.16	19.83	21.00	18.90	21.54	22.22	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	63.05	78.39	86.41	56.29	83.22	86.41	Lognormal
TPH - 418								
TPH (418.1)	mg/kg	15.95	28.18	39.00	17.18	47.55	2719.34	Normal/Lognormal

Table F-10 - Commercial Evaluation Unit 5 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Monomethylamine Nitrate	mg/kg	31	22.58	5.10	6.90	0.04	30000.00	1182.04	2.70	
Metals (Total)										
Aluminum	mg/kg	6	100.00			8000.00	16000.00	11133.33	10950.00	
Arsenic (inorganic)	mg/kg	8	100.00			1.70	45.00	12.60	4.70	
Copper	mg/kg	6	100.00			11.00	29.00	18.00	14.00	
Lead (and compounds) (inorganic)	mg/kg	14	85.71	5.00	5.40	9.40	115.00	23.19	16.50	
PAHs										
Phenanthrene	mg/kg	11	9.09	0.009	0.71	0.08	0.08	0.05	0.004	0.004
TPH - 418										
TPH (418.1)	mg/kg	18	50.00	20.00	22.00	26.00	36000.00	2469.81	18.50	
TPH - 8015										
Oil And Grease	mg/kg	7	85.71	22.00	22.00	39.00	20000.00	3840.00	500.00	

Table F-10 - Commercial Evaluation Unit 5 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Monomethylamine Nitrate	mg/kg	5410.06	1845.69	3146.00	4.44	2830.97	3146.00	Unknown
Metals (Total)								
Aluminum	mg/kg	2881.43	11988.53	14208.77	10841.76	13503.66	14208.77	Normal/Lognormal
Arsenic (inorganic)	mg/kg	15.29	16.44	45.00	6.50	22.84	92.54	Lognormal
Copper	mg/kg	7.87	20.34	28.50	16.72	24.48	28.50	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	27.84	28.35	50.14	15.09	36.36	50.14	Lognormal
PAHs								
Phenanthrene	mg/kg	0.11	0.08	0.08	0.01	0.11	0.46	Unknown
TPH - 418								
TPH (418.1)	mg/kg	8422.03	3837.53	36000.00	81.89	5923.87	78899.36	Unknown
TPH - 8015								
Oil And Grease	mg/kg	7315.91	5825.38	20000.00	486.95	9212.70	179309500.29	Lognormal

Table F-11 - Commercial Evaluation Unit6 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	26	100.00			2.00	85.00	31.55	33.50	
Lead (and compounds) (inorganic)	mg/kg	5	80.00	5.00	5.00	38.00	287.00	103.50	85.00	

Table F-11 - Commercial Evaluation Unit6 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	20.59	34.31	56.65	23.18	38.45	56.65	Normal
Lead (and compounds) (inorganic)	mg/kg	110.12	139.99	287.00	47.56	208.50	481722.54	Normal/Lognormal

Table F-12 - Commercial Evaluation Unit 6 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Nitroglycerine	mg/kg	1	0.00	0.21	0.21			0.11	0.11	
Trinitrotoluene, 2,4,6-	mg/kg	1	0.00	0.003	0.003			0.002	0.002	
Arsenic (inorganic)	mg/kg	1	100.00			5.80	5.80	5.80	5.80	
Copper	mg/kg	1	100.00			8.40	8.40	8.40	8.40	
Lead (and compounds) (inorganic)	mg/kg	2	0.00	5.20	5.40			2.65	2.65	
Mercury (inorganic)	mg/kg	1	0.00	0.08	0.08			0.04	0.04	

Table F-12 - Commercial Evaluation Unit 6 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Nitroglycerine	mg/kg				0.11			Unknown
Trinitrotoluene, 2,4,6-	mg/kg				0.002			Unknown
Arsenic (inorganic)	mg/kg			5.80	5.80			Unknown
Copper	mg/kg			8.40	8.40			Unknown
Lead (and compounds) (inorganic)	mg/kg	0.07	2.70		2.65	2.97	2.90	Unknown
Mercury (inorganic)	mg/kg				0.04			Unknown

Table F-13 - Commercial Evaluation Unit 7 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Monomethylamine Nitrate	mg/kg	8	0.00	5.80	7.70			3.17	3.05	2.90
Nitroglycerine	mg/kg	10	0.00	0.21	0.31			0.12	0.12	
Trinitrotoluene, 2,4,6-	mg/kg	12	25.00	0.003	0.04	0.01	0.21	0.04	0.004	
Aluminum	mg/kg	1	100.00			16000.00	16000.00	16000.00	16000.00	
Arsenic (inorganic)	mg/kg	42	100.00			2.60	160.00	38.41	29.50	
Copper	mg/kg	1	100.00			21.00	21.00	21.00	21.00	
Lead (and compounds) (inorganic)	mg/kg	78	92.31	5.00	6.60	5.70	960.00	85.85	46.50	2.50
Mercury (inorganic)	mg/kg	1	0.00	0.09	0.09			0.04	0.04	
Benzo(a)Anthracene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Benzo(a)Pyrene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Benzo(b)Fluoranthene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Benzo(g,h,i)Perylene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Benzo(k)Fluoranthene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Chrysene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Dibenz(a,h)anthracene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Indeno(1,2,3-cd)pyrene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Methylnaphthalene, 2-	mg/kg	1	0.00	0.20	0.20			0.10	0.10	
Phenanthrene	mg/kg	1	0.00	0.20	0.20			0.10	0.10	

Table F-13 - Commercial Evaluation Unit 7 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Monomethylamine Nitrate	mg/kg	0.35	3.26		3.15	3.40	3.41	Unknown
Nitroglycerine	mg/kg	0.02	0.13		0.12	0.13	0.13	Normal/Lognormal
Trinitrotoluene, 2,4,6-	mg/kg	0.07	0.05	0.21	0.008	0.08	0.35	Unknown
Aluminum	mg/kg			16000.00	16000.00			Unknown
Arsenic (inorganic)	mg/kg	31.98	41.77	54.49	27.73	46.72	54.49	Lognormal
Copper	mg/kg			21.00	21.00			Unknown
Lead (and compounds) (inorganic)	mg/kg	140.39	96.64	133.50	40.91	112.41	133.50	Lognormal
Mercury (inorganic)	mg/kg				0.04			Unknown
Benzo(a)Anthracene	mg/kg				0.10			Unknown
Benzo(a)Pyrene	mg/kg				0.10			Unknown
Benzo(b)Fluoranthene	mg/kg				0.10			Unknown
Benzo(g,h,i)Perylene	mg/kg				0.10			Unknown
Benzo(k)Fluoranthene	mg/kg				0.10			Unknown
Chrysene	mg/kg				0.10			Unknown
Dibenz(a,h)anthracene	mg/kg				0.10			Unknown
Indeno(1,2,3-cd)pyrene	mg/kg				0.10			Unknown
Methylnaphthalene, 2-	mg/kg				0.10			Unknown
Phenanthrene	mg/kg				0.10			Unknown

Table F-14 - Commercial Evaluation Unit 7 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Monomethylamine Nitrate	mg/kg	16	12.50	0.03	5.70	1.40	2.90	2.32	2.70	0.02
Nitroglycerine	mg/kg	20	5.00	0.19	0.57	0.35	0.35	0.13	0.11	
Trinitrotoluene, 2,4,6-	mg/kg	22	36.36	0.003	0.08	0.01	42.00	2.62	0.002	0.002
Aluminum	mg/kg	6	100.00			7000.00	16000.00	12166.67	12500.00	
Arsenic (inorganic)	mg/kg	21	100.00			1.00	8.40	2.72	2.30	
Copper	mg/kg	18	100.00			7.00	24000.00	1347.39	15.00	
Lead (and compounds) (inorganic)	mg/kg	44	40.91	4.90	5.50	5.50	2900.00	174.79	2.75	2.50
Mercury (inorganic)	mg/kg	18	0.00	0.08	0.11			0.05	0.05	
Benzo(a)Anthracene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Benzo(a)Pyrene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Benzo(b)Fluoranthene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Benzo(g,h,i)Perylene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Benzo(k)Fluoranthene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Chrysene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Dibenz(a,h)anthracene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Indeno(1,2,3-cd)pyrene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Methylnaphthalene, 2-	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Phenanthrene	mg/kg	1	0.00	0.18	0.18			0.09	0.09	
Oil And Grease	mg/kg	4	75.00	20.00	20.00	30.00	93.00	46.00	40.50	

Table F-14 - Commercial Evaluation Unit 7 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Monomethylamine Nitrate	mg/kg	0.96	2.48	2.90	1.37	2.74	41.64	Unknown
Nitroglycerine	mg/kg	0.07	0.14	0.15	0.12	0.15	0.15	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	9.36	3.99	42.00	0.01	6.05	53.47	Unknown
Aluminum	mg/kg	3060.50	13075.01	16000.00	11793.53	14684.30	16284.76	Normal/Lognormal
Arsenic (inorganic)	mg/kg	1.67	2.97	3.40	2.38	3.35	3.40	Lognormal
Copper	mg/kg	5653.35	2265.49	551.87	21.82	3665.96	551.87	Unknown
Lead (and compounds) (inorganic)	mg/kg	568.44	233.15	281.37	10.34	319.10	281.37	Unknown
Mercury (inorganic)	mg/kg	0.005	0.05		0.05	0.05	0.05	Normal/Lognormal
Benzo(a)Anthracene	mg/kg				0.09			Unknown
Benzo(a)Pyrene	mg/kg				0.09			Unknown
Benzo(b)Fluoranthene	mg/kg				0.09			Unknown
Benzo(g,h,i)Perylene	mg/kg				0.09			Unknown
Benzo(k)Fluoranthene	mg/kg				0.09			Unknown
Chrysene	mg/kg				0.09			Unknown
Dibenz(a,h)anthracene	mg/kg				0.09			Unknown
Indeno(1,2,3-cd)pyrene	mg/kg				0.09			Unknown
Methylnaphthalene, 2-	mg/kg				0.09			Unknown
Phenanthrene	mg/kg				0.09			Unknown
Oil And Grease	mg/kg	35.52	59.59	93.00	34.54	87.79	1722.91	Normal/Lognormal

Table F-15 - Commercial Evaluation Unit 8 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	27	100.00			4.20	120.00	50.19	46.00	
Lead (and compounds) (inorganic)	mg/kg	5	100.00			19.00	402.00	140.80	62.00	

Table F-15 - Commercial Evaluation Unit 8 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	25.49	53.55	72.35	42.10	58.56	72.35	Normal
Lead (and compounds) (inorganic)	mg/kg	156.49	192.66	402.00	83.92	290.00	4512.94	Normal/Lognormal

Table F-16 - Commercial Evaluation Unit 8 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	1	100.00			6.00	6.00	6.00	6.00	

Table F-16 - Commercial Evaluation Unit 8 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg			6.00	6.00			Unknown

Table F-17 - Commercial Evaluation Unit 9 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	219	99.54	2.40	2.40	3.00	160.00	31.69	26.00	
Lead (and compounds) (inorganic)	mg/kg	202	100.00			7.60	190.00	46.21	38.00	

Table F-17 - Commercial Evaluation Unit 9 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	22.58	32.72	35.68	25.10	34.22	35.68	Unknown
Lead (and compounds) (inorganic)	mg/kg	30.19	47.65	50.79	37.87	49.73	50.79	Lognormal

Table F-18 - Commercial Evaluation Unit 9 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	1	100.00			13.00	13.00	13.00	13.00	

Table F-18 - Commercial Evaluation Unit 9 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg			13.00	13.00			Unknown

Table F-19 - Golf Course Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	1	0.00	0.006	0.006			0.003	0.003	
Metals (Total)										
Arsenic (inorganic)	mg/kg	46	97.83	2.10	2.10	2.70	370.00	39.56	21.50	
Copper	mg/kg	3	100.00			6.60	96.00	38.20	12.00	
Lead (and compounds) (inorganic)	mg/kg	63	92.06	5.00	6.20	7.10	3100.00	373.51	89.00	2.50
Mercury (inorganic)	mg/kg	19	78.95	0.10	0.11	0.14	3.10	0.65	0.44	0.05

Table F-19 - Golf Course Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg				0.003			Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	66.05	46.19	63.23	18.12	55.95	63.23	Lognormal
Copper	mg/kg	50.13	61.82	96.00	19.66	122.71	4433702904.5	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	625.66	427.03	1162.44	93.40	505.22	1162.44	Lognormal
Mercury (inorganic)	mg/kg	0.77	0.77	1.89	0.33	0.96	1.89	Lognormal

Table F-20 - Golf Course Evaluation Unit 1 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Nitroglycerine	mg/kg	10	0.00	0.21	0.23			0.11	0.11	0.11
Trinitrotoluene, 2,4,6-	mg/kg	8	0.00	0.003	0.004			0.002	0.002	
Arsenic (inorganic)	mg/kg	14	100.00			1.50	110.00	17.86	3.70	
Copper	mg/kg	10	90.00	0.27	0.27	6.50	43.00	13.50	10.65	
Lead (and compounds) (inorganic)	mg/kg	39	71.79	4.70	5.80	7.10	4000.00	276.41	31.00	
Mercury (inorganic)	mg/kg	16	50.00	0.08	0.10	0.12	2.60	0.35	0.09	
TPH (418.1)	mg/kg	2	50.00	20.00	20.00	40.00	40.00	25.00	25.00	

Table F-20 - Golf Course Evaluation Unit 1 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Geometric Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Nitroglycerine	mg/kg	0.003	0.11		0.11	0.11	0.11	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	0.00007	0.002		0.002	0.002	0.002	Normal/Lognormal
Arsenic (inorganic)	mg/kg	32.16	23.82	51.81	6.19	33.08	51.81	Unknown
Copper	mg/kg	11.94	16.16	43.00	7.88	20.42	234.17	Unknown
Lead (and compounds) (inorganic)	mg/kg	732.47	356.52	1344.44	33.30	475.45	1344.44	Unknown
Mercury (inorganic)	mg/kg	0.64	0.46	1.02	0.14	0.63	1.02	Unknown
TPH (418.1)	mg/kg	21.21	40.00	40.00	20.00	119.71	113637142058	Unknown

Table F-21 - Golf Course Evaluation Unit 2 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Monomethylamine Nitrate	mg/kg	5	0.00	5.40	6.30			2.91	2.90	
Nitroglycerine	mg/kg	6	0.00	0.21	0.24			0.11	0.12	
Trinitrotoluene, 2,4,6-	mg/kg	13	0.00	0.003	0.18			0.01	0.008	0.002
Metals (Total)										
Aluminum	mg/kg	2	100.00			7700.00	18000.00	12850.00	12850.00	
Arsenic (inorganic)	mg/kg	58	100.00			1.90	490.00	54.96	24.00	
Copper	mg/kg	6	100.00			12.00	98.30	46.27	38.50	
Lead (and compounds) (inorganic)	mg/kg	49	85.71	5.20	6.20	5.80	1500.00	161.62	34.00	
Mercury (inorganic)	mg/kg	20	70.00	0.08	0.11	0.16	100.00	10.84	0.25	
Organochlorine Pesticides										
Aldrin	mg/kg	4	0.00	0.005	0.006			0.003	0.003	
PAHs										
Benzo(a)Anthracene	mg/kg	15	26.67	0.02	0.19	0.10	3.40	0.33	0.010	0.009
Benzo(a)Pyrene	mg/kg	15	26.67	0.02	0.19	0.10	2.80	0.32	0.010	0.009
Benzo(b)Fluoranthene	mg/kg	15	20.00	0.02	0.19	0.77	3.70	0.36	0.010	0.010
Benzo(g,h,i)Perylene	mg/kg	15	46.67	0.02	0.02	0.02	1.60	0.20	0.01	0.010
Benzo(k)Fluoranthene	mg/kg	15	20.00	0.02	0.19	0.30	1.70	0.17	0.010	0.010
Chrysene	mg/kg	15	53.33	0.02	0.02	0.02	4.50	0.45	0.02	0.010
Dibenz(a,h)anthracene	mg/kg	15	13.33	0.04	0.37	0.44	0.51	0.10	0.02	0.02
Indeno(1,2,3-cd)pyrene	mg/kg	15	26.67	0.02	0.19	0.04	1.60	0.17	0.010	0.009
Methylnaphthalene, 2-	mg/kg	2	0.00	0.19	0.79			0.25	0.25	
Phenanthrene	mg/kg	15	26.67	0.009	0.09	0.06	1.10	0.10	0.005	
TPH - 418										
TPH (418.1)	mg/kg	31	54.84	22.00	25.00	31.00	2800.00	479.98	35.00	11.00

Table F-21 - Golf Course Evaluation Unit 2 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Monomethylamine Nitrate	mg/kg	0.16	2.96		2.91	3.07	3.08	Normal/Lognormal
Nitroglycerine	mg/kg	0.005	0.12		0.11	0.12	0.12	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	0.02	0.02		0.006	0.02	0.04	Lognormal
Metals (Total)								
Aluminum	mg/kg	7283.20	18000.00	18000.00	11772.85	45367.10	242577934.05	Unknown
Arsenic (inorganic)	mg/kg	98.18	63.73	81.23	22.89	76.66	81.23	Lognormal
Copper	mg/kg	33.74	56.28	98.30	35.81	74.02	180.50	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	322.11	192.96	419.99	42.37	239.11	419.99	Lognormal
Mercury (inorganic)	mg/kg	26.16	14.87	100.00	0.49	20.96	211.86	Unknown
Organochlorine Pesticides								
Aldrin	mg/kg	0.0002	0.003		0.003	0.003	0.003	Normal/Lognormal
PAHs								
Benzo(a)Anthracene	mg/kg	0.88	0.49	3.23	0.03	0.73	3.23	Unknown
Benzo(a)Pyrene	mg/kg	0.75	0.45	2.80	0.03	0.66	3.57	Unknown
Benzo(b)Fluoranthene	mg/kg	0.96	0.53	3.48	0.03	0.80	3.48	Unknown
Benzo(g,h,i)Perylene	mg/kg	0.43	0.28	1.37	0.04	0.40	1.37	Unknown
Benzo(k)Fluoranthene	mg/kg	0.44	0.25	0.77	0.02	0.37	0.77	Unknown
Chrysene	mg/kg	1.17	0.66	4.50	0.04	0.98	4.86	Unknown
Dibenz(a,h)anthracene	mg/kg	0.16	0.12	0.23	0.04	0.17	0.23	Unknown
Indeno(1,2,3-cd)pyrene	mg/kg	0.42	0.25	0.86	0.03	0.36	0.86	Unknown
Methylnaphthalene, 2-	mg/kg	0.21	0.40		0.19	1.19	518550114788	Unknown
Phenanthrene	mg/kg	0.28	0.15	0.48	0.01	0.23	0.48	Unknown
TPH - 418								
TPH (418.1)	mg/kg	859.03	585.36	2404.03	64.68	741.81	2404.03	Unknown

Table F-22 - Golf Course Evaluation Unit 2 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Monomethylamine Nitrate	mg/kg	16	6.25	0.03	6.00	0.04	0.04	1.58	2.63	0.02
Trinitrotoluene, 2,4,6-	mg/kg	22	4.55	0.003	0.04	0.06	0.06	0.005	0.002	0.002
Metals (Total)										
Arsenic (inorganic)	mg/kg	24	100.00			1.60	436.00	86.76	15.30	
Copper	mg/kg	15	93.33	8.90	8.90	3.60	69.00	16.80	15.00	
Lead (and compounds) (inorganic)	mg/kg	56	80.36	5.00	5.70	6.10	920.00	172.99	69.50	2.50
Mercury (inorganic)	mg/kg	21	47.62	0.08	0.10	0.40	9.80	1.16	0.05	
PAHs										
Benzo(b)Fluoranthene	mg/kg	6	16.67	0.02	0.18	0.02	0.02	0.02	0.01	0.010
Benzo(g,h,i)Perylene	mg/kg	6	16.67	0.02	0.18	0.02	0.02	0.03	0.010	
Chrysene	mg/kg	6	16.67	0.02	0.18	0.03	0.03	0.03	0.01	0.010
TPH - 418										
TPH (418.1)	mg/kg	33	54.55	20.00	25.00	14.00	360.00	58.09	25.00	10.00
TPH - 8015										
Oil And Grease	mg/kg	16	68.75	20.00	20.00	22.00	2200.00	330.19	30.00	10.00

Table F-22 - Golf Course Evaluation Unit 2 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Monomethylamine Nitrate	mg/kg	1.43	1.83	0.04	0.30	2.21	423.25	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	0.01	0.007	0.006	0.002	0.01	0.006	Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	123.27	104.00	436.00	19.21	129.89	803.00	Unknown
Copper	mg/kg	15.47	19.57	26.16	13.02	23.84	26.16	Lognormal
Lead (and compounds) (inorganic)	mg/kg	237.31	194.58	756.72	46.62	226.39	756.72	Lognormal
Mercury (inorganic)	mg/kg	2.28	1.50	7.80	0.23	2.02	7.80	Unknown
PAHs								
Benzo(b)Fluoranthene	mg/kg	0.03	0.03	0.02	0.02	0.05	0.10	Unknown
Benzo(g,h,i)Perylene	mg/kg	0.03	0.03	0.02	0.02	0.05	0.12	Unknown
Chrysene	mg/kg	0.03	0.04	0.03	0.02	0.05	0.12	Unknown
TPH - 418								
TPH (418.1)	mg/kg	76.95	67.24	96.75	29.51	80.82	96.75	Unknown
TPH - 8015								
Oil And Grease	mg/kg	637.79	440.37	2200.00	57.08	609.70	2597.59	Unknown

Table F-23 - Golf Course Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Aluminum	mg/kg	8	100.00			9200.00	23000.00	14900.00	14000.00	
Arsenic (inorganic)	mg/kg	63	100.00			2.00	970.00	95.18	47.00	
Copper	mg/kg	8	100.00			17.00	72.00	38.75	36.50	
Lead (and compounds) (inorganic)	mg/kg	47	100.00			8.50	1200.00	117.48	63.00	
Mercury (inorganic)	mg/kg	17	94.12	0.13	0.13	0.13	11.00	1.78	0.28	
PAHs										
Benzo(a)Anthracene	mg/kg	1	100.00			0.07	0.07	0.07	0.07	
Benzo(a)Pyrene	mg/kg	1	100.00			0.09	0.09	0.09	0.09	
Benzo(b)Fluoranthene	mg/kg	1	100.00			0.13	0.13	0.13	0.13	
Benzo(g,h,i)Perylene	mg/kg	1	100.00			0.08	0.08	0.08	0.08	
Benzo(k)Fluoranthene	mg/kg	1	100.00			0.08	0.08	0.08	0.08	
Chrysene	mg/kg	1	100.00			0.14	0.14	0.14	0.14	
Indeno(1,2,3-cd)pyrene	mg/kg	1	100.00			0.07	0.07	0.07	0.07	
Phenanthrene	mg/kg	1	100.00			0.08	0.08	0.08	0.08	
TPH - 418										
TPH (418.1)	mg/kg	8	62.50	22.00	26.00	29.00	89.00	46.56	41.50	

Table F-23 - Golf Course Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Aluminum	mg/kg	4080.62	15925.77	18316.91	14442.01	17633.95	18316.91	Normal/Lognormal
Arsenic (inorganic)	mg/kg	145.42	107.62	132.35	50.23	125.79	132.35	Lognormal
Copper	mg/kg	19.44	43.64	63.87	34.48	51.77	63.87	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	189.11	136.26	147.87	68.49	163.93	147.87	Lognormal
Mercury (inorganic)	mg/kg	3.16	2.31	6.15	0.54	3.12	6.15	Unknown
PAHs								
Benzo(a)Anthracene	mg/kg			0.07	0.07			Unknown
Benzo(a)Pyrene	mg/kg			0.09	0.09			Unknown
Benzo(b)Fluoranthene	mg/kg			0.13	0.13			Unknown
Benzo(g,h,i)Perylene	mg/kg			0.08	0.08			Unknown
Benzo(k)Fluoranthene	mg/kg			0.08	0.08			Unknown
Chrysene	mg/kg			0.14	0.14			Unknown
Indeno(1,2,3-cd)pyrene	mg/kg			0.07	0.07			Unknown
Phenanthrene	mg/kg			0.08	0.08			Unknown
TPH - 418								
TPH (418.1)	mg/kg	34.63	55.27	89.00	33.42	69.76	163.76	Normal/Lognormal

Table F-24 - Golf Course Evaluation Unit 3 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Aluminum	mg/kg	1	100.00			6100.00	6100.00	6100.00	6100.00	
Arsenic (inorganic)	mg/kg	3	100.00			2.60	4.90	3.87	4.10	
Copper	mg/kg	1	100.00			330.00	330.00	330.00	330.00	
Lead (and compounds) (inorganic)	mg/kg	3	33.33	6.20	6.20	31.00	31.00	12.40	3.10	3.10
Mercury (inorganic)	mg/kg	3	33.33	0.11	0.11	0.87	0.87	0.33	0.06	0.06
TPH - 418										
TPH (418.1)	mg/kg	1	100.00			44.00	44.00	44.00	44.00	

Table F-24 - Golf Course Evaluation Unit 3 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Aluminum	mg/kg			6100.00	6100.00			Unknown
Arsenic (inorganic)	mg/kg	1.17	4.42	4.90	3.74	5.84	10.86	Normal/Lognormal
Copper	mg/kg			330.00	330.00			Unknown
Lead (and compounds) (inorganic)	mg/kg	16.11	19.99	31.00	6.68	39.56	199241106.45	Unknown
Mercury (inorganic)	mg/kg	0.47	0.55	0.87	0.14	1.12	7764156598.2	Unknown
TPH - 418								
TPH (418.1)	mg/kg			44.00	44.00			Unknown

Table F-25 - Golf Course Evaluation Unit 4 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	123	100.00			0.92	360.00	65.98	36.00	
Copper	mg/kg	8	100.00			16.00	190.00	64.75	27.00	16.00
Lead (and compounds) (inorganic)	mg/kg	59	96.61	5.70	6.50	6.90	25000.00	829.41	78.00	
Mercury (inorganic)	mg/kg	10	70.00	0.09	13.00	0.34	8.80	2.49	0.74	
PAHs										
Benzo(a)Anthracene	mg/kg	11	36.36	0.02	0.27	0.02	8.60	0.89	0.02	
Benzo(a)Pyrene	mg/kg	11	27.27	0.02	0.27	0.03	5.60	0.56	0.03	
Benzo(b)Fluoranthene	mg/kg	11	72.73	0.02	0.18	0.02	7.00	0.76	0.08	
Benzo(g,h,i)Perylene	mg/kg	11	54.55	0.02	0.18	0.17	4.40	0.82	0.17	
Benzo(k)Fluoranthene	mg/kg	11	18.18	0.02	0.27	0.20	2.60	0.28	0.01	
Chrysene	mg/kg	11	81.82	0.02	0.18	0.02	14.00	1.54	0.09	
Dibenz(a,h)anthracene	mg/kg	11	18.18	0.04	0.56	0.05	0.31	0.11	0.03	
Indeno(1,2,3-cd)pyrene	mg/kg	11	27.27	0.02	0.27	0.03	0.38	0.09	0.03	
Phenanthrene	mg/kg	11	63.64	0.010	0.09	0.01	7.10	0.78	0.05	
TPH - 418										
TPH (418.1)	mg/kg	19	57.89	20.00	20.00	35.00	5600.00	874.37	58.00	10.00
TPH - 8015										
Oil And Grease	mg/kg	2	100.00			240.00	250.00	245.00	245.00	

Table F-25 - Golf Course Evaluation Unit 4 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	77.49	70.71	86.27	37.03	77.57	86.27	Lognormal
Copper	mg/kg	72.58	82.99	190.00	38.87	113.38	265.87	Unknown
Lead (and compounds) (inorganic)	mg/kg	3293.56	1121.41	1300.09	110.17	1551.48	1300.09	Lognormal
Mercury (inorganic)	mg/kg	3.11	3.18	8.80	0.81	4.29	117.28	Lognormal
PAHs								
Benzo(a)Anthracene	mg/kg	2.57	1.43	8.60	0.05	2.30	34.09	Unknown
Benzo(a)Pyrene	mg/kg	1.67	0.91	5.60	0.05	1.47	6.54	Unknown
Benzo(b)Fluoranthene	mg/kg	2.08	1.20	7.00	0.09	1.90	16.52	Lognormal
Benzo(g,h,i)Perylene	mg/kg	1.41	1.12	4.40	0.14	1.59	159.09	Lognormal
Benzo(k)Fluoranthene	mg/kg	0.77	0.44	2.60	0.03	0.70	3.32	Unknown
Chrysene	mg/kg	4.16	2.42	14.00	0.14	3.81	50.83	Lognormal
Dibenz(a,h)anthracene	mg/kg	0.12	0.13	0.31	0.06	0.17	0.41	Unknown
Indeno(1,2,3-cd)pyrene	mg/kg	0.12	0.12	0.38	0.04	0.16	0.62	Lognormal
Phenanthrene	mg/kg	2.12	1.23	7.10	0.05	1.94	64.43	Lognormal
TPH - 418								
TPH (418.1)	mg/kg	1494.79	1110.30	5600.00	112.86	1469.00	40229.30	Unknown
TPH - 8015								
Oil And Grease	mg/kg	7.07	250.00	250.00	244.95	276.57	270.38	Unknown

Table F-26 - Golf Course Evaluation Unit 4 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	14	100.00			1.50	100.00	14.07	3.60	
Copper	mg/kg	8	100.00			4.10	22.00	13.14	11.50	
Lead (and compounds) (inorganic)	mg/kg	53	81.13	5.00	6.00	6.40	2500.00	358.84	160.00	
Mercury (inorganic)	mg/kg	8	37.50	0.07	0.09	0.50	6.70	1.15	0.04	
TPH - 418										
TPH (418.1)	mg/kg	20	10.00	20.00	22.00	51.00	520.00	37.60	10.00	10.00
TPH - 8015										
Oil And Grease	mg/kg	12	41.67	20.00	20.00	35.00	94.00	31.42	10.00	10.00

Table F-26 - Golf Course Evaluation Unit 4 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	27.08	19.09	34.49	5.40	26.89	34.49	Unknown
Copper	mg/kg	6.40	14.75	22.00	11.65	17.43	22.62	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	534.21	408.82	2500.00	82.16	482.42	2792.68	Lognormal
Mercury (inorganic)	mg/kg	2.32	1.73	6.70	0.17	2.71	234.15	Unknown
TPH - 418								
TPH (418.1)	mg/kg	113.91	55.12	35.23	13.28	81.64	35.23	Unknown
TPH - 8015								
Oil And Grease	mg/kg	29.52	37.36	70.91	20.85	46.72	70.91	Unknown

Table F-27 - Golf Course Evaluation Unit 5 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Aluminum	mg/kg	5	100.00			9400.00	22000.00	16280.00	18000.00	
Arsenic (inorganic)	mg/kg	20	100.00			2.00	190.00	28.61	13.50	
Copper	mg/kg	5	100.00			11.00	21.00	14.60	14.00	
Lead (and compounds) (inorganic)	mg/kg	10	60.00	5.80	6.50	12.00	308.00	41.32	12.50	
Mercury (inorganic)	mg/kg	5	20.00	0.09	0.11	0.01	0.01	0.04	0.05	

Table F-27 - Golf Course Evaluation Unit 5 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Aluminum	mg/kg	5365.82	18058.15	22000.00	15495.55	21396.09	26280.59	Normal/Lognormal
Arsenic (inorganic)	mg/kg	45.76	35.65	66.01	12.68	46.30	66.01	Lognormal
Copper	mg/kg	3.78	15.85	19.21	14.25	18.21	19.21	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	94.26	62.27	255.99	11.40	95.95	255.99	Lognormal
Mercury (inorganic)	mg/kg	0.02	0.05	0.01	0.04	0.06	0.13	Normal

Table F-28 - Golf Course Evaluation Unit 5 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Monomethylamine Nitrate	mg/kg	36	22.22	5.10	8.80	0.05	1000.00	53.01	2.70	
Metals (Total)										
Aluminum	mg/kg	13	100.00			6200.00	18000.00	11461.54	10000.00	
Arsenic (inorganic)	mg/kg	14	100.00			0.99	18.00	4.91	1.85	
Copper	mg/kg	13	100.00			11.00	24.00	15.08	15.00	
Lead (and compounds) (inorganic)	mg/kg	19	68.42	5.00	5.80	6.20	48.00	17.99	11.00	
Mercury (inorganic)	mg/kg	13	15.38	0.08	0.10	0.12	0.17	0.06	0.05	
PAHs										
Phenanthrene	mg/kg	12	8.33	0.009	0.18	0.08	0.08	0.02	0.005	
TPH - 418										
TPH (418.1)	mg/kg	17	23.53	20.00	23.00	160.00	10000.00	1288.06	10.50	10.50
TPH - 8015										
Oil And Grease	mg/kg	6	100.00			36.00	19000.00	3554.83	510.00	

Table F-28 - Golf Course Evaluation Unit 5 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Monomethylamine Nitrate	mg/kg	179.30	73.42	64.57	4.49	103.72	64.57	Unknown
Metals (Total)								
Aluminum	mg/kg	3235.36	12085.18	13483.74	11038.43	13060.58	13483.74	Normal/Lognormal
Arsenic (inorganic)	mg/kg	6.30	6.07	10.22	2.72	7.89	10.22	Unknown
Copper	mg/kg	3.48	15.75	16.90	14.75	16.79	16.90	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	15.70	20.47	43.15	10.83	24.24	43.15	Unknown
Mercury (inorganic)	mg/kg	0.04	0.07	0.08	0.05	0.08	0.08	Unknown
PAHs								
Phenanthrene	mg/kg	0.04	0.03	0.08	0.010	0.04	0.09	Unknown
TPH - 418								
TPH (418.1)	mg/kg	3301.35	1840.54	10000.00	37.21	2686.07	23041.50	Unknown
TPH - 8015								
Oil And Grease	mg/kg	7582.42	5805.27	19000.00	426.25	9792.29	69109801.12	Lognormal

Table F-29 - Golf Course Evaluation Unit 6 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	2	50.00	0.003	0.003	0.02	0.02	0.01	0.01	
Metals (Total)										
Arsenic (inorganic)	mg/kg	25	100.00			3.30	280.00	70.74	38.00	
Lead (and compounds) (inorganic)	mg/kg	15	93.33	5.00	5.00	3.10	264.00	58.17	31.00	
PAHs										
Benzo(a)Anthracene	mg/kg	2	100.00			0.03	0.05	0.04	0.04	
Benzo(a)Pyrene	mg/kg	2	100.00			0.04	0.05	0.05	0.05	
Benzo(b)Fluoranthene	mg/kg	2	100.00			0.02	0.03	0.03	0.03	
Benzo(g,h,i)Perylene	mg/kg	2	50.00	0.02	0.02	0.06	0.06	0.04	0.04	
Chrysene	mg/kg	2	50.00	0.02	0.02	0.09	0.09	0.05	0.05	
Indeno(1,2,3-cd)pyrene	mg/kg	2	50.00	0.02	0.02	0.03	0.03	0.02	0.02	
Phenanthrene	mg/kg	2	100.00			0.02	0.04	0.03	0.03	
TPH - 418										
TPH (418.1)	mg/kg	2	50.00	29.00	29.00	84.00	84.00	49.25	49.25	

Table F-29 - Golf Course Evaluation Unit 6 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg	0.01	0.02	0.02	0.006	0.08	.12244255176	Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	78.49	81.49	137.23	41.00	97.60	137.23	Lognormal
Lead (and compounds) (inorganic)	mg/kg	72.00	71.04	256.63	27.08	90.91	256.63	Lognormal
PAHs								
Benzo(a)Anthracene	mg/kg	0.01	0.05	0.05	0.04	0.10	0.88	Unknown
Benzo(a)Pyrene	mg/kg	0.004	0.05	0.05	0.04	0.06	0.06	Unknown
Benzo(b)Fluoranthene	mg/kg	0.003	0.03	0.03	0.02	0.04	0.04	Unknown
Benzo(g,h,i)Perylene	mg/kg	0.04	0.06	0.06	0.03	0.20	265175581486	Unknown
Chrysene	mg/kg	0.06	0.09	0.09	0.03	0.30	.78070058351	Unknown
Indeno(1,2,3-cd)pyrene	mg/kg	0.02	0.03	0.03	0.02	0.09	1772904.80	Unknown
Phenanthrene	mg/kg	0.01	0.04	0.04	0.03	0.09	16.62	Unknown
TPH - 418								
TPH (418.1)	mg/kg	49.14	84.00	84.00	34.90	268.66	.31734001616	Unknown

Table F-30 - Golf Course Evaluation Unit 6 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	8	100.00			2.25	47.00	11.38	4.31	
Copper	mg/kg	6	100.00			14.80	66.30	26.48	18.90	
Lead (and compounds) (inorganic)	mg/kg	11	45.45	5.00	5.60	6.00	260.00	45.17	2.80	2.50
PAHs										
Benzo(a)Anthracene	mg/kg	1	100.00			0.09	0.09	0.09	0.09	
Benzo(a)Pyrene	mg/kg	1	100.00			0.11	0.11	0.11	0.11	
Benzo(b)Fluoranthene	mg/kg	1	100.00			0.08	0.08	0.08	0.08	
Benzo(k)Fluoranthene	mg/kg	1	100.00			0.05	0.05	0.05	0.05	
Chrysene	mg/kg	1	100.00			0.15	0.15	0.15	0.15	
Dibenz(a,h)anthracene	mg/kg	1	100.00			0.12	0.12	0.12	0.12	
Phenanthrene	mg/kg	1	100.00			0.14	0.14	0.14	0.14	

Table F-30 - Golf Course Evaluation Unit 6 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	15.48	15.27	44.88	6.38	21.75	44.88	Lognormal
Copper	mg/kg	19.78	32.35	52.41	22.62	42.75	52.41	Unknown
Lead (and compounds) (inorganic)	mg/kg	85.46	63.21	260.00	9.00	91.86	614.66	Unknown
PAHs								
Benzo(a)Anthracene	mg/kg			0.09	0.09			Unknown
Benzo(a)Pyrene	mg/kg			0.11	0.11			Unknown
Benzo(b)Fluoranthene	mg/kg			0.08	0.08			Unknown
Benzo(k)Fluoranthene	mg/kg			0.05	0.05			Unknown
Chrysene	mg/kg			0.15	0.15			Unknown
Dibenz(a,h)anthracene	mg/kg			0.12	0.12			Unknown
Phenanthrene	mg/kg			0.14	0.14			Unknown

Table F-31 - Golf Course Evaluation Unit 7 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	9	11.11	0.003	0.04	0.15	0.15	0.02	0.009	
Metals (Total)										
Arsenic (inorganic)	mg/kg	50	100.00			7.40	350.00	88.76	59.50	
Lead (and compounds) (inorganic)	mg/kg	37	100.00			6.85	1900.00	98.58	38.00	

Table F-31 - Golf Course Evaluation Unit 7 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg	0.05	0.04	0.15	0.009	0.05	0.18	Lognormal
Metals (Total)								
Arsenic (inorganic)	mg/kg	86.42	97.08	133.45	55.54	109.34	133.45	Lognormal
Lead (and compounds) (inorganic)	mg/kg	307.10	133.06	99.33	40.56	184.25	99.33	Unknown

Table F-32 - Golf Course Evaluation Unit 7 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	10	20.00	0.003	0.33	0.004	0.07	0.03	0.003	
Metals (Total)										
Arsenic (inorganic)	mg/kg	8	100.00			1.80	15.00	5.87	4.43	
Copper	mg/kg	7	100.00			12.00	61.80	23.61	16.50	
Lead (and compounds) (inorganic)	mg/kg	21	28.57	5.00	5.90	5.00	290.00	33.10	2.55	2.50

Table F-32 - Golf Course Evaluation Unit 7 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg	0.05	0.04	0.07	0.006	0.06	0.32	Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	4.42	6.98	12.72	4.68	8.84	12.72	Normal/Lognormal
Copper	mg/kg	17.82	28.45	43.74	19.89	36.70	43.74	Lognormal
Lead (and compounds) (inorganic)	mg/kg	80.47	45.17	65.30	5.81	63.39	65.30	Unknown

Table F-33 - Golf Course Evaluation Unit 8 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	11	36.36	0.007	0.04	0.005	0.64	0.07	0.02	
Metals (Total)										
Arsenic (inorganic)	mg/kg	79	100.00			3.00	520.00	80.66	43.00	
Copper	mg/kg	2	100.00			18.40	26.00	22.20	22.20	
Lead (and compounds) (inorganic)	mg/kg	35	88.57	5.00	6.60	8.30	290.00	51.99	33.00	2.50
Mercury (inorganic)	mg/kg	2	50.00	0.13	0.13	0.09	0.09	0.08	0.08	
PAHs										
Benzo(a)Anthracene	mg/kg	2	50.00	0.02	0.02	0.03	0.03	0.02	0.02	
Benzo(a)Pyrene	mg/kg	2	50.00	0.02	0.02	0.03	0.03	0.02	0.02	
Chrysene	mg/kg	2	100.00			0.02	0.10	0.06	0.06	
Phenanthrene	mg/kg	2	50.00	0.009	0.009	0.03	0.03	0.02	0.02	
TPH - 418										
TPH (418.1)	mg/kg	2	100.00			47.00	52.00	49.50	49.50	

Table F-33 - Golf Course Evaluation Unit 8 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg	0.19	0.11	0.28	0.01	0.17	0.28	Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	106.41	88.79	119.62	40.77	100.66	119.62	Lognormal
Copper	mg/kg	5.37	26.00	26.00	21.87	46.19	96.04	Unknown
Lead (and compounds) (inorganic)	mg/kg	61.66	59.10	106.24	26.93	69.67	106.24	Lognormal
Mercury (inorganic)	mg/kg	0.02	0.09	0.09	0.08	0.16	0.29	Unknown
PAHs								
Benzo(a)Anthracene	mg/kg	0.01	0.03	0.03	0.02	0.07	103230.01	Unknown
Benzo(a)Pyrene	mg/kg	0.01	0.03	0.03	0.02	0.07	103230.01	Unknown
Chrysene	mg/kg	0.05	0.10	0.10	0.05	0.30	159594229770	Unknown
Phenanthrene	mg/kg	0.02	0.03	0.03	0.01	0.11	.33679937728	Unknown
TPH - 418								
TPH (418.1)	mg/kg	3.54	52.00	52.00	49.44	65.29	64.29	Unknown

Table F-34 - Golf Course Evaluation Unit 8 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	12	33.33	0.003	0.33	0.005	0.03	0.02	0.005	0.002
Metals (Total)										
Arsenic (inorganic)	mg/kg	11	100.00			3.20	11.00	5.41	4.38	
Copper	mg/kg	6	100.00			14.50	28.50	19.43	18.30	
Lead (and compounds) (inorganic)	mg/kg	27	22.22	5.00	5.70	5.00	60.00	5.68	2.50	2.50

Table F-34 - Golf Course Evaluation Unit 8 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg	0.05	0.03	0.03	0.007	0.05	0.17	Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	2.73	5.99	7.22	4.92	6.90	7.22	Lognormal
Copper	mg/kg	4.81	20.86	24.12	19.00	23.39	24.12	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	11.21	7.16	6.15	3.47	9.36	6.15	Unknown

Table F-35 - Golf Course Evaluation Unit 9 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Nitroglycerine	mg/kg	11	9.09	0.21	0.25	0.24	0.24	0.13	0.12	
Trinitrotoluene, 2,4,6-	mg/kg	20	20.00	0.006	0.18	0.009	0.40	0.05	0.02	
Metals (Total)										
Arsenic (inorganic)	mg/kg	32	100.00			1.90	400.00	37.45	12.50	
Lead (and compounds) (inorganic)	mg/kg	149	95.97	5.00	6.10	6.00	2700.00	258.62	94.00	2.50

Table F-35 - Golf Course Evaluation Unit 9 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Nitroglycerine	mg/kg	0.04	0.14	0.15	0.12	0.15	0.15	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	0.09	0.06	0.12	0.02	0.08	0.12	Lognormal
Metals (Total)								
Arsenic (inorganic)	mg/kg	73.46	46.32	59.95	15.89	59.49	59.95	Lognormal
Lead (and compounds) (inorganic)	mg/kg	447.16	283.42	427.21	91.63	319.36	427.21	Lognormal

Table F-36 - Golf Course Evaluation Unit 9 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Nitroglycerine	mg/kg	77	1.30	0.18	0.36	3.70	3.70	0.15	0.11	0.09
Trinitrotoluene, 2,4,6-	mg/kg	77	5.19	0.003	0.16	0.03	2.40	0.05	0.002	0.002
Metals (Total)										
Arsenic (inorganic)	mg/kg	11	100.00			1.80	40.00	6.19	3.12	
Copper	mg/kg	10	100.00			3.10	29.10	16.22	15.75	
Lead (and compounds) (inorganic)	mg/kg	59	28.81	5.00	5.50	4.00	330.00	17.04	2.50	2.50
PAHs										
Benzo(b)Fluoranthene	mg/kg	1	100.00			0.06	0.06	0.06	0.06	
Chrysene	mg/kg	1	100.00			0.04	0.04	0.04	0.04	

Table F-36 - Golf Course Evaluation Unit 9 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Nitroglycerine	mg/kg	0.41	0.18	0.13	0.11	0.23	0.13	Unknown
Trinitrotoluene, 2,4,6-	mg/kg	0.29	0.07	0.01	0.003	0.11	0.01	Unknown
Metals (Total)								
Arsenic (inorganic)	mg/kg	11.23	8.56	10.23	3.48	12.32	10.23	Unknown
Copper	mg/kg	6.84	17.74	27.71	14.36	20.18	27.71	Normal
Lead (and compounds) (inorganic)	mg/kg	46.27	21.14	17.31	5.15	27.19	17.31	Unknown
PAHs								
Benzo(b)Fluoranthene	mg/kg			0.06	0.06			Unknown
Chrysene	mg/kg			0.04	0.04			Unknown

Table F-37 - Historical Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	3	100.00			5.50	68.00	44.83	61.00	
Lead (and compounds) (inorganic)	mg/kg	3	100.00			38.00	190.00	90.67	44.00	

Table F-37 - Historical Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	34.24	60.97	68.00	28.36	102.56	10009991140.	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	86.08	131.22	190.00	68.23	235.78	150738.75	Normal/Lognormal

Table F-38 - Historical Evaluation Unit 2 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Aluminum	mg/kg	1	100.00			15000.00	15000.00	15000.00	15000.00	
Arsenic (inorganic)	mg/kg	8	100.00			6.00	73.00	44.88	49.50	
Lead (and compounds) (inorganic)	mg/kg	8	100.00			4.70	280.00	78.09	35.50	
Organochlorine Pesticides										
Aldrin	mg/kg	1	100.00			0.60	0.60	0.60	0.60	
TPH - 8015										
Oil And Grease	mg/kg	1	100.00			120.00	120.00	120.00	120.00	

Table F-38 - Historical Evaluation Unit 2 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Aluminum	mg/kg			15000.00	15000.00			Unknown
Arsenic (inorganic)	mg/kg	20.77	50.10	73.00	37.33	58.79	123.38	Normal
Lead (and compounds) (inorganic)	mg/kg	94.29	101.79	280.00	39.85	141.26	784.88	Lognormal
Organochlorine Pesticides								
Aldrin	mg/kg			0.60	0.60			Unknown
TPH - 8015								
Oil And Grease	mg/kg			120.00	120.00			Unknown

Table F-39 - Historical Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	8	100.00			5.40	150.00	29.58	13.00	
Lead (and compounds) (inorganic)	mg/kg	8	100.00			13.00	450.00	151.25	124.00	

Table F-39 - Historical Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	49.04	41.91	109.62	15.15	62.44	109.62	Lognormal
Lead (and compounds) (inorganic)	mg/kg	151.93	189.44	450.00	82.70	253.04	1587.03	Normal/Lognormal

Table F-40 - Industrial Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	134	98.51	2.00	4.60	3.40	180.00	40.79	31.00	
Lead (and compounds) (inorganic)	mg/kg	144	97.92	2.80	6.80	3.10	2000.00	126.33	49.50	

Table F-40 - Industrial Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	33.37	42.74	52.35	28.01	45.56	52.35	Lognormal
Lead (and compounds) (inorganic)	mg/kg	241.10	139.93	168.79	51.46	159.64	168.79	Lognormal

Table F-41 - Industrial Evaluation Unit 1 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Explosives										
Trinitrotoluene, 2,4,6-	mg/kg	38	7.89	0.003	0.07	0.004	0.21	0.02	0.002	0.002
Metals (Total)										
Aluminum	mg/kg	5	100.00			7500.00	14000.00	10900.00	11000.00	
Arsenic (inorganic)	mg/kg	17	100.00			1.70	71.00	8.18	2.80	1.70
Copper	mg/kg	15	100.00			9.90	220.00	31.06	17.00	
Lead (and compounds) (inorganic)	mg/kg	45	66.67	4.90	5.80	5.70	1500.00	59.54	9.00	
Mercury (inorganic)	mg/kg	15	26.67	0.07	0.09	0.09	0.24	0.07	0.04	
PAHs										
Benzo(a)Anthracene	mg/kg	15	6.67	0.02	0.18	0.23	0.23	0.05	0.009	0.009
Benzo(a)Pyrene	mg/kg	15	6.67	0.02	0.18	0.22	0.22	0.04	0.009	0.009
Benzo(b)Fluoranthene	mg/kg	15	6.67	0.02	0.18	0.15	0.15	0.04	0.009	0.009
Benzo(g,h,i)Perylene	mg/kg	16	6.25	0.02	0.18	0.10	0.10	0.04	0.009	0.009
Benzo(k)Fluoranthene	mg/kg	15	6.67	0.02	0.18	0.17	0.17	0.04	0.009	0.009
Chrysene	mg/kg	16	6.25	0.02	0.28	0.36	0.36	0.06	0.009	0.009
Dibenz(a,h)anthracene	mg/kg	16	6.25	0.04	0.18	0.05	0.05	0.04	0.02	0.02
Indeno(1,2,3-cd)pyrene	mg/kg	16	6.25	0.01	0.18	0.14	0.14	0.04	0.009	
Phenanthrene	mg/kg	16	12.50	0.009	0.18	0.009	0.20	0.04	0.005	0.004
TPH - 418										
TPH (418.1)	mg/kg	12	8.33	20.00	20.00	200.00	200.00	25.83	10.00	10.00

Table F-41 - Industrial Evaluation Unit 1 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Explosives								
Trinitrotoluene, 2,4,6-	mg/kg	0.04	0.02	0.05	0.006	0.03	0.05	Unknown
Metals (Total)								
Aluminum	mg/kg	2408.32	11698.08	14000.00	10674.63	13196.23	14271.02	Normal/Lognormal
Arsenic (inorganic)	mg/kg	16.97	11.02	12.25	3.69	15.36	12.25	Unknown
Copper	mg/kg	52.53	40.45	40.53	20.03	54.95	40.53	Unknown
Lead (and compounds) (inorganic)	mg/kg	226.77	82.56	59.51	10.45	116.46	59.51	Unknown
Mercury (inorganic)	mg/kg	0.06	0.08	0.10	0.06	0.10	0.10	Unknown
PAHs								
Benzo(a)Anthracene	mg/kg	0.06	0.06	0.12	0.02	0.07	0.12	Unknown
Benzo(a)Pyrene	mg/kg	0.06	0.05	0.12	0.02	0.07	0.12	Unknown
Benzo(b)Fluoranthene	mg/kg	0.05	0.05	0.09	0.02	0.06	0.09	Unknown
Benzo(g,h,i)Perylene	mg/kg	0.04	0.04	0.08	0.02	0.05	0.08	Unknown
Benzo(k)Fluoranthene	mg/kg	0.05	0.05	0.10	0.02	0.06	0.10	Unknown
Chrysene	mg/kg	0.09	0.07	0.18	0.02	0.10	0.18	Unknown
Dibenz(a,h)anthracene	mg/kg	0.03	0.04	0.05	0.03	0.05	0.06	Unknown
Indeno(1,2,3-cd)pyrene	mg/kg	0.04	0.04	0.09	0.02	0.06	0.09	Unknown
Phenanthrene	mg/kg	0.06	0.05	0.20	0.01	0.07	0.20	Unknown
TPH - 418								
TPH (418.1)	mg/kg	54.85	36.87	37.50	12.84	54.27	37.50	Unknown

Table F-42- Open Space Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	4	100.00			5.80	10.00	8.33	8.75	
Copper	mg/kg	3	100.00			50.00	100.00	81.00	93.00	
Lead (and compounds) (inorganic)	mg/kg	3	100.00			180.00	410.00	330.00	400.00	
Mercury (inorganic)	mg/kg	3	100.00			0.34	1.20	0.74	0.68	
TPH - 418										
TPH (418.1)	mg/kg	3	100.00			230.00	1900.00	1276.67	1700.00	

Table F-42 - Open Space Evaluation Unit 1 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	1.81	9.02	10.00	8.16	10.45	11.97	Normal/Lognormal
Copper	mg/kg	27.07	93.76	100.00	77.47	126.64	319.66	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	130.00	391.25	410.00	309.06	549.16	2583.36	Normal/Lognormal
Mercury (inorganic)	mg/kg	0.43	0.94	1.20	0.65	1.47	31.31	Normal/Lognormal
TPH - 418								
TPH (418.1)	mg/kg	911.94	1706.30	1900.00	905.68	2814.07	845688660.71	Normal/Lognormal

Table F-43 - Open Space Evaluation Unit 2 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	45	100.00			6.30	440.00	141.72	110.00	
Lead (and compounds) (inorganic)	mg/kg	50	96.00	5.00	5.90	6.30	12000.00	494.14	35.50	

Table F-43 - Open Space Evaluation Unit 2 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	135.82	155.50	295.89	72.69	175.81	295.89	Unknown
Lead (and compounds) (inorganic)	mg/kg	1765.99	664.21	756.78	55.09	914.71	756.78	Unknown

Table F-44 - Open Space Evaluation Unit 2 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	3	100.00			2.30	120.00	41.63	2.60	
Copper	mg/kg	2	100.00			11.00	14.00	12.50	12.50	

Table F-44 - Open Space Evaluation Unit 2 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	67.87	73.61	120.00	8.95	156.05	.22346841182	Lognormal
Copper	mg/kg	2.12	14.00	14.00	12.41	21.97	27.95	Unknown

Table F-45 - Open Space Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	16	100.00			4.30	110.00	31.56	22.00	
Lead (and compounds) (inorganic)	mg/kg	6	100.00			20.00	38.00	29.17	30.00	

Table F-45 - Open Space Evaluation Unit 3 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	29.59	36.67	59.57	21.69	44.52	59.57	Lognormal
Lead (and compounds) (inorganic)	mg/kg	7.08	31.27	37.51	28.41	34.99	37.51	Normal/Lognormal

Table F-46 - Open Space Evaluation Unit 3 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	1	100.00			3.80	3.80	3.80	3.80	

Table F-46 - Open Space Evaluation Unit 3 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg			3.80	3.80			Unknown

Table F-47 - Open Space Evaluation Unit 4 (0 to <=1 foot)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Arsenic (inorganic)	mg/kg	17	100.00			9.50	59.00	27.62	25.00	
Lead (and compounds) (inorganic)	mg/kg	7	85.71	5.00	5.00	46.00	101.00	62.21	72.00	

Table F-47 - Open Space Evaluation Unit 4 (0 to <=1 foot)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Arsenic (inorganic)	mg/kg	12.03	29.63	35.50	25.10	32.71	35.50	Normal/Lognormal
Lead (and compounds) (inorganic)	mg/kg	31.84	70.85	101.00	43.42	85.59	1067.07	Normal

Table F-48 - Open Space Evaluation Unit 4 (>1 to <= 15 feet)

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Metals (Total)										
Lead (and compounds) (inorganic)	mg/kg	3	66.67	5.00	5.00	5.80	22.00	10.10	5.80	

Table F-48 - Open Space Evaluation Unit 4 (>1 to <= 15 feet)

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Metals (Total)								
Lead (and compounds) (inorganic)	mg/kg	10.44	15.02	22.00	6.83	27.70	826294.51	Normal/Lognormal

Table F-49 – Comparison of Commercial EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin(1)	MTCA UCL Criterion(2)	MTCA 2X Criterion(3)	COPC
Commercial 1 (0 to <=1 foot)									
Arsenic (inorganic)	58	100	46	60	DW Commercial	10	0.80	6.20	Yes
Benzo(a)Pyrene	4	75	1	13	DW Commercial	0	0.09	0.09	No
Benzo(b)Fluoranthene	4	75	1	126	DW Commercial	0	0.01	0.01	No
Benzo(g,h,i)Perylene	4	100	5	No STD		--	--	--	No
Benzo(k)Fluoranthene	4	25	0	1,260	DW Commercial	0	0.00	0.00	No
Chrysene	4	75	1	12,600	DW Commercial	0	0.00	0.00	No
Copper	10	100	37	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	74	96	451	118	DW Commercial	60	3.80	28.00	Yes
Mercury (inorganic)	11	64	3	24	DW Commercial	0	0.10	0.10	No
Nitroglycerine	3	33	1	6,580	DW Commercial	0	0.00	0.00	No
Phenanthrene	4	25	0	No STD		--	--	--	No
TPH (418.1)	14	57	10,000	7,600	DW Commercial	7	1.30	1.30	Yes
Commercial 1 (1 to <=15 feet)									
Arsenic (inorganic)	14	100	11	60	DW Commercial	0	0.20	0.40	No
Chrysene	6	17	0	12,600	DW Commercial	0	0.00	0.00	No
Copper	8	100	47	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	54	80	237	118	DW Commercial	19	2.00	11.00	Yes
Mercury (inorganic)	12	25	0	24	DW Commercial	0	0.01	0.04	No
Motor Oil	1	100	3,000	2,000	DW Commercial	100	1.50	1.50	Yes
Oil And Grease	14	36	418	2,000	DW Commercial	0	0.20	0.30	No
TPH (418.1)	19	37	179	7,600	DW Commercial	0	0.02	0.20	No
Commercial 2 (0 to <=1 foot)									
Arsenic (inorganic)	165	98	41	60	DW Commercial	9	0.70	2.00	No
Copper	2	100	42	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	150	100	64	118	DW Commercial	11	0.50	2.80	Yes
Mercury (inorganic)	2	50	1	24	DW Commercial	0	0.02	0.02	No

Table F-49 – Comparison of Commercial EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin(1)	MTCA UCL Criterion(2)	MTCA 2X Criterion(3)	COPC
Commercial 2 (1 to <=15 feet)									
Arsenic (inorganic)	4	100	4	60	DW Commercial	0	0.06	0.06	No
Copper	4	100	18	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorgan	4	75	39	118	DW Commercial	0	0.30	0.30	No
TPH (418.1)	4	50	140	7,600	DW Commercial	0	0.02	0.02	No
Commercial 3 (0 to <=1 foot)									
Arsenic (inorganic)	59	100	48	60	DW Commercial	15	0.80	5.80	Yes
Benzo(a)Pyrene	1	100	0	13	DW Commercial	0	0.01	0.01	No
Benzo(b)Fluoranthene	1	100	0	126	DW Commercial	0	0.00	0.00	No
Benzo(g,h,i)Perylene	1	100	0	No STD		--	--	--	No
Benzo(k)Fluoranthene	1	100	0	1,260	DW Commercial	0	0.00	0.00	No
Chrysene	1	100	0	12,600	DW Commercial	0	0.00	0.00	No
Copper	2	100	66	90,900	DW Commercial	0	0.00	0.00	No
Indeno(1,2,3-cd)pyrene	1	100	0	126	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	33	97	852	118	DW Commercial	58	7.20	32.20	Yes
Mercury (inorganic)	2	50	0	24	DW Commercial	0	0.02	0.02	No
Phenanthrene	1	100	0	No STD		--	--	--	No
TPH (418.1)	1	100	450	7,600	DW Commercial	0	0.06	0.06	No
Commercial 3 (1 to <=15 feet)									
Aluminum	2	100	13,000	1,000,000	DW Commercial	0	0.01	0.01	No
Arsenic (inorganic)	4	100	3	60	DW Commercial	0	0.06	0.06	No
Copper	3	100	22	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	3	67	11	118	DW Commercial	0	0.09	0.09	No
TPH (418.1)	3	33	42	7,600	DW Commercial	0	0.01	0.01	No
Commercial 4 (0 to <=1 foot)									
Arsenic (inorganic)	64	100	62	60	DW Commercial	25	1.00	6.50	Yes
Copper	1	100	22	90,900	DW Commercial	0	0.00	0.00	No

Table F-49 – Comparison of Commercial EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin(1)	MTCA UCL Criterion(2)	MTCA 2X Criterion(3)	COPC
Lead (and compounds) (inorganic)	33	100	132	118	DW Commercial	18	1.10	3.80	Yes
Commercial 4 (1 to <=15 feet)									
Arsenic (inorganic)	2	100	28	60	DW Commercial	0	0.50	0.50	No
Commercial 5 (0 to <=1 foot)									
Aluminum	2	100	24,000	1,000,000	DW Commercial	0	0.02	0.02	No
Arsenic (inorganic)	208	100	52	60	DW Commercial	20	0.90	6.20	Yes
Copper	4	100	21	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	164	99	86	118	DW Commercial	17	0.70	3.50	Yes
TPH (418.1)	3	33	39	7,600	DW Commercial	0	0.01	0.01	No
Commercial 5 (1 to <=15 feet)									
Aluminum	6	100	14,209	1,000,000	DW Commercial	0	0.01	0.02	No
Arsenic (inorganic)	8	100	45	60	DW Commercial	0	0.80	0.80	No
Copper	6	100	29	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	14	86	50	118	DW Commercial	0	0.40	1.00	No
Monomethylamine Nitrate	31	23	3,146	19,900	DW Commercial	3	0.20	1.50	No
Oil And Grease	7	86	20,000	2,000	DW Commercial	29	10.00	10.00	Yes
Phenanthrene	11	9	0	No STD		--	--	--	No
TPH (418.1)	18	50	36,000	7,600	DW Commercial	6	4.70	4.70	Yes
Commercial 6 (0 to <=1 foot)									
Arsenic (inorganic)	26	100	57	60	DW Commercial	8	0.90	1.40	No
Lead (and compounds) (inorganic)	5	80	287	118	DW Commercial	20	2.40	2.40	Yes
Commercial 6 (1 to <=15 feet)									
Arsenic (inorganic)	1	100	6	60	DW Commercial	0	0.10	0.10	No
Copper	1	100	8	90,900	DW Commercial	0	0.00	0.00	No
Commercial 7 (0 to <=1 foot)									
Aluminum	1	100	16,000	1,000,000	DW Commercial	0	0.02	0.02	No
Arsenic (inorganic)	42	100	54	60	DW Commercial	21	0.90	2.70	Yes

Table F-49 – Comparison of Commercial EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin[1]	MTCA UCL Criterion[2]	MTCA 2X Criterion[3]	COPC
Copper	1	100	21	90,900	DW Commercial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	78	92	134	118	DW Commercial	17	1.10	8.10	Yes
Trinitrotoluene, 2,4,6-	12	25	0	2	DW Commercial	0	0.10	0.10	No
Commercial 7 (1 to <=15 feet)									
Aluminum	6	100	16,000	1,000,000	DW Commercial	0	0.02	0.02	No
Arsenic (inorganic)	21	100	3	60	DW Commercial	0	0.06	0.10	No
Copper	18	100	552	90,900	DW Commercial	0	0.01	0.30	No
Lead (and compounds) (inorganic)	44	41	281	118	DW Commercial	16	2.40	24.60	Yes
Monomethylamine Nitrate	16	13	3	19,900	DW Commercial	0	0.00	0.00	No
Nitroglycerine	20	5	0	6,580	DW Commercial	0	0.00	0.00	No
Oil And Grease	4	75	93	2,000	DW Commercial	0	0.05	0.05	No
Trinitrotoluene, 2,4,6-	22	36	42	2	DW Commercial	9	24.00	24.00	Yes
Commercial 8 (0 to <=1 foot)									
Arsenic (inorganic)	27	100	72	60	DW Commercial	26	1.20	2.00	Yes
Lead (and compounds) (inorganic)	5	100	402	118	DW Commercial	40	3.40	3.40	Yes
Commercial 8 (1 to <=15 feet)									
Arsenic (inorganic)	1	100	6	60	DW Commercial	0	0.10	0.10	No
Commercial 9 (0 to <=1 foot)									
Arsenic (inorganic)	219	100	36	60	DW Commercial	10	0.60	2.70	Yes
Lead (and compounds) (inorganic)	202	100	51	118	DW Commercial	4	0.40	1.60	No
Commercial 9 (1 to <=15 feet)									
Arsenic (inorganic)	1	100	13	60	DW Commercial	0	0.20	0.20	No

Notes:
[1]Frequency of Exceedence of Standard. A value > 10 triggers MTCA COPC = Yes.
[2]Ratio of RME concentration to Standard. A value > 1 triggers MTCA COPC = Yes.
[3]Ratio of MAX concentration to Standard. A value > 2 triggers MTCA COPC = Yes.

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin[1]	MTCA UCL Criterion[2]	MTCA 2X Criterion[3]	COPC
Golf Course 1 (0 to <=1 foot)									
Arsenic (inorganic)	46	98	63	60	DW Golf Course	15	1.10	6.20	Yes
Copper	3	100	96	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	63	92	1,162	118	DW Golf Course	44	9.90	26.30	Yes
Mercury (inorganic)	19	79	2	24	DW Golf Course	0	0.08	0.10	No
Golf Course 1 (1 to <=15 feet)									
Arsenic (inorganic)	14	100	52	60	DW Golf Course	14	0.90	1.80	Yes
Copper	10	90	43	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	39	72	1,344	118	DW Golf Course	26	11.40	33.90	Yes
Mercury (inorganic)	16	50	1	24	DW Golf Course	0	0.04	0.10	No
TPH (418.1)	2	50	40	7,600	DW Golf Course	0	0.01	0.01	No
Golf Course 2 (0 to <=1 foot)									
Aluminum	2	100	18,000	1,000,000	DW Golf Course	0	0.02	0.02	No
Arsenic (inorganic)	58	100	81	60	DW Golf Course	21	1.40	8.20	Yes
Benzo(a)Anthracene	15	27	3	126	DW Golf Course	0	0.03	0.03	No
Benzo(a)Pyrene	15	27	3	13	DW Golf Course	0	0.20	0.20	No
Benzo(b)Fluoranthene	15	20	3	126	DW Golf Course	0	0.03	0.03	No
Benzo(g,h,i)Perylene	15	47	1	No STD		--	--	--	No
Benzo(k)Fluoranthene	15	20	1	1,260	DW Golf Course	0	0.00	0.00	No
Chrysene	15	53	5	12,600	DW Golf Course	0	0.00	0.00	No
Copper	6	100	98	90,900	DW Golf Course	0	0.00	0.00	No
Dibenz(a,h)anthracene	15	13	0	13	DW Golf Course	0	0.02	0.04	No
Indeno(1,2,3-cd)pyrene	15	27	1	126	DW Golf Course	0	0.01	0.01	No
Lead (and compounds) (inorganic)	49	86	420	118	DW Golf Course	33	3.60	12.70	Yes
Mercury (inorganic)	20	70	100	24	DW Golf Course	15	4.20	4.20	Yes
Phenanthrene	15	27	0	No STD		--	--	--	No
TPH (418.1)	31	55	2,404	7,600	DW Golf Course	0	0.30	0.40	No
Golf Course 2 (1 to <=15 feet)									
Arsenic (inorganic)	24	100	436	60	DW Golf Course	33	7.30	7.30	Yes

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin(1)	MTCA UCL Criterion(2)	MTCA 2X Criterion(3)	COPC
Benzo(b)Fluoranthene	6	17	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(g,h,i)Perylene	6	17	0	No STD		--	--	--	No
Chrysene	6	17	0	12,600	DW Golf Course	0	0.00	0.00	No
Copper	15	93	26	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	56	80	757	118	DW Golf Course	38	6.40	7.80	Yes
Mercury (inorganic)	21	48	8	24	DW Golf Course	0	0.30	0.40	No
Monomethylamine Nitrate	16	6	0	19,900	DW Golf Course	0	0.00	0.00	No
Oil And Grease	16	69	2,200	2,000	DW Golf Course	6	1.10	1.10	Yes
TPH (418.1)	33	55	97	7,600	DW Golf Course	0	0.01	0.05	No
Trinitrotoluene, 2,4,6-	22	5	0	2	DW Golf Course	0	0.00	0.03	No
Golf Course 3 (0 to <=1 foot)									
Aluminum	8	100	18,317	1,000,000	DW Golf Course	0	0.02	0.02	No
Arsenic (inorganic)	63	100	132	60	DW Golf Course	37	2.20	16.20	Yes
Benzo(a)Anthracene	1	100	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(a)Pyrene	1	100	0	13	DW Golf Course	0	0.01	0.01	No
Benzo(b)Fluoranthene	1	100	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(g,h,i)Perylene	1	100	0	No STD		--	--	--	No
Benzo(k)Fluoranthene	1	100	0	1,260	DW Golf Course	0	0.00	0.00	No
Chrysene	1	100	0	12,600	DW Golf Course	0	0.00	0.00	No
Copper	8	100	64	90,900	DW Golf Course	0	0.00	0.00	No
Indeno(1,2,3-cd)pyrene	1	100	0	126	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	47	100	148	118	DW Golf Course	26	1.30	10.20	Yes
Mercury (inorganic)	17	94	6	24	DW Golf Course	0	0.30	0.50	No
Phenanthrene	1	100	0	No STD		--	--	--	No
TPH (418.1)	8	63	89	7,600	DW Golf Course	0	0.01	0.01	No
Golf Course 3 (1 to <=15 feet)									
Aluminum	1	100	6,100	1,000,000	DW Golf Course	0	0.01	0.01	No
Arsenic (inorganic)	3	100	5	60	DW Golf Course	0	0.08	0.08	No
Copper	1	100	330	90,900	DW Golf Course	0	0.00	0.00	No

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin(1)	MTCA UCL Criterion(2)	MTCA 2X Criterion(3)	COPC
Lead (and compounds) (inorganic)	3	33	31	118	DW Golf Course	0	0.30	0.30	No
Mercury (inorganic)	3	33	1	24	DW Golf Course	0	0.04	0.04	No
TPH (418.1)	1	100	44	7,600	DW Golf Course	0	0.01	0.01	No
Golf Course 4 (0 to <=1 foot)									
Arsenic (inorganic)	123	100	86	60	DW Golf Course	33	1.40	6.00	Yes
Benzo(a)Anthracene	11	36	9	126	DW Golf Course	0	0.07	0.07	No
Benzo(a)Pyrene	11	27	6	13	DW Golf Course	0	0.40	0.40	No
Benzo(b)Fluoranthene	11	73	7	126	DW Golf Course	0	0.06	0.06	No
Benzo(g,h,i)Perylene	11	55	4	No STD		--	--	--	No
Benzo(k)Fluoranthene	11	18	3	1,260	DW Golf Course	0	0.00	0.00	No
Chrysene	11	82	14	12,600	DW Golf Course	0	0.00	0.00	No
Copper	8	100	190	90,900	DW Golf Course	0	0.00	0.00	No
Dibenz(a,h)anthracene	11	18	0	13	DW Golf Course	0	0.02	0.02	No
Indeno(1,2,3-cd)pyrene	11	27	0	126	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	59	97	1,300	118	DW Golf Course	41	11.00	211.90	Yes
Mercury (inorganic)	10	70	9	24	DW Golf Course	0	0.40	0.40	No
Oil And Grease	2	100	250	2,000	DW Golf Course	0	0.10	0.10	No
Phenanthrene	11	64	7	No STD		--	--	--	No
TPH (418.1)	19	58	5,600	7,600	DW Golf Course	0	0.70	0.70	No
Golf Course 4 (1 to <=15 feet)									
Arsenic (inorganic)	14	100	34	60	DW Golf Course	7	0.60	1.70	No
Copper	8	100	22	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	53	81	2,500	118	DW Golf Course	57	21.20	21.20	Yes
Mercury (inorganic)	8	38	7	24	DW Golf Course	0	0.30	0.30	No
Oil And Grease	12	42	71	2,000	DW Golf Course	0	0.04	0.05	No
TPH (418.1)	20	10	35	7,600	DW Golf Course	0	0.01	0.07	No
Golf Course 5 (0 to <=1 foot)									
Aluminum	5	100	22,000	1,000,000	DW Golf Course	0	0.02	0.02	No
Arsenic (inorganic)	20	100	66	60	DW Golf Course	10	1.10	3.20	Yes

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin(1)	MTCA UCL Criterion(2)	MTCA 2X Criterion(3)	COPC
Copper	5	100	19	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	10	60	256	118	DW Golf Course	10	2.20	2.60	Yes
Mercury (inorganic)	5	20	0	24	DW Golf Course	0	0.00	0.00	No
Golf Course 5 (1 to <=15 feet)									
Aluminum	13	100	13,484	1,000,000	DW Golf Course	0	0.01	0.02	No
Arsenic (inorganic)	14	100	10	60	DW Golf Course	0	0.20	0.30	No
Copper	13	100	17	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	19	68	43	118	DW Golf Course	0	0.40	0.40	No
Mercury (inorganic)	13	15	0	24	DW Golf Course	0	0.00	0.01	No
Monomethylamine Nitrate	36	22	65	19,900	DW Golf Course	0	0.00	0.05	No
Oil And Grease	6	100	19,000	2,000	DW Golf Course	17	9.50	9.50	Yes
Phenanthrene	12	8	0	No STD		--	--	--	No
TPH (418.1)	17	24	10,000	7,600	DW Golf Course	12	1.30	1.30	Yes
Golf Course 6 (0 to <=1 foot)									
Arsenic (inorganic)	25	100	137	60	DW Golf Course	32	2.30	4.70	Yes
Benzo(a)Anthracene	2	100	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(a)Pyrene	2	100	0	13	DW Golf Course	0	0.00	0.00	No
Benzo(b)Fluoranthene	2	100	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(g,h,i)Perylene	2	50	0	No STD		--	--	--	No
Chrysene	2	50	0	12,600	DW Golf Course	0	0.00	0.00	No
Indeno(1,2,3-cd)pyrene	2	50	0	126	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	15	93	257	118	DW Golf Course	13	2.20	2.20	Yes
Phenanthrene	2	100	0	No STD		--	--	--	No
TPH (418.1)	2	50	84	7,600	DW Golf Course	0	0.01	0.01	No
Trinitrotoluene, 2,4,6-	2	50	0	2	DW Golf Course	0	0.01	0.01	No
Golf Course 6 (1 to <=15 feet)									
Arsenic (inorganic)	8	100	45	60	DW Golf Course	0	0.70	0.80	No
Benzo(a)Anthracene	1	100	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(a)Pyrene	1	100	0	13	DW Golf Course	0	0.01	0.01	No

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin[1]	MTCA UCL Criterion[2]	MTCA 2X Criterion[3]	COPC
Benzo(b)Fluoranthene	1	100	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(k)Fluoranthene	1	100	0	1,260	DW Golf Course	0	0.00	0.00	No
Chrysene	1	100	0	12,600	DW Golf Course	0	0.00	0.00	No
Copper	6	100	52	90,900	DW Golf Course	0	0.00	0.00	No
Dibenz(a,h)anthracene	1	100	0	13	DW Golf Course	0	0.01	0.01	No
Lead (and compounds) (inorganic)	11	46	260	118	DW Golf Course	18	2.20	2.20	Yes
Phenanthrene	1	100	0	No STD		--	--	--	No
Golf Course 7 (0 to <=1 foot)									
Arsenic (inorganic)	50	100	133	60	DW Golf Course	50	2.20	5.80	Yes
Lead (and compounds) (inorganic)	37	100	99	118	DW Golf Course	8	0.80	16.10	Yes
Trinitrotoluene, 2,4,6-	9	11	0	2	DW Golf Course	0	0.09	0.09	No
Golf Course 7 (1 to <=15 feet)									
Arsenic (inorganic)	8	100	13	60	DW Golf Course	0	0.20	0.30	No
Copper	7	100	44	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	21	29	65	118	DW Golf Course	10	0.60	2.50	Yes
Trinitrotoluene, 2,4,6-	10	20	0	2	DW Golf Course	0	0.04	0.04	No
Golf Course 8 (0 to <=1 foot)									
Arsenic (inorganic)	79	100	120	60	DW Golf Course	33	2.00	8.70	Yes
Benzo(a)Anthracene	2	50	0	126	DW Golf Course	0	0.00	0.00	No
Benzo(a)Pyrene	2	50	0	13	DW Golf Course	0	0.00	0.00	No
Chrysene	2	100	0	12,600	DW Golf Course	0	0.00	0.00	No
Copper	2	100	26	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	35	89	106	118	DW Golf Course	14	0.90	2.50	Yes
Mercury (inorganic)	2	50	0	24	DW Golf Course	0	0.00	0.00	No
Phenanthrene	2	50	0	No STD		--	--	--	No
TPH (418.1)	2	100	52	7,600	DW Golf Course	0	0.01	0.01	No
Trinitrotoluene, 2,4,6-	11	36	0	2	DW Golf Course	0	0.20	0.40	No
Golf Course 8 (1 to <=15 feet)									
Arsenic (inorganic)	11	100	7	60	DW Golf Course	0	0.10	0.20	No

Table F-50 – Comparison of Golf Course EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin[1]	MTCA UCL Criterion[2]	MTCA 2X Criterion[3]	COPC
Copper	6	100	24	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	27	22	6	118	DW Golf Course	0	0.05	0.50	No
Trinitrotoluene, 2,4,6-	12	33	0	2	DW Golf Course	0	0.02	0.02	No
Golf Course 9 (0 to <=1 foot)									
Arsenic (inorganic)	32	100	60	60	DW Golf Course	16	1.00	6.70	Yes
Lead (and compounds) (inorganic)	149	96	427	118	DW Golf Course	45	3.60	22.90	Yes
Nitroglycerine	11	9	0	6,580	DW Golf Course	0	0.00	0.00	No
Trinitrotoluene, 2,4,6-	20	20	0	2	DW Golf Course	0	0.07	0.20	No
Golf Course 9 (1 to <=15 feet)									
Arsenic (inorganic)	11	100	10	60	DW Golf Course	0	0.20	0.70	No
Benzo(b)Fluoranthene	1	100	0	126	DW Golf Course	0	0.00	0.00	No
Chrysene	1	100	0	12,600	DW Golf Course	0	0.00	0.00	No
Copper	10	100	28	90,900	DW Golf Course	0	0.00	0.00	No
Lead (and compounds) (inorganic)	59	29	17	118	DW Golf Course	2	0.10	2.80	Yes
Nitroglycerine	77	1	0	6,580	DW Golf Course	0	0.00	0.00	No
Trinitrotoluene, 2,4,6-	77	5	0	2	DW Golf Course	1	0.01	1.40	No

Notes:
[1] Frequency of Exceedence of Standard. A value > 10 triggers MTCA COPC = Yes.
[2] Ratio of RME concentration to Standard. A value > 1 triggers MTCA COPC = Yes.
[3] Ratio of MAX concentration to Standard. A value > 2 triggers MTCA COPC = Yes.
[4] Ecology Agreement for TPH that originated as Bunker C fuel. One area (Area 26 in GC-04 has TPH (418.1) that did not originate form Bunker C fuel. Those TPH data were compared to the MTCA value of 2,000 ng/kg for heavy oils.

Table F-51 – Comparison of Historical EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin[1]	MTCA UCL Criterion[2]	MTCA 2X Criterion[3]	COPC
Historical 1 (0 to <=1 foot)									
Arsenic (inorganic)	3	100	68	32	DW Historical	67	2.10	2.10	Yes
Lead (and compounds) (inorganic)	3	100	190	118	DW Historical	33	1.60	1.60	Yes
Historical 2 (0 to <=1 foot)									
Aldrin	1	100	1	0	DW Historical	100	2.00	2.00	Yes
Aluminum	1	100	15,000	825,000	DW Historical	0	0.02	0.02	No
Arsenic (inorganic)	8	100	73	32	DW Historical	75	2.30	2.30	Yes
Lead (and compounds) (inorganic)	8	100	280	118	DW Historical	25	2.40	2.40	Yes
Oil And Grease	1	100	120	2,000	DW Historical	0	0.06	0.06	No
Historical 3 (0 to <=1 foot)									
Arsenic (inorganic)	8	100	110	32	DW Historical	13	3.40	4.70	Yes
Lead (and compounds) (inorganic)	8	100	450	118	DW Historical	50	3.80	3.80	Yes

Notes:
[1] Frequency of Exceedence of Standard. A value > 10 triggers MTCA COPC = Yes.
[2] Ratio of RME concentration to Standard. A value > 1 triggers MTCA COPC = Yes.
[3] Ratio of MAX concentration to Standard. A value > 2 triggers MTCA COPC = Yes.

Table F-52 – Comparison of Industrial EU to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin (1)	MTCA UCL Criterion(2)	MTCA 2X Criterion (3)	COPC
Industial 1 (0 to <=1 foot)									
Arsenic (inorganic)	134	99	52	90	DW Industrial	9	0.60	2.00	No
Lead (and compounds) (inorganic)	144	98	169	1,000	DW Industrial	2	0.20	2.00	No
Industrial 1 (1 to <=15 feet)									
Aluminum	5	100	14,000	3,500,000	DW Industrial	0	0.00	0.00	No
Arsenic (inorganic)	17	100	12	90	DW Industrial	0	0.10	0.80	No
Benzo(a)Anthracene	15	7	0	180	DW Industrial	0	0.00	0.00	No
Benzo(a)Pyrene	15	7	0	18	DW Industrial	0	0.01	0.01	No
Benzo(b)Fluoranthene	15	7	0	180	DW Industrial	0	0.00	0.00	No
Benzo(g,h,i)Perylene	16	6	0	No STD		--	--	--	No
Benzo(k)Fluoranthene	15	7	0	1,800	DW Industrial	0	0.00	0.00	No
Chrysene	16	6	0	18,000	DW Industrial	0	0.00	0.00	No
Copper	15	100	41	130,000	DW Industrial	0	0.00	0.00	No
Dibenz(a,h)anthracene	16	6	0	18	DW Industrial	0	0.00	0.00	No
Indeno(1,2,3-cd)pyrene	16	6	0	180	DW Industrial	0	0.00	0.00	No
Lead (and compounds) (inorganic)	45	67	60	1,000	DW Industrial	2	0.06	1.50	No
Mercury (inorganic)	15	27	0	24	DW Industrial	0	0.00	0.01	No
Phenanthrene	16	13	0	No STD		--	--	--	No
TPH (418.1)	12	8	38	7,600	DW Industrial	0	0.01	0.03	No
Trinitrotoluene, 2,4,6-	38	8	0	2	DW Industrial	0	0.03	0.10	No

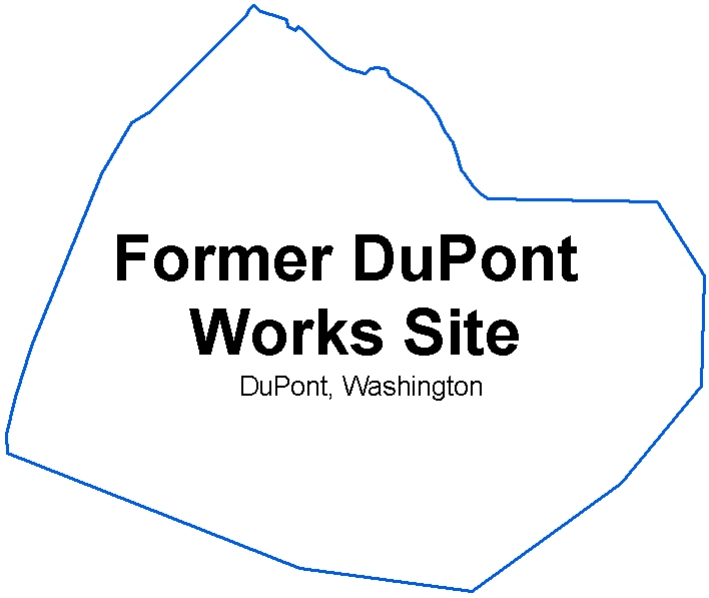
Notes:
(1) Frequency of Exceedence of Standard. A value > 10 triggers MTCA COPC = Yes.
(2) Ratio of RME concentration to Standard. A value > 1 triggers MTCA COPC = Yes.
(3) Ratio of MAX concentration to Standard. A value > 2 triggers MTCA COPC = Yes.

Table F-53 – Comparison of Open Space EUs to Soil Cleanup Levels and Remediation Levels

Constituent	Number of Samples	Frequency of Detection	MTCA UCL	Standard	Standard Description	MTCA 10% Criterioin[1]	MTCA UCL Criterion[2]	MTCA 2X Criterion[3]	COPC
Open Space 1 (0 to <=1 foot)									
Arsenic (inorganic)	4	100	10	32	DW Open Space	0	0.30	0.30	No
Copper	3	100	100	30,500	DW Open Space	0	0.00	0.00	No
Lead (and compounds) (inorganic)	3	100	410	118	DW Open Space	100	3.50	3.50	Yes
Mercury (inorganic)	3	100	1	24	DW Open Space	0	0.05	0.05	No
TPH (418.1)	3	100	1,900	7,600	DW Open Space	0	0.30	0.30	No
Open Space 2 (0 to <=1 foot)									
Arsenic (inorganic)	45	100	296	32	DW Open Space	62	9.20	13.80	Yes
Lead (and compounds) (inorganic)	50	96	757	118	DW Open Space	26	6.40	101.70	Yes
Open Space 2 (1 to <=15 feet)									
Arsenic (inorganic)	3	100	120	32	DW Open Space	33	3.80	3.80	Yes
Copper	2	100	14	30,500	DW Open Space	0	0.00	0.00	No
Open Space 3 (0 to <=1 foot)									
Arsenic (inorganic)	16	100	60	32	DW Open Space	31	1.90	3.40	Yes
Lead (and compounds) (inorganic)	6	100	38	118	DW Open Space	0	0.30	0.30	No
Open Space 3 (1 to <=15 feet)									
Arsenic (inorganic)	1	100	4	32	DW Open Space	0	0.10	0.10	No
Open Space 4 (0 to <=1 foot)									
Arsenic (inorganic)	17	100	36	32	DW Open Space	24	1.10	1.80	Yes
Lead (and compounds) (inorganic)	7	86	101	118	DW Open Space	0	0.90	0.90	No
Open Space 4 (1 to <=15 feet)									
Lead (and compounds) (inorganic)	3	67	22	118	DW Open Space	0	0.20	0.20	No

Notes:
[1] Frequency of Exceedence of Standard. A value > 10 triggers MTCA COPC = Yes.
[2] Ratio of RME concentration to Standard. A value > 1 triggers MTCA COPC = Yes.
[3] Ratio of MAX concentration to Standard. A value > 2 triggers MTCA COPC = Yes.

Remedial Design Report



Prepared for:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared by:

PIONEER Technologies Corporation
West Shore Corporation, NW
Asmundson & Company

October, 2003

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION AND GENERAL INFORMATION 1-1

1.1 Introduction 1-1
1.2 Goals of the Cleanup Action 1-1
1.3 Specific Cleanup or Performance Requirements 1-1
1.4 Owners and Operators 1-1
1.5 Site Characterization Information 1-2
1.6 Schedule 1-3
1.7 Basis for Plan of Action 1-3
1.8 General Process - Large Scale, Small Scale, and Groundwater Actions 1-3
1.8.1 General Process – Large Scale Applications 1-4
1.8.2 General Process – Small Scale Applications 1-4
1.8.3 No Action 1-4
1.8.4 General Process – Groundwater 1-5
1.8.5 Cleanup Units 1-5
1.8.6 Facilities 1-5
1.9 Permits and Approvals 1-6
1.10 Health and Safety 1-6

SECTION 2 – GENERAL DESIGN SPECIFICATIONS 2-1

2.1 Engineering Design 2-1
2.1.1 Engineering Design and Performance Criteria 2-1
2.1.1.1 Threshold Criteria 2-1
2.1.1.2 Performance Criteria and Goals - Cap Construction 2-1
2.1.2 Engineering Justification for Design and Operation Parameters 2-1
2.1.3 Management and Disposal of Residual Contamination 2-2
2.2 Environmental Controls 2-2
2.2.1 Control of Hazardous Materials Spills and Accidental Discharges 2-2
2.2.2 Air Pollution Controls 2-2
2.2.3 Water Pollution Controls 2-3
2.2.4 Erosion Control 2-3
2.2.5 Slope Stability Concerns 2-3
2.2.6 Re-contamination Controls 2-4
2.2.7 Dust Suppression Controls 2-4
2.2.8 Decontamination of Equipment 2-4
2.2.9 Solid Waste 2-4
2.3 Facility Specific Characteristics 2-4
2.3.1 Operating Facilities 2-4
2.3.2 Force Majure 2-4
2.3.3 Local Planning and Development Issues or SEPA Information not in RI/RA/FS 2-5
2.3.4 Permits and Approvals 2-5
2.3.5 Institutional Controls 2-5
2.4 Construction Documentation 2-5
2.4.1 As-Builts 2-5
2.4.2 Survey Steps 2-6
2.4.3 Documentation and Record Keeping 2-6

SECTION 3 – HEALTH AND SAFETY 3-1

3.1 Health and Safety Plan 3-1
3.1.1 General Policies 3-1
3.1.2 Responsibility 3-2
3.1.2.1 Project Direction 3-2
3.1.2.2 Project Manager/Site Supervisor 3-3
3.1.2.3 Contractor Health and Safety Managers 3-3
3.1.2.4 Project Personnel 3-4
3.1.3 Site Access 3-4
3.1.3.1 Access Restrictions 3-4
3.1.3.2 Site Access Procedures 3-5
3.1.4 Health and Safety Training 3-5
3.1.5 Communication 3-5
3.2 General Cleanliness 3-6
3.2.1 Clean, Orderly, and Hazard-Free Work Site 3-6
3.2.2 Decontamination of Personnel 3-6

SECTION 4 – TECHNICAL AND CONSTRUCTION SPECIFICATIONS : REMEDIAL ACTION 4-1

4.1 Pre-Construction Tasks 4-1
4.2 Cultural and Archeological Monitoring 4-1
4.3 Large Scale Applications 4-2
4.3.1 Excavation Methods 4-2
4.3.2 General Excavation Types/Process/Logistics 4-2
4.3.3 Placement Area Construction 4-3
4.3.4 Engineered Cap Construction 4-3
4.3.4.1 Gravel and Soil Cap 4-4
4.3.4.2 EcoCap Methodology and Specifications 4-4
4.3.4.3 Human Health Cap Methodology and Specifications 4-4
4.3.5 Compliance Monitoring for Large Scale Applications 4-4
4.4 Small Scale Applications 4-5
4.4.1 No Action – Sequalitchew Creek Canyon and Old Fort Lake 4-5
4.4.2 Cap 4-5
4.4.3 Cap/Cover 4-5
4.4.4 Disposal of Contaminated Soils 4-5
4.4.4.1 Designation Sampling – Post Excavation Soil Stockpiles 4-6
4.4.5 General Excavation Process/Logistics 4-6
4.4.6 Compliance Monitoring for Small Scale Applications 4-6
4.5 Design – Sequalitchew Creek Railroad Bed 4-7
4.5.1 Preparation 4-7
4.5.2 Drainage 4-7
4.5.2.1 CAP/Cover 4-8
4.5.2.2 Quality Control Testing 4-8
4.5.2.3 Operations and Maintenance 4-8
4.5.2.4 Ecological Impacts 4-8
4.5.2.5 Compliance Testing 4-8
4.6 Groundwater 4-9
4.6.1 Compliance Testing 4-9
4.6.2 Monitoring Well Construction 4-9
4.7 Remediation Costs 4-9

SECTION 5 – TECHNICAL AND CONSTRUCTION SPECIFICATIONS : GOLF COURSE CONSTRUCTION.. 5-1

5.1 Course Construction 5-1
5.1.1 References 5-1
5.1.2 Compaction Requirements 5-1
5.1.3 Additional Fill 5-1
5.1.4 Moisture Control 5-2
5.1.5 Rocks or Boulders 5-2
5.1.6 Architectural Adaptation for Golf Course Construction 5-2
5.1.7 Quality Control Testing 5-2
5.2 Topsoil 5-2
5.2.1 Preparation 5-2
5.2.2 Drainage and Irrigation 5-2
5.2.3 Grade Stakes 5-2
5.3 Rough Shaping 5-3
5.3.1 Equipment 5-3
5.3.2 Fairway and Rough 5-3
5.3.3 Tees 5-3
5.3.4 Greens 5-3
5.3.5 Sand Bunkers 5-4
5.4 Features Construction 5-4
5.4.1 Tees 5-4
5.4.2 Greens 5-5
5.4.2.1 Laboratory Tests 5-5
5.4.2.2 Standards 5-5
5.4.3 Bunkers 5-6
5.5 Cast-In-Place Concrete Cart Paths 5-7
5.5.1 Alignment 5-7
5.5.2 Surface Water 5-7
5.5.3 Sub-Grade Composition 5-7
5.5.4 Finish Grade and Width 5-8
5.5.5 Forms 5-8
5.5.6 Cast-in-Place Specifications 5-8
5.5.7 Hot Weather Concreting 5-9
5.5.8 Joints 5-9
5.5.8.1 Expansion Joints 5-9
5.5.8.2 Contraction Joints 5-9
5.5.9 Execution 5-9
5.5.10 Finish 5-9
5.6 Finish Grading 5-10
5.7 Soil Amendments 5-10
5.7.1 Equipment 5-10
5.7.2 Soil Tests 5-10
5.7.3 Application of Gypsum 5-10
5.7.4 Application of Dolomitic Lime 5-11
5.7.5 Starter Fertilizer (Fairways and Rough) 5-11
5.7.6 Starter Fertilizer (Tees and Greens) 5-11
5.8 Seedbed Preparation and Equipment 5-11
5.8.1 Seedbed Preparation 5-11
5.8.2 Equipment 5-11
5.8.3 Leveling and Preparation 5-12

5.9 Grassing 5-12
5.9.1 Material References 5-12
5.9.2 Grass Types and Seeding Rates 5-12
5.9.3 Inspection and Tests of Seed 5-13
5.9.4 Planting Dates 5-13
5.9.5 Equipment 5-13
5.9.6 Seeding 5-13
5.9.6.1 Greens 5-13
5.9.6.2 Tees 5-13
5.9.6.3 Fairways and Primary Roughs 5-13
5.9.6.4 Lake Banks and Secondary Re-Vegetation Areas 5-14
5.9.6.5 Protection 5-14
5.9.6.6 Maintenance 5-14
5.9.6.7 Germination 5-14
5.10 Lake Construction 5-14
5.10.1 PVC Liner 5-14
5.10.2 Clay Soil Seepage Control Lining (Alternative) 5-15
5.11 Irrigation 5-16
5.11.1 Irrigation General 5-16
5.11.1.1 As-Built/Construction Record Drawing 5-16
5.11.1.2 Course Personnel Training 5-17
5.11.1.3 List of Material for Approval 5-17
5.11.1.4 Warranty 5-18
5.11.1.5 The Companie's Responsibility for Maintenance 5-19
5.11.1.6 Service by Contractor 5-19
5.11.1.7 Turn Over Equipment 5-19
5.11.2 Irrigation Materials 5-19
5.11.2.1 Pipe 5-19
5.11.2.2 Fittings 5-20
5.11.2.3 Valves, Valve Boxes, and Wrenches 5-20
5.11.2.4 Thrust Blocks 5-20
5.11.2.5 Sprinklers & Quick Couplers 5-20
5.11.2.6 Field Controllers 5-21
5.11.2.7 Central Controller 5-21
5.11.2.8 120 Volt Wiring 5-22
5.11.2.9 Grounding 5-22
5.11.2.10 Swing Joints 5-23
5.11.2.11 Sleeving 5-23
5.11.2.12 Weather Station 5-23
5.11.3 Irrigation Installation 5-23
5.11.3.1 Equipment 5-23
5.11.3.2 Excavation, Trenching, and Back Filling 5-24
5.11.3.3 Pipe Fittings 5-24
5.11.3.4 Testing and Flushing of System 5-26
5.11.3.5 Thrust Blocks 5-26
5.11.3.6 Gear Driven Sprinklers, Rotary Sprinklers, & Quick Coupling Valves 5-26
5.11.3.7 Central Computer and Field Controllers 5-27
5.11.3.8 Control Wiring 5-27
5.11.3.9 Surge Protection 5-28
5.11.3.10 Electrical Service 5-28

5.11.3.11 Pump Station 5-28
5.12 Water Supply 5-32
5.13 Underpasses 5-33
5.14 Drainage 5-33
5.15 Placement/Revegetated Areas 5-35
5.16 Landscape Areas 5-36
5.17 Golf Course Costs 5-36

SECTION 6 – POST REMEDIATION GOLF COURSE GROW-IN SPECIFICATIONS 6-1

6.1 Introduction 6-1
6.2 Irrigation 6-1
6.2.1 Germination Period 6-2
6.2.2 Post-Germination Period 6-2
6.2.3 Regular Period 6-2
6.3 Mowing 6-3
6.3.1 Tees - To be Seeded with Alliance Perennial Ryegrass Blend 6-3
6.3.2 Greens - To be Seeded with Penn A-4 6-3
6.3.3 Fairways - To be Seeded with 80/20 mix of Alliance Perennial Ryegrass and Improved Colonial Bentgrass Blend 6-3
6.3.4 Rough – To be Seeded with Alliance Perennial Ryegrass 6-3
6.3.5 Secondary Revegetation – To be Seeded with Bonny Dunes Fine Fescue 6-3
6.4 Fertilization 6-4
6.4.1 Pre-Plant 6-4
6.4.2 Initial Grow-In Establishment 6-4
6.4.3 Established Turf Maintenance 6-5
6.5 Topdressing 6-5
6.6 Verticutting & Aerification 6-5
6.6.1 Greens 6-5
6.6.2 Fairways 6-6
6.7 Pesticides 6-6
6.8 Mechanical Practices 6-6
6.8.1 Washing Procedures 6-6
6.8.2 Equipment Check 6-7
6.8.3 Storage 6-7
6.8.4 Other Maintenance Practices 6-7
6.9 Miscellaneous Maintenance Practices 6-7
6.10 Record Keeping 6-7

REFERENCES 7-1

APPENDICES

Appendix A – Air Monitoring Plan

Appendix B – Washington State Water Well Construction Act

TABLES

Table 1-1 – Soil and Groundwater Cleanup, Screening, and Remediation Levels for each Land Use 1-7
Table 1-2 – Project Schedule 1-9
Table 2-1 – ARARs and Associated Permit Requirements 2-7
Table 3-1 – Required Health and Safety Training 3-7
Table 4-1 – Estimated Remediation Costs 4-11
Table 5-1 – Golf Course Re-vegetation Plant Types and Root Zone Depths 5-37
Table 5-2 – Golf Course Construction Costs 5-39
Table A-1 – Personal Air Monitoring Log A-5
Table A-2 – Real-Time Air Monitoring Log A-7
Table A-3 – PM-10 Sampling Forms A-9

FIGURES

Figure 4-1 – Confirmation Sampling Approach For Large Scale Applications 4-13
Figure B-1 – General Resource Protection Well – Cross Section B-7

REMEDIAL DESIGN DRAWINGS

Drawing	Title
PTC-1	Former DuPont Works Site Vicinity Map
PTC-2	Remediated Areas
PTC-3	Future Land Use at the Site
PTC-4	DuPont Works Site Overview
PTC-5	Miscellaneous Small Remediation Units
PTC-6	Narrow Gauge Railroad Miscellaneous Small Remediation Units
PTC-7	Foundations Miscellaneous Small Remediation Units
PTC-8	Debris and Stockpile Miscellaneous Small Remediation Units
SHEET 1	Cover Sheet for Asmundson & Company Drawings
SHEET 2	Conceptual Support Facility Plan
SHEET 3	Overall Clean-Up Units
SHEET 4	Clean-Up Unit 1
SHEET 5	PA-1A/1B Finish Elevation of Excavated Material
SHEET 6	PA-1A/1B Finish Elevation for Eco Barrier
SHEET 7	PA-1A/1B Finish Elevation for Human Health Layer
SHEET 8	PA-1A/1B Golf Course Features
SHEET 9	Clean-Up Unit 2
SHEET 10	PA-02 Finish Elevation of Excavated Material
SHEET 11	PA-02 Finish Elevation for Eco Barrier
SHEET 12	PA-02 Finish Elevation for Human Health Layer
SHEET 13	PA-02 Golf Course Features
SHEET 14	Clean-Up Unit 3
SHEET 15	PA-3A/3B Finish Elevation of Excavated Material
SHEET 16	PA-3A/3B Finish Elevation for Eco Barrier
SHEET 17	PA-3A/3B Finish Elevation for Human Health Layer
SHEET 18	PA-3A/3B Golf Course Features
SHEET 19	Clean-Up Unit 4
SHEET 20	PA-04 Finish Elevation of Excavated Material
SHEET 21	PA-04 Finish Elevation for Eco Barrier
SHEET 22	PA-04 Finish Elevation for Human Health Layer
SHEET 23	PA-04 Golf Course Features
SHEET 24	Clean-Up Unit 5
SHEET 25	PA-05 Finish Elevation of Excavated Material
SHEET 26	PA-05 Finish Elevation for Eco Barrier
SHEET 27	PA-05 Finish Elevation for Human Health Layer
SHEET 28	PA-05 Golf Course Features
SHEET 29	Clean-Up Unit 6
SHEET 30	PA-06 Finish Elevation of Excavated Material
SHEET 31	PA-06 Finish Elevation for Eco Barrier
SHEET 32	PA-06 Finish Elevation for Human Health Layer
SHEET 33	PA-06 Golf Course Features
SHEET 34	Clean-Up Unit 7
SHEET 35	PA-07 Finish Elevation of Excavated Material
SHEET 36	PA-07 Finish Elevation for Eco Barrier
SHEET 37	PA-07 Finish Elevation for Human Health Layer
SHEET 38	PA-07 Golf Course Features
SHEET 39	Remediation Details
SHEET 40	Tunnel Crossing Holes 1 & 2
SHEET 41	Tunnel Crossing Holes 8 & 9

ACRONYMS AND ABBREVIATIONS

Acronyms	Abbreviations
‘	Feet
“	Inches
A&C	Asmundson and Company
ADS	Advance Drainage System
ADU	Automatic Diagnostic Utility
AOSCA	Association of Office Seed Certification Agencies
ARARs	Applicable, Relevant, and Appropriate Requirements
ARU	Automatic Ramp Up
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
BGS	Below Ground Surface
CAP	Cleanup Action Plan
CIT	Center for Irrigation Technology
CL	Cleanup Level
CMP	Corrugated Metal Pipe
CRD	Construction Record Drawing
CU	Cleanup Unit
CY	Cubic Yard
DNT	Dinitrotoluene
DuPont	E.I. duPont de Nemours and Company, Inc.
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
E.T.	Evapotranspiration
FS	Feasibility Study
GC	Golf Course
GPS	Global Positioning System
H&S	Health and Safety
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response (OSHA Regulation)
HDPE	High Density Polyethylene
lb	Pound
LS-Crew 1	Large Scale Crew 1
LS-Crew 2	Large Scale Crew 2
MSUs	Miscellaneous Small Remediation Units
MTCA	Model Toxics Control Act
MW	Monitoring Well
NAX	Nitro Aromatic Explosives
NEC	National Electric Code
NEMA	National Electric Manufacturer’s Association
NGRR	Narrow Gauge Railroad
OAHP	Washington State Office of Archeology and Historic Preservation
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
OTIS	Operater Terminal Information System

PA	Placement Area
PEL	Permissible Exposure Limit
PLC	Programmable Logic Controller
PM/SS	Project Manager/Site Supervisor
PMT	Project Management Team
PPE	Personal Protective Equipment
Project	DuPont Works Project
PSI	Pounds per square inch
PVC	Poly Vinyl Chloride
QA/QC	Quality Assurance/Quality Control
RA	Risk Assessment
RAO	Remedial Action Objective
RDR	Remedial Design Report
RI	Remedial Investigation Report
RL	Remediation Level
RU	Remediation Unit
SC	Scheduling Coefficient
SEPA	Washington State Environmental Protection Act
Site	Former DuPont Works Site
STL	Severn Trent Services Laboratory
The Companies	Weyerhaeuser and DuPont
TNT	2,4,6-Trinitrotoluene
TPH	Total Petroleum Hydrocarbon
UL	Underwriters Laboratories
USGA	United States Golf Association
VFD	Variable Frequency Drive
WAC	Washington Administrative Code
Weyerhaeuser	Weyerhaeuser Company
WISHA	Washington State Industrial Safety and Health Administration

SECTION 1 – INTRODUCTION AND GENERAL INFORMATION

1.1 Introduction

The purpose of this Remedial Design Report (RDR) is to provide design criteria and information, engineering concepts, and construction plans and specifications for the cleanup actions at the former DuPont Works Site (Site). A Consent Decree between the lead agency, Washington State Department of Ecology (Ecology), and the principal responsible parties, the Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont) to enact these actions was entered into effective August 14, 2003. The RDR was developed in accordance with the Model Toxics Control Act Cleanup Regulation (MTCA).

1.2 Goals of the Cleanup Action

The goals of cleanup actions at the Site are to complete the work necessary to protect human health and the environment (WAC 173-340-350). In particular this means: Achieve cleanup standards that will be protective of human health and the environment; and comply with chemical-, location-, and action-specific applicable, relevant, and appropriate requirements (ARARs).

1.3 Specific Cleanup or Performance Requirements

Because of the complexity of the Site, a Site-specific risk assessment (RA) using land use specific exposure scenarios was used to develop Site-specific cleanup levels (CLs) and remediation levels (RLs) protective of human health and the environment (WAC 173-340-700 (3)(c)). These levels are listed in Table 1-1.

1.4 Owners and Operators

Weyerhaeuser is the current owner of the Site. DuPont owned the property between 1906 and 1974, and was the operator of the former DuPont Works Facility. All work described in this document will be conducted under the supervision of both Weyerhaeuser and DuPont (the Companies). West Shore Corporation will perform the day-to-day project management tasks. Active Construction is the Remediation Contractor. A contractor will be selected in late 2003 to build the golf course (GC). Asmundson and Company (A&C) is the GC Designer.

Various other consultants and contractors will be used, as needed, to complete specific tasks. Operations and maintenance (O&M) tasks following construction will also be completed by contractors of the Companies until the GC can be sold or donated to a third party. The names and qualifications of these contractors have not been finalized.

The contacts for the Site are:

The Weyerhaeuser Company:
Robert N. Martin
Weyerhaeuser Company
Mail Stop EC3 3C8
P.O. Box 9777
Federal Way, WA 98063-9777
(253) 924-2930

E.I du Pont de Nemours and Company:
Dr. Ronald J. Buchanan
E.I. duPont de Nemours Company, Inc.
Routes 141 & 48
Barley Mill Plaza, Building 27
Wilmington, DE 19805
(302) 992-5972

Site Contact:
Jeffrey D. King
2301 Center Drive
DuPont, WA 98327
(253) 964-9400
(253) 964-9405 – Fax
(425) 238-2212 Cellular

1.5 Site Characterization Information

The Site is located in DuPont, Washington, as shown in Drawing PTC-1. Site contamination is present in soils, debris and groundwater. Of the 213 constituents evaluated during Site characterization, 11 in soil (aldrin, arsenic, benzo(a)pyrene, dinitrotoluene (DNT), copper, lead, mercury, nitrobenzene, 2,4,6-trinitrotoluene (TNT), tetrachlorethene, and total petroleum hydrocarbon (TPH)) and one in groundwater (only DNT) were identified for remedy. The contamination is a result of manufacturing at, and decommissioning of the former explosives manufacturing facility. While the contamination is Site-wide, the highest concentrations occur in areas associated with former building foundations, in areas where manufacturing materials were disposed, and along the Narrow Gauge Railroad (NGRR) tracks. Drawing PTC-2 identifies the areas where interim source removal actions have occurred, and require no further action. Drawing PTC-3 presents the future land use areas for the Site.

Site soil contamination occurs as two distinct categories: lead and arsenic impacted surface soils, and isolated small occurrences of TPH, mercury, DNT and TNT, nitrobenzene, benzo(a)pyrene, and/or arsenic/lead impacted subsurface (i.e., depth greater than one foot below ground surface [BGS]) soils. The first group, referred to as Large Scale Remediation Units, is identified in Drawing PTC-4. The second group, referred to as Miscellaneous Small Remediation Units (MSUs) throughout this RDR, represents less than one percent of the total volume of contaminated soils, and is identified in Drawings PTC-5 through PTC-8. The total volume of contaminated soil is approximately 905,000 cubic yards (CY). The industrial area north of Sequalitchew Creek is in compliance with industrial cleanup standards with the exception of two MSUs.

NGRR MSUs are located within Sequalitchew Creek Canyon, an environmentally-sensitive area (see Drawing PTC-6). The NGRR track bed has elevated arsenic and lead concentrations. The estimated volume of contaminated soil along the Sequalitchew Creek NGRR is 7,800 CY. In addition, there are former NGRR track beds south of Sequalitchew Creek that will be

remediated. The total volume of contaminated soil associated with NGRR track beds is approximately 34,606 CY (these locations are also shown in Drawing PTC-6).

Contaminated debris is also categorized as a MSU (see Drawing PTC-8). It occurs as piping, brick and other construction materials painted with lead-based paint. The majority of this debris is buried making volume calculations uncertain. The volume of contaminated debris is estimated to be 33,400 CY.

Stockpiles of formerly-excavated material are also categorized as a MSU (see Drawing PTC-8). Stockpiles primarily consist of soil, although in some cases there is also demolition debris. The volume of stockpile contaminated debris is estimated to be 1,000 CY.

DNT is the only chemical that is of potential concern in groundwater. All other chemicals are either below levels of concern, were not detected, or are below background concentrations. Data from 34 rounds of sampling at 30 well locations indicate that low DNT concentrations have been consistently detected in five of 30 Site groundwater monitoring locations.

1.6 Schedule

Table 1-2 presents the project schedule as it is known at the time of this document. It is highly dependant upon regulatory issues and the final volume of soil requiring remediation.

1.7 Basis for Plan of Action

The cleanup action decision is based on the Remedial Investigation (RI), Risk Assessment (RA) and Feasibility Study (FS) completed by Weyerhaeuser and DuPont, and other relevant documents in the administrative record including the Cleanup Action Plan (CAP) issued by Ecology. These reports document current and former Site conditions and considerations as well as the selected remedial alternatives for the different remediation units (RU).

Actions undertaken at the Site will be done under a consent decree agreed to by the Companies and Ecology and filed with the Pierce County Superior Court on August 14, 2003. This consent decree requires that the Companies undertake the remedial actions identified in the CAP.

In accordance with MTCA, the purpose of this action is to protect human health and the environment. Human health and ecological evaluations have been performed for the Site. Ingestion of contaminated soil by future on-Site workers and ingestion of soil, plants, or soil biota by ecological receptors are the primary pathways of concern. By removing the contaminated soils from the Site or covering them with a cap/cover system, these pathways are eliminated. Institutional controls will prevent disruption to the cap/cover and thereby prevent exposure to contaminated soils.

1.8 General Process - Large Scale, Small Scale, and Groundwater Actions

Remediation of the Site will be completed by two different groups of methods:

- Those for large scale applications (lead and arsenic soils).
- Those for small scale applications (MSUs).

No active remediation other than long-term monitoring of groundwater will occur. These methods/decisions are discussed in the following sections.

1.8.1 General Process – Large Scale Applications

In general, this alternative involves the mass excavation of the top one-foot of soil in targeted areas of the Site, followed by the transfer of the excavated soil, and the consolidation of these soils in selected locations on-Site. Additional excavation will be required for soil greater than one foot below current ground surface if either confirmational or RI testing shows that they contain contaminant concentrations greater than RLs. If the confirmation results are greater than the GC placement area (PA) RLs, then the soil will be disposed of off-Site. Each of these consolidation locations (also called placement areas or PAs) will be capped and lie beneath the planned GC.

1.8.2 General Process – Small Scale Applications

Four remediation methods will be used for small-scale applications. They are:

- **Off-Site Disposal at a Landfill –** For this application, soils above Site-specific CLs or RLs for non-lead and non-arsenic contaminated soils will be excavated and transported for disposal at an off-Site disposal facility. Additional excavation will be required if either confirmational or RI testing shows that soil beyond the initially excavated area contains contaminant concentrations greater than CLs or RLs. These excavated soils will also be stockpiled, sampled for designation, and transported to an approved off-Site disposal facility.

- **Cap/Cover –** This alternative involves the installation of an engineered cap/cover 18 inches (?) in thickness over the contaminated soil. This cap will be placed on the GC and, if applicable, historical land use areas with in-situ contaminant concentrations less than the applicable RL but greater than the Site-specific commercial CL.

- **On-Site Deposition with Cap/Cover** – This alternative will involve the excavation of the existing soils containing contaminant concentrations above the CL but below the RL for a particular area, followed by the transfer, consolidation and capping of the excavated soils beneath the planned GC. If the confirmation sample results exceed the GC PA RLs, then the soil will be disposed of off-Site. This alternative will be used for lead and arsenic impacted soils only.

- **Capping** – A gravel and asphalt cap will be used along the Sequalitchew Creek NGRR to cap existing soils containing lead concentrations above the CL (118 mg/kg) but below the RL for a particular area. This asphalt and sub-base cap will act as the human health and ecological exposure barrier. No excavation of underlying soils will occur outside the Sequalitchew Creek NGRR except down slope of LR-68. This is an area where debris was dumped and is the only place where excavation will occur other than the actual track bed. Efforts will be made to minimize logging down slope during this excavation.

1.8.3 No Action

No action is appropriate in areas that are highly ecologically sensitive. These areas, the Sequalitchew Creek Canyon (excluding railroad track beds, and down slope of LR-68), and the open space setbacks surrounding Old Fort Lake, require special consideration to the impacts required to cleanup existing contamination (largely low concentrations) vs. impacts to the local

ecology if no action were taken. This net environmental benefit evaluation indicates that no action is a positive approach for these areas.

No action is also appropriate for small isolated occurrences of cadmium; an element that was not used or generated as part of the manufacturing activities or decommissioning of the buildings at the Site. No action is appropriate since the following conditions have been met:

- Cadmium has not been detected in groundwater;
- Cadmium concentrations are low (near the CL);
- The average/mean cadmium concentration is below the CL;
- The number of exceedances (less than five percent) of the cadmium CL are low in comparison to the number of detections and/or samples collected; and
- No known sources of cadmium are associated with activities at the Site.

1.8.4 General Process – Groundwater

DNT has been detected in groundwater below the Site at concentrations above drinking water standards but consistently below the MTCA Method B value. Because the majority of detected DNT concentrations are consistently low, are not affecting the regional aquifer, are not affecting surface water, and the aquifer is not used as a drinking water source, Natural Restoration has been selected as the remedy. Ecology agreed to the selection of this alternative by issuing a "No Active Remedial Action" letter for Site groundwater (Ecology 1996).

Groundwater monitoring will be required at the Site until DNT concentrations below drinking water standards are obtained in four consecutive sampling rounds. Monitoring at individual wells will discontinue based on approval from Ecology. The wells that will be monitored as part of the cleanup action are monitoring wells MW-3, MW-6, MW-19, and MW-22 and a new monitoring well installed down gradient of RI Area 25. Seep 1 will be sampled during annual groundwater monitoring events after the surface soil mass excavation remediation work has been completed. Ecology may also require groundwater monitoring at other locations.

1.8.5 Cleanup Units

The Site has been divided into seven different cleanup units based on several factors including: location, haul distances, excavation, placement logistics, staging, and GC construction considerations. These areas have been designated as Cleanup Units (CUs). Drawing SHEET 3 identifies each of the CUs. The intention is to complete the remediation of one CU before moving on to the next unit. The groundwater CU is considered separately from the seven soil CUs.

1.8.6 Facilities

The Site has no operating facilities. The only structures on Site are temporary office trailers and three well houses. The well houses will be removed as part of the remediation process. The maintenance buildings, clubhouse and other GC support structures will be completed concurrently with the GC construction but not as part of the remediation. The design of these

structures is outside the scope of this RDR, but the conceptual support facility plan is presented in drawing SHEET 2.

1.9 Permits and Approvals

MTCA includes an exemption from local government permits and approval processes for remedial actions performed under a consent decree, order, or agreed order (RCW 70.105D.090). State and local permits are not required for actions undertaken in association with MTCA, but Ecology must ensure that the substantive requirements of any permit that will normally be required for any activities occurring during the cleanup are met.

However, Ecology determined that the remedial action may result in probable significant adverse impacts to several elements of the environment and, therefore, determined that an Environmental Impact Statement (EIS) was required. An EIS for the cleanup action was completed in 2000 (Ecology, 2000). Sections 2.3.3 and 2.3.4 present more specific information concerning permit issues.

1.10 Health and Safety

All work conducted during this remedial action will comply with Washington State Industrial Safety and Health Administration (WISHA) regulations and requirements and policies of the Companies. A project specific Health and Safety Plan (HASP) has been developed and is part of the Hazards Communication Program.

Table 1-1 – Soil and Groundwater Cleanup, Screening, and Remediation Levels for each Land Use

Chemical	Commercial and Golf Course Cleanup and Remediation Levels (mg/kg)	Golf Course Cap Remediation Levels (mg/kg)	Historical and Open Space Cleanup and Remediation Levels (mg/kg)	Industrial Cleanup and Remediation Levels (mg/kg)	Groundwater Screening Concentration (ug/L)
Explosives					
2,4,6-Trinitrotoluene	1.75[1,2]	1.75[1,2]	1.75[1,2]	1.75[1,2]	NA
DNT	3.0[2,3]	3.0[2,3]	3.0[2,3]	3.0[2,3]	0.13
Petroleum Hydrocarbons					
TPH (418.1) (Bunker C)	7,600[2,4]	7,600[2,4]	7,600[2,4]	7,600[2,4]	NA
TPH (418.1) (heavy oil, non-Bunker C)	2,000[2,5]	2,000[2,5]	2,000[2,5]	2,000[2,5]	NA
Inorganics					
Arsenic	60[6,7]	530[6,7]	32[8]	90[7,9]	NA
Lead	118[10]	4,100[6,7]	118[10]	1,000[7,11]	NA
Mercury	24[2,6]	24[2,6]	24[2,6]	24[2,6]	NA
PAHs					
Benzo(a)Pyrene	12.6[7]	109[7]	0.71[7]	18[7,10]	NA
Pesticides/PCBs					
Aldrin	5[6,7]	47[6,7]	0.3[6,7]	7.7[9,7]	NA

Notes:
[1] Soil concentration protective of groundwater approved by Ecology.
[2] Value is a cleanup level.
[3] Soil concentration for DNT (2,4-DNT plus 2,6-DNT) protective of human health and groundwater approved by Ecology.
[4] Ecology agreement for TPH that originated as Bunker C fuel. One Area has TPH that did not originate from Bunker C fuel. Those TPH data were compared to the MTCA Table A value of 2,000 mg/kg for heavy oils.
[5] MTCA Method A value for heavy oil.
[6] Based on Site-specific exposure factors approved by Ecology.
[7] Value is a remediation level.
[8] Based on Site-specific background concentration approved by Ecology.
[9] Calculated using MTCA Method C parameters.
[10] Ecological screening concentration.
[11] MTCA default value used for Parcel 2.

Table 1-2 – Project Schedule

Tasks	Duration[1]	Start Date	End Date
Former DuPont Works Project Tasks:	1096d	1/21/03	4/3/07
"Public Review of RI/RA/FS/CAP, Document Revisions"	138d	1/21/03	7/31/03
Remedial Design	77d	4/16/03	7/31/03
Corrective Action – Site Cleanup	245d	8/1/03	7/8/04
Corrective Action Management & Technical	544d	8/1/03	8/31/05
Additional Sampling/Survey	33d	8/1/03	9/16/03
Archaeological and Cultural (2003)	297d	8/1/03	9/20/04
Survey Tasks (All)	654d	8/1/03	2/1/06
Reporting	222d	7/9/04	5/16/05
"Golf Course Construction Oversight, Survey"	265d	8/2/04	8/5/05
Golf Course Construction	265d	8/2/04	8/5/05
Groundwater Monitoring (2003 - EOP - assume four years)	772d	3/14/03	2/27/06
Post Construction Operations and Maintenance (O&M)	431d	8/8/05	4/2/07
Grow-In Management	156d	8/8/05	3/13/06
Extra O&M (one year)	275d	3/14/06	4/2/07
Golf Course Potentially Open for Play – Spring 2007			

Notes:

[1] Duration in Working Days

SECTION 2 – GENERAL DESIGN SPECIFICATIONS

2.1 Engineering Design

2.1.1 Engineering Design and Performance Criteria

Certain criteria were assumed and/or established during the design process. They fall into two categories; threshold criteria and performance criteria or goals. These criteria are discussed in the following sections.

2.1.1.1 Threshold Criteria

The threshold criterion chosen for the design was to provide remedial alternatives that protect human health and the environment (WAC 173-340-350). In particular, this means the proposed Remedial Action Objectives (RAO) for the Site are designed to:

- Achieve cleanup standards that will be protective of human health and the environment; and

- Comply with chemical-, location-, and action-specific ARARs.

2.1.1.2 Performance Criteria and Goals - Cap Construction

The engineered cap/cover will be designed and constructed so that it acts as a protective barrier against direct contact with humans or animals. At a minimum the cap/cover will include:

- Ecological Barrier: This will consist of a minimum of 12 inches of gravel. This decision is based upon the determination of Ecology's Ecological Risk Specialist that there is low likelihood that soil biota will travel through this depth of gravel to get to underlying soils. On-Site observations show that Steilacoom gravels do not support biological growth or activity. In lieu of gravels, a geo-textile that meets the same performance standards can be used. The specific liner to be used has not been selected. Field requirements will determine the need and specification of the liner.

- Human Health Barrier: This barrier will consist of the soil necessary to make the cap/cover a minimum of 18 inches thick. If gravel is used for an ecological barrier, the depth of soil cover will be no less than six inches. If geo-textile is used, the soil will be a minimum of 18 inches thick. This decision is based upon the maximum depth in which a GC worker is expected to excavate to make repairs to waterlines and irrigation piping.

- Vegetated Areas: Additional soil may be required above the ecological and human health cap/cover in areas where vegetation will be planted. At a minimum, this soil will be thick enough to accommodate the root ball of any planted vegetation.

2.1.2 Engineering Justification for Design and Operation Parameters

The engineering design criteria are intended to ensure that the threshold criteria and cap construction performance goals are met. The GC and associated PAs are designed to meet the following engineering criteria:

- Ensure adequate capacity for placement of all impacted Site soils for which the on-Site deposition and Cap/Cover alternative was selected (i.e., approximately 1,900,000 CY).
- Ensure that all potential runoff and irrigation water from the GC remain in the GC footprint.
- Locate lateral irrigation lines within the CAP in the placement areas.
- Where possible, avoid putting irrigation and drainage lines in PAs.
- Backfill irrigation trenches with clean material.
- Locate PAs to minimize haul distances.
- Create an ecological barrier consisting of at least 12 inches of gravel.
- Create a human health barrier consisting of at least six inches of soil.
- Ensure vegetated areas above placement areas will have at least four inches of clean soil below the root ball of shrubs.

2.1.3 Management and Disposal of Residual Contamination

Residual contamination will be controlled by installation of the cap/cover described in section 2.1.1.2. The installation of the cap/cover will meet the RAOs by preventing direct contact exposure with soil above the cleanup standards. This combination will act as an exposure barrier to both ecological receptors and humans.

2.2 Environmental Controls

This section identifies the actions to be taken to mitigate or avoid causing adverse environmental impacts related to: air quality, water quality, soil erosion, hazardous liquid and solid waste caused by construction activities. The remedial activities are to be performed in compliance with all applicable laws and regulations and in accordance with the requirements of the Companies and Ecology.

2.2.1 Control of Hazardous Materials Spills and Accidental Discharges

Liquid storage or treatment is not part of the remediation process and therefore, containment structures and leak detection devices are not of concern. An accidental spill response cleanup and notification plan has been developed and the procedures will be understood and used by all applicable employees. In general, all equipment will be re-fueled in the equipment storage and staging area.

2.2.2 Air Pollution Controls

The following steps will be taken to minimize wind blown dust:

1. Loads of materials, debris and waste materials will be covered if taken from the Site.
2. Water will be applied at all construction site areas and haul routes to control visible dust.

3. Vehicle speeds will not exceed posted limits.

The Site Air Monitoring Plan has been developed and is presented in Appendix A.

2.2.3 Water Pollution Controls

Runoff waters will be minimized and contained. No pollutants such as chemicals, fuels, lubricants, or other harmful wastes will be allowed into or alongside streams and impoundments or into channels leading thereto or onto the ground. Lubricating oils, hydraulic fluids, greases, and other such products will be handled carefully to minimize any potential for release. An accidental spill response cleanup and notification plan has been developed and the procedures will be understood and used by all applicable employees.

2.2.4 Erosion Control

Due to high infiltration rates and past experience, erosion will be a minor concern during the remediation of the Site. In areas where remediation activities could impact surface water bodies (i.e. within 200 feet of Sequalitchew Creek and Old Fort Lake), active erosion and sediment control procedures will be used. These methods and procedures include the minimum requirements for storm water control outlined in Ecology's storm water manual. Temporary erosion controls for the Sequalitchew Creek NGRR remediation will consist of continuous, silt fencing along the top of the slope on the creek side, and sediment ponds formed with hay bales at approximately 50-foot spacing along the wet areas in the track bed. Rip rap at outfalls of existing culvert pipes where scouring may occur, might also be required. Along the potentially impacted areas of Old Fort Lake, the primary method to be used will be silt fences and gravel filters. Other measures that may be used, based upon need, include sediment ponds and vegetated interceptor swales as warranted by water velocities and site slopes. The following will also be included, if necessary:

- Exposed slopes will be covered, and if necessary construction runoff (e.g., concrete wastes, equipment oils) will be collected.

- Sediment ponds will be used to retain/infiltrate runoff during construction, allowing for clean-out of ponds to finish grade elevation after Site stabilization.

- Accidental spill response cleanup and notification procedures will be available if needed.

- Wet Ponds will be used to provide dead storage for particulate/contaminant settling prior to discharge to infiltration systems constructed in conjunction with the GC.

2.2.5 Slope Stability Concerns

Slope stability is a potential concern associated with NGRR remediation work in Sequaltichew Creek Canyon. All of the work in the Sequalitchew Creek Canyon NGRR will occur on the railroad bed, and down slope of LR-68. This is the only place where excavation will occur, other than the actual track bed. Efforts will be made to minimize logging down slope during this excavation. In addition, erosion controls will be implemented to minimize the potential impact of erosion, which could decrease slope stability.

2.2.6 Re-contamination Controls

It will be unacceptable to track, spill or dump contaminated soils on remediated areas. Once the excavation takes place, an area will be assumed to be clean, and heavy equipment and trucks will stay out of the area if they are working in adjacent areas that have yet to be remediated. Confirmation sample results will then be collected to document that the resulting concentrations are below the Site-specific RLs. Once this step is complete, the goal is to avoid re-contaminating an area by moving equipment from contaminated areas into the areas that already have been remediated. The overall strategy for remediating each CU, individually, will also facilitate avoiding cross-contamination by staging the excavation in a manner that all on-going work is performed in areas that are yet to be excavated. Haul routes will be planned and constructed to eliminate, as best as possible, the use of remediated areas. If a remediated area must be used as a haul route an additional three inches of soil will be excavated and placed in a PA following its use, and the underlying soils retested for compliance.

2.2.7 Dust Suppression Controls

Visible dust will be suppressed with water. Water trucks will apply water to all work areas in which visible dust is present. During the dry summer months, pre-watering (i.e., watering before the normal work hours) to soak the work area prior to daily excavation work will be done. Air monitoring (see Appendix A for more details) will be conducted in the work area and on the personnel most likely to breath dust.

2.2.8 Decontamination of Equipment

Any equipment (e.g., excavators, back hoes, scrapers, etc.) that have been used in the remediation areas of the Site will be decontaminated before it is removed from the Site. Decontamination of equipment (i.e., removal of any soil particles from the equipment) will occur on the asphalted vehicle staging area using a pressure washer. The pad will periodically be cleaned and the residual soil will be placed in a PA. Trucks will proceed through the truck wash each time they leave the Site remediation areas. If needed, trucks will also be pressure washed.

2.2.9 Solid Waste

Solid waste (e.g., packaging for construction materials) will be disposed of off-Site at a permitted solid waste landfill. If it is likely that solid waste could be contaminated from Site activities, the waste will be tested to confirm that it can be disposed of as solid waste.

2.3 Facility Specific Characteristics

2.3.1 Operating Facilities

The Site has no operating facilities. The only structures on Site are temporary office trailers and three well houses. The maintenance buildings, clubhouse and other GC support structures will be completed concurrently with the GC construction, but not as part of the remediation. The design of these structures is outside the scope of this RDR.

2.3.2 Force Majure

The Site sits on a high bluff that rises 200 feet above Puget Sound and, thus, there is no potential for flooding. Earthquakes are a potential hazard and have been recorded within the immediate vicinity of the Site (Nisqually Earthquake, 1999). Temperatures as high as 100 degrees F have been recorded in the area. The Site's HASP will contain contingencies and special considerations to address these hazards.

2.3.3 Local Planning and Development Issues or SEPA Information not in RI/RA/FS

Local planning and development issues were addressed in the draft Environmental Impact Statement (EIS) for Site remediation completed on February 18, 2000. This EIS was finalized and approved after public review and comment on July 28, 2000 (Ecology, 2000). No State Environmental Policy Act (SEPA) requirements are outstanding. This EIS included an assessment of the "substantive requirements of local permits."

2.3.4 Permits and Approvals

Table 2-1 presents the ARARs that were evaluated to determine if any permits were required for Site cleanup. All permits will be addressed by ensuring that the substantial requirements are met.

2.3.5 Institutional Controls

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous chemicals at the Site. Such measures are required to assure both the continued protection of human health and the environment, and the integrity of the cleanup action whenever hazardous chemicals remain at the Site at concentrations that exceed the applicable CL (WAC 173-340-440(1) and (4)).

Institutional controls are a critical component of this proposed cleanup action. Residual contamination will remain on-Site, beneath the cap/cover. Both physical controls and legal and administrative mechanisms will be used to ensure that current and future citizens and wildlife do not come into contact with residual contamination, and that the integrity of the cap/cover containment system is maintained. Institutional controls will take the form of restrictive covenants placed with the deed. The restrictive covenants will limit Site use with the purpose of minimizing disturbance to the cap/cover system, and will prevent any unauthorized excavation on the property.

Deed restrictions to limit Site uses will be imposed for different land uses including commercial, recreational (GC), historical, industrial, and open space. An additional deed restriction will be required for the property inside the GC footprint, limiting this property to that sole use and placing restrictions on activities that could disturb the cap/cover. A deed restriction will also be placed upon the Site to restrict the use of groundwater to non-potable uses only, until such time as it meets CLs.

2.4 Construction Documentation

Construction documentation will include as-builts, a variety of survey steps, and other record-keeping procedures.

2.4.1 As-Builts

As-builts will be generated for each of the construction components in order to document the remedial action as well as to provide a record if such information is needed in the future. As-builts will also be generated for all aspects of the GC construction and the construction of the CAP.

2.4.2 Survey Steps

There are a number of different survey steps that will occur throughout the remedial action. In some cases surveys will be done using a survey crew and a control station. In other cases surveying will be done using a Global Positioning System (GPS). The following survey steps will occur as part of the remedial action:

1. A topographic survey of the areas of the Site that will undergo remedial action was performed using a GPS. This survey was done on 50-foot centers outside the GC and on 25-foot centers inside the GC. This information serves as the baseline elevation of the Site before remediation takes place.

2. Excavated areas will be surveyed after soil is removed. The pre-remediation grid nodes (see Step 1) will be used as the point of compliance to ensure that a minimum of 1 foot of soil has been removed. This survey will be performed using a GPS system.

3. PA elevations will be surveyed using a total station after all of the soil is placed in a PA. This survey will establish the elevation of the PA and will serve as a baseline to demonstrate that the eco-cap meets the performance standard at all grid nodes. If the performance standard is not met, additional cap material will be added in order to achieve the standard at all grid nodes. This survey will also determine the final boundaries of the contaminated material.

4. The elevations in PAs will be surveyed using a GPS after the eco-cap is in place. This survey will establish the elevation of the eco-cap and will serve as a baseline to demonstrate that the human health cap meets the performance standard at all of the grid nodes. If the performance standard is not met, additional cap material will be added in order to achieve the standard at all grid nodes.

5. The elevations in PAs will be surveyed using a GPS after the human health cap is in place. This survey will establish the elevation of the human health cap and will demonstrate that the human health cap meets the performance standard at all of the grid nodes. If the performance standard is not met, additional cap material will be added in order to achieve the standard at all grid nodes.

6. GC infrastructure, such as irrigation main lines and infiltration wells, will be documented via a survey using the GPS.

7. The rough finish grade of the GC will be recorded via a GPS survey.

8. Once the GC is completed, the footprint will be surveyed by a registered surveyor.

2.4.3 Documentation and Record Keeping

During construction, detailed records will be kept of all aspects of the work performed including construction techniques and materials used, items installed, and tests and measurements performed. This information will be documented and captured in the Site files by daily field inspections (including pictures as appropriate), GPS or total station surveys, as well as through the retention of information identifying manufacturers, manufacturing specifications, etc.

Table 2-1 – ARARs and Associated Permit Requirements

Applicable, Relevant, and Appropriate Requirements or Regulation (ARAR)	Permit Required?	Action
The Model Toxics Control Act (Chapter 173-340 WAC).	No	Overriding regulation
Washington State Shoreline Management Act (Chapter 90.58 RCW; Chapters 173-18, 173-22, and 173-27 WAC).	No	
Pierce County Shoreline Management Use Regulation (Title 20).	No	
Pierce County Development Regulations—Critical Areas (Title 18E).	No	
Washington State Hydraulic Projects Approval (Chapters 75.20.100 Through 75.20.160 RCW; Chapter 220-110 WAC).	No	
The Fish and Wildlife Coordination Act.	No	
Endangered Species Act (16 USC 1531 et seq.; 50 CFR Parts 17, 225, and 402).	No	
Native American Graves Protection and Repatriation Act (25 USC 3001 Through 3013; 43 CFR Part 10) and Washington's Indian Graves and Records Law (Chapter 27.44 RCW).	No	Regulations will apply if burial is discovered during remedial action.
Archaeological Resources Protection Act (16 USC 470aa et seq.; 43 CFR Part 7).	No	
Washington Dangerous Waste Regulations (Chapter 173-303 WAC).	No	
Solid Waste Management Act (Chapter 70.95 RCW; Chapter 173-304 and 173-351 WAC).	No	
Water Quality Standards for Surface Waters of the State of Washington (Chapters 90.48 and 90.54 RCW; Chapter 173-201A WAC).	No	
Federal, State, and Local Air Quality Protection Programs.	No	
Department of Transportation Hazardous Materials Regulations (40 CFR Parts 171 Through 180).	No	
Washington State Water Well Construction Act (Chapter 18.104 RCW; Chapter 173-160 WAC).	No	Requirement will be followed during well closure or installation
City of DuPont Regulations and Standards.	Yes	Ecology to ensure that substantial requirements of City Zoning codes are included in design criteria WAC 173-340-710 . See the EIS.

SECTION 3 – HEALTH AND SAFETY

3.1 Health and Safety Plan

The health and safety (H&S) of Site workers and local residents is the highest priority of this remediation. Dust generation represents the highest concern and will require monitoring so that the level of dust generated during soil handling does not exceed allowable levels in downwind areas. Dust control methods (i.e. applying water to work areas prior to and during excavation) will be implemented. The air quality impacts will be monitored to protect Site workers from unsafe working conditions. In addition, work done within 500 feet of the boundary of the Site will require perimeter dust monitoring and extensive dust prevention measures to prevent off-Site impacts. A detailed air monitoring plan is presented in Appendix A.

Personal protective equipment (PPE) appropriate for the type of potential exposure will be worn when appropriate, to reduce worker exposure. Workers will be trained in the H&S procedures appropriate for their respective tasks, and in the operation of equipment (trucks, backhoes, and other heavy equipment), and will comply with the appropriate safety regulations.

Some Site soil will be transported off-Site for disposal. This will add an additional risk of exposure for on-Site workers. This risk will be managed by wetting the soil during handling, paving the centralized storage area, and/or covering stockpiles when not adding or removing material. All truck loads will be covered prior to leaving the Site. Transportation of soil to the landfill will be managed by conforming to applicable Department of Transportation regulations.

The former DuPont Works Project (Project) has established a safety policy that, along with the project specific HASP, outlines the safety requirements of the Companies. This policy is intended to assure the long-term safety of workers and others and is summarized below. In addition to the procedures listed below, the Site has an active H&S program that meets WISHA requirements and regulations. The program includes a written HASP and daily safety meetings. The details of the specific H&S requirements for each remedial action are presented below.

3.1.1 General Policies

The following general H&S policies have been established for the project:

- **Safety is the single most important factor in the work place.** No work will be done on the Project except under the highest safety standards. At a minimum, this means following the rules and restrictions imposed by WISHA, the Occupational Safety and Health Administration (OSHA) and Weyerhaeuser and DuPont Company Safety Policies.

- **Safety is a condition of employment.** All contractors and employees must realize that the practice of unsafe work habits will result in immediate removal from the Site.

- **The project's goal is no incidents, accidents or loss of workdays.** All accidents are preventable. As such, all Project contractors and employees will look for and report unsafe working conditions and personnel to the Project Management Team (PMT) as soon as possible.

- **Safety procedures must apply to all contractors and workers**. All contractors working on the Site have the potential to impact each other. As such, everyone working on the Site must follow the same procedures and precautions.

- **All activities will follow Weyerhaeuser and DuPont Policies and Procedures.** This will include Weyerhaeuser's Incident Investigations Program.

- **All field or construction activities will be audited on a regular basis.** Annual audits will be conducted by an independent or company auditor. DuPont company representatives will perform periodic audits.

- **A safety briefing and debriefing will be held at the start and completion of each phase of the Project.** A safety kickoff meeting will be held at the start of each activity. A debriefing will be held at the completion of each activity.

- **A safety meeting will be held at the start of each work day**. The safety meeting held at the start of each work day will provide the opportunity to discuss the work to be completed, any specific safety issues associated with that work and any observations or safety issues noted during the previous workday.

- **Safety is the responsibility of each employee and contractor**. All workers on-Site must share in making the Site a safe work environment.

- **Each Contractor is responsible for the health and safety of its employees.** The PMT and Project Manager/Site Supervisor (PM/SS) will aid in the development of specific general guidelines but will not oversee the implementation of any H&S program other than their own.

- **Contractors are directly responsible for their subcontractors.** The PMT will assess the safety performance of all contractors, not only by their actions but by those of their subcontractors as well.

3.1.2 Responsibility

Safety is a line management responsibility. The responsibility of each member of the Site organization is presented below.

3.1.2.1 Project Direction

The PMT consists of the following:

- Bob Martin – Weyerhaeuser Company.

- Ron Buchanan – DuPont Company.

- Jeff King - West Shore Corporation, NW.

Responsibilities include overall coordination of Site activities. The PMT has overall responsibility for the safety of operations and the H&S of all personnel. The PMT is responsible

for ensuring that the project is periodically audited to verify compliance with the project H&S program.

3.1.2.2 Project Manager/Site Supervisor

The PM/SS is Jeff King of West Shore Corp. NW. The PM/SS is responsible for field-related activities under the PMT's direction and for maintaining field operations in accordance with project requirements. He is responsible for enforcing daily implementation of the HASP and resolving H&S issues. He will lead the daily Site briefings and make sure that the meetings are documented in the field logbook. He is also responsible for coordinating safety with subcontractors. In particular, the PM/SS will, if applicable:

- Ensure that personnel are aware of the provisions of the Site H&S Program and are instructed in work practices, safety, waste management, and emergency procedures.
- Establish and ensure maintenance of Site work zones.
- Ensure that appropriate monitoring of the work area and personal breathing zone is being conducted. Compliance of workers relative to pre-established personal protection levels will be assessed during these programs.
- Evaluate Site conditions (i.e., weather, chemical, physical) and recommend any modifications to existing levels of protection.
- Ensure that daily safety briefings are conducted.
- Initiate emergency response procedures.
- Exercise stop-work authority in the event of imminent danger to project personnel.
- Resolve any noncompliance issues.
- Conduct regular inspections to determine effectiveness of the HASP.
- Be responsible for maintaining copies of documents (e.g., training, medical, fit test).

3.1.2.3 Contractor Health and Safety Managers

The H&S manager of each contractor is a resource for development of the Site-specific HASP and will be consulted on all related H&S issues that arise in the field, including any changes in the scope of work. The H&S manager will make all final decisions regarding questions concerning each contractor's HASP. He also must:

- Ensure that contractors' personnel are aware of the provisions of their HASP and are instructed in work practices, safety, waste management, and emergency procedures.
- Work with the PM/SS to ensure that appropriate monitoring of the work area and personal breathing zone is being conducted. Compliance of workers relative to pre-established personal protection levels will be assessed during these programs.

- Evaluate Site conditions (i.e., weather, chemical, physical) and recommend any modifications to existing levels of protection.
- Ensure that daily safety briefings are conducted.
- Initiate emergency response procedures.
- Exercise stop-work authority in the event of imminent danger to project personnel.
- Resolve any noncompliance issues.
- Conduct regular inspections to determine the effectiveness of the HASP.
- Maintain copies of documents (e.g., training, medical, fit test).

3.1.2.4 Project Personnel

Project personnel involved in field activities are responsible for:

- Taking all reasonable precautions to prevent injury to themselves and to fellow employees.
- Conducting only those tasks that they believe they can do safely.
- Reporting all occurrences and/or unsafe conditions to the PM/SS.

3.1.3 Site Access

Site access restrictions will be in effect during times of active fieldwork. This is necessary for the safety of the contractors working on the Site, visitors and vendors, and to control Company liability.

3.1.3.1 Access Restrictions

The following Site access restrictions have been put in place and will continue until the end of the Project.

- General Site Access: No casual visitors will be allowed on Site except to visit the Site office. General Site access will be denied to all visitors except as permitted by Weyerhaeuser. If Site access is granted, trained Site personnel will escort the visitor in the Site personnel's vehicle. No personal vehicles will be allowed on Site except for delivery of supplies. No one except those listed below will be allowed in the work areas or outside of vehicles within areas judged, by Weyerhaeuser, DuPont or the PMT, to be unsafe. This policy is in place to protect each individual from potential exposure to contaminants and other safety hazards.
- Work Area: No one who does not have active involvement in the corrective action process will be allowed within the work area. Access to the work area will be limited to Ecology, employees of Weyerhaeuser and DuPont, and their contractors.

3.1.3.2 Site Access Procedures

The Site access procedures include the following:

- General Conditions – Site Visitors and Vendors: All persons entering the Site will be required to check in with the guard at the guard shack. Access outside of working hours will be highly restricted and granted on a case-by-case basis only.

- Additional Conditions – Delivery Personnel: Delivery personnel will remain at the guard gate parking area until Site personnel can escort them to and from their destination. Deliveries to the Site office will be allowed without escort.

- Additional Conditions – Site Visitors and Vendors: All visitors and vendors must remain at the guard shack parking area until they can be escorted to the Site office. At the Site office they may request access to the Site. If granted they will be required to sign the Site Access Agreement and complete a brief orientation on Site safety requirements and hazards. Trained Site personnel will escort all visitors. No personal vehicles will be allowed on Site except for delivery of supplies. No visitors will be allowed in the work areas or outside of vehicles within areas, judged by Weyerhaeuser and DuPont to be unsafe.

3.1.4 Health and Safety Training

All Site workers will have H&S training commensurate with their work. Table 3-1 presents the training that will be required based on specific activities.

3.1.5 Communication

Regular communication is vital due to the multiple tasks being completed during this program. As such, each individual will be supplied with a two-way radio. In addition, one individual from each company and each work crew on Site will be required to carry a cellular telephone.

All contractors will be required to contact Weyerhaeuser or the PM/SS immediately if a H&S incident occurs. The PM/SS will contact the PMT and conduct a full investigation of the incident, following procedures established by the Companies. A report of findings will be issued.

Immediate contact with Weyerhaeuser or the PM/SS will also be necessary in all the following cases:

- Media contact.

- Unauthorized visitors.

- Contact by non-Project individuals.

- Unexpected findings.

Other individuals will also be contacted as required by the Project's Communication Plan.

3.2 General Cleanliness

3.2.1 Clean, Orderly, and Hazard-Free Work Site

A clean, orderly, and hazard-free work Site will be maintained at all times. As a standard practice all Site Contractors will:

- Maintain the work Site in a neat, orderly and hazard-free manner in conformance with all federal, state and local rules, laws, codes, regulations and orders including all OSHA and WISHA requirements, until final acceptance of the work;
- Inspect facilities regularly for hazardous conditions caused by construction activities;
- Maintain the work Site in such a manner as to permit access by other contractors;
- Clean the work Site every workday during the term of their involvement;
- Maintain structures, grounds, and areas of the work Site, free from accumulations of waste materials caused by construction operations;
- Maintain equipment in a safe, working condition;
- Remove dirt, dust, litter, corrosion, solvents, paint, stains, and extraneous markings;
- Remove surplus materials, except those materials intended for maintenance;
- Remove tools and equipment used in the construction; and
- Repair damaged materials to the specified condition, or remove and replace.

3.2.2 Decontamination of Personnel

Personnel who enter contaminated areas of the Site will choose suitable PPE based on the activities that will be undertaken and the associated hazards. Personnel who come into contact with soil will proceed through the appropriate decontamination procedures to ensure that no soil is transported into the clean areas of the Site. Detailed PPE and decontamination procedures are identified in the Contractors' HASPs.

Table 3-1 – Required Health and Safety Training

Individual/Position	Minimum Training Required
Weyerhaeuser Management	24 hours HAZWOPER Training
DuPont Management	24 hours HAZWOPER Training
Weyerhaeuser Employees – Site office visitors only	Safety Orientation
DuPont Employees – Site office visitors only	Safety Orientation
Weyerhaeuser Employees – On-Site, non-work area visitors	24 hours HAZWOPER Training
DuPont Employees – On-Site, non-work area visitors	24 hours HAZWOPER Training
Weyerhaeuser Employees – Work area visitors	40 hour HAZWOPER Training Annual 8 hour Refreshers
DuPont Employees – Work area visitors	40 hour HAZWOPER Training Annual 8 hour Refreshers
Project Manager/Site Supervisor	40 hour HAZWOPER Training Annual 8 hour Refreshers Site Supervisor Training
Project Coordinator – Non-work area, occasional escort	24 hours HAZWOPER Training
Project Employees/Contractors who will work regularly within the Exclusion Zone or may require use of an respirator	40 hour HAZWOPER Training Annual 8 hour Refreshers
Contractors Supervisors – In Field	40 hour HAZWOPER Training Annual 8 hour Refreshers Site Supervisor Training
Site Visitors	Safety Orientation

SECTION 4 – TECHNICAL AND CONSTRUCTION SPECIFICATIONS: REMEDIAL ACTION

4.1 Pre-Construction Tasks

The following tasks will be done prior to the start of work.

1. **Safety Review**: Prior to the start of work the following will take place:
    a. The Site will be inspected by the PMT to determine if measures have been taken to create a safe work environment.
    b. The Contractor's HASP will be reviewed for completeness and compliance with Site, state and federal regulations.
    c. Appropriate H&S training (e.g., HAZWOPER) for all personnel will be established. Without written documentation, personnel will not be allowed to work at the Site.
    d. All individuals must read, understand, and sign their companies' Site-specific H&S plan.
2. **Contractor Mobilization**: Following the authorization to proceed by Ecology, the Remediation Contractor (Active) will mobilize all needed equipment and materials to the Site. The materials will be stockpiled on the asphalt pad formerly used for the soil screening plant so that it will be centrally located. The equipment will be delivered to the equipment containment area.
3. **Inspection of Equipment and Materials**: All equipment will be inspected to look for obvious unsafe conditions by the Contractor and the PMT. All materials will be inventoried against invoices by the PMT.
4. **Archeology Training**: All personnel involved in excavation activities will be trained per the Site Cultural Resources Protection Plan.
5. **Truck Routes**: Truck traffic routing for access/egress outside the Consent Decree Boundary will be presented on a map and discussed. Inside of fence traffic procedures and routes will be presented on a map and discussed.
6. **Communications Proceedures**: Inside the fence, communication procedures using radios will be discussed.
7. **Kickoff Meeting**: A kickoff meeting will be held to initiate construction activities.

4.2 Cultural and Archeological Monitoring

By agreement with the Nisqually Tribe and the Office of Archeology and Historic Preservation (OAHP), all initial excavation work done within zero to three feet of the current ground surface will be monitored by trained archeologists to determine if cultural or archeological artifacts are present. If any artifacts are found, they will be treated in the manner described in the Cultural Resource Protection Plan for the Site. In addition, the Nisqually Tribe will have the option of

having a representative working full-time with the excavation crews and a trained Archeologist to audit the remediation.

4.3 Large Scale Applications

4.3.1 Excavation Methods

Excavation of soils greater than the Site-specific RLs for lead and arsenic will occur by the following methods. All of the material excavated, by either method, will be placed in the PAs within the GC areas and will be rough-graded. Any soil that is found that has concentrations greater than the GC PA RLs will be disposed of off site.

- **Method One: Scraping –** The majority of the shallow soils (up to one foot) will be excavated using self-loading pan scrapers. This method will be used on those areas within Parcel 1 that are not historical or open-space RUs. Some selected excavation could occur within the GC areas. The general scraping process will be:

    - Phase I – The top six inches of soil will be removed, using a self-loading pan scraper.

    - Phase II – The remaining six inches of soil will be graded into a windrow and picked up by the pan scraper. GPS will be used to confirm that the final excavation depth is at least one foot. If verification sampling identifies an exceedence after the initial excavation, then an additional foot will be excavated.

- **Method Two: Selected Excavation** – In those areas not accessible to the pan scrapers (because of topography or other reasons), an excavator will be used to selectively excavate the soil in six to eight inch lifts until the desired depth of one foot is achieved. The excavated soil will be loaded into off-road haul trucks and transported to the PAs for placement. Direct pushing of soil into the PA is also possible within the areas adjacent to the PA and in the glacial kettles (depressions in the surface topography) on the Site. Any soil that is found to have concentrations greater than the GC PA RLs, will be disposed of off site. GPS will be used to confirm that the final excavation depth is at least one foot.

4.3.2 General Excavation Types/Process/Logistics

Three work crews will be used to complete different components of the remediation. The work crews and their functions are as follows:

- **Crew Type 1 (Crew 1) - Sloped Area Excavation**: In those areas requiring mass excavation that are not accessible to the pan scrapers (because of topography or other reasons); a bulldozer will be used to push the top one foot of soil to a collection point. An excavator and off road haul trucks will be used to collect the soil at the collection point and transport it to the PAs for placement. Direct pushing of soil into the PA is also possible within the areas adjacent to the PA and in the glacial kettles (depressions in the surface topograpgy) on the Site. GPS will be used to confirm that the final excavation depth is at least one foot.

    Crew 1 will consist of one D8 dozer and operator, an 892 excavator with operator, three 22-29 ton off-road haul trucks with operators, one laborer, an archeologist and a tribal

monitor. Approximately 179,000 CY of soil will be excavated by Crew 1 and the effort will take approximately 125 workdays.

- **Crew Type 2 (Crew 2) - Scraped Area Excavation:** In areas of the Site where the topography is less than seven % slope, the majority of the shallow soils to be excavated up to one foot deep, will be excavated using self-loading pan scrapers. This work will be done in two lifts of six inches in depth so that archeological monitoring can be effective. GPS will be used to confirm the initial depth, followed by a complete survey to confirm the depth excavated. This method will be used on those areas within Parcel 1 that are not historical or open space RUs.

  In those areas not accessible to the pan scrapers (because of topography or other reasons), an excavator will be used to selectively excavate the soil in six to eight inch lifts until the desired depth of one foot is achieved. The excavated soil will be loaded into off-road haul trucks and transported to the PAs for placement. Direct pushing of soil into the PA is also possible within the areas adjacent to the PA and in the glacial kettles (depressions in the surface topography) on the Site. Any soil that is found to have concentrations greater than the GC PA RLs, will be disposed of off site. GPS will be used to confirm that the final excavation depth is at least one foot.

  Crew 2 will consist of one 14H road grader and operator, three 23 CY scrapers with operators, one laborer, an archeologist and a tribal monitor. Approximately 537,000 CY of soil will be excavated by Crew 2; the effort will take approximately 175 workdays.

- **Crew Type 3 (Crew 3) Secondary Excavation**: Contaminated soils found as a result of verification sampling will be excavated by Crew 3 using the method described above (i.e., using an excavator).

  Crew 3 will consist of one 892 excavator with operator, two 22-29 ton off-road haul trucks with operators and one laborer. Secondary excavations will not require an archeologist or tribal monitor, since the initial soil excavation will have already taken place. Volumes of soil requiring excavation and placement will be determined following verification sampling. GPS will be used to confirm that the final excavation depth is at least one foot below the initial excavation.

4.3.3 Placement Area Construction

Placement areas will be constructed in lifts as the material is received from the scrapers or off-road trucks. A D8 bulldozer will be used to flatten the soils deposited by the scrapers/trucks. Once the volume of soil earmarked for the PA is received, a D6 bulldozer will be used to contour the top of the PA. The contour is approximately 18 inches below GC design grade (to allow for 18 inches of cap). A survey to confirm that the desired grade has been reached will be conducted with a GPS. Once the contouring is complete, the edges and final PA contours will be surveyed by a registered surveyor.

4.3.4 Engineered Cap Construction

The GC will be constructed on the project Site as an engineered cover (cap) for contaminated soil and, if necessary, contaminated debris. The cap will be roughly 80.9 acres of the 180-acre

GC footprint and will cover the placed soils. The cap will be a minimum of 18 inches thick and will consist of two layers--an EcoCap to protect ecological receptors, and a Human Health Cap which, with the EcoCap, will prevent humans from coming into contact with the contaminated soil. The methods that will be used to create the cap are presented in the following sections.

4.3.4.1 Gravel and Soil Cap

The cap will consist of a minimum of six inches of clean soil being placed over a minimum of 12 inches of gravel. In this process, the gravel will act as an exposure barrier to ecological receptors. The clean soil will act as an additional exposure barrier to individuals most likely to be exposed—the GC worker who, on occasion, may find it necessary to install drainage ditches or repair an irrigation pipe.

4.3.4.2 EcoCap Methodology and Specifications

Gravels will be excavated on-Site within ¼ mile of the placement area. Steilacoom Gravels excavated on-Site will be used. There will be no specifications for this material. Scrapers or trucks will be used to transport the gravel to the PA, where a bulldozer will be used to spread it. A GPS survey will be performed to ensure that a minimum of 12 inches of gravel has been placed over all placed material.

4.3.4.3 Human Health Cap Methodology and Specifications

Soils for the Human Health Cap will be excavated from on-Site stockpiles or on-Site burrow areas within ¼ mile of the PA. Off-road trucks will primarily be used to transport the majority of these soils to the PA for placement. A D8 bulldozer will be used to spread it to an initial depth of 18 inches over the contaminated soils with the EcoCap. Additional soils will be added until the depth of the Human Health and EcoCap is greater than 18 inches. Once this thickness has been reached, a GPS will be used to survey the final contours of the cap.

The soils to be used to construct the human health cap will vary in composition but will meet one standard; they will meet all Ecology standards for "clean material." The majority of these soils will be topsoil obtained from off-Site sources and oversize sands purchased off-Site. Site soils may also be used if off-Site soils are not available or financially viable, provided that they meet all Ecology standards for "clean material." No particle size or other geotechnical specifications will apply to these soils.

4.3.5 Compliance Monitoring for Large Scale Applications

For soil CLs and RLs based on exposure via direct contact, the point of compliance is established for soils throughout the Site. Compliance verification samples will be collected on 75-foot centers after the contaminated soil has been removed. A five point composite sample will be collected from zero to six inches BGS and the area represented by the sample (i.e., a box of which the sides are 37.5 feet north, east, west, and south from the compliance point) will be considered to be in compliance when the resulting concentrations are less than the land use-specific cleanup standards. If the resulting concentration is greater than the land use-specific cleanup standards, an additional one-foot of soil will be excavated in the box represented by the sample. No statistics will be used to evaluate compliance. The sampling approach including the sub-sample locations is presented in Figure 4-1.

4.4 Small Scale Applications

4.4.1 No Action – Sequalitchew Creek Canyon and Old Fort Lake

No action (remediation) will occur within Sequalitchew Creek Canyon (excluding the NGRR track bed, and lead related excavations down slope of LR-68) and open space setbacks surrounding Old Fort Lake. LR-68 is the only place where excavation will occur other than the actual track bed in Sequalitchew Creek Canyon. Efforts will be made to minimize logging down slope during this excavation. These are highly ecologically-sensitive areas, and require special consideration for the impacts associated with the cleanup of existing contamination (largely low concentrations) vs. impacts to the local ecology if no action was taken.

4.4.2 Cap

The railroad track bed within Sequalitchew Creek Canyon will be capped with an asphalt cap over existing soils, which contain contaminant concentrations above the open space RL, but below the RL established for this remedy.

4.4.3 Cap/Cover

This alternative involves the same cap/cover process described under *Large Scale Applications: Excavation, On Site Deposition and Cap/Cover,* above, but on a smaller scale. No excavation of underlying soils will occur. This action will apply to the Fort Nisqually Cemetery and locations within other historically-sensitive areas.

4.4.4 Disposal of Contaminated Soils

The majority of MSUs containing non-lead and non-arsenic contaminated soils will require disposal off Site. Soils and/or debris that will be disposed of off Site will be stockpiled prior to final disposition. The following five options will be used for these soils or debris based upon contaminant concentrations and economic feasibility. They are:

- Screening and off-Site Disposal – This is appropriate when the arsenic and lead concentrations are greater than that allowed to be placed under the GC cap and the volume warrants the capital cost of building a soil washing plant. Any soil that is found that has concentrations greater than the GC PA RLs will be disposed of off site. There must be more than 5,000 CY of soil before a screening plant is feasible. It is unlikely that this option will be used.

- Placement in Golf Course Placement Areas – This is appropriate for soils and debris with lead and arsenic concentrations above the Site-specific commercial RLs but below the RLs for the capped areas of the GC.

- General Fill – This is appropriate for those soils and debris that have concentrations below the Site-specific commercial RLs. These soils and debris can be placed anywhere in the future commercial area.

- Solid Waste – Brick and debris that are slightly contaminated but are not hazardous waste will be placed on-Site in PAs. Slightly contaminated solid waste is material where the Lead concentration is less than 118 mg/kg and the arsenic concentration is less than 20 mg/kg.

- Direct Disposal Off-Site – Soil and debris that either cannot be screened or the cost of screening is not economical will be disposed of off-Site.

4.4.4.1 Designation Sampling – Post Excavation Soil Stockpiles

Designation sampling is necessary prior to off-Site disposal. Stockpiles will be sampled as they are created or pre-excavation data will be used to develop an adequate representation of the stockpile. Stockpile testing is to determine the appropriate disposal option.

4.4.4.1.1 Reporting – Off-Site Disposal

Actions associated with off-Site disposal will be documented in the final closure report and will include descriptions of each stockpile, descriptions and results of the field processes, the analytical results of all sampling activities, and the designation of each stockpile or excavated volume. A discussion of methods for management, or disposal procedures for hauling off-Site of any treatment residual and other waste materials containing hazardous substances generated as a result of the cleanup action, will also be discussed. Transportation manifests will be organized in a report format and retained by Weyerhaeuser in a Site file for ten years.

4.4.5 General Excavation Process/Logistics

In areas that require precise excavating (e.g., MSUs), an excavator will be used to selectively excavate the soil in six to eight inch lifts until the desired depth is met. The excavated soil will be loaded into off-road haul trucks and transported to the PAs for placement or, in the case of some MSUs, moved to the stockpile retention area prior to transport to the hazardous waste landfill. This method will be used for the excavation of contaminated soils and debris in MSUs, and also for the areas known or suspected of having undiscovered historical and archeological artifacts.

This work will be done using one 892 excavator with operator, two 22-29 ton off-road haul trucks with operators and one laborer. An archeologist and tribal monitor will monitor the initial excavation, but will not be required in all MSU locations once the top three feet of soil is removed.

4.4.6 Compliance Monitoring for Small Scale Applications

For soil CLs and RLs based on exposure via direct contact, the point of compliance is established for soils throughout the Site. The point of compliance for MSUs and debris areas will be the initial excavation limits (no greater than 50 x 50 foot areas). One five-point composite confirmation sample (zero to six inches BGS) will be collected in every excavation. The area represented by the sample will be considered to be in compliance when the resulting concentrations are less than the Site and land use-specific cleanup standards. No MSU-wide statistics will be used to evaluate compliance.

Contaminated debris occurs in two forms: lead painted metal, wood or brick, and elemental lead. Debris that is painted will be tested to determine if the paint is lead-based. If lead-based paint is present, a representative composite sample of painted debris will be collected and sent to the Project Laboratory for analysis. The results will be reported in mg/kg.

Stockpiles or debris evaluated for lead or lead-based paint will be designated based on the analytical results as follows:

- If the lead concentration is less than 118 mg/kg, the material will be treated as fill.

- If the lead concentration is greater than 118 mg/kg, but less than 4,100 mg/kg, the material will be moved to a PA.

- If the lead concentration is greater than 4,100 mg/kg, the material will be cleaned and/or disposed of off-Site.

4.5 Design – Sequalitchew Creek Railroad Bed

The railroad track bed within Sequalitchew Creek Canyon will be capped with an impermeable cap over existing soils containing contaminant concentrations above the open space RL but below the RL established for this remedy. In essence, this will include asphalt and sub-base over the entire length of the railroad bed, from the toe of the uphill slope to the crest of the downhill slope. This RDR includes only that work within the Consent Decree Boundary; the remainder of the track bed will be remediated as an independent action. The process to complete this work is discussed below.

4.5.1 Preparation

The following preparation will be required to complete the remedy:

- Clearing and grubbing, which consists of removing tree branches and brush that obstruct or overhang the trail, cutting and removing wind fall trees that obstruct the trail, removing the danger trees adjacent to the trail, and disposal of all removed materials (e.g., woody debris) along the creek side slopes.

- All steel rails and wood ties will be removed and stockpiled in the previously-excavated section of the burning ground.

- The trail sub-grade will be prepared to a width of 12 to 25 feet by grading and leveling and stabilizing with on-Site sand and gravel.

- Uphill eroded and/or slide areas will be stabilized with Ecology Blocks if necessary. The block foundation will be excavated to one foot below the trail sub-grade. Blocks will be installed to a maximum of four blocks high and one block beyond the slide at each end and will be backfilled with quarry spalls. Perforated pipe will be installed behind the wall at the base if water is present.

- The trail will be widened where necessary, to a minimum of 12 feet using quarry spalls for the embankment material. The spalls will be keyed into the existing slope so that an approximate 1:1 or flatter fill slope can be constructed.

4.5.2 Drainage

Existing culverts will be replaced with 12 and 18 inch corrugated metal pipe (CMP) where required. Pipe outfalls will be located in the same place as the existing pipe to minimize erosion at the outfall. Pre-cast concrete inlet boxes will be located at the inlet end of the culvert in the ditch line. The inlet boxes will facilitate collection of the water in the drainage ditches and cleaning the culvert pipes.

For portions of the trail where water seeping from the cut slope on the uphill side occurs, a shallow trench excavated approximately 18 inches below the trail sub-grade will be installed. Fabric will be placed in the bottom of the excavation which will be filled with crushed quarry rock with no fine material. The rock will be covered with Filter Fabric so that the fine material from future hillside erosion will not clog the voids. The excess excavated material will be placed along the slope on the downhill side of the trail.

4.5.2.1 CAP/Cover

An asphalt cap will be installed over the trail in the following manner:

- Crushed Surfacing Base or Top Course will be placed three inches thick over the width of the trail that will be paved with asphalt. The material will be graded and compacted so that the surface water run-off from the surface asphalt pavement will not concentrate and cause future bank erosion.

- Asphalt Pavement Class B will be placed a minimum of two inches thick on the prepared trail surface. The rock ditches will not be paved over.

- The base course will be a minimum of six inches of two-inch minus base course material.

4.5.2.2 Quality Control Testing

Periodic measurements will be done on the thickness of the laid asphalt and sub-base to ensure compliance with specifications.

4.5.2.3 Operations and Maintenance

The goal of the remediation in Sequalitchew Creek Canyon is to return the area to as "natural a condition" as possible while completing a remedy that is protective to humans and the local ecology. As such, little or no maintenance will be done on the finished surface of the cap. The drainage systems will be maintained until Sequalitchew Creek Canyon is transferred to Quadrant.

4.5.2.4 Ecological Impacts

Implementing environmental controls as well as limiting excavation work to the NGRR track bed will minimize ecological impacts to Sequalitchew Creek Canyon. Environmental controls will include silt fences and erosion controls.

4.5.2.5 Compliance Testing

Sequalitchew Creek Canyon NGRR and LR-68 post-excavation composite samples will be collected from zero to six inches BGS, and the area represented by the sample will be considered to be in compliance when the resulting concentrations are less than the Site- and land use-specific cleanup standards. No RU-wide statistics will be used to evaluate compliance. Five-point composite confirmation samples will be collected every 75 feet along the NGRR and will occur within the excavation only. This will result in 75 x 25 foot boxes with one five-point composite in each box. The five point composite sample will be comprised of one sub-sample in the middle of the tracks and the other four sub-samples collected on both sides of the tracks, no more than ten feet from the track centerline. LR-68 post-excavation composite samples will be collected from zero to six inches BGS, and the area represented by the sample will be 2,500 ft^2 or less.

4.6 Groundwater

4.6.1 Compliance Testing

Groundwater monitoring for DNT will continue on an annual basis. Once DNT concentrations in a well are below drinking standards for four consecutive sampling rounds, the well is considered to be clean. It is at Ecology's discretion for a well to no longer be monitored. Wells that are no longer sampled will be left open and abandoned on a case-by-case basis after approval from Ecology.

Groundwater samples will be collected from four Site monitoring wells: MW-3, MW-6, MW-19, MW-22 and a new monitoring well (MW-28) that will be installed down gradient of RI Area 25. A duplicate sample will be collected from one well. Groundwater monitoring and laboratory analysis will follow the procedures outlined in the Management Plan for Remedial Investigation/Feasibility Study (Hart Crowser, 1992). Any adjustments or changes to this plan must be approved by Ecology prior to implementation. Reports will be submitted using the same format as in the past.

All samples will be analyzed for nitroamine and nitroaromatic explosives (NAX) by Severn Trent Laboratory Services (STL). The analyses will be performed by STL using EPA Method 8095. Only DNT will be reported. A quality assurance/quality control (QA/QC) review of the data will be performed by Ethix Corporation. Reports will be submitted using the same format as in the past.

4.6.2 Monitoring Well Construction

The Washington State Water Well Construction Act (Chapter 18.104 RCW; Chapter 173-160 WAC) governs the minimum standards for construction, maintenance, and abandonment of wells, including both water supply wells and resource protection wells (e.g., monitoring wells). These regulations will apply to the closure of Site monitoring wells and three production wells (W-1, W-2 and W-3) that may be closed (abandoned) as part of this remedial action and the installation of MW 28, which will be installed down gradient of RI Area 25. This well will be installed under the requirements listed in WAC 173-160-420. No soil samples will be collected during installation.

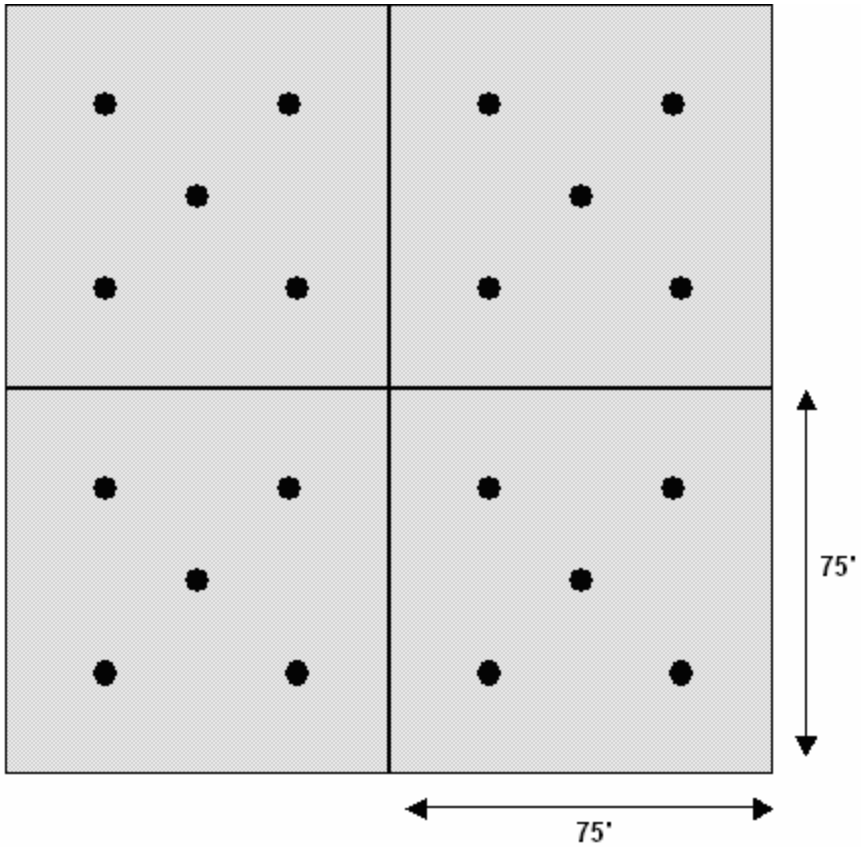
4.7 Remediation Costs

The Table 4-1 presents the estimated remediation costs.

Table 4-1 – Estimated Remediation Costs

Task	Cost
TOTAL REMEDIATION COSTS	$ 10,995,427
CORRECTIVE ACTION – EXPENSED	$ 10,954,595
ARCHAEOLOGICAL & CULTURAL	$ 727,295
NEGOTIATIONS	$ 40,166
SITE MAINTENANCE AND OVERSIGHT COSTS	$ 50,400
FACILITIES	$ 63,573
SECURITY	$ 55,500
PROJECT MANAGEMENT (Routine)	$ 149,673
REPORTING	$ 52,004
MISC. TECHNICAL	$ 69,438
PUBLIC RELATIONS PROGRAM	$ 25,192
MEETINGS	$ 71,620
CORRECTIVE ACTION MGT. & TECHNICAL	$ 1,475,704
ECOLOGY OVERSIGHT & PROJECT MANAGEMENT	$ 110,400
CLEARING & GRUBBING OF SITE	$ 16,200
MISC. PREP. TASKS	$ 230,587
SAFETY	$ 367,089
DISPOSAL OF WASTE OFF-SITE	$ 1,324,616
CONTRACTOR MOBILIZATION	$ 23,701
SOIL SAMPLING & QA/QC	$ 203,273
OPEN SPACE	$ 388,163
GOLF COURSE AREA REMEDIATION	$ 431,175
MISC. SMALL UNITS/HOT SPOT REMOVAL	$ 48,211
COMMERCIAL/PLACEMENT AREA REMEDIATION	$ 2,397,137
CAP CONSTRUCTION	$ 1,674,037
MISC. CAP RELATED ITEMS	$ 43,200
DUST SUPPRESSION	$ 412,258
EROSION CONTROL	$ 74,142
MONITORING WELL INSTALLATION	$ 105,000
SURVEY TASKS - REMEDIATION RELATED	$ 324,843
GROUNDWATER SAMPLING EXPENSES (Assume 10 years)	$ 40,832

Figure 4-1 – Confirmation Sampling Approach For Large Scale Applications



Note: One sample will be collected from each 75' x 75' box. This sample will be a five point composite. The black dots identify the general location of the sub-samples of the composite sample.

SECTION 5 – TECHNICAL AND CONSTRUCTION SPECIFICATIONS: GOLF COURSE CONSTRUCTION

5.1 Course Construction

Golf Course construction will begin once CUs are satisfactorily remediated and rough grading is completed. It is the design intent that all earth work will balance, meaning the PA capacity and final GC grades can and will be adjusted as necessary. If additional fill is required for grading the GC, it will be obtained from areas adjacent to the work area, but outside of the GC footprint.

5.1.1 References

The latest issue of the publication or standard is listed below for material or operations:

Standard	Description
ASTM D 422	Particle Size Analysis of Soils
ASTM D 698	Laboratory Compaction Characteristics of Soil Using Standard Effort
ASTM D 1556	Density of Soil in place by the Sand Cone Method
ASTM D 2216	Laboratory Determination of Water (Moisture) Content of
	Soil and Rock
ASTM D 2487	Classification of Soils for Engineering Purposes
ASTM D 2922	Density of Soil and Soil-Aggregate in Place by Nuclear Methods
ASTM D 2937	Density of Soil in Place by the Drive-Cylinder Method

5.1.2 Compaction Requirements

Compaction will be accomplished by using approved equipment suited for the type of soil to be compacted. Unless otherwise specified, material will be moistened or aerated as necessary to provide the moisture content that will readily facilitate obtaining the specified compaction with the equipment used. Using the appropriate laboratory maximum dry density test procedures as defined above, each layer of fill and backfill will be compacted to not less than the percentage of maximum density specified below:

Area	Requirement
Common Fill for Fairways and Roughs	85% per ASTM D 698
Select Fill for Tees, Greens, Cart Paths, Lake	95% per ASTM D 698
Foundations and Miscellaneous Structures	95% per ASTM D 698
Common Fill for Embankments	90% per ASTM D 698
Building Sites	95% per ASTM D 698
Parking Area, Road Subgrade	95% per ASTM D 698

5.1.3 Additional Fill

Where fill material is obtained from borrow areas outside of the GC footprint, such areas will be graded to provide complete surface drainage and to blend with the surrounding contours. If surplus excavated material is generated, such material will be placed in areas outside of the GC footprint.

5.1.4 Moisture Control

The water content of the common fill and select fill, will be distributed uniformly throughout each layer of the material prior to compaction. The water content will be within the specified range of the optimum moisture content determined by American Society for Testing and Materials (ASTM) D 698 standard proctor moisture-density test. In general, the contractor will be required to maintain the average placement water content at the standard optimum condition which will be determined by compaction tests. This optimum water content is defined as "that water content which will result in a maximum dry unit weight of the soil when subjected to the compaction tests." Water will be used for the suppression of dust during excavation, including areas being worked and associated haul roads.

5.1.5 Rocks or Boulders

If rocks or boulders (over 12 inches) are encountered during excavation, the material will be collected and stockpiled for future placement.

5.1.6 Architectural Adaptation for Golf Course Construction

The GC designer retains certain architectural freedoms in areas outside of the PAs with respect to minor adjustments to grades, green and tee locations and elevations, quantity and shape of bunkers, etc. This is a normal evolution of the design and creation of a quality GC.

5.1.7 Quality Control Testing

Field density testing for all sub-grade areas and embankments may be performed by nuclear methods, ASTM D 2922 (AASHTO T-238), in addition to the sand cone or rubber balloon methods. The contractor must supply his own testing for compaction control to assure compliance with the specifications. The contractor QC records are subject to owner review.

5.2 Topsoil

Sand topfill material has been imported and is strategically stockpiled on site for future topsoiling of the irrigated turf grass portions of the GC. Proper management of this resource is essential.

5.2.1 Preparation

All areas to be topsoiled will be reviewed and approved prior to application. Any areas that have become overly compacted during remediation or construction will be cultivated to a minimum depth of four inches and shaped to the originally approved contour. All stones, rocks, debris, etc., larger than two inches in diameter in the top four inches of sub-grade will be removed prior to any topsoil application.

5.2.2 Drainage and Irrigation

Prior to the application of the topsoil, the contractor will have completed drainage and irrigation installation and the sub-grade will be restored to the original sub-grade contour of the GC.

5.2.3 Grade Stakes

Grade stakes will be installed at a minimum of 100 feet on center for controlling the required minimum uniform depth of topsoil throughout the GC.

5.3 Rough Shaping

Rough shaping includes the formation of all GC contours and features prior to the application of topsoil. All rough shaping to be performed during and after excavation will be in accordance with GC grading plans.

5.3.1 Equipment

Bulldozers (JD 850 or D6 Caterpillar, six-way blade), shapers, excavators and backhoes will be used for rough shaping operations. A Class 'A' shaper will be used for the formation of all tees, greens, bunkers and other GC features.

5.3.2 Fairway and Rough

Rough shaping of fairways and roughs will provide positive surface drainage to designated collection, conveyance and outlet areas. Continuous verification will be required at all times during the various grading operations (rough and finish shaping), drainage and irrigation installation, as well as topsoil placement and soil preparation phases of the project to ensure the appropriate gradients.

All stones, rocks and/or debris two inches in diameter and larger will be removed from areas that will not receive topsoil. This removal will be accomplished with stone pickers, rakes or any other devices that do not disturb the integrity of the approved sub-grade.

5.3.3 Tees

Tees will be constructed as follows:

1. Tees will be built to follow contour plans, ensuring that tee forms blend smoothly into the natural, surrounding terrain. All filled areas will be compacted to 95% as specified so that no future settling will occur. Fill soil will be compacted with adequate moisture added throughout the grading process. The last three feet will be placed in lifts not exceeding six inches with necessary compacting and moisture to achieve the mandatory compaction of 95%.

2. Tee platforms will be constructed a minimum of three feet wider than the area indicated on the plan, continuously around the perimeter.

3. Sub-grade gradient of tees will be a minimum of 2% and flow toward perforated drain lines per plans and details.

4. As-built drawings for tee outlines, sub-grades elevations, and perforated drainlines will be submitted for review and approval prior to application of tee mix. Tee mix is composed of the approved sand for green construction without organic material. The finish grade of the tee surface is to be completely flat. The minimum depth of the imported sand will be four inches.

5.3.4 Greens

Greens will be constructed as follows:

1. The putting surface and green surroundings will be shaped as a finished contour prior to the excavation of the green core.

2. The greens will be constructed in the presence and under the immediate direction of the golf course designer. Recording and verifying of all spot elevations and contours will be done. As-built drawings of the green at a scale of 1" = 30' with spot elevations on a 15-foot grid will be provided.

3. The excess material from the green core will either be placed outside of the GC footprint or be displaced in the areas surrounding the green as directed.

4. The green core is to be built eight inches below the surrounding sub-grade to allow for the importation of specified topsoil. This allows for a four-inch layer of specified drain gravel and a 12 inch layer of greens mix. Should a 'choker' layer be required, the depth of the core will be increased by two inches.

5. Once the sub-grade has been approved, the various layers of the putting green will be placed at uniform depths to identically parallel the originally approved sub-grade contour. Finish grade tolerances will be plus or minus one inch.

5.3.5 Sand Bunkers

Sand bunkers will be constructed as follows:

1. Sand Bunkers will follow the design in size, shape and depth and are to be constructed under the immediate direction of the golf course designer. It will be necessary to construct the bunker utilizing bulldozers and excavators as well as handwork to achieve the desired contour and edge conditions.

2. After bunker sub-grade has been approved, an exit drain line will be installed in the low point. Exit drain lines beyond the perimeter of the bunkers will be non-perforated pipe with trenches backfilled and compacted with select site soils as specified for carry-off pipe for fairways and roughs.

3. The sub-grade form of the bunker floor will be slightly concave and the perimeter edges will be parabolic curves of varying heights.

5.4 Features Construction

5.4.1 Tees

1. Fine Grading and Topsoil – Prior to the application of tee mix and surrounding topsoil, the Contractor will verify sub-grade for positive surface drainage meeting minimum grade requirements. Care will be exercised that no water will be trapped around the tee after topsoil has been applied. Tee banks will be of constant gradient with no grade breaks between surrounding slopes and tee mix.

2. The same sand material as specified for the greens (without the organic material) will be spread on the tees at a minimum depth of four inches when water has settled, compacted and floated.

3. Tee tops to be level. "String lining" of all tee surfaces will be used for verification.

5.4.2 Greens

5.4.2.1 Laboratory Tests

Drain gravel, coarse sand, and green's sand have been submitted to an approved testing facility for analysis and recommendations for use in the construction of United States Golf Association (USGA) putting greens.

5.4.2.2 Standards

The method of construction will conform to a modified version of the ***"USGA Recommendations for a Method of Putting Green Construction,"*** 1993 Revision, due to specific regional site adaptations.

It will be noted that layers of materials above the sub-grade consist of a uniform layer, four inches in depth, of specified drain gravel, a uniform layer two inches in depth of specified coarse sand (optional depending upon approved laboratory recommendations), and a uniform layer 12 inches in depth of specified greens mix.

1. Plastic Interface - To prevent capillary water movement between the greens mix and surrounding site soils, a plastic liner will be installed to provide a vertical interface with the putting surface. The plastic will be 0.030 mm x 450 mm H.D. polyethylene liner. The plastic will be placed vertically around the cored sub-grade so that the top coincides with the height of the finished grade and will be staked at ten-foot intervals, per manufacturer's recommendations, to ensure that it remains in proper position during filling operation.

2. Copper Wire - Attach a continuous strand of #14 coated copper wires to stakes around the perimeter of the green, as called for on the construction details.

3. Gravel Base – After completion of drainage installation the entire sub-grade will be covered with a layer of clean, washed gravel or crushed stone to a uniform thickness of four inches.

4. Very Coarse Sand Layer- If a discrepancy of more than seven diameters (as determined by the approved USGA-recommended testing lab) exists between the sand top mix and gravel base the following applies: a two inch layer of coarse sand is then to be provided and spread over the entire gravel base prior to application of greens mix.

5. Greens Mixture - The greens mix will be in accordance with recommendations made by a testing laboratory. The analysis of the test of the mixture is to be submitted to the designer for written approval prior to delivery to project site. The USGA Recommendations for the particle sizes of sand for greens mix is as follows: *Total sand particles should exceed 92% of the mix.*

Classification	Sieve Size	Percent Passing
Gravel	2-3.4 mm	<3%
Sand (Very Coarse)	1-2 mm	<10%
Sand (Coarse)	0.5-1 mm	60% minimum
Sand (Medium)	0.25-0.5 mm	combined
Sand (Fine)	0.15-0.25 mm	<20%
Sand (Very Fine)	0.05-0.15 mm	<5%
Silt	.002-.05 mm	<5%
Clay	<.002 mm	<3%

6. The initial rate for greens mix will be between 12 inches and 24 inches per hour of saturated hydraulic conductivity. The final greens mix recommendations will be based upon the initial conductivity rate of the sand and the recommended proportion of organic material required to meet the combined initial rate as referenced above.

7. The greens mixture will be composed of the approved sand and organic material. The organic material will be derived from Canadian Sphagnum peat moss. All mixing and blending of materials (sand and organic) will occur prior to delivery to individual greens. After mixing, samples will be sent to a testing lab to ensure that the mix meets the recommendations of the testing facility. This will be performed at a minimum of every 500 tons of mix production.

8. Physical properties and performance characteristics approved by the testing laboratory must be met with the completed mix. Variations of 10% will be allowed with the percolation rate.

9. Greens mix will be transported to the greens in dual axle truck vehicles and deposited on the inside perimeter and spread by bulldozer. Special care will be taken in cleaning and removing any soil from the tracks of the equipment prior to operations within the green. Equipment will only be operated over areas with the full depth (12") of the greens mix in place. The depth of the sand will continually be probed to achieve the identical sub-grade and maintain the integrity of the green surface. The green will then be completely water-settled and compacted.

10. Under no circumstances will loaded rubber-tired vehicles or dump trucks be allowed on the gravel base prior to or during the spreading of the top mix. Existing perimeter drain lines and irrigation lines (if installed) must be clearly marked so that they are not crushed by sand trucks or other equipment.

11. Grade stakes spaced at frequent intervals on the green site will be helpful in indicating the finished depth of the soil mixture. Finishing the contour of the green will require the use of a level or transit, as well as sand pro and hand raking.

5.4.3 Bunkers

1. Final shaping of the bottoms (concave) and forming of the interior/exterior edges (parabolic curves of varying heights) will be accomplished utilizing excavators and/or backhoe and hand labor.

2. All excess excavated material from final shaping and trench excavations will be removed from the bunker and disposed of as directed.

3. After approval of the bunker's base contour, perforated drainage will be installed with specified gravel backfill. It will be the contractor's responsibility to protect the drainage from any subsequent contamination until such time that the sand is placed. This will be accomplished by installing filter fabric securely anchored at 20 inches on center along each side of the drainline.

4. Bunker sand will meet the following particle size. Total sand particles need to total a minimum of 97%. The sand will be sub-angular, medium sphericity in particle shape and tan in color.

Classification	Sieve Size	Percent Passing
Gravel	2-3.4 mm	0%
Sand (Very Coarse)	1-2 mm	<2%
Sand (Coarse)	0.5-1 mm	75% minimum
Sand (Medium)	0.25-0.5 mm	Combined
Sand (Fine)	0.15-0.25 mm	<20%
Sand (Very Fine)	0.05-0.15 mm	< 3%
Silt	.002-.05 mm	<2%
Clay	<.002 mm	<1%

5. No sand installation will be performed prior to approval. The material will be spread evenly throughout the bunker at a settled depth of not less than four inches and not more than six inches.

5.5 Cast-In-Place Concrete Cart Paths

5.5.1 Alignment

Cart path alignment as indicated on the plans is general. The actual location of all cart paths will be as directed in the field.

5.5.2 Surface Water

In many instances the cart path is being utilized as a diversion for surface water runoff. The cart paths will be positioned and constructed in a manner as to prevent water inundation or ponding. Surface runoff that is being diverted will be collected in drain inlets along the outboard or non-turf grass edge of the cart path. The minimum cross gradient for paths will be 2% and the maximum cross gradient will be 4%.

5.5.3 Sub-Grade Composition

Sub-grade composition will be as follows:

1. Sub-grade beneath cart paths will be compacted to 95% maximum density (ASTM D-698).

2. Construction of the cart path includes sub-grade compaction, six inches of gravel base course or underlayment and four inches of cast-in-place, reinforced, concrete.

3. Compaction testing of both the sub-grade and gravel base course will occur. Results of these tests need to be reviewed at each stage of construction, and prior to advancing to the next stage.

4. Minimum width of the gravel base course will be 8.8 feet, with a uniform extension of four inches on each side of the path beyond the cast-in-place concrete.

5.5.4 Finish Grade and Width

The finish grade and width will be as follows:

1. Finish grade adjacent to the cart path for both turf and non-turf edges will be minus one inch.

2. Cart paths will be a uniform width of eight feet. All cart path turnarounds will have a minimum diameter of 28 feet to the outboard edge of the path.

5.5.5 Forms

Forms will consist of the following:

1. Form lumber or steel (including board and batten forms) will be straight, uniform width and thickness, free from knots, offsets, holes, dents, and other surface defects. Lumber must be sufficiently sealed to prevent absorption of water, form release agent, etc.

2. Stake and secure wood forms in place with steel bars at intervals to prevent form deflection during placement of cast-in-place concrete.

3. Do not remove or disturb forms until the concrete has attained sufficient strength to safely support all dead and live loads. Use care in removal to avoid surface gouging, corner or edge breakage, and other damage to the concrete.

5.5.6 Cast-in-Place Specifications

The cast-in-place specifications are as follows:

1. Cast-in-place concrete to be reinforced with welded wire fabric that has (six inches x six inches) electrically welded cold-drawn wire (70,000 PSI yield point) or fibermesh synthetic fiber material. Wire reinforcement will be installed in longest practical lengths, and adjoining pieces will be lapped in 2 meshes plus end extension of wires, but not less than 12 inches. Welded wire mesh will be placed on acceptable chair blocks at 1 and 1/2 to 2 inches above the gravel base. Fibermesh will be incorporated in the mix at the rate of 1.5 pounds per CY prior to leaving the plant. The fiber quantity and manufacturer will be noted on each batch ticket provided by the concrete provider.

2. Cast-in-place concrete curbs (four inches high by four inches wide) will be formed and poured in an integral manner with the adjacent flat work. In situations where welded wire mesh is utilized for reinforcement and, when a curb is present, it will be evenly bent at 90 degree angle so that it is evenly imbedded in the curb after concrete installation. Cast-in-Place concrete will conform to ASTM C 94, using 3/4 inch maximum-size aggregate, and having a minimum compressive strength of 3000 PSI at 28 days.

5.5.7 Hot Weather Concreting

Hot weather concreting will conform to American Concrete Institute #305, "Recommended Practice for Hot Weather Concreting," in addition to the following specifications:

1. Precautions will be taken when ambient air temperature is 90^{o} F or above. These measures may include installation of wind breaks, shading, fog spraying, sprinkling, or wet covering of a light color.

2. Temperature of concrete when placed will not exceed 85 degrees.

3. Forms and reinforcing will be cooled to a maximum of 90 degrees by spraying with water prior to placement of concrete.

4. Prevent plastic shrinkage cracking due to rapid evaporation of moisture.

5. Set-retarding and water-reducing admixtures may be used when ambient air temperature is 90 degrees or above, to offset accelerating effects of high temperature.

5.5.8 Joints

5.5.8.1 Expansion Joints

Install mastic or felt material perpendicular to the length and curvature of the path at maximum of 40 feet on center.

5.5.8.2 Contraction Joints

Install contraction joints at ten feet on center perpendicular to the length and curvature of the path. Contraction joints can be either 'tooled' or 'saw-cut' at seven days.

5.5.9 Execution

The following procedures will be followed prior to pouring of concrete:

1. Form work will be inspected.

2. Sub-grade compaction tests will be performed.

3. Inspect re-enforcement for proper position and securement.

4. Verify expansion joint material and that other embedded dowels are in the proper position.

5. Moisten sub-grade prior to placement, but do not cause water to pond or muddy, or soft spots to appear.

5.5.10 Finish

The concrete will be finished as follows:

1. Immediately after pouring concrete, it will be spread, straight edged and bull floated. These operations must be performed before bleeding water has an opportunity to collect on the surface.

2. To obtain good surfaces and avoid cold joints, the size of the finishing crews will be planned with due regard for the effects of concrete temperature and atmospheric conditions on the rate of hardening of the concrete.

3. Finish to coarse broom transverse-scored texture (right angles to direction of traffic) by drawing a broom across the surface. This operation will follow immediately after floating operations.

4. Test surfaces of specified finish will be done for approval prior to concrete installation.

5.6 Finish Grading

Finish grading will occur after drainage and irrigation installations are complete and the specified topsoil has been applied. Ideally, cart paths will be installed prior to topsoil installation. Finish grading includes:

1. Maintenance of continuous, smooth contours with no uneven grade breaks within the GC, including other features such as greens, tees, cart paths, surrounding undisturbed areas, existing trees, etc.

2. Positive surface drainage will be maintained with a minimum of 3% in all instances and will utilize a transit to verify this requirement.

3. Stones, rocks and other deleterious material larger than one inch in diameter will be removed.

Finish grading will be approved prior to advancing to subsequent soil amendments, seedbed preparation and grassing phases. Bulldozers, tractors with disks for cultivation, sand pros, hydraulic box graders, rock pickers, etc. will be available for performing finish grading of the GC.

5.7 Soil Amendments

This section includes minimum requirements and procedures for the initial cultivation of the seedbed and the incorporation of chemical additives for improved agronomic fertility.

5.7.1 Equipment

Tractors with turf tires, Viacon and or Lily Spreaders, agricultural disks or plows, mechanical rock pickers, will be available as required.

5.7.2 Soil Tests

Soil fertility tests will be conducted throughout the GC (minimum one per hole) to determine the need for additional amendments and rates over that specified herein.

5.7.3 Application of Gypsum

Gypsum will be applied at the rate of one ton per acre for fairways and rough areas of the GC, unless amended by site-specific soil tests. Gypsum will be uniformly applied and incorporated into the soil to a depth of at least six inches by disking, harrowing, or other acceptable methods within 24 hours following application.

5.7.4 Application of Dolomitic Lime

Greens and tees will receive an application of dolomitic lime at the rate of 50 pounds per 1,000 square feet and be incorporated into the top four inches with approved equipment.

5.7.5 Starter Fertilizer (Fairways and Rough)

Starter fertilizer will be Lesco Professional Starter Fertilizer (18-24-12) derived from Poly Coated Sulfur Coated Urea, Urea, Diammonium Phosphate, Sulfate of Potash, and Muriate of Potash. It will be applied at the rate of 450 pounds per acre with rotary spreaders as recommended by the manufacturer. Starter fertilizer will be applied 12 hours prior to planting.

5.7.6 Starter Fertilizer (Tees and Greens)

Starter Fertilizer for Greens and Tees - Basic fertilizer should be a 12-24-14 Elite grade product (-14+35 Tyler mesh size) containing monoammonium phosphate as the phosphate source with a minimum of 50% of the total nitrogen, 12% derived from Poly Plus sulfur coated urea and a minimum of 24% from monoammonium phosphate. Fertilizer is to be delivered to the project in un-opened 50 pound bags. Starter fertilizer will be applied at the rate of ten lbs per 1,000 square feet with rotary spreaders as recommended by the manufacturer. Starter fertilizer will be applied 12 hours prior to planting. Iron Plus Elite (Lesco granular micro nutrient package) will also be applied at the rate of six lbs per 1,000 square feet.

5.8 Seedbed Preparation and Equipment

5.8.1 Seedbed Preparation

Seedbed preparation will be performed after areas have been finish graded and the gypsum has been applied and incorporated into the soil as specified. Seedbed preparation includes:

1. Final contouring and 'floating' of all surfaces.
2. Removal of rocks, stones larger than one inch in diameter.
3. Final installation and compaction of sprinkler heads, quick couplers, valve boxes.
4. Final testing and programming of irrigation heads and controllers with radio control; and orientation in presence of owner's golf course superintendent.
5. Repair and completion of transition grades between tees, greens, bunkers, lakes, cart paths and their surroundings.
6. Verification of minimum gradients for proper drainage.
7. Flushing of drainage system and installation of drain inlets.

5.8.2 Equipment

Tractors with turf tires, culti-packers, and sand pros with various attachments, drag mats and drag floats, mechanical rock pickers, disks/harrows, pendulum and rotary spreaders, etc., will be available as required to perform the above operations.

5.8.3 Leveling and Preparation

All undulations or irregularities in the surface resulting from tillage, fertilizing, liming, or other operations will be leveled and floated to a smooth, finished grade with no water-holding pockets. Multiple operations will be required over the areas to be seeded. These will include passing in small, circular directions over all areas with culti-packers, drag floats, sand pros with rakes and drag mats, etc. Hand labor and raking will be used in those areas where the use of equipment maybe constricted. The final seedbed must be smooth and sufficiently soft in order for the seed to be planted therein (85% compaction or less).

5.9 Grassing

5.9.1 Material References

Seed will be labeled in accordance with United States Department of Agriculture Rules and Regulations under the Federal Seed Act and state seed laws. Seed will be furnished in sealed standard containers unless exception is granted in writing by the contracting agency. Each seed container will bear the date of the last germination, and that date will be within a period of six months prior to commencement of planting operations. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable. The type and minimum percentage-by-weight of pure, live seed will be as follows:

Type/Minimum Percentage-by-Weight	Percentage
Purity	98%
Live Seed	90%
Weed Seed	0%
Poa trivialis	0%
Poa annua	0%

5.9.2 Grass Types and Seeding Rates

Seeding will be done at the following rates:

1. Greens: Penn A-4 Creeping Bentgrass at a seeding rate 1.5 lbs/1,000 square foot

2. Tees: Alliance Perennial Ryegrass blend, seeding rate 15 lbs./1,000sq.ft.

3. Fairways: 100% Alliance Perennial Ryegrass blend
   Seeding rate 300 lbs./acre.
   50% Alister Colonial Bentgrass
   50% Glory Colonial Bentgrass
   Seeding rate 50 lbs./acre

Ryegrass and colonial bentgrass should be seeded separately, and done at different times or in a seeder with separate bins.

1. Roughs: 100% Alliance Perennial Ryegrass blend
   Seeding rate 450 lbs./acre.
2. Secondary Rough/Revegetation: 100% Bonny Dunes Fine fescue blend
   Seeding rate 75 lbs./acre

5.9.3 Inspection and Tests of Seed

Seed will be obtained from an approved seed distributor. Triplicate signed copies will be furnished of the vendor's statement certifying that each container of seed delivered is fully labeled in accordance with the Federal Seed Act, and is at least equal to the requirement for seed in the materials paragraph of these specifications. This certification will appear on or with all copies of invoices for the seed. A 1/8 pound sample of each seed type and seed lot will be shipped to an independent registered seed lab for testing. Sampling and testing will be in accordance with the latest rules and regulations under the Federal Seed Act and state seed laws.

Seed that is purchased will be labeled in accordance with the U.S. Department of Agriculture and Regulation under the Federal Seed Act and Association of Office Seed Certification Agencies (AOSCA). Any seed not meeting the design specifications will be rejected.

5.9.4 Planting Dates

All seeding will be performed at such time that the climatic conditions and seasons are favorable for the proper growth and establishment for the specified types of grasses. Seeding will commence as construction and weather allow. The approved grassing dates for the project are between May 1st and September 1st, 2005. No turf grass planting will be allowed to occur outside of these specified dates.

5.9.5 Equipment

Tractors with turf tires, pendulum or rotary spreaders, culti-packers and sand pro with rake attachment will be available for seeding operations.

5.9.6 Seeding

5.9.6.1 Greens

All areas will be checked with a transit or hand level to verify a minimum of one-half of one percent (0.5%) positive fall exiting the green surface. The condition of the seedbed will be approved prior to planting. Seed will be drop seeded with approved sowing equipment at the rates listed herein. The seed will be covered to an average depth of 1/2 inch by means of a sand-pro with 'knobby' tires and light rake attachment.

5.9.6.2 Tees

Seed will be drop seeded by approved sowing equipment at the rates listed herein. The seed will be uniformly distributed over the designated areas. The seed will be covered to an average depth of 1/2 inch by means of a sand-pro with 'knobby' tires and light rake attachment.

5.9.6.3 Fairways and Primary Roughs

Seeding will be performed with Lily or Viacon equipment (rotary or pendulum spreaders) pulled with tractors with turf tires. After seed has been applied, the entire area will be driven over with a culti-packer in two perpendicular directions in order to incorporate the seed into the top 1/2 inch of the seedbed. The entire area will then be smoothed again utilizing a sand pro with light rake attachment driven in a continuous circular pattern. Seeding equipment must be loaded while the seeder is on the fairways and a drop cloth used to surround in transport from one fairway to another.

5.9.6.4 Lake Banks and Secondary Re-Vegetation Areas

Seed will be applied with rotary spreaders and incorporated into the top 1/2 inch of the seedbed by use of sand-pro with light rake attachment or by lightly hand raking.

5.9.6.5 Protection

Immediately after seeding, the entire area will be protected against traffic or other use by erecting barricades as needed, and by placing approved warning signs at appropriate intervals.

5.9.6.6 Maintenance

Immediately after all areas have been planted those areas will be sufficiently watered to seal the soil around the seed. Active maintenance of the GC will be initiated following initial watering.

5.9.6.7 Germination

Germination will be evidenced if the seed sprouts and generates leaf growth. Satisfactory germination will be established by evidence of average 85% germination within any particular 10-foot sample. Areas will be selected at random and counted for satisfactory germination, 30 days after planting. Any area not demonstrating satisfactory germination will be replanted.

5.10 Lake Construction

Lake construction will include the following:

1. Lake edge will be laid out with proposed elevations at a maximum of 25 feet on center for review and approval prior to any subsequent excavation and shaping.

2. Upon approval of layout, the lakes will be excavated and the bottom rough shaped to the design contour. The bottom of the lake will have a minimum gradient of 1% in the direction of the outlet structure and the side slopes will be 5:1 gradient to a water depth of five feet and then a 4:1 gradient to the lake bottom. The lake bottom will be smooth and free from all rock and stone greater than 1/2 inch in diameter, objects, vegetation, and stubble. The sub-grade foundation will be compacted to 95% per ASTM D 698 with no abrupt changes or breaks in grade.

3. Lake lining will be accomplished with either polyvinyl chloride (PVC) (minimum 30 mil), or SS-13 (organic polymers) per manufacturer's recommendations.

5.10.1 PVC Liner

If applicable, PVC liners will be installed as follows:

1. Anchor trenches will be 24 inches by 24 inches and be excavated at a constant elevation around the entire perimeter of the lakes, with an approximate setback from normal water level of one meter.

2. All structures, piping, concrete, drains and any associated work will be completed prior to lining installation. All drain line outfalls into the lake will be at an elevation that is 3 feet below normal water level. Pipe "boots" or "sleeves" will be installed as needed for penetrations below water level to maintain the integrity of the liner and lake sealing.

3. Care will be taken in unloading and placing rolls of lining to avoid damage. The location of a panel or sheet will be verified before unrolling and placement to avoid improper

alignment. Sandbags (or similar ballast) are required to keep the panels in place during installation, a minimum of 25 bags per 1,000 square meters prior to placement of protective soil cover.

4. Care will be taken to avoid wrinkles in the seam areas and around mechanical attachments.

5. Pre-fabricating panels reduce the amount of field seaming. PVC field seeming will consist of solvent welding or wedge welding. Lake Liners will be welded by an installer certified by the manufacturer.

6. After the liner has been installed, it will be covered with a uniform layer of select soils (e.g., excess Site sands), 12 inches in depth, compacted to 85% over the entire surface. Care will be taken so that no equipment is operated without the full depth of the soil cover in place. Select soils will be free from all rocks, stones, or any other deleterious material larger than 1/2 inch in diameter.

5.10.2 Clay Soil Seepage Control Lining (Alternative)

A clay soil seepage control lining is an alternative that may be employed and the installation would include the following steps:

1. Sufficient site soils suitable for lake lining as per Item 2 below will be either stockpiled during the mass excavation or imported by the contractor.

2. Seepage Control Lining Requirements – to expedite lining construction, and to meet reasonable water requirement limitations based on economics and conservation, the clay soil lining permeability coefficient should be less than 1×10^{-7} cm/sec. Selected site soils can be treated as per the following procedures to meet this requirement.

3. The side slope of the lake will be fine graded away from the lake edge to the slope indicated on the plans. The side slope and bottom will be constructed to a uniform sub-grade elevation minus the lining thickness shown on the plans. Deposits of sand, gravel or rocks will be removed to a depth of one foot and be replaced with approved site soil compacted to at least 95% relative density by ASTM D1557.

4. Enough approved soil will be spread over the entire surface of the lake bottom and side slopes to achieve a minimum six-inch layer after the compaction procedure of Item 6 below has been followed.

5. Using a rotary-type mixer or disc capable of producing a uniform mixture to at least a twelve-inch depth, thoroughly mix the select soil deposited on the bottom and side slopes of the lake with water containing 25 gallons of WA-13 and 50 gallons of SS-13 per surface acre, to achieve near optimum moisture content. WA-13 and SS-13 are available from Soil Science International, Post Office Box 5429, Glendale, Arizona, 85053, (800) 873-7713.

6. The treated soil layer will immediately be compacted to at least 92% relative density by ASTM D1557 to a minimum depth of six inches. The method of compacting is both

segmented foot and vibratory rollers to achieve the required compaction. All work will be to the satisfaction of the soils engineer and the site representative of Soil Science International. Density tests by ASTM D2922 are acceptable.

7. Subsequent six-inch lifts to achieve the lining thickness shown on the plans will be added.

8. The select soil lining will be kept moist to prevent surface cracking until the lake bottom is covered with soil cement.

9. Filling of the lake will begin as soon as possible after final compaction of the soil cement and soil lining is completed. The filling water will be added carefully to avoid erosion. Two tons of commercial soda ash per surface acre of lake will be added to the filling water.

10. The supplier of SS-13 and WA-13 will have a technical advisor on the job each day that the seepage control lining is being placed, to insure that adequate treatment is accomplished and correct procedure is followed. The technical advisor will have at least three years of experience in placement of chemically-treated and compacted soil linings. The advisor's qualifications (and those of an alternate) will be submitted to the owner for review and acceptance at least 30 days prior to the start of work.

11. The supplier of SS-13 and WA-13 will submit to the owner one pint samples of each chemical product from current production at least 30 days prior to the start of work. In addition, samples of each shipment will be sent to an approved testing laboratory for a repeat permeability test of site soil.

5.11 Irrigation

5.11.1 Irrigation General

5.11.1.1 As-Built/Construction Record Drawing

The As-Built/Construction Record Drawing (CRD) plan will be an original of the irrigation system as constructed. It will indicate the location of all sprinklers, valves (air, isolation, reducing, relief, drain), controllers, wire routing, pipe routing, sizing of both types of routing and field programming. The construction drawing will be prepared with standard AUTOCAD.dwg files, and information will be gathered using the Sites GPS survey equipment.

For the purposes of the As-Built/CRD requirements, the contractor will provide two measurements from the closest sprinkler heads to the following components, and may use controllers if sprinkler heads are more than 100' away. The components are:

1. Isolation valves.

2. Mainline gate valves.

3. Air release valves.

4. Pressure reducing valves.

5. Pressure relief valves.

6. Drain valves.

7. Automatic valves.

8. Provide pipe sizes for all lateral and mainline pipe.

9. All wire splices - (120 volt, 24 volt and communication).

10. Provide 120 volt and communication cable wire paths and sizes.

11. Provide location of any wire route which does not run in a common pipe trench, e.g. from the controller to the pipe trench.

12. Provide notes as to any sprinkler addition, deletion or programming changes from the "As-Staked" plan to the "As-Built/CRD" field notes.

13. All dimensions to mainline change of direction fittings.

14. Note existing utilities, drainage and existing irrigation equipment.

5.11.1.2 Course Personnel Training

Upon completion of the work and acceptance by the owner, the contractor will be responsible for the training of GC personnel in the operation, maintenance, and repair of the system. The contractor will furnish four copies of all available parts lists, troubleshooting lists, specification sheets and catalog sheets to the owner prior to final payment.

5.11.1.3 List of Material for Approval

The contractor will submit four copies of a material list, complete with manufacturers' name and product numbers, four copies of lists of comparable installations in operation, including customer address and location of installation. Any engineering drawings that would alter the system design of the proposed changes will be the responsibility of the contractor to provide. Included but not limited for submittal are:

1. Sprinkler head manufacturer (each type).

2. Weather station.

3. Automatic valve manufacturer.

4. Radio remote control.

5. Automatic control system manufacturer.

6. Quick coupling valves.

7. Piping system manufacturer.

8. Electrical components.

9. Mainline fittings manufacturer.
10. Grounding.
11. Lateral fittings manufacturer.
12. 24 volt connectors.
13. Swing joint manufacturer.
14. 120 volt connectors.
15. Wire manufacturer.
16. Power conditioner.
17. Pump station manufacturer (see pump section).
18. Junction boxes.
19. Isolation valve manufacturer(s).
20. Mainline valve manufacturer(s).
21. Lateral valve manufacturer(s).
22. Drain valve manufacturer(s).
23. Proposed construction schedule.
24. Sprinkler Center for Irrigation Technology (CIT) performance.

All of the above items are to be listed with:

1. Agent and/or local distributor.
2. Local address, phone # and contact person.
3. Manufacturer's warranty.

5.11.1.4 Warranty

The contractor is to provide Weyerhaeuser an irrigation system that is free from defects in material and workmanship for a period to be not less than one year from final date of acceptance. If, during such warranty period, any such product fails due to improper installation or defective material, the contractor will repair the defective component free of charge. The contractor will have 24 hours to respond to the failure. In the event the contractor does not respond within this time frame, the owner will back charge the contractor the same schedule of service fees as provided to him for such repairs.

5.11.1.5 The Companie's Responsibility for Maintenance

It will be the responsibility of the Companies to maintain the system in working order during the guarantee period, performing necessary minor repairs, keeping grass from obstructing the sprinkler heads, protecting against vandalism, and preventing damage during the landscape maintenance operation.

5.11.1.6 Service by Contractor

The contractor will service the system at the Companies' request during the guarantee period. Any work performed which is not covered by the guarantee will be paid for by the owner. The contractor will furnish the Companies with a schedule of service fees.

5.11.1.7 Turn Over Equipment

The following equipment will be supplied by the contractor to the Weyerhaeuser after the final walk-through:

1. Ten one-inch quick coupling valve keys with a one-inch hose swivel.
2. Two operating keys for each type of isolation valve.
3. Four new sprinklers of each model installed with full nozzle range set.
4. Two controller face plates.
5. Four communication modems.
6. Ten full sets of repair fuses and circuit breakers.
7. Ten swing joints of each style and type installed.
8. Two Dickson #PR4150PB24S, 24-hour pressure recorders (1-800-323-2448).
9. Two satellite keys for every controller installed.
10. Five sprinkler on/off keys.
11. Two sets of sprinkler repair tools for each type of sprinkler.

5.11.2 Irrigation Materials

5.11.2.1 Pipe

Pipe sizes will conform to those shown of the irrigation plan. No substitutions of pipe can be made without prior approval. All pipes damaged or rejected because of defects or non-conformance to the specifications will be removed from the site at the time of said rejection. Pipe as indicated on the plan as four-inch to 12 inch pipe will be a gasketed type with internal ring gasket Class 200 PVC or equivalent. Galvanized steel pipe and fittings installed above ground will be Schedule 40 (or equivalent) galvanized steel painted with a rust resistant paint, with a color that will help to blend into the surroundings.

All PVC pipe, while stored on site, will be covered and protected from the sun's UV rays, in addition to the mud or blowing sand. When the pipe is to be transported from the delivery truck to storage, the forks on the lift will be covered with carpet or another material to prevent any deterioration of the pipe. When the pipe is transported from the storage area to the installation area, the bed and sides of the trailer will be covered with carpet or another material to prevent deterioration. The pipe rack supports are not to exceed five feet.

5.11.2.2 Fittings

Fittings will consist of the following:

1. All change of direction fittings for 4 inch and above pipe will be ductile iron.

2. All threaded fittings will be Schedule 80 unless otherwise noted on the plan.

3. All two-inch solvent weld fittings will be Schedule 40 as manufactured by Dura or Lasco.

5.11.2.3 Valves, Valve Boxes, and Wrenches

Mainline gate valves will be resilient wedge seat construction, designed for 150 pounds of cold water working pressure, and will have iron bodies with brass trim. All valves will be of the non-rising stem type, with a two-inch square nut on the stem, American Water Works Association (AWWA) approved or any other valve meeting the above specifications with five-year warranty. The different valves will have the following characteristics:

1. Lateral isolation valves will be of brass construction, non-rising stem, with cross handle as manufactured by Nibco T-113 IRR unless otherwise noted on the plan.

2. Drain valves will be of the type and size as specified on the plan and installed at low points of the mainline along each mainline loop.

3. Each valve placed below grade must be placed in a valve box. The box will be marked "water." All valve boxes will be as noted on the plans.

4. Air air vacuum release valves will be of the same type and size as the ball valve specified in the plan. They will be installed at high points along a mainline loop or in situations where the mainline dead ends.

5. Remote-control valves with pressure regulating valves will be of the type specified on the plan.

6. Four sets of operational keys for each type of valve installed will be delivered to the owner. They will be of sufficient length to operate each valve smoothly and efficiently.

5.11.2.4 Thrust Blocks

Thrust block concrete will conform to ASTM C 94, using three quarter (3/4) inch maximum size aggregate, and having a minimum compressive strength of 3,000 PSI at 28 days. Thrust blocking will be installed in accordance with the plans and specifications.

5.11.2.5 Sprinklers & Quick Couplers

All gear-driven sprinklers or rotary sprinklers within turfgrass areas will be:

1. Rain Bird full circle Eagle 700-E-36-80-ACME or Toro 734 full circle.

2. Rain Bird part circle Eagle 750-E-36-80-ACME or Toro 765 part circle.

3. All quick couplers will be Rain Bird 4NP-ACME or Toro 470 series.

Sprinklers and quick couplers will be of the size and type as indicated on the plan. The performance selection was based on the CIT space performance testing. Sprinklers and quick couplers must meet 1.2 or better scheduling co-efficient (SC) and 85% or better distribution uniformity and Christiansen's uniformity.

5.11.2.6 Field Controllers

The field controllers will consist of the following:

1. All field controllers will be Rain Bird PAR+-TW-PP 48 station field controllers or Toro Network LTC Plus.

2. Field controllers will be installed on approved concrete bases in accordance with the manufacturer's recommendations and connected to the valves in correct fairway, green and/or tee zones at the grades and locations as staked. Each zone will be properly identified, labeled and adjusted ready for use.

3. Field controllers to be manufactured by the manufacturer as listed on the plans, including manufacturer's lightning and surge protection and plastic pedestals.

4. Each station will be equipped with circuit protection consisting of an "On/Off/Auto" manual switch, choke, transorb and replaceable gas pill that shunts high voltage directly to ground. The kit will protect up to 6KV and 3KA surges in accordance with I.E.E.E. standard 587. The kit will also provide protection to the pump/master valve and field common wires.

5. Each controller will have a laminated blueprint of the area controlled attached to the door housing.

5.11.2.7 Central Controller

The central controller will consist of the following:

1. One Rain Bird Nimbus II or Toro Site Pro with T-Map central controller which are designated on the plans, and are in accordance with manufacturer's specifications will be connected to specified field controllers.

2. Central computer components will be warranted for five years from date of installation. They will be supported with a toll-free number with an unlimited number of calls. A 24 hour turnaround service arrangement will be included to provide zero down time. Software and hardware upgrades will be provided at no charge for the warranty period. A support engineer will be assigned to the project and have a system in place to provide support for any problems. A quarterly newsletter will be produced detailing latest upgrades, helpful hints to maximize the system, and address common problems and resolutions.

3. Central computer components will include four Rain Bird FREEDOM handheld radios, remote hardware and remote software for radio access to central control system, with licenses, FCC permits, and error-free radio frequency.

5.11.2.8 120 Volt Wiring

120 Volt wiring will consist of the following:

1. Wire sizes on the plan are for copper wire. Number eight and smaller wire will be solid, #6 and larger to be stranded. All splices will be done with 3M Scotchlok Epoxy Splice kits and located in Ametek box #170140 marked "electrical." Each splice will have a minimum of 20 inches of excess above final grade for future maintenance.

2. All wiring will be done in accordance with applicable electrical codes and manufacturer's recommendations.

3. All wires and circuits will be identifiable by color-coding.

5.11.2.9 Grounding

Between one and three eight-foot copper clad rod(s), 5/8 inch diameter will be driven at every controller location, and a #6 bare copper wire set 150' into an irrigated area. These devices must have a resistance of five Ohms or less to the ground in which it is driven. When the soil conditions dictate, additional grounding equipment may be required to achieve the five Ohms resistance.

The local irrigation materials representative and/or manufacturer's service representative must test, inspect, and approve all grounding prior to operating the system. A list of all Ohms resistance readings by satellite number will be supplied for recording purposes.

5.11.2.9.1 24-Volt Wiring

The 24-Volt wiring will consist of the following:

1. All 24-volt control wires from the controllers to the remote-control valves will be #14 PE or UF/UL approved 600-volt direct burial wire. All 24-volt common wires will be #12 PE or UF/UL approved 600-volt direct burial wire and will be white in color.

2. All 24-volt splices will be done with “3M” DBY kits or “King” One Step Connectors #70-566.

3. Wire will be furnished in 2500' reels and all splices needed for "teeing-off" will be done in valve boxes with a minimum of 20 inches of extra lead wire provided for modifications and future use.

5.11.2.9.2 Communication Cable

The communication cable will be of the type that is compatible with the control system as manufactured by Paige Electric Corp./New Jersey, Regency Wire/Missouri, or Baron Wire/Illinois. Each communication leg will be clearly marked with a different color or striping. Each satellite will have proper supplemental surge protection as per manufacturer’s recommendation.

5.11.2.10 Swing Joints

All sprinkler heads will be installed on Lasco unitized triple top swing joints, as noted on the plan, with O-Ring seals.

5.11.2.11 Sleeving

Sleeving will consist of the following:

1. All piping under roads, or river and creek crossings will be made with Schedule 40 or equivalent galvanized steel or ductile iron pipe, two sizes larger than the mainline.

2. All piping under bridges will be made with Ductile Iron, hung from and supported every five feet along the length of the bridge with drains on each low point.

3. Sleeving under all cart paths will be installed in Cl200 PVC.

4. Wires will be installed in UL approved Schedule 40 PVC conduit for all bridge crossings, road crossings, cart path crossings or other areas that may warrant the protection of the wire network.

5. Any PVC conduit exposed to sunlight will be painted with a UV ray inhibitor to protect it from sunlight and must be installed in such a way that it blends into the surroundings.

5.11.2.12 Weather Station

The weather station will be designed to provide weather information for the various industries and to calculate E.T. (evapotranspiration) using the varying mow heights of the grass and be manufactured by: Weather Metrics, Inc., 14645 W. 95th Street, Lenexa, KS; (913) 438-7666 or equivalent. The standard sensors monitored will include:

1. Temperature.

2. Wind Speed.

3. Wind Direction.

4. Solar Radiation.

5. Rainfall.

6. Barometric Pressure.

7. Relative Humidity.

8. Soil Temperature.

5.11.3 Irrigation Installation

5.11.3.1 Equipment

Equipment to be used in mainline/lateral trenching and back filling include a tracked trencher (digging depth of six-feet maximum, and a width of 24 inches maximum), a water truck and a backhoe loader or excavator.

5.11.3.2 Excavation, Trenching, and Back Filling

Prior to pipe installation, the bottom of trenches must be level and free from any foreign material such that each pipe will be supported uniformly throughout its length. Material to be used to back fill around irrigation pipe will be from existing sand stockpiles. Backfill material will be free from all rocks, stones, or any other deleterious material larger than ½ inch in diameter.

Backfill will be compacted to 95% standard proctor density. All trench excavation will be compacted in six-inch lifts and completely water settled to insure no future settlement. Compaction reports will be submitted. Trenching excavation and back filling will be done as follows:

1. Trenches for the piping system, wiring and allied material will be excavated of sufficient depth and width to permit proper handling and installation of the materials.

2. Trenches for ten inch to 12 inch pipe will be excavated to a depth so as to provide minimum soil coverage over the top of the pipe 36 inches and to a minimum width of 12 inches wider than the pipe size that is being installed.

3. Trenches for four inches to eight inches will be excavated to a depth so as to provide minimum soil coverage over the top of the pipe of 24 inches or as indicated on the plan and to a minimum width of eight inches wider than the pipe size that is being installed.

4. Trenches for two-inch pipe will be excavated to a depth so as to provide a minimum soil coverage over the top of the pipe is 24 inches or as indicated on the plan and to a minimum width of six inches wider than the pipe size that is being installed.

5. Prior to pipe installation, the bottom of trenches must be level and free from any foreign material such that each pipe will be supported uniformly throughout its length.

6. There are two types of clean backfill material: pipe backfill and trench backfill.

7. All pipe backfill will be "select" material imported from existing sand stockpiles as directed. All pipes need to have a minimum uniform thickness of three inches of select material completely surrounding the pipe.

8. The remaining trench backfill material will be excavated site soils free from all rocks, stones, or any other deleterious material larger than two inches.

9. Backfill will be compacted to 95% standard proctor density. All trench excavations will be compacted in six inch lifts and completely water settled to ensure no future settlement. Compaction reports will be submitted.

5.11.3.3 Pipe Fittings

Pipe fittings will be as follows:

1. Suitable tools for safe and convenient handling of the pipe will be used. The interior of all pipe, fittings and valves will be cleaned before being assembled into the piping system and will be kept clean up to the time of completion and acceptance of the project. All

open ends of pipe and fittings must be suitably blocked or covered during lunch hour and at night to prevent entry of ground rodents, leaves, debris, etc.

2. Appropriate pipe fittings must be inserted in the line where the angle exceeds four degrees off center. All male threads on screwed pipe and fittings will be coated with an approved pipe thread compound before being made up. Pipe compound will not be applied to female threads on fittings or valves.

3. Unless otherwise specified or indicated on the drawings, all sharp changes will be made with two 45-degree elbows and a nipple or short length of pipe as the conditions may require.

4. All elbows, tees, and fittings will be suitably thrust-blocked with concrete, or stabilized with EBAA joint restraints to prevent the breaking or blow off of the joint. In connecting bell-ring PVC, the installer will make certain that each rubber ring gasket is carefully fitted in place, free from all foreign objects, and properly seated, and that these rubber rings are not out of position, buckled, jammed, or "fish-mouthed."

5. All road crossings will be made with ductile iron or galvanized steel pipe. Transition couplings' length will be two times the diameter of the pipe and a minimum of 12 inches long.

6. If, at any time, the mainline must drop more than 12 inches to cross a road, connect to another pipe or for any other reason, the drop will be made with steel as shown on the bridge-crossing detail.

7. Solvent weld PVC: Plastic pipe will be installed as recommended by the manufacturer to provide for expansion and contraction.

8. Plastic pipe will be cut with the assistance of a squared-in sawing vise, or in a manner to ensure a square cut. Burrs will be removed prior to installation so that a smooth unobstructed flow will be obtained.

9. Plastic to plastic solvent weld type joints will be made in the following manner:

    a. Thoroughly clean the mating pipe and fitting with a clean, dry cloth. All solvent weld joints on main line piping will use a cleaner prior to solvent application.

    b. A uniform coat of solvent will be applied to the outside of the pipe with a natural bristle brush.

    c. Solvent will be applied to the fitting in a similar manner.

    d. A second, light coat of solvent will be applied to the pipe, after it is quickly inserted into the fitting.

    e. The pipe or fitting will be given a quarter turn to ensure even distribution of the solvent and to make sure that the pipe is inserted to the full depth of the fitting socket.

    f. The pipe will be held in position for 15 seconds.

g. All excess solvent that appears at the outer shoulder of the fitting will be wiped off.

h. The joints will be allowed to set at least 24 hours before water pressure is applied to the system.

5.11.3.4 Testing and Flushing of System

Testing and flushing of the irrigation system will consist of the following steps:

1. Prior to testing, backfilling of all thrust blocks and mid sections of pipe must be made.

2. The entire system will be field tested at 50% more than the normal working pressure for a period of one hour. This must be done prior to completion of the backfilling process. Upon any visual inspection of the ground, should any leak be found, it will be promptly repaired and re-tested until satisfactory. This test will be under static conditions.

3. All electrical circuits will be tested in accordance with the control system manufacturer's recommendations prior to automatic sequencing.

4. Each hole will be isolated and inspected prior to the installation of any sprinkler heads. During this inspection, all the pipe systems will be "flushed" with water such that it flows cleanly without any debris or sediment in the line. Immediately after flushing, the heads will be installed and, subsequently, wire connections will be set at proper angles, grades compacted, etc. This last process will be performed during final seedbed preparation.

5.11.3.5 Thrust Blocks

Thrust blocks will be installed at all tees, reducer fittings, mainline isolation valves, bends, or at the end of all pipelines as called for in these plans and specifications. Thrust blocks will be poured in forming material, placed between solid ground, and the fittings will be anchored. The area of backing will be sufficient to permit no movement whatsoever of the pipe when placed under test pressures for final acceptance.

5.11.3.6 Gear Driven Sprinklers, Rotary Sprinklers, & Quick Coupling Valves

1. All pipelines will be thoroughly flushed before any heads are installed. Pipeline will be tested for pressure and leakage on each line separated by valves, at pressures from 100 to 150 PSI for one hour.

2. Prior to sprinkler and quick-coupling valve installation, swing joints will be clearly marked in the field with appropriate stakes and flagging material to avoid possible damage caused by equipment or personnel.

3. All sprinklers and quick-coupling valves will be installed on triple-top swing joints, and will be set plumb and level with finished grade once seedbed preparation has started, and will be thoroughly compacted as specified (minimum 95% compaction as determined by ASTM 698).

4. In the event that the cart path has not been installed, the contractor will provide extra pipe, a riser, and ten feet of extra 24 volt wire within five feet of the cart path. When the

path is complete, the contractor will be required to install the sprinkler within six inches of the cart path edge.

5.11.3.7 Central Computer and Field Controllers

The central computer will be completely installed, as designated on the irrigation plan and in accordance with manufacturer's specifications, and connected correctly to the specified field controllers.

Pedestals will be mounted on “cast in place” concrete bases in accordance with manufacturer's recommendations, and will be connected to solenoids in correct fairway, green and/or tee zones at the locations and grades and will be properly fitted, labeled and adjusted, ready for use.

5.11.3.8 Control Wiring

1. All wiring to be used for connecting the remote control solenoids to the field controllers, and from field controllers to the power sources and central controllers will be UF or PE/UL approved 600 volt, single solid copper wire.

2. All wire types and installation procedures will conform to local codes.

3. A minimum of 20 inches of wire for an expansion loop will be allowed at each valve-in-head sprinkler and/or each electric control valve for contraction of wire or tightening of wire, in addition to every change of direction fitting.

4. At no place in the entire wire network will the wire be tight. It must be "snaked" into the trenches to provide expansion. It will be bundled every ten feet with electrical tape or wire ties.

5. All wire will be furnished in 2,500-foot reels and all splices needed for "teeing-off" will be done in valve boxes with a minimum of 20 inches of excess for future needs.

6. All 24-volt wiring will be run with, or be in a common trench with, the main or lateral piping system. The only exception is to run the wiring from the controller to the mainline pipe location.

7. All splices are to be made out of the fairway areas and will be placed in an appropriate valve box with a flush gray lid and a minimum of 20 inches of excess for future use.

8. All expansion loops will be formed by wrapping wire at least eight times around a ¾ inch pipe and withdrawing the pipe.

9. Install one control wire to each valve-in-head sprinkler or electric control valve to the designated controller. Two or more valve-in-head sprinklers or remote control valves on the same control wire will not be permitted. All grouping of stations will be done in the control box.

10. Only one common wire will be installed from each controller to the designated valves. No grouping of common wires between controllers adjacent to each other will be permitted.

11. At each valve-in-head sprinkler, the contractor will use an electrical tape on each swing joint to secure wires in a location that will protect wires from damage.

12. One extra #14 wire the length of mainline that each controller operates, in addition to two #14 wires to each quick coupling valve will be installed for future irrigation needs. This wire will be a yellow color, different from any other 24-volt wire colors, and can be used in the future.

13. When more than one controller is located in an area, different colored control wire will be used for each controller.

14. All 220-volt power wire will be installed in PVC conduit and in a separate trench from the mainline at the depth below finish grade as called for in the plans.

5.11.3.9 Surge Protection

Surge protection will be installed on the 115 VAC power wires and on the communication wires. Surge protection will also be provided on all 24 VAC secondary circuits. Grounding will be checked by the local manufacturer's representative prior to operating any part of the system and then recorded.

5.11.3.10 Electrical Service

Electrical service of proper voltage and phase, along with necessary metering, will be available within 30 feet of the pump house. Wiring inside the pump house and for controllers including, but not limited to, installing a panel board, installing the necessary primary disconnect, fuse boxes and controls, electric lights and switches, and attaching wires to the same will meet local codes.

All electrical equipment and wiring will comply with local and state codes and be installed by those skilled and licensed in the trade. Unless governing codes specify otherwise, 24 VAC control wire will be installed.

5.11.3.11 Pump Station

A Flowtronex PSI model VWTP-2500-4-120 (5HP, 4@75HP) packaged variable-speed pumping station rated for 2,500 GPM at 120 PSI at station discharge, 1,800 RPM 380/3/50 full voltage, 20 foot pump length (from top of slab to bottom of pump basket), turbine pump will have stainless shafting, water lubricated line shaft bearings, galvanized strainer, high pressure stuffing box, and vertical hollow shaft drip proof motors.

Vertical Turbine Pump station will include the following features:

1. Custom fabricated pump steel discharge heads with integral air relief & leak-free packing box assembly.

2. 3-1/2 inch silicone-filled pressure gauges with isolation valves.

3. Hose bib connection.

4. Silent wafer check valves.

5. Individually grooved pump discharge isolation valves.
6. Stainless steel pressure transducers.
7. Heat exchanger.
8. Continuous weld around deck plate.
9. Steel grit blast of all piping and structural members.
10. Integral wet well access hatch.
11. Eight inch flow meter spool with data industrial flow sensor.
12. Eight inch station discharge isolation valve.
13. Four inch station relief valve.
14. 10 inch wye strainer with automatic flushing.
15. Box lake inlet screen with SS legs.
16. Motor space heaters.
17. Pump log remote monitoring software.
18. Eight inch flanged x 16 inch plain ends (Z) pipe.

Controls will include:

1. U.L. listing of complete pump station.
2. U.L. listed NEMA 4 starter and control panel.
3. 400 amp main disconnect.
4. Fused motor protection rated for 200,000 A.I.C.
5. Allen-Bradley microprocessor controller with *SMOOTHFLOW* control software.
6. 75HP 380 volt variable frequency drive.
7. Input line reactor (transient suppression).
8. Dual mechanically interlocked output contactors for automatic alternation of pumps.
9. Low discharge pressure shutdown.
10. High discharge pressure shutdown with auto restart.
11. Low water level shutdown with auto restart.

12. VFD fault shutdown with auto restart.

13. Premier grounding package - UL listed 5/8 inch x 10' copper clad ground rod; 4 inch x 96 inch grounding plate with 25feet of #4 bare copper wire; 100 pounds of Power Set ground- enhancing material.

14. Overload shutdown.

15. Individual motor phase failure, phase imbalance and low voltage protection.

16. Dual S.L.A.P. U.L. categories B and C surge and lightning arrestor with total power dissipation of 82,500,000 VA. Maximum clamping voltage - 1,500 volts (200a Pulse, 8*20 m/sec).

17. Lamp test function.

18. Individual run-time monitoring.

19. Automatic alternation of lead pumps.

20. First out fault indication.

21. Automatic Ramp Up feature (ARU) will slowly ramp up to design pressure (1 psig every 4 seconds) when filling lines when restarting after a shutdown or whenever pressure has substantially dropped

22. Automatic Diagnostic Utility (ADU).

23. Operator Terminal Information System (OTIS) for viewing flow, total flow, set point and system pressure, pump station diagnostics, pump run times, and all other registers within the programmable logic controller (PLC). With data logging flow and pressure capability and 253-station event history.

24. On site start-up supervision, station calibration & operator training.

5.11.3.11.1 Prefabricated, Skid Mounted Pump Station

A prefabricated, skid mounted, pumping plant and booster plant complete with automatic control valve, flow meter, filter assembly, all automatic electrical control components and attached hardware as part of the skid assembly will be installed. The pumping system will conform with manufacturer's warranties and service and personnel training specifications in all respects. A complete set of operating instructions and service manuals will be supplied at the time of installation.

5.11.3.11.2 Rules and Regulations

Work and materials will be in accordance with the latest edition of the National Electrical Code (NEC), NEMA, Uniform Plumbing Code, UL, ASME and other applicable state or local laws or regulations. Nothing in the drawings or specifications is to be construed to permit work which would not conform to code. When the specifications call for materials or construction of a better

quality or larger size than required by codes and regulations, provide the quality and size stated in the specifications.

5.11.3.11.3 Inspections/Approvals

The following inspections/approvals will occur:

1. An inspection will occur prior to the installation of the pumping plant at the manufacturer's facility. During the inspection, an evaluation of the system appearance and conformation to the specifications will be completed.

2. A punch list will be used to identify any deficiencies. Corrections will be performed prior to installation and start-up.

3. A complete submittal package will be submitted to verify that the pump station is in complete accordance with the specifications.

5.11.3.11.4 Installation

The installation of the station, pumps, etc. will occur according to the following steps:

1. A manufacturer's service technician will supervise and assist the installation of the station, pumps and motors, and will provide a preliminary check of all components.

2. Hook-up of electrical power will follow local codes. A manufacturer's service technician will inspect and approve the installation or make the necessary changes required prior to start-up.

3. Following hook-up, the connection of the discharge from the pumping station to the distribution system and the filling of the reservoir so that water can be pumped will take place.

5.11.3.11.5 Start-up and Testing

A manufacturer's service technician will start and calibrate the station to satisfy the performance demands and will also conduct training of the operating personnel to familiarize them with the system's operation and maintenance. Operating personnel will also be trained on how to make minor adjustments to the system after the irrigation system installation is complete, even if multiple visits are required during the two-year warranty period.

The complete pumping system will operate without undue vibration throughout the range of operating conditions. The unit will be given a running test of normal start and stop conditions under load. During each test, each pump will demonstrate its ability to operate without undue vibration or overheating, and will demonstrate without question its general fitness for service. All defects will be corrected and adjustments made at the expense of the manufacturer.

5.11.3.11.6 Warranty

The pump station is to be free from defects in material and workmanship under normal use and operation for a period of two years from the date of effective use, or 30 months from date of shipment, whichever occurs first. If, during such warranty period, any such product proves to be defective, the manufacturer will repair or replace the defective product.

5.11.3.11.7 Skid Wiring

All skid wiring will conform to NEC standards. All wiring from control panels to motors will be in solid conduit, with type THHN copper conductors rated at not less than 600 volts AC and of proper size to carry the full load amperage of the motors without exceeding 70% capacity of the conductor. A grounding cable sized to NEC requirements will be included in the rigid conduit. There will be no splices between the motor starters and the motor connection boxes.

The wiring to the flow switches and the water level electrode controls will be l6 gauge, ten strand copper conductors rated at 600 volts AC, contained in rigid conduit supported per NEC.

5.11.3.11.8 Discharge Flow Meter and/or Recorder

Data Industrial, Pocasset, MA, will manufacture flow sensor and flow rate indicator. Series will be compatible with the irrigation system controls (Maxi). The flow sensor will be properly sized as per the manufacturer's recommendations and installed accordingly.

5.11.3.11.9 Pressure Recorder

The Dual-trace pressure recorder installed on the pump station electrical rack will observe control valve inlet and discharge pressure. The recorder will have a 12 inch diameter, 24-hour chart, with an electrical drive. The enclosure will be suitable for outdoor installation with a casketed latching door and a clear plastic window for viewing the chart with the door closed. The recorder will have a pressure range of 0-250; 100 replacement charts will be provided.

5.11.3.11.10 Main Station Fused Disconnect

A three pole main station fused disconnect will be mounted in a separate NEMA 4 enclosure to completely isolate the electrical system from the incoming power. The fused disconnect will conform to the requirements of the NEC or any applicable local code. The main station fused disconnect will have an operating handle on the front of the panel.

5.11.3.11.11 Power Zone

The pump station manufacturer will provide an auxiliary power supply, pre-wired and mounted on the skid. It should be capable of delivering 120 volts, single-phase power, with KVA and breaker ratings as called out in the technical data sheets.

5.11.3.11.12 Station Heater

The pump station manufacturer will provide a three phase, heavy duty, industrial rated heater, with KW rating as called out in the technical data sheets. The heater will be provided with an internal protected disconnect switch, thermostat, and thermal safety overload shutdown. The heater will be pre-wired and securely mounted on the skid.

5.11.3.11.13 Reservoir Inlet Screen

The screen will be of the type listed on the plans, complete with all the controls required to operate the unit as per the manufacturer’s specifications. The screen outlet connection will be compatible with the horizontal induction tube.

5.12 Water Supply

Irrigation water will be supplied to the GC from a production well that is currently in place. The water right has been previously established and the well is capable of pumping 1,250 gallons/hour. The water will be used for irrigation and dust control purposes, only.

5.13 Underpasses

Two tunnel underpasses are being installed in order to provide access from holes one to two and from eight to nine. Tunnel sections are approximately 12 foot wide by 10 foot height. Length of the tunnels will be the full road right-of-way. Drainage from the tunnels will be captured as part of the GC drainage system. Tunnels will be constructed with precast concrete sections, and set on cast-in-place concrete abuttments. Tunnels will be sized for both golf cart and GC maintenance vehicles and equipment. The elevations of the tunnels will be coordinated to facilitate utilities and roads that overlay them. Retaining walls will be constructed on both ends of the tunnels to provide proper grade transition. Guardrails will be required along the tops of the retaining walls for safety. Cart/maintenance paths will be cast-in-place concrete. Drawings SHEET 40 and SHEET 41 present design details for these two tunnels.

5.14 Drainage

Subterranean drainage will be installed throughout the GC for purposes of collecting and conveying storm and nuisance water runoff. The attached drainage plans (see drawings SHEET 8, SHEET 13, SHEET 18, SHEET 23, SHEET 28, SHEET 33, SHEET 38, and SHEET 39 are schematic and convey the drainage concept and are presented for the purposes of quantifying the approximate number of inlets as well as pipe lengths and sizes. Actual layout of the drainage systems will be accomplished in the field to adapt to actual site conditions and GC shaping.

GC drainage consists of the following:

1. Non-perforated drain pipe (four inch to 12 inch) will be N-12 HDPE per ADS with corrugated exterior and smooth wall interior. Non-perforated pipe will be installed as carry-off pipe. The pipe will be bedded (minimum of three inch surrounding) with select backfill material from existing stockpiles, as directed. The balance of the trench will be backfilled and compacted with previously-excavated site soils. All pipe will be installed with copper wire, as detailed. Excess trench spoils will be either uniformly displaced in surrounding areas or removed.

2. Perforated drain pipe (four inch) will be N-12 HDPE per ADS with corrugated exterior and smooth wall interior. Perforated drain pipe will be installed as intercept pipe in tees, bunkers and greens, as detailed. Trench spoils will be removed and disposed of as directed. The full depth and width of the trench will be backfilled with drain gravel (1/8 inch minus washed pea gravel).

3. Perforated panel pipe (12 inches x 1-1/2 inches) will be AdvanEDGE by ADS and will be installed at 18 feet, zero inches on center in all greens within the proposed placement areas. Pipe will be laid flat with the holes down along the PVC liner and will be covered with a minimum of a 4 inch layer of drain gravel (1/8 inch minus washed pea gravel).

4. Drain Inlet will be constructed with 12 inch N-12 risers with drop-in ductile grate per Eagle Golf and Landscape Products, Inc.

5. Catch basin will be constructed with 24 inch N-12 risers with drop-in ductile grate per Eagle Golf and Landscape Products, Inc.

6. Related appurtenances (fittings and connections) to be provided as required.

7. Carry-off pipe (fairways and rough).

    a. Trenches will be excavated with either a backhoe or mechanized trencher. Depth of trench will provide a minimum of three feet of cover between the proposed finish grade and the top of the drain pipe. Trench bottoms are to have continuous positive gradients with no undulations that allow the pipe to become suspended prior to backfill. Unless otherwise directed, drain lines will be installed at a minimum gradient of 1%. All extraneous material such as rocks, stones, roots, etc. larger than two inches will be removed from the trench bottom prior to placement of pipe or backfill.

    b. The pipe is to be embedded with minimum of three inches (surrounding) of select clean backfill from stockpiles, as detailed and directed.

    c. The remaining trench will be backfilled in lifts not exceeding six inches and be completely water-settled prior to application of additional lifts. Select backfill will be free of all rocks, stones or other deleterious material larger than four inches. Trenches will be mechanically compacted with approved vibratory compactors, or wheeled equipment to ninety-five percent (95%) pre ASTM D 698.

8. Intercept Pipe - Greens

    a. Intercept pipe for greens will be included in the unit price for greens under features construction.

    b. Lay out of drainage for approval will be done prior to installation.

    c. Pipe is to be installed at 18 feet on center in a 'herringbone' configuration with perimeter drainpipe(s) in the low exit portions of the green.

    d. Trenches will be a minimum of eight inches wide by 12 inches deep with a minimum gradient of one percent (1.0%).

    e. Specified pipe will be installed on two inches of gravel bedding with the holes in the down position. End caps will be installed on each lateral line, and 90 degree elbows and clean outs will be installed on the main drain pipe as detailed.

    f. No bunkers or surrounding low point drains will be allowed to drain through the green.

    g. All trench spoils will be removed from the interior of the green core and disposed of, as directed.

    h. Drain gravel for green's drainage will be as approved by testing facility.

9. Tee Drainage

    a. Install perforated drain pipe in tees along the long axis of the tee.

    b. Tee sub-grade to slope minimum of 2% towards drain pipe.

    c. All trench spoils are to be removed from tee surface as directed.

    d. Minimum trench width, depth and gradient to be the same as for the greens.

e. Install pipe on two inch of gravel bed and backfill with specified drain gravel.

f. Install clean-outs on the pipe ends, as detailed.

10. Intercept Drain - Sand Bunkers

a. Intercept drainage in bunkers will not be installed until sub-grades are approved.

b. Drainage will be installed along the low point and longitudinal axis of the bunker.

c. Trench excavations are to be removed from the bunkers as directed. Minimum trench width is eight inches by 12 inches in depth. Place perforated pipe on specified gravel blanket two inches deep with the holes in the down position. Backfill with specified gravel. Install caps on pipe ends.

d. Drainpipe and gravel will be protected from sediment contamination prior to placement of sand.

11. Drain Inlets

a. Inlets are to be installed in the low points of the GC as determined during rough shaping process.

b. Upon completion of rough shaping and installation of carry-off pipe, temporary inlets will be installed at low points that consist of elbows, tees, perforated risers (extending a minimum 20 inches above surrounding grade) with gravel backfill.

c. Permanent drain inlets will be installed during the seedbed preparation process.

12. Catch Basins to be installed in the proposed detention areas of the GC as drawn and specified.

5.15 Placement/Revegetated Areas

These areas are within the interior of the GC and total approximately 16.6 acres of the 80.9 acres of placement (measured to toe of human health cap). Another eight inches of select native till will be provided as a final topfill layer or seedbed and planting medium.

During the completion of the GC, these areas will be initially hydroseeded with Bonny Dunes Fine fescue blend at the rate of 75 pounds per acre. Bonny Dunes is a select mixture of *Discovery Hard, Shadow II Chewings, Florentine* creeping red, and *Bighorn* sheeps fescues.

These areas will not have automatic irrigation; however quick coupler hose bibbs will be provided at approximately 100' on center for available water during initial establishment. After establishment, these grasses are capable of sustaining with natural precipitation.

During the grow-in period of the GC and after the native grasses have begun to establish, the revegetated areas will be augmented with a variety of native woodland shrub and groundcover plant materials. **No trees will be planted within the PAs.**

The proposed plant list for augmentation is presented in Table 5-1. All of the plant materials are native to the subject property and provide both habitat and aesthetic value. These plant materials

typically grow within shallow topsoil layers overlaying either denser clay or gravel subgrades, similar to that being created at the Site. Consequently, the root structures of these plants are shallow and develop in the upper soil profiles. It would be very unusual for them to penetrate the gravel layers that are being utilized for the ecological barrier.

5.16 Landscape Areas

The non-placement landscape areas surrounding the GC will be similarly planted. The exception is that some additional flowering and ornamental shrubs will be provided (Rhododendrons/Azaleas, forsythias, winter-flowering hazelnuts, etc), along with several native trees and occasional flowering trees for accent.

Certain areas of the GC will be planted with vegetation. Vegetation will be planted in a manner so that the roots will not impact the placement areas cap. Table 5-1 lists the types of plants and the anticipated sizes.

5.17 Golf Course Costs

Estimated costs for the completion of the GC cap are summarized in Table 5-2.

Table 5-1 – Golf Course Re-vegetation Plant Types and Root Zone Depths

Botanical Name	Common Name	Size	Remarks
Amelanchier alnifolia	Saskatoon Service-berry	6'-10'	Sun, drought tolerant, deciduous white flowers early spring, blue berries
Gaultheria willon	Salal	3'-5'	Sun, drought tolerant, evergreen white/pink flowers early spring
Holodiscus discolor	Hillside Oceanspray	6'-8'	Sun, drought tolerant, deciduous creamy color flowers, extremely hard wood
Mahonia aquifolium	Oregon Grape	4'-6'	Sun, drought tolerant, evergreen yellow flower clusters in spring, edible blue berries
Mahonia nervosa	Cascade Oregon Grape	2'	Sun, drought tolerant, evergreen, similar flowering characteristics M. aquifolium
Philadelphus lewisii	Mockorange	8'	Sun, drought tolerant, deciduous, fragrant white flowers in summer
Ribes aureum	Golden Currant	6'	Sun, drought tolerant, deciduous, yellow flowers, red berries
Rosa nutkana	Nootka Rose	4'	Sun, drought tolerant, deciduous, single pink flowers in June
Rosa woodsii	Wood's Rose	3'	Sun, drought tolerant, deciduous, pink flowers, edible flower and fruit
Symphoricarpos albus	Common Snowberry	3'-4'	Sun, drought tolerant, deciduous, white berries that persist through winter
Vaccinium ovatum	Evergreen Huckleberry	2-3'	Sun, drought tolerant, dark evergreen leaves, bronzy new growth, white flowers

Table 5-2 – Golf Course Construction Costs

Task	Cost
GC CONSTRUCTION COSTS	$ 9,038,409
GC CONSTRUCTION OVERSIGHT - GENERAL	$ 182,200
GC CONSTRUCTION - GENERAL	$ 7,688,219
COURSE CONSTRUCTION (Mass Ex, Rough Shaping	$ 639,728
DRAINAGE	$ 580,784
GREENS, TEES, BUNKERS CONSTRUCTION	$ 707,291
IRRIGATION	$ 1,458,000
CART PATHS	$ 498,960
SHAPING FINAL	$ 176,205
SOIL AMENDMENTS & SAND SCREENING	$ 115,560
TOPSOIL	$ 545,163
SEEDBED PREPARATION	$ 275,400
GRASSING	$ 234,706
LANDSCAPING	$ 540,000
LAKES	$ 268,251
MISC. GC CONSTRUCT.	$ 143,100
DUST SUPPRESSION	$ 108,000
EROSION CONTROL	$ 13,500
TUNNELS	$ 634,197
GC CONTRACTOR MOBILIZATION	$ 23,451
SUPPLEMENTS (Historic and Water Supply)	$ 54,000
WELL IMPROVEMENTS	$ 55,080
PUMPING STATION AND WATER SUPPLY LINE	$ 162,000
INFILTRATION SYSTEM INSTALLATION	$ 31,017
SAFETY - GC (CAPITALIZED)	$ 122,954
FACILITIES - GC (CAPITALIZED)	$ 22,827
SURVEY TASKS - GC RELATED	$ 213,045
PERFORMANCE BOND	$ 65,000
GC GROWN-IN	$ 432,300
SALES TAX (shared)	$ 735,690

SECTION 6 – POST REMEDIATION GOLF COURSE GROW-IN SPECIFICATIONS

6.1 Introduction

The establishment period of the GC is typically referred to as the 'grow-in' period. It is a highly specialized process whereby the turfgrasses are aggressively grown and nurtured from the time of planting to maturity.

The DuPont Works GC will be planted during the optimum grassing window between May 1st and September 15 2005. Approximately one golf hole per week will be planted during this time. Once a golf hole has been planted and irrigated for the first time, it becomes the responsibility of the owner or his contracted maintenance staff to maintain. The GC contractor's responsibilities from that time forward for any particular planted golf hole are relegated to final completion, minor repairs and warranty items.

The DuPont Works GC will be grown-in for approximately 12 months, over one growing season. This is sufficient time to yield mature turfgrass fully resistant to the effects of play while offering ideal playing conditions. Many GCs do not have the luxury of time that is being invested in this project for this process.

The grow-in will include all of the following functions on a continuing basis:

- Irrigation.
- Mowing.
- Fertilization.
- Topdressing.
- Verticutting & Aerification.
- Pesticides.
- Mechanical Practices.
- Miscellaneous Maintenance Practices.
- Record Keeping.

Each of these functions is discussed in the following sections.

6.2 Irrigation

Irrigation practices are broken down into three phases during grow-in. These include germination, post-germination, and the regular period.

6.2.1 Germination Period

Maintaining quality control during the final seedbed preparation, along with the uniform distribution of seed with proper soil contact, is essential for successful planting. After that, the management of irrigation water is the most critical item needed to achieve uniform germination, minimizing any damping off of new plants, potential rotting and drying of seed, as well as erosion.

To that end, no hole will be watered during the germination period without direct visual and physical control of the irrigation system by designated, trained personnel. Holes will only be watered during the daytime for the first three to four weeks, and will be watered multiple times to maintain a continually moist and uniform surface without drying or surface runoff.

6.2.2 Post-Germination Period

The post-germination period begins at approximately two weeks after planting (depending upon the variety of grass and climatic conditions), when the plants have grown to the 3-leaf stage. The number of water cycles is reduced to three or four times daily with slightly longer duration than the five to six cycles during the initial period. As plants begin to develop, the intent is to match available moisture in the soil profile to the depth of the root growth.

All watering during this period continues to occur during the daytime. While programs are cycled through the satellite controllers, it is still important that personnel be present during watering.

Prior to the first mowing, irrigation water is cut back to allow the surfaces to dry sufficiently to support mechanical equipment with minimal wear. All areas will be irrigated immediately after mowing.

6.2.3 Regular Period

After areas have been mowed a minimum of four times, they can then be irrigated during the night via pre-programmed cycles and without direct visual observation. The intent during this period is to deep water the plants, matching root development. Some daytime watering or syringing may be necessary during the first stages of the regular period, depending upon Site specific and climatic conditions. Also during this period the irrigation system for those portions of the GC that have matured sufficiently can be actuated from the central computer, optimizing the hydraulic window and system flow management.

The regular period also includes the micro-management of each individual turf area. This typically occurs after the entire course has begun to mature. This will affect the programming and optimization of the system and will continually require adjustment as the course ages. The grow-in superintendent, through testing and observation, will adapt to micro-environmental conditions which are affected by contour, soils, turf maturity, exposure, etc. Not all areas of the GC are equal nor do they require exactly the same maintenance regimens. This attention to detail will assure a quality product as manifested in healthy turfgrass, while conserving valuable resources.

6.3 Mowing

Mowers are to be inspected, adjusted, and sharpened to provide optimal performance. There are four primary areas that have different mowing requirements.

6.3.1 Tees - To be Seeded with Alliance Perennial Ryegrass Blend

The first mowing will occur at or after the three-leaf growth stage when grass has grown to 1-1/2 inch height. Moisture content of the soils will be reduced so as not to track mowing equipment. Mowing equipment will be lightweight, belt-driven, tri-plex mowers (e.g., National) set at 1-1/4 inches height with solid rollers. Mowing will be repeated when grass is 1-1/2 inches in height, approximately three to four times per week depending upon climatic conditions. After the first five to six mowings, the cutting height will be reduced to one inch and standard mowing equipment (e.g., Reelmaster 3100-D Sidewinder or equivalent) will begin to be utilized.

6.3.2 Greens - To be Seeded with Penn A-4

The first greens' mowing will occur when there is uniform turf coverage at a height from 1/4 to 3/8 inch, and definitely not more than 1/2 inch. The mower should have a smooth front roller. Greens should be rolled in two directions prior to mowing. Clippings should be caught every other mowing, as this will help build biomass that will protect the crown. It is possible to get the desired mowing height within six to seven weeks after the first mowing. These grasses are being maintained by most facilities at $5/32^{nd}$ or $9/64^{th}$ of an inch.

6.3.3 Fairways - To be Seeded with 80/20 mix of Alliance Perennial Ryegrass and Improved Colonial Bentgrass Blend

The first fairways' mowing will occur at the three-leaf growth stage when grass has grown to 1/2 inch to 5/8 inch height. Moisture content of soil is to be reduced prior to mowing so as not to track or leave depressions with equipment. Mowing equipment will be Greensmaster 3250-D triplex or equivalent with a cutting height set at 7/16 inch with solid rollers. Mowing will continue 3 or 4 times per week depending upon climatic conditions. After the initial six to eight mowings and when the irrigation is cycled to the regular period, standard mowing equipment will be used (e.g., Reelmaster 5400D w/8 blade cutting units). Fairway cutting height will be reduced from 7/16 inch growth height to 3/8 inch.

6.3.4 Rough – To be Seeded with Alliance Perennial Ryegrass

The first rough mowing will occur at the three-leaf growth stage when grass has grown to 1-1/2 inches-2 inch height. Moisture content of soil is to be reduced prior to mowing so as not to track or leave depressions with equipment. Mowing equipment will be lightweight, belt-driven, tri-plex mowers (National) set at 1-1/4 inch height with solid rollers. Mowing will be repeated when the grass once again achieves 1-1/2 inch-2 inch height, approximately three to four times per week, depending upon climatic conditions.

After the first five to six mowings, and when irrigation has been cycled to the regular period, roughs will be mowed with standard units, i.e Reelmaster 5400D w/eight blade cutting unit or equivalent. Mowing heights and frequencies will be reduced to one inch from 1-1/2 inches.

6.3.5 Secondary Revegetation – To be Seeded with Bonny Dunes Fine Fescue

Revegetation areas will be periodically mowed, at the discretion of the superintendent, with an out-front deck mower for weed control, normally at four inches.

6.4 Fertilization

Equipment will be calibrated for both output rate and pattern distribution prior to fertilizing. The minimum equipment includes a walk-behind rotary spreader, a tractor mounted or pull behind spreader (either rotary or pendulum-type), and a boom sprayer (primarily for germinated greens). The primary type of fertilizer will be granular of varying size depending upon use (fine granular for greens and larger pellet for fairways and tees) and water soluble. The GC fertilization requirements are divided into three stages: Pre-plant, Initial Grow-in Establishment, and Established Turf Maintenance.

6.4.1 Pre-Plant

The pre-plant stage is the time to correct nutritional needs by application of soil amendments. However, soil tests need to be administered prior to application of soil amenities to determine the proper additives and application rates. Soil tests should be taken after rough grade has been achieved to obtain a true representation of the topsoil nutritional needs. Based on the finding of the soil test, proper amendments (lime, phosphorous, sulfur, etc.) should be added as needed. It is already determined that the topsoil will primarily consist of sand, so almost all plant nutrients will come from applied sources.

Due to the constantly-moist soil conditions during the first two weeks of germination, no equipment will be allowed on the seeded portion. This requires that pre-plant fertilization nutrients be sufficient for two weeks after the grass has been seeded. The most important nutrient to seedlings is phosphorous. A starter fertilizer applied at 1.5-2 lb of phosphous/1000 sq. ft. along with a minimum of one pound of controlled release nitrogen usually provide the necessary nutrient requirements during germination for turf grass. Greens will be fertilized with a granular fertilizer during this stage as well. On a sand-based medium, micronutrients can also be added in granular form.

6.4.2 Initial Grow-In Establishment

Initial grow-in fertilization will follow an established program. After the initial starter fertilizer is applied prior to seeding, the next application is usually necessary when the grass reaches a height of about one inch (turf begins to show signs of nitrogen deficiencies at this stage, usually about two weeks after seeding).

Tees, fairways, and rough will need to be fertilized with a granular fertilizer on an average of once every 14 days until grasses are well established. Fertilizer mixtures will depend upon the grow-in superintendent's analysis of deficiencies. Greens will be fertilized with a combination granular and water-soluble fertilizers during the grow-in stage. Due to the nature of Penn A-4, greens will possibly have to be sprayed with water-soluble fertilizers to achieve the proper nutrients.

Due to the fact that all growing medium is sand, tees, greens, and fairways will require approximately one-third to one-half pound of nitrogen per week. After the first two applications of "starter" fertilizer, phosphorous will be reduced and nitrogen and potassium will be increased. Continual monitoring will determine the need for micronutrients.

6.4.3 Established Turf Maintenance

After the GC has been grown in, a fertilization schedule needs to be maintained in order for grasses to stay healthy. Tees, fairways, and rough will be fertilized with a large Vicon pendulum-type spreader, while greens are done with a sprayer or walk rotary spreader. On average, fertilizing the first year after grow-in will be reduced approximately 25% to 40%, and the year after that another 15% to 20%. As turf grasses become better established and deeper root systems are developed by the plant, less nutrients are needed to sustain it.

Topdressing the bentgrass fairways during the first two years will have an impact on fertilization schedules. Ammonium Sulfate ($AmSO_4$) and/or Ammonium Nitrate ($AmNO_3$) will possibly need to be used in conjunction with topdressing. Fertilizer applications should take place approximately six days prior to any topdressing, to allow grasses to be at maximum growth and recovery time at a minimum.

6.5 Topdressing

Topdressing for both greens and fairways will be done to control thatch, to level surfaces, and to improve root structure. Topdressing should be of the same material as used during construction, or at least of the same particle size.

Topdressing greens is an integral part of maintaining greens' growth and creating optimal playing surface. Penn A-4 greens require weekly topdressing, which will be performed more often during periods of good growth and recovery and less often during winter and times of stress. Topdressing should be preceded by verticutting to remove some of the organic material and open the greens so that the sand may be worked down into the grass.

6.6 Verticutting & Aerification

6.6.1 Greens

Verticutting greens is primarily employed for the removal of organic material. It is also an important factor in maintaining overall plant health by ensuring the correct number of plants per square inch. Regular verticutting keeps greens from becoming puffy, helps to control thatch buildup, and gives topdressing sand ingress to the thatch layer. It is a very important part of the process employed to keep the greens surfaces at the correct firmness for the best playing characteristics, shot receptivity, trueness of roll, and resistance to ball marks.

Aerification of greens is also used for the removal of organic material but, more importantly, to allow better air exchange in the root system and to relieve compaction. As such, verticutting will generally occur prior to topdressing, with the order of work on that day being as follows:

1. Verticut - depth to be determined by the superintendent.

2. Mow - using triplex greens mower with baskets to remove organic material.

3. Topdress - at 1/2 to one yard of appropriate topdressing material for each 5,000 square feet of green.

4. Drag - "Drag in" topdressing sand with either a steel drag mat or coco mat, depending on desired effect.

5. Cleanup - Using a broom, clean the edges of the green as needed.

Aerification will normally occur one to three times per year during normal maintenance. During grow-in, the superintendent will determine aerification needs.

6.6.2 Fairways

On colonial bentgrass, verticutting is used to control thatch by removing organic material, and as a surface-smoothing operation during the grow-in period. For this use, the vertical cutting blades should be spaced about one inch apart, instead of the usual 1/2 inch. This spacing aides in smoothing the surface without damage to the establishing turf.

Aerification of fairways is normal, once the GC has matured, and will typically begin in the second year of growth. The aerification cores will be broken up by mowing or dragging with a steel drag mat to separate the sand from the organic material. This allows the organic material to be removed and the sand conserved in the fairways.

6.7 Pesticides

The goal for the GC is to employ all means of non-chemical pest control in addition to continual scouting and evaluation to minimize the need for any chemical application. These non-chemical pest controls include correct mowing practices, verticutting, topdressing, appropriate timing and rates of fertilizer applications, and proper irrigation practices.

Pesticide use will be determined by the superintendent with reference to the Integrated Golf Course Management Plan. All applications will be in accordance with Washington State pesticide laws, best management practices, and be administered by a licensed operator. All pesticides and chemicals will be stored in an approved chemical storage unit located in the maintenance area.

The need for pesticides will be determined by continual scouting for pests and diseases; pesticides will be applied when acceptable thresholds have been exceeded. Depending on whether the material to be applied is granular or fluid, the appropriate spreaders or spray equipment will be employed. Application rates will be determined by label recommendations and be kept to the minimum required to maintain the pest within acceptable levels.

6.8 Mechanical Practices

In order for the GC to look its best and operate efficiently, proper equipment maintenance is a necessity. All maintenance personnel will be trained in the following equipment maintenance practices:

6.8.1 Washing Procedures

All grass-cutting equipment will be blown off with air prior to arrival at the wash rack. It will then be cleaned with water and inspected for potential problems, leaks, etc. Mowers will then be fueled and the oil checked before being turned over to the mechanic who will check the cutting units for correct height of cut, sharpness, etc., prior to storing the equipment. Any other equipment used will be cleaned in the appropriate manner prior to storage.

6.8.2 Equipment Check

Hydraulic hoses will be checked prior to usage each day, at intervals during work day, and at the end of the day's work after the equipment has been cleaned. Leaks are often difficult to spot during operation, so checking the equipment each half-hour during usage for leaks, hose wear, or other problems is appropriate.

6.8.3 Storage

All equipment and tools will have a designated storage location. After use or at the end of each day, all equipment and tools will be returned to their appropriate place.

6.8.4 Other Maintenance Practices

Preventative equipment maintenance practices, such as oil changes, filter changes etc., will be performed at correct hour intervals, and be monitored by the mechanic. Reel grinding and reel maintenance will be performed as needed (i.e., as determined by the mechanic and the superintendent).

6.9 Miscellaneous Maintenance Practices

Miscellaneous maintenance practices will include the following:

(1) Cart Paths – Cart paths will be swept regularly to remove grass clippings and any accumulated debris. Beginning in the second growing season, cart paths will be edged as required to remove overgrown turf.

(2) Winter Debris – All downed trees and branches will be picked up and properly disposed of from the GC.

(3) Drainage Systems – Drainage systems will be cleaned and flushed, removing accumulated sediments and debris.

6.10 Record Keeping

All maintenance activities during the grow-in period will be recorded on a daily basis to include: area, specific maintenance task, equipment utilized, materials applied, number of personnel, and duration. This information will be formatted in a spreadsheet and summarized on a monthly/annual basis.

REFERENCES

Ecology. (Washington State Department of Ecology). 1996. Personal Communication from Mike Blum to Vern Moore/Weyerhaeuser Company regarding Russ McMillan's June 14, 1996 Draft Parcel 2 Cleanup Action Plan comments during Parcel 2 CAP Meeting. June 26, 1996.

Ecology. (Washington State Department of Ecology). 2000. Final Environmental Impact Statement: Former DuPont Works Site, DuPont, WA

Ecology. (Washington State Department of Ecology). 2003. Cleanup Action Plan: Former DuPont Works Site, DuPont, WA.

Hart, Crowser & Associates, Inc. 1992. Management Plan for Remedial Investigation/Feasibility Study (RI/FS), Former DuPont Works Site, DuPont, Washington. January 17, 1992.

PIONEER Technologies Corporation. 2002. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, DuPont, Washington.

URS Inc. and PIONEER Technologies Corporation. 2002. Remedial Investigation, Former DuPont Works Site, DuPont, Washington.

West Shore Corporation NW. 2002. Feasibility Study for the Former DuPont Works Site, DuPont, Washington.

APPENDIX A – AIR MONITORING PLAN

A.1.1 Introduction

This Air Sampling Plan presents the approach that will be followed to document worker exposures and the effectiveness of engineering controls in limiting off-Site migration of particulate matter during Site-wide remediation activities at the former DuPont Works Site in DuPont, Washington. Two types of sampling are specified in this plan, personal work space sampling and Site boundary (PM10) sampling. Work space sampling will be conducted for the entire duration of the excavation work associated with remediation activities, to ensure that workers performing remediation activities are not exposed to elevated levels of arsenic and lead. In addition, while excavation work is taking place, water truck(s) will be used to minimize dust generation by spraying roadways and work areas with water. Site boundary (PM10) sampling will be done whenever excavation takes place within 500 feet of the south or east Site boundaries.

The purpose of this plan is to provide some guidelines for when air monitoring should be conducted. Air monitoring may be appropriate at more frequent intervals than indicated in this plan depending on Site-specific factors. Workers/Managers should use their professional judgment/common sense to adjust the sampling frequency so that it is appropriate for the site-specific situation.

During the Site-wide remediation at the former DuPont Works Site, DuPont, WA, large areas of arsenic and lead contaminated soil will be excavated. Workers may be exposed to lead and arsenic in the air that results from activities that generate airborne particulates. Extensive historical soil sampling indicated that the highest levels of arsenic and lead in Site soil were approaching 1,000 mg/kg and 10,000 mg/kg, respectively. Although these hot spot areas were removed during previous interim actions at the Site, it is possible that isolated high areas of contamination still remain.

The results of this air sampling program will be compiled and organized in a notebook at the Site field office using the forms (See Tables A-1, A-2, and A-3) so that all Site workers have access to the results. In addition, the results of the monitoring should be discussed at the morning daily health and safety meetings.

A.1.2 Section 2 – General Design Specifications

The objectives of the air sampling program are to:

- Quantify the level of exposure of workers to arsenic and lead in airborne dust;
- Quantify the amount of respirable particulate (i.e., PM_{10}) that may be transported into off-Site areas during excavation activities;
- Quantify the amount of arsenic and lead present in the PM_{10} samples;

- Compare the amount of arsenic and lead to appropriate health-based standards for both workers and off-site receptors.

The sampling approach for worker exposure monitoring and PM_{10} transport monitoring are described below.

A.1.3 Sampling Approach

The sampling plans, including the type and number of samples and the proposed locations for sampling, are described below.

A.1.4 Worker Exposure Monitoring

The procedures used for monitoring worker exposures will consist of collection of personal dust samples for analysis of arsenic and lead, and real-time measurement of airborne respirable particulate concentrations.

A.1.5 Personal Dust Samples

Personal air samples should be collected from those workers expected to receive the highest dust exposure (e.g., those working adjacent to an excavator). These data will be used to determine whether or not airborne arsenic and lead concentrations are below the Permissible Exposure Limit (PEL).

Personal air samples should be taken in the breathing zone of workers on the first day of the work week, during every week of excavation activities. It is recommended that one or two employees who are expected to receive the highest exposure be monitored. Samples will be collected to reflect an eight-hour exposure, and will be analyzed for both arsenic and lead.

A.1.6 Real-Time Air Monitoring

Realtime air monitoring should be conducted using a miniram (pDR-1000) in order to determine whether or not respirable particulate levels in the air are sufficiently low, so that the PEL for arsenic and lead will not be exceeded. The miniram should be used at the beginning the first week of field activities and the frequency of sampling should be determined based on the readings, changes in work patterns, or changes in soil conditions that potentially result in increased dust emissions.

Based on historical soil sampling results, the miniram concentration that would result in exposure to lead at the PEL is 5.0 mg/m^3. This assumes a soil concentration of 10,000 mg/kg lead, which is slightly higher than the maximum measured soil concentration known to be present on-Site. This level will also be protective for exposure to arsenic. To provide an additional margin of safety, it is recommended that continued measurements above 2.5 mg/m^3 result in Personal Protective Equipment (PPE) upgrade to Level C. This is the air concentration level that corresponds to one half of the PEL.

Monitoring should be conducted during heavy equipment operation (e.g., excavation of in-place soils). Readings should be taken at least every 15 minutes. If readings taken during the first day do not exceed 2.5 mg/m^3, sampling frequency can be reduced to sampling once every 15 minutes when the visible dust concentrations indicate that it is warranted.

A.1.7 PM10 Transport Monitoring

PM_{10} sampling will be performed to document the effectiveness of engineering controls in limiting off-Site migration of particulate during on-Site remediation work. Two PM_{10} samples will be collected each day. Samples will be collected on a 24-hour basis. At the start of the work shift in the morning, the PM_{10} samplers will be set up for the 24-hour day (the previous day's sample will be capped and sent for analysis).

The sequencing of excavation and prevailing wind direction will determine the specific sample locations. In general, the samplers will be located against the southwest boundary fence, which is the area on Site that is directly adjacent to off-Site development. PM_{10} monitoring will be conducted during excavation activities in Cleanup units 3, 4, and 5, because these are the only Units that are directly adjacent to off-Site development. The total excavation time in these units will be approximately three months (i.e. 90 days), which will result in a total of 180 (i.e., 90 x 2) samples.

All samples will be analyzed for PM_{10}, arsenic, and lead. To ensure that airborne particulates generated during remediation activities do not pose a threat to the general population who might work or live adjacent to the Site, measured concentrations of PM_{10} (particles with diameter of 10 micrometers or less, that are able to penetrate into lungs), arsenic, and lead will be compared to health-based concentrations. If PM_{10} concentrations approach regulatory levels of concern, engineering controls such as soil wetting will be increased to reduce particulate generation.

Table A-1 – Personal Air Monitoring Log

Date_____ Person Sampling_____

Sample Number: _____ Worker Sampled:_____

Morning	Afternoon
Pump #_____	Pump #_____
Pre-Sample Pump Flow Rate _____(L/min) Start Time_____ (hr:min)	Pre-Sample Pump Flow Rate _____(L/min) Start Time_____ (hr:min)
Post-Sample Pump Flow Rate _____ (L/min) End Time _____ (hr:min)	Post-Sample Pump Flow Rate _____ (L/min) End Time _____ (hr:min)
Average Pump Flow Rate _____(L/min) Sampling Duration___(mins)	Average Pump Flow Rate _____(L/min) Sampling Duration ___(mins)
Worker Activities During Sampling:	Worker Activities During Sampling:

Table A-2 – Real-Time Air Monitoring Log

Miniram Sampling Log

Date	Miniram Number	Activity Monitored	Person or Area Monitored	Time On	Time Off

Table A-3 – PM-10 Sampling Forms

Date_____ Person Sampling_____

PM_{10} Monitor Number_____ Sample Number _____

Time On _____ Filter Changed ☐

Time Off _____ Chart Recorder Changed ☐

Location of Monitor_____

PM_{10} Monitor Number_____ Sample Number _____

Time On _____ Filter Changed ☐

Time Off _____ Chart Recorder Changed ☐

Location of Monitor_____

PM_{10} Monitor Number_____ Sample Number _____

Time On _____ Filter Changed ☐

Time Off _____ Chart Recorder Changed ☐

Location of Monitor_____

APPENDIX B – WASHINGTON STATE WATER WELL CONSTRUCTION ACT

WAC 173-160-400 What are the minimum standards for resource protection wells and geotechnical soil borings? The following minimum standards will apply to all resource protection wells and geotechnical soil borings constructed in the state of Washington. It is the responsibility of the resource protection well operator, resource protection well contractor, and the property owner to take whatever measures are necessary to guard against waste and contamination of the ground water resource.

(1) It will be necessary in some cases to construct resource protection wells and geotechnical soil borings with additional requirements beyond the minimum standards.

(2) Nothing in this section limits the department's authority to approve comparable alternative specifications for construction as technology in the industry is developed, or new methods of construction become known to the department.

WAC 173-160-420 What are the general construction requirements for resource protection wells? (1) No resource protection well or soil boring excavation may be used for domestic, industrial, municipal, commercial, or agricultural purposes.

(2) No resource protection well or soil boring excavation may interconnect aquifers.

(3) Nested resource protection wells are prohibited.

(4) Cuttings, development water, and other investigation derived waste from resource protection well construction or geotechnical soil borings will be managed in a manner consistent with the intent and purposes of the Water Pollution Control Act, chapter 90.48 RCW, the Hazardous Waste Management Act, chapter 70.105 RCW, and implementing regulations.

(5) Well tagging:

(a) It will be the drillers' responsibility to place a well identification tag with a unique identification number on every resource protection well that is constructed or altered. Uncased geotechnical soil borings are exempt from the tagging requirements of this chapter.

(i) The alpha-numeric number will be recorded on the drilling report in the space provided.

(ii) The drillers will remove the well identification tag on all resource protection wells they decommission and will attach the tag to the decommissioning well report.

(b) It will be the well owners' responsibility to place a well identification tag with a unique identification number on every resource protection well they own and which was completed prior to the effective date of this regulation.

(i) Upon request, the department will furnish the well owner with a well tag and tagging instructions.

(ii) The well owners will tag their well(s) and submit a completed tagging report to the department.

(c) The well tag will be permanently attached to the outer well casing and be visible above land surface for all wells which have been completed above land surface. For wells completed below land surface, the well tag will be attached to the well casing or to any permanent and protected portion of the vault.

(d) All well identification tags will be supplied by the department.

(e) It is unlawful for a person to tamper with or remove a well identification tag except during well alteration.

(6) All resource protection wells will be sealed in accordance with this chapter regardless of

the method of installation. Except, resource protection wells that are properly decommissioned prior to the removal of any drilling equipment from the well location are exempted from the surface sealing requirements of this chapter. Provided the decommissioning process includes the removal of any conduit, tubing, probe, or other items inserted into the ground.

(7) All geotechnical soil borings will be decommissioned under the terms of this chapter.

(8) Except as provided in RCW 18.104.180, all construction, alteration, reconstruction, and decommissioning of resource protection wells and geotechnical soil borings will be done by an individual licensed under the provisions of chapter 173-162 WAC.

(9) A notice of intent to construct or decommission a resource protection well and a geotechnical soil boring will be filed with the department a minimum of seventy-two hours prior to initiating construction or decommissioning of the well(s) or boring(s). A fee must accompany each notice of intent to construct a resource protection well. The fee for constructing, altering, or reconstructing each resource protection well is forty dollars. Geotechnical soil borings are **EXEMPT** from all fees. Under some circumstances, it may be necessary to construct more resource protection wells or geotechnical soil borings than originally anticipated. When additional resource protection wells are constructed on a site for which a notice of intent and fee were submitted, a second notice and fee will be submitted within twenty-four hours after all wells have been completed or as soon as the final number of wells to be constructed is determined, whichever is sooner. When additional geotechnical soil borings are needed, the borings may be completed. A follow-up notice of intent will be submitted to the department within twenty-four hours after all borings are constructed. Notification to construct multiple wells or geotechnical soil borings within the same quarter/quarter section, township, and range may be submitted on one notice form. A fee of forty dollars per well must be attached to each notice. Example: Six resource protection wells identified on one notice of intent would be submitted along with a two hundred forty dollar fee.

(10) Resource protection well and geotechnical soil boring drilling reports will be completed.

(a) All well contractors are required to submit a complete report on the construction, alteration, or decommissioning of all resource protection wells and geotechnical soil borings they construct. Reports must be submitted to the department within thirty days after completion of construction, alteration, or decommissioning.

(b) This applies to all resource protection wells and geotechnical soil borings.

(c) The resource protection well and geotechnical soil boring report must be made on a form provided by the department, or a reasonable facsimile of the form, as approved by the department.

(d) Where applicable the report will include the following information:

(i) Owner's name; operator/trainee name; operator/trainee license number; contractor registration number, drilling company name;

(ii) Tax parcel number;

(iii) Well location address;

(iv) Location of the well to at least 1/4, 1/4 section or smallest legal subdivision;

(v) Unique well identification tag number;

(vi) Construction date;

(vii) Start notification number;

(viii) Intended use of well;

(ix) The well depth, diameter, and general specifications of each well;

(x) Total depth of casing;

(xi) Well head elevation;

(xii) Drilling method;

(xiii) Seal material, seal location and type of placement used;

(xiv) Filter pack location; filter pack material used;

(xv) The thickness and character of each bed, stratum or formation penetrated by each well including identification of each water bearing zone;

(xvi) Casing gauge, diameter, stickup, type of material, and length, also of each screened interval or perforated zone in the casing;

(xvii) The depth to the static water level, as measured below the land surface; and

(xviii) Such additional factual information as may be required by the department.

(e) The well report must show the license number and signature of the person who constructed the well. If this is an unlicensed person, exempted under RCW 18.104.180(2), the report will show the license number and signature of the licensed individual who witnessed the drilling. Resource protection well reports for wells constructed by trainees will have the signatures and license numbers of both the trainee and licensed operator.

What are the surface protection requirements?

(11) All resource protection wells will be capped and protected using one of the following methods:

(a) If the well is cased with metal and completed above the ground surface, you must attach a watertight cap with a lock to the top of the casing.

(b) If the well is not cased with metal and completed above the land surface, you must install a protective metal casing over and around the well. The protective casing will extend at least six inches above the top of the well casing and be cemented at least two feet into the ground. A cap with lock will be attached to the top of the protective casing.

(12) You will protect the well(s) completed above ground from damage by:

(a) Cementing three metal posts, at least three inches in diameter, in a triangular array around the casing and at least two feet from it. Each post will extend at least three feet above and below the land surface.

(b) Installilng a reinforced concrete pad to protect against and prevent frost heave. If installed, the concrete pad will extend to a depth equal to anticipated frost depth. When a concrete pad is used, the well seal may be part of the concrete pad.

(13) If the well is completed below land surface, a watertight cap with a lock will be attached to the top of the well casing. A metal monument or equivalent will be installed over and around the well. The monument will serve as a protective cover and be installed level with the land surface and be equipped with a waterproof seal to prevent the inflow of any water or contaminants. Drains will be provided, when feasible, to keep water out of the well and below the well cap. The cover must be designed to withstand the maximum expected loading.

(14) The protective measures may be waived or modified upon written approval from the department (a variance).

(15) If the well is damaged, the well protection measures and casing will be repaired to meet the requirements of this chapter. If the well is damaged beyond repair, it will be decommissioned in accordance with WAC 173-160-460.

WAC 173-160-430 What are the minimum casing standards? The casing may not affect or interfere with the chemical, physical, radiological, or biological constituents of interest. All

resource protection well casing will conform to ASTM Standards, or at least 304 or 316 stainless steel, PTFE, or Schedule 40 PVC casing.

WAC 173-160-440 What are the equipment cleaning standards? (1) When drilling in known or potential areas of contamination, steam clean the drill rig derrick and all drilling equipment on site before and after well construction. If the equipment is used to drill in radioactive areas, you must develop a decontamination plan and the department must approve that plan prior to the equipment being removed from the drill site.

(2) All well construction materials to include casing, screen(s), and filter pack material must be free of contaminants prior to installation.

WAC 173-160-450 What are the well sealing requirements? (1) All resource protection wells constructed will have a continuous seal, which seals the annular space between the bore hole and the permanent casing. The seal will be constructed to prevent interconnection of separate aquifers penetrated by the well, and will provide casing stability. The seal will have a minimum diameter of four inches larger than the nominal size of the permanent casing, and will extend from land surface to the top of the filter pack. See Figure 7.

(2) After the permanent casing has been set in final position, the filter pack (optional) and sealing material will be placed in the open bore hole annular space that must be a minimum of four inches greater in diameter than the nominal size of the permanent casing. After installing the filter pack (optional) a layer of bentonite will be placed on top of the filter pack to maintain separation between the seal material and the screened interval. Insure that placement will not disturb the filter pack. The remaining annular space will be filled to land surface in a continuous operation with bentonite, neat cement, or cement grout. If a cement/bentonite slurry is used as the sealant, it will be installed with a tremmie tube and pumped from the top of the bentonite plug (above the filter pack) to land surface. Use only potable water to hydrate the mixture.

(3) The completed annular space will fully surround the permanent casing, be evenly distributed, free of voids, and extend from the permanent casing to undisturbed or recompacted soil.

(4) All sealing materials used will conform to one of the following minimum requirements:

(a) **Bentonite sealants:**

(i) Bentonite used to prepare slurries for sealing, or decommissioning will be specifically designed for this purpose. At no time will grout slurry contain materials that are toxic, polluting, develop odor or color changes, or serve as a micro-bacterial nutrient. All bentonite slurries will be prepared and installed according to the manufacturer's instructions. All additives must be certified by a recognized certification authority such as NSF. Active solids content (bentonite) will be twenty percent by weight or greater in all bentonite slurries.

(ii) Unhydrated bentonite--pelletized, granulated, powder, or chip bentonite may be used in the construction of seals or in decommissioning of resource protection wells. The bentonite material will be specifically designed for sealing or decommissioning and be within the industry tolerances for dry western sodium bentonite. Polymer additives must be designed and manufactured to meet industry standards to be nondegrading and must not act as a medium which will support or promote the growth of micro-organisms. All unhydrated bentonite used for sealing or decommissioning must be free of organic polymers. Placement of bentonite will conform to the manufacturer's specifications and result in a seal free of voids or bridges.

(b) **Cement sealants:**

(i) Neat cement consists of either portland cement types I, II, III, or high-alumina cement mixed with not more than six gallons of potable water per sack of cement (ninety-four pounds per sack).

(ii) Neat cement grout consists of neat cement with up to five percent bentonite clay added, by dry weight of the bentonite. Bentonite is to be added to improve flow qualities and compensate for shrinkage.

(iii) Concrete sealants consist of clean, hard and durable aggregate with not less than five sacks (ninety-four pounds per sack) of portland cement per cubic yard of concrete sealant.

(A) The maximum diameter of aggregate particles may not exceed 1 1/2 inches, but in any case may not exceed 1/5 the minimum width of the casing thickness.

(B) The ratio of coarse aggregate to fine aggregate (passing No. 4 U.S. Standard Sieve) must be approximately 1-1/2 to 1 by volume, but in any case, may not exceed 2 to 1 nor be less than 1 to 2.

(iv) Expanding agents, such as aluminum powder, may be used at a rate not exceeding 0.075 ounce (1 level teaspoon) per sack (ninety-four pounds per sack) of dry cement. The powder may not contain polishing agents. High-alumina cement and portland cement of any type must not be mixed together.

(5) This section may not preclude the use of new sealant materials which have been approved by the technical advisory group.

WAC 173-160-460 What is the decommissioning process for resource protection wells? (1) Resource protection wells that were not constructed in accordance with these regulations, or for which a drilling report required under this section is missing, will be decommissioned in one of the following ways:

(a) Perforate the casing from the bottom to land surface and pressure grout the casing.

(i) Perforations will be at least four equidistant cuts per row, and one row per foot. Each cut will be at least one and one-half inches long.

(ii) Apply enough pressure to force the sealing material through the perforations, filling any voids on the outside of the casing.

(iii) The remainder of the casing will be filled with cement grout, neat cement, or bentonite slurry.

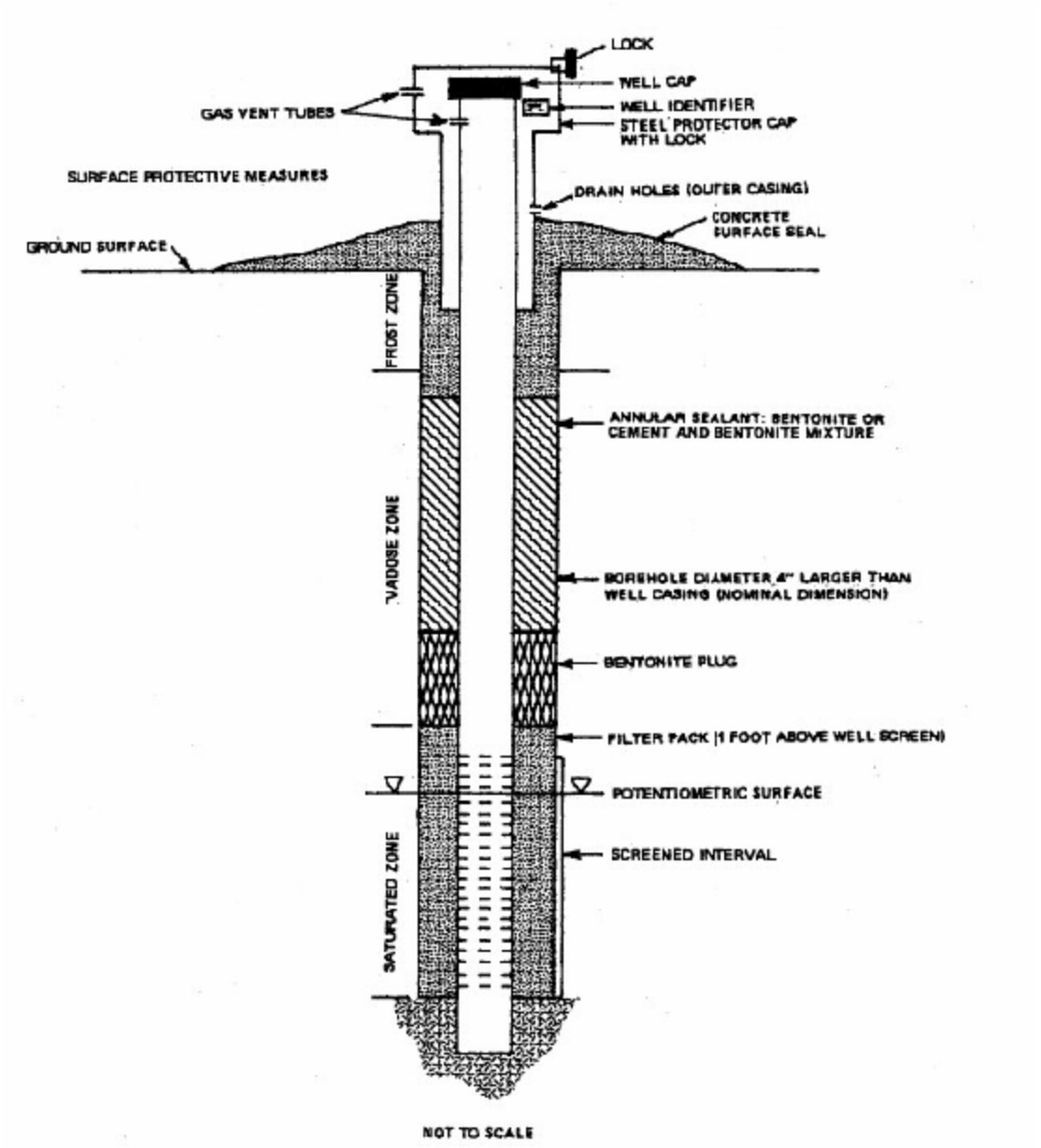
(b) Withdraw the casing and fill the bore hole with cement grout, neat cement, or bentonite as the casing is being withdrawn.

(2) If it can be verified through a field examination and review of the drilling report that the resource protection well was constructed in accordance with these regulations, it will be decommissioned by:

(a) Filling the casing from bottom to land surface with bentonite, cement grout, or neat cement; and

(b) Placing a cap on the casing.

Figure B-1 – General Resource Protection Well – Cross Section



[Statutory Authority: Chapter 18.104 RCW. 98–18–104 (Order 98–17), § 173–160–990, filed 9/2/98, effective 10/3/98. Statutory Authority: Chapter 18.104 RCW and RCW 43.21A.090. 98–08–032 (Order 97–09), § 173–160–990, filed 3/23/98, effective 4/23/98.]

Chapter 173-160 WAC
Ecology Edition

Hart Crowser
J-1747-64

INTERIM SOURCE REMOVAL MEMORANDUM
AREA 8 PIPELINE AND FORMER ABOVE-GROUND STORAGE TANKS
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON

Dupont Environmental Remediation Services (DERS) conducted interim source removal activities along the former Bunker-C pipeline and in the former above-ground storage tanks (AST) area. The pipeline carried Bunker-C fuel to the ASTs and to the upper powerhouse. Olympus Environmental Services provided excavation services during this work. The activities at the site are detailed in DERS' **Source Removal Work Plan - Area 8**, dated September 16, 1991.

Hart Crowser provided technical assistance and field oversight to DERS during the interim source removal activities. We conducted soil verification sampling and analysis to characterize the subgrades after source removal and soil designation sampling and analysis to characterize Area 8 stockpiles relative to Washington State solid waste and dangerous waste regulations. A detailed discussion of Hart Crowser's scope of work is presented in the **Oversight Work Plan - Area 8**, dated October 29, 1991.

Summary of Activities

DERS removed approximately 29,100 cubic yards (excavated) of soils from the pipeline and former AST locations between January 1992 and August 1993. Of this amount approximately 18,000 cubic yards have been or will be sent to Woodworth & Company in Tacoma, Washington, for recycling and the remaining "clean soil" will be used as site backfill material following approval by the Washington State Department of Ecology (Ecology). The Bunker-C pipeline sections along the level portion of the pipeline were removed, steam cleaned, and disposed of off site at Chemical Waste Management's hazardous waste landfill in Arlington, Oregon. The lead packing in the pipe joints was removed and is currently awaiting disposal. In June 1992, residual product from the sloped section of the pipeline was drained into 55-gallon drums. The pipeline was cleaned and grout-filled for abandonment in place. A total of forty 55-gallon drums of residual Bunker C product and cleaning waters were disposed of by incineration at the OSCO facility in Henderson, Colorado.

Hart Crowser provided field documentation of the daily activities in the form of daily field reports.

Summary of Analytical Results

Prior to source removal, we collected soil characterization samples from 11 test pits, 3 borings, and 4 surface locations along the pipeline and AST area to characterize the extent of petroleum-impacted soils. The samples were analyzed for total petroleum by method 418.1 and selected samples were tested for PAHs, total lead, volatiles (methods 8015 and 8240), and semivolatiles. Characterization sample locations are presented on Figure 1. Chemical analytical results for the initial soil characterization are presented in Tables 1, 2, and 3.

Following interim source removal excavation activities, we collected 24 verification soil samples along the former pipeline and 24 verification soil samples from the former AST location. The pipeline and AST sample locations are shown on Figures 2 and 3, respectively. Pipeline and AST analytical data for the verification soil samples are presented in Tables 4 and 5, respectively. The verification soil samples were analyzed for TPH by Method 418.1 at either the Hart Crowser Chemistry Laboratory or Analytical Technologies, Inc. Selected soil samples were analyzed for cPAH based on an evaluation of TPH results.

Nine verification soil samples were collected along the Bunker C pipeline to evaluate the potential leachability of soils with elevated TPH concentrations. Selected samples were analyzed for toxicity characteristic leaching procedure (TCLP) cPAH and TCLP TPH. The TCLP analytical data are presented in Table 6. TCLP verification sample locations are presented on Figures 2 and 3.

Forty-seven soil samples were collected from Area 8 soil stockpiles for designation analysis. Soil designation analytical results are presented in Tables 7, 8, 9, and 10. Analytical results for six samples (8-DS-26 through 8-DS-29, 8-DS-31, and 8-DS-44) did not exceed 200 mg/kg TPH. Stockpiles represented by these six samples remain on site. The other stockpiles whose analytical results exceeded 200 mg/kg TPH are currently being shipped off site to Woodward and Company for recycling.

Considerations

Analysis of the data from the final verification soil sampling indicates that the pipeline and AST areas have met the 570 mg/kg TPH concentration that correlates to 1 ppm cPAH at the 90th percentile confidence interval, for soils above depths of 15 feet, and the 11,000 mg/kg non-leachable TPH concentration for soils below depths of 15 feet, indicating that no further interim source removal action is required.

The remaining site soil stockpiles from Area 8, which based on 6 samples are below 200 mg/kg, are being considered for use as clean backfill material, following approval by Ecology.

arealpip.ism

Attachments:

Table 1 - Soil Characterization Test Pit, Boring, and Surface Samples Analytical Results - Area 8

Table 2 - Soil Characterization Test Pit and Surface Samples Analytical Results - Area 8 - Bunker "C" Pipeline

Table 3 - Soil Characterization Boring Samples Analytical Results - Area 8 - Bunker "C" Pipeline

Table 4 - Soil Verification Analytical Results (TPH) - Area 8 - Bunker "C" Pipeline

Table 5 - Soil Verification Analytical Results (TPH) - Area 8 - Former AST Location

Table 6 - Summary of Soil Petroleum Hydrocarbon TCLP Analytical Results - Area 8

Table 7 - Stockpile Soil Designation Analytical Results (TPH and Lead) - Area 8

Table 8 - Stockpile Soil Designation Analytical Results (TPH, Lead, and PAHs) - Area 8

Table 9 - Stockpile Soil Designation Analytical Results - Area 8

Table 10 - Stockpile Soil Designation Analytical Results - Area 8

Figure 1 - Characterization Test Pit, Boring, and Surface Sampling Location Plan - Area 8 - Bunker C Pipeline

Figure 2 - Interim Source Removal Verification Soil Sampling Location Plan - Area 8 - Bunker C Pipeline and AST

Figure 3 - Interim Source Removal Excavation and Verification Sampling Location Plan - Area 8 - Former AST Area

Hart Crowser
J-1747-64

Table 1 – Soil Characterization Test Pit, Boring, and Surface Samples
Analytical Results – Area 8
Former DuPont Works Site

Sample ID:	Sample Date	Depth in Feet	418.1 in mg/kg	8015 Analyses: Bunker C in mg/kg	Oil in mg/kg	Diesel/Fuel in mg/kg	Unknown in mg/kg
8-TPS-01	—	—	NC	NC	NC	NC	--
8-TPS-02-S-1	1/30/92	17	NA	10 U	10 U	10 U	--
8-TPS-03							
S-5 (1) (2)	1/28/92	5	3,400	2,700	10 U	10 U	1,900
S-6 (1) (2)	1/30/92	9	NA	3,300	10 U	10 U	1,700
S-7 (1) (2)	1/28/92	13	13,000	4,800	10 U	10 U	6,100
S-8 (1) (2)	1/30/92	12	NA	2,300	10 U	10 U	1,900
S-9 (1) (2)	1/28/92	12	NA	10 U	10 U	10 U	--
S-10 (1)	1/28/92	16	29	10 U	10 U	10 U	--
8-TPS-04-S-1	1/31/92	15	NA	10 U	3,000	1,000	—
8-TPS-04-S-2	1/31/92	17	NA	10 U	2,100	660	—
8-TP5-S1 (2)	5/12/92	4	130,000	NA	NA	NA	—
8-TP5-S-2 (2)	5/12/92	15	3,000	NA	NA	NA	—
8-TP5-S-3 (2)	5/12/92	7	25 U	NA	NA	NA	—
8-TP5-S-4 (2)	5/12/92	20	360	NA	NA	NA	—
8-TP6-S1 (2)	5/28/92	4	74,000	NA	NA	NA	—
8-TP6-S2 (2)	5/28/92	13	12,000	NA	NA	NA	--
8-TP6-S3 (2)	5/28/92	4	330	NA	NA	NA	--
8-TP6-S4 (2)	5/28/92	17	13,000	NA	NA	NA	—
8-TP7 S-1 (2)	5/27/92	2	17,000	NA	NA	NA	—
8-TP7 S-2 (2)	5/27/92	12	11,000	NA	NA	NA	—
8-TP7 S-3 (2)	5/27/92	11	110	NA	NA	NA	—
8-TP7 S-4	5/27/92	19	1,400	NA	NA	NA	—
8-TP8-S1 (2)	5/28/92	8	26,000	NA	NA	NA	—
8-TP8-S2 (2)	5/28/92	14	4,800	NA	NA	NA	—
8-TP8-S2 D (2)	5/28/92	14	7,000	NA	NA	NA	—
8-TP8-S3 (2)	5/28/92	2	25 U	NA	NA	NA	—
8-TP8-S4 (2)	5/28/92	7	4,800	NA	NA	NA	—
8-TP9 S-1 (2)	5/27/92	6	63	10 U	10 U	10 U	--
8-TP9 S-2 (2)	5/27/92	7	47	NA	NA	NA	--
8-TP9 S-3 (2)	5/27/92	9	30	NA	NA	NA	--
8-TP9 S-4 (2)	5/27/92	15	77	NA	NA	NA	--
8-TP10 S-1 (2)	5/27/92	5	25 U	10 U	10 U	10 U	--
8-TP10 S-2 (2)	5/27/92	7	25 U	NA	NA	NA	—
8-TP10 S-3 (2)	5/27/92	7	25 U	NA	NA	NA	—
8-TP10 S-4	5/27/92	15	94	NA	NA	NA	--

Hart Crowser
J-1747-64

Table 1 – Soil Characterization Test Pit, Boring, and Surface Samples
Analytical Results – Area 8
Former DuPont Works Site

Sample ID:	Sample Date	Depth in Feet	418.1 in mg/kg	8015 Analyses			
				Bunker C in mg/kg	Oil in mg/kg	Diesel/Fuel in mg/kg	Unknown in mg/kg
8-TP11 S-1 (2)	5/26/92	3	80	10 U	10 U	10 U	--
8-TP11 S-2 (2)	5/26/92	5	80	NA	NA	NA	--
8-TP11 S-3 (2)	5/26/92	7	47	NA	NA	NA	--
8-TP11 S-4 (2)	5/26/92	15	63	NA	NA	NA	--
8-TP12 S-1 (2)	5/26/92	5	29,000	9,100	10 U	10 U	--
8-TP12 S-2 (2)	5/26/92	3	120	NA	NA	NA	--
8-TP12 S-3 (2)	5/26/92	11	29	NA	NA	NA	--
8-TP12 S-4 (2)	5/26/92	14	10,000	NA	NA	NA	--
8-TP12 S-4D (2)	5/26/92	14	7,700	NA	NA	NA	--
8-BS-1-S2 (2)	6/09/92	7.5-8.4	12,000	10 U	2,900	980	--
8-BS-1-S3 (2)	6/09/92	12.5-14	1,900	NA	NA	NA	--
8-BS-1-S4	6/09/92	17.5-19	2,800	NA	NA	NA	--
8-BS-1-S7	6/09/92	32.5-34	2,400	10 U	880	240	--
8-BS-2-S2 (2)	6/09/92	12.5-14	25 U	NA	NA	NA	--
8-BS-2-S4	6/09/92	22.5-24	25 U	NA	NA	NA	--
8-BS-3-S1 (2)	6/10/92	7.5-9	71	NA	NA	NA	--
8-BS-3-S3	6/10/92	17.5-19	150	NA	NA	NA	--
8-BS-3-S5	6/10/92	27.5-29	25 U	NA	NA	NA	--
S-1 (2)	1/15/92	5	34	NA	NA	NA	--
S-2 (2)	1/15/92	5.5	1,400	NA	NA	NA	--
S-3 (2)	1/17/92	8	25 U	NA	NA	NA	--
S-4 (2)	1/17/92	8	25 U	NA	NA	NA	--

Notes:

U Not detected at indicated detection limit.

NA Not analyzed.

NC Sample not collected.

(1) Sample collected from Test Pit 8-TPS-03.

(2) Sample locations excavated during subsequent source removal.

Hart Crowser
J-1747-64

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-TP5 S-2 (c)	8-TP5 S-4 (c)	8-TP6 S-2 (c)	8-TP6 S-3 (c)	8-TP6 S-4 (c)	8-TP7 S-2 (c)
Sample Date:	5/14/92	5/12/92	5/28/92	5/28/92	5/28/92	5/29/92
Total Lead in mg/kg (ppm)	NA	NA	NA	NA	NA	NA
8015 mg/kg (ppm)						
Bunker C	NA	NA	NA	NA	NA	NA
Diesel/Fuel Oil #2	NA	NA	NA	NA	NA	NA
Oil	NA	NA	NA	NA	NA	NA
Unknown						
TPH 418.1 in mg/kg (ppm)	3,000	360	12,000	330	13,000	11,000
ncPAHs in mg/kg (ppm)						
Naphthalene	0.091 UJ	0.087 UJ	0.89 U	0.091 U	0.092 U	0.91 U
Acenaphthylene	0.18 UJ	0.17 UJ	1.8 U	0.18 U	0.18 U	1.8 U
Acenaphthene	0.18 UJ	0.17 UJ	1.8 U	0.18 U	0.18 U	1.8 U
Fluorene	0.080 J	0.040 J	0.18 U	0.018 U	0.11	0.18 U
Phenanthrene	0.20 J	0.11 J	0.44	0.0091 U	0.28	0.86
Anthracene	0.0091 UJ	0.087 UJ	0.089 U	0.0091 U	0.0092 U	0.091 U
Fluoranthene	0.018 UJ	0.17 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Pyrene	0.018 UJ	0.17 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Benzo(g,h,i)perylene	0.24 J	0.087 J	1.1	0.018 U	0.51	1.0
Total ncPAHs (a)	0.52 J	0.237 J	1.54	0	0.9	1.86
cPAHs in mg/kg (ppm)						
Benzo(a)anthracene	0.018 UJ	0.017 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Chrysene	0.018 UJ	0.017 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Benzo(b)fluoranthene	0.018 UJ	0.017 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Benzo(k)fluoranthene	0.018 UJ	0.017 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Benzo(a)pyrene	0.096 J	0.066 J	0.18 U	0.018 U	0.018 U	0.18 U
Dibenzo(a,h)anthracene	0.037 UJ	0.036 UJ	0.36 U	0.037 U	0.038 U	0.37 U
Ideno(1,2,3,c,d)pyrene	0.018 UJ	0.017 UJ	0.18 U	0.018 U	0.018 U	0.18 U
Total cPAHs (a)	0.096 J	0.066 J	0	0	0	0
Total cPAHs (b)	0.1595 J	0.1265 J	0.72 U	0.0725 U	0.073 U	0.725 U

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-TP5 S-2 (e)	8-TP5 S-4 (e)	8-TP6 S-2 (e)	8-TP6 S-3 (e)	8-TP6 S-4 (e)	8-TP7 S-2 (e)
Sample Date:	5/14/92	5/12/92	5/28/92	5/28/92	5/28/92	5/29/92
Semivolatiles (8270) in mg/kg (ppm) (c)						
2-Methylnaphthalene	NA	NA	1.5 J	NA	NA	2.0 J
Acenaphthene	NA	NA	1.8 U	NA	NA	4.5 U
Fluorene	NA	NA	0.45 J	NA	NA	4.5 U
Phenanthrene	NA	NA	1.2 J	NA	NA	1.7 J
Anthracene	NA	NA	0.53 J	NA	NA	4.5 U
Fluoranthene	NA	NA	1.8 U	NA	NA	4.5 U
Pyrene	NA	NA	1.3 J	NA	NA	4.5 U
Benzo(a)Anthracene	NA	NA	0.47 J	NA	NA	4.5 U
Chrysene	NA	NA	1.1 J	NA	NA	4.5 U
Benzo(b)Fluoranthene	NA	NA	1.8 U	NA	NA	4.5 U
Benzo(a)Pyrene	NA	NA	1.8 U	NA	NA	4.5 U
Benzo(g,h,i)Perylene	NA	NA	1.8 U	NA	NA	4.5 U
Volatiles in mg/kg (ppm)	NA	NA	NA	NA	NA	NA

AREA8ALL.WK1/CLE

Notes:

U	Not detected at indicated detection limit.
J	Estimated value.
NA	Not analyzed.
ND	Not detected.
(a)	Total represents the sum of detected values only.
(b)	Total includes one-half the detection limit of non-detected compounds.
(c)	Only those compounds detected are listed.
(d)	Pyrene and chrysene were detected in semivolatile (8270) analysis but were not detected in PAH (8310) analysis. This was due to the interference of high hydrocarbon concentrations in the sample. The hydrocarbon interference resulted in the target peaks shift out of the retention time windows. However, the mass spectrometer can still identify the peaks. Therefore, the GC/MS results should be used. (PAHs are analyzed by HPLC method and semivolatiles are analyzed by GC/MS method.)
(e)	Sample locations excavated during subsequent source removal.

Table 2 – Soil Characterization
Test Pit and Surface Samples
Analytical Results –
Area 8 – Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-TP7 S-4	8-TP8 S-1 (d)(e)	8-TP8 S-2 (e)	8-TP12 S-1 (e)	8-TP12 S-4 (e)	S-1 (e)
Sample Date:	5/27/92	5/28/92	5/28/92	5/26/92	5/26/92	1/15/92
Total Lead in mg/kg (ppm)	NA	NA	NA	NA	NA	5 U
8015 mg/kg (ppm)						
Bunker C	NA	NA	NA	9,100	NA	NA
Diesel/Fuel Oil #2	NA	NA	NA	10 U	NA	NA
Oil	NA	NA	NA	10 U	NA	NA
Unknown						
TPH 418.1 in mg/kg (ppm)	1,400	26,000	4,800	29,000	10,000	34
ncPAHs in mg/kg (ppm)						
Naphthalene	0.088 U	1.8 UJ	0.092 U	0.92 U	0.90 U	NA
Acenaphthylene	0.18 U	3.7 UJ	0.18 U	1.8 U	1.8 U	NA
Acenaphthene	0.18 U	3.7 UJ	0.18 U	1.8 U	1.8 U	NA
Fluorene	0.018 U	0.37 UJ	0.048	0.18 U	0.18 U	NA
Phenanthrene	0.0088 U	1.8 J	0.25	0.092 U	0.090 U	NA
Anthracene	0.0088 U	0.18 UJ	0.0092 U	0.092 U	0.090 U	NA
Fluoranthene	0.018 U	0.37 UJ	0.018 U	0.18 U	0.18 U	NA
Pyrene	0.018 U	0.37 UJ(d)	0.18 U	0.18 U	0.18 U	NA
Benzo(g,h,i)perylene	0.14	3.2 J	0.62	1.6	1.9	NA
Total ncPAHs (a)	0.14	5 J	0.918	1.6	1.9	NA
cPAHs in mg/kg (ppm)						
Benzo(a)anthracene	0.018	0.37 UJ	0.018 U	0.18 U	0.18 U	NA
Chrysene	0.018 U	0.37 UJ(d)	0.018 U	0.18 U	0.18 U	NA
Benzo(b)fluoranthene	0.18 U	1.3 J	0.018 U	0.18 U	0.18	NA
Benzo(k)fluoranthene	0.018 U	0.37 UJ	0.018 U	0.18 U	0.18 U	NA
Benzo(a)pyrene	0.18 U	2.4 J	0.018 U	0.18 U	0.18 U	NA
Dibenzo(a,h)anthracene	0.036 U	0.75 UJ	0.038 U	0.38 U	0.37 U	NA
Ideno(1,2,3,c,d)pyrene	0.018 U	0.37 UJ	0.018 U	0.18 U	0.18 U	NA
Total cPAHs (a)	0.018	3.7 J	0	0	0.18	NA
Total cPAHs (b)	0.243	4.815 J	0.073 U	0.73 U	0.815	NA

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-TP7 S-4	8-TP8 S-1 (d)(e)	8-TP8 S-2 (c)	8-TP12 S-1 (c)	8-TP12 S-4 (c)	S-1 (e)
Sample Date:	5/27/92	5/28/92	5/28/92	5/26/92	5/26/92	1/15/92
Semivolatiles (8270) in mg/kg (ppm) (c)						
2-Methylnaphthalene	NA	3.7 J	NA	NA	1.8 U	NA
Acenaphthene	NA	1.3 J	NA	NA	1.8 U	NA
Fluorene	NA	1.7 J	NA	NA	1.8 U	NA
Phenanthrene	NA	7.4	NA	NA	1.8 U	NA
Anthracene	NA	1.8 J	NA	NA	1.8 U	NA
Fluoranthene	NA	1.9 J	NA	NA	1.8 U	NA
Pyrene	NA	11 (d)	NA	NA	1.8 U	NA
Benzo(a)Anthracene	NA	4.2 J	NA	NA	1.8 U	NA
Chrysene	NA	9.7 (d)	NA	NA	1.8 U	NA
Benzo(b)Fluoranthene	NA	2.4 J	NA	NA	1.8 U	NA
Benzo(a)Pyrene	NA	5.3	NA	NA	1.8 U	NA
Benzo(g,h,i)Perylene	NA	3.4 J	NA	NA	1.8 U	NA
Volatiles in mg/kg (ppm)	NA	NA	NA	NA	NA	NA

AREA8ALL.WK1/CLK

Notes:

U	Not detected at indicated detection limit.
J	Estimated value.
NA	Not analyzed.
ND	Not detected.
(a)	Total represents the sum of detected values only.
(b)	Total includes one-half the detection limit of non-detected compounds.
(c)	Only those compounds detected are listed.
(d)	Pyrene and chrysene were detected in semivolatile (8270) analysis but were not detected in PAH (8310) analysis. This was due to the interference of high hydrocarbon concentrations in the sample. The hydrocarbon interference resulted in the target peaks shift out of the retention time windows. However, the mass spectrometer can still identify the peaks. Therefore, the GC/MS results should be used. (PAHs are analyzed by HPLC method and semivolatiles are analyzed by GC/MS method.)
(e)	Sample locations excavated during subsequent source removal.

Hart Crowser
J-1747-64

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	S-2 (e)	S-3 (e)	S-4 (e)	8-TPS-02 S-1	8-TPS-03 S-5 (e)	8-TPS-03 S-6 (e)
Sample Date:	1/15/92	1/17/92	1/17/92	1/30/92	1/30/92	1/30/92
Total Lead in mg/kg (ppm)	5 U	NA	NA	NA	8	NA
8015 mg/kg (ppm)						
Bunker C	NA	NA	NA	10 U	2,700	3,300
Diesel/Fuel Oil #2	NA	NA	NA	10 U	10 U	10 U
Oil	NA	NA	NA	10 U	10 U	10 U
Unknown					1,900	1,700
TPH 418.1 in mg/kg (ppm)	1,400	25 U	25 U	NA	3,400	NA
ncPAHs in mg/kg (ppm)						
Naphthalene	NA	NA	NA	NA	1.9 UJ	NA
Acenaphthylene	NA	NA	NA	NA	3.7 UJ	NA
Acenaphthene	NA	NA	NA	NA	3.7 UJ	NA
Fluorene	NA	NA	NA	NA	0.37 UJ	NA
Phenanthrene	NA	NA	NA	NA	0.33 J	NA
Anthracene	NA	NA	NA	NA	0.073 J	NA
Fluoranthene	NA	NA	NA	NA	0.37 UJ	NA
Pyrene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	0.62 J	NA
Total ncPAHs (a)	NA	NA	NA	NA	1.023 J	NA
cPAHs in mg/kg (ppm)						
Benzo(a)anthracene	NA	NA	NA	NA	0.37 UJ	NA
Chrysene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(a)pyrene	NA	NA	NA	NA	0.37 UJ	NA
Dibenzo(a,h)anthracene	NA	NA	NA	NA	0.74 UJ	NA
Ideno(1,2,3,c,d)pyrene	NA	NA	NA	NA	1.6 J	NA
Total cPAHs (a)	NA	NA	NA	NA	1.6 J	NA
Total cPAHs (b)	NA	NA	NA	NA	2.90 J	NA

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	S-2 (e)	S-3 (e)	S-4 (e)	8-TPS-02 S-1	8-TPS-03 S-5 (c)	8-TPS-03 S-6 (e)
Sample Date:	1/15/92	1/17/92	1/17/92	1/30/92	1/30/92	1/30/92
Total Lead in mg/kg (ppm)	5 U	NA	NA	NA	8	NA
8015 mg/kg (ppm)						
Bunker C	NA	NA	NA	10 U	2,700	3,300
Diesel/Fuel Oil #2	NA	NA	NA	10 U	10 U	10 U
Oil	NA	NA	NA	10 U	10 U	10 U
Unknown					1,900	1,700
TPH 418.1 in mg/kg (ppm)	1,400	25 U	25 U	NA	3,400	NA
ncPAHs in mg/kg (ppm)						
Naphthalene	NA	NA	NA	NA	1.9 UJ	NA
Acenaphthylene	NA	NA	NA	NA	3.7 UJ	NA
Acenaphthene	NA	NA	NA	NA	3.7 UJ	NA
Fluorene	NA	NA	NA	NA	0.37 UJ	NA
Phenanthrene	NA	NA	NA	NA	0.33 J	NA
Anthracene	NA	NA	NA	NA	0.073 J	NA
Fluoranthene	NA	NA	NA	NA	0.37 UJ	NA
Pyrene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	0.62 J	NA
Total ncPAHs (a)	NA	NA	NA	NA	1.023 J	NA
cPAHs in mg/kg (ppm)						
Benzo(a)anthracene	NA	NA	NA	NA	0.37 UJ	NA
Chrysene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	0.37 UJ	NA
Benzo(a)pyrene	NA	NA	NA	NA	0.37 UJ	NA
Dibenzo(a,h)anthracene	NA	NA	NA	NA	0.74 UJ	NA
Ideno(1,2,3,c,d)pyrene	NA	NA	NA	NA	1.6 J	NA
Total cPAHs (a)	NA	NA	NA	NA	1.6 J	NA
Total cPAHs (b)	NA	NA	NA	NA	2.90 J	NA

Table 2 – Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 – Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	S-2 (c)	S-3 (c)	S-4 (c)	8-TPS-02 S-1	8-TPS-03 S-5 (c)	8-TPS-03 S-6 (c)
Sample Date:	1/15/92	1/17/92	1/14/92	1/30/92	1/30/92	1/30/92
Semivolatiles (8270) in mg/kg (ppm) (c)						
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA
Benzo(b)Fluoranthene	NA	NA	NA	NA	NA	NA
Benzo(a)Pyrene	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)Perylene	NA	NA	NA	NA	NA	NA
Volatiles in mg/kg (ppm)	NA	NA	NA	NA	NA	NA

AREA8ALL.WK1/CLK

Notes:

U	Not detected at indicated detection limit.
J	Estimated value.
NA	Not analyzed.
ND	Not detected.
(a)	Total represents the sum of detected values only.
(b)	Total includes one-half the detection limit of non-detected compounds.
(c)	Only those compounds detected are listed.
(d)	Pyrene and chrysene were detected in semivolatile (8270) analysis but were not detected in PAH (8310) analysis. This was due to the interference of high hydrocarbon concentrations in the sample. The hydrocarbon interference resulted in the target peaks shift out of the retention time windows. However, the mass spectrometer can still identify the peaks. Therefore, the GC/MS results should be used. (PAHs are analyzed by HPLC method and semivolatiles are analyzed by GC/MS method.)
(e)	Sample locations excavated during subsequent source removal.

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-TPS-03 S-7 (c)	8-TPS-03 S-8 (c)	8-TPS-03 S-9 (c)	8-TPS-03 S-10	8-TPS-04 S-1	8-TPS-04 S-2
Sample Date:	1/30/92	1/30/92	1/30/92	1/30/92	1/31/92	1/31/92
Total Lead in mg/kg (ppm)	NA	NA	NA	NA	NA	NA
8015 mg/kg (ppm)						
Bunker C	4,800	2,300	10 U	10 U	10 U	10 U
Diesel/Fuel Oil #2	10 U	10 U	10 U	10 U	1,000	660
Oil	10 U	10 U	10 U	10 U	3,000	2,100
Unknown	6,100	1,900				
TPH 418.1 in mg/kg (ppm)	13,000	NA	NA	29	NA	NA
ncPAHs in mg/kg (ppm)						
Naphthalene	1.8 UJ	NA	NA	.0.018 U	NA	NA
Acenaphthylene	3.5 UJ	NA	NA	0.036 U	NA	NA
Acenaphthene	3.5 UJ	NA	NA	0.036 U	NA	NA
Fluorene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Phenanthrene	0.18 UJ	NA	NA	0.0018 U	NA	NA
Anthracene	0.18 UJ	NA	NA	0.0018 U	NA	NA
Fluoranthene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Pyrene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Benzo(g,h,i)perylene	0.34 J	NA	NA	0.0036 U	NA	NA
Total ncPAHs (a)	0.34 J	NA	NA	0	NA	NA
cPAHs in mg/kg (ppm)						
Benzo(a)anthracene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Chrysene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Benzo(b)fluoranthene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Benzo(k)fluoranthene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Benzo(a)pyrene	0.35 UJ	NA	NA	0.0036 U	NA	NA
Dibenzo(a,h)anthracene	0.70 UJ	NA	NA	0.0071 U	NA	NA
Ideno(1,2,3,c,d)pyrene	3.1 J	NA	NA	0.0036 U	NA	NA
Total cPAHs (a)	3.1 J	NA	NA	0	NA	NA
Total cPAHs (b)	4.33 J	NA	NA	0.0143 U	NA	NA

Hart Crowser
J-1747-64

Table 2 - Soil Characterization
Test Pit and Surface Samples
Analytical Results -
Area 8 - Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-TPS-03 S-7 (e)	8-TPS-03 S-8 (e)	8-TPS-03 S-9 (e)	8-TPS-03 S-10	8-TPS-04 S-1	8-TPS-04 S-2
Sample Date:	1/30/92	1/30/92	1/30/92	1/30/92	1/31/92	1/31/92
Semivolatiles (8270) in mg/kg (ppm) (c)						
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA
Benzo(b)Fluoranthene	NA	NA	NA	NA	NA	NA
Benzo(a)Pyrene	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)Perylene	NA	NA	NA	NA	NA	NA
Volatiles in mg/kg (ppm)	NA	NA	NA	NA	ND	ND

AREA8ALL.WK1/CLK

Notes:

U	Not detected at indicated detection limit.
J	Estimated value.
NA	Not analyzed.
ND	Not detected.
(a)	Total represents the sum of detected values only.
(b)	Total includes one-half the detection limit of non-detected compounds.
(c)	Only those compounds detected are listed.
(d)	Pyrene and chrysene were detected in semivolatile (8270) analysis but were not detected in PAH (8310) analysis. This was due to the interference of high hydrocarbon concentrations in the sample. The hydrocarbon interference resulted in the target peaks shift out of the retention time windows. However, the mass spectrometer can still identify the peaks. Therefore, the GC/MS results should be used. (PAHs are analyzed by HPLC method and semivolatiles are analyzed by GC/MS method.)
(e)	Sample locations excavated during subsequent source removal.

Hart Crowser
J-1747-64

Table 3 – Soil Characterization Boring Samples
Analytical Results – Area 8 – Bunker 'C' Pipeline
Former DuPont Works Site

Sample ID:	8-BS-1	8-BS-1	8-BS-1	8-BS-1	8-BS-1
Sample Date:	S2 (f) 6/9/92	S3 (e)(f) 6/9/92	S4 6/9/92	S5 6/9/92	S7 (c) 6/9/92
8015 mg/kg (ppm)					
Bunker C	10 U	NA	NA	NA	10 U
Diesel/Fuel Oil #2	980	NA	NA	NA	240
Oil	2,900	NA	NA	NA	880
TPH 418.1 in mg/kg (ppm)	12,000	1,900	2,800	(d)	2,400
ncPAHs in mg/kg (ppm)					
Naphthalene	0.94 U	0.091 U	0.095 U	0.091 U	0.091 U
Acenaphthylene	1.9 U	1.8 U	0.19 U	0.18 U	0.18 U
Acenaphthene	1.9 U	1.8 U	0.19 U	0.18 U	0.18 U
Fluorene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Phenanthrene	0.094 U	0.091 U	0.0095 U	0.0091 U	0.0091 U
Anthracene	0.094 U	0.091 U	0.0095 U	0.0091 U	0.0091 U
Fluoranthene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Pyrene	0.26	0.18 U	0.019 U	0.018 U	0.018 U
Benzo(g,h,i)perylene	3.1	0.74	0.18	0.065	0.21
Total ncPAHs (a)	3.36	0.74	0.18	0.065	0.21
cPAHs in mg/kg (ppm)					
Benzo(a)anthracene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Chrysene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Benzo(b)fluoranthene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Benzo(k)fluoranthene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Benzo(a)pyrene	1.4	0.18 U	0.019 U	0.018 U	0.018 U
Dibenzo(a,h)anthracene	0.38 U	0.37 U	0.039 U	0.037 U	0.037 U
Ideno(1,2,3,c,d)pyrene	0.19 U	0.18 U	0.019 U	0.018 U	0.018 U
Total cPAHs (a)	1.4	0	0	0	0
Total cPAHs (b)	2.065	0.725 U	0.0765 U	0.0725 U	0.0725 U
Semivolatiles (8270) in mg/kg (ppm) (c)					
Fluorene	NA	0.24 J	NA	NA	1.7 U
Pentachlorophenol	NA	1.2	NA	NA	1.7 U
Phenanthrene	NA	1.3	NA	NA	0.54 J
Fluoranthene	NA	0.83 U	NA	NA	0.36 J

Notes:

U Not detected at indicated detection limit.

J Estimated value.

NA Not analyzed.

(a) Total represents the sum of detected values only.

(b) Total includes one-half the detection limit of non-detected compounds.

(c) Only those compounds detected are listed.

(d) Result cannot be obtained due to analytical problems and insufficient sample volume.

(e) Semivolatile concentrations are on a wet weight basis due to low recoveries of soil boring sample volumes.

(f) Sample locations excavated during subsequent source removal.

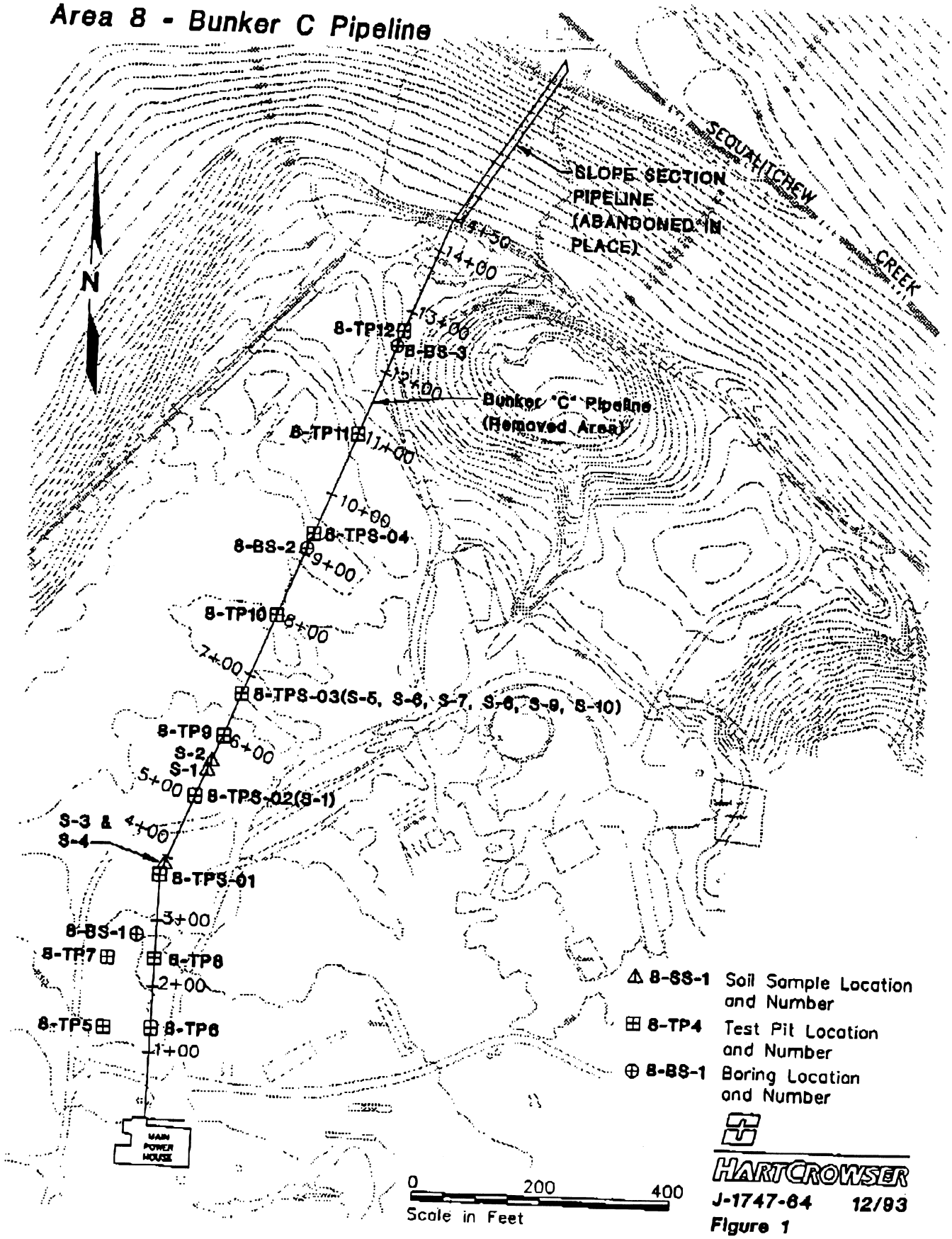
Table 4 – Soil Verification Analytical Results (TPH)
Area 8 – Bunker C Pipeline
Former DuPont Works Site

Sample No.	Sample Date	Depth in Feet	Station No.	TPH 418.1 (1) in mg/kg (dry weight)
8-VS-41	6/23/93	15 to 15.5	0+99	160 J
8-VS-42	6/23/93	15 to 15.5	3+99	210 J
8-VS-43	6/23/93	15 to 15.5	3+30	4000 J
8-VS-44	6/23/93	12 to 13	5+31	ND
8-VS-45	6/23/93	9 to 10	6+56	ND
8-VS-46	6/23/93	13 to 14	7+60	24 J
8-VS-47	6/23/93	15 to 15.5	8+56	77 J
8-VS-48	6/23/93	12 to 13	11+22	ND
8-VS-49	6/23/93	12 to 13	13+61	30 J
8-VS-50	6/23/93	15 to 15.5	14+21	ND
8-VS-51	6/23/93	15 to 15.5	0+48	55 J
8-VS-74	7/28/93	18 to 18.5	5+78	1300
8-VS-75	7/28/93	20 to 20.5	5+90	5100
8-VS-76	7/28/93	20 to 20.5	6+27	7500
8-VS-77	7/28/93	20 to 20.5	7+12	64
8-VS-78	7/28/93	20 to 20.5	7+84	1100
8-VS-79 (2)	7/28/93	15 to 15.5	9+41	3600
8-VS-80	7/28/93	20 to 20.5	9+41	6100
8-VS-81	7/28/93	20 to 20.5	10+74	11000
8-VS-82	7/28/93	20 to 20.5	12+66	50 U
8-VS-83	7/28/93	20 to 20.5	13+26	340
8-VS-84 (3)	7/28/93	18 to 18.5	13+26	50 U
8-VS-SC-112	6/07/93	15 to 15.5	12+90	5400
8-VS-SC-142	6/07/93	15 to 15.5	9+66	3800
8-VS-SC-262	6/16/93	15 to 15.5	11+93	46 J

(1) Interim Source Removal Action Level (90th Percentile) 570 mg/kg at or above 15-foot depth.
(2) Sample location excavated during subsequent source removal.
(3) East side wall sample.
U Not detected at the detection limit indicated.
NA Not analyzed.

Characterization Test Pit, Boring and Surface Sampling Location Plan

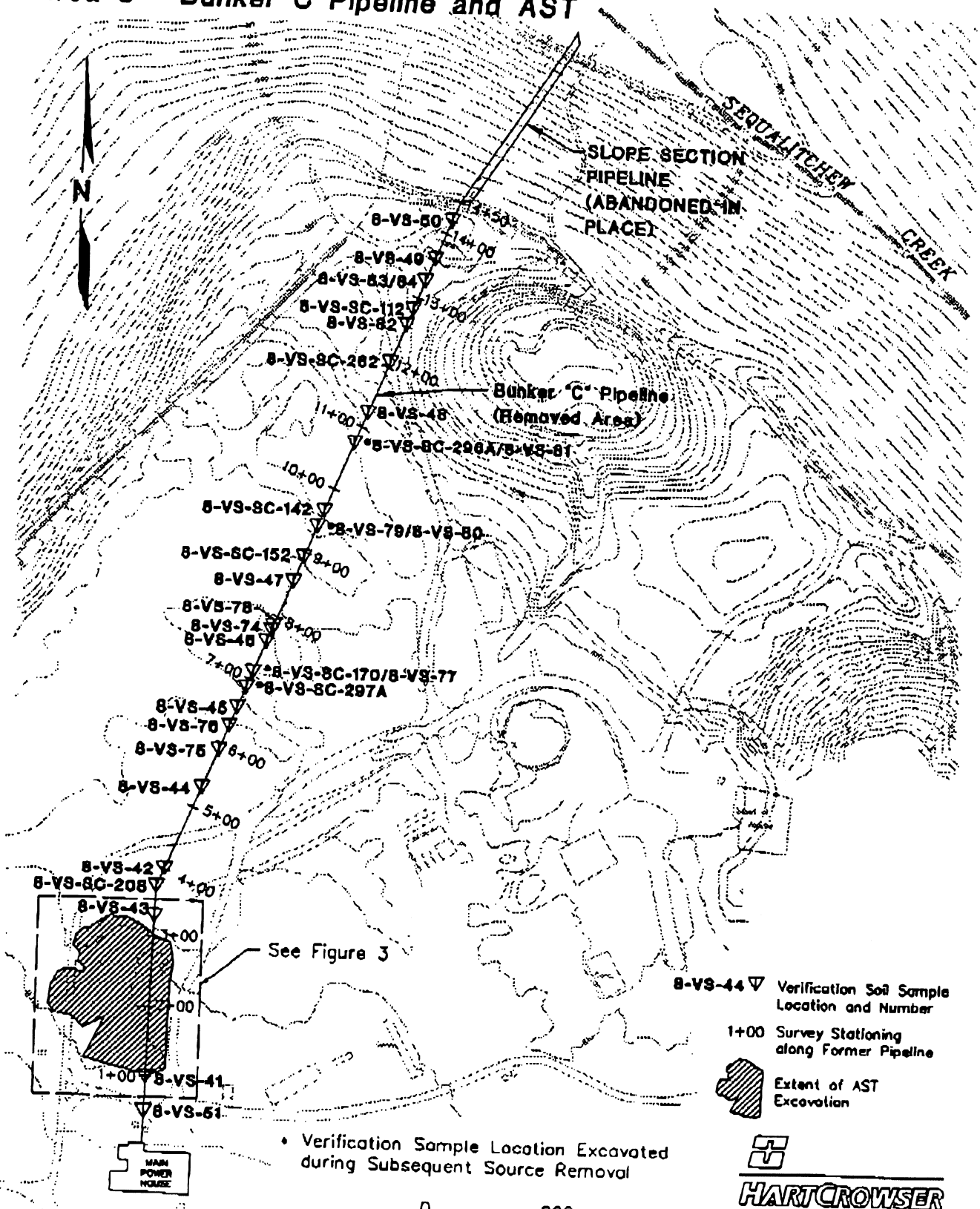
Area 8 - Bunker C Pipeline



EJC 12/27/93 1=200 Dupont.tpp
17476403

Interim Source Removal Verification Soil Sampling Location Plan

Area 8 - Bunker C Pipeline and AST



HARTCROWSER

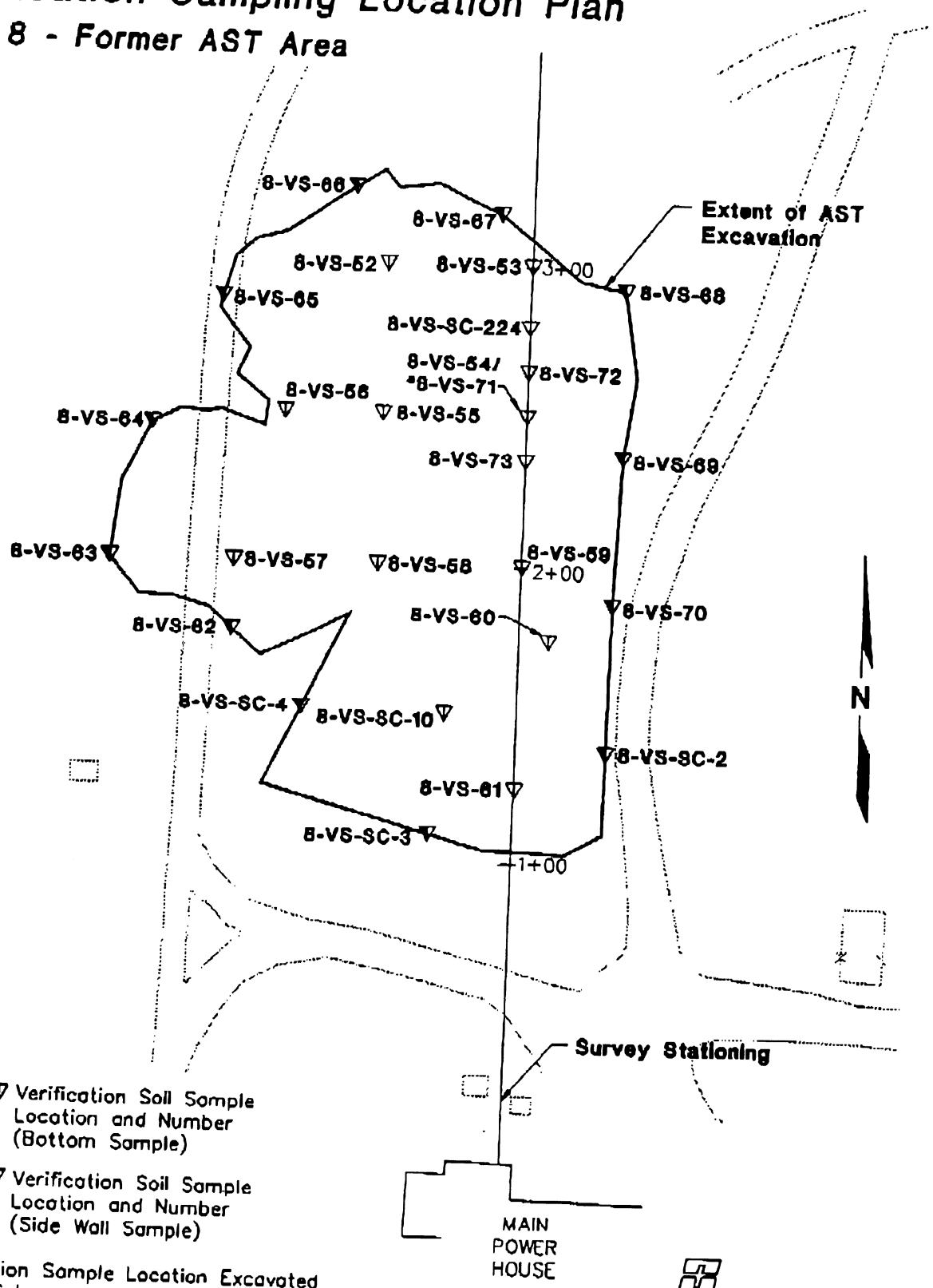
J-1747-64 12/93

Figure 2

DuPont Pipe 1=200 12/21/93 17476400

Interim Source Removal Excavation and Verification Sampling Location Plan

Area 8 - Former AST Area



8-VS-63 ▽ Verification Soil Sample Location and Number (Bottom Sample)

8-VS-62 ▽ Verification Soil Sample Location and Number (Side Wall Sample)

* Verification Sample Location Excavated during Subsequent Source Removal

HARTCROWSER

J-1747-64 12/93

Figure 3

DuPont Map
1747640I

Sand Laydown Area Interim Action Report
Former DuPont Works Site
DuPont, Washington

Prepared for:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared by:

PIONEER Technologies Corporation
West Shore Corporation, NW
URS

November 16, 2000

Table of Contents

1.0 Introduction....1
2.0 Sand Laydown Area Analytical Results....1
3.0 Conclusions....1
Appendix A – Summary of Field Activities....10
A.1 Project Management/Resources....10
A.2 Cultural and Archaeological Management....10
A.3 Site Preparation....10
A.4 Field Construction Activities....10
A.5 Sampling Confirmation Activities....11
A.6 Secondary Excavations....11
A.7 Sand Hauling....11
Appendix B – Laboratory Analytical Data Validation Results....12
B.1 Summary....12
B.2 Introduction....12
B.3 Sample Data Groups....12
B.4 Laboratory Report and Reporting of Required Analyses....13
B.5 Chain of Custody and Holding Times....13
B.6 Method and Field Blanks....13
B.7 Matrix Spikes/Blank Spikes....13
B.8 Laboratory Duplicates....13
B.9 Field Duplicates....13
B.10 Reporting Limits....14
Appendix C – Sand Laydown Areas Analytical Results....15

List of Tables

Table 1 – Sand Laydown Area Information....1
Table 2 – Sand Laydown Area Excavations MTCA Compliance Statistics....2
Table B-1 – Sample Data Groups Included in the Data Review....13
Table B-2 – RPD of Detected Compounds....14
Table C-1 – Sand Laydown Results for SLA#1....15
Table C-2 – Sand Laydown Results for SLA#2....16
Table C-3 – Sand Laydown Results for SLA#3....17
Table C-4 – Sand Laydown Results for SLA#4....18
Table C-5 – Sand Laydown Results for SLA#5....19
Table C-6 – Sand Laydown Results for SLA#6....20

List of Figures

Figure 1 – Golf Course Layout, Placement Areas, and Sand Laydown Areas....3
Figure 2 – Sand Laydown Area Excavation #1 and Soil Results for Arsenic and Lead....4
Figure 3 – Sand Laydown Area Excavation #2 and Soil Results for Arsenic and Lead....5
Figure 4 – Sand Laydown Area Excavation #3 and Soil Results for Arsenic and Lead....6
Figure 5 – Sand Laydown Area Excavation #4 and Soil Results for Arsenic and Lead....7
Figure 6 – Sand Laydown Area Excavation #5 and Soil Results for Arsenic and Lead....8
Figure 7 – Sand Laydown Area Excavation #6 and Soil Results for Arsenic and Lead....9

1.0 Introduction

This report describes the activities that were undertaken to excavate soils at the former DuPont Works Site in order to prepare six different areas for sand stockpiles. This program was done as an interim action as allowed under the July 1991 Consent Decree signed by the Weyerhaeuser Company (Weyerhaeuser), E.I. duPont de Nemours and Company (DuPont) and the Washington State Department of Ecology (Ecology). The program was initiated in October of 1999 and completed in December of 1999.

A key component of the overall plan for the former DuPont Works Site involves excavating contaminated soils and placing them in specific areas (i.e., Placement Areas) within the future golf course boundary. These soils will be covered with an engineered cap. The sand will be used as topfill for the cap. The volume of sand needed for the project was available from the Glacier Northwest Plant that is adjacent to the Site.

The objective of the sand laydown program was to remove surface soil from six areas on the site so that sand could be stockpiled in these areas and not moved again until placed on the golf course cap. These six areas were located so that they are directly adjacent to the areas where the sand will be used. Figure 1 presents the location of the Sand Laydown Areas (SLAs) and identifies the Placement Areas where the excavated soil was placed. Table 1 identifies the SLAs, excavation depths, the volume of soil that was excavated, and where the soil was placed. A summary of the field activities is presented in Appendix A.

Table 1 – Sand Laydown Area Information

Sand Laydown Area	Placement Area for Soil	Excavation Area (feet)	Average Excavation Depth (feet)	Volume Excavated (Cubic Yards)
1	PA-07	83,022	3	9,225
2	PA-07	57,326	2.5	5,308
3	PA-02	78,475	1.5	4,360
4	PA-03	42,163	1.5	2,342
5	PA-05	76,137	1.5	4,230
6	PA-06	99,538	1.5	5,530
			TOTAL	30,995

2.0 Sand Laydown Area Analytical Results

Soil samples were collected within each SLA excavation to demonstrate statistical compliance with the Model Toxic Control Act (MTCA) three-fold criteria. A 50 foot grid was proposed to and accepted by Ecology as appropriate to demonstrate that each excavated area was in compliance with the MTCA three-fold statistical compliance criteria. The starting point for the excavation grid was related to the Site-wide 150-foot sample grid. Figures 2 through 7 present the extent of the excavations, as well as, the post-excavation arsenic and lead confirmation sample results. The sampling results are presented in Appendix C.

The data for each of the six excavations were compared to screening levels of 60 mg/kg for arsenic and 118 mg/kg for lead. Samples inside each excavation were grouped together to demonstrate that the vertical extent of each of the excavations are in compliance with the arsenic and lead screening levels. The compliance statistics are in Table 2.

3.0 Conclusions

The findings and conclusions of this program are presented below:

1. In general, post-excavation sample concentrations were near or below background levels for both lead and arsenic. Exceptions were areas where there were visible debris or foundations where concentrations of lead were slightly elevated due to its association with some buildings at the site.

2. No sand was stockpiled in SLA areas where there were visible debris (SLA#1) or foundations (SLA#1, SLA#6) (See Figures 2 and 7).

3. Based on the evaluation of the pre-existing and collected data, this program met its goals. When debris and foundation samples are excluded, all six of the excavations are in compliance with the MTCA three-fold criteria.

Table 2 – Sand Laydown Area Excavations MTCA Compliance Statistics (mg/kg)

Analyte	Num. Of Samps.	Num. Of Hits	Max Detect	Mean	95% UCL	Log Mean	95% Log UCL	Distribution type	MTCA UCL[(a)]	Screening Levels	Number Greater than 2X the Cleanup Level	Percentage of samples greater than the Cleanup Level (10% criterion)
Sand Laydown Area #1 – All Data												
Arsenic	35	29	37	9	11	5	14	Lognormal	14	60	0	0.0%
Lead	35	35	1000	188	251	87	582	Lognormal	582	118	8	51.4%
Sand Laydown Area #1 – Excluding Debris and Foundation Samples												
Arsenic	12	7	10	3	4	2	6	Lognormal	6	60	0	0.0%
Lead	12	12	100	34	50	20	184	Normal/Lognormal	100	118	0	0.0%
Sand Laydown Area #2 – All Data												
Arsenic	27	13	21	3	4	2	4	Unknown	4	60	0	0.0%
Lead	27	26	160	10	20	4	12	Unknown	12	118	0	3.7%
Sand Laydown Area #3 – All Data												
Arsenic	35	34	54	13	17	9	19	Lognormal	19	60	0	0.0%
Lead	35	35	120	19	25	13	25	Unknown	25	118	0	2.9%
Sand Laydown Area #4 – All Data												
Arsenic	24	10	6	2	3	2	3	Unknown	3	60	0	0.0%
Lead	24	24	8	5	6	5	6	Unknown	6	118	0	0.0%
Sand Laydown Area #5 – All Data												
Arsenic	36	36	58	13	17	8	17	Unknown	17	60	0	0.0%
Lead	36	36	53	13	16	10	16	Unknown	16	118	0	0.0%
Sand Laydown Area #6 – All Data												
Arsenic	49	48	39	8	10	6	10	Unknown	10	60	0	0.0%
Lead	49	43	1600	51	106	11	41	Unknown	41	118	1	4.1%
Sand Laydown Area #6 – Excluding Foundation Sample												
Arsenic	48	47	39	8	10	6	10	Unknown	30	60	0	0.0%
Lead	48	42	120	19	25	10	26	Unknown	30	118	1	2.1%

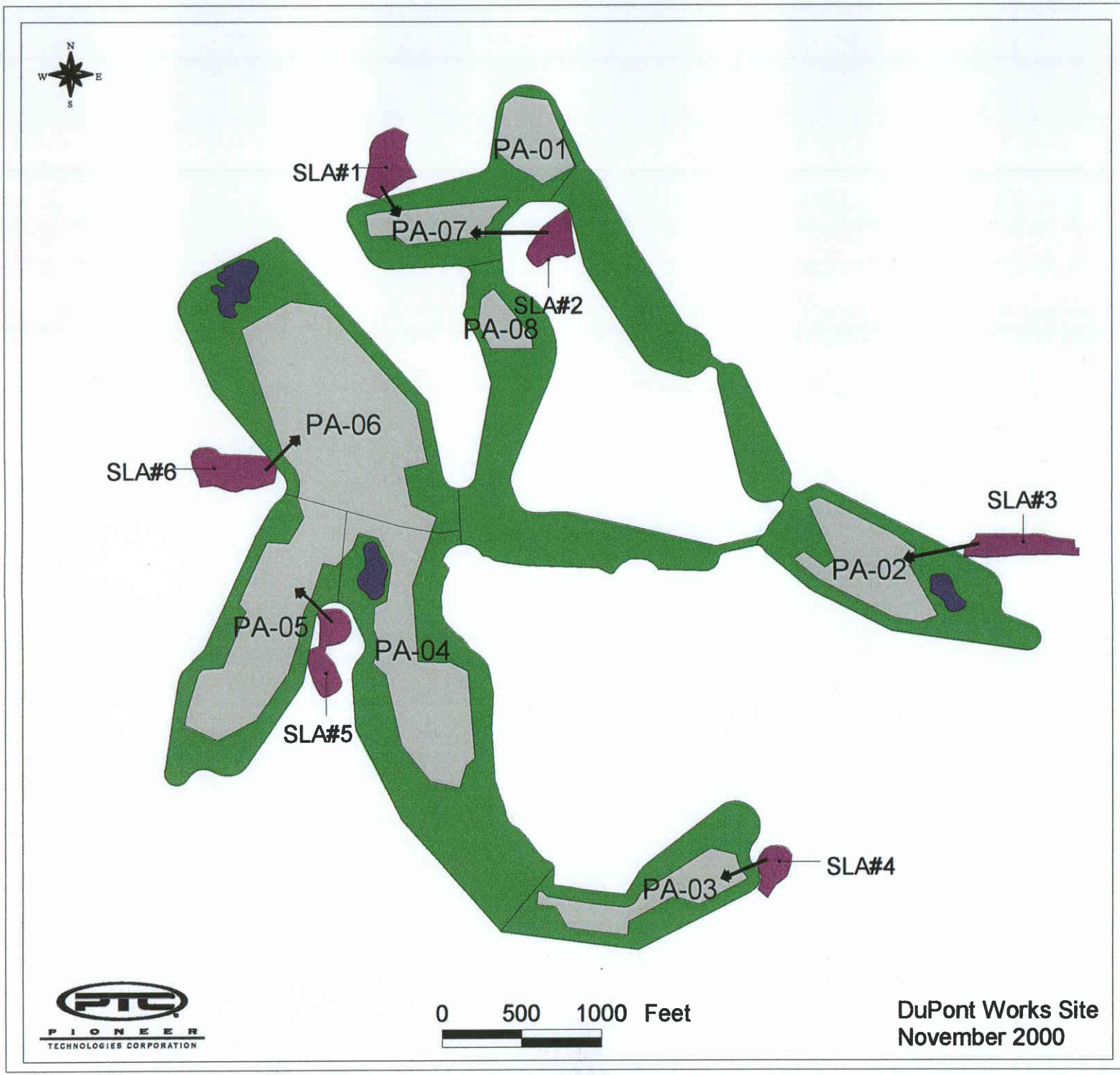
Note:

[(a)]The MTCA UCL was determined based on the following decision rules:

1. Use the log 95% UCL if the data distribution is lognormal.
2. Use the 95% UCL if the data distribution is normal.
3. Use either the log 95% UCL, arithmetic 95% UCL, or the approximate one-sided upper confidence limit on the mean if the data distribution is unknown.
4. Use the maximum detected value if the maximum detected value is greater than the appropriate UCL statistic.

The following decision rules were followed for duplicate samples in order to develop a dataset for statistical analysis:

1. If all of the results were detected values, then the two values were averaged.
2. If all the results were non-detects then use the highest non-detected value.
3. If there was a mixture of detects and non-detects, then take the highest detected value.
4. The resulting value was assigned to the primary sample ID and the other duplicate samples were excluded from the data tables and figures.



PIONEER TECHNOLOGIES CORPORATION

DuPont Works Site
November 2000

Legend

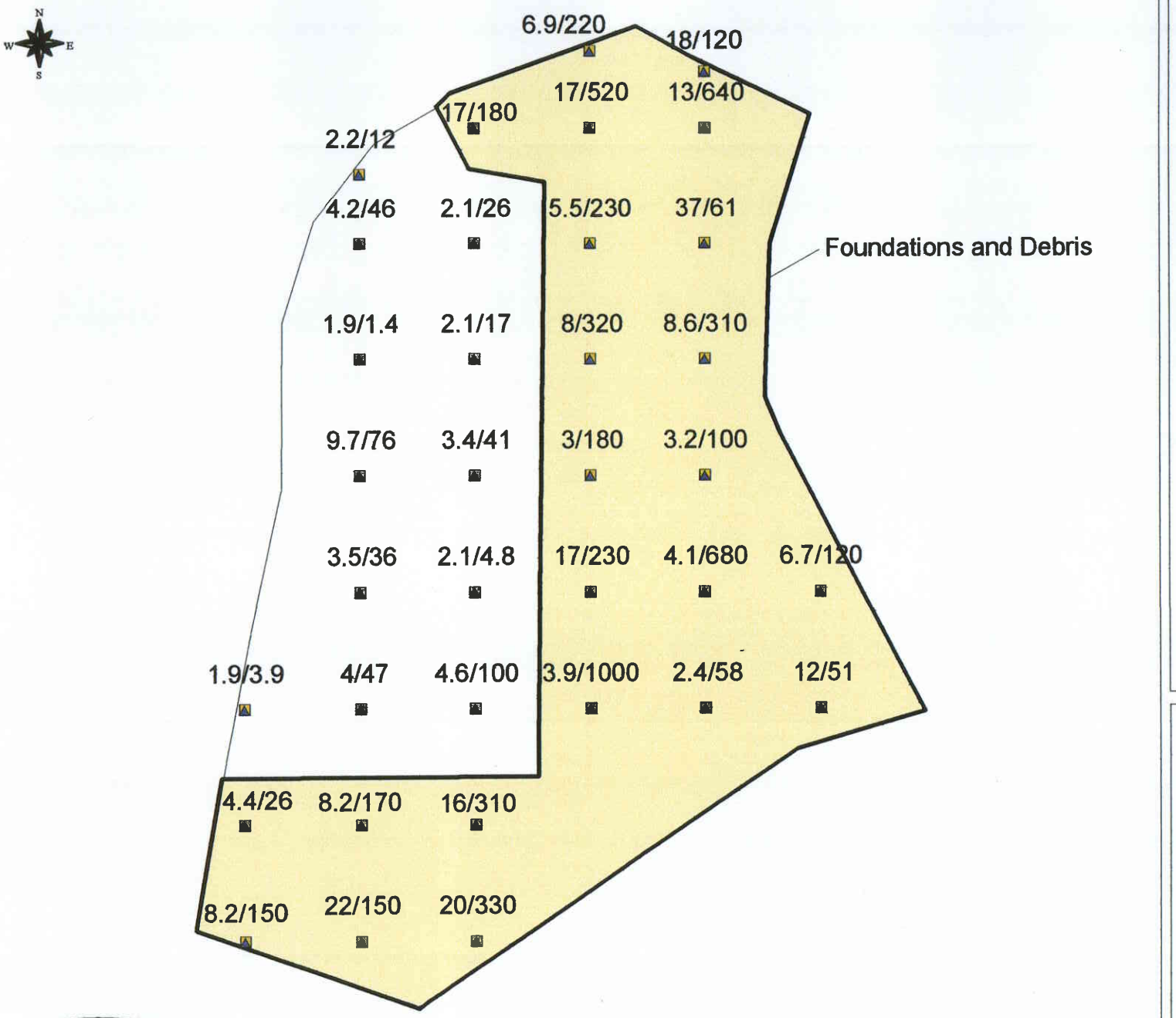
- Placement Areas
- Golf Course
- Golf Course Lakes
- Sand Laydown Areas

Notes

Arrows point to where excavated soil was placed.

Golf Course Layout, Placement Areas, and Sand Laydown Areas

Figure 1



PIONEER TECHNOLOGIES CORPORATION

DuPont Works Site
November 2000

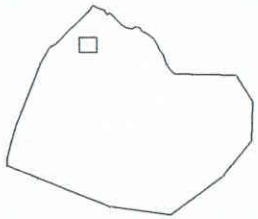
Legend

- Arsenic Data (mg/kg)
- Lead Data (mg/kg)
- Foundation and Debris
- Sand Laydown Areas

Notes

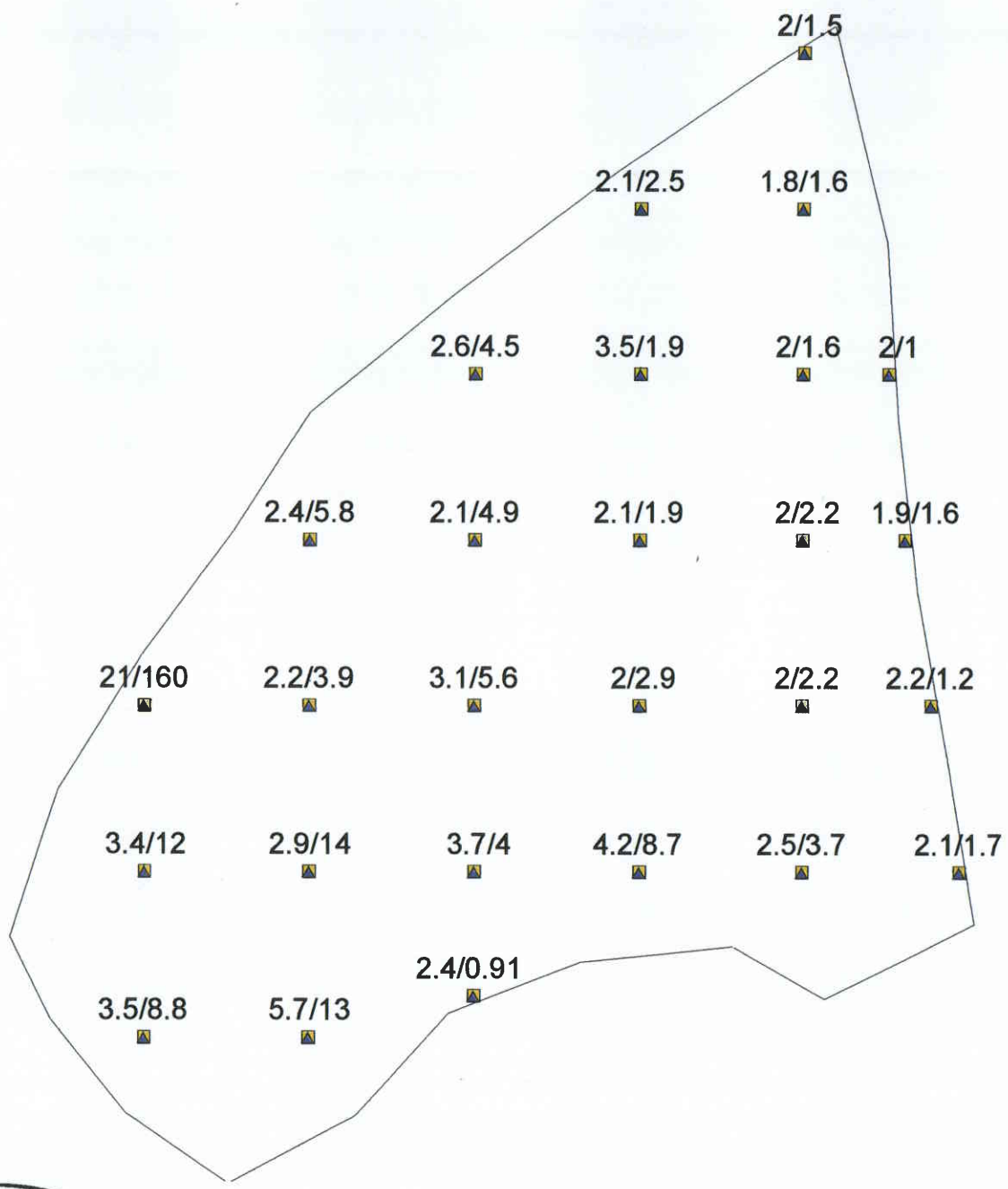
Results for Arsenic/Lead are presented in the figure.

Location on Site



Sand Laydown Area Excavation #1 and Soil Results for Arsenic and Lead

Figure 2



PIONEER TECHNOLOGIES CORPORATION

0 50 100 Feet

DuPont Works Site
November 2000

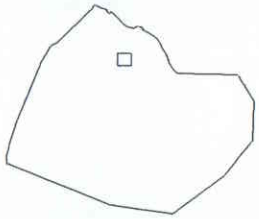
Legend

- Arsenic Data (mg/kg)
- Lead Data (mg/kg)
- Sand Laydown Areas

Notes

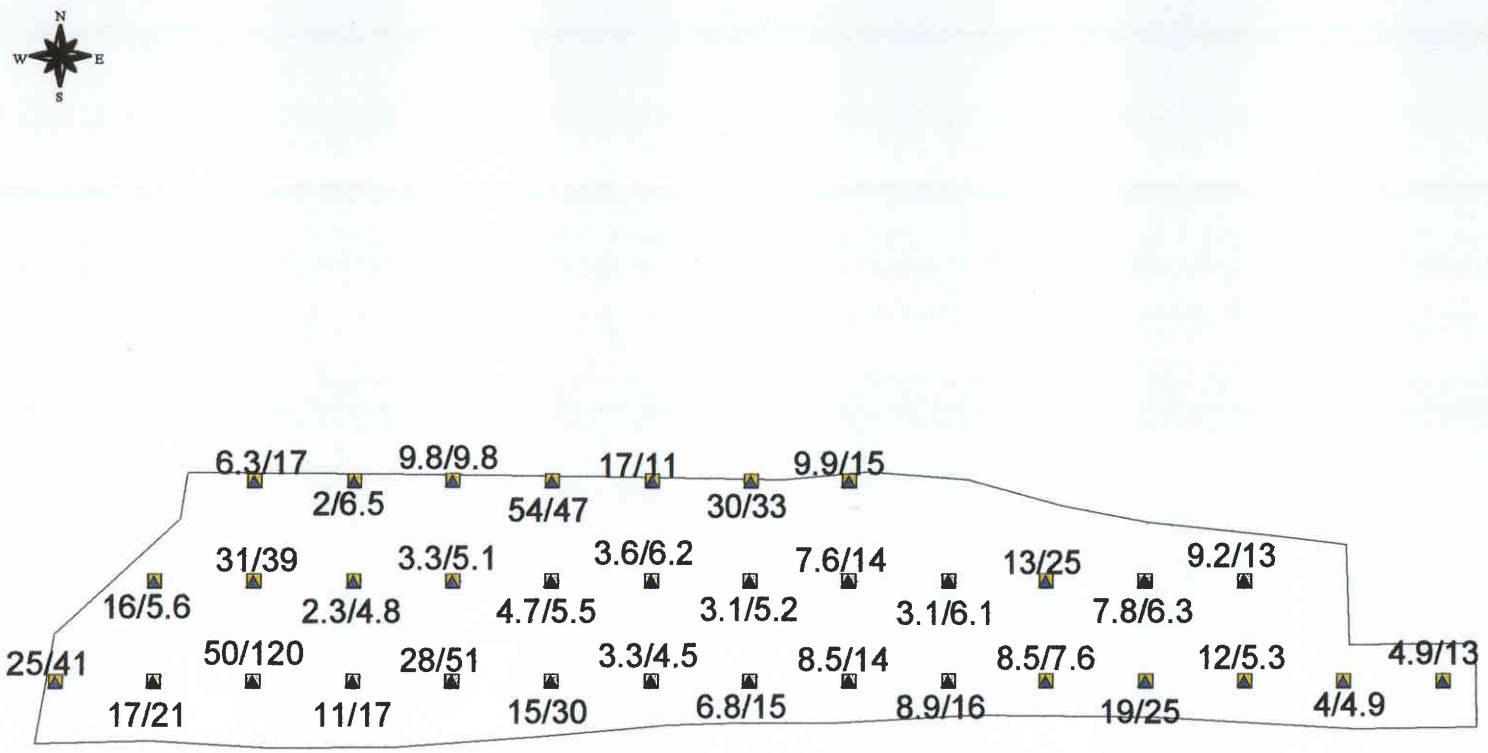
Results for Arsenic/Lead are presented in the figure.

Location on Site



Sand Laydown Area Excavation #2 and Soil Results for Arsenic and Lead

Figure 3



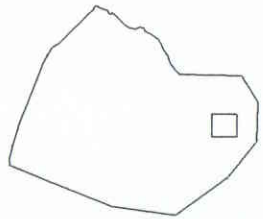
Legend

- Arsenic Data (mg/kg)
- Lead Data (mg/kg)
- Sand Laydown Areas

Notes

Results for Arsenic/Lead are presented in the figure.

Location on Site



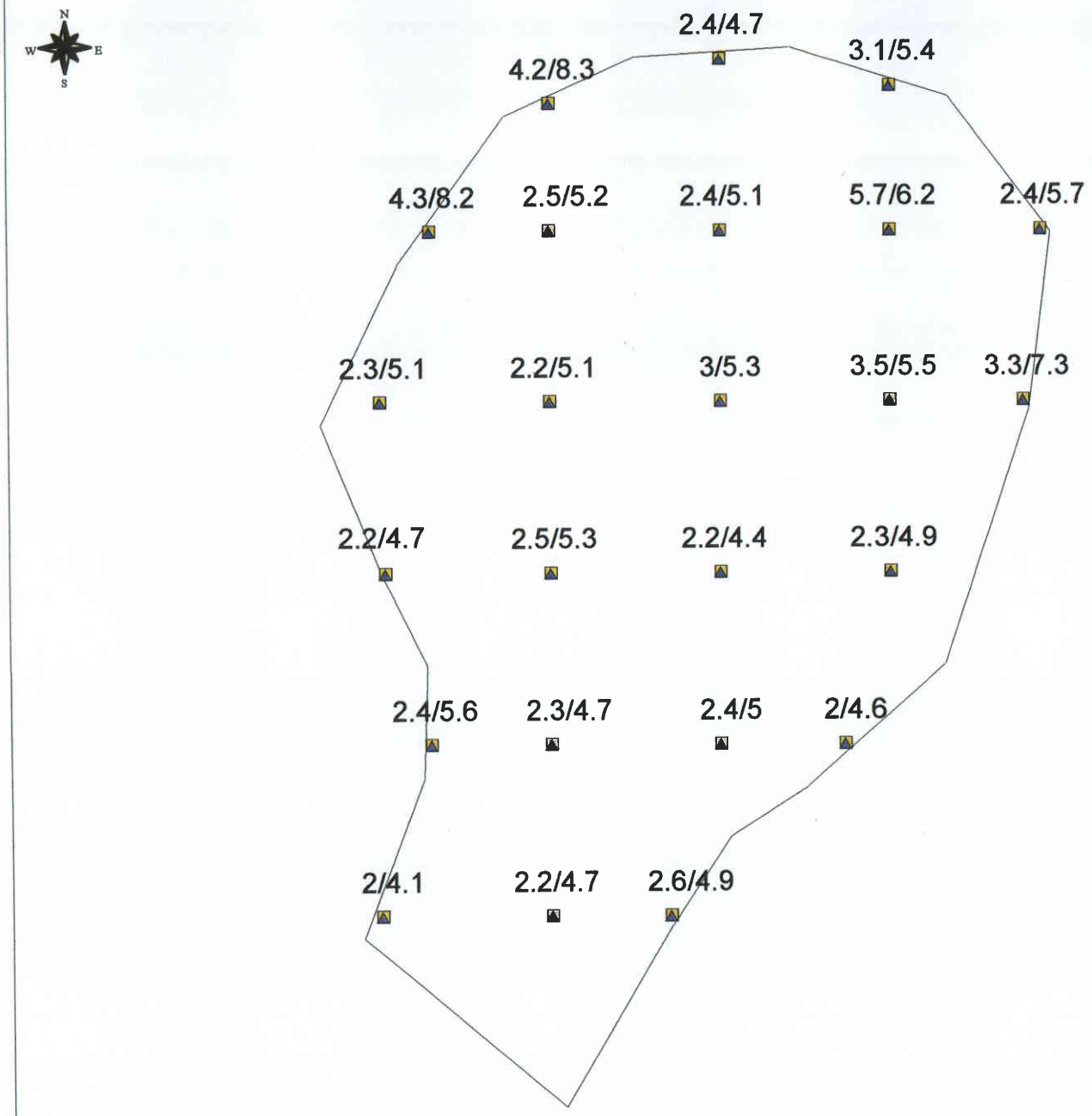
PIONEER TECHNOLOGIES CORPORATION

0 50 100 Feet

DuPont Works Site
November 2000

Sand Laydown Area Excavation #3 and Soil Results for Arsenic and Lead

Figure 4



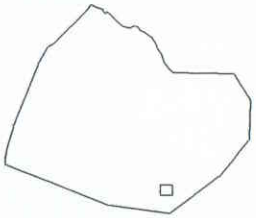
Legend

- Arsenic Data (mg/kg)
- Lead Data (mg/kg)
- Sand Laydown Areas

Notes

Results for Arsenic/Lead are presented in the figure.

Location on Site

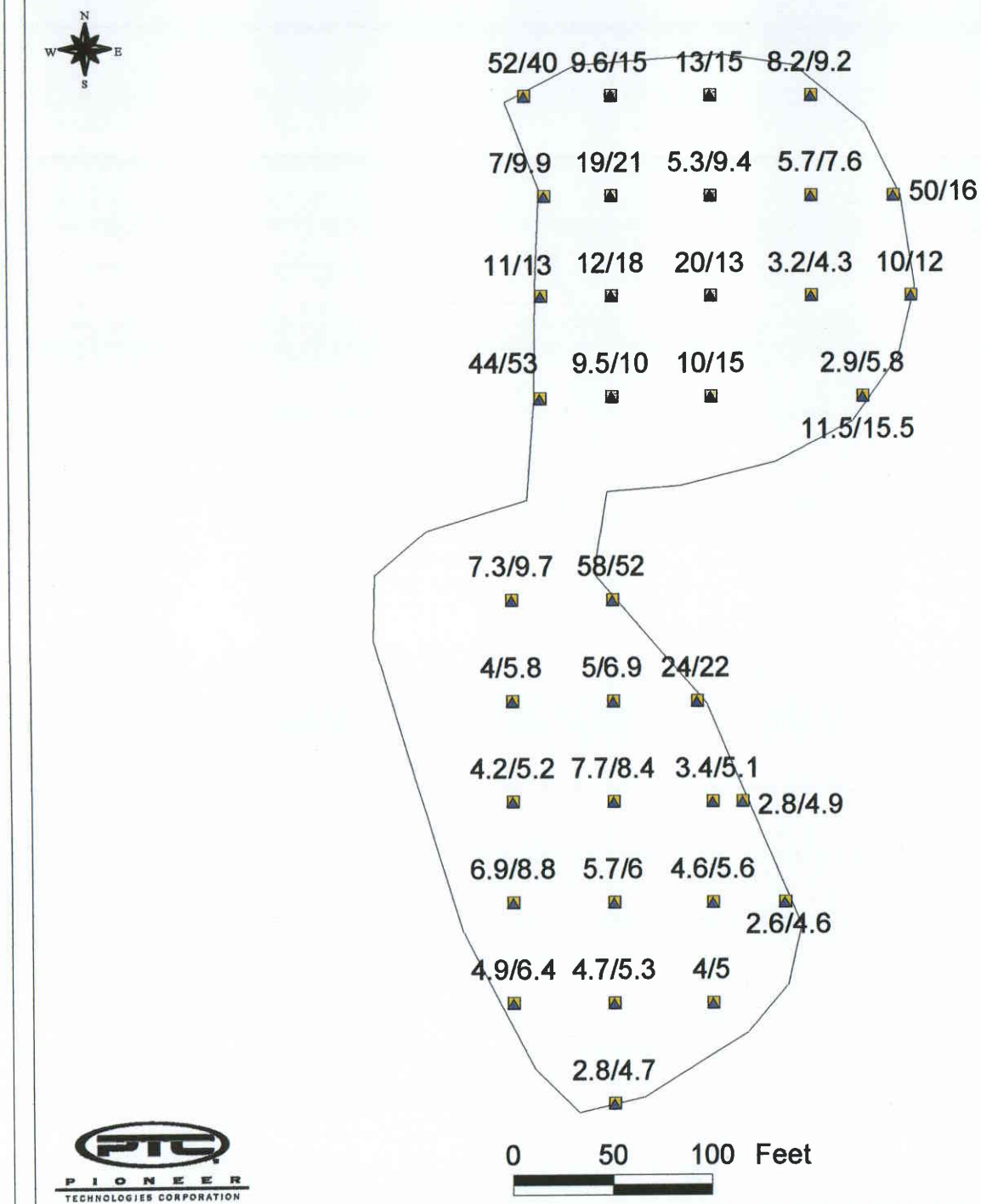


Sand Laydown Area Excavation #4 and Soil Results for Arsenic and Lead

PIONEER TECHNOLOGIES CORPORATION

DuPont Works Site
November 2000

Figure 5



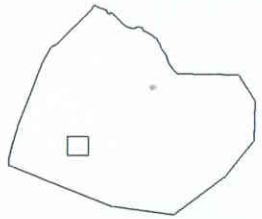
Legend

- Arsenic Data (mg/kg)
- Lead Data (mg/kg)
- Sand Laydown Areas

Notes

Results for Arsenic/Lead are presented in the figure.

Location on Site

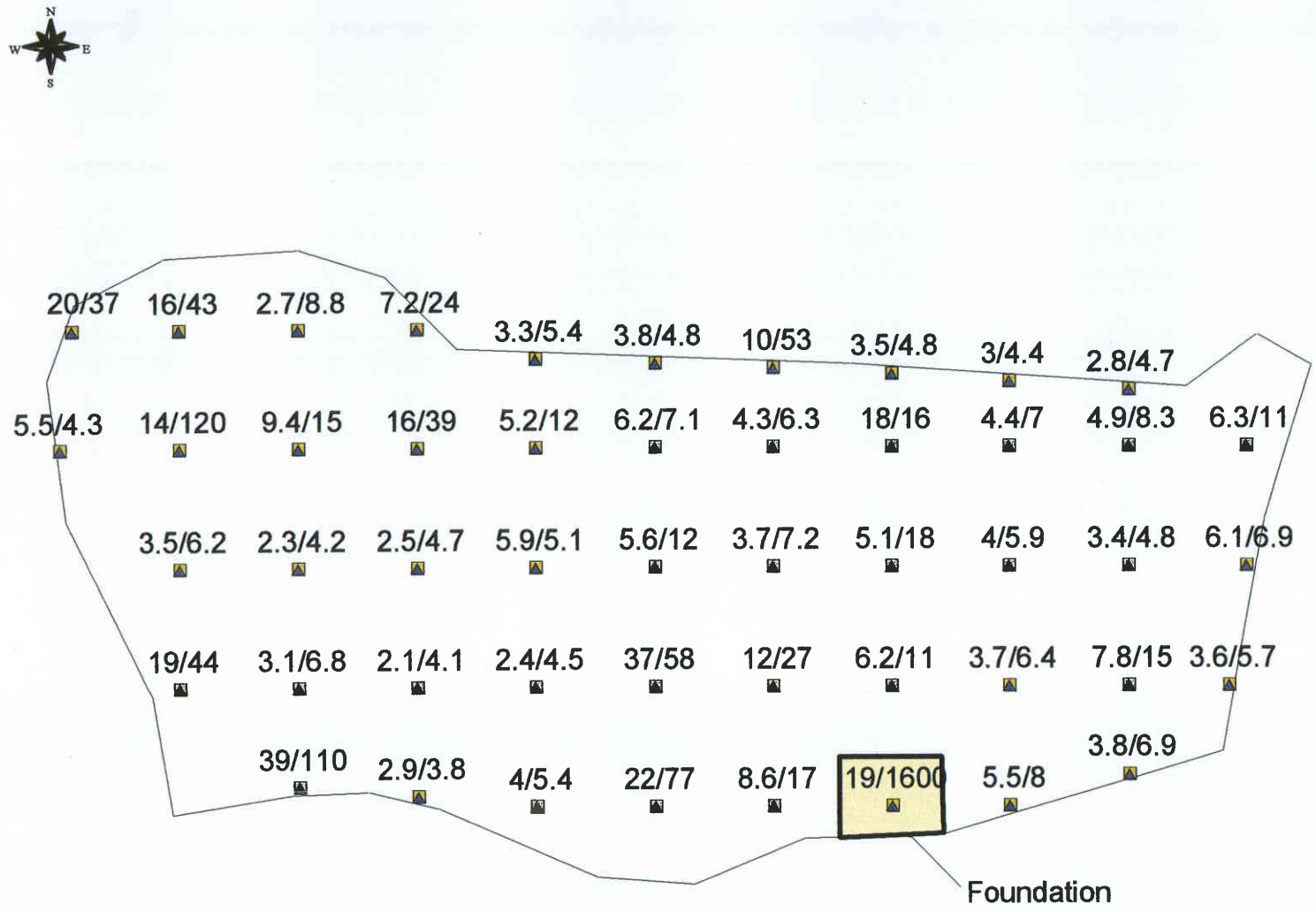


Sand Laydown Area Excavation #5 and Soil Results for Arsenic and Lead

DuPont Works Site
November 2000

PIONEER TECHNOLOGIES CORPORATION

Figure 6



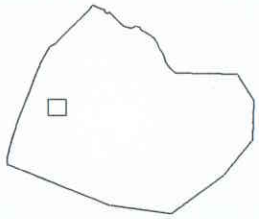
Legend

- Arsenic Data (mg/kg)
- Lead Data (mg/kg)
- Foundation and Debris
- Sand Laydown Areas

Notes

Results for Arsenic/Lead are presented in the figure.

Location on Site



PIONEER TECHNOLOGIES CORPORATION

0 50 100 Feet

DuPont Works Site
November 2000

Sand Laydown Area Excavation #6 and Soil Results for Arsenic and Lead

Figure 7

Appendix A – Summary of Field Activities

A.1 Project Management/Resources

This program was performed under the direction of the Site Management Team (ST). Each of the ST members and their responsibilities for this project are described below.

- Jeff King of West Shore Corporation, NW (WSNW), performed day-to-day oversight of the project activities.
- URS performed the confirmation sampling, and Sound Analytical Services, Inc. was the Project laboratory.
- Active Construction (ACTIVE) of Gig Harbor, Washington was the remediation contractor.
- PIONEER Technologies Corporation (PTC) managed the analytical data and developed the figures.
- The Sand Laydown Program Interim Action Report was created collectively by PTC, WSNW, and URS.

A.2 Cultural and Archaeological Management

The program followed the criteria listed in the Project's Cultural and Archaeological Management Plan. This plan, which is based upon cooperative agreements established between Weyerhaeuser, the Nisqually Tribe, and the Washington State Office of Archaeology and Historic Preservation (OAHP), identifies the terms for compliance for Site construction activities. As a result of this plan, the following activities took place:

- All individuals involved in this program were trained by the Project's Archaeology Consultant, Western Heritage, on the identification of items of cultural or historic significance prior to the start of field work.
- Western Heritage was present on the site during the excavation and site preparation phases of the program.

A report describing the findings of, and any observations made, during this program will be issued to Ecology and OAHP within the next month.

A.3 Site Preparation

Phase One of this program included locating and flagging the SLA locations and clearing and grubbing each work area. ESM Incorporated (ESM) of Federal Way, WA located and flagged the location of each area. A field check of the locations was conducted and the boundaries of the work areas were flagged by PTC and WSNW. Olympia Timber cleared and grubbed any trees and vegetation within 50 feet of each location and any other areas needed to safely complete the project.

A.4 Field Construction Activities

The excavation of the areas was initiated after the site preparation activities were completed. In general the process consisted of the following steps.

1. ACTIVE initially excavated to the perimeter of the staked area to depth of 1.5 foot except for SLA#1 where debris was encountered and the excavation activities continued to approximately 3 feet.
2. SLA#2 was excavated to 2.5 feet in an attempt to excavate to a gravel layer but a gravel layer was not reached.
3. Once an area was excavated ACTIVE moved on to the next excavation. Decisions for further excavation were made once initial laboratory results were available.

A.5 Sampling Confirmation Activities

This SLA Program was performed in accordance with the Hot Spot Removal Program Work Plan which summarizes characterization procedures and was prepared before field activities were initiated[1]. This Work Plan was generally consistent with the sampling and analytical activities specified in the 1992 Management Plan[2]. URS prepared a site-specific health and safety plan for use by on-site URS personnel.

Sampling began once ACTIVE had completed 2 days of work. Samples were collected in accordance with the Hot Spot Removal Program Work Plan. Soil samples were collected by placing soil into clean stainless steel bowls, mixing the soil with a clean stainless steel spoon to homogenize the sample, and then placing the soil into 4-ounce glass jars. The sampling equipment was decontaminated according to the Work Plan immediately prior to collecting each sample. Samples were held under chain-of-custody procedures at all times. The samples were delivered to the Project laboratory on a 3-day turn around basis.

Sample locations were surveyed by ESM based on the site-wide confirmation sampling grid. The 150 foot grid was further refined so that samples were collected on 50 foot centers for demonstration purposes. Each sample was discrete. Preliminary sample results were issued to the Project Team and decisions for further excavation were made based upon these results.

A.6 Secondary Excavations

Because of the tight schedule, a field call was made in SLA#5 in order to ensure that arsenic and lead concentrations were not elevated. One area (i.e., sample SA5-88-44, arsenic = 45, and lead = 100) was excavated an additional 1 foot.

A.7 Sand Hauling

Once confirmation samples were obtained, and evaluated sand was hauled by ACTIVE from the Glacier Northwest Plant adjacent to the Site, and stockpiled. All travel was done using pre-existing roads. At no time was sand hauled on public streets.

[1] West Shore Corporation, NW and PIONEER Technologies Corporation. 1999. Hot Spot Removal Program Work Plan for the Former DuPont Work Site, DuPont, WA.

[2] HartCrowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study Former DuPont Works Site, DuPont, WA.

Appendix B – Laboratory Analytical Data Validation Results

B.1 Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan[3]. The data may be used to assess analyte concentrations with the stated qualifications.

B.2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil samples from the former DuPont Works Site in Dupont, Washington, from September 10, 1999 through July 17, 2000. The SLA data were collected during this period and therefore, all of the Data Validation information is presented in the Hot Spot Interim Action Report (PIONEER et al., Oct. 4, 2000). Samples were submitted to Sound Analytical Services, Inc. for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits. The samples were analyzed for the following chemicals, using the noted analytical methods.

Arsenic	EPA 6010
Lead	EPA 6010

B.3 Sample Data Groups

The sample data groups identified in Table B-1 were included in this data review.

[3] HartCrowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study Former DuPont Works Site, DuPont, WA.

Table B-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
84778	12 Oct 99
84800	13 Oct 99
84832	14 Oct 99
84863	15 Oct 99
84898	18 Oct 99

B.4 Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that URS would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. Comprehensive data validation was not requested for this sampling event. The reports provide all necessary information to complete this review. All analytical methods were reported as requested.

B.5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled until arrival at the laboratory. Sample bottles were in good condition. The samples were extracted and analyzed within the 6 month holding time. Holding times were within specifications of the Management Plan.

B.6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met. No data require qualification based on field rinse blank contamination.

B.7 Matrix Spikes/Blank Spikes

- Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS and one blank spike (BS) per analytical batch or one MS and one BS per 20 samples, was met. The MS and BS results were compared to evaluate the accuracy of laboratory procedures. The spike recoveries ranged from 76 to 125 percent and were within the control limits.

B.8 Laboratory Duplicates

The relative percent differences (RPDs) ranged from 0 to 34 percent and were within the control limits established by the laboratory. Therefore, no data were qualified due to laboratory duplicate RPDs.

B.9 Field Duplicates

- Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, or one field duplicate per day at a minimum, specified in the Management Plan, was met. Forty-two sets of field duplicate samples were collected. Table B-2 presents the RPD of detected compounds that were calculated for the duplicate pairs. The RPDs were acceptable.

Table B-2 – RPD of Detected Compounds

SAMPLE ID & DUPLICATE ID	ANALYTE	PRIMARY RESULT (µg/L)	DUPLICATE RESULT (µg/L)	RPD %
SA5-8944/SA5-8940	Arsenic	11	12	9
	Lead	14	17	19

B.10 Reporting Limits

To ensure the level of analytical reporting sensitivity meets project goals, reporting limits were reviewed. Reported results are acceptable.

Appendix C – Sand Laydown Areas Analytical Results

Table C-1 – Sand Laydown Results for SLA#1

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA1-28-50	Yes	6.9	220
SA1-28-51	Yes	18	120
SA1-29-48		2.2	12
SA1-29-49	Yes	17	180
SA1-29-50	Yes	17	520
SA1-29-51	Yes	13	640
SA1-30-48		4.2	46
SA1-30-49		2.1 U	26
SA1-30-50	Yes	5.5	230
SA1-30-51	Yes	37	61
SA1-31-48		1.9 U	1.4
SA1-31-49		2.1 U	17
SA1-31-50	Yes	8	320
SA1-31-51	Yes	8.6	310
SA1-32-48		9.7	76
SA1-32-49		3.4	41
SA1-32-50	Yes	3	180
SA1-32-51	Yes	3.2	100
SA1-33-48		3.5	36
SA1-33-49		2.1 U	4.8
SA1-33-50	Yes	17	230
SA1-33-51	Yes	4.1	680
SA1-33-52	Yes	6.7	120
SA1-34-47		1.9 U	3.9
SA1-34-48		4	47
SA1-34-49		4.6	100
SA1-34-50	Yes	3.9	1000
SA1-34-51	Yes	2.4 U	58
SA1-34-52	Yes	12	51
SA1-35-47	Yes	4.4	26
SA1-35-48	Yes	8.2	170
SA1-35-49	Yes	16	310
SA1-36-47	Yes	8.2	150
SA1-36-48	Yes	22	150
SA1-36-49	Yes	20	330

[(a)]Blank cell means no debris and no foundation.

U = Compound was analyzed for, but not detected and the value presented is the sample quantitation limit.

Table C-2 – Sand Laydown Results for SLA#2

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA2-38-71		2 U	1.5
SA2-39-70		2.1 U	2.5
SA2-39-71		1.8 U	1.6
SA2-40-69		2.6	4.5
SA2-40-70		3.5	1.9
SA2-40-71		2 U	1.6
SA2-40-72		2 U	1
SA2-41-68		2.4	5.8
SA2-41-69		2.1 U	4.9
SA2-41-70		2.1 U	1.9
SA2-41-71		2 U	2.2
SA2-41-72		1.9 U	1.6
SA2-42-67		21	160
SA2-42-68		2.2 U	3.9
SA2-42-69		3.1	5.6
SA2-42-70		2 U	2.9
SA2-42-71		2 U	2.2
SA2-42-72		2.2 U	1.2
SA2-43-67		3.4	12
SA2-43-68		2.9	14
SA2-43-69		3.7	4
SA2-43-70		4.2	8.7
SA2-43-71		2.5	3.7
SA2-43-72		2.1 U	1.7
SA2-44-67		3.5	8.8
SA2-44-68		5.7	13

[(a)]Blank cell means no debris and no foundation.
U = Compound was analyzed for, but not detected and the value presented is the sample quantitation limit.

Table C-3 – Sand Laydown Results for SLA#3

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA3-77-120		3.3	5.5
SA3-77-121		6.3	17
SA3-77-122		2 U	6.5
SA3-77-123		9.8	9.8
SA3-77-124		54	47
SA3-77-125		17	11
SA3-77-126		30	33
SA3-77-127		9.9	15
SA3-78-120		16	5.6
SA3-78-121		31	39
SA3-78-122		2.3	4.8
SA3-78-123		3.3	5.1
SA3-78-124		4.7	5.5
SA3-78-125		3.6	6.2
SA3-78-126		3.1	5.2
SA3-78-127		7.6	14
SA3-78-128		3.1	6.1
SA3-78-129		13	25
SA3-78-130		7.8	6.3
SA3-78-131		9.2	13
SA3-79-119		25	41
SA3-79-120		17	21
SA3-79-121		50	120
SA3-79-122		11	17
SA3-79-123		28	51
SA3-79-124		15	30
SA3-79-125		3.3	4.5
SA3-79-126		6.8	15
SA3-79-127		8.5	14
SA3-79-128		8.9	16
SA3-79-129		8.5	7.6
SA3-79-130		19	25
SA3-79-131		12	5.3
SA3-79-132		4	4.9
SA3-79-133		4.9	13

[(a)]Blank cell means no debris and no foundation.
U = Compound was analyzed for, but not detected and the value presented is the sample quantitation limit.

Table C-4 – Sand Laydown Results for SLA#4

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA4-114-95		4.2	8.3
SA4-114-96		2.4	4.7
SA4-114-97		3.1	5.4
SA4-115-94		4.3	8.2
SA4-115-95		2.5 U	5.2
SA4-115-96		2.4 U	5.1
SA4-115-97		5.7	6.2
SA4-115-98		2.4 U	5.7
SA4-116-94		2.3 U	5.1
SA4-116-95		2.2 U	5.1
SA4-116-96		3	5.3
SA4-116-97		3.5	5.5
SA4-116-98		3.3	7.3
SA4-117-94		2.2 U	4.7
SA4-117-95		2.5 U	5.3
SA4-117-96		2.2 U	4.4
SA4-117-97		2.3 U	4.9
SA4-118-94		2.4	5.6
SA4-118-95		2.3 U	4.7
SA4-118-96		2.4 U	5
SA4-118-97		2 U	4.6
SA4-119-94		2 U	4.1
SA4-119-95		2.2 U	4.7
SA4-119-96		2.6	4.9

U = Compound was analyzed for, but not detected and the value presented is the sample quantitation limit.
[(a)]Blank cell means no debris and no foundation.

Table C-5 – Sand Laydown Results for SLA#5

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA5-86-41		52	40
SA5-86-42		9.6	15
SA5-86-43		13	15
SA5-86-44		8.2	9.2
SA5-87-41a		7	9.9
SA5-87-42		19	21
SA5-87-43		5.3	9.4
SA5-87-44		5.7	7.6
SA5-87-45a		50	16
SA5-88-41a		11	13
SA5-88-42		12	18
SA5-88-43		20	13
SA5-88-44a		3.2	4.3
SA5-88-45a		10	12
SA5-89-40		11.5	15.5
SA5-89-41a		44	53
SA5-89-42		9.5	10
SA5-89-43		10	15
SA5-89-45a		2.9	5.8
SA5-91-41		7.3	9.7
SA5-91-42		58	52
SA5-92-41		4	5.8
SA5-92-42a		5	6.9
SA5-92-43a		24	22
SA5-93-41		4.2	5.2
SA5-93-42		7.7	8.4
SA5-93-43		3.4	5.1
SA5-93-44a		2.8	4.9
SA5-94-41		6.9	8.8
SA5-94-42		5.7	6
SA5-94-43		4.6	5.6
SA5-94-44a		2.6	4.6
SA5-95-41		4.9	6.4
SA5-95-42		4.7	5.3
SA5-95-43		4	5
SA5-96-42a		2.8	4.7

[(a)]Blank cell means no debris and no foundation.

U = Compound was analyzed for, but not detected and the value presented is the sample quantitation limit.

Table C-6 – Sand Laydown Results for SLA#6

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA6-67-26		20	37
SA6-67-27		16	43
SA6-67-28		2.7	8.8
SA6-67-29		7.2	24
SA6-67-30		3.3	5.4
SA6-67-31		3.8	4.8
SA6-67-32		10	53
SA6-67-33		3.5	4.8
SA6-67-34		3	4.4
SA6-67-35		2.8	4.7
SA6-68-26		5.5	4.3 U
SA6-68-27		14	120
SA6-68-28		9.4	15
SA6-68-29		16	39
SA6-68-30		5.2	12
SA6-68-31		6.2	7.1
SA6-68-32		4.3	6.3
SA6-68-33		18	16
SA6-68-34		4.4	7
SA6-68-35		4.9	8.3
SA6-68-36		6.3	11
SA6-69-27		3.5	6.2
SA6-69-28		2.3	4.2 U
SA6-69-29		2.5	4.7 U
SA6-69-30		5.9	5.1
SA6-69-31		5.6	12
SA6-69-32		3.7	7.2
SA6-69-33		5.1	18
SA6-69-34		4	5.9
SA6-69-35		3.4	4.8
SA6-69-36		6.1	6.9
SA6-70-27		19	44
SA6-70-28		3.1	6.8
SA6-70-29		2.1 U	4.1 U
SA6-70-30		2.4	4.5 U
SA6-70-31		37	58
SA6-70-32		12	27
SA6-70-33		6.2	11
SA6-70-34		3.7	6.4
SA6-70-35		7.8	15
SA6-70-36		3.6	5.7
SA6-71-28		39	110
SA6-71-29		2.9	3.8 U
SA6-71-30		4	5.4
SA6-71-31		22	77
SA6-71-32		8.6	17
SA6-71-33	Yes	19	1600

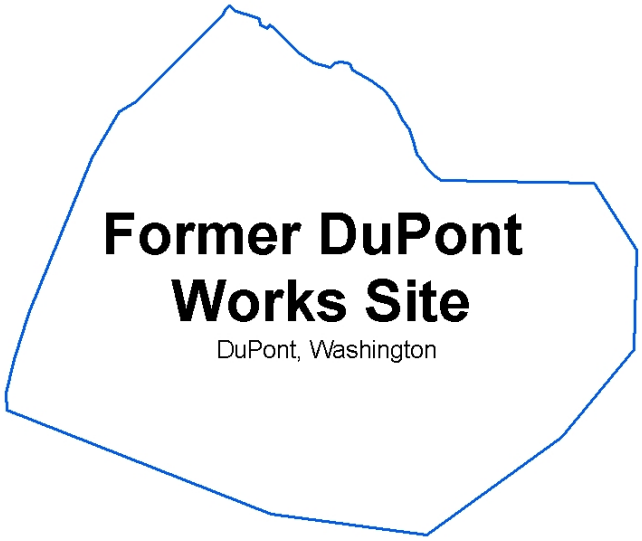
Table C-6 – Sand Laydown Results for SLA#6

Sample Number	Debris or Foundation[(a)]	Arsenic (mg/kg)	Lead (mg/kg)
SA6-71-34		5.5	8
SA6-71-35		3.8	6.9

[(a)]Blank cell means no debris and no foundation.
U = Compound was analyzed for, but not detected and the value presented is the sample quantitation limit.

Interim Source Removal Actions:

Screening Plant Report



Prepared for:

The Weyerhaeuser Company and E.I. duPont de Nemours and Company

Prepared by:

PIONEER Technologies Corporation
West Shore Corporation, NW

January 22, 2002

Table of Contents

1 Introduction 1
2 Background 1
3 Summary of Activities 1
3.1 Screening Process 1
3.2 Screening Plant Sampling Program 1
3.3 Filtering of Residual Water 2
4 Results 2
4.1 Screening Plant 2
4.2 Screening Plant Water 2
5 Summary 4
Appendix A – Stockpile Fraction Sampling Results 1

List of Tables

Table 1 – Fractions that Were Rewashed 2
Table 2 – Screening Plant Water Filtration Results 3
Table A-1 – Analytical Results for Each Fraction by Run 1
Table A-2 – Analytical Results for Cobble Fraction (3” plus) 13
Table A-3 – Analytical Results for Gravel Fraction (3' - 1/4") 14
Table A-4 – Analytical Results for Sand Fraction (1/4" - 200 mesh) 15
Table A-5 – Analytical Results for Fines Fraction 16
Table A-6 – Analytical Results for Humus Fraction 17

1 Introduction

Stockpiles of soil containing high levels of arsenic and lead were created as part of the 2000 hot spot removal program and other previous interim actions. The level of arsenic and lead in these stockpiles is too high to permit on-site disposal. Therefore, to limit the amount of soil requiring off-site disposal, a soil screening plant was assembled where the stockpile material could be washed and separated into five different fractions. The five separate fractions were individually sampled to determine their designation for either off-site disposal or placement on site.

This report presents a description of the screening plant, screening process, and results of the confirmatory sampling conducted to determine the appropriate disposal option for each stockpile fraction.

2 Background

As part of an interim removal action, a soil screening plant was installed on the site to separate out contaminated stockpile fractions for off-site disposal. The screening plant was assembled during March, April, and May of 2001 by Materials Processing Inc. (MPI) of Issaquah, Washington. Adjacent to the screening plant, a two-acre sloped asphalt drying pad was created to contain the fine material fraction (i.e., the fines). The drying pad also has a sump that collected the water that ran off from the fines. The water from the sump was pumped back into the screening plant process. The plant was tested with clean dirt and the pump rate was adjusted to ensure that the 50,000-gallon system was in balance.

3 Summary of Activities

The activities completed in the stockpile screening program and water filtration programs are described below.

3.1 Screening Process

Soil was loaded into the screening plant conveyer where the material went over the 3 inch vibrating screen with water spray bars. Cobbles greater than 3 inches and other material such as plastic and pieces of wood were conveyed to a pile. Material that went through the upper screen then fell to the lower 3 inch to ¼ inch vibrating screen. The oversized fraction (i.e., gravels) then went to a twin screw wash and were conveyed to a separate pile. The less than ¼ inch material went to twin cyclones in a water slurry. The material down to 200 mesh (i.e., sand) was captured and placed in a separate pile. The humus organic matter that floated was captured and sent to a separate pile. The remaining material (i.e., fines less than 200 mesh) was then piped to a double cell clarifier. Flocculent and coagulent were added to facilitate settling out of the material. A drag chain moved the material to a chute where it was captured in a dump truck and placed in a gravel bermed cell on the drying pad. The water in the cell drained through the gravel berm and when the material was dry, it was stockpiled. Following screening, the fines were spread out on the drying pad and turned over regularly using a wide track tractor and a disc in order to decrease the water content. Figures 1 and 2 identify the different components of the screening plant.

The water collected in the sump was pumped to Baker tanks for storage future disposal. Prior to disposal, the tank water was filtered using a sand filter, a bag filter, and a 0.5 micron cartridge filter. The water was then be sampled for lead and arsenic. The water was either disposed of or re-filtered depending on the laboratory results.

3.2 Screening Plant Sampling Program

Samples were collected from each different fraction (i.e., cobbles, gravel, sand, humus, and fines) on a regular basis (e.g., generally once each hour) during screening plant operation. The plant operated on a 24-hour cycle, therefore samples were typically collected hourly (while the plant was running) from 12:00 p.m. one day until 12:00 p.m. the next day. The hourly samples were composited, and one sample from each fraction was delivered to Sound Analytical Services. The different fractions were labeled as follows:

Description	Size Fraction	Sample Name
Cobbles	Greater than 3 inches	SCPL-3PLUS-COB-
Gravel	3 inches to ¼ inch	SCPL-3 TO 1/4-
Sand	¼ inch to 200 mesh	SCPL-1/4 TO 200-
Humus	Organic matter	SCPL-HUMUS-
Fines	200 Mesh or less	SCPL-FINES-

3.3 Filtering of Residual Water

After the screening process was completed there was approximately 47,500 gallons of water remaining in the screening plant system. A three stage filtration system was obtained from Rain-for-Rent that included a packed sand filter, a bag filter, and a 0.5 micron canister type filter. Water from the screening plant was pumped through these filters in order to remove the particles. A water sample was collected every 500 gallons and composited so that there was one sample analyzed by the laboratory for every 2,500 gallons of filtered water. The filtered water was placed in a storage tank until the results were obtained from the laboratory.

4 Results

4.1 Screening Plant

The analytical results for each 24-hour batch from the screening plant are presented in Appendix A. In instances where the arsenic concentration exceeded 530 mg/kg or the lead concentration exceeded 4,100 mg/kg, the cobbles, gravel or sand fractions were run through the screening plant again, sampled, and stockpiled separately. The fractions that were rewashed are presented in Table 1. Fines where the concentration exceeded 530 mg/kg arsenic or 4,100 lead were stockpiled for drying. Screened material that was less than 530 mg/kg arsenic or 4,100 mg/kg lead were placed in Placement Area Number 6.

Table 1 – Fractions that Were Rewashed

Date	Sample ID	Analyte	Result (mg/kg)	Notes	Rewashed Results
6/18/01	SCPL-3 to 1/4-02	Arsenic	13	Rewashed 6/20 as SCPL-3 TO 1/4-02-2	3
6/18/01	SCPL-3 to 1/4-02	Lead	11,000	Rewashed 6/20 as SCPL-3 TO 1/4-02-2	25
6/26/01	SCPL-3 TO 1/4-07	Arsenic	7	Rewashed 6/28 as SCPL-3 TO 1/4-07-02	16
6/26/01	SCPL-3 TO 1/4-07	Lead	6,200	Rewashed 6/28 as SCPL-3 TO 1/4-07-02	31
7/9/01	SCPL 3 PLUS COB - 12	Arsenic	40	Rewashed 7/12 as SCPL3PLUSCOB-12-2	110
7/9/01	SCPL 3 PLUS COB - 12	Lead	12,000	Rewashed 7/12 as SCPL3PLUSCOB-12-2	2,700
7/23/01	SCPL3TO1/4-20	Arsenic	24	Rewashed on 7/25 as SCPL-3TO1/4-20-2	73
7/23/01	SCPL3TO1/4-20	Lead	18,000	Rewashed on 7/25 as SCPL-3TO1/4-20-2	250
7/24/01	SCPL 3 PLUS-COB-21	Arsenic	27	Rewashed on 7/30 as SCPL3PLUSCOB21-2	48
7/24/01	SCPL 3 PLUS-COB-21	Lead	100,000	Rewashed on 7/30 as SCPL3PLUSCOB21-2	860
7/24/01	SCPL 1/4-200-21	Arsenic	23	Rewashed on 7/26 as SCPL1/4-200-21-2	69[(a)]
7/24/01	SCPL 1/4-200-21	Lead	7,500	Rewashed on 7/26 as SCPL1/4-200-21-2	11,000[(a)]
7/25/01	SCPL3PLUS-COB-22	Arsenic	63	Rewashed on 7/30 as SCPL3PLUSCOB21-2	48
7/25/01	SCPL3PLUS-COB-22	Lead	5,400	Rewashed on 7/30 as SCPL3PLUSCOB21-2	860
7/31/01	SCPL1/4-200-25	Arsenic	28	Rewashed on 8/06 as SCPL 3 PLUSCOB-26-2	37
7/31/01	SCPL1/4-200-25	Lead	6,600	Rewashed on 8/06 as SCPL 3 PLUSCOB-26-2	1,200

[(a)]This fraction was re-washed a third time (i.e., sample SCPL1/4-200-21-3 is a Rewash of SCPL1/4-200-21-2 and SCPL1/4-200-22) and the results for arsenic and lead were 52 and 1,400, respectively.

4.2 Screening Plant Water

The analytical results for each 2,500-gallon batch of water from the screening plant are presented in Table 2. In instances where the arsenic concentration exceeded 50 ug/L or the lead concentration

exceeded 15 ug/L the water was pumped back to the storage tank and re-filtered (See Table 2 for details). Water with arsenic and lead concentrations that were less than the associated arsenic and lead drinking water levels was discharged to the ground.

Table 2 – Screening Plant Water Filtration Results

Date Sampled	Sample	Arsenic (ug/L)	Lead (ug/L)	Number of Gallons	Action	Comment
9/20/01	SP-Water-01	ND(10)	16	2,500	Pumped water back into the storage tank	
9/27/01	SP-Water-02	ND (10)	ND (10)	2,500	Discharged water to ground	
10/11/01	SP-Water-03	ND (10)	ND (10)	2,500	Discharged water to ground	
10/22/01	SP-Water-04	ND (10)	17	2,500	Pumped water back into the storage tank	
10/26/01	SP-Water-05	ND (10)	17.2	2,500	Pumped water back into the storage tank	
10/29/01	SP-Water-06	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the filters.
11/5/01	SP-Water-07	ND (10)	14.2	2,500	Discharged water to ground	
11/9/01	SP-Water-08	ND (10)	65.7	2,500	Pumped water back into the storage tank	
11/14/01	SP-Water-09	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters. Pumping water off of the top of the tank rather than the bottom.
11/19/01	SP-Water-10	ND (10)	35.7	2,500	Pumped water back into the storage tank	
11/26/01	SP-Water-11	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
11/26/01	SP-Water-12	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
11/28/01	SP-Water-13	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
11/28/01	SP-Water-14	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/3/01	SP-Water-15	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/3/01	SP-Water-16	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/5/01	SP-Water-17	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/5/01	SP-Water-18	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/11/01	SP-Water-19	ND (10)	14.2	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/11/01	SP-Water-20	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/12/01	SP-Water-21	ND (3)	2.19	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/12/01	SP-Water-22	ND (3)	2.12	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/17/01	SP-Water-23	ND (10)	ND (10)	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.
12/17/01	SP-Water-24	ND (10)	11.7	2,500	Discharged water to ground	Replaced the 0.5 micron canister filters.

ND = Not detected
Drinking water standards for arsenic and lead are 50 and 15 ug/L, respectively.

5 Summary

Approximately 36,028 tons of arsenic and lead contaminated soil was processed through the screening plant. The plant was effective in separating the contaminated fines from the other fractions. After drying there was approximately 2,500 tons of arsenic and lead contaminated fines to be disposed of off-site. In addition, approximately 47,500 gallons of water was filtered to remove arsenic and lead. The filter cake and used filters will be disposed of off site.

Figure 1 – Front End of the Screening Plant

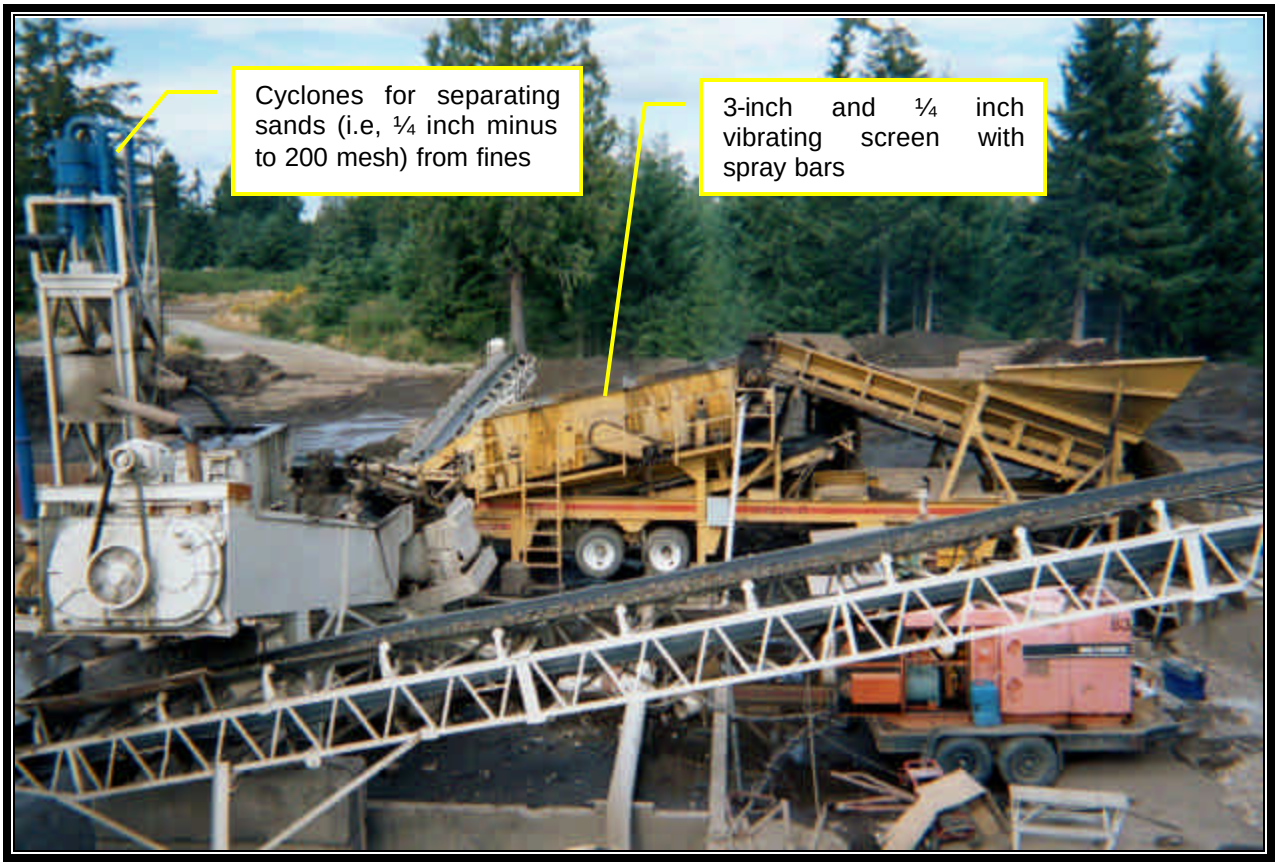


Figure 2 – Back End of the Screening Plant

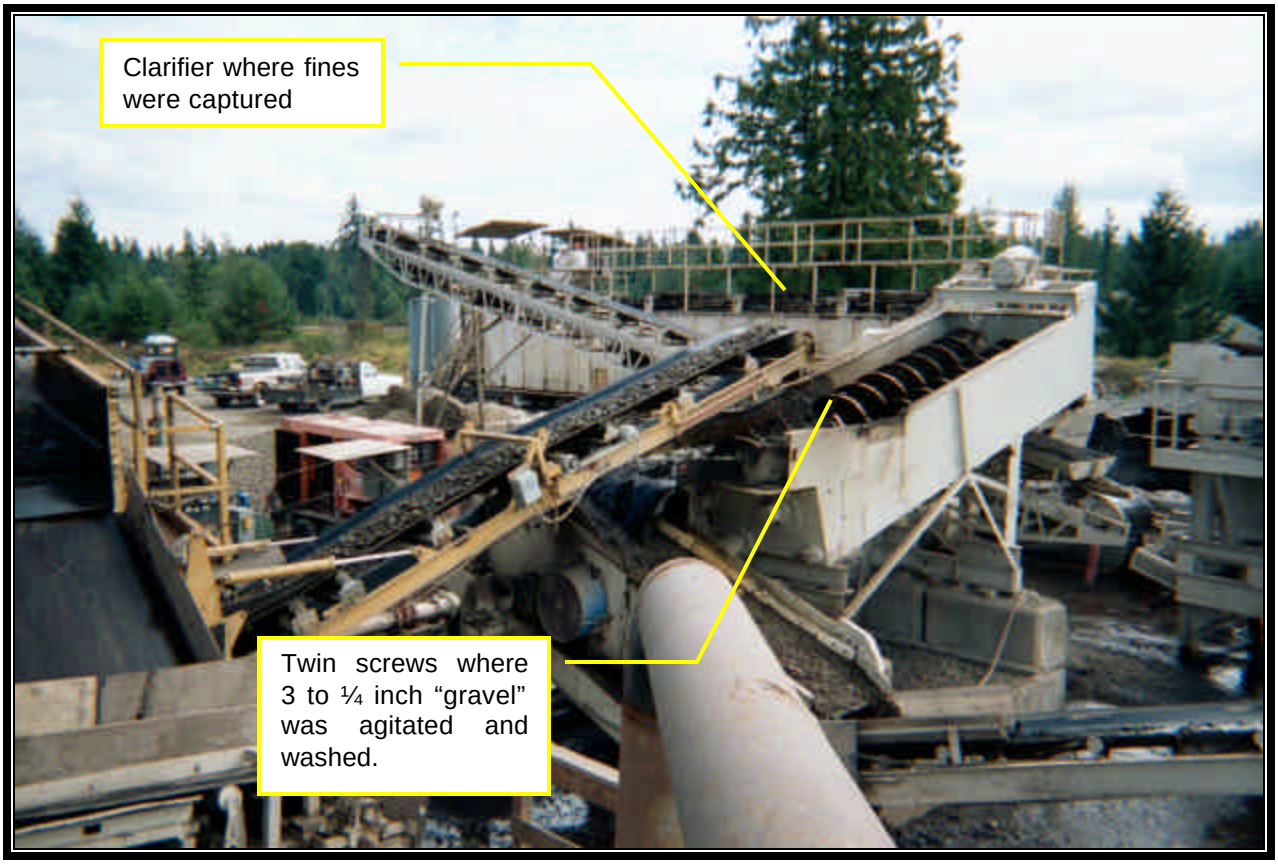
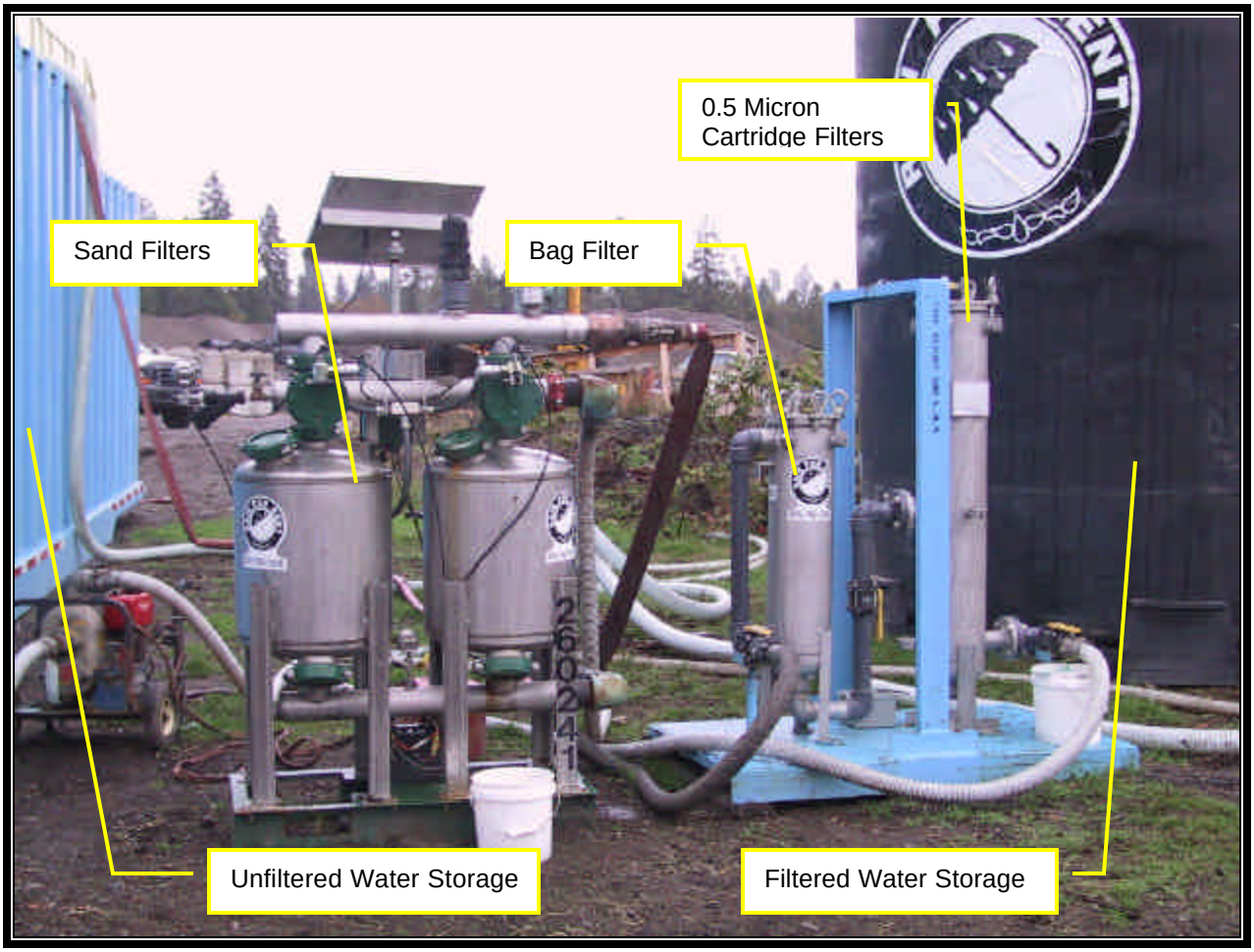


Figure 3 – Screening Plant Water Filtration System



Appendix A – Stockpile Fraction Sampling Results

Analytical results obtained for each fraction are presented below. Table A-1 presents the analytical results for each fraction for arsenic and lead for each run. Tables A-2 through A-6 present the same data organized by fraction.

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
6/14/2001 (12:00 Thurs 6/13 - 4:30 Thurs 6/14)					
98834-04	SCPL-1/4 TO 200-01	Arsenic	17	mg/kg	
98834-04	SCPL-1/4 TO 200-01	Lead	540	mg/kg	
98834-03	SCPL-3 TO 1/4-01	Arsenic	12	mg/kg	
98834-03	SCPL-3 TO 1/4-01	Lead	110	mg/kg	
98834-01	SCPL-3PLUS-COB-01	Arsenic	28	mg/kg	
98834-01	SCPL-3PLUS-COB-01	Lead	430	mg/kg	
98834-02	SCPL-3PLUS-ORG-01	Arsenic	4	mg/kg	
98834-02	SCPL-3PLUS-ORG-01	Lead	110	mg/kg	
98834-05	SCPL-FINES-01	Arsenic	32	mg/kg	
98834-05	SCPL-FINES-01	Lead	520	mg/kg	
98834-06	SCPL-HUMUS-01	Arsenic	16	mg/kg	
98834-06	SCPL-HUMUS-01	Lead	1,200	mg/kg	
6/18/2001 (8:00 Mon 6/18 - 12:00 Mon 6/18)					
98874-03	SCPL - 1/4 to 200 -02	Arsenic	18	mg/kg	
98874-03	SCPL - 1/4 to 200 -02	Lead	1,800	mg/kg	
98874-01	SCPL - 3 PLUS -COB-02	Arsenic	50	mg/kg	
98874-01	SCPL - 3 PLUS -COB-02	Lead	1,200	mg/kg	
98874-04	SCPL - Fines -02	Arsenic	150	mg/kg	
98874-04	SCPL - Fines -02	Lead	3,900	mg/kg	
98874-02	SCPL-3 to 1/4-02	Arsenic	13	mg/kg	Rewashed 6/20 as SCPL-3 TO 1/4-02-2
98874-02	SCPL-3 to 1/4-02	Lead	11,000	mg/kg	Rewashed 6/20 as SCPL-3 TO 1/4-02-2
98874-05	SCPL-Humus-02	Arsenic	5	mg/kg	
98874-05	SCPL-Humus-02	Lead	270	mg/kg	
6/19/2001 (12:00 Mon 6/18 - 12:00 Tues 6/19)					
98911-03	SCPL-1/4 TO 200-03	Arsenic	16	mg/kg	
98911-03	SCPL-1/4 TO 200-03	Lead	500	mg/kg	
98911-02	SCPL-3 TO 1/4-03	Arsenic	3	mg/kg	
98911-02	SCPL-3 TO 1/4-03	Lead	55	mg/kg	
98911-01	SCPL-3PLUS-COB-03	Arsenic	31	mg/kg	
98911-01	SCPL-3PLUS-COB-03	Lead	1,700	mg/kg	
98911-04	SCPL-FINES-03	Arsenic	140	mg/kg	
98911-04	SCPL-FINES-03	Lead	2,900	mg/kg	
98911-05	SCPL-HUMUS-03	Arsenic	4	mg/kg	
98911-05	SCPL-HUMUS-03	Lead	210	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
6/20/2001 (12:00 Tues 6/19 - 12:00 Wed 6/20)					
98964-03	SCPL-1/4 TO 200-04	Arsenic	21	mg/kg	
98964-03	SCPL-1/4 TO 200-04	Lead	1,200	mg/kg	
98964-06	SCPL-3 TO 1/4-02-2	Arsenic	3	mg/kg	Rewash of 6/18 SCPL-3 to 1/4-02 data
98964-06	SCPL-3 TO 1/4-02-2	Lead	25	mg/kg	Rewash of 6/18 SCPL-3 to 1/4-02 data
98964-02	SCPL-3 TO 1/4-04	Arsenic	2	mg/kg	
98964-02	SCPL-3 TO 1/4-04	Lead	41	mg/kg	
98964-01	SCPL-3PLUS-COB-04	Arsenic	16	mg/kg	
98964-01	SCPL-3PLUS-COB-04	Lead	230	mg/kg	
98964-04	SCPL-FINES-04	Arsenic	140	mg/kg	
98964-04	SCPL-FINES-04	Lead	3,600	mg/kg	
98964-05	SCPL-HUMUS-04	Arsenic	17	mg/kg	
98964-05	SCPL-HUMUS-04	Lead	590	mg/kg	
6/21/2001 (12:00 Wed 6/20 - 12:00 Thur 6/21)					
98995-03	SCPL-1/4 TO 200-05	Arsenic	13	mg/kg	
98995-03	SCPL-1/4 TO 200-05	Lead	270	mg/kg	
98995-02	SCPL-3 TO 1/4-05	Arsenic	4	mg/kg	
98995-02	SCPL-3 TO 1/4-05	Lead	70	mg/kg	
98995-01	SCPL-3PLUS-C0B-05	Arsenic	6	mg/kg	
98995-01	SCPL-3PLUS-C0B-05	Lead	140	mg/kg	
98995-04	SCPL-FINES-05	Arsenic	150	mg/kg	
98995-04	SCPL-FINES-05	Lead	3,700	mg/kg	
98995-05	SCPL-HUMUS-05	Arsenic	14	mg/kg	
98995-05	SCPL-HUMUS-05	Lead	320	mg/kg	
6/25/2001 (12:00 Thur 6/21 - 12:00 Mon 6/25)					
99051-01	SCPL-3 PLUS-06	Arsenic	83	mg/kg	
99051-01	SCPL-3 PLUS-06	Lead	660	mg/kg	
99051-02	SCPL-3 TO 1/4-06	Arsenic	6	mg/kg	
99051-02	SCPL-3 TO 1/4-06	Lead	42	mg/kg	
99051-03	SCPL-1/4-200-06	Arsenic	18	mg/kg	
99051-03	SCPL-1/4-200-06	Lead	410	mg/kg	
99051-04	SCPL-FINES-06	Arsenic	150	mg/kg	
99051-04	SCPL-FINES-06	Lead	3,700	mg/kg	
99051-05	SCPL-HUMUS-06	Arsenic	15	mg/kg	
99051-05	SCPL-HUMUS-06	Lead	590	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
6/26/2001 (12:00 Mon 6/25 - 12:00 Tues 6/26)					
99086-01	SCPL-3PLUS-COB07	Arsenic	31	mg/kg	
99086-01	SCPL-3PLUS-COB07	Lead	3,000	mg/kg	
99086-02	SCPL-3 TO 1/4-07	Arsenic	7	mg/kg	Rewashed 6/28 as SCPL-3 TO 1/4-07-02
99086-02	SCPL-3 TO 1/4-07	Lead	6,200	mg/kg	Rewashed 6/28 as SCPL-3 TO 1/4-07-02
99086-03	SCPL-1/4 TO 200-07	Arsenic	22	mg/kg	
99086-03	SCPL-1/4 TO 200-07	Lead	2,500	mg/kg	
99086-04	SCPL-FINES-07	Arsenic	160	mg/kg	
99086-04	SCPL-FINES-07	Lead	4,000	mg/kg	
99086-05	SCPL-HUMUS-07	Arsenic	16	mg/kg	
99086-05	SCPL-HUMUS-07	Lead	680	mg/kg	
6/27/2001 (12:00 Tues 6/26 - 12:00 Wed 6/27)					
99118-01	SCPL-3 PLUS-COB-08	Arsenic	56	mg/kg	
99118-01	SCPL-3 PLUS-COB-08	Lead	1,600	mg/kg	
99118-02	SCPL-3 TO 1/4-08	Arsenic	3	mg/kg	
99118-02	SCPL-3 TO 1/4-08	Lead	40	mg/kg	
99118-03	SCPL-1/4-200-08	Arsenic	22	mg/kg	
99118-03	SCPL-1/4-200-08	Lead	910	mg/kg	
99118-04	SCPL-FINES-08	Arsenic	170	mg/kg	
99118-04	SCPL-FINES-08	Lead	4,500	mg/kg	
99118-05	SCPL-HUMUS-08	Arsenic	11	mg/kg	
99118-05	SCPL-HUMUS-08	Lead	430	mg/kg	
6/28/2001 (12:00 Wed 6/27 - 12:00 Thurs 6/28)					
99171-01	SCPL-3PLUS-COB-09	Arsenic	91	mg/kg	
99171-01	SCPL-3PLUS-COB-09	Lead	1,500	mg/kg	
99171-02	SCPL-3 TO 1/4-09	Arsenic	23	mg/kg	
99171-02	SCPL-3 TO 1/4-09	Lead	340	mg/kg	
99171-03	SCPL-1/4-200-09	Arsenic	30	mg/kg	
99171-03	SCPL-1/4-200-09	Lead	500	mg/kg	
99171-04	SCPL-FINES-09	Arsenic	170	mg/kg	
99171-04	SCPL-FINES-09	Lead	4,500	mg/kg	
99171-05	SCPL-HUMUS-09	Arsenic	11	mg/kg	
99171-05	SCPL-HUMUS-09	Lead	400	mg/kg	
99171-06	SCPL-3 TO 1/4-07-02	Arsenic	16	mg/kg	Rewash of SCPL-3 TO 1/4-07 6/26
99171-06	SCPL-3 TO 1/4-07-02	Lead	31	mg/kg	Rewash of SCPL-3 TO 1/4-07 6/26

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
7/2/2001 (12:00 Thurs 6/28 - 12:00 Monday 7/2)					
99244-01	SCPL3PLUSCOB-9b	Arsenic	160	mg/kg	
99244-01	SCPL3PLUSCOB-9b	Lead	3,000	mg/kg	
99244-02	SCPL3-1/4-9b	Arsenic	5	mg/kg	
99244-02	SCPL3-1/4-9b	Lead	170	mg/kg	
99244-03	SCPL-1/4 TO 200-9b	Arsenic	35	mg/kg	
99244-03	SCPL-1/4 TO 200-9b	Lead	900	mg/kg	
99244-04	SPPL-FINES-9b	Arsenic	190	mg/kg	
99244-04	SPPL-FINES-9b	Lead	4,400	mg/kg	
99244-05	SCPL-HUMUS-9b	Arsenic	15	mg/kg	
99244-05	SCPL-HUMUS-9b	Lead	490	mg/kg	
7/3/2001 (12:00 Monday 7/2 - 12:00 Tuesday 7/3)					
99278-01	SCPL3PLUS-COB-10	Arsenic	290	mg/kg	
99278-01	SCPL3PLUS-COB-10	Lead	3,600	mg/kg	
99278-02	SCPL3 TO 1/4-10	Arsenic	24	mg/kg	
99278-02	SCPL3 TO 1/4-10	Lead	1,600	mg/kg	
99278-03	SCPL1/4-200-10	Arsenic	53	mg/kg	
99278-03	SCPL1/4-200-10	Lead	2,000	mg/kg	
99278-04	SCPL-FINES-10	Arsenic	240	mg/kg	
99278-04	SCPL-FINES-10	Lead	4,600	mg/kg	
99278-05	SCPL-HUMUS-10	Arsenic	74	mg/kg	
99278-05	SCPL-HUMUS-10	Lead	1,400	mg/kg	
7/5/2001 (12:00 Tuesday 7/3 - 12:00 Thursday 7/5)					
99312-01	SCPL3PLUSCOB-11	Arsenic	140	mg/kg	
99312-01	SCPL3PLUSCOB-11	Lead	850	mg/kg	
99312-02	SCPL3TO1/4-11	Arsenic	19	mg/kg	
99312-02	SCPL3TO1/4-11	Lead	2,500	mg/kg	
99312-03	SCPL1/4TO200-11	Arsenic	54	mg/kg	
99312-03	SCPL1/4TO200-11	Lead	1,300	mg/kg	
99312-04	SCPL-FINES-11	Arsenic	350	mg/kg	
99312-04	SCPL-FINES-11	Lead	6,800	mg/kg	
99312-05	SCPL-HUMUS-11	Arsenic	23	mg/kg	
99312-05	SCPL-HUMUS-11	Lead	5,900	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
7/9/2001 (12:00 Thursday 7/5 - 12:00 Monday 7/9)					
99370-01	SCPL 3 PLUS COB - 12	Arsenic	40	mg/kg	Rewashed 7/12 as SCPL3PLUSCOB-12-2
99370-01	SCPL 3 PLUS COB - 12	Lead	12,000	mg/kg	Rewashed 7/12 as SCPL3PLUSCOB-12-2
99370-02	SCPL 3 TO 1/4 - 12	Arsenic	1	mg/kg	
99370-02	SCPL 3 TO 1/4 - 12	Lead	12	mg/kg	
99370-03	SCPL 1/4 - 200 -12	Arsenic	57	mg/kg	
99370-03	SCPL 1/4 - 200 -12	Lead	1,600	mg/kg	
99370-04	SCPL - FINES -12	Arsenic	290	mg/kg	
99370-04	SCPL - FINES -12	Lead	7,600	mg/kg	
99370-05	SCPL - HUMUS - 12	Arsenic	38	mg/kg	
99370-05	SCPL - HUMUS - 12	Lead	1,800	mg/kg	
7/10/2001 (12:00 Monday 7/9 - 12:00 Tuesday 7/10)					
99402-01	SCPL 3 PLUS COB - 13	Arsenic	120	mg/kg	
99402-01	SCPL 3 PLUS COB - 13	Lead	2,000	mg/kg	
99402-02	SCPL 3 TO 1/4 - 13	Arsenic	nd	mg/kg	
99402-02	SCPL 3 TO 1/4 - 13	Lead	110	mg/kg	
99402-03	SCPL 1/4 - 200 -13	Arsenic	110	mg/kg	
99402-03	SCPL 1/4 - 200 -13	Lead	1,100	mg/kg	
99402-04	SCPL - FINES -13	Arsenic	340	mg/kg	
99402-04	SCPL - FINES -13	Lead	5,500	mg/kg	
99402-05	SCPL - HUMUS - 13	Arsenic	12	mg/kg	
99402-05	SCPL - HUMUS - 13	Lead	1,300	mg/kg	
7/11/2001 (12:00 Tuesday 7/10 - 12:00 Wednesday 7/11)					
99435-01	SCPL3PLUSCOB-14	Arsenic	52	mg/kg	
99435-01	SCPL3PLUSCOB-14	Lead	1,200	mg/kg	
99435-02	SCPL3TO1/4-14	Arsenic	15	mg/kg	
99435-02	SCPL3TO1/4-14	Lead	190	mg/kg	
99435-03	SCPL1/4-200-14	Arsenic	42	mg/kg	
99435-03	SCPL1/4-200-14	Lead	3,500	mg/kg	
99435-04	SCPL-FINES-14	Arsenic	320	mg/kg	
99435-04	SCPL-FINES-14	Lead	5,400	mg/kg	
99435-05	SCPL-HUMUS-14	Arsenic	35	mg/kg	
99435-05	SCPL-HUMUS-14	Lead	910	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
7/12/2001 (12:00 Wednesday 7/11 - 12:00 Thursday 7/12)					
99483-01	SCPL3PLUS-COB-15	Arsenic	220	mg/kg	
99483-01	SCPL3PLUS-COB-15	Lead	2,300	mg/kg	
99483-02	SCPL3PLUSCOB-12-2	Arsenic	110	mg/kg	Rewash of SCPL-3 PLUS COB-12
99483-02	SCPL3PLUSCOB-12-2	Lead	2,700	mg/kg	Rewash of SCPL-3 PLUS COB-12
99483-03	SCPL3TO1/4-15	Arsenic	1	mg/kg	
99483-03	SCPL3TO1/4-15	Lead	26	mg/kg	
99483-04	SCPL1/4-200-15	Arsenic	41	mg/kg	
99483-04	SCPL1/4-200-15	Lead	1,100	mg/kg	
99483-05	SCPL-FINES-15	Arsenic	380	mg/kg	
99483-05	SCPL-FINES-15	Lead	6,600	mg/kg	
99483-06	SCPL-HUMUS-15	Arsenic	90	mg/kg	
99483-06	SCPL-HUMUS-15	Lead	2,300	mg/kg	
7/16/2001 (12:00 Thursday 7/12 - 12:00 Monday 7/16)					
99544-01	SCPL3PLUSCOB-16	Arsenic	120	mg/kg	
99544-01	SCPL3PLUSCOB-16	Lead	950	mg/kg	
99544-02	SCPL3TO1/4-16	Arsenic	10	mg/kg	
99544-02	SCPL3TO1/4-16	Lead	260	mg/kg	
99544-03	SCPL1/4TO200-16	Arsenic	48	mg/kg	
99544-03	SCPL1/4TO200-16	Lead	3,100	mg/kg	
99544-04	SCPL-FINES-16	Arsenic	360	mg/kg	
99544-04	SCPL-FINES-16	Lead	6,000	mg/kg	
99544-05	SCPL-HUMUS-16	Arsenic	53	mg/kg	
99544-05	SCPL-HUMUS-16	Lead	1,300	mg/kg	
7/17/2001 (12:00 Monday 7/16 - 12:00 Tuesday 7/17)					
99580-01	SCPL3PLUS-COB-17	Arsenic	180	mg/kg	
99580-01	SCPL3PLUS-COB-17	Lead	2,800	mg/kg	
99580-02	SCPL3TO1/4-17	Arsenic	47	mg/kg	
99580-02	SCPL3TO1/4-17	Lead	1,600	mg/kg	
99580-03	SCPL1/4-200-17	Arsenic	88	mg/kg	
99580-03	SCPL1/4-200-17	Lead	1,600	mg/kg	
99580-04	SCPL-FINES-17	Arsenic	480	mg/kg	
99580-04	SCPL-FINES-17	Lead	6,900	mg/kg	
99580-05	SCPL-HUMUS-17	Arsenic	45	mg/kg	
99580-05	SCPL-HUMUS-17	Lead	1,400	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
7/18/2001 (12:00 Tuesday 7/17 - 12:00 Wednesday 7/18)					
99601-01	SCPL 3 PLUS COB-18	Arsenic	180	mg/kg	
99601-01	SCPL 3 PLUS COB-18	Lead	2,500	mg/kg	
99601-02	SCPL 3 TO 1/4-18	Arsenic	51	mg/kg	
99601-02	SCPL 3 TO 1/4-18	Lead	1,300	mg/kg	
99601-03	SCPL 1/4 TO 200-18	Arsenic	140	mg/kg	
99601-03	SCPL 1/4 TO 200-18	Lead	2,000	mg/kg	
99601-04	SCPL-FINES-18	Arsenic	650	mg/kg	
99601-04	SCPL-FINES-18	Lead	9,000	mg/kg	
99601-05	SCPL-HUMUS-18	Arsenic	120	mg/kg	
99601-05	SCPL-HUMUS-18	Lead	9,000	mg/kg	
7/19/2001 (12:00 Wednesday 7/18 - 12:00 Thursday 7/19)					
99642-01	SCPL 3 PLUS-COB-19	Arsenic	210	mg/kg	
99642-01	SCPL 3 PLUS-COB-19	Lead	3,300	mg/kg	
99642-02	SCPL 3 TO 1/4-19	Arsenic	34	mg/kg	
99642-02	SCPL 3 TO 1/4-19	Lead	1,200	mg/kg	
99642-03	SCPL 1/4 TO 200-19	Arsenic	110	mg/kg	
99642-03	SCPL 1/4 TO 200-19	Lead	2,600	mg/kg	
99642-04	SCPL-FINES-19	Arsenic	760	mg/kg	
99642-04	SCPL-FINES-19	Lead	12,000	mg/kg	
99642-05	SCPL-HUMUS-19	Arsenic	110	mg/kg	
99642-05	SCPL-HUMUS-19	Lead	6,600	mg/kg	
7/23/2001 (12:00 Thursday 7/19 - 12:00 Monday 7/23)					
99689-01	SCPL3PLUS-COB-20	Arsenic	86	mg/kg	
99689-01	SCPL3PLUS-COB-20	Lead	1,200	mg/kg	
99689-02	SCPL3TO1/4-20	Arsenic	24	mg/kg	Rewashed on 7/25 as SCPL-3TO1/4-20-2
99689-02	SCPL3TO1/4-20	Lead	18,000	mg/kg	Rewashed on 7/25 as SCPL-3TO1/4-20-2
99689-03	SCPL1/4TO200-20	Arsenic	86	mg/kg	
99689-03	SCPL1/4TO200-20	Lead	1,600	mg/kg	
99689-04	SCPL-FINES-20	Arsenic	530	mg/kg	
99689-04	SCPL-FINES-20	Lead	8,100	mg/kg	
99689-05	SCPL-HUMUS-20	Arsenic	77	mg/kg	
99689-05	SCPL-HUMUS-20	Lead	3,500	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
7/24/2001 (12:00 Monday 7/23 - 12:00 Tuesday 7/24)					
99718-01	SCPL 3 PLUS-COB-21	Arsenic	27	mg/kg	Rewashed on 7/30 as SCPL3PLUSCOB21-2
99718-01	SCPL 3 PLUS-COB-21	Lead	100,000	mg/kg	Rewashed on 7/30 as SCPL3PLUSCOB21-2
99718-02	SCPL 3 TO 1/4-21	Arsenic	10	mg/kg	
99718-02	SCPL 3 TO 1/4-21	Lead	650	mg/kg	
99718-03	SCPL 1/4-200-21	Arsenic	23	mg/kg	Rewashed on 7/26 as SCPL1/4-200-21-2
99718-03	SCPL 1/4-200-21	Lead	7,500	mg/kg	Rewashed on 7/26 as SCPL1/4-200-21-2
99718-04	SCPL-FINES-21	Arsenic	310	mg/kg	
99718-04	SCPL-FINES-21	Lead	7,300	mg/kg	
99718-05	SCPL-HUMUS-21	Arsenic	14	mg/kg	
99718-05	SCPL-HUMUS-21	Lead	1,600	mg/kg	
7/25/2001 (12:00 Tuesday 7/24 - 12:00 Wednesday 7/25)					
99751-01	SCPL3PLUS-COB-22	Arsenic	63	mg/kg	Rewashed on 7/30 as SCPL3PLUSCOB21-2
99751-01	SCPL3PLUS-COB-22	Lead	5,400	mg/kg	Rewashed on 7/30 as SCPL3PLUSCOB21-2
99751-02	SCPL3TO1/4-22	Arsenic	71	mg/kg	
99751-02	SCPL3TO1/4-22	Lead	770	mg/kg	
99751-03	SCPL1/4-200-22	Arsenic	47	mg/kg	
99751-03	SCPL1/4-200-22	Lead	4,600	mg/kg	
99751-04	SCPL-FINES-22	Arsenic	180	mg/kg	
99751-04	SCPL-FINES-22	Lead	13,000	mg/kg	
99751-05	SCPL-HUMUS-22	Arsenic	30	mg/kg	
99751-05	SCPL-HUMUS-22	Lead	400	mg/kg	
99751-06	SCPL-3TO1/4-20-2	Arsenic	73	mg/kg	Rewash of SCPL-3TO1/4-20
99751-06	SCPL-3TO1/4-20-2	Lead	250	mg/kg	Rewash of SCPL-3TO1/4-20
7/26/2001 (12:00 Wednesday 7/25 - 12:00 Thursday 7/26)					
99779-01	SCPL3PLUSCOB-23	Arsenic	470	mg/kg	
99779-01	SCPL3PLUSCOB-23	Lead	650	mg/kg	
99779-02	SCPL3TO1/4-23	Arsenic	18	mg/kg	
99779-02	SCPL3TO1/4-23	Lead	360	mg/kg	
99779-03	SCPL1/4-200-23	Arsenic	58	mg/kg	
99779-03	SCPL1/4-200-23	Lead	880	mg/kg	
99779-04	SCPL-FINES-23	Arsenic	210	mg/kg	
99779-04	SCPL-FINES-23	Lead	2,600	mg/kg	
99779-05	SCPL-HUMUS-23	Arsenic	44	mg/kg	
99779-05	SCPL-HUMUS-23	Lead	210	mg/kg	
99779-06	SCPL1/4-200-21-2	Arsenic	69	mg/kg	Rewash of SCPL-1/4-200-21
99779-06	SCPL1/4-200-21-2	Lead	11,000	mg/kg	Rewash of SCPL-1/4-200-21

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
7/30/2001 (12:00 Thursday 7/26 - 12:00 Monday 7/30)					
99829-01	SCPL3PLUSCOB-24	Arsenic	120	mg/kg	
99829-01	SCPL3PLUSCOB-24	Lead	2,900	mg/kg	
99829-02	SCPL3TO1/4-24	Arsenic	14	mg/kg	
99829-02	SCPL3TO1/4-24	Lead	320	mg/kg	
99829-03	SCPL1/4-200-24	Arsenic	39	mg/kg	
99829-03	SCPL1/4-200-24	Lead	670	mg/kg	
99829-04	SCPL-FINES-24	Arsenic	330	mg/kg	
99829-04	SCPL-FINES-24	Lead	4,200	mg/kg	
99829-05	SCPL-HUMUS-24	Arsenic	33	mg/kg	
99829-05	SCPL-HUMUS-24	Lead	700	mg/kg	
99829-06	SCPL3PLUSCOB21-2	Arsenic	48	mg/kg	Rewash of SCPL3PLUSCOB-21 and SCPL3PLUSCOB-22
99829-06	SCPL3PLUSCOB21-2	Lead	860	mg/kg	Rewash of SCPL3PLUSCOB-21 and SCPL3PLUSCOB-22
99829-07	SCPL1/4-200-21-3	Arsenic	52	mg/kg	Rewash of SCPL1/4-200-21-2 and SCPL1/4-200-22
99829-07	SCPL1/4-200-21-3	Lead	1,400	mg/kg	Rewash of SCPL1/4-200-21-2 and SCPL1/4-200-22
7/31/2001 (12:00 Monday 7/30 -12:00 Tuesday 7/31)					
99864-1	SCPL3PLUSCOB-25	Arsenic	130	mg/kg	
99864-1	SCPL3PLUSCOB-25	Lead	400	mg/kg	
99864-2	SCPL3TO1/4-25	Arsenic	260	mg/kg	
99864-2	SCPL3TO1/4-25	Lead	3,500	mg/kg	
99864-3	SCPL1/4-200-25	Arsenic	28	mg/kg	Rewashed on 8/06 as SCPL 3 PLUSCOB-26-2
99864-3	SCPL1/4-200-25	Lead	6,600	mg/kg	Rewashed on 8/06 as SCPL 3 PLUSCOB-26-2
99864-4	SCPL-FINES-25	Arsenic	5	mg/kg	
99864-4	SCPL-FINES-25	Lead	70	mg/kg	
99864-5	SCPLHUMUS-25	Arsenic	22	mg/kg	
99864-5	SCPLHUMUS-25	Lead	370	mg/kg	
8/01/2001 (12:00 Tuesday 7/31 -12:00 Wednesday 8/01)					
99895-01	SCPL3PLUSCOB-26	Arsenic	1,500	mg/kg	
99895-01	SCPL3PLUSCOB-26	Lead	600	mg/kg	
99895-02	SCPL3TO1/4-26	Arsenic	67	mg/kg	
99895-02	SCPL3TO1/4-26	Lead	2,700	mg/kg	
99895-03	SCPL1/4-200-26	Arsenic	26	mg/kg	
99895-03	SCPL1/4-200-26	Lead	580	mg/kg	
99895-04	SCPL-FINES-26	Arsenic	220	mg/kg	
99895-04	SCPL-FINES-26	Lead	5,600	mg/kg	
99895-05	SCPL-HUMUS-26	Arsenic	18	mg/kg	
99895-05	SCPL-HUMUS-26	Lead	550	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
8/02/2001 (12:00 Wednesday 8/01 -12:00 Thursday 8/02)					
99926-01	SCPL 3 PLUS COB-27	Arsenic	50	mg/kg	
99926-01	SCPL 3 PLUS COB-27	Lead	750	mg/kg	
99926-02	SCPL 3 TO 1/4-27	Arsenic	15	mg/kg	
99926-02	SCPL 3 TO 1/4-27	Lead	520	mg/kg	
99926-03	SCPL 1/4-200-27	Arsenic	41	mg/kg	
99926-03	SCPL 1/4-200-27	Lead	1,900	mg/kg	
99926-04	SCPL-FINES-27	Arsenic	230	mg/kg	
99926-04	SCPL-FINES-27	Lead	4,200	mg/kg	
99926-05	SCPL-HUMUS-27	Arsenic	17	mg/kg	
99926-05	SCPL-HUMUS-27	Lead	510	mg/kg	
8/06/2001 (12:00 Thursday 8/02 -12:00 Monday 8/06)					
99985-01	SCPL 3 PLUS COB-28	Arsenic	91	mg/kg	
99985-01	SCPL 3 PLUS COB-28	Lead	1,600	mg/kg	
99985-02	SCPL 3 TO 1/4-28	Arsenic	15	mg/kg	
99985-02	SCPL 3 TO 1/4-28	Lead	570	mg/kg	
99985-03	SCPL 1/4-200-28	Arsenic	34	mg/kg	
99985-03	SCPL 1/4-200-28	Lead	1,600	mg/kg	
99985-04	SCPL FINES-28	Arsenic	220	mg/kg	
99985-04	SCPL FINES-28	Lead	5,200	mg/kg	
99985-05	SCPL HUMUS-28	Arsenic	17	mg/kg	
99985-05	SCPL HUMUS-28	Lead	500	mg/kg	
99985-06	SCPL 3 PLUSCOB-26-2	Arsenic	37	mg/kg	Sample was given the wrong sample ID. This sample was a re-wash of SCPL 1/4 - 200 - 25
99985-06	SCPL 3 PLUSCOB-26-2	Lead	1,200	mg/kg	Sample was given the wrong sample ID. This sample was a re-wash of SCPL 1/4 - 200 - 25
8/07/2001 (12:00 Monday 8/06 -12:00 Tuesday 8/07)					
100011-01	SCPL 3 PLUS-COB-29	Arsenic	62	mg/kg	
100011-01	SCPL 3 PLUS-COB-29	Lead	1,100	mg/kg	
100011-02	SCPL 3 TO 1/4-29	Arsenic	7	mg/kg	
100011-02	SCPL 3 TO 1/4-29	Lead	340	mg/kg	
100011-03	SCPL 1/4-200-29	Arsenic	26	mg/kg	
100011-03	SCPL 1/4-200-29	Lead	2,800	mg/kg	
100011-04	SCPL-FINES-29	Arsenic	220	mg/kg	
100011-04	SCPL-FINES-29	Lead	3,800	mg/kg	
100011-05	SCPL-HUMUS-29	Arsenic	21	mg/kg	
100011-05	SCPL-HUMUS-29	Lead	350	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
8/08/2001 (12:00 Tuesday 8/07 -12:00 Wednesday 8/08)					
100048-01	SCPL3PLUS-COB-30	Arsenic	120	mg/kg	
100048-01	SCPL3PLUS-COB-30	Lead	1,600	mg/kg	
100048-02	SCPL3TO1/4-30	Arsenic	50	mg/kg	
100048-02	SCPL3TO1/4-30	Lead	180	mg/kg	
100048-03	SCPL1/4-200-30	Arsenic	30	mg/kg	
100048-03	SCPL1/4-200-30	Lead	520	mg/kg	
100048-04	SCPL-FINE-30	Arsenic	200	mg/kg	
100048-04	SCPL-FINE-30	Lead	4,000	mg/kg	
100048-05	SCPL-HUMUS-30	Arsenic	15	mg/kg	
100048-05	SCPL-HUMUS-30	Lead	440	mg/kg	
8/09/2001 (12:00 Wednesday 8/08 -12:00 Thursday 8/09)					
100083	SCPL 3PLUSCOB-31	Arsenic	46	mg/kg	
100083	SCPL 3PLUSCOB-31	Lead	840	mg/kg	
100083	SCPL 3 TO 1/4-31	Arsenic	15	mg/kg	
100083	SCPL 3 TO 1/4-31	Lead	210	mg/kg	
100083	SCPL 1/4-200-31	Arsenic	32	mg/kg	
100083	SCPL 1/4-200-31	Lead	370	mg/kg	
100083	SCPL-FINES-31	Arsenic	220	mg/kg	
100083	SCPL-FINES-31	Lead	3,000	mg/kg	
100083	SCPL-HUMUS-31	Arsenic	21	mg/kg	
100083	SCPL-HUMUS-31	Lead	290	mg/kg	
8/13/2001 (12:00 Thursday 8/09 -12:00 Monday 8/13)					
100137	SCPL3PLUS-COB-32	Arsenic	60	mg/kg	
100137	SCPL3PLUS-COB-32	Lead	630	mg/kg	
100137	SCPL3TO1/4-32	Arsenic	10	mg/kg	
100137	SCPL3TO1/4-32	Lead	43	mg/kg	
100137	SCPL31/4-200-32	Arsenic	25	mg/kg	
100137	SCPL31/4-200-32	Lead	500	mg/kg	
100137	SCPL-HUMUS-32	Arsenic	37	mg/kg	
100137	SCPL-HUMUS-32	Lead	640	mg/kg	
100137	SCPL-FINES-32	Arsenic	230	mg/kg	
100137	SCPL-FINES-32	Lead	2,900	mg/kg	

Table A-1 – Analytical Results for Each Fraction by Run

SAS ID	Client ID	Parameter	Result	Units	Notes
8/14/2001 (12:00 Monday 8/13 -12:00 Tuesday 8/14)					
100164-01	SCPL 3 PLUS-COB-33	Arsenic	62	mg/kg	
100164-01	SCPL 3 PLUS-COB-33	Lead	1,300	mg/kg	
100164-02	SCPL 3 TO 1/4-33	Arsenic	5	mg/kg	
100164-02	SCPL 3 TO 1/4-33	Lead	110	mg/kg	
100164-03	SCPL 1/4-200-33	Arsenic	44	mg/kg	
100164-03	SCPL 1/4-200-33	Lead	840	mg/kg	
100164-04	SCPL-FINES-33	Arsenic	230	mg/kg	
100164-04	SCPL-FINES-33	Lead	3,500	mg/kg	
100164-05	SCPL-HUMUS-33	Arsenic	33	mg/kg	
100164-05	SCPL-HUMUS-33	Lead	1,300	mg/kg	
8/20/2001 (12:00 Thursday 8/16 -12:00 Monday 8/20)					
100274-01	SCPL3PLUSCOB-35	Arsenic	120	mg/kg	
100274-01	SCPL3PLUSCOB-35	Lead	2,400	mg/kg	
100274-02	SCPL3TO1/4-35	Arsenic	10	mg/kg	
100274-02	SCPL3TO1/4-35	Lead	69	mg/kg	
100274-03	SCPL1-4-200-35	Arsenic	24	mg/kg	
100274-03	SCPL1-4-200-35	Lead	1,400	mg/kg	
100274-04	SCPLFINES-35	Arsenic	240	mg/kg	
100274-04	SCPLFINES-35	Lead	4,600	mg/kg	
100274-05	SCPLHUMUS-35	Arsenic	12	mg/kg	
100274-05	SCPLHUMUS-35	Lead	2,500	mg/kg	
8/21/2001 (12:00 Monday 8/20 -12:00 Tuesday 8/21)					
100304-01	SCPL3PLUS-COB-36	Arsenic	140	mg/kg	
100304-01	SCPL3PLUS-COB-36	Lead	2,500	mg/kg	
100304-02	SCPL3TO1/4-36	Arsenic	3	mg/kg	
100304-02	SCPL3TO1/4-36	Lead	70	mg/kg	
100304-03	SCPL1/4-200-36	Arsenic	28	mg/kg	
100304-03	SCPL1/4-200-36	Lead	560	mg/kg	
100304-04	SCPL-FINES-36	Arsenic	250	mg/kg	
100304-04	SCPL-FINES-36	Lead	4,800	mg/kg	
100304-05	SCPL-HUMUS-36	Arsenic	17	mg/kg	
100304-05	SCPL-HUMUS-36	Lead	570	mg/kg	

Table A-2 – Analytical Results for Cobble Fraction (3" plus)

Sample Number	Date Sample Delivered to Lab	Arsenic Level (mg/kg)	Lead Level (mg/kg)
SCPL-3PLUS-COB-01	6/14/2001	28	430
SCPL-3PLUS-ORG-01	6/14/2001	4	110
SCPL - 3 PLUS -COB-02	6/18/2001	50	1,200
SCPL-3PLUS-COB-03	6/19/2001	31	1,700
SCPL-3PLUS-COB-04	6/20/2001	16	230
SCPL-3PLUS-C0B-05	6/21/2001	6	140
SCPL-3 PLUS-06	6/25/2001	83	660
SCPL-3PLUS-COB07	6/26/2001	31	3,000
SCPL-3 PLUS-COB-08	6/27/2001	56	1,600
SCPL-3PLUS-COB-09	6/28/2001	91	1,500
SCPL3PLUSCOB-9b	7/2/2001	160	3,000
SCPL3PLUS-COB-10	7/3/2001	290	3,600
SCPL3PLUSCOB-11	7/5/2001	140	850
SCPL 3 PLUS COB - 12	7/9/2001	40	12,000
SCPL 3 PLUS COB - 13	7/10/2001	120	2,000
SCPL3PLUSCOB-14	7/11/2001	52	1,200
SCPL3PLUSCOB-12-2	7/12/2001	110	2,700
SCPL3PLUS-COB-15	7/12/2001	220	2,300
SCPL3PLUSCOB-16	7/16/2001	120	950
SCPL3PLUS-COB-17	7/17/2001	180	2,800
SCPL 3 PLUS COB-18	7/18/2001	180	2,500
SCPL 3 PLUS-COB-19	7/19/2001	210	3,300
SCPL3PLUS-COB-20	7/23/2001	86	1,200
SCPL 3 PLUS-COB-21	7/24/2001	27	100,000
SCPL3PLUS-COB-22	7/25/2001	63	5,400
SCPL3PLUSCOB-23	7/26/2001	470	650
SCPL3PLUSCOB-24	7/30/2001	120	2,900
SCPL3PLUSCOB21-2	7/30/2001	48	860
SCPL3PLUSCOB-25	7/31/2001	130	400
SCPL3PLUSCOB-26	8/1/2001	1500	600
SCPL 3 PLUS COB-27	8/2/2001	50	750
SCPL 3 PLUS COB-28	8/6/2001	91	1,600
SCPL 3 PLUSCOB-26-2	8/6/2001	37	1,200
SCPL 3 PLUS-COB-29	8/7/2001	62	1,100
SCPL3PLUS-COB-30	8/8/2001	120	1,600
SCPL 3PLUSCOB-31	8/9/2001	46	840
SCPL3PLUS-COB-32	8/13/2001	60	630
SCPL 3 PLUS-COB-33	8/14/2001	62	1,300
SCPL3PLUSCOB-35	8/20/2001	120	2,400
SCPL3PLUS-COB-36	8/21/2001	140	2,500

Table A-3 – Analytical Results for Gravel Fraction (3' - 1/4")

Sample Number	Date Sample Delivered to Lab	Arsenic Level (mg/kg)	Lead Level (mg/kg)
SCPL-3 TO 1/4-01	6/14/2001	12	110
SCPL-3 to 1/4-02	6/18/2001	13	11,000
SCPL-3 TO 1/4-03	6/19/2001	3	55
SCPL-3 TO 1/4-02-2	6/20/2001	3	25
SCPL-3 TO 1/4-04	6/20/2001	2	41
SCPL-3 TO 1/4-05	6/21/2001	4	70
SCPL-3 TO 1/4-06	6/25/2001	5.5	42
SCPL-3 TO 1/4-07	6/26/2001	6.8	6,200
SCPL-3 TO 1/4-08	6/27/2001	3.4	40
SCPL-3 TO 1/4-07-02	6/28/2001	16	31
SCPL-3 TO 1/4-09	6/28/2001	23	340
SCPL3-1/4-9b	7/2/2001	4.9	170
SCPL3 TO 1/4-10	7/3/2001	24	1,600
SCPL3TO1/4-11	7/5/2001	19	2,500
SCPL 3 TO 1/4 - 12	7/9/2001	0.62	12
SCPL 3 TO 1/4 - 13	7/10/2001	nd	110
SCPL3TO1/4-14	7/11/2001	15	190
SCPL3TO1/4-15	7/12/2001	1.4	26
SCPL3TO1/4-16	7/16/2001	10	260
SCPL3TO1/4-17	7/17/2001	47	1,600
SCPL 3 TO 1/4-18	7/18/2001	51	1,300
SCPL 3 TO 1/4-19	7/19/2001	34	1,200
SCPL3TO1/4-20	7/23/2001	24	18,000
SCPL 3 TO 1/4-21	7/24/2001	9.9	770
SCPL 3 TO 1/4-21	7/24/2001	9.9	250
SCPL3TO1/4-22	7/25/2001	71	360
SCPL-3TO1/4-20-2	7/25/2001	73	320
SCPL3TO1/4-23	7/26/2001	18	3,500
SCPL3TO1/4-24	7/30/2001	14	2,700
SCPL3TO1/4-25	7/31/2001	260	520
SCPL3TO1/4-26	8/1/2001	67	570
SCPL 3 TO 1/4-27	8/2/2001	15	340
SCPL 3 TO 1/4-28	8/6/2001	15	180
SCPL 3 TO 1/4-29	8/7/2001	6.7	210
SCPL3TO1/4-30	8/8/2001	50	43
SCPL 3 TO 1/4-31	8/9/2001	15	110
SCPL3TO1/4-32	8/13/2001	9.5	69
SCPL 3 TO 1/4-33	8/14/2001	5.4	70
SCPL3TO1/4-35	8/20/2001	9.9	110
SCPL3TO1/4-36	8/21/2001	3.4	11,000

Table A-4 – Analytical Results for Sand Fraction (1/4" - 200 mesh)

Sample Number	Date Sample Delivered to Lab	Arsenic Level (mg/kg)	Lead Level (mg/kg)
SCPL-1/4 TO 200-01	6/14/2001	17	540
SCPL - 1/4 to 200 -02	6/18/2001	18	1,800
SCPL-1/4 TO 200-03	6/19/2001	16	500
SCPL-1/4 TO 200-04	6/20/2001	21	1,200
SCPL-1/4 TO 200-05	6/21/2001	13	270
SCPL-1/4-200-06	6/25/2001	18	410
SCPL-1/4 TO 200-07	6/26/2001	22	2,500
SCPL-1/4-200-08	6/27/2001	22	910
SCPL-1/4-200-09	6/28/2001	30	500
SCPL-1/4 TO 200-9b	7/2/2001	35	900
SCPL1/4-200-10	7/3/2001	53	2,000
SCPL1/4TO200-11	7/5/2001	54	1,300
SCPL 1/4 - 200 -12	7/9/2001	57	1,600
SCPL 1/4 - 200 -13	7/10/2001	110	1,100
SCPL1/4-200-14	7/11/2001	42	3,500
SCPL1/4-200-15	7/12/2001	41	1,100
SCPL1/4TO200-16	7/16/2001	48	3,100
SCPL1/4-200-17	7/17/2001	88	1,600
SCPL 1/4 TO 200-18	7/18/2001	140	2,000
SCPL 1/4 TO 200-19	7/19/2001	110	2,600
SCPL1/4TO200-20	7/23/2001	86	1,600
SCPL 1/4-200-21	7/24/2001	23	7,500
SCPL1/4-200-22	7/25/2001	47	4,600
SCPL1/4-200-23	7/26/2001	58	880
SCPL1/4-200-21-2	7/26/2001	69	11,000
SCPL1/4-200-24	7/30/2001	39	670
SCPL1/4-200-21-3	7/30/2001	52	1,400
SCPL1/4-200-25	7/31/2001	28	6,600
SCPL1/4-200-26	8/1/2001	26	580
SCPL 1/4-200-27	8/2/2001	41	1,900
SCPL 1/4-200-28	8/6/2001	34	1,600
SCPL 1/4-200-29	8/7/2001	26	2,800
SCPL1/4-200-30	8/8/2001	30	520
SCPL 1/4-200-31	8/9/2001	32	370
SCPL31/4-200-32	8/13/2001	25	500
SCPL 1/4-200-33	8/14/2001	44	840
SCPL1-4-200-35	8/20/2001	24	1,400
SCPL1/4-200-36	8/21/2001	28	560

Table A-5 – Analytical Results for Fines Fraction

Sample Number	Date Sample Delivered to Lab	Arsenic Level (mg/kg)	Lead Level (mg/kg)
SCPL-FINES-01	6/14/2001	32	520
SCPL - Fines -02	6/18/2001	150	3,900
SCPL-FINES-03	6/19/2001	140	2,900
SCPL-FINES-04	6/20/2001	140	3,600
SCPL-FINES-05	6/21/2001	150	3,700
SCPL-FINES-06	6/25/2001	150	3,700
SCPL-FINES-07	6/26/2001	160	4,000
SCPL-FINES-08	6/27/2001	170	4,500
SCPL-FINES-09	6/28/2001	170	4,500
SPPL-FINES-9b	7/2/2001	190	4,400
SCPL-FINES-10	7/3/2001	240	4,600
SCPL-FINES-11	7/5/2001	350	6,800
SCPL - FINES -12	7/9/2001	290	7,600
SCPL - FINES -13	7/10/2001	340	5,500
SCPL-FINES-14	7/11/2001	320	5,400
SCPL-FINES-15	7/12/2001	380	6,600
SCPL-FINES-16	7/16/2001	360	6,000
SCPL-FINES-17	7/17/2001	480	6,900
SCPL-FINES-18	7/18/2001	650	9,000
SCPL-FINES-19	7/19/2001	760	12,000
SCPL-FINES-20	7/23/2001	530	8,100
SCPL-FINES-21	7/24/2001	310	7,300
SCPL-FINES-22	7/25/2001	180	13,000
SCPL-FINES-23	7/26/2001	210	2,600
SCPL-FINES-24	7/30/2001	330	4,200
SCPL-FINES-25	7/31/2001	5.1	70
SCPL-FINES-26	8/1/2001	220	5,600
SCPL-FINES-27	8/2/2001	230	4,200
SCPL FINES-28	8/6/2001	220	5,200
SCPL-FINES-29	8/7/2001	220	3,800
SCPL-FINE-30	8/8/2001	200	4,000
SCPL-FINES-31	8/9/2001	220	3,000
SCPL-FINES-32	8/13/2001	230	2,900
SCPL-FINES-33	8/14/2001	230	3,500
SCPLFINES-35	8/20/2001	240	4,600
SCPL-FINES-36	8/21/2001	250	4,800

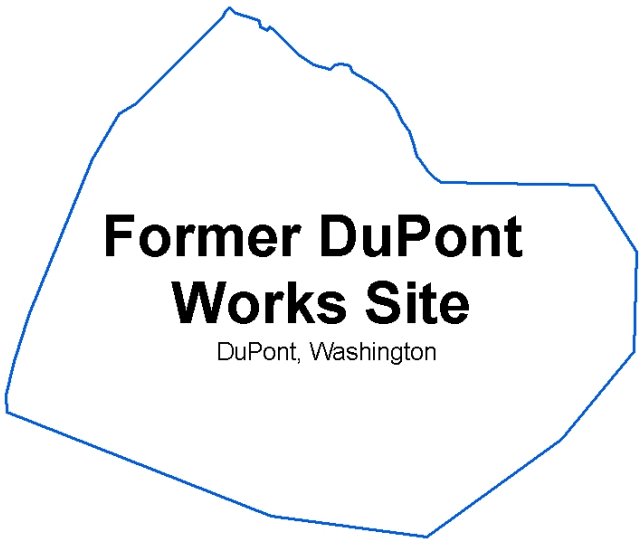
Table A-6 – Analytical Results for Humus Fraction

Sample Number	Date Sample Delivered to Lab	Arsenic Level (mg/kg)	Lead Level (mg/kg)
SCPL-HUMUS-01	6/14/2001	16	1,200
SCPL-Humus-02	6/18/2001	5	270
SCPL-HUMUS-03	6/19/2001	4	210
SCPL-HUMUS-04	6/20/2001	17	590
SCPL-HUMUS-05	6/21/2001	14	320
SCPL-HUMUS-06	6/25/2001	15	590
SCPL-HUMUS-07	6/26/2001	16	680
SCPL-HUMUS-08	6/27/2001	11	430
SCPL-HUMUS-09	6/28/2001	11	400
SCPL-HUMUS-9b	7/2/2001	15	490
SCPL-HUMUS-10	7/3/2001	74	1,400
SCPL-HUMUS-11	7/5/2001	23	5,900
SCPL - HUMUS - 12	7/9/2001	38	1,800
SCPL - HUMUS - 13	7/10/2001	12	1,300
SCPL-HUMUS-14	7/11/2001	35	910
SCPL-HUMUS-15	7/12/2001	90	2,300
SCPL-HUMUS-16	7/16/2001	53	1,300
SCPL-HUMUS-17	7/17/2001	45	1,400
SCPL-HUMUS-18	7/18/2001	120	9,000
SCPL-HUMUS-19	7/19/2001	110	6,600
SCPL-HUMUS-20	7/23/2001	77	3,500
SCPL-HUMUS-21	7/24/2001	14	1,600
SCPL-HUMUS-22	7/25/2001	30	400
SCPL-HUMUS-23	7/26/2001	44	210
SCPL-HUMUS-24	7/30/2001	33	700
SCPLHUMUS-25	7/31/2001	22	370
SCPL-HUMUS-26	8/1/2001	18	550
SCPL-HUMUS-27	8/2/2001	17	510
SCPL HUMUS-28	8/6/2001	17	500
SCPL-HUMUS-29	8/7/2001	21	350
SCPL-HUMUS-30	8/8/2001	15	440
SCPL-HUMUS-31	8/9/2001	21	290
SCPL-HUMUS-32	8/13/2001	37	640
SCPL-HUMUS-33	8/14/2001	33	1,300
SCPLHUMUS-35	8/20/2001	12	2,500
SCPL-HUMUS-36	8/21/2001	17	570

Interim Source Removal Actions:

On-site Stockpiles Report

At the



Prepared for:

The Weyerhaeuser Company and E.I. duPont de Nemours and Company

Prepared by:

PIONEER Technologies Corporation
West Shore Corporation, NW

January 28, 2001

Table of Contents

1 Introduction 1
2 Background 1
3 Summary of Activities 1
3.1 Stockpile Inventory 1
3.2 Evaluation of Data 1
3.3 Determination of Stockpile Disposition 2
Appendix A Current Stockpile Sampling Results A-1
Appendix B Laboratory Analytical Data Validation Results B-1
Appendix C Stockpile Designation C-1

List of Tables

Table 1 – Stockpile Disposition Criteria 2
Table A-1- Current Stockpile Sampling Results A-1
Table B-1 – Sample Data Groups Included in the Data Review B-2
Table C-1 – Stockpile Disposition C-1

List of Figures

Figure 1 – Stockpile and Placement Area Locations 3

1 Introduction

As of March 9, 2001 there were approximately 90,000 cubic yards of soil and debris stockpiled at the former DuPont Works Site (Site) that required further evaluation, testing, designation or disposal. These stockpiles were created as a result of interim source removal activities conducted between 1991 and 1995. In 2001 the Weyerhaeuser and DuPont Companies decided to conduct work to characterize, designate and either dispose of off-site or place these soils on-site. This report describes the work accomplished and the results of this program. All work conducted and the data collected during this program where done using the methodology described in the *Interim Source Removal Actions: On-site Stockpiles (March 9, 2001) Work Plan* that was approved by Ecology.

2 Background

One hundred and three stockpiles where included in this program. They were created as part of the following past interim source removal (ISR) work:

- 61 were created as part of the Interim Source Removal (ISR) effort to remove lead impacted debris and soil.
- 3 were created as part of ISR efforts to remove Dinitrotoluene (DNT) and Trinitrotoluene (TNT) impacted soils.
- 12 were created as part of the ISR effort to remove debris from the Area 5 Kettle.
- 2 were created as part of the ISR effort to remediate Area 40 foundations.
- 1 was created as part of the ISR effort to remediate Total Petroleum Hydrocarbons (TPH).
- 24 were created as part of other ISR efforts involving the removal of non-soil debris.

This program did not disturb in-place soil. Therefore, no archeological monitoring was conducted.

3 Summary of Activities

This program was accomplished in the following steps:

3.1 Stockpile Inventory

The Project's stockpile management plan was revisited and a site inventory was conducted to further refine the grouping of stockpiles. A map that identified all of the stockpile locations was developed to guide the field activities.

3.2 Evaluation of Data

Each stockpile was evaluated to determine if it had been properly characterized using the following process:

- Data for each stockpile was reviewed to determine the number of samples per cubic yard (CY) of material.
- When the number of data exceeded 1 sample per 500 CY the stockpile was considered to be adequately characterized and the data were evaluated.
- Designation of the stockpile was done on a pass/fail basis. If one sample exceeded the limit for a certain disposition option (see Section 3.3) the whole stockpile was designated for the more protective option.
- Stockpiles that did not meet the 1-sample-per-500-CY criterion where determined to be non-characterized and resampled.

3.3 Stockpile Characterization

If a stockpile was determined to be non characterized it was systematically sampled as described in the Interim Source Removal Actions: On-site Stockpiles (March 9, 2001) Work Plan. Twenty-nine stockpiles were sampled as part of this program by the following method:

- Stockpiles larger than 500 CY in size where flattened to approximately five feet in height. Each of these "flattened" stockpiles where divided into sections representing as close to 500 CY as possible and sampled. These "sections" areas were given different alphabetical designations (e.g., stockpile 510A; 510B), and were evaluated individually for disposition decisions.
- Stockpiles less than 500 CY were sampled by URS, Inc.
- Sampling was done using the following method: Five points were staked for each section. These points were staked to represent equal portions of the section. A backhoe was then used to excavate a five-foot deep hole in each of the five staked locations. The backhoe then collected a sample by scraping the entire vertical sidewall of the five-foot excavation. The sampler then collected a sample representing the entire vertical section of the sample location from the backhoe bucket. The soils obtained from the five-staked locations were composited and one sample was delivered to the laboratory for analysis.

Sampling results for these stockpiles is presented in Appendix A; laboratory analytical data validation results are presented in Appendix B.

3.4 Determination of Stockpile Disposition

There were five options available for disposition of stockpiles based upon their contaminant concentrations. They are:

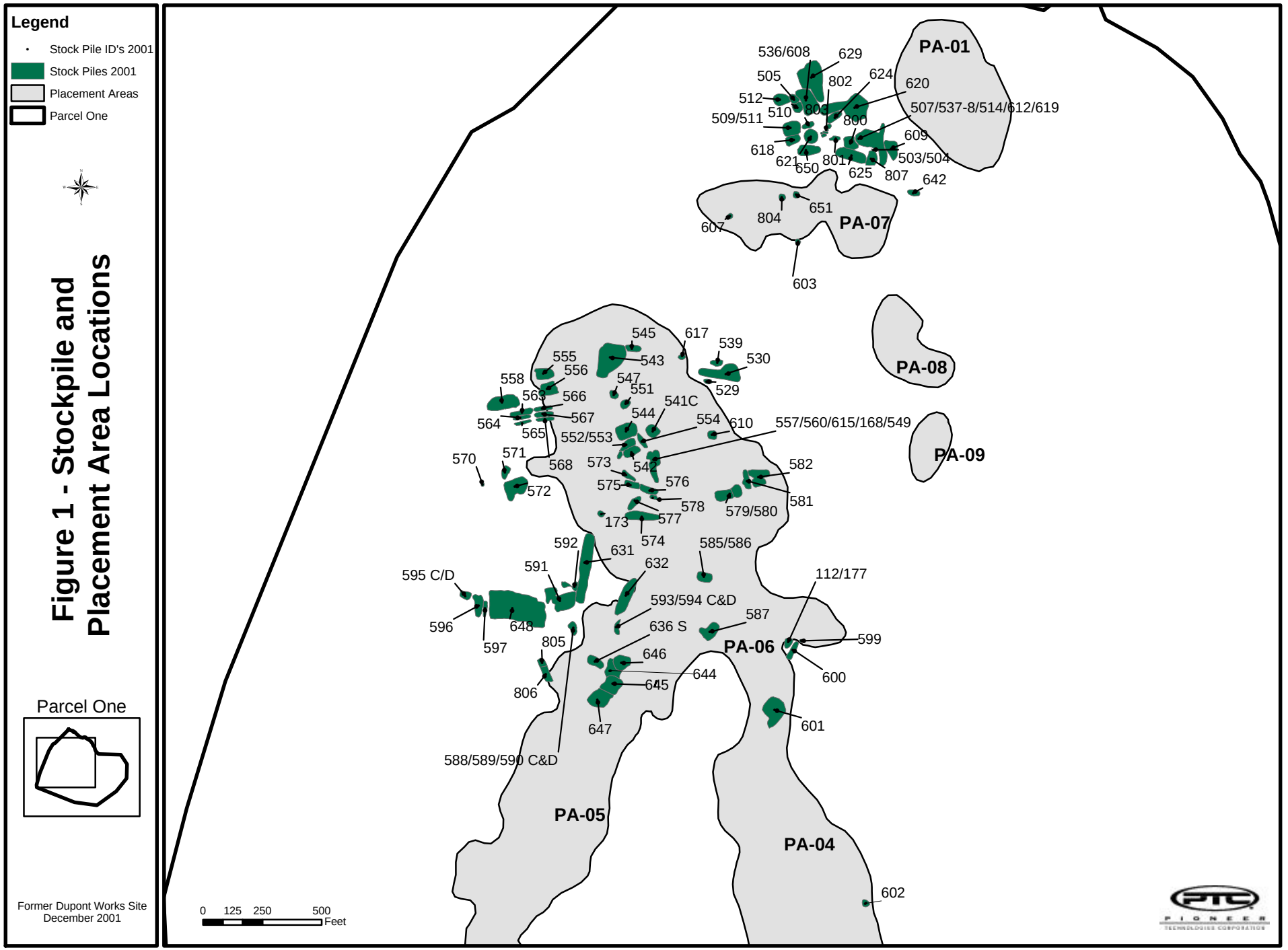
- Direct Disposal Off-site: Debris that cannot be screened prior to disposal.
- Screening and off-site disposal: Soil containing arsenic and lead concentrations greater than that allowed to be placed under the golf course cap.
- Placement in Golf Course Placement Areas: Soils and debris with chemical concentrations above non-restricted cleanup levels but below the remediation levels for the golf course cap.
- General Fill: Soils and debris that have concentrations below non-restricted cleanup levels.
- Solid Waste: Brick and debris that are not hazardous waste**.**

The disposition of each stockpile was determined using the criteria presented in Table 1.

Table 1 – Stockpile Disposition Criteria

Chemical	Stockpile Disposition			
	Direct Disposal Off-Site	**Screening, then Off-Site Disposal**	**Placement in Golf Course Areas**	**General Fill**
Total DNT (mg/kg)	>3.0	N/A	<3.0	<3.0
TNT (mg/kg)	>1.75	N/A	<1.75	<1.75
Arsenic (mg/kg)	N/A	>530	>60 and <530	<60
Lead (mg/kg)	N/A	>4100	>118 and<4100	<118
TPH (mg/kg)	>250	N/A	<250	<250

N/A = Not Applicable.


Legend
Stock Pile ID's 2001
Stock Piles 2001
Placement Areas
Parcel One
Figure 1 - Stockpile and Placement Area Locations
Parcel One
Former Dupont Works Site
December 2001
0 125 250 500
Feet
PA-01
PA-07
PA-08
PA-09
PA-06
PA-05
PA-04
536/608
629
505
802
624
620
512
510
803
507/537-8/514/612/619
509/511
800
609
618
621
650
801
625
503/504
807
642
651
804
607
603
545
617
539
555
543
530
556
547
558
551
529
563
566
541C
564
567
544
554
610
557/560/615/168/549
565
552/553
571
570
568
573
542
582
572
575
576
581
578
579/580
173
577
574
592
631
585/586
591
632
595 C/D
112/177
593/594 C&D
596
648
587
636 S
599
597
805
646
644
600
806
645
647
601
588/589/590 C&D
602

4 Results

Using the criteria above, the following stockpile designations were made:

- Direct Disposal Off-Site: 14 stockpiles (approximately 6,111 CY)
- Screening, then Off-Site Disposal: 7 stockpiles (approximately 3,790 CY)
- Placement in Golf Course Areas: 139 stockpiles (approximately 46,747 CY)
- General Fill: 4 stockpiles (approximately 2,520 CY)

The designation for each individual stockpile and it's disposition is presented in Appendix C.

Appendix A

Current Stockpile Sampling Results

Table A-1- Current Stockpile Sampling Results

Sample ID	Date Sampled	Arsenic (mg/kg)	Lead (mg/kg)	2,4,6 TNT (mg/kg)	2,4 DNT (mg/kg)	2,6-DNT (mg/kg)	TPH/Diesel #2 (mg/kg)	TPH/ Motor Oil (mg/kg)
01-C625-SO-[625-A-DS]-C6-000	19-Mar-01	160	1200					
01-C625-SO-[625-B-DS]-C6-000	19-Mar-01	78	1200					
01-C625-SO-[625-C-DS]-C6-000	19-Mar-01	48	300					
01-C650-SO-[650-A-DS]-C6-000	19-Mar-01	110	440					
01-C650-SO-[650-B-DS]-C6-000	19-Mar-01	66	950					
01-C621-SO-[621-A-DS]-C6-000	19-Mar-01	200	480					
01-C621-SO-[621-B-DS]-C6-000	19-Mar-01	510	270					
01-C624-SO-[624-A-DS]-C6-000	19-Mar-01	4.8	210					
01-C802-SO-[802-A-DS]-C6-000	19-Mar-01	42	600					
01-C510-SO-[510-A-DS]-C6-000	19-Mar-01	27	1900					
01-C510-SO-[510-B-DS]-C6-000	19-Mar-01	25	1100					
01-C803-SO-[803-A-DS]-C6-000	19-Mar-01	77	13					
01-C800-SO-[800-A-DS]-C6-000	19-Mar-01	140	1000					
01-C801-SO-[801-A-DS]-C6-000	19-Mar-01	83	940					
01-C620-SO-[620-DS-A]-C1-000	20-Mar-01	480	140					
01-C620-SO-[620-DS-B]-C1-000	20-Mar-01	78	620					
01-C620-SO-[620-DS-C]-C1-000	20-Mar-01	61	430					
01-C620-SO-[620-DS-G]-C1-000	20-Mar-01	90	420					
01-C620-SO-[620-DS-D]-C1-000	20-Mar-01	81	270					
01-C620-SO-[620-DS-E]-C1-000	20-Mar-01	31	320					
01-C620-SO-[620-DS-F]-C1-000	20-Mar-01	61	360					
01-C629-SO-[629-DS-A]-C1-000	20-Mar-01	270	4100					
01-C629-SO-[629-DS-B]-C1-000	20-Mar-01	260	3800					
01-C629-SO-[629-DS-C]-C1-000	20-Mar-01	320	4500					
01-C629-SO-[629-DS-D]-C1-000	20-Mar-01	200	4600					
01-C629-SO-[629-DS-E]-C1-000	20-Mar-01	230	3600					
01-C629-SO-[629-DS-F]-C1-000	20-Mar-01	260	5000					
01-C651-SO-[651-DS-A]-C1-000	20-Mar-01	3	12					
01-C804-SO-[804-DS-A]-C1-000	20-Mar-01	23	23					
01-C530-SO-[530-DS-A]-C1-000	20-Mar-01	7.3	270					
01-C530-SO-[530-DS-B]-C1-000	20-Mar-01	8.7	190					
01-C530-SO-[530-DS-C]-C1-000	20-Mar-01	11	100					
01-C530-SO-[530-DS-E]-C1-000	20-Mar-01	12	100					
01-C530-SO-[530-DS-D]-C1-000	20-Mar-01	6.1	68					
01-C530-SO-[530-DS-F]-C1-000	20-Mar-01	11	96					
01-C530-SO-[530-DS-G]-C1-000	20-Mar-01	8.7	150					
01-C543-SO-[543-DS-A]-C1-000	21-Mar-01	6.2	180					

Table A-1- Current Stockpile Sampling Results

Sample ID	Date Sampled	Arsenic (mg/kg)	Lead (mg/kg)	2,4,6 TNT (mg/kg)	2,4 DNT (mg/kg)	2,6-DNT (mg/kg)	TPH/Diesel #2 (mg/kg)	TPH/ Motor Oil (mg/kg)
01-C543-SO-[543-DS-B]-C1-000	21-Mar-01	5.4	220					
01-C543-SO-[543-DS-C]-C1-000	21-Mar-01	6.3	850					
01-C543-SO-[543-DS-D]-C1-000	21-Mar-01	7.6	160					
01-C543-SO-[543-DS-E]-C1-000	21-Mar-01	5	220					
01-C543-SO-[543-DS-F]-C1-000	21-Mar-01	5.7	170					
01-C543-SO-[543-DS-G]-C1-000	21-Mar-01	4.8	160					
01-C543-SO-[543-DS-H]-C1-000	21-Mar-01	5.4	170					
01-C543-SO-[543-DS-I]-C1-000	21-Mar-01	7.5	170					
01-C545-SO-[545-DS-A]-C1-000	21-Mar-01	5.8	250					
01-C556-SO-[556-DS-A]-C1-000	21-Mar-01	7.8	160					
01-C556-SO-[556-DS-B]-C1-000	21-Mar-01	5.5	140					
01-C555-SO-[555-DS-A]-C1-000	21-Mar-01	3.9	190					
01-C555-SO-[555-DS-B]-C1-000	21-Mar-01	5.3	350					
01-C558-SO-[558-DS-A]-C1-000	21-Mar-01	3.9	37					
01-C558-SO-[558-DS-B]-C1-000	21-Mar-01	6	89					
01-C558-SO-[558-DS-C]-C1-000	21-Mar-01	4.9	35					
01-C558-SO-[558-DS-D]-C1-000	21-Mar-01	6	39					
01-C558-SO-[558-DS-E]-C1-000	21-Mar-01	4.6	32					
01-C558-SO-[558-DS-F]-C1-000	21-Mar-01	4.3	31					
01-C544-SO-[544-DS-A]-C1-000	21-Mar-01	3.7	390					
01-C544-SO-[544-DS-B]-C1-000	21-Mar-01	4.1	460					
01-C544-SO-[544-DS-C]-C1-000	21-Mar-01	2.8	320					
01-C544-SO-[544-DS-D]-C1-000	21-Mar-01	4.1	350					
01-C552-SO-[552-DS-A]-C1-000	22-Mar-01	7.9	550					
01-C631-SO-[631-DS-A]-C1-000	22-Mar-01	18	46					
01-C631-SO-[631-DS-B]-C1-000	22-Mar-01	16	46					
01-C631-CO-[631-DS-C]-C1-000	22-Mar-01	12	38					
01-C631-SO-[631-DS-D]-C1-000	22-Mar-01	14	56					
01-C631-SO-[631-DS-E]-C1-000	22-Mar-01	12	44					
01-C631-SO-[631-DS-F]-C1-000	22-Mar-01	23	100					
01-C631-SO-[631-DS-G]-C1-000	22-Mar-01	17	140					
01-C632-SO-[632-DS-A]-C1-000	22-Mar-01	25	33					
01-C632-SO-[632-DS-B]-C1-000	22-Mar-01	11	23					
01-C632-SO-[632-DS-C]-C1-000	22-Mar-01	19	36					
01-C632-SO-[632-DS-D]-C1-000	22-Mar-01	15	29					
01-C805-SO-[805-DS-A]-C1-000	22-Mar-01	20	45					
01-C806-SO-[806-DS-A]-C1-000	22-Mar-01	7.9	15					
01-C647-SO-[647-DS-A]-C1-000	22-Mar-01	34	300					
01-C647-SO-[647-DS-B]-C1-000	22-Mar-01	34	200					
01-C647-SO-[647-DS-C]-C1-000	22-Mar-01	27	100					
01-C647-SO-[647-DS-D]-C1-000	22-Mar-01	17	81					
01-C645-SO-[645-DS-A]-C1-000	22-Mar-01	22	100					
01-C645-SO-[645-DS-B]-C1-000	22-Mar-01	22	91					

Table A-1- Current Stockpile Sampling Results

Sample ID	Date Sampled	Arsenic (mg/kg)	Lead (mg/kg)	2,4,6 TNT (mg/kg)	2,4 DNT (mg/kg)	2,6-DNT (mg/kg)	TPH/Diesel #2 (mg/kg)	TPH/ Motor Oil (mg/kg)
01-S536-SO-[536-DS-A]-C1-000	3-Apr-01	240	3100					
01-S536-SO-[536-DS-B]-C1-000	3-Apr-01	37	1700					
01-S536-SO-[536-DS-C]-C1-000	3-Apr-01	300	1900					
01-S536-SO-[536-DS-D]-C1-000	3-Apr-01	68	1400					
01-S536-SO-[536-DS-E]-C1-000	3-Apr-01	190	1500					
01-S536-SO-[536-DS-F]-C1-000	3-Apr-01	180	1800					
01-C648-SO-[648-DS-A]-C1-000	27-Mar-01			0.54 J	1.1 J	2.2 J		
01-C648-SO-[648-DS-B]-C1-000	27-Mar-01			0.42 J	0.76 J	0.047 U		
01-C648-SO-[648-DS-C]-C1-000	27-Mar-01			0.7 J	0.48 J	52 J		
01-C648-SO-[648-DS-D]-C1-000	27-Mar-01			0.34 J	0.16 J	0.046 U		
01-C648-SO-[648-DS-E]-C1-000	27-Mar-01			0.29 J	0.37 J	0.14 J		
01-C648-SO-[648-DS-F]-C1-000	27-Mar-01			0.17 J	2.6 J	0.047 U		
01-C648-SO-[648-DS-G]-C1-000	27-Mar-01			0.19 J	0.29 J	0.095 J		
01-C648-SO-[648-DS-H]-C1-000	27-Mar-01			0.067	0.068	0.047 U		
01-C648-SO-[648-DS-I]-C1-000	27-Mar-01			0.11	0.16	0.076		
01-C648-SO-[648-DS-J]-C1-000	27-Mar-01			0.12	0.098	0.057		
01-S648-SO-[DS-648-A-2]-C-000	5-Apr-01			0.9 J	0.13 J	0.4 J		
01-S648-SO-[DS-648-B-2]-C-000	5-Apr-01			9 J	2.7 J	2.2 J		
01-S648-SO-[DS-648-C-2]-C-000	5-Apr-01			0.38 J	0.093 J	0.074 J		
01-S648-SO-[DS-648-D-2]-C-000	5-Apr-01			0.48 J	10 J	0.047 U		
01-S648-SO-[DS-648-E-2]-C-000	5-Apr-01			0.078	0.14	0.11		
01-S648-SO-[DS-648-F-2]-C-000	5-Apr-01			1.3 J	0.21 J	1.1 J		
01-S648-SO-[DS-648-G-2]-C-000	5-Apr-01			0.57 J	0.23 J	0.45 J		
01-S648-SO-[DS-648-H-2]-C-000	5-Apr-01			3 J	0.65 J	1.4 J		
01-S648-SO-[DS-648-I-2]-C-000	5-Apr-01			0.097	0.11	0.071		
01-S648-SO-[DS-648-J-2]-C-000	5-Apr-01			0.12	0.13	0.075		
807	7-May-01						260	250

Notes:
"J" qualifier means the value is estimated; qualifier was applied during data validation.
"U" qualifier means the analyte was undetected; the value reported is the sample quantitation limit.

Appendix B

Laboratory Analytical Data Validation Results

(Prepared by URS, Inc.)

B.1 Summary

The soil sample analytical data reviewed from the Stockpile Interim Action Program are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan.[1] The data may be used to assess analyte concentrations with the stated qualifications.

B.2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil stockpile samples from the former DuPont Works Site in Dupont, Washington, from March 19, 2001 through May 7, 2001. Samples were submitted to Sound Analytical Services, Inc. (SAS) located in Tacoma, Washington for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Surrogate recoveries
- Matrix spike / blank spike (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992. (Management Plan)
- Work Plan, Interim Source Removal Actions: On-site Stockpiles, Pioneer Technologies Corporation, West Shore Corporation, NW, March 9, 2001.
- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- National Functional Guidelines for Organic Data Review, EPA, February 1994.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data have been compared to criteria referenced in the Management Plan. The samples were analyzed for one or more of the following chemicals by the analytical methods shown.

- Metals (Arsenic and Lead) — EPA 6010
- Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene and 2,4,6-Trinitrotoluene) — EPA 8330
- Diesel range and motor oil range total petroleum hydrocarbons — NWTPH-Dx

B.3 Sample Case

The sample data groups (SDGs) identified in Table B-1 were included in this data review.

[1] Hart Crowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, WA.

Table B-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
96864	March 19, 2001
96890	March 20, 2001
96924	March 21, 2001
96959	March 22, 2001
97027	March 27, 2001
97185	April 3, 2001
97281	April 5, 2001
97962	May 7, 2001

B.4 Laboratory Report and Reporting of Required Analyses

The laboratory reports included method blanks, surrogate recoveries, sample results, sample preparation logs, matrix spike results and matrix duplicate results. Blank spike data were reported only when matrix spike recovery data were outside of the control limits. Generally, the reports were adequate to evaluate the data quality given that blank spikes are not consistently reported. All sample analyses were reported as requested.

B.5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were submitted to the laboratory on the day of sample collection. All sample bottles were received in good condition. The samples were digested and analyzed within the method-required holding times. Holding times were within specifications of the Management Plan.

B.6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met.

Field blanks (rinse blanks) were collected to assess potential cross-contamination in the field. Two rinse blanks were collected and analyzed for arsenic and lead. The field blanks were free of contamination. Data qualifiers were not assigned to associated data based on method or field blank results.

B.7 Surrogate Recoveries

Laboratory performance on individual samples was assessed by reviewing the recoveries of system monitoring compounds (surrogates).

Explosives by EPA 8330

Recoveries of the surrogate 3,4-dinitrotoluene were above the laboratory control limits of 63-119% due to sample matrix interference in seven samples in SDG 97281: (01-S648-SO- [DS-648-A-2]-C-000 (356%), 01-S648-SO- [DS-648-B-2]-C-000 (622%), 01-S648-SO- [DS-648-C-2]-C-000 (136%), 01-S648-SO- [DS-648-D-2]-C-000 (175%), 01-S648-SO- [DS-648-F-2]-C-000 (646%), 01-S648-SO- [DS-648-G-2]-C-000 (265%) and 01-S648-SO- [DS-648-H-2]-C-000 (520%)) and in seven samples in SDG 97027: (01-C648-SO- [648-DS-A]-C1-000 (287%), 01-C648-SO-[648-DS-B]-C1-000 (243%), 01-C648-SO-[648-DS-C]-C1-000 (588%), 01-C648-SO-[648-DS-D]-C1-000 (193%), 01-C648-SO-[648-DS-E]-C1-000 (129%), 01-C648-SO-[648-DS-F]-C1-000 (124%) and 01-C648-SO-[648-DS-G]-C1-000 (130%)). Sample results for 2,4,6-trinitrotoluene (2,4,6-TNT), 2,4-dinitrotoluene (2,4-DNT), and 2,6-dinitrotoluene (2,6-DNT) reported above the reporting limits for these samples have been qualified as estimated and flagged "J". Sample results reported as not detected were not qualified based on surrogate recoveries.

B.8 Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS per analytical batch or one MS per 20 samples was met. In some cases, the MS was performed on samples unrelated to this site. Samples included in SAS sample delivery groups (SDGs) 97185 and 97962 and a subset of samples included in SDGs 96890 and 96924 are associated with MS analyses performed on samples unrelated to this site. Data qualifiers were not assigned to sample data based on MS recoveries from non-project samples. Blank spike (BS) analyses were used to assess the overall performance of the analytical system when matrix spike recoveries were not acceptable.

Arsenic and Lead by EPA 6010

The MS results were compared to the method control limits of 75 to 125%. For matrix spikes performed on site samples, spike recoveries ranged from 93 to 122 percent for arsenic and 4 to 106 percent for lead. The lead recovery (4%) for the MS performed on sample 01-C625-SO- [625-A-DS]-C6-000 (SDG 96864) was outside of the control limits due to high concentrations of lead in the parent sample. Per data validation guidelines, when the concentration of the analyte in the parent sample is greater than 4X the spike level, data are not qualified based on the matrix spike recovery. Data qualifiers were not assigned to associated data based on matrix spike results.

Based on review of the sample preparation log sheets, blank spikes were prepared at the appropriate frequency although the results were reported only when MS recoveries were outside of control limits. The blank spike recoveries provided were all within the control limits of 80 to 120%. Data provided included sets of blank spike/blank spike duplicates for lead associated with samples from SDG 96864 and one set for lead associated with samples from SDG 96924 where the MS was performed on a non-project sample. Data qualifiers were not assigned to associated samples based on blank spike/blank spike duplicate results.

Explosives by EPA 8330

The recoveries of 2,4,6-TNT (72.8%) in the MS and 2,6-DNT (149%) in the MSD performed on sample 01-S648-SO- [DS-648-A-2]-C-000 (SDG 97281) were outside of the laboratory control limits of 73-108% for 2,4,6-TNT and 79-103% for 2,6-DNT. The relative percent differences (RPDs) for 2,4,6-TNT (36%) and 2,6-DNT (47%) were greater than the RPD control limits of 18% for 2,4,6-TNT and 10% for 2,6-DNT. The recoveries of 2,4,6-TNT in the MS (69.2%) and the MSD (72.3%) performed on sample 01-S648-SO-[648-DS-J]-C1-000 (SDG 97027) were outside the control limits of 73-108% for 2,4,6-TNT. Sample results for samples 01-S648-SO- [DS-648-A-2]-C-000 and 01-S648-SO- [648-DS-J]-C1-000 were previously qualified based on surrogate recovery.

Diesel Range and Motor Oil Range TPH by NWTPH-Dx

An MS/MSD was not performed on the sample submitted for diesel range and motor oil range TPH analysis. Data were assessed based on the BS/BSD results that were acceptable.

B.9 Laboratory Duplicates

Laboratory duplicate results were used to assess the precision of laboratory measurements. The laboratory duplicate results were compared to the project control limit for relative percent difference (RPD) of 35%. The QC frequency requirement of one duplicate per analytical batch or one duplicate per 20 samples was met. In some cases, the duplicate was performed on samples unrelated to this site. Samples included in SAS SDG 97185 and a subset of samples included in SDGs 96890, 96924 and 97962 are associated with duplicate analyses performed on samples unrelated to this site. Data qualifiers were not assigned to associated sample data based on duplicate results from non-project samples.

B.10 Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples collected was met for metals and explosives analyses. Eight sets of field duplicate samples (seven for metals analysis, one for explosives analysis) were collected. Table B-2 presents the RPDs of detected compounds that were calculated for the duplicate pairs. Because only one sample was analyzed for diesel-range and motor oil-range petroleum hydrocarbons, a field duplicate was not collected for this analysis.

Table B-2 – Relative Percent Differences of Detected Compounds

Sample ID	Duplicate ID	Analyte	Primary Result (mg/kg)	Duplicate Result (mg/kg)	RPD %
01-C620-SO-[620-DS-C]-C1-000	01-C620-SO-[620-DS-G]-C1-000	Arsenic	61	90	38
		Lead	430	420	2
01-C629-SO-[629-DS-E]-C1-000	01-C629-SO-[629-DS-F]-C1-000	Arsenic	230	260	12
		Lead	3,600	5,000	33
01-C530-SO-[530-DS-F]-C1-000	01-C530-SO-[530-DS-G]-C1-000	Arsenic	11	8.7	23
		Lead	96	150	44
01-C543-SO-[543-DS-H]-C1-000	01-C543-SO-[543-DS-I]-C1-000	Arsenic	5.4	7.5	33
		Lead	170	170	NC
01-C558-SO-[558-DS-E]-C1-000	01-C558-SO-[558-DS-F]-C1-000	Arsenic	4.6	4.3	7
		Lead	32	31	3.2
01-S536-SO-[536-DS-E]-C1-000	01-S536-SO-[536-DS-F]-C1-000	Arsenic	190	180	5.4
		Lead	1,500	1,800	18
01-C632-SO-[632-DS-C]-C1-000	01-C632-SO-[632-DS-D]-C1-000	Arsenic	19	15	24
		Lead	36	29	22
01-C648-SO-[648-DS-I]-C1-000	01-C648-SO-[648-DS-J]-C1-000	2,4,6-TNT	0.11	0.12	9
		2,4-DNT	0.16	0.098	48
		2,6-DNT	0.076	0.057	29

B.11 Reporting Limits

Reporting limits were reviewed to ensure that results reported meet project goals. The reporting limits are acceptable for the project needs.

Appendix C

Stockpile Designation

Table C-1 – Stockpile Disposition

Stockpile	CY	Stockpile Contents	Date Sampled	Stockpile Disposition	Rationale
Stockpiles Designated for Direct Off-Site Disposal					
503	25	Soil and Debris	Previously Characterized	Direct disposal off-site.	TPH above remediation level
504	66	Soil	Previously Characterized	Direct disposal off-site.	TPH above remediation level and from aluminum powder area
570	20	Other Debris	Previously Characterized	Direct disposal off-site.	Lead levels above remediation level
Stockpiles Disposed of Off-Site in 2001					
509/511	940	Concrete, Other Debris, Soil	Previously Characterized	Direct disposal off-site.	Contains DNT and TPH (disposed of as DNT soil)
512	2000	Concrete, Other Debris, Soil	Previously Characterized	Direct disposal off-site.	Contains DNT
609	180	Concrete, Soil	Previously Characterized	Direct disposal off-site.	TPH above remediation level
646	500	Soil	Previously Characterized	Direct disposal off-site.	Contains DNT
648A	480	Other Debris	3/27/2001	Direct disposal off-site.	Contains DNT
648B-2	250	Other Debris	4/5/2001	Direct disposal off-site.	Contains DNT
648C	480	Other Debris	3/27/2001	Direct disposal off-site.	Contains DNT
648D-2	390	Other Debris	4/5/2001	Direct disposal off-site.	Contains DNT
648F	480	Other Debris	3/27/2001	Direct disposal off-site.	Contains DNT
648H-2	250	Other Debris	4/5/2001	Direct disposal off-site.	Contains TNT
807	50	Soil	5/7/2001	Direct disposal off-site.	TPH above remediation level
Stockpiles Screened Prior to Off-Site Disposal in 2001					
607	90	Soil	Previously Characterized	Screening before off-site disposal	Arsenic and/or Lead above remediation level
629A	705	Concrete, Other Debris, Soil	3/20/2001	Screening before off-site disposal	Arsenic and/or Lead above remediation level
629B	855	Concrete, Other Debris, Soil	3/20/2001	Screening before off-site disposal	Arsenic and/or Lead above remediation level
629C	825	Concrete, Other Debris, Soil	3/20/2001	Screening before off-site disposal	Arsenic and/or Lead above remediation level
629D	825	Concrete, Other Debris, Soil	3/20/2001	Screening before off-site disposal	Arsenic and/or Lead above remediation level
629E	225	Concrete, Other Debris, Soil	3/20/2001	Screening before off-site disposal	Arsenic and/or Lead above remediation level
629F	265	Concrete, Other Debris, Soil	3/20/2001	Screening before off-site disposal	Arsenic and/or Lead above remediation level
Stockpiles Designated for Placement in Golf Course Placement Areas in 2001					
173	10	Concrete, Other Debris	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
177/112	175	Concrete, Other Debris	Previously Characterized	Still in Place. Will be moved to PA-6	Chemical concentrations below GC PA remediation levels
507/537/538/514/612/619	765	Concrete, Other Debris	Previously Characterized	Still in Place. Will be moved to PA-1	Chemical concentrations below GC PA remediation levels
510A	210	Concrete, Other Debris	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
510B	210	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
529	135	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
530A	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA remediation levels
530B	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA

Table C-1 – Stockpile Disposition

Stockpile	CY	Stockpile Contents	Date Sampled	Stockpile Disposition	Rationale
					remediation levels
530C	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA remediation levels
530D	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA remediation levels
530E	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA remediation levels
530F	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA remediation levels
530G	300	Soil	3/20/2001	PA-6	Chemical concentrations below GC PA remediation levels
535	210	Concrete, Other Debris, Soil	Previously Characterized	PA-1	Chemical concentrations below GC PA remediation levels
536/608A	450	Concrete, Other Debris, Soil	4/3/2001	PA-1	Chemical concentrations below GC PA remediation levels
536/608B	435	Concrete, Other Debris, Soil	4/3/2001	PA-1	Chemical concentrations below GC PA remediation levels
536/608C	435	Concrete, Other Debris, Soil	4/3/2001	PA-1	Chemical concentrations below GC PA remediation levels
536/608D	435	Concrete, Other Debris, Soil	4/3/2001	PA-1	Chemical concentrations below GC PA remediation levels
536/608E	465	Concrete, Other Debris, Soil	4/3/2001	PA-1	Chemical concentrations below GC PA remediation levels
536/608F	280	Concrete, Other Debris, Soil	4/3/2001	PA-1	Chemical concentrations below GC PA remediation levels
539	125	Concrete	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
541	75	Concrete	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
542	110	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
543 I	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543A	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543B	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543C	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543D	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543E	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543F	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543G	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
543H	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
544A	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
544B	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
544C	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
544D	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
545	50	Other Debris	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels

Table C-1 – Stockpile Disposition

Stockpile	CY	Stockpile Contents	Date Sampled	Stockpile Disposition	Rationale
547	20	Concrete	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
549/557/560/168/584/569/615/175/176/583/616/533/531/532/164	735	Concrete, Other Debris	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
551	150	Concrete	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
552	500	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
553	120	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
554	500	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
555A	300	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
555B	300	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
556A	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
556B	500	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
558A	270	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
558B	225	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
558C	225	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
558D	225	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
558E	270	Soil	3/21/2001	PA-6	Chemical concentrations below GC PA remediation levels
563	150	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
564	150	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
565	150	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
566	150	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
567	150	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
568	150	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
571	135	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
573	170	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
574	45	Concrete	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
575	500	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
576	300	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
577	1000	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
578	12	Other Debris	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
579	700	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels

Table C-1 – Stockpile Disposition

Stockpile	CY	Stockpile Contents	Date Sampled	Stockpile Disposition	Rationale
580	250	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
581	330	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
582	300	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
588/589/590	130	Concrete, Other Debris	Previously Characterized	Still in Place	Chemical concentrations below GC PA remediation levels
591	1,395	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
592	510	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
593/594 C&D	171	Concrete, Other Debris	Previously Characterized	PA-5	Chemical concentrations below GC PA remediation levels
595 A	165	Concrete, Other Debris	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
595 B	165	Concrete, Other Debris	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
597	45	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
599	4	Other Debris	Previously Characterized	Still in Place	Chemical concentrations below GC PA remediation levels
600	300	Soil	Previously Characterized	Still in Place	Chemical concentrations below GC PA remediation levels
601	340	Soil	Previously Characterized	PA-4	Chemical concentrations below GC PA remediation levels
602	115	Soil	Previously Characterized	PA-4	Chemical concentrations below GC PA remediation levels
603	85	Soil	Previously Characterized	PA-7	Chemical concentrations below GC PA remediation levels
610	85	Soil	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
617	7	Concrete, Other Debris	Previously Characterized	PA-6	Chemical concentrations below GC PA remediation levels
618	240	Concrete, Other Debris, Soil	Previously Characterized	PA-1	Chemical concentrations below GC PA remediation levels
620A	660	Soil	3/20/2001	PA-1	Chemical concentrations below GC PA remediation levels
620B	375	Soil	3/20/2001	PA-1	Chemical concentrations below GC PA remediation levels
620C	375	Soil	3/20/2001	PA-1	Chemical concentrations below GC PA remediation levels
620D	375	Soil	3/20/2001	PA-1	Chemical concentrations below GC PA remediation levels
620E	375	Soil	3/20/2001	PA-1	Chemical concentrations below GC PA remediation levels
620F	330	Soil	3/20/2001	PA-1	Chemical concentrations below GC PA remediation levels
621A	225	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
621B	225	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
624	270	Other Debris, Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
625A	450	Concrete, Other Debris, Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
625B	465	Concrete, Other Debris, Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
625C	465	Concrete, Other Debris, Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels

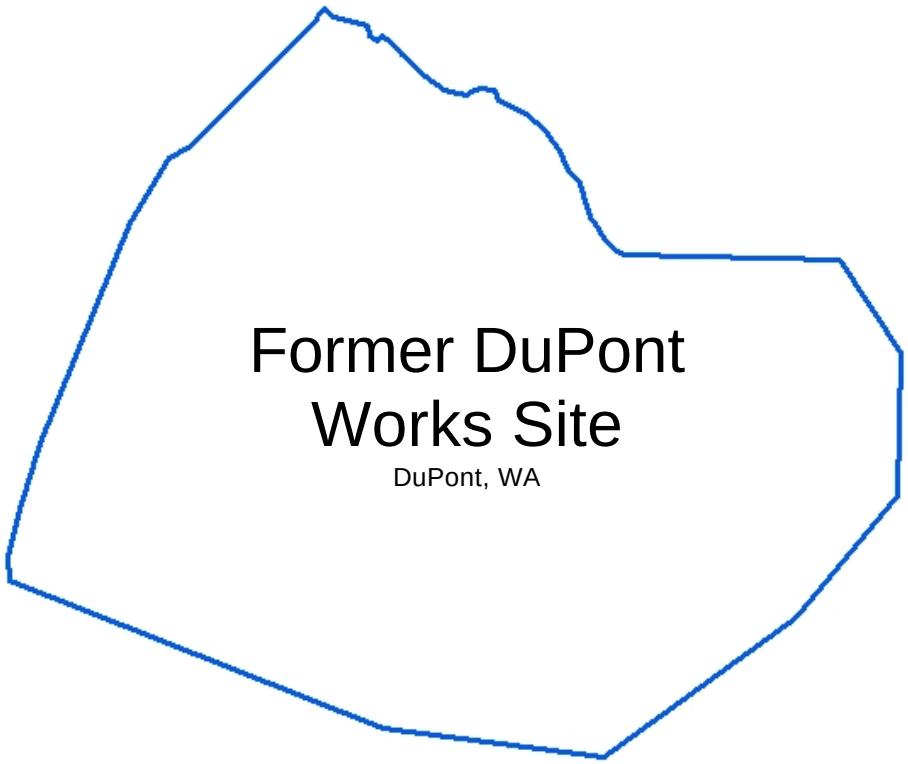
Table C-1 – Stockpile Disposition

Stockpile	CY	Stockpile Contents	Date Sampled	Stockpile Disposition	Rationale
631A	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
631B	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
631C	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
631D	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
631E	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
631F	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
631G	480	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
632A	466	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
632B	466	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
632C	466	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
636	500	Soil	Previously Characterized	PA-5	Chemical concentrations below GC PA remediation levels
642	165	Concrete, Other Debris	Previously Characterized	PA-1	Chemical concentrations below GC PA remediation levels
644	500	Soil	Previously Characterized	PA-5	Chemical concentrations below GC PA remediation levels
645A	500	Soil	3/22/2001	PA-5	Chemical concentrations below GC PA remediation levels
645B	500	Soil	3/22/2001	PA-5	Chemical concentrations below GC PA remediation levels
647A	500	Soil	3/22/2001	PA-5	Chemical concentrations below GC PA remediation levels
647B	500	Soil	3/22/2001	PA-5	Chemical concentrations below GC PA remediation levels
647C	500	Soil	3/22/2001	PA-5	Chemical concentrations below GC PA remediation levels
647D	500	Soil	3/22/2001	PA-5	Chemical concentrations below GC PA remediation levels
648A-2	390	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
648B	315	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels
648C-2	405	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
648D	300	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels
648E	300	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels
648E-2	375	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
648F-2	405	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
648G	300	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels
648G-2	375	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
648H	300	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels
648I	300	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels

Table C-1 – Stockpile Disposition

Stockpile	CY	Stockpile Contents	Date Sampled	Stockpile Disposition	Rationale
648I-2	690	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
648J	300	Other Debris	3/27/2001	PA-6	Chemical concentrations below GC PA remediation levels
648J-2	705	Other Debris	4/5/2001	PA-6	Chemical concentrations below GC PA remediation levels
650A	210	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
650B	210	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
651	70	Soil	3/20/2001	PA-7	Chemical concentrations below GC PA remediation levels
800	180	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
801	60	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
802	150	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
803	100	Soil	3/19/2001	PA-1	Chemical concentrations below GC PA remediation levels
804	50	Soil	3/20/2001	PA-7	Chemical concentrations below GC PA remediation levels
805	75	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
806	255	Soil	3/22/2001	PA-6	Chemical concentrations below GC PA remediation levels
Stockpiles Designated for Use as General Fill in 2001					
572	1365	Soil	Previously Characterized	Fill Material used under the screening pad	Chemical concentrations below commercial level
585/586	255	Soil	Previously Characterized	Fill Material used under the screening pad	Chemical concentrations below commercial level
587	810	Soil	Previously Characterized	Fill Material used under the screening pad	Chemical concentrations below commercial level
596	90	Soil	Previously Characterized	Fill Material used under the screening pad	Chemical concentrations below commercial level

Draft
Interim Corrective Action Report Foundations, Narrow Gauge Railroad, and Hot Spots



Prepared For:

The Weyerhaeuser Company and E.I. duPont de Nemours and Company

Prepared by:

PIONEER Technologies Corporation
The West Shore Corporation, NW
URS, Inc.

April 22, 2002

Table of Contents

CHAPTER 1 INTRODUCTION 1-1
1.1 2001 Interim Corrective Actions 1-1
1.2 Background 1-1
1.3 Objectives 1-2

CHAPTER 2 INTERIM CORRECTIVE ACTIONS 2-1
2.1 Site Preparation Activities 2-1
2.2 Foundation Excavations 2-1
2.2.1 Excavation Procedure 2-1
2.2.2 Verification Sampling 2-1
2.2.3 Verification Sampling Results 2-1
2.3 Narrow Gauge Railroad Tracks 2-2
2.3.1 Excavation Procedure 2-2
2.3.2 Verification Sampling 2-2
2.3.3 Verification Sampling Results 2-2
2.4 Hot Spot Areas: Arsenic and Lead 2-2
2.4.1 Excavation Procedure 2-2
2.4.2 Verification Sampling 2-3
2.4.3 Verification Sampling Results 2-3
2.5 Hotspot Areas: 2,4-DNT, 2,6-DNT, and TNT 2-4
2.5.1 Excavation Procedure 2-4
2.5.2 Verification Sampling 2-4
2.5.3 Verification Sampling Results 2-4
2.6 Topsoil Laydown Areas 2-5
2.6.1 Excavation Procedure 2-5
2.6.2 Verification Sampling 2-5
2.6.3 Verification Sampling Results 2-5
2.7 Archeological Monitoring 2-5

CHAPTER 3 CONCLUSIONS 3-1

CHAPTER 4 REFERENCES 4-1

Appendices

Appendix A – Analytical Data A-1
Appendix B – Laboratory Analytical Data Validation Results B-1

List of Tables

Table 1-1 – Interim Corrective Action Soil Placement Criteria TF-2

List of Figures

Figure 1-1 – Dupont Vicinity Map TF-3
Figure 1-2 – 2001 Interim Corrective Action Excavations TF-4
Figure 2-1 – Foundation Exceedence Locations TF-5
Figure 2-2 – Conceptual Foundation Sampling Scheme TF-6
Figure 2-3 – NGRR Exceedence Locations TF-7
Figure 2-4 – Conceptual NGRR Sampling Scheme TF-8
Figure 2-5 – Arsenic and Lead Hot Spot Exceedence Locations TF-9
Figure 2-6 – NGRR Transect Sample Location LR-68-600E-2-TRANSECT TF-10
Figure 2-7 – Dinitrotoluene and Trinitrotoluene Exceedence Locations TF-11
Figure 2-8 – Top Soil Laydown Area Exceedence Locations TF-12

Note: Tables and Figures are presented after the text.

Chapter 1 – Introduction

1.1 2001 Interim Corrective Actions

This report describes the interim corrective actions (ICAs) that were undertaken during 2001 at the former DuPont Works Site (Site) within the Parcel One Consent Decree Boundary. The Site is located in the City of Dupont, Pierce County, Washington (see Figure 1-1). The ICAs involved excavation of contaminated soil, verification sampling of excavated areas, and stockpiling of contaminated soil for on-Site placement or off-Site disposal. ICAs were conducted as allowed under the July 1991 Consent Decree signed by the Weyerhaeuser Company (Weyerhaeuser), E.I. duPont de Nemours and Company (DuPont), and the Washington State Department of Ecology (Ecology). ICAs included soil excavation and sampling in the following areas (see Figure 1-2):

- Building Foundations (Foundations).
- The Narrow Gauge Railroad (NGRR) outside the Golf Course land use footprint.
- Hot spots:
    - Arsenic and Lead Areas (Sequalitchew Creek NGRR, Area 38, and an area within the "Areas for Additional Sampling Site-Wide Grid" (Row 71, Column 85 of [R71C85])).
    - 2,4-Dinitrotoluene (2,4-DNT), 2,6-dinitrotoluene (2,6-DNT), and 2,4,6-trinitrotoluene (TNT) Areas (Areas 10 and 18).
- Topsoil Laydown Areas.

All work was performed under the direction of the Project's Management Team (MT). West Shore Corporation, NW (WSNW) oversaw the program on a day-to-day basis. URS, Inc. (URS) performed the verification sampling and Sound Analytical Services served as the project laboratory. PIONEER Technologies Corporation (PIONEER) managed the analytical data. ESM Consulting Engineers, LLC (ESM) surveyed the excavation boundaries and sample locations. Active Construction (ACTIVE) was the remediation contractor. The program was initiated in the first quarter of 2001 and was completed in September 2001.

1.2 Background

Historical soil sampling at the Site identified concentrations of lead, arsenic, DNT, and TNT above Site-specific remediation levels. Remediation levels are Site-specific cleanup standards for humans that were developed using exposure assumptions and other media-specific factors that reflect future planned land uses for the Site. These areas are described below:

- Elevated lead concentrations were found in soil adjacent to building foundations. The source of this lead was lead sheeting that had been used to line the buildings, and lead-based paint chips remaining after building demolition.
- Elevated arsenic concentrations were found associated with the NGRR, where an arsenic-containing herbicide had been used for weed control for fire protection.
- 2,4-DNT, 2,6-DNT, and TNT, explosives that were manufactured on-Site, were found in elevated concentrations in a former industrial manufacturing area (Area 10), and in a historical "hot spot" area (Area 18).

- Hot spot areas of arsenic and/or lead contamination were found in soil along the Sequalitchew Creek NGRR, and in one location in the "Areas for Additional Sampling Site-Wide Grid".

The planned land uses within the Parcel 1 Consent Decree Boundary include open space, commercial, industrial, historical, and a golf course. In preparation for these future land uses, areas with elevated concentrations of constituents of concern were identified for soil removal and either on-Site placement or off-Site disposal. Table 1-1 presents the ICA soil placement criteria.

During the ICA programs, soil in the selected areas with elevated arsenic, lead, 2,4-DNT, 2,6-DNT, and/or TNT levels were excavated until concentrations were reached that could: either be left in place (met Site-specific remediation levels), moved to placement areas, processed at the soil screening plant, or stockpiled for off-Site disposal. In addition to the foundation, narrow gauge railroad, and other miscellaneous hot spot areas, soil was excavated in areas where clean topsoil is being stored for future use during development of the cap/containment areas`.

1.3 Objectives

The objectives of the ICAs were to:

- Excavate the top 2 feet of soil around selected foundations outside of the proposed golf course land use footprint.

- Excavate the top 1.5 feet of soil along the total length of NGRR outside the proposed golf course land use footprint.

- Excavate the top 1.5 feet of soil in remaining hot spot areas that may require on-Site screening and/or off-Site disposal.

- Excavate soil to provide clean areas for clean topsoil storage that will be used for the future cap/containment areas.

The Foundation, NGRR, Hot Spots, and Soil Laydown ICAs are discussed in detail below.

Chapter 2 – Interim Corrective Actions

ICAs were conducted as allowed under the July 1991 Consent Decree signed by Weyerhaeuser, Dupont and the Washington State Department of Ecology. The processes and results of each interim corrective action are discussed below separately by area.

2.1 Site Preparation Activities

In preparation for the ICAs the following Site preparation activities took place:

- A work plan was prepared and submitted to the Department of Ecology (Dec. 6, 2000).
- Permission was obtained from Ecology to proceed with the work.
- The areas to be excavated were located by ESM and the excavation boundaries were surveyed.
- Vegetation was removed within 50 feet of the foundations, within 25 feet of either side the NGRR centerline, and any additional areas needed to safely complete the work.
- With the exception of work done along the NGRR within Sequalitchew Creek Canyon, Site preparation did not include any removal of track or ties. This work had been completed in the past.

2.2 Foundation Excavations

Soil was excavated around the foundations of buildings that were known to have been explosive storage locations or were painted with lead-based paint. The locations of these excavations are shown in Figure 2-1. The excavation procedure and verification sampling procedure and results are described below.

2.2.1 Excavation Procedure

ACTIVE excavated the top 2 feet of soil within 25 feet of each foundation. The excavated soil was hauled by truck to the nearest placement area and placed. Site characterization sampling had shown that soil concentrations in the areas surrounding foundations were acceptable for placement in placement areas. After verification samples were taken, it was necessary to perform an additional one-foot excavation around some of the building foundations to achieve the Site-specific remediation level of 60 mg/kg for arsenic and the 118 mg/kg screening concentration for lead. Areas where additional excavation was necessary are shown in Figure 2-1. The soil removed during additional round(s) of excavation was deposited in the nearest placement areas.

2.2.2 Verification Sampling

Following excavation, verification soil sampling was conducted. Verification samples were collected on the excavation floor and on each side of the foundation (See Figure 2-2). To ensure that adequate characterization had been done, each of the samples consisted of a composite of 5 different locations. Further details of the sampling design are described in the Interim Source Removal Action Work Plan (PIONEER and West Shore, 2000). Verification sampling results are shown in Appendix A, Table A-1. The data validation report describing sample quality control procedures is presented in Appendix B.

2.2.3 Verification Sampling Results

A total of 267 locations were sampled around building foundations. Of these locations, 3 required two additional rounds of excavation and sampling, and 8 required three additional rounds of excavation and sampling. The arsenic Site-specific remediation level of 60 mg/kg was met at all locations (the highest result was 60 mg/kg), however there were 7 locations where the lead screening level of 118 mg/kg was

not met. Lead concentrations in these locations ranged from 120 mg/kg up to 520 mg/kg. Remediation of these areas will be addressed in the Feasibility Study Report, which is currently being prepared.

2.3 Narrow Gauge Railroad Tracks

The sections of NGRR included in this program were located outside the future golf course land use footprint, and south of Sequalitchew Creek. Some areas of the NGRR along the main paved road were not excavated due to the presence of merchantable timber. Timber harvesting is planned to allow access to all potentially contaminated soil. Harvesting requires a Forest Practices Act Permit, and will be conducted at a later time. The locations of the NGRR excavations are shown in Figure 2-3. The excavation and verification sampling procedures and results are described below.

2.3.1 Excavation Procedure

ACTIVE excavated the top 1.5 feet of soil within 25 feet from the centerline of the NGRR. Both sides of the rail bed were excavated first, followed by the rail bed itself. The excavated soil was hauled by truck to the nearest placement area and placed. Site characterization sampling had shown that soil concentrations in the NGRR track areas were acceptable for placement.

2.3.2 Verification Sampling

Following excavation, verification soil sampling was conducted. One five-point composite verification sample was collected from the excavation floor every 50 feet along the NGRR (see Figure 2-4). This resulted in 50 x 50 foot boxes with one five-point composite verification sample from each box. Each sample was composited from soil taken in the middle of the track and soil taken on both sides of the track, no more than 10 feet from the track centerline. Where verification samples exceeded the Site-specific remediation level of 60 mg/kg for arsenic and/or the 118 mg/kg lead screening level, the 50 x 50 foot box was excavated an additional vertical foot. Areas where additional excavation was necessary are shown in Figure 2-3. The soil removed during additional round(s) of excavation was also hauled to the nearest placement area and placed. Further details of the sampling design are shown in the Interim Source Removal Action Work Plan (PIONEER and West Shore 2000). Verification sampling results are shown in Appendix A, Table A-2. The data validation report describing sample quality control procedures is presented in Appendix B.

2.3.3 Verification Sampling Results

A total of 392 locations were sampled along the former NGRR. Of these locations, 21 required one additional round of excavation and sampling and 2 required two additional rounds of excavation and sampling to meet the concentration criteria for remaining on-Site. One sample with an arsenic concentration of 89 mg/kg exceeded the Site-specific remediation level of 60 mg/kg. The highest remaining lead concentration was 110 mg/kg.

2.4 Hot Spot Areas: Arsenic and Lead

During this ICA, three areas with elevated arsenic and/or lead levels were excavated. These were, the NGRR locations along the Sequalitchew Creek, Area 38, and one location (row 71, column 85 or R71C85) located on the “Areas for Additional Sampling Site-Wide Grid”. These areas were excavated in order to include them in the 2001 Soil Screening Program. The location of these excavations is shown in Figure 2-5. The excavation procedure, verification sampling procedure, and results are described below.

2.4.1 Excavation Procedure

Sequalitchew Creek NGRR

ACTIVE excavated all soil along the NGRR track bed, out to a distance of 25 feet of the NGRR centerline but not over the bank, to an initial depth of 2 feet below ground surface (BGS). The sides of the rail bed were excavated first, followed by the rail bed itself. The excavated soil was hauled by truck to the screening plant stockpile. After excavation, the centerlines of the NGRR were re-staked to aid in

verification sampling. Verification samples were collected from five areas of the NGRR along Sequalitchew Creek.

Areas for Additional Sampling Site-Wide Grid Area R71C85 and Area 38

In preparation for excavation, ESM located and flagged the locations to be excavated and outlined the initial excavation limit. This was set at 25 feet in the north, south, east and west directions from the original sample location. This resulted in a 50-by-50 foot initial excavation. After preparation work, ACTIVE excavated all soils within the staked area to an initial depth of 1.5 feet BGS for R71C85 and 2 feet BGS for Area 38. The excavated soil was hauled by truck to the screening plant soil stockpile.

2.4.2 Verification Sampling

Following excavation, verification soil sampling was conducted as described below for each area.

Sequalitchew Creek NGRR

Following excavation, one five-point composite verification sample was collected from the excavation floor every 75 feet along the NGRR. This resulted in seven 75 x 25 foot boxes, with one five-point verification sample obtained from each box. Each sample was composited from soil taken in the middle of the track and soil taken on both sides of the track, no more than 10 feet from the track centerline. The sampling design is the same as those shown for the NGRR in the Interim Source Removal Action Work Plan and is presented in Figure 2-6 (PIONEER and West Shore, 2000). Verification sampling results are shown in Appendix A, Table A-3. The data validation report describing sample quality control procedures is presented in Appendix B.

Ecology requested that characterization samples be collected along transects perpendicular to Sequalitchew Creek to confirm that arsenic concentrations were not elevated from the edge of the NGRR track bed down to the creek bed. Three composite samples were collected in areas selected by Ecology. The first 0 to 6 inch sub-sample of the composite was collected 2 feet down the slope from the NGRR track bed. Additional sub-samples were collected every 20 feet down the bank until the creek was reached. No sub-samples were collected in Sequalitchew Creek. In addition, 5 discrete samples were collected at one of the locations in order to determine if there was a potential concentration gradient. The first sample was collected 2 feet down the slope from the NGRR track bed and then additional discrete samples were collected every 5 feet until the Sequalitchew Creek bed was reached. Characterization sampling results are shown in Appendix A, Table A-4. The data validation report describing sample quality control procedures is presented in Appendix B.

Areas for Additional Sampling Site-Wide Grid Area R71C85 and Area 38

Following excavation, verification soil sampling was conducted. Verification samples were collected from the excavation bottom as well as adjacent to the excavation on each side, for a total of 5 samples for R71C85. For the Area 38 excavation, there were only 3 sides to the excavation due to an adjacent excavation. In this case a total of 4 samples were taken, one adjacent to each of the three walls and one on the bottom of the excavation. To ensure adequate characterization, the sample collected on the floor of the excavation consisted of a composite of 5 different locations. Adjacent to each sidewall, one discrete sample was taken. Verification sampling results are shown in Appendix A, Table A-5. The data validation report prepared describing sample quality control proceedures was prepared by URS, and is presented in Appendix B.

2.4.3 Verification Sampling Results

Sequalitchew Creek NGRR

Verification samples were collected from 7 locations along the Sequalitchew NGRR. There were 5 locations where the arsenic Site-specific remediation level of 60 mg/kg was not met. At these locations, the arsenic levels ranged from 67 mg/kg to 130 mg/kg. In addition, there were 7 locations where the lead screening level of 118 mg/kg was not met. In these locations, the lead levels ranged from 190 mg/kg to

2,900 mg/kg. Remediation of these areas will be addressed in the Feasibility Study Report, which is currently being prepared.

All of the transect sample arsenic soil concentrations were below background concentrations and Site-specific remediation levels. The only location where the lead concentration was elevated was at 600E, which was the location of a lead hot spot. Additional discrete samples were collected and demonstrated that the elevated lead concentration was only present 2 feet down the slope from where the NGRR track bed had sluffed off (see Figure 2-6).

Areas for Additional Sampling Site-Wide Grid Area (Row 71, Column 85) and Area 38

A total of 9 locations were sampled in these two areas (5 in Row 71, Column 85 area; 4 in Area 38). In the Row 71, Column 85 location, the highest remaining arsenic concentration was 55 mg/kg. The highest remaining lead concentration was 99 mg/kg. In Area 38, there was 1 location where the arsenic Site-specific remediation level of 60 mg/kg was not met. At this location, the arsenic level was 330 mg/kg. The lead screening level of 118 mg/kg was met at all locations sampled. The highest remaining lead concentration was 44 mg/kg. Remediation of the area with the elevated arsenic concentration will be addressed in the Feasibility Study Report, which is currently being prepared.

2.5 Hotspot Areas: 2,4-DNT, 2,6-DNT, and TNT

During this ICA, two areas with elevated 2,4-DNT, 2,6-DNT, and/or TNT were excavated. These are Area 10 and Area 18. The locations of these excavations are shown in Figure 2-7. The excavation and verification sampling procedures and results are described below.

2.5.1 Excavation Procedure

Prior to excavation ESM located and flagged each location to be excavated. Next, they staked the initial excavation limit set at 25 feet in the north, south, east and west directions from the original sample location for the Area 18 sample. This resulted in a 50-by-50 foot initial excavation. The initial excavation limit in Area 10 was set at 15 feet in the north, south, east, and west directions from the original sample because the area had been excavated previously. ACTIVE excavated the top 3 feet of soil within the Area 18 staked area and the top 3 feet of soil within the Area 10 staked area. The excavated soil was hauled by truck to the appropriate DNT or TNT stockpile for off-Site disposal.

2.5.2 Verification Sampling

Following excavation, verification soil sampling was conducted. In Area 18, one verification sample was collected on the excavation floor. In Area 10, because of the depth of the excavation, verification samples were collected on the excavation floor as well as on each sidewall of the excavation, for a total of 5 samples in Area 10. To ensure adequate characterization, the sample collected on the floor of the excavation consisted of a composite of 5 different locations. On each wall of the excavation, one discrete sample was taken. Verification sampling results are shown in Appendix A, Table A-6. The data validation report describing sample quality control procedures is presented in Appendix B.

2.5.3 Verification Sampling Results

Area 10

A total of 5 locations were sampled in this area. Sample results from the second round of excavation all met the arsenic and lead criteria for remaining on-Site. The only analyte detected in samples was TNT, and the highest detected concentration was 0.2 mg/kg. This is below the Site-specific cleanup level of 1.75 mg/kg (Ecology, 2001).

Area 18

One sample was collected in this area. Sample results from this first round of excavation met the criteria for remaining on-Site. The analytes detected were 2,4-Dinitrotoluene and Total DNT. The highest

detected concentrations were 0.023 mg/kg and 0.046 mg/kg, respectively. These concentrations are below the Site-specific cleanup level of 3.0 mg/kg for total DNT (Ecology, 1996).

2.6 Topsoil Laydown Areas

Two areas designated for storage of clean topsoil were excavated during this ICA. The locations of these areas are shown in Figure 2-8. The objective of the topsoil laydown ICA was to remove potentially contaminated surface soil from these areas so that they could be used for stockpiling of clean topsoil. This topsoil will be used in the development of the future cap/containment areas. The excavation and verification sampling procedures and results are described below.

2.6.1 Excavation Procedure

ACTIVE excavated soil within the staked area to an initial depth of 1.5 feet BGS. The excavated soil was hauled by truck to the nearest placement area and placed. Site characterization sampling had shown that soil concentrations in these areas were acceptable for placement areas.

Areas where verification samples exceeded the Site-specific remediation level of 60 mg/kg for arsenic and/or the 118 mg/kg lead screening level were excavated an additional foot. Areas where additional excavation was necessary are shown in Figure 2-8. The soil removed during the additional rounds of excavation was also hauled to placement areas and placed.

2.6.2 Verification Sampling

Following excavation, verification soil sampling was conducted. Verification samples were collected using a 150-foot grid, and one discrete sample was collected per grid node. The starting point for the excavation grid was related to the Site-wide 150-foot sample grid. Verification sampling results are shown in Appendix A, Table A-5. The data validation report describing sample quality control procedures is presented in Appendix B.

2.6.3 Verification Sampling Results

A total of 13 locations were sampled in the topsoil laydown areas. Of these samples, 1 (R34C15) exceeded the criteria, requiring a second round of excavation and sampling at that location. The highest remaining arsenic concentration was 33 mg/kg and the highest remaining lead concentration was 96 mg/kg.

2.7 Archeological Monitoring

All activities that disturbed in place soil greater than eight inches in depth and less than three feet in depth were monitored by either Gary Wesson and Associates, Inc. (WESSON) or Historical Research Associates (HRA); both qualified archeological consulting firms. Five occurrences of potential historical or cultural artifacts were discovered during ICA field work. They are:

- Historic Scatter near the 1833 Fort Nisqually: Content included china fragments, a clear bottle base, a china cup fragment, and a fragment of a large metal pipe.

- Potential Small Midden near the 1833 Fort Nisqually: 13 meter long potential deposit containing sparse *in situ* shell and animal bone thought to be associated with the 1833 Fort Site.

- Historic Scatter near the Site Fence Line: Content included Hudson Bay era colored glass, plate fragments, a small teacup base and assorted metal fragments.

- Two Potential Small Middens located in the Southwest Corner of the Site: Two very small, both less than 2 square meters in size, shallow accumulations of shell. It is believed that neither location is *in situ*.

- Faunal Remains in the Southern Portion of the Site: Small occurrence of elk teeth, broken mammal bones and three small mussel fragments. Occurrence is not *in situ* and lacks integrity.

Each of these areas was protected against further disturbance and will be further evaluated during 2002 to determine if they are sites of Historic significance. WESSON/HRA's monitoring report, entitled *Interim Archaeological Monitoring Report for the Former DuPont Works Site, Parcel 1*, is available at the Office of Archaeology and Historic Preservation in Olympia, Washington or upon request.

Chapter 3 – Conclusions

A total of 731 samples were collected and analyzed for the 133 ICA excavation locations on the Site. Based on the evaluation of sample data, all of the locations sampled during this ICA met the Site-specific remediation level for arsenic of 60 mg/kg, the lead screening level of 118 mg/kg, and 2,4-DNT, 2,6-DNT, and TNT Site-specific remediation levels except:

- There were 7 locations where the Site-specific remediation levels for arsenic of 60 mg/kg were not met.

- There were 13 locations where the lead screening level of 118 mg/kg was not met.

However, all of the arsenic and lead sample results were below the placement area remediation levels. Potential remediation of these locations will be addressed in the Feasibility Study Report, which is currently being prepared.

In all sampled locations, levels of 2,4-DNT, 2,6-DNT, and TNT were below Site-specific remediation levels of 3.0 mg/kg for total DNT and 1.75 mg/kg for TNT (Ecology 1996; 2001).

Chapter 4 – References

Ecology (Washington State Department of Ecology). 1996. Acceptance of Two Issue Papers – 1) Determination of a DNT Soil Cleanup Level Protective of Groundwater, and 2) Impractability of Groundwater Treatment. Letter from Mike Blum to Vern Moore and Jack Frazier.

Ecology (Washington State Department of Ecology). 2001. Hot Spot Interim Action Report. Letter from Mike Blum to Jim Odendahl and Ron Buchanan.

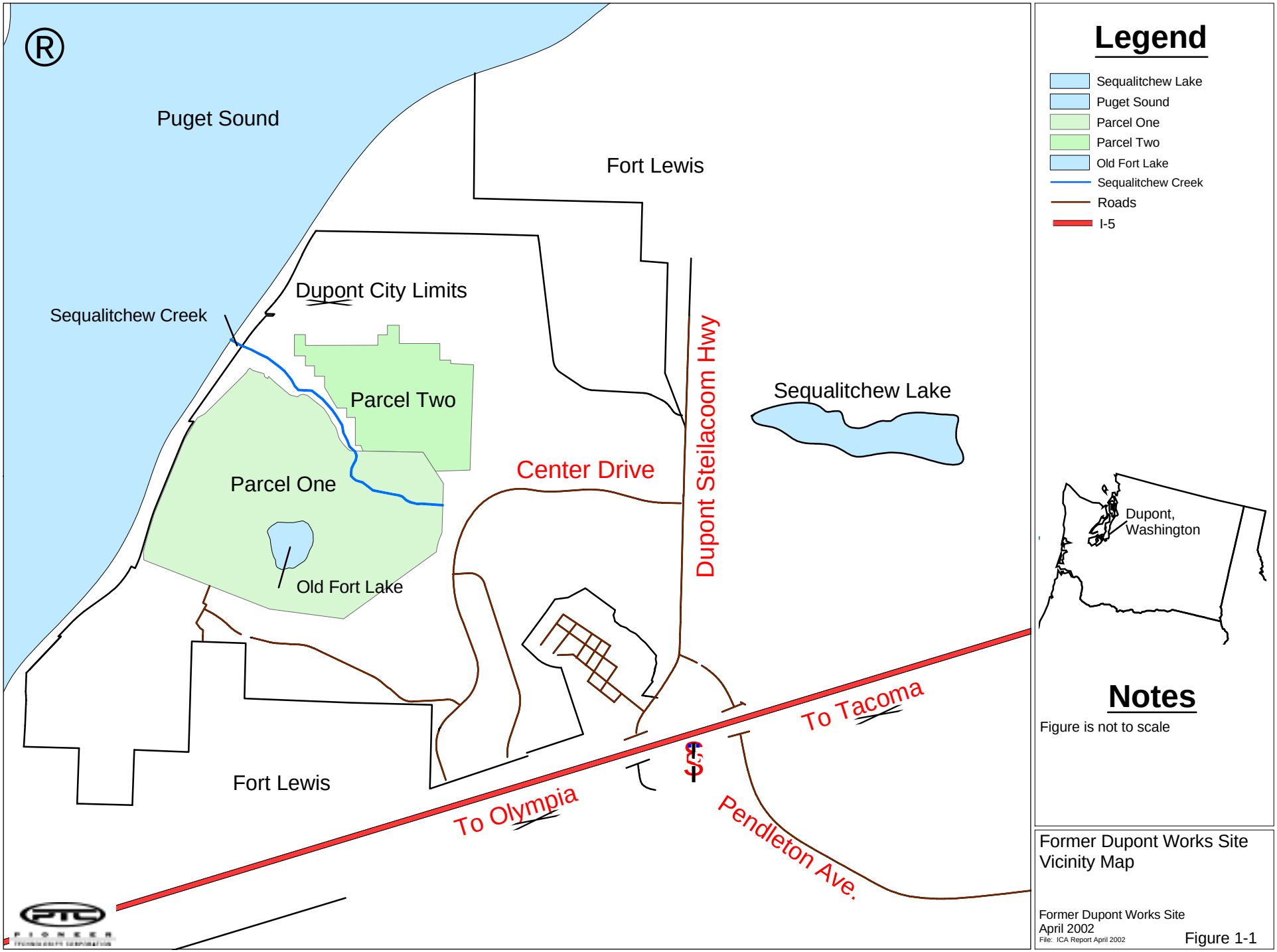
PIONEER (PIONEER Technologies Corporation) and West Shore Corporation. 2000. Workplan: Interim Source Removal Actions: Impacted Foundations and Narrow Gauge Railroad Beds at the Former DuPont Works Site. DuPont, Washington. Prepared for the Weyerhaeuser Company and E.I. duPont de Nemours and Company. December 6, 2000.

Tables and Figures

Table 1-1 – Interim Corrective Action Soil Placement Criteria

Constituent	Concentration in Soil Left In Place (mg/kg)	Concentration in Soil moved to Placement Areas (mg/kg)	Concentration in Soil Stockpiled for On-Site Screening and/or Off-Site Disposal (mg/kg)
Arsenic	≤60	>60 and ≤530	>530
Lead	≤118	> 118 and ≤4100	>4100
2,4-Dinitrotoluene	≤1.5[(a)]	NA	≥1.5
2,6-Dinitrotoluene	≤1.5[(a)]	NA	≥1.5
2,4,6-Trinitrotoluene	≤1.75	NA	>1.75

Notes:
NA: Soil with 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, or 2,4,6-Trinitrotoluene concentrations greater than those that could be left in place were stockpiled for off-Site disposal.
[(a)] Ecology approved a Site-specific number of 3.0 mg/kg for total DNT.

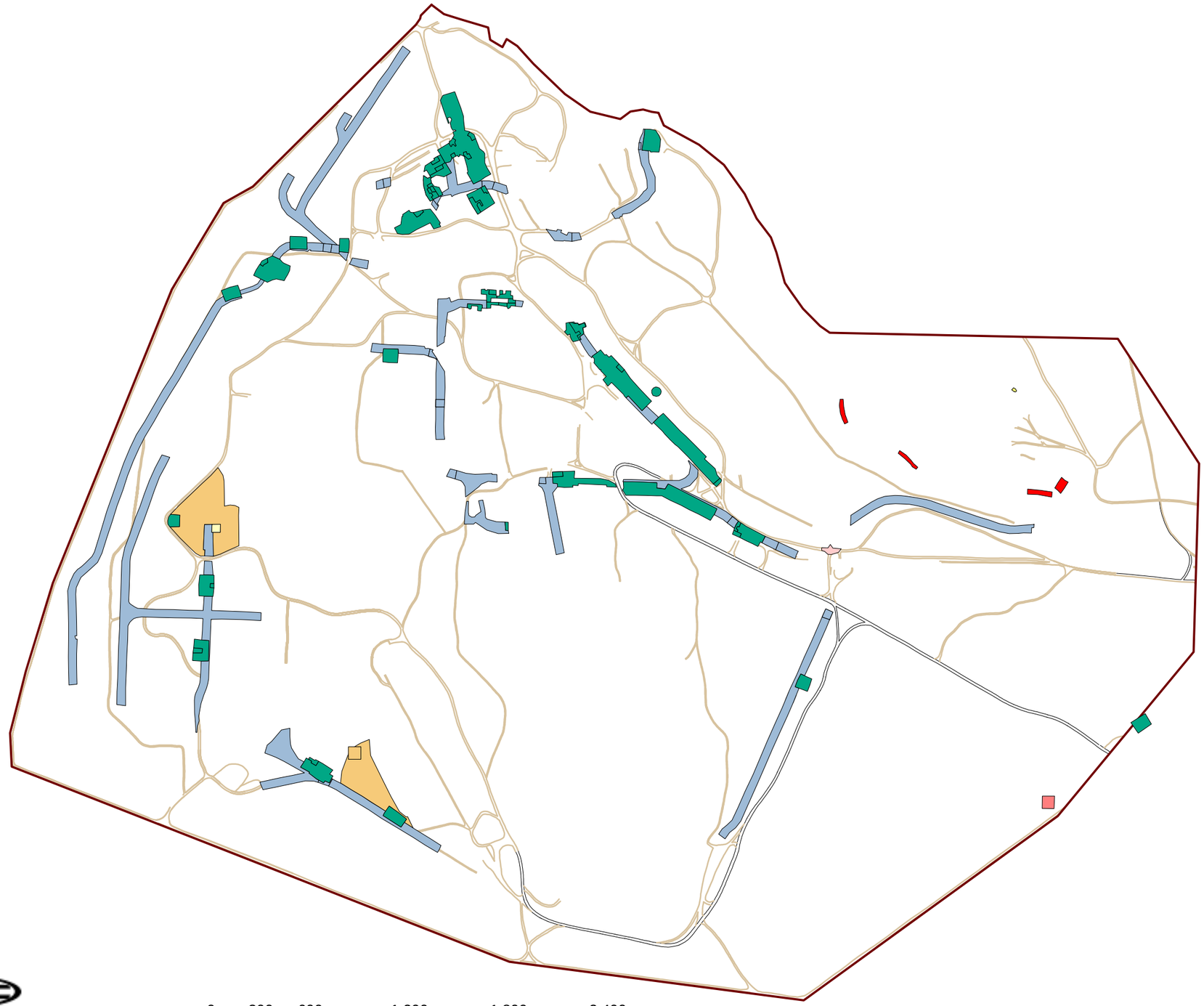


Former Dupont Works Site
Vicinity Map

Former Dupont Works Site
April 2002
File: ICA Report April 2002

Figure 1-1

®



0 300 600 1,200 1,800 2,400 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

- Foundation Excavations
- NGRR Excavations

Arsenic and Lead Hotspot Excavations

- Area 38
- AFAS
- Sequalitchew Creek

DNT and TNT Hotspot Excavations

- Area 18
- Area 10

Topsoil Laydown Area Excavations

- Parcel One
- Dirt Roads
- Paved Roads

Notes

NGRR = Narrow Gauge Railroad
DNT = Dinitrotoluene
TNT = Trinitrotoluene

2001 Interim Corrective Action Excavations

Former Dupont Works Site
April 2002

File: ICA Report April 2002

Figure 1-2

F-79-4 (Lead = 290 mg/kg)

F-80-4 (Lead = 520 mg/kg)

F-90-4 (Lead = 355 mg/kg)

F-254-3 (Lead = 170 mg/kg)

F-249-3 (lead = 190 mg/kg)

F-252-3 (Lead = 360 mg/kg)

F-244-3 (Lead = 120 mg/kg)

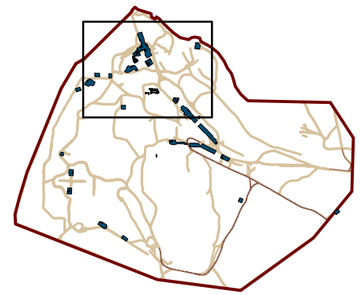
0 125 250 500 750 1,000 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

Foundations 2001 Excavations

- 2 ft BGS
- 3 ft BGS
- 4 ft BGS
- 5 ft BGS
- Lead > 118 mg/kg
- Parcel One
- Dirt Roads
- Paved Roads



Notes

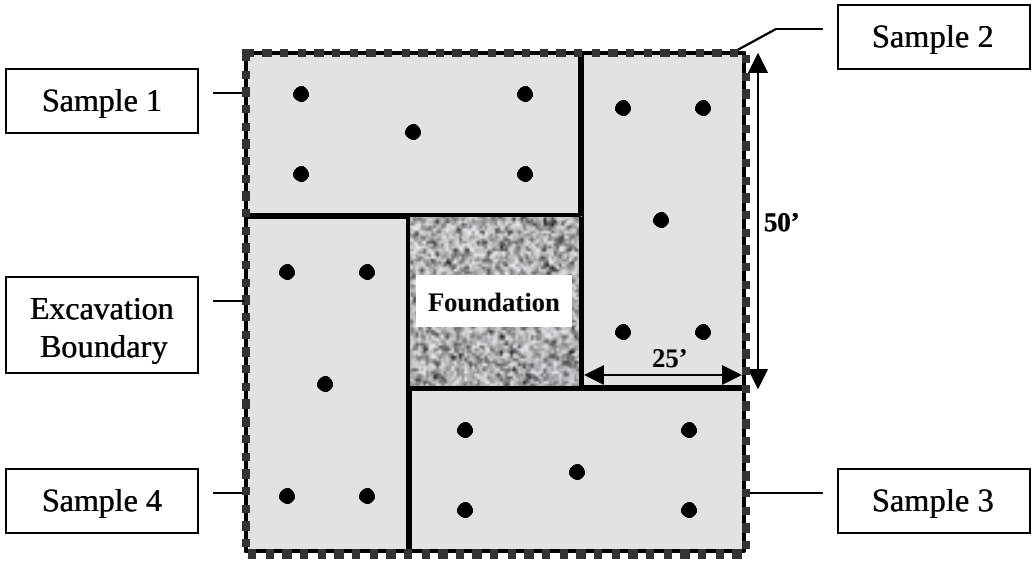
BGS = Below Ground Surface
mg/kg = milligrams per kilogram

Foundation Excavation Exceedence Locations

Former Dupont Works Site
April 2002
File: ICA Report April 2002

Figure 2-1

Figure 2-2 – Conceptual Foundation Sampling Scheme



Note: One sample was collected from each box. This sample was a five point composite. The black dots identify the general location of the sub-samples of the composite sample.

R47C71 (Arsenic = 89 mg/kg)

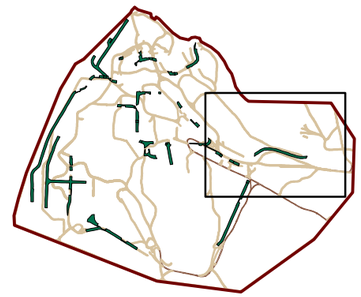
0 125 250 500 750 1,000 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

NGRR 2001 Excavations

- 1.5 ft BGS
- 2.5 ft BGS
- 3.5 ft BGS
- Arsenic > 60 mg/kg
- Parcel One
- Dirt Roads
- Paved Roads



Notes

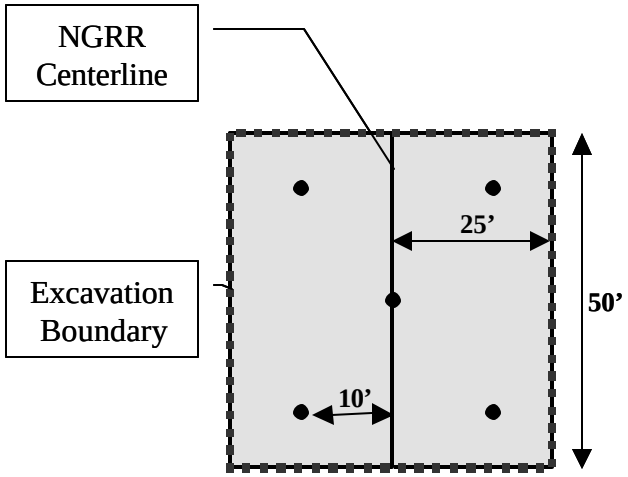
NGRR = Narrow Gauge Railroad
BGS = Below Ground Surface
mg/kg = miligrams per kilogram

Narrow Gauge Railroad
Exceedence Locations

Former Dupont Works Site
April 2002
File: ICA Report April 2002

Figure 2-3

Figure 2-4 – Conceptual NGRR Sampling Scheme



Note: One sample will be collected from each 50’ x 50’ box. This sample will be a five point composite. The black dots identify the general location of the sub-samples of the composite sample.

LR-68-0-02 (Arsenic = 98 mg/kg)

LR-68-0-02 (Lead = 210 mg/kg)

LR-68-75-02 (Arsenic = 99 mg/kg)

LR-68-525E-02 (Lead = 190 mg/kg)

LR-68-600E-02 (Arsenic = 130 mg/kg)

LR-68-525E-02 (Arsenic = 85 mg/kg)

LR-68-1575E-02 (Arsenic = 67 mg/kg)

38-VS-152 (Arsenic = 330 mg/kg)

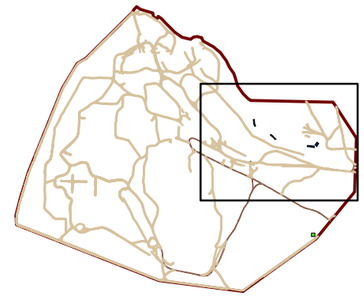
0 125 250 500 750 1,000 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

Arsenic and Lead Hotspot Excavations

- Creek = 1.5 ft BGS
- Area 38 = 2 ft BGS
- Lead > 118 mg/kg
- Arsenic > 60 mg/kg
- Parcel One
- Dirt Roads
- Paved Roads



Notes

BGS = Below Ground Surface
mg/kg = milligrams per kilogram

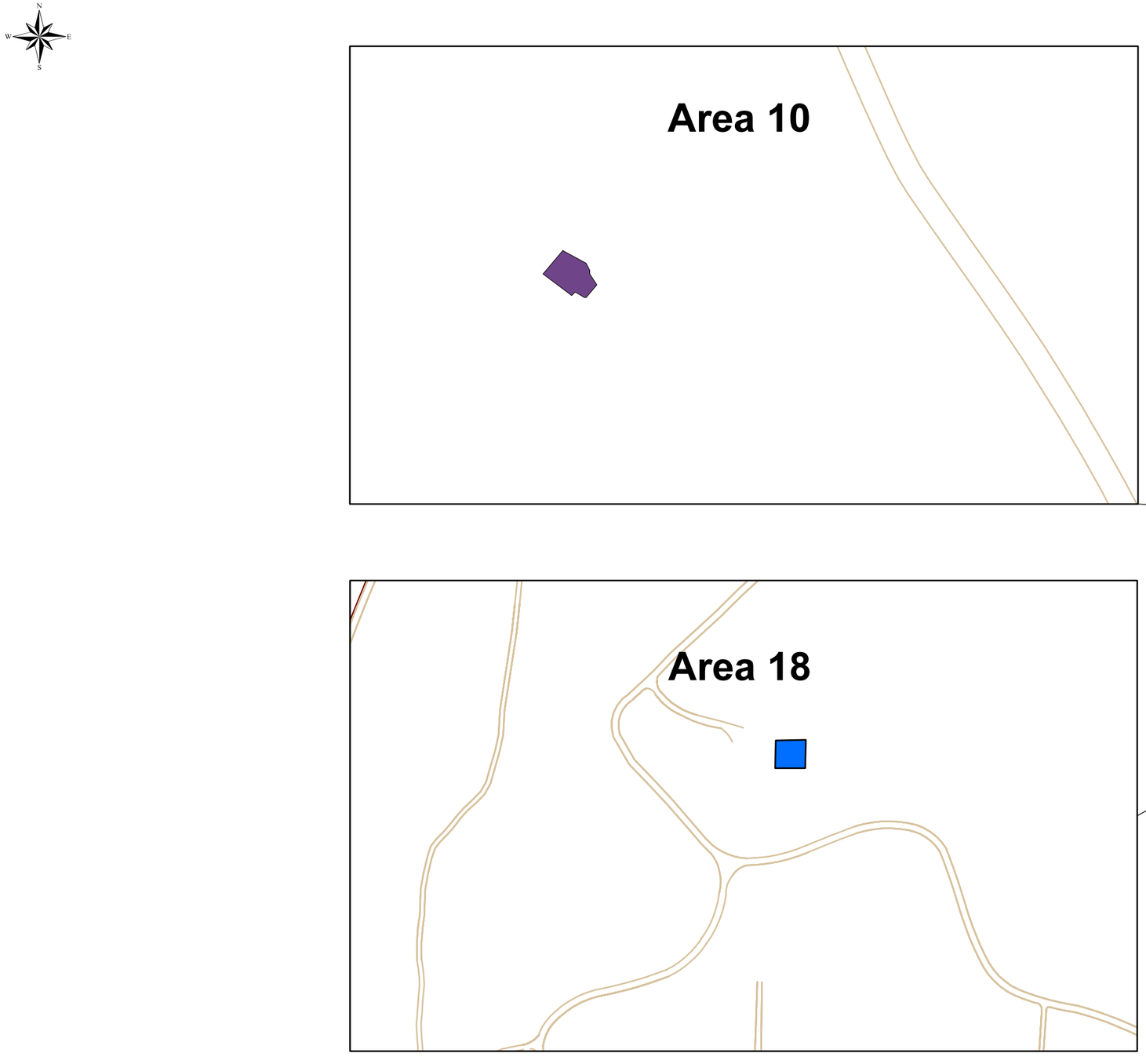
Arsenic and Lead Exceedence Locations

Former Dupont Works Site
April 2002
File: ICA Report April 2002

Figure 2-5

Figure 2-6 – NGRR Transect Sample Location LR-68-600E-2-TRANSECT

Note: Picture was taken looking down slope towards creek where samples were collected. A pink ribbon is attached to the sample location stake.



Legend

DNT/ TNT Excavations

- 3.5 ft BGS
- 6 ft BGS
- Dirt Roads
- Paved Roads

Notes

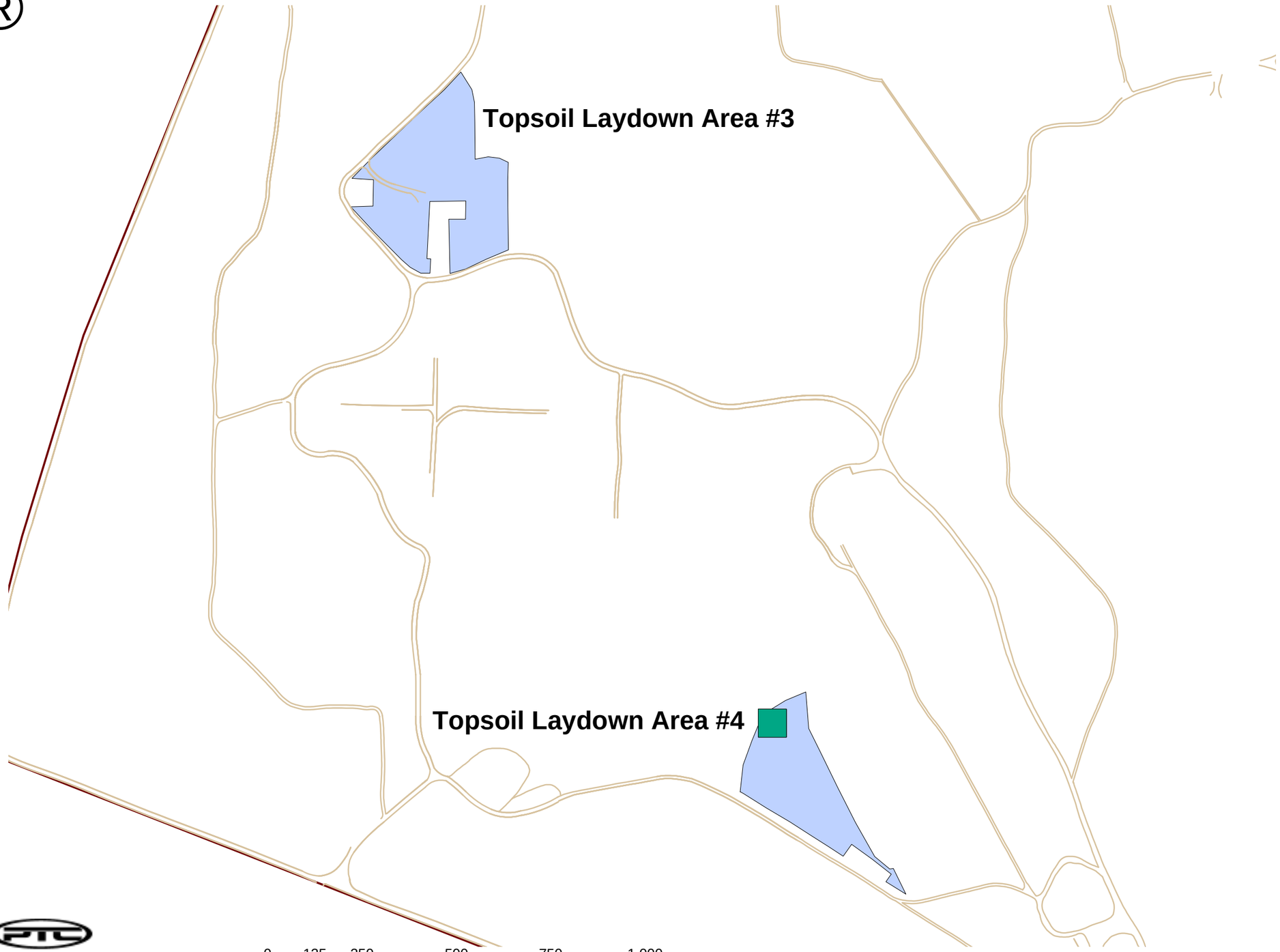
DNT = Dinitrotoluene
TNT = Trinitrotoluene
BGS = Below Ground Surface

Dinitrotoluene and Trinitrotoluene Hotspot Excavations

Former Dupont Works Site
April 2002
File: ICA Report April 2002

Figure 2-7

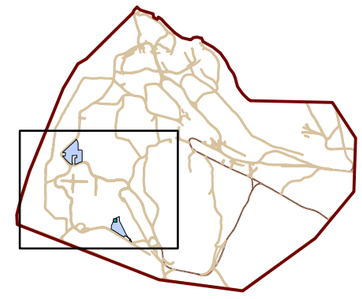
PIONEER TECHNOLOGIES CORPORATION



Legend

Topsoil Laydown Areas 2001

- 1.5 ft BGS
- 2.5 ft BGS
- Parcel One
- Dirt Roads
- Paved Roads



Notes

BGS = Below Ground Surface

Topsoil Laydown Areas

Former Dupont Works Site
April 2002
File: ICA Report April 2002

Figure 2-8

PIONEER TECHNOLOGIES CORPORATION

Appendix A – Analytical Data

Verification sampling data from the interim corrective actions is presented in this Appendix. Where multiple excavations were necessary, only the last round of sampling data is presented. Therefore, the concentrations that appear in these tables are the concentrations that are currently in place. Sample numbers that have a "-" extension (e.g., F-08-2), the number following the dash indicates the number of samples (and hence the number of excavations) that occurred at that location. Shaded values indicate concentrations that exceeded the Site-specific remediation level of 60 mg/kg for arsenic or the lead screening level of 118 mg/kg.

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F08-SS[F-01] C2-005-DAVG	F-01	3.90		3.50	
01-F08-SS[F-03] C2-005	F-03	3.30		3.90	
01-F08-SS[F-04] C2-005	F-04	2.50		2.20	
01-F08-SS[F-05] C2-005	F-05	3.10		2.70	
01-F08-SS[F-06] C2-005	F-06	2.60		3.90	
01-F08-SS[F-07] C2-005	F-07	5.00		75.00	
02-F08-SS[F-08-2]C2-030	F-08-2	2.60		90.00	J
01-F08-SS[F-09] C2-005	F-09	3.50		3.30	
01-F08-SS[F-10] C2-005	F-10	3.90		4.40	
01-F08-SS[F-11] C2-005	F-11	3.80		2.40	
01-F08-SS[F-12] C2-005	F-12	2.60		4.50	
01-F08-SS[F-13] C2-005	F-13	4.60		14.00	
01-F08-SS[F-14] C2-005	F-14	3.60		13.00	
01-F08-SS[F-15] C2-005	F-15	3.20		7.00	
01-F08-SS[F-16] C2-005	F-16	3.10		3.50	
01-F08-SS[F-17] C2-005-DAVG	F-17	3.10		2.60	
01-F07-SS[F-20]C2-005	F-20	2.80		2.30	
01-F07-SS[F-21]C2-005	F-21	2.70		2.50	
01-F07-SS[F-22]C2-005	F-22	2.50		2.30	
01-F07-SS[F-23]C2-005	F-23	2.00	U	2.10	
01-F07-SS[F-24]C2-005	F-24	3.40		2.30	
01-F06-SS[F-25]C2-005	F-25	2.50		2.30	
01-F06-SS[F-26]C2-005	F-26	3.80		8.20	
01-F06-SS[F-27]C2-005	F-27	4.10		3.00	
01-F06-SS[F-28]C2-005	F-28	2.40		24.00	
01-F01-SS[F-29]C2-005	F-29	5.60		8.50	
01-F01-SS[F-30]C2-005	F-30	4.10		28.00	
01-F01-SS[F-31]C2-005	F-31	12.00		37.00	
01-F01-SS[F-32]C2-005	F-32	13.00		70.00	
01-F01-SS[F-33]C2-005	F-33	3.50		3.60	
01-F01-SS[F-34]C2-005	F-34	4.20		15.00	
01-F01-SS[F-35]C2-005	F-35	7.00		18.00	
01-F01-SS[F-36]C2-005	F-36	5.40		41.00	
01-F01-SS[F-37]C2-005	F-37	13.00		43.00	
01-F01-SS[F-38]C2-005	F-38	13.00		93.00	
01-F01-SS[F-39]C2-005	F-39	12.00		19.00	
01-F01-SS[F-40]C2-005	F-40	5.50		40.00	
02-F01-SS[F-42-2]C2-030	F-42-2	7.40		22.00	
01-F01-SS[F-43]C2-005	F-43	7.70		53.00	
01-F01-SS[F-44]C2-005	F-44	7.90		41.00	

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F01-SS[F-45]C2-005	F-45	9.10		67.00	
01-F01-SS[F-46]C2-005	F-46	7.80		37.00	
03-F01-SS-[F-47-3]-C2-050	F-47-3	7.70		6.10	
01-F01-SS[F-48]C2-005-DAVG	F-48	4.75		18.00	
01-F01-SS[F-50]C2-005	F-50	3.00		2.40	
01-F01-SS[F-51]C2-005	F-51	6.30		9.30	
01-F01-SS[F-52]C2-005	F-52	9.80		23.00	
01-F01-SS[F-53]C2-005	F-53	7.40		26.00	
01-F01-SS[F-54]C2-005	F-54	3.60		4.90	
01-F01-SS[F-55]C2-005	F-55	4.20		4.70	
01-F01-SS[F-56]C2-005	F-56	6.50		29.00	
01-F01-SS[F-57]C2-005	F-57	6.80		6.20	
01-F01-SS[F-58]C2-005	F-58	2.60		2.70	
01-F01-SS[F-59]C2-005	F-59	5.30		2.40	U
01-F01-SS[F-60]C2-005	F-60	4.40		2.20	U
01-F01-SS[F-61]C2-005	F-61	3.90		2.30	U
01-F01-SS[F-62]C2-005	F-62	3.80		2.40	
01-F01-SS[F-63]C2-005	F-63	4.70		88.00	
04-F01-SS-[F-64-4]-C2-060	F-64-4	4.90		66.00	
01-F01-SS[F-66]C2-005	F-66	6.30		59.00	
02-F01-SS[F-67-2]C2-030	F-67-2	3.40		22.00	
01-F01-SS[F-68]C2-005	F-68	4.10		10.00	
01-F01-SS[F-69]C2-005	F-69	4.50		4.80	
01-F01-SS[F-70]C2-005	F-70	2.90		49.00	
04-F02-SS-[F-72-4]-C2-060	F-72-4	3.30		23.00	
01-F02-SS[F-73]C2-005	F-73	3.70		10.00	
01-F02-SS[F-74]C2-005	F-74	7.60		10.00	
01-F02-SS[F-75]C2-005	F-75	3.70		5.90	
03-F02-SS-[F-76-3]-C2-050-DAVG	F-76-3	6.15		24.50	
04-F02-SS-[F-77-4]-C2-060	F-77-4	2.70		40.00	
02-F02-SS[F-78-2]C2-030	F-78-2	4.50		100.00	
04-F02-SS-[F-79-4]-C2-060	F-79-4	9.60		290.00	
04-F02-SS-[F-80-4]-C2-060	F-80-4	12.00		520.00	
04-F02-SS-[F-81-4]-C2-060	F-81-4	8.00		65.00	
01-F02-SS[F-82]C2-005	F-82	3.50		3.00	
02-F02-SS[F-84-2]C3-030-DAVG	F-84-2	4.20		82.50	
02-F02-SS[F-85-2]C2-030	F-85-2	6.90		80.00	
01-F02-SS[F-86]C2-005	F-86	8.50		100.00	
01-F02-SS[F-87]C2-005	F-87	5.00		6.80	
03-F02-SS-[F-88-3]-C2-050	F-88-3	5.60		62.00	

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
04-F02-SS-[F-89-4]-C2-060-DAVG	F-89-4	7.05		86.50	
04-F02-SS-[F-90-4]-C2-060-DAVG	F-90-4	6.90		355.00	
02-F02-SS[F-91-2]C2-030	F-91-2	6.20		62.00	
02-F02-SS[F-92-2]C2-030	F-92-2	3.90		49.00	
01-F03-SS[F-94]C2-005	F-94	3.90		7.70	
01-F03-SS[F-95]C2-005	F-95	10.00		89.00	
01-F03-SS[F-96]C2-005	F-96	2.80		5.00	
01-F03-SS[F-97]C2-005	F-97	5.50		83.00	
01-F03-SS[F-98]C2-005	F-98	5.20		3.50	
01-F03-SS[F-99]C2-005	F-99	4.90		3.20	
01-F03-SS[F-100]C2-005	F-100	7.80		23.00	
02-F03-SS[F-101-2]C2-030	F-101-2	3.70		7.50	
01-F03-SS[F-102]C2-005-DAVG	F-102	6.85		41.50	
01-F03-SS[F-104]C2-005	F-104	5.80		30.00	
01-F03-SS[F-105]C2-005	F-105	8.50		95.00	
01-F03-SS[F-106]C2-005	F-106	2.90		38.00	
01-F03-SS[F-107]C2-005	F-107	14.00		9.90	
01-F03-SS[F-108]C2-005	F-108	9.70		18.00	
01-F03-SS[F-109]C2-005	F-109	7.30		22.00	
01-F03-SS[F-110]C2-005	F-110	7.10		75.00	
01-F03-SS[F-111]C2-005	F-111	11.00		4.80	
01-F03-SS[F-112]C2-005	F-112	8.20		82.00	
01-F03-SS[F-113]C2-005	F-113	12.00		26.00	
01-F04-SS[F-115]C2-005	F-115	7.10		5.20	
01-F04-SS[F-116]C2-005-DAVG	F-116	7.85		16.00	
02-F04-SS[F-118-2]C2-030	F-118-2	14.00		3.90	
02-F04-SS[F-119-2]C2-030	F-119-2	31.00		25.00	
01-F04-SS[F-120]C2-005	F-120	11.00		2.60	
02-F04-SS[F-121-2]C2-030	F-121-2	34.00		21.00	
01-F04-SS[F-122]C2-005	F-122	7.80		3.10	
01-F04-SS[F-123]C2-005	F-123	39.00		22.00	
02-F04-SS[F-124-2]C2-030	F-124-2	12.00		45.00	
01-F04-SS[F-125]C2-005	F-125	6.40		43.00	
01-F12-SS[F-127]C2-005	F-127	4.40		3.90	
03-F15-SS-[F-128-3]-C2-050	F-128-3	4.40		2.80	
01-F15-SS[F-129]C2-005	F-129	2.50		8.40	
01-F15-SS[F-130]C2-005	F-130	3.20		4.20	
01-F15-SS[F-131]C2-005	F-131	1.90	U	23.00	
01-F15-SS[F-132]C2-005	F-132	2.30		2.50	
02-F15-SS[F-133-2]C2-030	F-133-2	4.10		55.00	J

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F15-SS[F-134]C2-005	F-134	2.50		27.00	
01-F15-SS[F-135]C2-005	F-135	1.90	U	4.70	
01-F19-SS[F-136]C2-005	F-136	3.30		6.10	
01-F19-SS[F-137]C2-005	F-137	2.00		39.00	
01-F20-SS[F-138]C2-005	F-138	5.20		9.30	
01-F20-SS[F-139]C2-005	F-139	3.60		2.20	U
01-F20-SS[F-140]C2-005	F-140	3.50		3.70	
01-F20-SS[F-141]C2-005	F-141	4.70		4.90	
01-F20-SS[F-142]C2-005	F-142	3.90		4.20	
01-F20-SS[F-143]C2-005	F-143	6.60		10.00	
01-F22-SS[F-145]C2-005	F-145	4.80		2.70	
01-F22-SS[F-146]C2-005	F-146	4.50		2.50	
01-F22-SS[F-147]C2-005	F-147	3.70		3.20	
01-F22-SS[F-148]C2-005	F-148	4.80		3.60	
01-F22-SS[F-149]C2-005	F-149	3.90		6.20	
01-F22-SS[F-150]C2-005	F-150	3.70		2.00	
01-F22-SS[F-151]C2-005	F-151	3.20		1.80	U
01-F22-SS[F-152]C2-005	F-152	13.00		6.80	
01-F22-SS[F-153]C2-005	F-153	3.40		3.00	
01-F22-SS[F-154]C2-005	F-154	2.70		2.80	
01-F22-SS[F-155]C2-005	F-155	5.90		5.00	
01-F22-SS[F-156]C2-005	F-156	3.70		7.20	
01-F22-SS[F-157]C2-005	F-157	3.60		2.60	
01-F22-SS[F-158]C2-005	F-158	26.00		35.00	
01-F22-SS[F-159]C2-005	F-159	4.90		2.30	
03-F23-SS-[F-161-3]-C2-050	F-161-3	4.00		10.00	
02-F23-SS[F-162-2]C2-030	F-162-2	12.00	J	31.00	
01-F23-SS[F-163]C2-005	F-163	5.90		9.10	
01-F23-SS[F-164]C2-005	F-164	8.60		6.90	
01-F23-SS[F-165]C2-005	F-165	6.70		5.00	
01-F23-SS[F-166]C2-005	F-166	18.00		15.00	
01-F23-SS[F-167]C2-005	F-167	60.00		5.60	
01-F23-SS[F-168]C2-005	F-168	5.50		4.40	
01-F23-SS[F-169]C2-005	F-169	14.00		6.60	
01-F34-SS[F-170]C2-005	F-170	3.10		5.50	J
01-F34-SS[F-171]C2-005	F-171	3.00		29.00	J
01-F24-SS[F-172]C2-005	F-172	3.60		2.00	
01-F24-SS[F-173]C2-005	F-173	3.30		2.50	
01-F24-SS[F-174]C2-005	F-174	4.40		3.60	
01-F24-SS[F-175]C2-005	F-175	2.50		1.90	U

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F24-SS[F-176]C2-005	F-176	3.70		4.00	
01-F10-SS[F-177]C2-005	F-177	2.40		4.50	
01-F10-SS[F-178]C2-005	F-178	11.00		98.00	
01-F10-SS[F-179]C2-005	F-179	5.50		89.00	
01-F10-SS[F-180]C2-005	F-180	10.00		60.00	
01-F10-SS[F-181]C2-005	F-181	12.00		16.00	
01-F10-SS[F-182]C2-005	F-182	4.60		18.00	
01-F37-SS[F-183]C2-005	F-183	8.60		9.00	
01-F37-SS[F-184]C2-005	F-184	13.00		10.00	
01-F37-SS[F-185]C2-005	F-185	26.00		9.90	
01-F37-SS[F-186]C2-005	F-186	8.60		14.00	
01-F37-SS[F-187]C2-005	F-187	3.60		3.90	
01-F37-SS[F-188]C2-005	F-188	13.00		62.00	
01-F37-SS[F-189]C2-005-DAVG	F-189	4.50		2.95	
01-F37-SS[F-191]C2-005	F-191	4.70		5.50	
01-F37-SS[F-192]C2-005	F-192	6.90		5.20	
01-F36-SS[F-193]C2-005	F-193	25.00		16.00	
01-F36-SS[F-194]C2-005	F-194	5.00		8.50	
01-F36-SS[F-195]C2-005	F-195	5.10		7.30	
01-F36-SS[F-196]C2-005	F-196	4.00		5.70	
01-F36-SS[F-197]C2-005	F-197	4.80		6.00	
01-F29-SS[F-199]C2-005	F-199	6.00		10.00	
01-F29-SS[F-200]C2-005	F-200	9.20		20.00	
01-F29-SS[F-201]C2-005	F-201	4.30		74.00	
01-F29-SS[F-202]C2-005	F-202	3.90		12.00	
01-F29-SS[F-203]C2-005	F-203	4.10		11.00	
01-F29-SS[F-204]C2-005	F-204	4.70		25.00	
02-F29-SS[F-205-2]C2-030	F-205-2	3.90		13.00	
01-F29-SS[F-206]C2-005	F-206	3.80		6.70	
01-F29-SS[F-207]C2-005	F-207	17.00		53.00	
01-F29-SS[F-208]C2-005	F-208	5.20		24.00	
01-F29-SS[F-209]C2-005	F-209	8.10		33.00	
01-F29-SS[F-210]C2-005	F-210	9.50		51.00	
01-F16-SS[F-211]C2-005	F-211	3.80		20.00	
01-F16-SS[F-212]C2-005	F-212	5.00		40.00	
01-F16-SS[F-213]C2-005	F-213	4.70		35.00	
01-F16-SS[F-214]C2-005	F-214	3.50		20.00	
01-F16-SS[F-215]C2-005	F-215	4.20		45.00	
01-F16-SS[F-216]C2-005	F-216	25.00		69.00	
01-F16-SS[F-217]C2-005	F-217	33.00		60.00	

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F16-SS[F-218]C2-005	F-218	7.90		49.00	
01-F30-SS[F-220]C2-005	F-220	7.20		7.80	
01-F30-SS[F-221]C2-005	F-221	8.70		23.00	
01-F30-SS[F-222]C2-005	F-222	8.70		12.00	
01-F30-SS[F-223]C2-005	F-223	6.90		15.00	
01-F30-SS[F-224]C2-005	F-224	6.00		7.90	
01-F30-SS[F-225]C2-005	F-225	4.60		5.70	
01-F30-SS[F-226]C2-005	F-226	5.00		11.00	
02-F30-SS[F-227-2]C2-030	F-227-2	5.60		35.00	J
01-F30-SS[F-228]C2-005	F-228	4.80		12.00	
01-F30-SS[F-229]C2-005	F-229	7.40		9.30	
01-F31-SS[F-231]C2-005	F-231	8.40		7.00	
01-F31-SS[F-232]C2-005	F-232	5.40		6.00	
02-F31-SS[F-233-2]C2-030	F-233-2	5.70		54.00	J
01-F31-SS[F-234]C2-005	F-234	5.10		4.50	
01-F31-SS[F-235]C2-005	F-235	6.10		14.00	
01-F31-SS[F-236]C2-005	F-236	6.90		16.00	
01-F31-SS[F-237]C2-005	F-237	3.60		14.00	
01-F31-SS[F-238]C2-005	F-238	5.20		29.00	
01-F31-SS[F-239]C2-005	F-239	4.90		5.10	
01-F31-SS[F-240]C2-005	F-240	6.50		6.10	
01-F35-SS[F-241]C2-005	F-241	6.00		12.00	
01-F35-SS[F-242]C2-005	F-242	8.30		25.00	
01-F35-SS[F-243]C2-005	F-243	24.00		68.00	
03-F11-SS-[F-244-3]-C2-050	F-244-3	5.10		120.00	
03-F11-SS-[F-245-3]-C2-050	F-245-3	5.60		8.50	
02-F11-SS[F-246-2]C2-030	F-246-2	6.40	J	38.00	
01-F11-SS[F-247]C2-005	F-247	15.00		93.00	
02-F11-SS[F-248-2]C2-030	F-248-2	4.80	J	96.00	
03-F11-SS-[F-249-3]-C2-050	F-249-3	39.00		190.00	
03-F11-SS-[F-251-3]-C2-050	F-251-3	3.90		51.00	
03-F11-SS-[F-252-3]-C2-050	F-252-3	7.00		360.00	
02-F11-SS[F-253-2]C2-030	F-253-2	24.00	J	65.00	
03-F11-SS-[F-254-3]-C2-050	F-254-3	19.00		170.00	
02-F11-SS[F-255-2]C2-030	F-255-2	11.00	J	47.00	
02-F11-SS[F-256-2]C2-030	F-256-2	4.90		9.50	
02-F11-SS[F-257-2]C2-030	F-257-2	4.30		60.00	
02-F38-SS[F-259-2]C2-030	F-259-2	5.20		57.00	J
01-F09-SS[F-260]C2-005-DAVG	F-260	4.55		4.35	
01-F09-SS[F-262]C2-005	F-262	3.70		4.40	

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F09-SS[F-263]C2-005	F-263	5.90		7.70	
01-F09-SS[F-264]C2-005	F-264	4.00		3.60	
01-F09-SS[F-265]C2-005	F-265	4.00		17.00	
01-F09-SS[F-266]C2-005	F-266	6.00		5.70	
01-F32-SS[F-268]C2-005	F-268	3.60		3.90	
01-F32-SS[F-269]C2-005	F-269	26.00		32.00	
01-F32-SS[F-270]C2-005	F-270	4.50		4.30	
01-F32-SS[F-271]C2-005	F-271	2.80		2.50	
01-F32-SS[F-272]C2-005	F-272	4.40		5.60	
01-F33-SS[F-273]C2-005-DAVG	F-273	14.50		80.00	
01-F33-SS[F-275]C2-005	F-275	5.80		7.80	
01-F33-SS[F-276]C2-005	F-276	20.00		45.00	
01-F33-SS[F-277]C2-005	F-277	4.70		3.00	
01-F33-SS[F-278]C2-005	F-278	6.50		4.00	
01-F33-SS[F-279]C2-005	F-279	8.60		12.00	
01-F33-SS[F-280]C2-005	F-280	4.90		5.10	
01-F20-SS[F-283]-C2-005	F-283	4.10		5.30	
01-F20-SS[F-284]-C2-005-DAVG	F-284	5.70		5.80	
01-F20-SS[F-286]-C2-005	F-286	4.10		4.30	
01-F20-SS[F-287]-C2-005	F-287	3.70		4.30	
01-F20-SS[F-288]-C2-005	F-288	4.80		7.30	
01-F20-SS[F-289]-C2-005	F-289	4.40		5.20	
01-F20-SS[F-290]-C2-005	F-290	9.60		14.00	
01-F20-SS[F-291]-C2-005	F-291	5.90		18.00	
01-F20-SS[F-292]-C2-005	F-292	13.00		27.00	
01-F20-SS-[F-295]-C3-005-DAVG	F-295	7.15		28.50	
02-F20-SS-[F-296-2]C2-030	F-296-2	7.90		7.60	
01-F20-SS-[F-297]-C2-005	F-297	5.00		34.00	
01-F20-SS-[F-298]-C2-005	F-298	6.90		21.00	
01-F20-SS-[F-299]-C2-005	F-299	25.00		29.00	
01-F20-SS-[F-300]-C2-005	F-300	15.00		11.00	
01-F34-SS-[F-301]-C2-005	F-301	5.80		5.00	
01-F34-SS-[F-302]-C2-005	F-302	6.20		14.00	
01-F34-SS-[F-303]-C2-005	F-303	6.60		14.00	
01-F21-SS-[F-304]-C2-005	F-304	9.10		70.00	
01-F21-SS-[F-305]-C2-005	F-305	5.80		30.00	
02-F21-SS-[F-306-2]C2-030	F-306-2	5.10		2.80	
01-F18-SS-[F-308]-C2-020	F-308	4.80		4.60	
01-F18-SS-[F-309]-C2-020	F-309	5.30		3.90	
01-F18-SS-[F-310]-C2-020	F-310	5.60		4.30	

Table A-1 – Soil Verification Sample Results for Foundation Areas

Sample ID	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-F18-SS-[F-311]-C2-020	F-311	4.70		4.90	
01-F18-SS-[F-312]-C2-020	F-312	15.00		2.00	
01-F18-SS-[F-313]-C2-020	F-313	4.00		3.50	
01-F18-SS-[F-314]-C2-020	F-314	3.50		2.70	
01-F18-SS-[F-315]-C2-020	F-315	5.10		4.70	
01-F18-SS-[F-316]-C2-020	F-316	7.50		31.00	
01-F18-SS-[F-317]-C2-020	F-317	5.70		17.00	
01-F18-SS-[F-318]-C2-020	F-318	4.80		13.00	
01-F18-SS-[F-320]-C2-020	F-320	4.70		32.00	
01-F18-SS-[F-321]-C2-020	F-321	5.40		29.00	
01-F18-SS-[F-322]-C2-020	F-322	53.00		7.10	
01-F18-SS-[F-323]-C2-020	F-323	5.10		92.00	
01-F18-SS-[F-325]C2-015	F-325	4.80		2.80	
01-F18-FD-[F-328]-C2-030-DAVG	F-328	4.00		3.25	

Notes:
J = Estimated

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-01]C2-005	NGRR-01	4.1		6.4	
01-N01-SS[NGRR-02]C2-005	NGRR-02	2.4		3.1	
01-N01-SS[NGRR-03]C2-005	NGRR-03	3.3		3.1	
01-N01-SS[NGRR-04]C2-005	NGRR-04	5.4		5	
01-N01-SS[NGRR-05]C2-005	NGRR-05	6.1		3.2	
01-N01-SS[NGRR-06]C2-005	NGRR-06	2.9		2.9	
02-N01-SS[NGRR-07-2]C2-025-DAVG	NGRR-07-2	4.55		21.5	
01-N01-SS[NGRR-09]C2-005	NGRR-09	33		11	
01-N01-SS[NGRR-101]C2-005	NGRR-101	6.5		5.8	
01-N01-SS[NGRR-102]C2-005	NGRR-102	3.1		76	
01-N01-SS[NGRR-103]C2-005-DAVG	NGRR-103	6.4		8.65	
01-N01-SS[NGRR-105]C2-005	NGRR-105	4.3		4.4	
01-N01-SS[NGRR-106]C2-005	NGRR-106	4.3		3.6	
01-N01-SS[NGRR-107]C2-005	NGRR-107	5		14	
01-N01-SS[NGRR-108]C2-005	NGRR-108	5.3		6.1	
01-N01-SS[NGRR-109]C2-005	NGRR-109	9.3		18	
01-N01-SS[NGRR-110]C2-005	NGRR-110	10		24	
01-N01-SS[NGRR-111]C2-005	NGRR-111	5.7		3.7	
01-N01-SS[NGRR-112]C2-005	NGRR-112	6.9		5.8	
02-N01-SS[NGRR-11-2]C2-025	NGRR-11-2	2.8		2.7	
01-N01-SS[NGRR-113]C2-005	NGRR-113	55		26	
01-N01-SS[NGRR-114]C2-005	NGRR-114	13		29	
01-N01-SS[NGRR-115]C2-005	NGRR-115	12		5.2	
01-N01-SS[NGRR-116]C2-005	NGRR-116	19		9	
01-N01-SS[NGRR-117]C2-005	NGRR-117	7.6		3.7	
01-N01-SS[NGRR-118]C2-005	NGRR-118	6.9		4.1	
01-N01-SS[NGRR-120]C2-005	NGRR-120	13		19	
01-N01-SS[NGRR-121]C2-005	NGRR-121	4.3		3.9	
01-N01-SS[NGRR-122]C2-005	NGRR-122	5.7		8.1	
02-N01-SS[NGRR-12-2]C2-025	NGRR-12-2	5.1		3.2	
01-N01-SS[NGRR-123]C2-005	NGRR-123	3.8		3.4	
01-N01-SS[NGRR-124]C2-005	NGRR-124	10		6.6	
02-N01-SS[NGRR-125-2]C2-025-DAVG	NGRR-125-2	5.3		14.5	
01-N01-SS[NGRR-127]C2-005	NGRR-127	10		6.3	
01-N01-SS[NGRR-128]C2-005	NGRR-128	12		4.8	
01-N01-SS[NGRR-129]C2-005	NGRR-129	7.7		3.5	
01-N01-SS[NGRR-130]C2-005	NGRR-130	7		4.3	
01-N01-SS[NGRR-131]C2-005	NGRR-131	7.3		6.5	
02-N01-SS[NGRR-13-2]C2-025	NGRR-13-2	4.6		3.6	
02-N01-SS[NGRR-132-2]C2-025	NGRR-132-2	3.9		9.9	J

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-133]C2-005	NGRR-133	4.4		10	
01-N01-SS[NGRR-134]C2-005	NGRR-134	21		19	
01-N01-SS[NGRR-135]C2-005	NGRR-135	3.9		3.3	
01-N01-SS[NGRR-136]C2-005	NGRR-136	24		14	
01-N01-SS[NGRR-138]C2-005	NGRR-138	4.8		9.4	
01-N01-SS[NGRR-139]C2-005	NGRR-139	5.4		5.3	
01-N01-SS[NGRR-14]C2-005-DAVG	NGRR-14	4.5		6.95	
01-N01-SS[NGRR-140]C2-005	NGRR-140	18		16	
01-N01-SS[NGRR-141]C2-005	NGRR-141	24		28	
01-N01-SS[NGRR-142]C2-005	NGRR-142	13		15	
01-N01-SS[NGRR-143]C2-005	NGRR-143	16		5.1	
01-N01-SS[NGRR-144]C2-005	NGRR-144	11		8.8	
03-N01-SS-[NGRR-145-3]-C2-050	NGRR-145-3	6		5.5	
01-N01-SS[NGRR-146]C2-005	NGRR-146	28		12	
01-N01-SS[NGRR-148]C2-005	NGRR-148	13		8.2	
01-N01-SS[NGRR-149]C2-005	NGRR-149	7.3		4.6	
01-N01-SS[NGRR-150]C2-005	NGRR-150	5.8		3.4	
01-N01-SS[NGRR-151]C2-005	NGRR-151	5.1		2.8	
01-N01-SS[NGRR-152]C2-005	NGRR-152	3.6		2.1	U
01-N01-SS[NGRR-153]C2-005-DAVG	NGRR-153	3.5		2.25	
02-N01-SS[NGRR-156-2]C2-025	NGRR-156-2	5.3		2	
01-N01-SS[NGRR-157]C2-005	NGRR-157	6.4		6.8	
01-N01-SS[NGRR-158]C2-005	NGRR-158	16		17	
01-N01-SS[NGRR-159]C2-005	NGRR-159	10		3.9	
01-N01-SS[NGRR-16]C2-005	NGRR-16	3.5		4.9	
01-N01-SS[NGRR-160]C2-005	NGRR-160	4.3		5	
01-N01-SS[NGRR-161]C2-005	NGRR-161	4.7		5.5	
01-N01-SS[NGRR-162]C2-005	NGRR-162	4.3		4.1	
01-N01-SS[NGRR-163]C2-005	NGRR-163	10		9	
01-N01-SS[NGRR-164]C2-005-DAVG	NGRR-164	10.5		54.5	
01-N01-SS[NGRR-166]C2-005	NGRR-166	5.7		8.5	
01-N01-SS[NGRR-167]C2-005	NGRR-167	17		17	
01-N01-SS[NGRR-168]C2-005	NGRR-168	7.7		13	
01-N01-SS[NGRR-169]C2-005	NGRR-169	4.5		6.1	
01-N01-SS[NGRR-17]C2-005	NGRR-17	2.9		31	
01-N01-SS[NGRR-170]C2-005	NGRR-170	5		6.1	
01-N01-SS[NGRR-171]C2-005	NGRR-171	21		6.1	
01-N01-SS[NGRR-172]C2-005	NGRR-172	6.4		7.6	
01-N01-SS[NGRR-173]C2-005	NGRR-173	5.6		3.1	
01-N01-SS[NGRR-174]C2-005	NGRR-174	3.5		2.2	U

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-175]C2-005	NGRR-175	15		3.2	
01-N01-SS[NGRR-176]C2-005	NGRR-176	4.6		2.7	
01-N01-SS[NGRR-178]C2-005	NGRR-178	3.5		37	
03-N01-SS-[NGRR-179-3]-C2-050	NGRR-179-3	4.8		87	
01-N01-SS[NGRR-180]C2-005	NGRR-180	18		9.9	
01-N01-SS[NGRR-181]C2-005	NGRR-181	10		7.6	
01-N01-SS[NGRR-182]C2-005	NGRR-182	23		11	
01-N01-SS[NGRR-183]C2-005	NGRR-183	10		13	
01-N01-SS[NGRR-184]C2-005	NGRR-184	5.2		13	
01-N01-SS[NGRR-185]C2-005	NGRR-185	4.7		5.7	
01-N01-SS[NGRR-186]C2-005	NGRR-186	6.2		8	
01-N01-SS[NGRR-187]C2-005-DAVG	NGRR-187	37.5		11.5	
01-N01-SS[NGRR-189]C2-005	NGRR-189	26		21	
01-N01-SS[NGRR-19]C2-005-DAVG	NGRR-19	5.1		3.05	
01-N01-SS[NGRR-190]C2-005	NGRR-190	13		9.2	
01-N01-SS[NGRR-191]C2-005	NGRR-191	15		8.8	
01-N01-SS[NGRR-192]C2-005	NGRR-192	31		17	
01-N01-SS[NGRR-193]C2-005-DAVG	NGRR-193	11		59	
01-N01-SS[NGRR-195]C2-005	NGRR-195	18		53	
02-N01-SS[NGRR-196-2]C2-025	NGRR-196-2	16		81	
02-N01-SS[NGRR-197-2]C2-025	NGRR-197-2	5.1		10	
01-N01-SS[NGRR-198]C2-005	NGRR-198	13		30	
01-N01-SS[NGRR-199]C2-005	NGRR-199	4.6		7.3	
01-N01-SS[NGRR-200]C2-005	NGRR-200	5.2		55	
01-N01-SS[NGRR-201]C2-005	NGRR-201	5.3		14	
01-N01-SS[NGRR-202]C2-005	NGRR-202	6.3		24	
02-N01-SS[NGRR-203-2]C2-025	NGRR-203-2	16		37	
01-N01-SS[NGRR-204]C2-005	NGRR-204	11		55	
01-N01-SS[NGRR-205]C2-005	NGRR-205	5.6		36	
01-N01-SS[NGRR-206]C2-005	NGRR-206	4.6		9.2	
01-N01-SS[NGRR-207]C2-005	NGRR-207	6		51	
01-N01-SS[NGRR-209]C2-005	NGRR-209	8		7.5	
01-N01-SS[NGRR-21]C2-005	NGRR-21	4.2		3.5	
01-N01-SS[NGRR-210]C2-005	NGRR-210	11		9.4	
01-N01-SS[NGRR-211]C2-005	NGRR-211	7.7		4.1	
01-N01-SS[NGRR-212]C2-005	NGRR-212	5		3.6	
01-N01-SS[NGRR-213]C2-005	NGRR-213	4.9		3.3	
01-N01-SS[NGRR-214]C2-005	NGRR-214	38		11	
01-N01-SS[NGRR-215]C2-005	NGRR-215	55		4.2	
01-N01-SS[NGRR-216]C2-005	NGRR-216	7.2		4.8	

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-217]C2-005	NGRR-217	5.2		4.8	
01-N01-SS[NGRR-218]C2-005	NGRR-218	50		66	
01-N01-SS[NGRR-219]C2-005	NGRR-219	7.4		6.2	
01-N01-SS[NGRR-22]C2-005	NGRR-22	6.5		4.3	
01-N01-SS[NGRR-220]C2-005	NGRR-220	9.8		6.7	
01-N01-SS[NGRR-221]C2-005	NGRR-221	9.1		5.4	
01-N01-SS[NGRR-222]C2-005	NGRR-222	14		5.3	
01-N01-SS[NGRR-223]C2-005-DAVG	NGRR-223	6.3		5.8	
01-N01-SS[NGRR-225]C2-005	NGRR-225	5.6		5.5	
01-N01-SS[NGRR-226]C2-005	NGRR-226	18		25	
01-N01-SS[NGRR-227]C2-005	NGRR-227	4.9		6.2	
01-N01-SS[NGRR-228]C2-005	NGRR-228	5		4.2	
01-N01-SS[NGRR-229]C2-005	NGRR-229	4.9		4.4	
01-N01-SS[NGRR-23]C2-005	NGRR-23	4.1		5.1	
01-N01-SS[NGRR-230]C2-005	NGRR-230	16		9.4	
01-N01-SS[NGRR-231]C2-005	NGRR-231	6.5		25	
01-N01-SS[NGRR-232]C2-005	NGRR-232	6		4.9	
01-N01-SS[NGRR-233]C2-005	NGRR-233	6.4		6	
01-N01-SS[NGRR-234]C2-005	NGRR-234	5.1		4.8	
01-N01-SS[NGRR-235]C2-005-DAVG	NGRR-235	6.5		7	
01-N01-SS[NGRR-237]C2-005	NGRR-237	4.8		6.1	
01-N01-SS[NGRR-238]C2-005	NGRR-238	6		7.8	
01-N01-SS[NGRR-239]C2-005	NGRR-239	4.6		5.4	
01-N01-SS[NGRR-24]C2-005	NGRR-24	4.9		7.5	
01-N01-SS[NGRR-240]C2-005	NGRR-240	11		13	
01-N01-SS[NGRR-241]C2-005	NGRR-241	13		8.3	
01-N01-SS[NGRR-242]C2-005	NGRR-242	3.9		5.2	
01-N01-SS[NGRR-243]C2-005	NGRR-243	5.9		4.8	
01-N01-SS[NGRR-245]C2-005-DAVG	NGRR-245	8.95		9.5	
01-N01-SS[NGRR-247]C2-005	NGRR-247	9.8		8.2	
01-N01-SS[NGRR-248]C2-005	NGRR-248	7.8		11	
01-N01-SS[NGRR-249]C2-005	NGRR-249	12		16	
01-N01-SS[NGRR-25]C2-005	NGRR-25	5.8		10	
01-N01-SS[NGRR-250]C2-005	NGRR-250	7.9		6.6	
01-N01-SS[NGRR-251]C2-005	NGRR-251	6.8		4.8	
01-N01-SS[NGRR-252]C2-005	NGRR-252	9		6.1	
01-N01-SS[NGRR-253]C2-005	NGRR-253	7.8		4.3	
01-N01-SS[NGRR-254]C2-005	NGRR-254	6.3		5	
01-N01-SS[NGRR-255]C2-005	NGRR-255	17		4.8	
01-N01-SS[NGRR-256]C2-005	NGRR-256	9.6		4.8	

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-258]C2-005	NGRR-258	6.8		5.7	
01-N01-SS[NGRR-259]C2-005	NGRR-259	10		5.2	
01-N01-SS[NGRR-26]C2-005	NGRR-26	19		6.4	
01-N01-SS[NGRR-260]C2-005	NGRR-260	6.8		6.6	
01-N01-SS[NGRR-261]C2-005-DAVG	NGRR-261	7.05		5.95	
01-N01-SS[NGRR-263]C2-005	NGRR-263	7.5		4.5	
01-N01-SS[NGRR-264]C2-005	NGRR-264	9.5		6.2	
01-N01-SS[NGRR-265]C2-005	NGRR-265	4		4.1	
01-N01-SS[NGRR-266]C2-005	NGRR-266	6.7		5.8	
01-N01-SS[NGRR-267]C2-005	NGRR-267	8.9		8	
01-N01-SS[NGRR-268]C2-005	NGRR-268	9.5		6.8	
01-N01-SS[NGRR-269]C2-005	NGRR-269	6.7		7	
01-N01-SS[NGRR-270]C2-005	NGRR-270	8.2		9.1	
01-N01-SS[NGRR-271]C2-005	NGRR-271	10		7.8	
01-N01-SS[NGRR-272]C2-005	NGRR-272	11		6.6	
02-N01-SS[NGRR-27-2]C2-025	NGRR-27-2	31	J	14	
01-N01-SS[NGRR-273]C2-005	NGRR-273	8.9		7.9	
01-N01-SS[NGRR-274]C2-005	NGRR-274	8.5		7.9	
01-N01-SS[NGRR-275]C2-005	NGRR-275	19		22	
02-N01-SS[NGRR-276-2]C2-025	NGRR-276-2	7.2		97	
01-N01-SS[NGRR-277]C2-005	NGRR-277	20		15	
01-N01-SS[NGRR-278]C2-005	NGRR-278	34		110	
02-N01-SS[NGRR-279-2]C2-025-DAVG	NGRR-279-2	12.5		26.5	
02-N01-SS[NGRR-281-2]C2-025	NGRR-281-2	35		40	J
02-N01-SS[NGRR-282-2]C2-025	NGRR-282-2	7.3		29	J
01-N01-SS[NGRR-283]C2-005-DAVG	NGRR-283	11.5		19	
01-N01-SS[NGRR-285]C2-005	NGRR-285	7.3		8.8	
01-N01-SS[NGRR-286]C2-005	NGRR-286	7.1		6.7	
01-N01-SS[NGRR-287]C2-005	NGRR-287	6		5.1	
01-N01-SS[NGRR-288]C2-005	NGRR-288	7.4		5.9	
01-N01-SS[NGRR-289]C2-005	NGRR-289	6.2		4.3	
01-N01-SS[NGRR-290]C2-005	NGRR-290	8.2		5.1	
01-N01-SS[NGRR-291]C2-005	NGRR-291	8.4		8.2	
01-N01-SS[NGRR-292]C2-005	NGRR-292	12		12	
02-N01-SS[NGRR-29-2]C2-025	NGRR-29-2	17	J	16	
01-N01-SS[NGRR-293]C2-005	NGRR-293	6.6		5.5	
01-N01-SS[NGRR-294]C2-005	NGRR-294	6.8		7.3	
01-N01-SS[NGRR-295]C2-005	NGRR-295	7.1		4.9	
01-N01-SS[NGRR-297]C2-005	NGRR-297	8.4		7.7	
01-N01-SS[NGRR-298]C2-005	NGRR-298	7.8		9.6	

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-299]C2-005	NGRR-299	18		26	
01-N01-SS[NGRR-300]C2-005	NGRR-300	5.9		55	
02-N01-SS[NGRR-301-2]C2-025-DAVG	NGRR-301-2	5.65		11.3	
02-N01-SS[NGRR-30-2]C2-025	NGRR-30-2	6	J	4.8	
01-N01-SS[NGRR-303]C2-005	NGRR-303	46		20	
01-N01-SS[NGRR-304]C2-005	NGRR-304	13		7.2	
01-N01-SS[NGRR-305]C2-005	NGRR-305	13		10	
01-N01-SS[NGRR-306]C2-005	NGRR-306	4.6		2.6	
01-N01-SS[NGRR-307]C2-005	NGRR-307	17		5.5	
01-N01-SS[NGRR-308]C2-005	NGRR-308	19		7.1	
01-N01-SS[NGRR-309]C2-005	NGRR-309	34		11	
01-N01-SS[NGRR-31]C2-005	NGRR-31	24		6.7	
01-N01-SS[NGRR-310]C2-005	NGRR-310	34		37	
01-N01-SS[NGRR-312]C2-005	NGRR-312	8		10	
01-N01-SS[NGRR-313]C2-005	NGRR-313	12		13	
01-N01-SS[NGRR-314]C2-005	NGRR-314	14		20	
01-N01-SS[NGRR-315]C2-005	NGRR-315	5.5		5.7	
01-N01-SS[NGRR-316]C2-005	NGRR-316	5.9		15	
01-N01-SS[NGRR-317]C2-005	NGRR-317	4.9		8.2	
01-N01-SS[NGRR-318]C2-005	NGRR-318	24		16	
01-N01-SS[NGRR-319]C2-005	NGRR-319	8.9		76	
01-N01-SS[NGRR-32]C2-005	NGRR-32	5.1		4.1	
01-N01-SS[NGRR-320]C2-005	NGRR-320	6.1		9.5	
01-N01-SS[NGRR-321]C2-005-DAVG	NGRR-321	42	U	21	U
01-N01-SS[NGRR-323]C2-005	NGRR-323	40	U	41	
01-N01-SS[NGRR-324]C2-005	NGRR-324	37	U	18	U
01-N01-SS[NGRR-325]C2-005	NGRR-325	36	U	18	U
01-N01-SS[NGRR-326]C2-005	NGRR-326	37	U	18	U
01-N01-SS[NGRR-327]C2-005	NGRR-327	36	U	18	U
01-N01-SS[NGRR-328]C2-005	NGRR-328	39	U	19	U
01-N01-SS[NGRR-329]C2-005	NGRR-329	37	U	19	U
01-N01-SS[NGRR-33]C2-005	NGRR-33	3.4		3.2	
01-N01-SS[NGRR-330]C2-005	NGRR-330	39	U	19	U
01-N01-SS[NGRR-331]C2-005	NGRR-331	35	U	18	U
01-N01-SS[NGRR-333]C2-005	NGRR-333	46	U	23	U
01-N01-SS[NGRR-334]C2-005	NGRR-334	42	U	21	U
01-N01-SS[NGRR-335]C2-005	NGRR-335	43	U	22	
01-N01-SS[NGRR-336]C2-005	NGRR-336	38	U	19	U
01-N01-SS[NGRR-337]C2-005	NGRR-337	39	U	19	U
01-N01-SS[NGRR-338]C2-005	NGRR-338	41	U	20	U

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-339]C2-005	NGRR-339	38	U	19	U
01-N01-SS[NGRR-34]C2-005	NGRR-34	4.5		7.9	
01-N01-SS[NGRR-340]C2-005	NGRR-340	39	U	19	U
01-N01-SS[NGRR-341]C2-005	NGRR-341	41	U	21	U
01-N01-SS[NGRR-342]C2-005-DAVG	NGRR-342	42	U	46	J
01-N01-SS[NGRR-344]C2-005	NGRR-344	43	U	21	UJ
01-N01-SS[NGRR-345]C2-005	NGRR-345	39	U	20	UJ
01-N01-SS[NGRR-346]C2-005	NGRR-346	41	U	21	UJ
01-N01-SS[NGRR-347]C2-005	NGRR-347	38	U	19	UJ
01-N01-SS[NGRR-348]C2-005	NGRR-348	41	U	20	UJ
01-N01-SS[NGRR-349]C2-005	NGRR-349	38	U	19	UJ
01-N01-SS[NGRR-35]C2-005	NGRR-35	17		9.4	
01-N01-SS[NGRR-350]C2-005	NGRR-350	40	U	20	UJ
01-N01-SS[NGRR-351]C2-005	NGRR-351	42	U	21	UJ
01-N01-SS[NGRR-352]C2-005-DAVG	NGRR-352	43	U	21	UJ
01-N01-SS[NGRR-354]C2-005	NGRR-354	43	U	21	UJ
01-N01-SS[NGRR-355]C2-005	NGRR-355	45	U	22	UJ
01-N01-SS[NGRR-356]C2-005	NGRR-356	42	U	21	UJ
01-N01-SS[NGRR-357]C2-005	NGRR-357	40	U	20	UJ
01-N01-SS[NGRR-358]C2-005	NGRR-358	37	U	18	UJ
01-N01-SS[NGRR-359]C2-005	NGRR-359	43	U	22	UJ
01-N01-SS[NGRR-36]C2-005-DAVG	NGRR-36	6		24.5	
01-N01-SS[NGRR-360]C2-005	NGRR-360	44	U	22	UJ
01-N01-SS[NGRR-361]C2-005	NGRR-361	40	U	20	UJ
01-N01-SS[NGRR-362]C2-005	NGRR-362	5.5		13	
01-N01-SS[NGRR-363]C2-005	NGRR-363	6.7		8.3	
01-N01-SS[NGRR-364]C2-005	NGRR-364	6		5.3	
01-N01-SS[NGRR-365]C2-005	NGRR-365	3.6		3.4	
01-N01-SS[NGRR-366]C2-005	NGRR-366	10		5.9	
01-N01-SS[NGRR-367]C2-005	NGRR-367	6		7.2	
01-N01-SS[NGRR-369]C2-005	NGRR-369	11		6.4	
01-N01-SS[NGRR-370]C2-005	NGRR-370	12		15	
01-N01-SS[NGRR-371]C2-005	NGRR-371	4.5		5.6	
01-N01-SS[NGRR-372]C2-005	NGRR-372	4.2		4.9	
01-N01-SS[NGRR-373]C2-005	NGRR-373	6.2		5.1	
01-N01-SS[NGRR-374]C2-005	NGRR-374	5.5		4	
01-N01-SS[NGRR-375]C2-005	NGRR-375	4.2		3.6	
01-N01-SS[NGRR-376]C2-005	NGRR-376	4.2		3.8	
01-N01-SS[NGRR-377]C2-005	NGRR-377	7.2		7.1	
01-N01-SS[NGRR-378]C2-005	NGRR-378	5.5		6.4	

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-379]C2-005	NGRR-379	5.8		5.1	
01-N01-SS[NGRR-38]C2-005	NGRR-38	3.3		4.1	
01-N01-SS[NGRR-380]C2-005	NGRR-380	3.1		3.4	
01-N01-SS[NGRR-381]C2-005	NGRR-381	2.5		2.7	
01-N01-SS[NGRR-382]C2-005	NGRR-382	3.5		2.7	
01-N01-SS[NGRR-383]C2-005-DAVG	NGRR-383	5.05		5.35	
01-N01-SS[NGRR-385]C2-005	NGRR-385	5.7		6.8	
01-N01-SS[NGRR-386]C2-005	NGRR-386	6		3.8	
01-N01-SS[NGRR-387]C2-005	NGRR-387	3.5		2.2	U
01-N01-SS[NGRR-388]C2-005	NGRR-388	6.6		6.2	
01-N01-SS[NGRR-389]C2-005	NGRR-389	8.6		7	
01-N01-SS[NGRR-39]C2-005	NGRR-39	4.7		5.4	
01-N01-SS[NGRR-390]C2-005	NGRR-390	5.9		3.7	
01-N01-SS[NGRR-391]C2-005	NGRR-391	7.1		3.4	
01-N01-SS[NGRR-392]C2-005	NGRR-392	7.9		4.3	
01-N01-SS[NGRR-393]C2-005	NGRR-393	3.6		62	
01-N01-SS[NGRR-395]C2-005	NGRR-395	4		4	
01-N01-SS[NGRR-396]C2-005	NGRR-396	3.4		3.6	
01-N01-SS[NGRR-397]C2-005	NGRR-397	7.8		17	
01-N01-SS[NGRR-398]C2-005	NGRR-398	3.3		3.1	
01-N01-SS[NGRR-399]C2-005	NGRR-399	13		15	
01-N01-SS[NGRR-40]C2-005	NGRR-40	7.3		6.8	
01-N01-SS[NGRR-400]C2-005	NGRR-400	3.3		4.5	
01-N01-SS[NGRR-401]C2-005	NGRR-401	4.5		2.7	
01-N01-SS[NGRR-402]C2-005	NGRR-402	10		8.3	
01-N01-SS[NGRR-403]C2-005	NGRR-403	8.4		9.3	
01-N01-SS[NGRR-404]C2-005	NGRR-404	8.7		6.8	
01-N01-SS[NGRR-405]C2-005	NGRR-405	7		6.1	
01-N01-SS[NGRR-406]C2-005	NGRR-406	6.5		9	
01-N01-SS[NGRR-407]C2-005	NGRR-407	9.8		16	
01-N01-SS[NGRR-408]C2-005	NGRR-408	13		15	
01-N01-SS[NGRR-409]C2-005	NGRR-409	10		11	
01-N01-SS[NGRR-41]C2-005	NGRR-41	4.4		3.9	
01-N01-SS[NGRR-410]C2-005	NGRR-410	14		18	
01-N01-SS[NGRR-411]C2-005-DAVG	NGRR-411	9.3		8.1	
01-N01-SS[NGRR-413]C2-005	NGRR-413	3		2	U
01-N01-SS[NGRR-414]C2-005	NGRR-414	10		8.2	
01-N01-SS[NGRR-415]C2-005	NGRR-415	6.6		3.9	
01-N01-SS[NGRR-416]C2-005	NGRR-416	7.7		7.7	
01-N01-SS[NGRR-417]C2-005	NGRR-417	11		11	

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-418]C2-005	NGRR-418	8.3		5.4	
01-N01-SS[NGRR-419]C2-005	NGRR-419	11		8.6	
01-N01-SS[NGRR-42]C2-005	NGRR-42	5.5		4	
01-N01-SS[NGRR-420]C2-005	NGRR-420	6.3		4	
01-N01-SS[NGRR-421]C2-005	NGRR-421	6.4		5	
01-N01-SS[NGRR-422]C2-005	NGRR-422	52		8.6	
01-N01-SS[NGRR-423]C2-005	NGRR-423	19		2.4	
01-N01-SS[NGRR-424]C2-005	NGRR-424	4.8		2.1	
01-N01-SS[NGRR-425]C2-005	NGRR-425	4.4		3	
01-N01-SS[NGRR-426]C2-005	NGRR-426	6.7		3.8	
01-N01-SS[NGRR-428]C2-005	NGRR-428	6.8		2.7	
01-N01-SS[NGRR-429]C2-005	NGRR-429	14		8.2	
01-N01-SS[NGRR-43]C2-005	NGRR-43	5.3		4.4	
01-N01-SS[NGRR-430]C2-005	NGRR-430	35		7.4	
01-N01-SS[NGRR-431]C2-005	NGRR-431	25		13	
02-N01-SS-[NGRR-432-2]-C2-030	NGRR-432-2	4.1		29	
01-N01-SS[NGRR-433]C2-005	NGRR-433	30		62	
01-N01-SS[NGRR-434]C2-005	NGRR-434	21		9.9	
01-N01-SS-[NGRR-436]-C2-020	NGRR-436	3.5		2.6	
01-N01-SS-[NGRR-437]-C2-020	NGRR-437	2.8		2.2	
01-N01-SS-[NGRR-439]C2-015	NGRR-439	5.4		3.7	
01-N01-SS[NGRR-44]C2-005	NGRR-44	4.2		4.6	
01-N01-SS-[NGRR-440]C2-015	NGRR-440	13		5.8	
01-N01-SS[NGRR-45]C2-005	NGRR-45	4.5		4.1	
01-N01-SS[NGRR-46]C2-005	NGRR-46	3.3		3.2	
01-N01-SS[NGRR-47]C2-005	NGRR-47	5		4.3	
01-N01-SS[NGRR-48]C2-005	NGRR-48	5		3.4	
01-N01-SS[NGRR-49]C2-005	NGRR-49	7.7		4.3	
01-N01-SS[NGRR-50]C2-005	NGRR-50	2.6		2.6	
01-N01-SS[NGRR-52]C2-005	NGRR-52	13		40	
01-N01-SS[NGRR-53]C2-005	NGRR-53	6.6		7.6	
01-N01-SS[NGRR-54]C2-005-DAVG	NGRR-54	5.85		6.65	
01-N01-SS[NGRR-56]C2-005	NGRR-56	4.3		3.5	
01-N01-SS[NGRR-57]C2-005	NGRR-57	16		3.7	
01-N01-SS[NGRR-58]C2-005	NGRR-58	2.9		2.6	
01-N01-SS[NGRR-59]C2-005	NGRR-59	3.6		3.5	
01-N01-SS[NGRR-60]C2-005	NGRR-60	2.4		2	
01-N01-SS[NGRR-62]C2-005	NGRR-62	21		6	J
01-N01-SS[NGRR-63]C2-005	NGRR-63	7.6		3.1	J
01-N01-SS[NGRR-64]C2-005	NGRR-64	2.8		1.8	UJ

Table A-2 – Soil Verification Sample Results for NGRR Areas South of the Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-N01-SS[NGRR-65]C2-005	NGRR-65	3.8		2.1	UJ
01-N01-SS[NGRR-66]C2-005	NGRR-66	12		5.3	J
01-N01-SS[NGRR-67]C2-005	NGRR-67	3.9		7.3	J
02-N01-SS[NGRR-69-2]C2-025	NGRR-69-2	14		5.4	
01-N01-SS[NGRR-70]C2-005	NGRR-70	6.5		2.8	J
01-N01-SS[NGRR-71]C2-005	NGRR-71	9.9		2	UJ
01-N01-SS[NGRR-72]C2-005	NGRR-72	11		2.6	J
01-N01-SS[NGRR-73]C2-005	NGRR-73	3.7		1.8	UJ
01-N01-SS[NGRR-74]C2-005-DAVG	NGRR-74	6.4		3.6	
01-N01-SS[NGRR-76]C2-005	NGRR-76	3.6		3.3	
01-N01-SS[NGRR-77]C2-005	NGRR-77	4.3		3.1	
01-N01-SS[NGRR-78]C2-005	NGRR-78	15		3.5	
01-N01-SS[NGRR-79]C2-005	NGRR-79	15		3.7	
01-N01-SS[NGRR-80]C2-005	NGRR-80	27		6	
02-N01-SS[NGRR-81-2]C2-025	NGRR-81-2	6.9		3.5	
01-N01-SS[NGRR-82]C2-005	NGRR-82	9.7		6.5	
01-N01-SS[NGRR-83]C2-005	NGRR-83	3		3.1	
01-N01-SS[NGRR-84]C2-005	NGRR-84	12		4.5	
01-N01-SS[NGRR-85]C2-005	NGRR-85	4.2		3.2	
01-N01-SS[NGRR-87]C2-005	NGRR-87	3.4		5.1	
01-N01-SS[NGRR-88]C2-005	NGRR-88	3.9		7.5	
01-N01-SS[NGRR-89]C2-005	NGRR-89	37		25	
01-N01-SS[NGRR-90]C2-005	NGRR-90	7.2		45	
01-N01-SS[NGRR-91]C2-005	NGRR-91	3.1		3.8	
01-N01-SS[NGRR-92]C2-005	NGRR-92	11		22	
01-N01-SS[NGRR-93]C2-005	NGRR-93	11		7.5	
01-N01-SS[NGRR-94]C2-005	NGRR-94	14		6.5	
01-N01-SS[NGRR-95]C2-005-DAVG	NGRR-95	3.05		5.15	
01-N01-SS[NGRR-97]C2-005	NGRR-97	3.4		5	
01-N01-SS[NGRR-98]C2-005	NGRR-98	5.3		36	
01-N01-SS[NGRR-99]C2-005	NGRR-99	2.9		4.9	
01-C011-SS-[R47C71]-D1-000	R47C71	89		24	

Notes:
J = Estimated
U = Not detected at detection limit indicated.
UJ = Not detected at estimated detection limit indicated.

Table A-3 – Soil Verification Sample Results for Sequalitchew Creek NGRR Arsenic and Lead Hot Spot Areas

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
02-OS02-SS[LR-68-0-02]C02-1.5	LR-68-0-02	98		210	
02-OS02-SS[LR-68-1275E-02]C02-1.5	LR-68-1275E-02	29		22	
02-OS02-SS[LR-68-1350E-02]C02-1.5	LR-68-1350E-02	40		9.1	
02-OS02-SS[LR-68-1575E-02]C02-1.5	LR-68-1575E-02	67		21	
02-OS02-SS[LR-68-525E-02]C02-1.5	LR-68-525E-02	85		190	
02-OS02-SS[LR-68-600E-02]C02-1.5	LR-68-600E-02	130		20	
02-OS02-SS[LR-68-75-02]C02-1.5	LR-68-75-02	99		16	

Table A-4 – Soil Characterization Sample Results for Arsenic and Lead Along Sequalitchew Creek

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-OS02-SS[LR-68-600E-TRANSECT]-C1-000	LR-68-600E-TRANSECT	20		1,700	
01-OS02-SS-[LR-68-1500W-TRANSECT]-C1-000	LR-68-1500W-TRANSECT	10		22	
01-OS02-SS-[LR-68-3600W-TRANSECT]-C1-000	LR-68-3600W-TRANSECT	27		38	
02-OS02-[LR-68-600E-2-TRANSECT]-D1-000	LR-68-600E-2-TRANSECT	33		2,900	
02-OS02-[LR-68-600E-3-TRANSECT]-D1-000	LR-68-600E-3-TRANSECT	22		360	
02-OS02-[LR-68-600E-4-TRANSECT]-D1-000	LR-68-600E-4-TRANSECT	19		260	
02-OS02-[LR-68-600E-5-TRANSECT]-D1-000	LR-68-600E-5-TRANSECT	16		430	
02-OS02-[LR-68-600E-6-TRANSECT]-D1-000	LR-68-600E-6-TRANSECT	19		10	

Table A-5 – Soil Verification Sample Results for Arsenic and Lead Hot Spot Areas in Area 38 and R71C85

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
Area 38					
01-C004-SS[38-VS-150]C2-2.00	38-VS-150	11		26	
01-C004-SS[38-VS-151]C2-2.00	38-VS-151	23		31	
01-C004-SS[38-VS-152]C2-2.00	38-VS-152	330		44	
01-C004-SS[38-VS-153]C2-2.00	38-VS-153	8.1		13	
Row 71, Column 85 Area					
02-C013-SS[R71C85-02]C2-1.0	R71C85-02	19		4	
02-C013-SS[R71C85-03]D1-000	R71C85-03	46		90	
02-C013-SS[R71C85-04]D1-000	R71C85-04	38		70	
02-C013-SS[R71C85-05]D1-000	R71C85-05	49		80	
02-C013-SS[R71C85-06]D1-000	R71C85-06	55		99	

Table A-6 – Soil Verification Sample Results for 2,4-DNT, 2,6-DNT, and 2,4,6-TNT Hot Spot Areas

Sample Number	Short ID	Analyte	Result (mg/kg)	Qualifier	Units
Area 10					
02-IN01-SS[10-VS-6]D2-5.0	10-VS-6	Dinitrotoluene, 2,4-	0.046	U	mg/kg
02-IN01-SS[10-VS-6]D2-5.0	10-VS-6	Dinitrotoluene, 2,6-	0.046	U	mg/kg
02-IN01-SS[10-VS-6]D2-5.0	10-VS-6	Trinitrotoluene, 2,4,6-	1		mg/kg
02-IN01-SS[10-VS-6]D2-5.0	10-VS-6	DNT - Total	0.092	U	mg/kg
02-IN01-SS[10-VS-8]D2-5.0	10-VS-8	DNT - Total	0.088	U	mg/kg
02-IN01-SS[10-VS-8]D2-5.0	10-VS-8	Dinitrotoluene, 2,4-	0.044	U	mg/kg
02-IN01-SS[10-VS-8]D2-5.0	10-VS-8	Dinitrotoluene, 2,6-	0.044	U	mg/kg
02-IN01-SS[10-VS-8]D2-5.0	10-VS-8	Trinitrotoluene, 2,4,6-	0.073	J	mg/kg
02-IN01-SS[10-VS-9]D2-5.0-DAVG	10-VS-9	Dinitrotoluene, 2,6-	0.044	U	mg/kg
02-IN01-SS[10-VS-9]D2-5.0-DAVG	10-VS-9	Dinitrotoluene, 2,4-	0.044	U	mg/kg
02-IN01-SS[10-VS-9]D2-5.0-DAVG	10-VS-9	Trinitrotoluene, 2,4,6-	0.13		mg/kg
02-IN01-SS[10-VS-9]D2-5.0-DAVG	10-VS-9	DNT - Total	0.088	U	mg/kg
03-IN01-SS-[10-VS-11]-C2-100	10-VS-11	DNT - Total	0.094	U	mg/kg
03-IN01-SS-[10-VS-11]-C2-100	10-VS-11	Dinitrotoluene, 2,4-	0.047	U	mg/kg
03-IN01-SS-[10-VS-11]-C2-100	10-VS-11	Dinitrotoluene, 2,6-	0.047	U	mg/kg
03-IN01-SS-[10-VS-11]-C2-100	10-VS-11	Trinitrotoluene, 2,4,6-	0.2		mg/kg
03-IN01-SS-[10-VS-12]-C2-050	10-VS-12	Trinitrotoluene, 2,4,6-	0.048	U	mg/kg
03-IN01-SS-[10-VS-12]-C2-050	10-VS-12	DNT - Total	0.096	U	mg/kg
03-IN01-SS-[10-VS-12]-C2-050	10-VS-12	Dinitrotoluene, 2,4-	0.048	U	mg/kg
03-IN01-SS-[10-VS-12]-C2-050	10-VS-12	Dinitrotoluene, 2,6-	0.048	U	mg/kg
Area 18					
02-C-SS-[18-TR-18N,S-1]-C2-010	18-TR-18N,S-1	Trinitrotoluene, 2,4,6-	0.045	U	mg/kg
02-C-SS-[18-TR-18N,S-1]-C2-010	18-TR-18N,S-1	Dinitrotoluene, 2,6-	0.045	U	mg/kg
02-C-SS-[18-TR-18N,S-1]-C2-010	18-TR-18N,S-1	Dinitrotoluene, 2,4-	0.023	J	mg/kg
02-C-SS-[18-TR-18N,S-1]-C2-010	18-TR-18N,S-1	DNT - Total	0.046		mg/kg

Notes:
The Site-specific cleanup levels for Total DNT (i.e., 2,4-DNT + 2,6-DNT) and TNT are 3.0 and 1.75, respectively.
U = Not detected at the detection limit indicated.

Table A-7 – Soil Verification Sample Results for Topsoil Laydown Areas

Sample Number	Short ID	Arsenic (mg/kg)	Qualifier	Lead (mg/kg)	Qualifier
01-TS03-SS-[R23C09]-D1-015	R23C09	7		17	
01-TS03-SS-[R24C08]-D1-015	R24C08	5.8		8.8	
01-TS03-SS-[R24C09]-D1-015	R24C09	10		9.2	
01-TS03-SS-[R24C10]-D1-015	R24C10	10		28	
01-TS03-SS-[R25C08]-D1-015	R25C08	9.5		21	
01-TS03-SS-[R25C09]-D1-015	R25C09	8.9		96	
01-TS03-SS-[R25C10]-D1-015	R25C10	4.8		12	
02-TS04-SS-[R34C15-2]-D2-030	R34C15-2	8.2		5.8	
01-TS04-SS[R35C14]-D1-015	R35C14	33		19	
01-TS04-SS[R35C15]-D1-015	R35C15	10		9.5	
01-TS04-SS[R35C16]-D1-015	R35C16	8.1		15	
01-TS04-SS[R36C16]-D1-015	R36C16	19		31	
01-TS04-SS[R37C17]-D1-015	R37C17	16		22	

Appendix B – Laboratory Analytical Data Validation Results

(Prepared by URS, Inc.)

Summary
The soil sample analytical data reviewed for the 2001 Interim Corrective Actions at the Former DuPont Works Site in DuPont, Washington are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan.[1] The data may be used to assess analyte concentrations with the stated qualifications.

Introduction
This section presents a quality control (QC) review of data generated from collection and analysis of samples for the 2001 Interim Corrective Actions at the former DuPont Works Site in Dupont, Washington, from May 7, 2001 through September 19, 2001. Samples were submitted to Sound Analytical Services, Inc. (SAS) located in Tacoma, Washington for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Surrogate recoveries
- Matrix spike / blank spike (MS / BS) recoveries
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992. (Management Plan)
- Work Plan, Interim Source Removal Actions: Impacted Foundations and Narrow Gauge Railroad Beds at the Former DuPont Works Site, Dupont, Washington, Pioneer Technologies Corporation, West Shore Corporation, NW, December 6, 2000.
- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- National Functional Guidelines for Organic Data Review, EPA, February 1994.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data were compared to criteria referenced in the Management Plan. The samples were analyzed for one or more of the following chemicals by the analytical methods shown:

- Metals (Arsenic, Lead and/or 23 metal target analyte list) EPA 6000/7000 series
- Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene and 2,4,6-Trinitrotoluene) EPA 8330
- Diesel-range and motor oil-range total petroleum hydrocarbons (TPH) NWTPH-Dx

Sample Case
The sample data groups (SDGs) presented in Table B-1 were included in this data review.

Laboratory Report and Reporting of Required Analyses
The laboratory reports included method blanks, surrogate recoveries (if appropriate), sample results, sample preparation logs, matrix spike results and matrix duplicate results. Blank spike data were reported for all organic analyses and were reported for metals only when matrix spike recovery data were outside of the control limits. Generally, the reports were adequate to evaluate the data quality given that blank spikes are not consistently reported. All sample analyses were reported as requested.

Chain of Custody and Holding Times

[1] Hart Crowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, WA.

Samples were maintained under chain of custody until arrival at the laboratory. With the exception of the samples collected on September 10, 2001 (SAS # 100780), samples were submitted to the laboratory on the day of sample collection. All sample bottles were received in good condition. All samples were digested or extracted and analyzed within the method-required holding times.

Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met.

Field blanks (rinse blanks) were collected to assess potential cross-contamination in the field. Forty-five (45) field blanks were collected and analyzed for arsenic and lead. Arsenic was detected in 2 of the field blanks at concentrations of 0.02 mg/L and 0.01 mg/L. These field blanks are associated with the analytical groups 98830 and 100052, respectively. Lead was detected in 15 field blanks at concentrations ranging from 0.01 mg/L to 0.11 mg/L. These field blanks are associated with the analytical groups 98976, 99001, 99474, 99620, 99660, 99700, 99729, 99996, 100020, 100052, 100171, 100198, 100330, 100606 and 100645. Concentrations of arsenic and lead detected in the soil samples associated with these field blanks typically were reported with significantly higher concentrations of the metals (i.e. greater than 10X the concentration in the field blank). Data qualifiers were not assigned to associated soil analytical data based on method or field blank results.

Surrogate Recoveries

Laboratory performance on individual samples analyzed for explosives and TPH was assessed by reviewing the recoveries of system monitoring compounds (surrogates). Surrogate recoveries for samples analyzed for explosives and TPH were acceptable and data qualifiers were not assigned.

Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS per analytical batch or one MS per 20 samples was met. In some cases, the MS was performed on samples unrelated to this Site. Thirty (30) SDGs contained MS analyses on samples unrelated to this Site. These SDGs are listed in the Laboratory Duplicates section of this report. Data qualifiers were not assigned based on results from MS analyses performed on samples unrelated to this Site. Blank spike (BS) analyses were used to assess the overall performance of the analytical system when matrix spike recoveries were not acceptable.

Arsenic and Lead by EPA 6010

The MS results were compared to the method control limits of 75 to 125%. The lead recovery (376%) and the arsenic recovery (51%) for the MS performed on sample 01-OS02-SS[LR-68-600E-TRANSECT]-C1-000 (SDG 100529) were outside of the control limits. Per data validation guidelines, when the concentration of the analyte in the parent sample is greater than 4X the spike level, data are not qualified based on the MS recovery. Lead results were not qualified due to the MS recovery in sample 01-OS02-SS[LR-68-600E-TRANSECT]-C1-000 based on the 4X rule. Results for arsenic in the samples in the same analytical batch as 01-OS02-SS[LR-68-600E-TRANSECT]-C1-000 (SDG 100529) were qualified as estimated and flagged “J” or “UJ” based on MS results.

The recovery of lead (44%) in the MS performed on sample 02-N01-SS[NGRR-145-2]C2-025 (SDG 100558) was below the control limits due to sample matrix interference. Results for lead for samples in the same analytical batch as sample 02-N01-SS[NGRR-145-2]C2-025 (SDG100558) were qualified as estimated and flagged “J” based on the MS results. The results for arsenic in SDG 100558 were not qualified.

Based on review of the sample preparation log sheets, blank spikes were prepared at the appropriate frequency. The results were reported only when MS recoveries were outside of control limits. The blank spike recoveries provided were all within the control limits of 80% to 120%. Data provided included sets of blank spike/blank spike duplicates for lead associated with samples from SDGs 100529 and 100558 and arsenic associated with samples from SDG 100529. Blank spike/blank spike duplicate data were also provided for chromium and nickel associated with samples from SDG 99002 and lead associated

with samples from SDG 100375, where the MS was performed on a non-project sample. Data qualifiers were not assigned to associated samples based on blank spike/blank spike duplicate results.

Explosives by EPA 8330

The recovery of 2,4,6-trinitrotoluene (2,4,6-TNT) in the MS (1,900 %) and the recoveries of 2,4-dinitrotoluene (2,4-DNT, 465%), 2,6-dinitrotoluene (2,6-DNT, 132%) and 2,4,6-TNT (200,000%) in the MSD performed on sample 03-IN01-SS[10-VS-5]D2-7.0 (SDG 99905) were outside of the laboratory control limits of 69–110% for 2,4,6-TNT, 78-105% for 2,4-DNT, and 68-108% for 2,6-DNT. The relative percent differences (RPDs) for 2,4,6-TNT (200%), 2,4-DNT (130%) and 2,6-DNT (21%) were greater than the RPD control limits of 9%, 13%, and 10% for 2,4,6-TNT, 2,4-DNT and 2,6-DNT, respectively. Recoveries of explosives in the blank spike/blank spike duplicate were acceptable. Results for 2,4,6-TNT, 2,4-DNT and 2,6-TNT for sample 03-IN01-SS[10-VS-5]D2-7.0 were qualified as estimated and assigned "J" or "UJ" flags based on MS/MSD results.

Laboratory Duplicates

Laboratory duplicate results were used to assess the precision of laboratory measurements. The laboratory duplicate results were compared to the project control limit for relative percent difference (RPD) of 35% when sample results were greater than or equal to five times the reporting limit. A control limit of plus or minus the reporting limit was used for evaluation of duplicate samples where one or both of the results are less than five times the reporting limit. The QC frequency requirement of one duplicate per analytical batch, or one duplicate per 20 samples was met. In some cases, the duplicate was performed on samples unrelated to this Site. Thirty (30) SDGs include samples or subsets of samples that are associated with duplicate analyses performed on samples unrelated to this Site (See Table B-2). Data qualifiers were not assigned to sample data based on duplicate analyses of non-project samples.

Arsenic and Lead by EPA 6010

A total of sixty-two samples were qualified as estimated based on the results of laboratory duplicate analyses. All qualified results for metals analysis are summarized in Table B-2. Of the samples qualified based on laboratory duplicates, 20 samples were qualified due to an RPD that is greater than 35% and 42 sample results were qualified due to a difference of greater than the reporting limit between a sample and its duplicate. Qualified data were assigned "J" flags if the sample result was reported as detected and "UJ" flags if reported as not detected.

Explosives by EPA 8330

Second column confirmation for detected compounds was performed on samples analyzed for explosives by EPA Method 8330. The RPDs of the results were evaluated by the laboratory and found to be greater than 40% for 2,4,6-TNT in samples 03-IN01-SS[10-VS-8]D2-5.0, 03-IN01-SS[10-VS-9]D2-5.0 and 03-IN01-SS[10-VS-10]D3-5.0, and for 2,4-DNT in sample 03-IN01-SS[10-VS-5]D2-7.0 (SDG 99905). Sample results were qualified as estimated and flagged with a "J" for 2,4,6-TNT in samples 03-IN01-SS[10-VS-8]D2-5.0, 03-IN01-SS[10-VS-9]D2-5.0 and 03-IN01-SS[10-VS-10]D3-5.0 and for 2,4-DNT in sample 03-IN01-SS[10-VS-5]D2-7.0.

Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples collected was met for metals and explosives analyses. Forty-nine (49) sets of field duplicate samples for metals analysis were collected, and one set of duplicate samples were collected for explosives. A field duplicate was not collected for diesel-range and motor oil-range TPH analysis. Tables B-3 and B-4 present the RPDs of detected compounds that were calculated for the duplicate pairs of soil samples analyzed for metals and explosives.

Reporting Limits

Reporting limits were reviewed to ensure that results reported meet project goals. The reporting limits are acceptable for the project needs. The data are summarized in Appendix A.

Arsenic and Lead by EPA 6010

The samples analyzed on August 23, 2001 were reported with elevated PQLs. This affects the samples collected on August 20, 2001 (SDG 100280) and a subset of samples collected August 21, 2001 (SDG 100308). The typical PQLs for lead and arsenic analyses performed on soil samples for this project were approximately 2 mg/kg for both metals. Samples analyzed on August 23, 2001 were reported with PQLs of approximately 20 mg/kg for lead and 40 mg/kg for arsenic. The soil screening level for lead and the Site-specific remediation level for arsenic (118 mg/kg and 60 mg/kg, respectively) are greater than the elevated PQLs reported for the August 23 analyses, therefore the elevated PQLs do not affect the use of these data for project objectives.

Explosives by EPA 8330

The result for 2,4-DNT reported by the laboratory for sample 18-TR-18N,S-1 (0.023 mg/kg) was below the reported PQL for 2,4-DNT (0.045 mg/kg). The laboratory assigned a "J" flag to the sample result, as they typically do when reporting below the PQL. The Corps of Engineers requires SAS to report all confirmed detections of explosives even if compounds are detected below the PQL.

Table B-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
97962 *	5/7/01
98654	6/6/01
98684	6/7/01
98762	6/12/01
98830	6/14/01
98881	6/18/01
98938	6/19/01
98976	6/20/01
99001	6/21/01
99002	6/21/01
99100	6/26/01
99114	6/27/01
99246	7/2/01
99277	7/3/01
99382	7/9/01
99452	7/11/01
99474	7/12/01
99583	7/17/01
99620	7/18/01
99660	7/19/01
99700	7/23/01
99729	7/24/01
99847	7/30/01
99881	7/31/01
99905	8/1/01
99931	8/2/01
99996	8/6/01
100020	8/7/01
100052	8/8/01
100088	8/9/01
100144	8/13/01
100171	8/14/01
100198	8/15/01
100234	8/16/01
100280	8/20/01
100308	8/21/01
100330	8/22/01
100375	8/23/01
100443	8/27/01
100481	8/28/01
100529	8/29/01
100558	8/30/01
100606	9/4/01
100759	9/4/01
100645	9/5/01
100780	9/10/01–9/12/01

Table B-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
100804	9/13/01
100855	9/17/01
100856	9/17/01
100921	9/19/01

* This data review includes only a subset of the samples included with this SDG.

Table B-2 – SDGs with MS and Laboratory Duplicate Analysis Performed on Non-Project Samples

98654*	99100*	99474	100052	100308	100558
98684	99114*	99905	100088	100330	100606
98938*	99246*	99660*	100171	100375	100645*
99001	99382*	99931	100198	100481*	100780*
99002	99452*	99996	100280*	100529	100804*

* Associated with water samples only

Table B-3 – Relative Percent Differences of Detected Metal Compounds

Sample ID	Date	Arsenic Result (mg/kg)	RPD (As) %	Lead Result (mg/kg)	RPD (Pb) %
01-F08-SS[F-01] C2-005	6-Jun-01	4.1	10.3	3.5	0.0
01-F08-SS[F-02] C3-005		3.7		3.5	
01-F08-SS[F-17] C2-005	6-Jun-01	2.9	12.9	2.8	15.4
01-F08-SS[F-18] C3-005		3.3		2.4	
01-N01-SS[NGRR-07]C2-005	7-Jun-01	130	7.4	16	31.6
01-N01-SS[NGRR-08]C3-005		140		22	
01-F01-SS[F-48]C2-005	14-Jun-01	4.4	14.7	14	44.4
01-F01-SS[F-49]C3-005		5.1		22	
01-F01-SS[F-83]C2-005	18-Jun-01	4.3	17.0	120	0.0
01-F01-SS[F-84]C3-005		5.1		120	
01-F03-SS[F-102]C2-005	20-Jun-01	8.3	42.3	30	55.4
01-F03-SS[F-103]C3-005		5.4		53	
01-F04-SS[F-116]C2-005	20-Jun-01	8.7	21.7	16	0.0
01-F04-SS[F-117]C3-005		7		16	
01-N01-SS[NGRR-14]C2-005	26-Jun-01	4.6	4.4	6.9	1.4
01-N01-SS[NGRR-15]C3-005		4.4		7	
01-N01-SS[NGRR-19]C2-005	2-Jul-01	3.8	51.0	3.2	9.8
01-N01-SS[NGRR-20]C3-005		6.4		2.9	
01-H404-SS[11]D1-005	3-Jul-01	6.1	1.6	33	12.9
01-H404-SS[12]D2-005		6.2		29	
01-N01-SS[NGRR-36]C2-005	11-Jul-01	6	0.0	25	4.1
01-N01-SS[NGRR-37]C3-005		6		24	
01-N01-SS[NGRR-54]C2-005	12-Jul-01	6.2	12.0	7.3	19.5
01-N01-SS[NGRR-55]C3-005		5.5		6	
01-N01-SS[NGRR-74]C2-005	18-Jul-01	7.5	34.4	4.1	27.8
01-N01-SS[NGRR-75]C3-005		5.3		3.1	
01-N01-SS[NGRR-95]C2-005	19-Jul-01	3.7	42.6	5	5.8
01-N01-SS[NGRR-96]C3-005		2.4		5.3	
01-N01-SS[NGRR-103]C2-005	23-Jul-01	6.1	9.4	9.8	26.6
01-N01-SS[NGRR-104]C3-005		6.7		7.5	
01-N01-SS[NGRR-125]C2-005	24-Jul-01	97	12.0	23	4.4
01-N01-SS[NGRR-126]C3-005		86		22	
01-F37-SS[F-189]C2-005	30-Jul-01	4.9	17.8	3.5	37.3
01-F37-SS[F-190]C3-005		4.1		2.4	
01-N01-SS[NGRR-153]C2-005	31-Jul-01	3.5	0.0	2.3	4.4
01-N01-SS[NGRR-154]C3-005		3.5		2.2	
01-N01-SS[NGRR-164]C2-005	2-Aug-01	11	9.5	63	31.2
01-N01-SS[NGRR-165]C3-005		10		46	
01-N01-SS[NGRR-187]C2-005	6-Aug-01	35	13.3	11	8.7
01-N01-SS[NGRR-188]C3-005		40		12	

Table B-3 – Relative Percent Differences of Detected Metal Compounds

Sample ID	Date	Arsenic Result (mg/kg)	RPD (As) %	Lead Result (mg/kg)	RPD (Pb) %
01-N01-SS[NGRR-193]C2-005	7-Aug-01	11	0.0	57	6.8
01-N01-SS[NGRR-194]C3-005		11		61	
01-N01-SS[NGRR-223]C2-005	8-Aug-01	6.6	9.5	5.6	6.9
01-N01-SS[NGRR-224]C3-005		6		6	
01-N01-SS[NGRR-235]C2-005	9-Aug-01	6.5	0.0	7.4	11.4
01-N01-SS[NGRR-236]C3-005		6.5		6.6	
01-N01-SS[NGRR-245]C2-005	13-Aug-01	8.6	7.8	10	10.5
01-N01-SS[NGRR-246]C3-005		9.3		9	
01-N01-SS[NGRR-261]C2-005	13-Aug-01	6.7	9.9	5.6	11.8
01-N01-SS[NGRR-262]C3-005		7.4		6.3	
01-N01-SS[NGRR-279]C2-005	14-Aug-01	140	19.4	79	20.5
01-N01-SS[NGRR-280]C3-005		170		97	
01-F11-SS[F-249]C2-005	14-Aug-01	20	4.9	2,500	0.0
01-F11-SS[F-250]C3-005		21		2,500	
01-N01-SS[NGRR-283]C2-005	15-Aug-01	12	8.7	20	10.5
01-N01-SS[NGRR-284]C3-005		11		18	
01-N01-SS[NGRR-301]C2-005	16-Aug-01	81	20.0	37	21.7
01-N01-SS[NGRR-302]C3-005		99		46	
01-N01-SS[NGRR-321]C2-005	20-Aug-01	42 U	NC	21 U	NC
01-N01-SS[NGRR-322]C3-005		41 U		21 U	
01-N01-SS[NGRR-342]C2-005	20-Aug-01	42 U	NC	46 J	NC
01-N01-SS[NGRR-343]C3-005		42 U		21 U	
01-N01-SS[NGRR-352]C2-005	21-Aug-01	40 U	NC	20 UJ	NC
01-N01-SS[NGRR-353]C3-005		43 U		21 UJ	
01-F09-SS[F-260]C2-005	22-Aug-01	4.4	6.6	5.2	39.1
01-F09-SS[F-261]C3-005		4.7		3.5	
01-N01-SS[NGRR-383]C2-005	23-Aug-01	5.2	5.9	5.5	5.6
01-N01-SS[NGRR-384]C3-005		4.9		5.2	
01-N01-SS[NGRR-411]C2-005	27-Aug-01	9.7	8.6	8.8	17.3
01-N01-SS[NGRR-412]C3-005		8.9		7.4	
01-F33-SS[F-273]C2-005	28-Aug-01	15	6.9	98	45.0
01-F33-SS[F-274]C3-005		14		62	
02-F02-SS[F-83-2]C2-030	28-Aug-01	4.8	28.6	89	15.8
02-F02-SS[F-84-2]C3-030		3.6		76	
02-F11-SS[F-249-2]C2-030	29-Aug-01	9.2 J	8.3	4,900	149.4
02-F11-SS[F-250-2]C3-030		10 J		710	
02-N01-SS[NGRR-07-2]C2-025	30-Aug-01	4.6	2.2	22 J	4.7
02-N01-SS[NGRR-08-2]C3-025		4.5		21 J	
02-N01-SS[NGRR-279-2]C2-025	30-Aug-01	14	24.0	34 J	56.6
02-N01-SS[NGRR-280-2]C3-025		11		19 J	
02-N01-SS[NGRR-125-2]C2-025	30-Aug-01	4.9	15.1	15 J	6.9

Table B-3 – Relative Percent Differences of Detected Metal Compounds

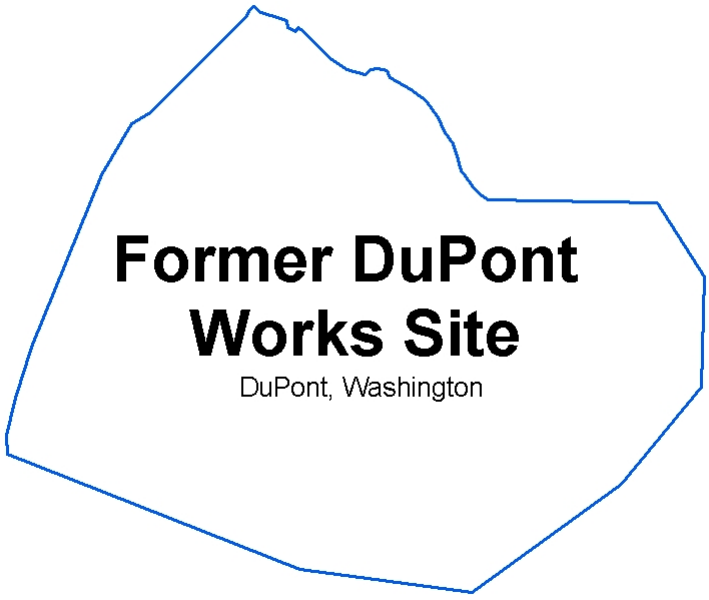
Sample ID	Date	Arsenic Result (mg/kg)	RPD (As) %	Lead Result (mg/kg)	RPD (Pb) %
02-N01-SS[NGRR-126-2]C3-025		5.7		14 J	
02-N01-SS[NGRR-301-2]C2-025	30-Aug-01	6	12.4	14 J	47.8
02-N01-SS[NGRR-302-2]C3-025		5.3		8.6 J	
01-F20-SS[F-284]-C2-005	4-Sep-01	4.9	28.1	5.8	0.0
01-F20-SS[F-285]-C3-005		6.5		5.8	
01-F20-SS-[F-294]-C2-005	5-Sep-01	6.8	9.8	25	24.6
01-F20-SS-[F-295]-C3-005		7.5		32	
03-F02-SS-[F-76-3]-C2-050	13-Sep-01	4.7	47.2	19	44.9
03-F02-FD-[F-84-3]-C3-050		7.6		30	
03-F02-SS-[F-77-3]-C2-050	13-Sep-01	10	152.9	20	50.0
03-F02-FD-[F-49-3]-C3-050		75		12	
04-F02-SS-[F-89-4]-C2-060	19-Sep-01	7.6	15.6	86	1.2
01-F02-FD-[F-326]-C3-000		6.5		87	
04-F02-SS-[F-90-4]-C2-060	19-Sep-01	6.7	5.8	270	47.9
01-F02-FD-[F-327]-C3-000		7.1		440	
02-F18-SS-[F-319-2]-C2-030	19-Sep-01	4.2	10.0	2.9	21.5
01-F18-FD-[F-328]-C3-030		3.8		3.6	

NC = Not Calculable

Table B-4 – Relative Percent Differences of Detected Explosive Compounds

Sample ID	Date	2,4,6-Trinitrotoluene Result (mg/kg)	RPD (Pb) %
03-IN01-SS[10-VS-9]D2-5.0	1-Aug-01	0.12 J	15.4
03-IN01-SS[10-VS-10]D3-5.0		0.14 J	

Perimeter Soil and Storm Water Runoff Overflow Pipeline Interim Corrective Action



Prepared for:

The Weyerhaeuser Company and E.I. duPont de Nemours and Company

Prepared by:

PIONEER Technologies Corporation
West Shore Corporation, NW

November 2002

Table of Contents

1 Introduction 1

2 Objectives 1

3 Summary of Activities 1
3.1 250 Foot Perimeter Soil Area 1
3.2 Future Storm Water Runoff Overflow Pipeline 2
3.3 Results 2

4 Conclusions 2

Attachments

Attachment A – Laboratory Analytical Data Validation Results 16

List of Tables

Table 1-1 – Verification Sample Results for Arsenic and Lead 2

List of Figures

Figure 1-1 – Former DuPont Works Site Vicinity Map 8
Figure 3-1 – Perimeter Soil Verification Sample Locations 9
Figure 3-2 – Perimeter Soil Verification Sample Locations 10
Figure 3-3 – Perimeter Soil Verification Sample Locations 11
Figure 3-4 – Perimeter Soil Verification Sample Locations 12
Figure 3-5 – Additional Perimeter Soil Excavation Verification Sample 13
Figure 3-6 – Storm Water Runoff Overflow Pipeline Verification Sample Locations 14
Figure 3-7 – Additional Pipeline Excavation Verification Sample Locations 15

1 Introduction

This Report presents the analytical results from post-excavation verification soil samples collected between June 24 and July 24, 2002 as part of an interim corrective action (ICA) conducted at the former DuPont Works Site (Site) within the Parcel One Consent Decree Boundary. The Site is located in the City of Dupont, Pierce County, Washington (see Figure 1-1). The ICA involved excavation of soil and verification sampling of the excavated areas. This ICA was conducted as allowed under the July 1991 Consent Decree signed by the Weyerhaeuser Company (Weyerhaeuser), E.I. duPont de Nemours and Company (DuPont), and the Washington State Department of Ecology (Ecology). The ICA included soil excavation and sampling in the following areas:

- 250 Foot Perimeter Soil Area (see Figures 3-1 through 3-5)
- Future Storm Water Runoff Overflow Pipeline (see Figures 3-6 and 3-7)

All work was performed under the direction of the Project's Management Team (MT). West Shore Corporation, NW (WSNW) oversaw the program on a day-to-day basis. PIONEER Technologies Corporation (PIONEER) performed the verification sampling, and managed the analytical data. Severn Trent Laboratories, Inc. (STL) served as the project laboratory. Ethix performed the data quality control review. Active Construction (ACTIVE) surveyed the excavation boundaries and sample locations and served as the remediation contractor. The program was initiated in June 2002 and was completed in July 2002.

2 Objectives

The objectives of this ICA was to:

1. Minimize any potential impacts of wind blown dust generated during the removal of Site soil to future residences that will be constructed in the near future, south of the Site (i.e., outside the consent decree boundary).

2. Ensure that the constituent concentrations in soil are in compliance with the Washington State Model Toxics Control Act (MTCA). The constituent concentrations in soil cannot exceed 60 mg/kg for arsenic and 118 mg/kg for lead, which are site-specific levels established by Ecology that are protective of human health and the environment.

3 Summary of Activities

The goal of this program was to remove 1 foot of soil and confirm that the resulting soil concentrations are below the Site-specific cleanup goals. Excavation activities were undertaken to remove 1 foot of soil at the following two locations:

3.1 250 Foot Perimeter Soil Area

Approximately 1 foot of soil was excavated within 250 feet of the southern Site consent decree boundary (see Figures 3-1 through 3-4). A discrete sample was then collected from each node on the 75-foot sampling grid from a depth of 0 to 6 inches. The verification samples were delivered, under chain of custody, to STL for analysis. On July 9, 2002 an additional foot of soil was removed at the sampling grid location R81C41 because the initial verification sample result (144 mg/kg) exceeded the cleanup goal for lead. The limit of the additional excavation was determined by going half way to the surrounding grid points. In other words, soil was excavated 37.5 feet in every direction from the sampling grid point which resulted in a 75-foot by 75-foot excavation. Figure 3-5 identifies where this additional excavation was undertaken and the associated post-excavation verification sample location.

3.2 Future Storm Water Runoff Overflow Pipeline

Approximately 1 foot of soil was excavated within an approximate 50-foot by 25-foot box surrounding each of the pipeline sample locations (see Figure 3-6). A 5-point composite verification sample was collected from the bottom of each excavation at a depth of 0 to 6 inches. On July 24, 2002 an additional foot of soil was removed from two sample locations (PL-8 [arsenic = 109 mg/kg] and PL-12 [arsenic = 80 mg/kg]) where the results of the first round of verification samples exceeded the cleanup goal for arsenic. The limit of the additional excavation was determined by excavating half way to the next sampling point. This resulted in excavations that were approximately 25 by 50 feet. Figure 3-7 identifies these locations. The verification samples were delivered, under chain of custody, to STL for analysis.

3.3 Results

The analytical results are presented in Table 3-1. These data were assessed for accuracy and precision, and no data were qualified indicating the absence of matrix interferences (see Attachment A).

4 Conclusions

A total of 184 samples were collected at the base of each excavation and the soils were analyzed using EPA Methods. The resulting concentrations are all well below the site-specific cleanup goals.

Table 1-1 – Verification Sample Results for Arsenic and Lead

Sample Number	Lead Result (1)	Qualifier	Arsenic Result (2)	Qualifier
Perimeter Soil Sample Results				
01-SS-[75-R67C7]-D1-050	3.9		3.06	
01-SS-[75-R68C10]-D1-050	15.1		14.6	
01-SS-[75-R68C8]-D1-050	5.75		6.32	
01-SS-[75-R68C9]-D1-050	8.37		7.46	
01-SS-[75-R69C10]-D1-050	16.6		7.8	
01-SS-[75-R69C11]-D1-050	3.98		2.65	
01-SS-[75-R69C12]-D1-050	6.77		3.56	
01-SS-[75-R69C7]-D1-050	4.81		3.98	
01-SS-[75-R69C8]-D1-050	4.79		2.5	
01-SS-[75-R69C9]-D1-050	4.73		3.54	
01-SS-[75-R70C10]-D1-050	5.14		5.27	
01-SS-[75-R70C11]-D1-050	4.48		2.96	
01-SS-[75-R70C12]-D1-050	4.3		4.02	
01-SS-[75-R70C13]-D1-050	52.5		21.1	
01-SS-[75-R70C14]-D1-050	7.51		5.71	
01-SS-[75-R70C15]-D1-050	3.92		3.59	
01-SS-[75-R70C7]-D1-050	12.5		30.2	
01-SS-[75-R70C8]-D1-050	4.77		2.75	
01-SS-[75-R70C9]-D1-050	3.78		3.04	
01-SS-[75-R71C10]-D1-050	2.36		2.1	
01-SS-[75-R71C11]-D1-050	4.64		3.19	
01-SS-[75-R71C12]-D1-050	4.31		2.76	
01-SS-[75-R71C13]-D1-050	4.14		5	
01-SS-[75-R71C14]-D1-050	5.68		4.53	
01-SS-[75-R71C15]-D1-050	4.33		2.71	
01-SS-[75-R71C16]-D1-050	9.03		7.77	
01-SS-[75-R71C17]-D1-050	17		7.34	
01-SS-[75-R71C9]-D1-050	4.32		2.92	
01-SS-[75-R72C12]-D1-050	2.88		2.31	
01-SS-[75-R72C13]-D1-050	3.33		2.41	
01-SS-[75-R72C14]-D1-050	3.14		1.81	
01-SS-[75-R72C15]-D1-050	3.67		1.82	
01-SS-[75-R72C16]-D1-050	7.68		13.4	
01-SS-[75-R72C17]-D1-050	5.99		3.34	
01-SS-[75-R72C18]-D1-050	3.08		2.45	
01-SS-[75-R72C19]-D1-050	8.7		6.14	
01-SS-[75-R72C20]-D1-050	5		4.98	
01-SS-[75-R73C14]-D1-050	5.37		3.03	
01-SS-[75-R73C15]-D1-050	4.32		2.22	

Table 1-1 – Verification Sample Results for Arsenic and Lead

Sample Number	Lead Result (1)	Qualifier	Arsenic Result (2)	Qualifier
01-SS-[75-R73C16]-D1-050	5.5		1.85	
01-SS-[75-R73C17]-D1-050	2.7		2.18	
01-SS-[75-R73C18]-D1-050	4.29		3.06	
01-SS-[75-R73C19]-D1-050	6.85		10.05	
01-SS-[75-R73C20]-D1-050	5.05		8.4	
01-SS-[75-R73C21]-D1-050	4.86		5.22	
01-SS-[75-R73C22]-D1-050	4.61		5.95	
01-SS-[75-R74C17]-D1-050	5.01		2.73	
01-SS-[75-R74C18]-D1-050	4.39		3.67	
01-SS-[75-R74C19]-D1-050	3.31		3.23	
01-SS-[75-R74C20]-D1-050	3.77		5.59	
01-SS-[75-R74C21]-D1-050	3.05		3.22	
01-SS-[75-R74C22]-D1-050	5.26		8.09	
01-SS-[75-R74C23]-D1-050	4.67		5.31	
01-SS-[75-R74C24]-D1-050	2.34		2.55	
01-SS-[75-R74C25]-D1-050	2.51		3.02	
01-SS-[75-R75C19]-D1-050	6.05		3.6	
01-SS-[75-R75C20]-D1-050	4.55		6.81	
01-SS-[75-R75C21]-D1-050	3.37		5.11	
01-SS-[75-R75C22]-D1-050	4.91		5.82	
01-SS-[75-R75C23]-D1-050	21.8		13.5	
01-SS-[75-R75C24]-D1-050	56.4		59.9	
01-SS-[75-R75C25]-D1-050	4.46		2.92	
01-SS-[75-R75C26]-D1-050	7.25		5.43	
01-SS-[75-R75C27]-D1-050	5.59		6.85	
01-SS-[75-R75C28]-D1-050	19		12	
01-SS-[75-R76C22]-D1-050	2.61		2.97	
01-SS-[75-R76C23]-D1-050	4.82		6.38	
01-SS-[75-R76C24]-D1-050	18.1		15	
01-SS-[75-R76C25]-D1-050	6.41		12.9	
01-SS-[75-R76C26]-D1-050	4.39		2.76	
01-SS-[75-R76C27]-D1-050	6.23		4.65	
01-SS-[75-R76C28]-D1-050	4.26		2.49	
01-SS-[75-R76C29]-D1-050	6.17		3.34	
01-SS-[75-R76C30]-D1-050	5.82		4.27	
01-SS-[75-R77C25]-D1-050	4.57		3.01	
01-SS-[75-R77C26]-D1-050	7.41		8.55	
01-SS-[75-R77C27]-D1-050	80.1		22.1	
01-SS-[75-R77C28]-D1-050	5.05		5.11	
01-SS-[75-R77C29]-D1-050	4.38		2.79	
01-SS-[75-R77C30]-D1-050	20.3		6.41	
01-SS-[75-R77C31]-D1-050	13.8		4.74	

Table 1-1 – Verification Sample Results for Arsenic and Lead

Sample Number	Lead Result (1)	Qualifier	Arsenic Result (2)	Qualifier
01-SS-[75-R77C32]-D1-050	2.41		3.56	
01-SS-[75-R77C33]-D1-050	6.01		10.4	
01-SS-[75-R78C27]-D1-050	4.01		2.03	
01-SS-[75-R78C28]-D1-050	3.72		2.25	
01-SS-[75-R78C29]-D1-050	6.75		4.24	
01-SS-[75-R78C30]-D1-050	63.1		39.6	
01-SS-[75-R78C31]-D1-050	2.33		3.12	
01-SS-[75-R78C32]-D1-050	2.19		3.6	
01-SS-[75-R78C33]-D1-050	3.26		5.41	
01-SS-[75-R78C34]-D1-050	2.02		3.41	
01-SS-[75-R78C35]-D1-050	2.21		2.79	
01-SS-[75-R79C30]-D1-050	6.96		4.04	
01-SS-[75-R79C31]-D1-050	1.93		3.07	
01-SS-[75-R79C32]-D1-050	3.41		2.71	
01-SS-[75-R79C33]-D1-050	4.52		5.35	
01-SS-[75-R79C34]-D1-050	2.14		3.8	
01-SS-[75-R79C35]-D1-050	2.27		3.78	
01-SS-[75-R79C36]-D1-050	2.46		3.35	
01-SS-[75-R79C37]-D1-050	3.25		5.53	
01-SS-[75-R79C38]-D1-050	3.86		5.07	
01-SS-[75-R80C32]-D1-050	2.21		2.85	
01-SS-[75-R80C33]-D1-050	1.91		2.17	
01-SS-[75-R80C34]-D1-050	67.7		25.2	
01-SS-[75-R80C35]-D1-050	3.93		6.92	
01-SS-[75-R80C36]-D1-050	2.62		5.29	
01-SS-[75-R80C37]-D1-050	4.58		5.86	
01-SS-[75-R80C38]-D1-050	2.59		4.06	
01-SS-[75-R80C39]-D1-050	13.9		16.8	
01-SS-[75-R80C40]-D1-050	15.2		11.2	
01-SS-[75-R81C35]-D1-050	7.26		5.89	
01-SS-[75-R81C36]-D1-050	4.72		6.2	
01-SS-[75-R81C37]-D1-050	4.59		15	
01-SS-[75-R81C38]-D1-050	3.28		4.22	
01-SS-[75-R81C39]-D1-050	4.43		2.9	
01-SS-[75-R81C40]-D1-050	4.91		2.94	
01-SS-[75-R81C41]-D1-050	143.5		59.25	
01-SS-[75-R81C42]-D1-050	7.62		4.82	
01-SS-[75-R81C43]-D1-050	5.95		3.91	
01-SS-[75-R81C44]-D1-050	4.69		3.34	
01-SS-[75-R81C45]-D1-050	10.6		7.44	
01-SS-[75-R82C37]-D1-050	2.94		3.98	
01-SS-[75-R82C38]-D1-050	2.74		4.35	

Table 1-1 – Verification Sample Results for Arsenic and Lead

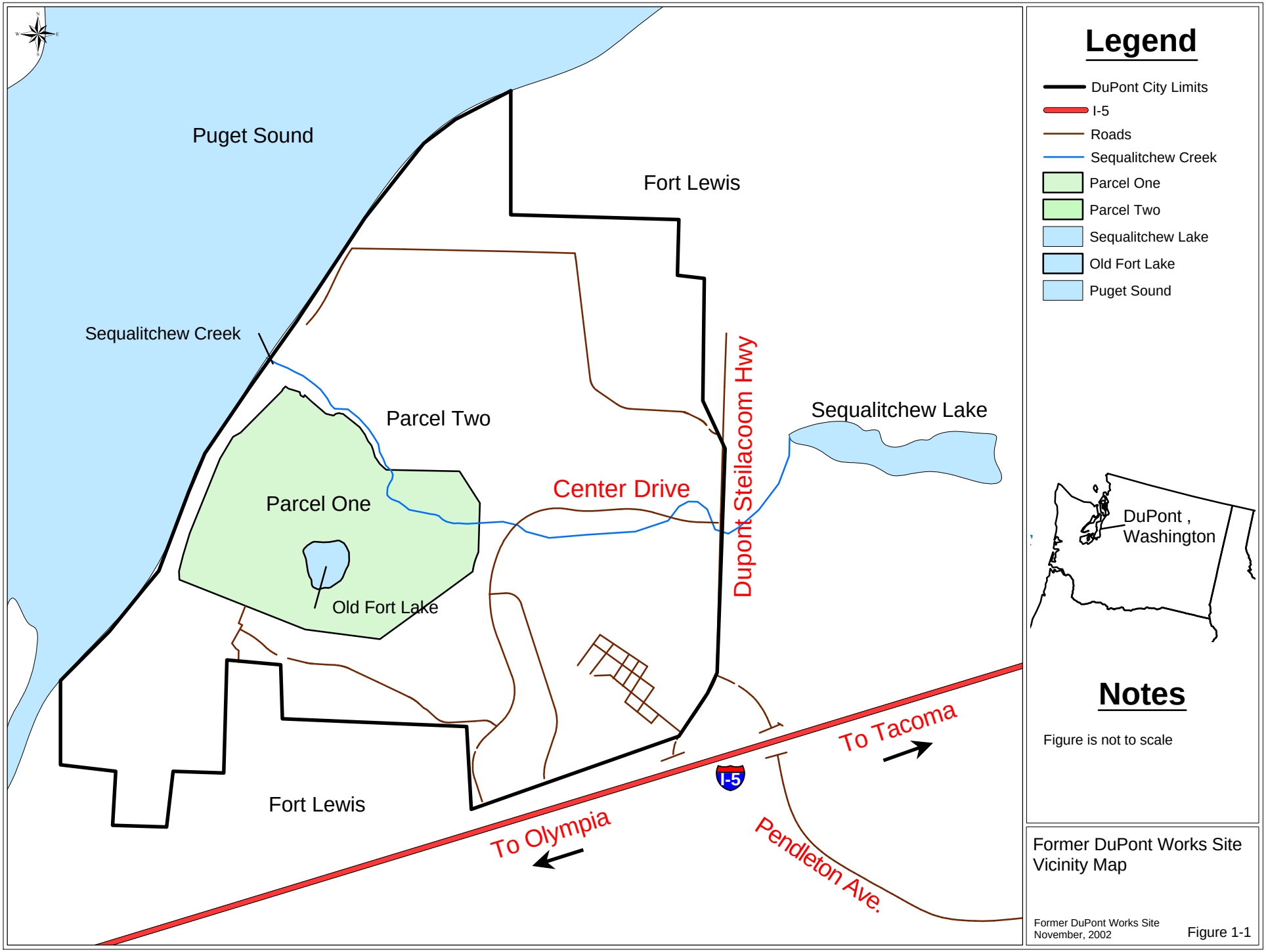
Sample Number	Lead Result (1)	Qualifier	Arsenic Result (2)	Qualifier
01-SS-[75-R82C39]-D1-050	18.2		16.9	
01-SS-[75-R82C40]-D1-050	4.27		3.19	
01-SS-[75-R82C41]-D1-050	4.94		3.85	
01-SS-[75-R82C42]-D1-050	6.48		4.76	
01-SS-[75-R82C43]-D1-050	5.28		4.24	
01-SS-[75-R82C44]-D1-050	5.27		3.78	
01-SS-[75-R82C45]-D1-050	5.73		4	
01-SS-[75-R82C46]-D1-050	4.2		2.83	
01-SS-[75-R83C40]-D1-050	22.1		34.8	
01-SS-[75-R83C41]-D1-050	5.82		4.59	
01-SS-[75-R83C42]-D1-050	5.44		4.03	
01-SS-[75-R83C43]-D1-050	5.62		4	
01-SS-[75-R83C44]-D1-050	7.47		5.91	
01-SS-[75-R83C45]-D1-050	5.46		3.44	
01-SS-[75-R83C46]-D1-050	6.96		5.61	
01-SS-[75-R83C47]-D1-050	6.91		4.64	
01-SS-[75-R83C48]-D1-050	5.52		4.49	
01-SS-[75-R83C54]-D1-050	6.03		5.72	
01-SS-[75-R83C55]-D1-050	5.02		4.56	
01-SS-[75-R83C57]-D1-050	61.8		39.5	
01-SS-[75-R84C43]-D1-050	4.13		3	
01-SS-[75-R84C44]-D1-050	4.31		3.15	
01-SS-[75-R84C45]-D1-050	2.44		2.43	
01-SS-[75-R84C46]-D1-050	4.44		3.87	
01-SS-[75-R84C47]-D1-050	5.14		4.85	
01-SS-[75-R84C48]-D1-050	4.65		9.65	
01-SS-[75-R84C49]-D1-050	4.51		4.35	
01-SS-[75-R84C55]-D1-050	7.06		6.35	
01-SS-[75-R84C57]-D1-050	2.96		2.07	
01-SS-[75-R85C51]-D1-050	3.27		2.93	
01-SS-[75-R85C52]-D1-050	32.4		25.8	
01-SS-[75-R85C53]-D1-050	5.9		3.19	
01-SS-[75-R85C54]-D1-050	4.37		7.42	
01-SS-[75-R85C55]-D1-050	30.1		53.4	
01-SS-[75-R85C56]-D1-050	5.84		5.02	
01-SS-[75-R85C57]-D1-050	8.69		8.08	
01-SS-[75-R85C58]-D1-050	6		4.95	
01-SS-[75-R86C58]-D1-050	3.7		2.6	
02-SS-[75-R81C41-2]-D1-050	10.5		19.1	
Pipeline Sample Results				
01-SS-[PL-2] -D1-050	20.7		19.5	
01-SS-[PL-3] -D1-050	10.7		10.8	

Table 1-1 – Verification Sample Results for Arsenic and Lead

Sample Number	Lead Result [1]	Qualifier	Arsenic Result [2]	Qualifier
01-SS-[PL-4] -D1-050	22.2		23.6	
01-SS-[PL-5] -D1-050	27.2		27.4	
01-SS-[PL-6] -D1-050	3.09		4.61	
01-SS-[PL-7] -D1-050	4.74		8.87	
01-SS-[PL-8] -D1-050	29.7		109	
01-SS-[PL-9] -D1-050	38.1		59.3	
01-SS-[PL-10] -D1-050	65.6		34.7	
01-SS-[PL-11] -D1-050	25		26.4	
01-SS-[PL-12] -D1-050	12.1		79.7	
01-SS-[PL-13] -D1-050	27.5		46.5	
02-SS-[PL-8-2]-D1-050	7.11		10.5	
02-SS-[PL-12-2]-D1-050	4.27		1.97	

[1] The DuPont Works Site Remediation Level for Commercial Areas for Lead is 118 mg/kg.

[2] The DuPont Works Site Cleanup Level for Commercial Areas for Arsenic is 60 mg/kg.


Puget Sound
Fort Lewis
Sequalitchew Creek
Parcel Two
Sequalitchew Lake
Parcel One
Center Drive
Dupont Steilacoom Hwy
Old Fort Lake
Fort Lewis
To Tacoma
I-5
To Olympia
Pendleton Ave.
Legend
DuPont City Limits
I-5
Roads
Sequalitchew Creek
Parcel One
Parcel Two
Sequalitchew Lake
Old Fort Lake
Puget Sound
DuPont , Washington
Notes
Figure is not to scale
Former DuPont Works Site
Vicinity Map
Former DuPont Works Site
November, 2002
Figure 1-1

R67C7(3.06/3.9)

Perimeter Soil ICA Boundary

R68C8(6.32/5.75)

R68C10(14.6/15.1)

R68C9(7.46/8.37)

R69C7(3.98/4.81)

R69C9(3.54/4.73)

R69C11(2.65/3.98)

R69C8(2.495/4.785)

R69C10(7.8/16.6)

R69C12(3.56/6.77)

R70C7(30.2/12.5)

R70C9(3.04/3.78)

R70C11(2.96/4.48)

R70C13(21.1/52.5)

R70C15(3.59/3.92)

R70C8(2.75/4.77)

R70C10(5.27/5.14)

R70C12(4.02/4.3)

R70C14(5.71/7.51)

Consent Decree Boundary

R71C9(2.92/4.32)

R71C11(3.19/4.64)

R71C13(5/4.14)

R71C15(2.71/4.33)

R71C10(2.1/2.36)

R71C12(2.76/4.31)

R71C14(4.53/5.68)

R71C16(7.77/9.03)

R72C12(2.31/2.88)

R72C14(1.81/3.14)

R72C16(13.4/7.68)

R72C13(2.41/3.33)

R72C15(1.82/3.67)

R73C14(3.03/5.365)

R73C16(1.85/5.5)

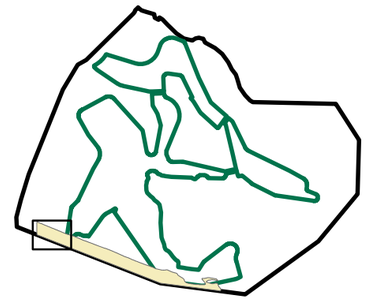
R73C15(2.22/4.32)

0 25 50 100 150 200 Feet

PIONEER TECHNOLOGIES CORPORATION

Legend

- Soil Verification Samples
- Dirt Roads
- Paved Roads
- Perimeter Soil ICA Area
- Golf Course
- Consent Decree Boundary



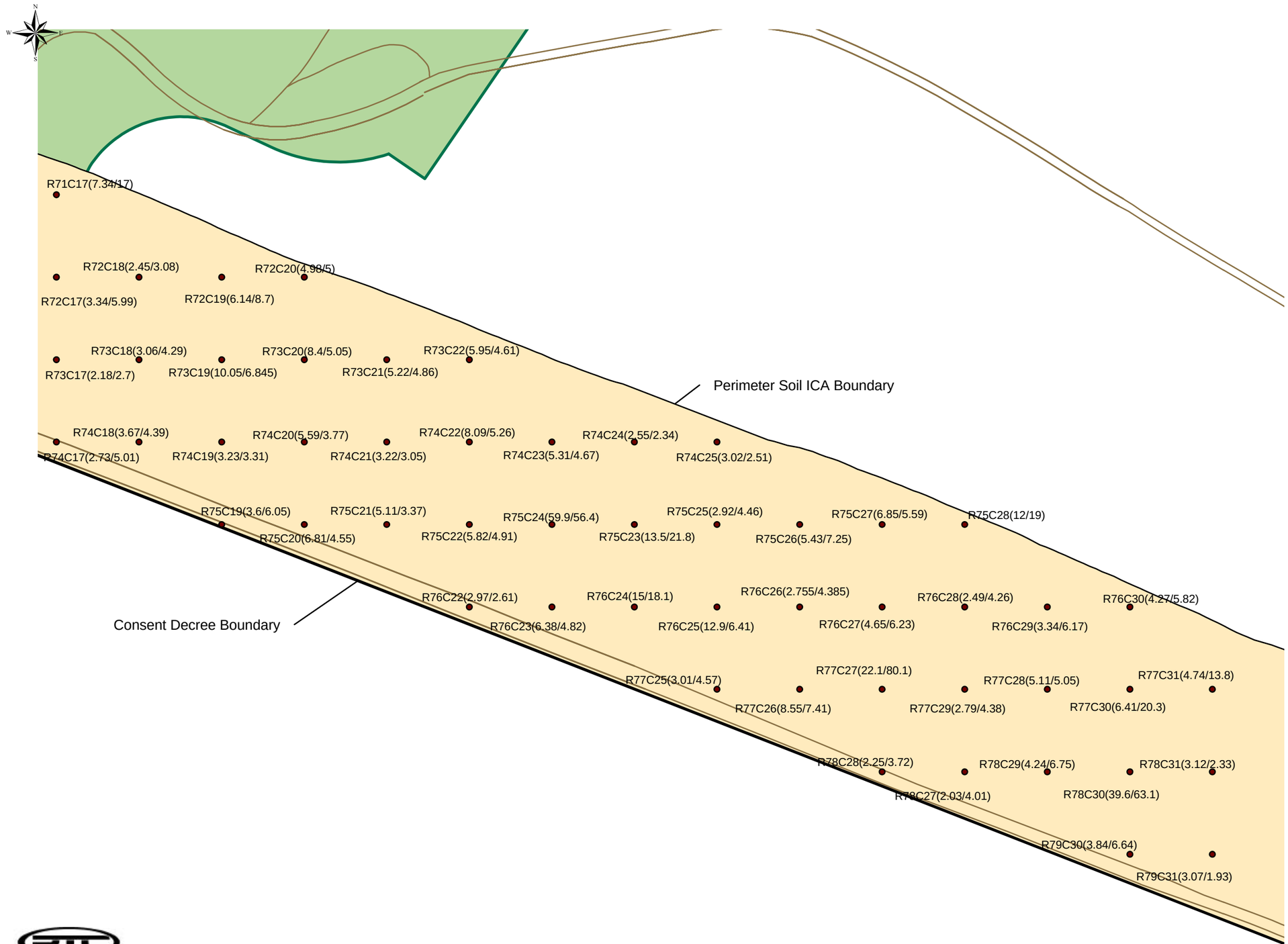
Notes

Concentrations are presented as Arsenic/Lead and are in mg/kg

Perimeter Soil Verification Sample Locations

Former DuPont Works Site
November, 2002

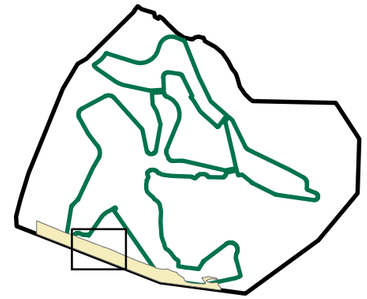
Figure 3-1



PIONEER TECHNOLOGIES CORPORATION

Legend

- Soil Verification Samples
- Dirt Roads
- Paved Roads
- Perimeter Soil ICA Area
- Golf Course
- Consent Decree Boundary



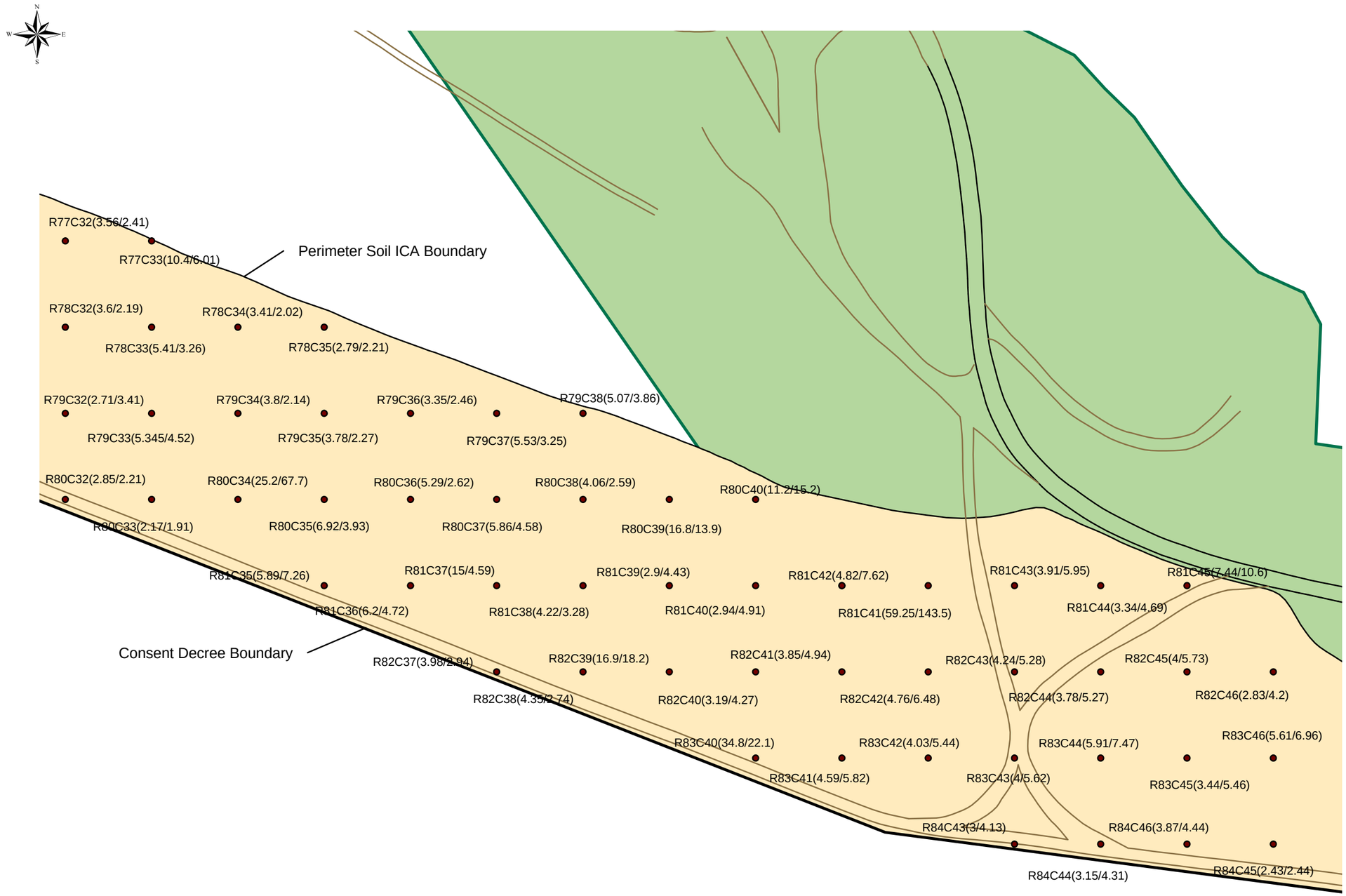
Notes

Concentrations are presented as Arsenic/Lead and are in mg/kg

Perimeter Soil Verification Sample Locations

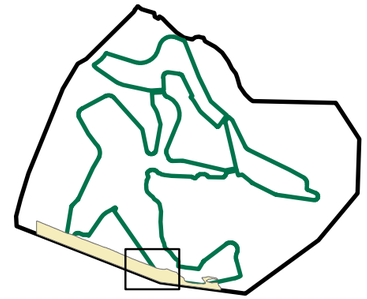
Former DuPont Works Site
November, 2002

Figure 3-2



Legend

- Soil Verification Samples
- Dirt Roads
- Paved Roads
- Perimeter Soil ICA Area
- Golf Course
- Consent Decree Boundary



Notes

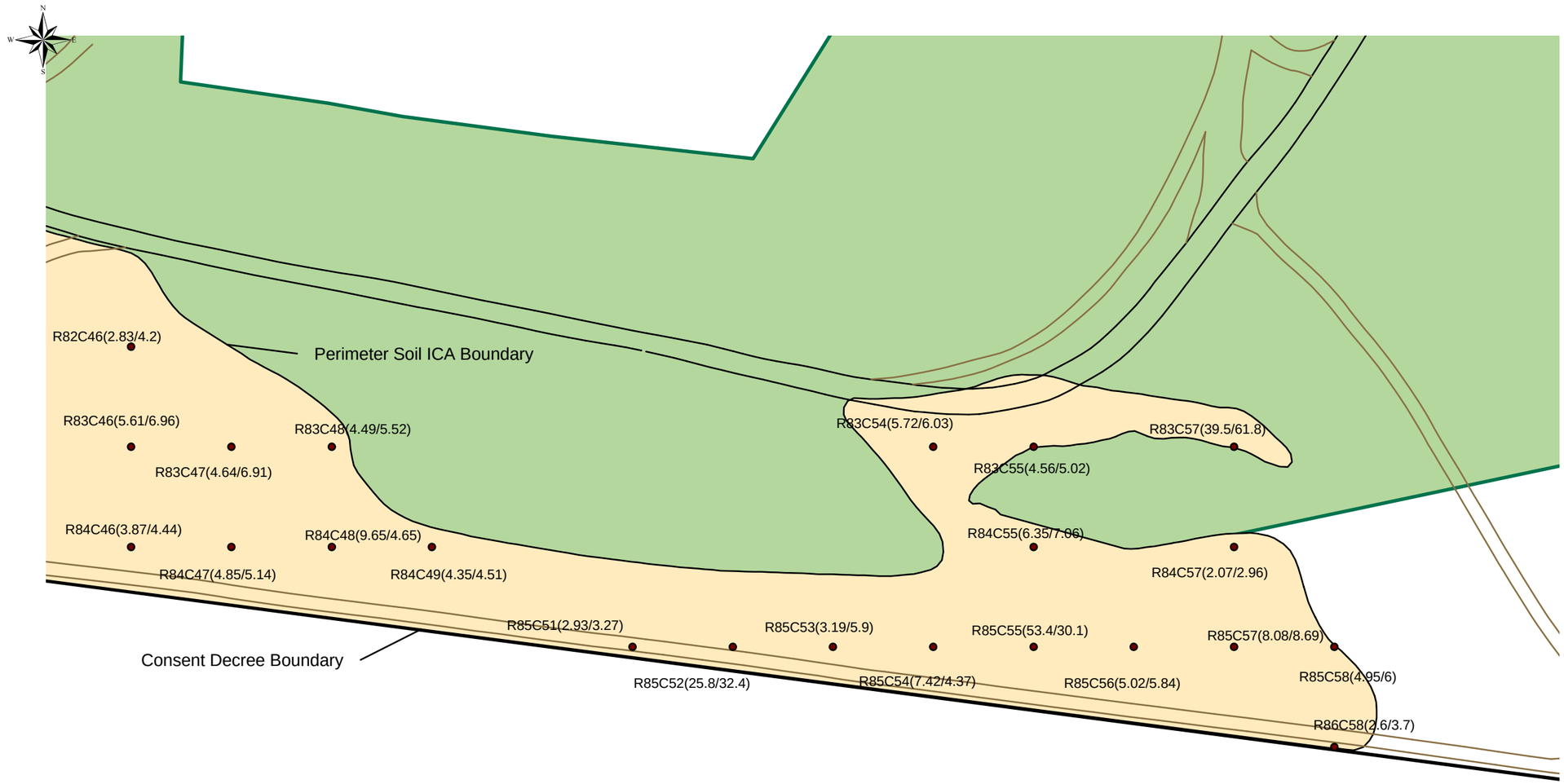
Concentrations are presented as Arsenic/Lead and are in mg/kg

Perimeter Soil Verification Sample Locations

Former DuPont Works Site
November, 2002

Figure 3-3

PIONEER TECHNOLOGIES CORPORATION



Legend

- Soil Verification Samples
- Dirt Roads
- Paved Roads
- Perimeter Soil ICA Area
- Golf Course
- Consent Decree Boundary

Notes

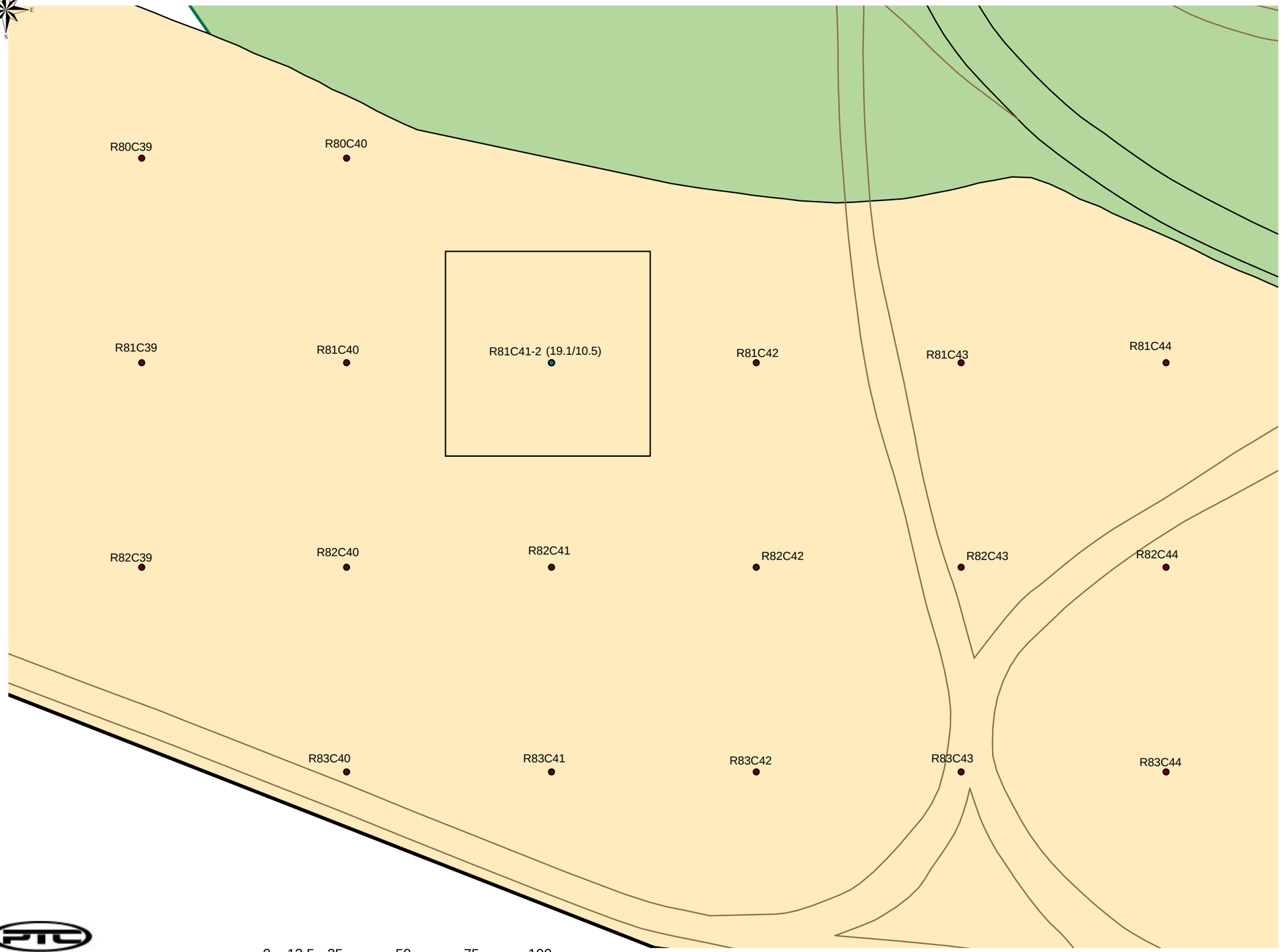
Concentrations are presented as Arsenic/Lead and are in mg/kg

PIONEER TECHNOLOGIES CORPORATION

Perimeter Soil Verification Sample Locations

Former DuPont Works Site
November, 2002

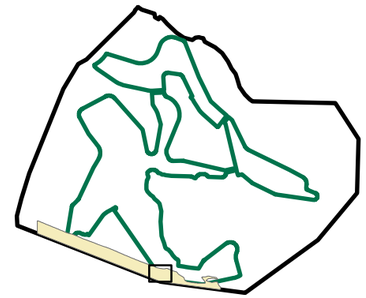
Figure 3-4



PIONEER TECHNOLOGIES CORPORATION

Legend

- Additional Perimeter Soil Excavation Sample
- 75 Foot Grid in Perimeter Soil Area
- Dirt Roads
- Paved Roads
- Perimeter Soil ICA Area
- Golf Course
- Consent Decree Boundary



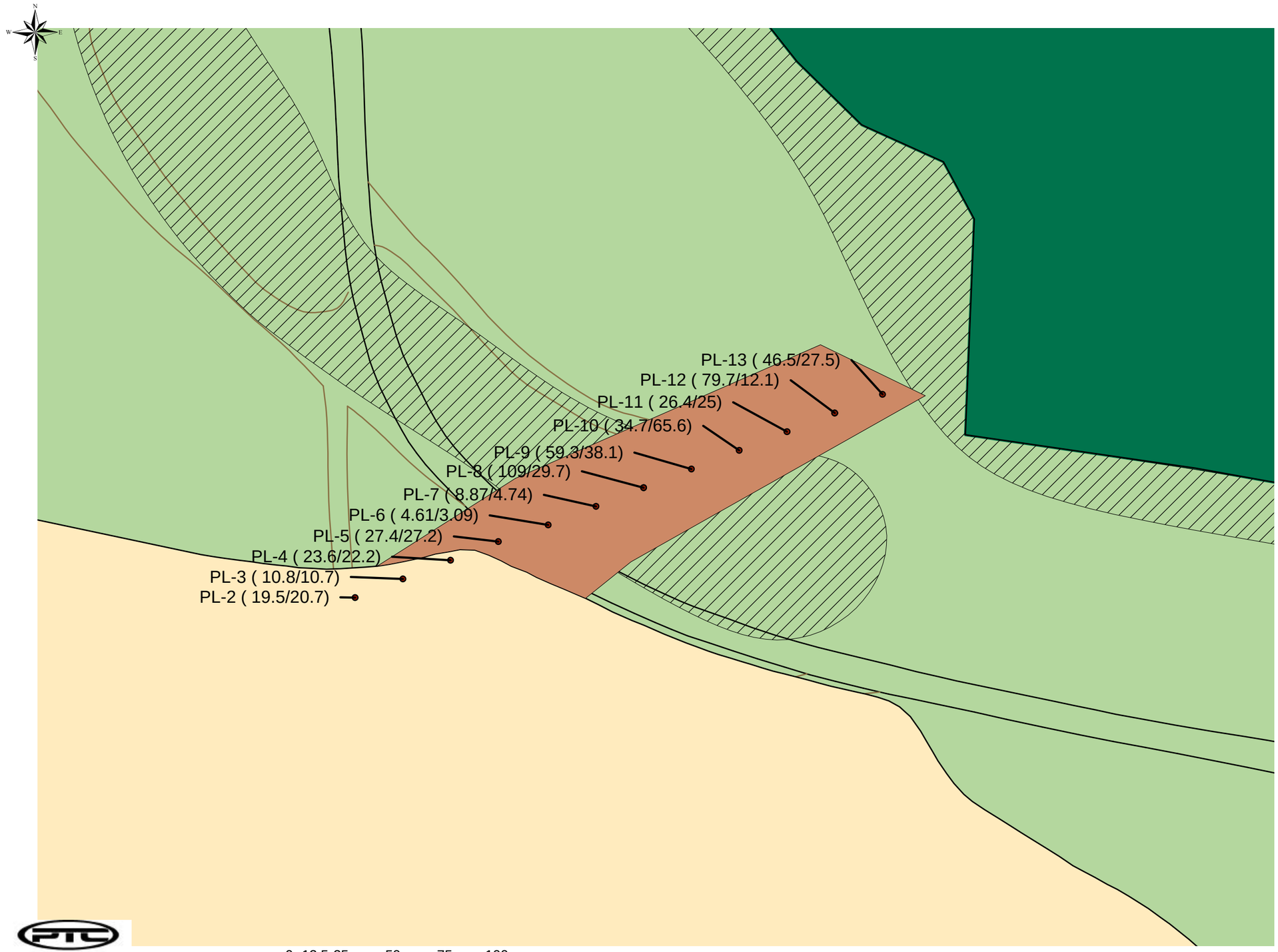
Notes

Concentrations are presented as Arsenic/Lead and are in mg/kg

Additional Perimeter Soil Excavation Verification Sample Location

Former DuPont Works Site
November, 2002

Figure 3-5



PIONEER TECHNOLOGIES CORPORATION

Legend

- Pipeline Verification Samples
- Dirt Roads
- Paved Roads
- Storm Water Pipeline ICA Area
- Perimeter Soil ICA Area
- Open Space
- Vegetation Area Phase 1
- Golf Course
- Consent Decree Boundary

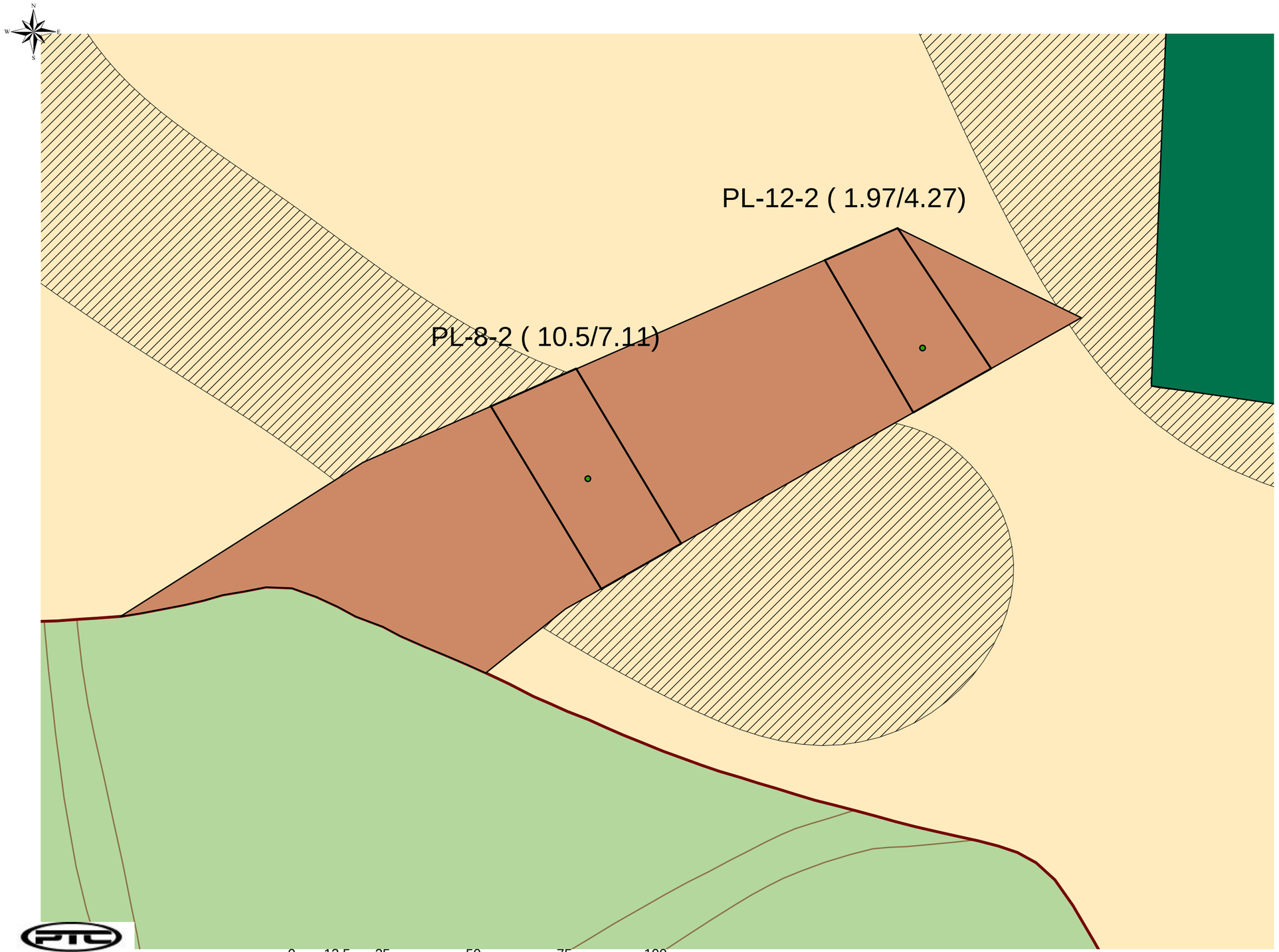
Notes

Concentrations are presented as Arsenic/Lead and are in mg/kg

Storm Water Runoff Overflow Pipeline Verification Sample Locations

Former DuPont Works Site
November, 2002

Figure 3-6



PIONEER TECHNOLOGIES CORPORATION

Legend

- Additional Pipeline Excavation Verification Samples
- Dirt Roads
- Paved Roads
- Stormwater Pipeline ICA Area
- Perimeter Soil ICA Area
- Open Space
- Vegetation Area Phase 1
- Golf Course
- Consent Decree Boundary

Notes

Concentrations are presented as Arsenic/Lead and are in mg/kg

Additional Pipeline Excavation Verification Sample Locations

Former DuPont Works Site
November, 2002

Figure 3-7

Attachment A – Laboratory Analytical Data Validation Results

CHEMICAL DATA QUALITY REVIEW

Former DuPont Works Site

Soil Sampling

Prepared for

Pioneer Technologies Corporation

Prepared by

ETHIX

1400 Carpenter Lane, Suite D
Modesto, CA 95351
(209) 576-2621
www.ethix@sbcglobal.net

Table of Contents

	Section		Page No
Chemical Data Quality Review	1.0	Introduction	2
	2.0	Executive Summary	3
	3.0	Total Metals (As & Pb only)	4
	4.0	References	8
Appendix A - Qualifier Definitions			A-1
Appendix B - Acronyms			B-1
Appendix C - Data Summary Table			C-1
Appendix D - Data Quality Summaries			D-1
Appendix E		Table 1 - Sample Table	E-1-1

1.0 Introduction

This report summarizes the technical review of analytical results generated in support of the soil sampling event at the former DuPont Works Site in DuPont, Washington. The criteria applied for this review are consistent with analytical method protocols, in conjunction with the laboratory-established control limits. In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of chain-of-custody, holding time and summary information for method blanks (to assess contamination), sample duplicates (to assess precision), and matrix spike recoveries (to assess matrix effect).

The report is arranged by method; within each method section is a sub-section addressing each data quality indicator. In situations where all applicable criteria were met, it will be stated. If criteria were not met, the non-compliance, qualifier and associated samples are listed. Appendices A and B list qualifier definitions and acronyms, respectively. Appendix C, the data summary table, displays all sample results, as well as qualifiers and descriptors that may apply. Appendix D includes a summary of all qualified data, by analysis type. All samples collected are identified in Table 1. If applicable, any discrepancies or deficiencies associated with sampling and analysis can be found in Table 2. Rejected data, if applicable, are identified in Table 3 (Appendix E). All remaining tables (Appendix E) list all qualified data by data quality indicator and analysis type as well as results that did not meet specific screening levels.

The laboratory electronic data format (EDF) for this project was used to generate this report. In many cases abbreviations are used from the EDF; refer to the acronyms (Appendix B) for an explanation of abbreviations. When discrepancies between the hardcopy data and the EDF are found, the EDF has been modified to reflect values from the hardcopy, unless the hardcopy is found to be in error. Results used to generate this report are deemed to be accurate.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

_____

Authorized Signature (209) 576-2621

2.0 Executive Summary

One hundred eighty-four soil samples were collected by Weyerhaeuser, Inc. from June 25, 2002 to July 24, 2002 at the Former DuPont Works Site in DuPont, Washington. Samples were submitted to Severn Trent Laboratories (STL) in Tacoma, Washington within the same day of collection. Samples were analyzed for total lead and arsenic by either EPA Method 6010 (ICP) or EPA Method 6020 (ICP/MS).

The laboratory reports only included sample results, method blanks, matrix spike results and matrix duplicate results. Laboratory control samples, prep and analysis logs, and calibration information were not reported. All requested analyses were performed by the laboratory. Cooler receipt forms were not generated, therefore sample condition upon arrival to the laboratory could not be evaluated.

Sample 01-SS-[75-R79C300]-D3-050 listed on the chain-of-custody in sample delivery group 106905 was listed on the analytical report and associated electronic data deliverable (EDD) as 01-SS[75-R76C300]-D3-050, and sample 02-SS-[75-R81C41-2]-D1-050 listed on the chain-of-custody in sample delivery group 107174 was listed on the analytical report and associated EDD as 02-SS[75-R81C4]-D1-050. Sample IDs were changed to the identification used on the chain-of-custodies.

Acceptable accuracy and/or precision was exhibited in matrix spikes and sample duplicates. Acceptable precision was exhibited in the field duplicates indicating a homogeneous matrix. No data were qualified indicating the absence of matrix interference.

3.0 Total Metals (As & Pb only) 6010/6020

The following number of samples were prepared and analyzed by the listed methods:

Laboratory STL

# of Samples	Matrix	Analysis Metho	Reporting Units
120	Soil	SW6020	mg/kg
64	Soil	SW6010	mg/kg

Samples analyzed by these methods are identified in Table 1.

3.1 Holding Time

All samples were analyzed within the required technical holding time.

3.2 Blanks

Method blanks were analyzed at the minimum required frequency. All target analytes were reported as nondetected in all cases.

Field blanks were not collected for analysis by these methods.

3.3 Matrix Spike/Matrix Spike Duplicates

Matrix spikes were analyzed at the required frequency. All recoveries were within the method control limits of 75-125%.

3.4 Sample Duplicates

Laboratory sample duplicates were also analyzed. Precision between the primary and duplicate sample results was acceptable in all cases.

3.5 Quantitation Limits

The practical quantitation limits (PQLs) achieved by the laboratory were acceptable relative to the estimated quantitation limits (EQL) suggested by these methods in SW846 for soil matrix samples. Project-required report limits were not specified for this project. All samples were reported as detected.

3.6 Field Duplicates

Eight sets of field duplicate samples were collected for analysis by this method as shown below.

Matrix: Soil	**Primary**	**QC Dup**	
Project ID:	106905	106905	
Field ID:	01-SS-[75-R76C26]-D1-050	01-SS-[75-R76C260]-D3-050	
Lab ID:	106905-05	106905-24	
	Result Q	**Result Q**	
	SW6020	**SW6020**	
Units:	***mg/kg***	***mg/kg***	**RPD**
Arsenic	2.52	2.99	17.1
Lead	4.1	4.67	13.0

Matrix: Soil	**Primary**	**QC Dup**	
Project ID:	106905	106905	
Field ID:	01-SS-[75-R79C30]-D1-050	01-SS-[75-R79C300]-D3-050	
Lab ID:	106905-23	106905-25	
	Result Q	**Result Q**	
	SW6020	**SW6020**	
Units:	***mg/kg***	***mg/kg***	**RPD**
Arsenic	4.04	3.64	10.4
Lead	6.96	6.32	9.6

Matrix: Soil	**Primary**	**QC Dup**	
Project ID:	107084	107084	
Field ID:	01-SS-[75-R81C41]-D1-050	01-SS-[75-R81C410]-D3-050	
Lab ID:	107084-05	107084-06	
	Result Q	**Result Q**	
	SW6020	**SW6020**	
Units:	***mg/kg***	***mg/kg***	**RPD**
Arsenic	59	59.5	0.8
Lead	144	143	0.7

Matrix: Soil	Primary	QC Dup	
Project ID:	107174	107174	
Field ID:	01-SS-[75-R79C33]-D1-050	01-SS-[75-R79C330]-D3-050	
Lab ID:	107174-20	107174-21	
	Result Q	**Result Q**	
	SW6010	**SW6010**	
Units:	***mg/kg***	***mg/kg***	**RPD**
Arsenic	4.66	6.03	25.6
Lead	3.19	5.85	58.8

Matrix: Soil	Primary	QC Dup	
Project ID:	107217	107217	
Field ID:	01-SS-[75-R73C19]-D1-050	01-SS-[75-R73C190]-D3-050	
Lab ID:	107217-09	107217-10	
	Result Q	**Result Q**	
	SW6010	**SW6010**	
Units:	***mg/kg***	***mg/kg***	**RPD**
Arsenic	10.6	9.51	10.8
Lead	7.37	6.32	15.3

Matrix: Soil	Primary	QC Dup	
Project ID:	107248	107248	
Field ID:	01-SS-[75-R73C14]-D1-050	01-SS-[75-R73C140]-D3-050	
Lab ID:	107248-14	107248-15	
	Result Q	**Result Q**	
	SW6020	**SW6020**	
Units:	***mg/kg***	***mg/kg***	**RPD**
Arsenic	2.94	3.12	5.9
Lead	5.3	5.43	2.4

Matrix: Soil	Primary	QC Dup	
Project ID:	107248	107248	
Field ID:	01-SS-[75-R69C8]-D1-050	01-SS-[75-R69C80]-D3-050	
Lab ID:	107248-35	107248-36	
	Result Q	Result Q	
	SW6020	SW6020	
Units:	*mg/kg*	*mg/kg*	RPD
Arsenic	2.39	2.6	8.4
Lead	3.09	3.39	9.3

Matrix: Soil	Primary	QC Dup	
Project ID:	107325	107325	
Field ID:	01-SS-[75-R83C55]-D1-050	01-SS-[75-R83C550]-D3-050	
Lab ID:	107325-22	107325-23	
	Result Q	Result Q	
	SW6020	SW6020	
Units:	*mg/kg*	*mg/kg*	RPD
Arsenic	4.05	5.07	22.4
Lead	4.01	6.03	40.2

3.7 Overall Assessment

No data quality deficiencies were found. All data generated by these methods should be considered useable as reported.

4.0 References

"USEPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods", July 1992 (SW-846)

"Methods for Chemical Analysis of Water and Wastes", March 1983 (EPA-600)

"National Functional Guidelines for Inorganic Data Review", February, 1994

Quality Assurance Project Plan, Hart Crowser, J-1747-49

Appendix A

Qualifier Definitions

B	The sample result is less than 5 or 10 times (for common laboratory contaminants) the associated blank contamination.
U	The analyte was analyzed for, but was not detected above the reported quantitation limit.
UJ	The analyte was not detected above the reported quantitation limit. However, the reported quantitation is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J/none	Sample results for the analyte are estimated for positive results; results reported below the quantitation limit are not qualified (high bias).
J/UJ	Sample results for the analyte are estimated for both positive results and results reported below the quantitation limit (low bias).
R/UR	The sample results are rejected for both positive results and results reported below the quantitation limit due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Appendix B

Acronyms

CRQL	Contract Required Quantitation Limit
H	High Bias
L	Low Bias
LCL	Lower Control Limit
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MB	Method Blank
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
N	No Bias Determined
NA	Not Applicable
NE	Not Established
NR	Not Reported
PQL	Practical Quantitation Limit
Q	Qualifier
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percent Difference
RRL	Required Reporting Limit
RSD	Relative Standard Deviation
RTHT	Required Technical Holding Time
SD	Sample Duplicate
STL	Severn Trent Laboratories
SW-846	EPA Test Methods for Evaluating Solid Waste
UCL	Upper Control Limit

Appendix C

Data Summary Table

QUALIFIER REASON CODES

a - The analyte was found in the method blank

a- - Negative drift observed in instrument calibration blanks

b - Surrogate spike recovery outside control limits

c - Matrix Spike/Matrix Spike Duplicate (MS/MSD) recovery outside control limits

d - Laboratory Control Sample (LCS) recovery outside control limits

e - Holding time exceeded

f - MS/LCS sample duplicate failed precision criteria

h - Second column results indicate that the environmental results were not confirmed

i - Instrument Calibration outside control limits

k - The analyte was found in the field blank

m - Numerical value between the MDL and PQL

n - Field duplicate precision problem

o - Result reported exceeds calibration range

p - Sample was not properly collected, preserved or shipped

s - Internal Standard outside control limits

t - Sample temperature outside acceptance criteria

(Note: Where multiple qualifiers have been applied the first qualifier corresponds to the first reason code)

DATA SUMMARY TABLE

Sample ID	106905-01			106905-02			106905-03			106905-04			106905-05			106905-06		
Field ID	01-SS-[75-R76C24]-D1-050			01-SS-[75-R76C25]-D1-050			01-SS-[75-R77C25]-D1-050			01-SS-[75-R78C27]-D1-050			01-SS-[75-R76C26]-D1-050			01-SS-[75-R76C27]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	15			12.9			3.01			2.03			2.52			4.65		
Lead	18.1			6.41			4.57			4.01			4.1			6.23		

DATA SUMMARY TABLE

Sample ID	106905-07			106905-08			106905-09			106905-10			106905-11			106905-12		
Field ID	01-SS-[75-R76C28]-D1-050			01-SS-[75-R76C29]-D1-050			01-SS-[75-R76C30]-D1-050			01-SS-[75-R75C25]-D1-050			01-SS-[75-R75C26]-D1-050			01-SS-[75-R75C27]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	2.49			3.34			4.9			2.92			5.43			6.85		
Lead	4.26			6.17			5.32			4.46			7.25			5.59		

DATA SUMMARY TABLE

Sample ID	106905-13			106905-14			106905-15			106905-16			106905-17			106905-18		
Field ID	01-SS-[75-R75C28]-D1-050			01-SS-[75-R77C26]-D1-050			01-SS-[75-R77C27]-D1-050			01-SS-[75-R77C28]-D1-050			01-SS-[75-R77C29]-D1-050			01-SS-[75-R77C30]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	12			8.55			22.1			5.11			2.79			6.41		
Lead	19			7.41			80.1			5.05			4.38			20.3		

DATA SUMMARY TABLE

Sample ID	106905-19			106905-20			106905-21			106905-22			106905-23			106905-24		
Field ID	01-SS-[75-R77C31]-D1-050			01-SS-[75-R78C28]-D1-050			01-SS-[75-R78C29]-D1-050			01-SS-[75-R78C30]-D1-050			01-SS-[75-R79C30]-D1-050			01-SS-[75-R76C260]-D3-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002			6/25/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	4.74			2.25			4.24			39.6			4.04			2.99		
Lead	13.8			3.72			6.75			63.1			6.96			4.67		

DATA SUMMARY TABLE

Analyte	Sample ID / Field ID / Matrix / Date Collected / Units	RESULT	Q	RC				
	Sample ID	106905-25						
	Field ID	01-SS-[75-R79C300]-D3-050						
	Matrix	Soil						
	Date Collected	6/25/2002						
	Units	mg/kg						
Arsenic		3.64						
Lead		6.32						

DATA SUMMARY TABLE

Sample ID	107084-01			107084-02			107084-03			107084-04			107084-05			107084-06		
Field ID	01-SS-[75-R80C39]-D1-050			01-SS-[75-R80C40]-D1-050			01-SS-[75-R81C39]-D1-050			01-SS-[75-R81C40]-D1-050			01-SS-[75-R81C41]-D1-050			01-SS-[75-R81C410]-D3-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	16.8			11.2			2.9			2.94			59			59.5		
Lead	13.9			15.2			4.43			4.91			144			143		

DATA SUMMARY TABLE

Sample ID	107084-07			107084-08			107084-09			107084-10			107084-11			107084-12		
Field ID	01-SS-[75-R81C42]-D1-050			01-SS-[75-R81C43]-D1-050			01-SS-[75-R81C44]-D1-050			01-SS-[75-R81C45]-D1-050			01-SS-[75-R82C39]-D1-050			01-SS-[75-R82C40]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	4.82			3.91			3.34			7.44			16.9			3.19		
Lead	7.62			5.95			4.69			10.6			18.2			4.27		

DATA SUMMARY TABLE

Sample ID	107084-13			107084-14			107084-15			107084-16			107084-17			107084-18		
Field ID	01-SS-[75-R82C41]-D1-050			01-SS-[75-R82C42]-D1-050			01-SS-[75-R82C43]-D1-050			01-SS-[75-R82C44]-D1-050			01-SS-[75-R82C45]-D1-050			01-SS-[75-R82C46]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	3.85			4.76			4.24			3.78			4			2.83		
Lead	4.94			6.48			5.28			5.27			5.73			4.2		

DATA SUMMARY TABLE

Sample ID	107084-19			107084-20			107084-21			107084-22			107084-23			107084-24		
Field ID	01-SS-[75-R83C40]-D1-050			01-SS-[75-R83C41]-D1-050			01-SS-[75-R83C42]-D1-050			01-SS-[75-R83C43]-D1-050			01-SS-[75-R83C44]-D1-050			01-SS-[75-R83C45]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	34.8			4.59			4.03			4			5.91			3.44		
Lead	22.1			5.82			5.44			5.62			7.47			5.46		

DATA SUMMARY TABLE

Sample ID	107084-25			107084-26			107084-27			107084-28			107084-29			
Field ID	01-SS-[75-R83C46]-D1-050			01-SS-[75-R84C43]-D1-050			01-SS-[75-R84C44]-D1-050			01-SS-[75-R84C45]-D1-050			01-SS-[75-R84C46]-D1-050			
Matrix	Soil			Soil			Soil			Soil			Soil			
Date Collected	7/2/2002			7/2/2002			7/2/2002			7/2/2002			7/2/2002			
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	
Arsenic	5.61			3			3.15			2.43			3.87			
Lead	6.96			4.13			4.31			2.44			4.44			

DATA SUMMARY TABLE

Sample ID	107174-01			107174-02			107174-03			107174-04			107174-05			107174-06		
Field ID	01-SS-[75-R79C38]-D1-050			01-SS-[75-R80C38]-D1-050			01-SS-[75-R81C38]-D1-050			01-SS-[75-R82C38]-D1-050			01-SS-[75-R82C37]-D1-050			01-SS-[75-R81C37]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	5.07			4.06			4.22			4.35			3.98			15		
Lead	3.86			2.59			3.28			2.74			2.94			4.59		

DATA SUMMARY TABLE

Sample ID	107174-07			107174-08			107174-09			107174-10			107174-11			107174-12		
Field ID	01-SS-[75-R80C37]-D1-050			01-SS-[75-R79C37]-D1-050			01-SS-[75-R79C36]-D1-050			01-SS-[75-R80C36]-D1-050			01-SS-[75-R81C36]-D1-050			01-SS-[75-R81C35]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	5.86			5.53			3.35			5.29			6.2			5.89		
Lead	4.58			3.25			2.46			2.62			4.72			7.26		

DATA SUMMARY TABLE

Sample ID	107174-13			107174-14			107174-15			107174-16			107174-17			107174-18		
Field ID	01-SS-[75-R80C35]-D1-050			01-SS-[75-R79C35]-D1-050			01-SS-[75-R78C35]-D1-050			01-SS-[75-R78C34]-D1-050			01-SS-[75-R79C34]-D1-050			01-SS-[75-R80C34]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	6.92			3.78			2.79			3.41			3.8			25.2		
Lead	3.93			2.27			2.21			2.02			2.14			67.7		

DATA SUMMARY TABLE

Sample ID	107174-19			107174-20			107174-21			107174-22			107174-23			107174-24		
Field ID	01-SS-[75-R80C33]-D1-050			01-SS-[75-R79C33]-D1-050			01-SS-[75-R79C330]-D3-050			01-SS-[75-R78C33]-D1-050			01-SS-[75-R77C33]-D1-050			01-SS-[75-R77C32]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	2.17			4.66			6.03			5.41			10.4			3.56		
Lead	1.91			3.19			5.85			3.26			6.01			2.41		

DATA SUMMARY TABLE

Sample ID	107174-25			107174-26			107174-27			107174-28			107174-29			107174-30		
Field ID	01-SS-[75-R78C32]-D1-050			01-SS-[75-R79C32]-D1-050			01-SS-[75-R80C32]-D1-050			01-SS-[75-R79C31]-D1-050			01-SS-[75-R78C31]-D1-050			02-SS-[75-R81C41-2]-D1-05		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002			7/9/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	3.6			2.71			2.85			3.07			3.12			19.1		
Lead	2.19			3.41			2.21			1.93			2.33			10.5		

DATA SUMMARY TABLE

Sample ID	107217-01			107217-02			107217-03			107217-04			107217-05			107217-06		
Field ID	01-SS-[75-R72C19]-D1-050			01-SS-[75-R72C20]-D1-050			01-SS-[75-R74C20]-D1-050			01-SS-[75-R74C21]-D1-050			01-SS-[75-R74C22]-D1-050			01-SS-[75-R74C23]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/10/2002			7/10/2002			7/10/2002			7/10/2002			7/10/2002			7/10/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	6.14			4.98			5.59			3.22			8.09			5.31		
Lead	8.7			5			3.77			3.05			5.26			4.67		

DATA SUMMARY TABLE

Sample ID	107217-07			107217-08			107217-09			107217-10			107217-11			107217-12		
Field ID	01-SS-[75-R74C24]-D1-050			01-SS-[75-R74C25]-D1-050			01-SS-[75-R73C19]-D1-050			01-SS-[75-R73C190]-D3-050			01-SS-[75-R73C20]-D1-050			01-SS-[75-R73C21]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/10/2002			7/10/2002			7/10/2002			7/10/2002			7/10/2002			7/10/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	2.55			3.02			10.6			9.51			8.4			5.22		
Lead	2.34			2.51			7.37			6.32			5.05			4.86		

DATA SUMMARY TABLE

Sample ID	107217-13			107217-14			107217-15			107217-16			107217-17			107217-18		
Field ID	01-SS-[75-R73C22]-D1-050			01-SS-[75-R76C22]-D1-050			01-SS-[75-R76C23]-D1-050			01-SS-[75-R75C20]-D1-050			01-SS-[75-R75C21]-D1-050			01-SS-[75-R75C22]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/10/2002			7/10/2002			7/10/2002			7/10/2002			7/10/2002			7/10/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	5.95			2.97			6.38			6.81			5.11			5.82		
Lead	4.61			2.61			4.82			4.55			3.37			4.91		

DATA SUMMARY TABLE

Sample ID	107217-19		107217-20				
Field ID	01-SS-[75-R75C23]-D1-050		01-SS-[75-R75C24]-D1-050				
Matrix	Soil		Soil				
Date Collected	7/10/2002		7/10/2002				
Units	mg/kg		mg/kg				
Analyte	**RESULT**	**Q RC**	**RESULT**	**Q RC**			
Arsenic	13.5		59.9				
Lead	21.8		56.4				

DATA SUMMARY TABLE

Sample ID	107248-01			107248-02			107248-03			107248-04			107248-05			107248-06		
Field ID	01-SS-[75-R72C17]-D1-050			01-SS-[75-R73C17]-D1-050			01-SS-[75-R74C17]-D1-050			01-SS-[75-R72C18]-D1-050			01-SS-[75-R73C18]-D1-050			01-SS-[75-R74C18]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	3.34			2.18			2.73			2.45			3.06			3.67		
Lead	5.99			2.7			5.01			3.08			4.29			4.39		

DATA SUMMARY TABLE

Sample ID	107248-07			107248-08			107248-09			107248-10			107248-11			107248-12		
Field ID	01-SS-[75-R72C16]-D1-050			01-SS-[75-R73C16]-D1-050			01-SS-[75-R73C15]-D1-050			01-SS-[75-R70C15]-D1-050			01-SS-[75-R72C15]-D1-050			01-SS-[75-R70C14]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	13.4			1.85			2.22			3.59			1.82			5.71		
Lead	7.68			5.5			4.32			3.92			3.67			7.51		

DATA SUMMARY TABLE

Sample ID	107248-13			107248-14			107248-15			107248-16			107248-17			107248-18		
Field ID	01-SS-[75-R72C14]-D1-050			01-SS-[75-R73C14]-D1-050			01-SS-[75-R73C140]-D3-050			01-SS-[75-R70C13]-D1-050			01-SS-[75-R71C13]-D1-050			01-SS-[75-R72C13]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	1.81			2.94			3.12			21.1			5			2.41		
Lead	3.14			5.3			5.43			52.5			4.14			3.33		

DATA SUMMARY TABLE

Sample ID	107248-19			107248-20			107248-21			107248-22			107248-23			107248-24		
Field ID	01-SS-[75-R70C12]-D1-050			01-SS-[75-R71C12]-D1-050			01-SS-[75-R72C12]-D1-050			01-SS-[75-R69C12]-D1-050			01-SS-[75-R69C11]-D1-050			01-SS-[75-R70C11]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	4.02			2.76			2.31			3.56			2.65			2.96		
Lead	4.3			4.31			2.88			6.77			3.98			4.48		

DATA SUMMARY TABLE

Sample ID	107248-25			107248-26			107248-27			107248-28			107248-29			107248-30		
Field ID	01-SS-[75-R71C11]-D1-050			01-SS-[75-R71C10]-D1-050			01-SS-[75-R70C10]-D1-050			01-SS-[75-R69C10]-D1-050			01-SS-[75-R68C10]-D1-050			01-SS-[75-R70C9]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	3.19			2.1			5.27			7.8			14.6			3.04		
Lead	4.64			2.36			5.14			16.6			15.1			3.78		

DATA SUMMARY TABLE

Sample ID	107248-31			107248-32			107248-33			107248-34			107248-35			107248-36		
Field ID	01-SS-[75-R69C9]-D1-050			01-SS-[75-R68C9]-D1-050			01-SS-[75-R71C9]-D1-050			01-SS-[75-R70C8]-D1-050			01-SS-[75-R69C8]-D1-050			01-SS-[75-R69C80]-D3-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	3.54			7.46			2.92			2.75			2.39			2.6		
Lead	4.73			8.37			4.32			4.77			3.09			3.39		

DATA SUMMARY TABLE

Sample ID	107248-37			107248-38			107248-39			107248-40			107248-41			107248-42		
Field ID	01-SS-[75-R68C8]-D1-050			01-SS-[75-R75C19]-D1-050			01-SS-[75-R74C19]-D1-050			01-SS-[75-R70C7]-D1-050			01-SS-[75-R69C7]-D1-050			01-SS-[75-R67C7]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002			7/11/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	6.32			3.6			3.23			30.2			3.98			3.06		
Lead	5.75			6.05			3.31			12.5			4.81			3.9		

DATA SUMMARY TABLE

Sample ID	107271-01			107271-02			107271-03			107271-04			107271-05			107271-06		
Field ID	01-SS-[PL-2] -D1-050			01-SS-[PL-3] -D1-050			01-SS-[PL-4] -D1-050			01-SS-[PL-5] -D1-050			01-SS-[PL-6] -D1-050			01-SS-[PL-7] -D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/12/2002			7/12/2002			7/12/2002			7/12/2002			7/12/2002			7/12/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	19.5			10.8			23.6			27.4			4.61			8.87		
Lead	20.7			10.7			22.2			27.2			3.09			4.74		

DATA SUMMARY TABLE

Sample ID	107271-07			107271-08			107271-09			107271-10			107271-11			107271-12		
Field ID	01-SS-[PL-8] -D1-050			01-SS-[PL-9] -D1-050			01-SS-[PL-10] -D1-050			01-SS-[PL-11] -D1-050			01-SS-[PL-12] -D1-050			01-SS-[PL-13] -D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/12/2002			7/12/2002			7/12/2002			7/12/2002			7/12/2002			7/12/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	109			59.3			34.7			26.4			79.7			46.5		
Lead	29.7			38.1			65.6			25			12.1			27.5		

DATA SUMMARY TABLE

Sample ID	107325-01			107325-02			107325-03			107325-04			107325-05			107325-06		
Field ID	01-SS-[75-R71C14]-D1-050			01-SS-[75-R71C15]-D1-050			01-SS-[75-R71C16]-D1-050			01-SS-[75-R71C17]-D1-050			01-SS-[75-R83C47]-D1-050			01-SS-[75-R84C47]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	4.53			2.71			7.77			7.34			4.64			4.85		
Lead	5.68			4.33			9.03			17			6.91			5.14		

DATA SUMMARY TABLE

Sample ID	107325-07			107325-08			107325-09			107325-10			107325-11			107325-12		
Field ID	01-SS-[75-R83C48]-D1-050			01-SS-[75-R84C48]-D1-050			01-SS-[75-R85C53]-D1-050			01-SS-[75-R85C52]-D1-050			01-SS-[75-R85C51-D1-050			01-SS-[75-R84C49]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	4.49			9.65			3.19			25.8			2.93			4.35		
Lead	5.52			4.65			5.9			32.4			3.27			4.51		

DATA SUMMARY TABLE

Sample ID	107325-13			107325-14			107325-15			107325-16			107325-17			107325-18		
Field ID	01-SS-[75-R85C56]-D1-050			01-SS-[75-R85C55]-D1-050			01-SS-[75-R85C54]-D1-050			01-SS-[75-R84C55]-D1-050			01-SS-[75-R86C58]-D1-050			01-SS-[75-R85C58]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	5.02			53.4			7.42			6.35			2.6			4.95		
Lead	5.84			30.1			4.37			7.06			3.7			6		

DATA SUMMARY TABLE

Sample ID	107325-19			107325-20			107325-21			107325-22			107325-23			107325-24		
Field ID	01-SS-[75-R84C57]-D1-050			01-SS-[75-R85C57]-D1-050			01-SS-[75-R83C57]-D1-050			01-SS-[75-R83C55]-D1-050			01-SS-[75-R83C550]-D3-050			01-SS-[75-R83C54]-D1-050		
Matrix	Soil			Soil			Soil			Soil			Soil			Soil		
Date Collected	7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002			7/16/2002		
Units	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**
Arsenic	2.07			8.08			39.5			4.05			5.07			5.72		
Lead	2.96			8.69			61.8			4.01			6.03			6.03		

DATA SUMMARY TABLE

Sample ID	107500-01			107500-02							
Field ID	02-SS-[PL-8-2]-D1-050			02-SS-[PL-12-2]-D1-050							
Matrix	Soil			Soil							
Date Collected	7/24/2002			7/24/2002							
Units	mg/kg			mg/kg							
Analyte	**RESULT**	**Q**	**RC**	**RESULT**	**Q**	**RC**					
Arsenic	10.5			1.97							
Lead	7.11			4.27							

Appendix D

Data Quality Summary

by Analysis Type

Data Quality Summary

TOTAL METALS (As & Pb only)

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**368**	-	-	
TOTAL QUALIFIED DATA POINTS:	**0**	0.0%	-	
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	

Qualified/Rejected as a result of:

No Qualified Data

Appendix E

Sample Table
Qualified Data Tables

by Data Quality Indicator and Analysis Type

Table 1 - Sample Table

Former DuPont Works Site

The following samples were collected and analyzed by all applicable methods:

Laboratory: **STL** **(Primary Laboratory)**

SDG: **106905**

Date Rec'd: **6/25/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q[1]	Bias	RC
SW6020									
106905-01	01-SS-[75-R76C24]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-02	01-SS-[75-R76C25]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-03	01-SS-[75-R77C25]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-04	01-SS-[75-R78C27]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-05	01-SS-[75-R76C26]-D1-050	01-SS-[75-R76C260]-D3-050	6/25/2002	Soil	NR*	NR*	none		
106905-06	01-SS-[75-R76C27]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-07	01-SS-[75-R76C28]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-08	01-SS-[75-R76C29]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-09	01-SS-[75-R76C30]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-10	01-SS-[75-R75C25]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-11	01-SS-[75-R75C26]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-12	01-SS-[75-R75C27]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-13	01-SS-[75-R75C28]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-14	01-SS-[75-R77C26]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-15	01-SS-[75-R77C27]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-16	01-SS-[75-R77C28]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-17	01-SS-[75-R77C29]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-18	01-SS-[75-R77C30]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-19	01-SS-[75-R77C31]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-20	01-SS-[75-R78C28]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-21	01-SS-[75-R78C29]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-22	01-SS-[75-R78C30]-D1-050		6/25/2002	Soil	NR*	NR*	none		
106905-23	01-SS-[75-R79C30]-D1-050	01-SS-[75-R79C300]-D3-050	6/25/2002	Soil	NR*	NR*	none		
106905-24	01-SS-[75-R76C260]-D3-050		6/25/2002	Soil	NR*	NR*	none		
106905-25	01-SS-[75-R79C300]-D3-050		6/25/2002	Soil	NR*	NR*	none		

SDG: **107084**

Date Rec'd: **7/2/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q[1]	Bias	RC
SW6020									
107084-01	01-SS-[75-R80C39]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-02	01-SS-[75-R80C40]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-03	01-SS-[75-R81C39]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-04	01-SS-[75-R81C40]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-05	01-SS-[75-R81C41]-D1-050	01-SS-[75-R81C410]-D3-050	7/2/2002	Soil	NR*	NR*	none		
107084-06	01-SS-[75-R81C410]-D3-050		7/2/2002	Soil	NR*	NR*	none		
107084-07	01-SS-[75-R81C42]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-08	01-SS-[75-R81C43]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-09	01-SS-[75-R81C44]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-10	01-SS-[75-R81C45]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-11	01-SS-[75-R82C39]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-12	01-SS-[75-R82C40]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-13	01-SS-[75-R82C41]-D1-050		7/2/2002	Soil	NR*	NR*	none		

Table 1 - Sample Table

Former DuPont Works Site

Laboratory: **STL** **(Primary Laboratory)**

SDG: **107084**

Date Rec'd: **7/2/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q[1]	Bias	RC
SW6020									
107084-14	01-SS-[75-R82C42]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-15	01-SS-[75-R82C43]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-16	01-SS-[75-R82C44]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-17	01-SS-[75-R82C45]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-18	01-SS-[75-R82C46]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-19	01-SS-[75-R83C40]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-20	01-SS-[75-R83C41]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-21	01-SS-[75-R83C42]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-22	01-SS-[75-R83C43]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-23	01-SS-[75-R83C44]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-24	01-SS-[75-R83C45]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-25	01-SS-[75-R83C46]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-26	01-SS-[75-R84C43]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-27	01-SS-[75-R84C44]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-28	01-SS-[75-R84C45]-D1-050		7/2/2002	Soil	NR*	NR*	none		
107084-29	01-SS-[75-R84C46]-D1-050		7/2/2002	Soil	NR*	NR*	none		

SDG: **107174**

Date Rec'd: **7/9/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q[1]	Bias	RC
SW6010									
107174-01	01-SS-[75-R79C38]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-02	01-SS-[75-R80C38]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-03	01-SS-[75-R81C38]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-04	01-SS-[75-R82C38]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-05	01-SS-[75-R82C37]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-06	01-SS-[75-R81C37]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-07	01-SS-[75-R80C37]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-08	01-SS-[75-R79C37]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-09	01-SS-[75-R79C36]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-10	01-SS-[75-R80C36]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-11	01-SS-[75-R81C36]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-12	01-SS-[75-R81C35]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-13	01-SS-[75-R80C35]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-14	01-SS-[75-R79C35]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-15	01-SS-[75-R78C35]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-16	01-SS-[75-R78C34]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-17	01-SS-[75-R79C34]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-18	01-SS-[75-R80C34]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-19	01-SS-[75-R80C33]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-20	01-SS-[75-R79C33]-D1-050	01-SS-[75-R79C330]-D3-050	7/9/2002	Soil	NR*	NR*	none		
107174-21	01-SS-[75-R79C330]-D3-050		7/9/2002	Soil	NR*	NR*	none		
107174-22	01-SS-[75-R78C33]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-23	01-SS-[75-R77C33]-D1-050		7/9/2002	Soil	NR*	NR*	none		

Table 1 - Sample Table

Former DuPont Works Site

Laboratory: **STL** **(Primary Laboratory)**

SDG: **107174**

Date Rec'd: **7/9/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q [1]	Bias	RC
SW6010									
107174-24	01-SS-[75-R77C32]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-25	01-SS-[75-R78C32]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-26	01-SS-[75-R79C32]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-27	01-SS-[75-R80C32]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-28	01-SS-[75-R79C31]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-29	01-SS-[75-R78C31]-D1-050		7/9/2002	Soil	NR*	NR*	none		
107174-30	02-SS-[75-R81C41-2]-D1-05		7/9/2002	Soil	NR*	NR*	none		

SDG: **107217**

Date Rec'd: **7/10/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q [1]	Bias	RC
SW6010									
107217-01	01-SS-[75-R72C19]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-02	01-SS-[75-R72C20]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-03	01-SS-[75-R74C20]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-04	01-SS-[75-R74C21]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-05	01-SS-[75-R74C22]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-06	01-SS-[75-R74C23]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-07	01-SS-[75-R74C24]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-08	01-SS-[75-R74C25]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-09	01-SS-[75-R73C19]-D1-050	01-SS-[75-R73C190]-D3-050	7/10/2002	Soil	NR*	NR*	none		
107217-10	01-SS-[75-R73C190]-D3-050		7/10/2002	Soil	NR*	NR*	none		
107217-11	01-SS-[75-R73C20]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-12	01-SS-[75-R73C21]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-13	01-SS-[75-R73C22]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-14	01-SS-[75-R76C22]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-15	01-SS-[75-R76C23]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-16	01-SS-[75-R75C20]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-17	01-SS-[75-R75C21]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-18	01-SS-[75-R75C22]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-19	01-SS-[75-R75C23]-D1-050		7/10/2002	Soil	NR*	NR*	none		
107217-20	01-SS-[75-R75C24]-D1-050		7/10/2002	Soil	NR*	NR*	none		

SDG: **107248**

Date Rec'd: **7/11/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q [1]	Bias	RC
SW6020									
107248-01	01-SS-[75-R72C17]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-02	01-SS-[75-R73C17]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-03	01-SS-[75-R74C17]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-04	01-SS-[75-R72C18]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-05	01-SS-[75-R73C18]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-06	01-SS-[75-R74C18]-D1-050		7/11/2002	Soil	NR*	NR*	none		

Table 1 - Sample Table

Former DuPont Works Site

Laboratory: **STL** **(Primary Laboratory)**

SDG: **107248**

Date Rec'd: **7/11/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q[1]	Bias	RC
SW6020									
107248-07	01-SS-[75-R72C16]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-08	01-SS-[75-R73C16]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-09	01-SS-[75-R73C15]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-10	01-SS-[75-R70C15]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-11	01-SS-[75-R72C15]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-12	01-SS-[75-R70C14]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-13	01-SS-[75-R72C14]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-14	01-SS-[75-R73C14]-D1-050	01-SS-[75-R73C140]-D3-050	7/11/2002	Soil	NR*	NR*	none		
107248-15	01-SS-[75-R73C140]-D3-050		7/11/2002	Soil	NR*	NR*	none		
107248-16	01-SS-[75-R70C13]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-17	01-SS-[75-R71C13]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-18	01-SS-[75-R72C13]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-19	01-SS-[75-R70C12]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-20	01-SS-[75-R71C12]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-21	01-SS-[75-R72C12]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-22	01-SS-[75-R69C12]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-23	01-SS-[75-R69C11]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-24	01-SS-[75-R70C11]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-25	01-SS-[75-R71C11]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-26	01-SS-[75-R71C10]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-27	01-SS-[75-R70C10]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-28	01-SS-[75-R69C10]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-29	01-SS-[75-R68C10]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-30	01-SS-[75-R70C9]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-31	01-SS-[75-R69C9]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-32	01-SS-[75-R68C9]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-33	01-SS-[75-R71C9]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-34	01-SS-[75-R70C8]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-35	01-SS-[75-R69C8]-D1-050	01-SS-[75-R69C80]-D3-050	7/11/2002	Soil	NR*	NR*	none		
107248-36	01-SS-[75-R69C80]-D3-050		7/11/2002	Soil	NR*	NR*	none		
107248-37	01-SS-[75-R68C8]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-38	01-SS-[75-R75C19]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-39	01-SS-[75-R74C19]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-40	01-SS-[75-R70C7]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-41	01-SS-[75-R69C7]-D1-050		7/11/2002	Soil	NR*	NR*	none		
107248-42	01-SS-[75-R67C7]-D1-050		7/11/2002	Soil	NR*	NR*	none		

SDG: **107271**

Date Rec'd: **7/12/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q[1]	Bias	RC
SW6010									
107271-01	01-SS-[PL-2] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-02	01-SS-[PL-3] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-03	01-SS-[PL-4] -D1-050		7/12/2002	Soil	NR*	NR*	none		

Table 1 - Sample Table

Former DuPont Works Site

Laboratory: **STL** **(Primary Laboratory)**

SDG: **107271**

Date Rec'd: **7/12/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q [1]	Bias	RC
SW6010									
107271-04	01-SS-[PL-5] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-05	01-SS-[PL-6] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-06	01-SS-[PL-7] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-07	01-SS-[PL-8] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-08	01-SS-[PL-9] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-09	01-SS-[PL-10] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-10	01-SS-[PL-11] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-11	01-SS-[PL-12] -D1-050		7/12/2002	Soil	NR*	NR*	none		
107271-12	01-SS-[PL-13] -D1-050		7/12/2002	Soil	NR*	NR*	none		

SDG: **107325**

Date Rec'd: **7/16/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q [1]	Bias	RC
SW6020									
107325-01	01-SS-[75-R71C14]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-02	01-SS-[75-R71C15]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-03	01-SS-[75-R71C16]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-04	01-SS-[75-R71C17]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-05	01-SS-[75-R83C47]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-06	01-SS-[75-R84C47]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-07	01-SS-[75-R83C48]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-08	01-SS-[75-R84C48]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-09	01-SS-[75-R85C53]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-10	01-SS-[75-R85C52]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-11	01-SS-[75-R85C51-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-12	01-SS-[75-R84C49]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-13	01-SS-[75-R85C56]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-14	01-SS-[75-R85C55]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-15	01-SS-[75-R85C54]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-16	01-SS-[75-R84C55]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-17	01-SS-[75-R86C58]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-18	01-SS-[75-R85C58]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-19	01-SS-[75-R84C57]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-20	01-SS-[75-R85C57]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-21	01-SS-[75-R83C57]-D1-050		7/16/2002	Soil	NR*	NR*	none		
107325-22	01-SS-[75-R83C55]-D1-050	01-SS-[75-R83C550]-D3-050	7/16/2002	Soil	NR*	NR*	none		
107325-23	01-SS-[75-R83C550]-D3-050		7/16/2002	Soil	NR*	NR*	none		
107325-24	01-SS-[75-R83C54]-D1-050		7/16/2002	Soil	NR*	NR*	none		

Table 1 - Sample Table

Former DuPont Works Site

Laboratory: **STL** **(Primary Laboratory)**

SDG: **107500**

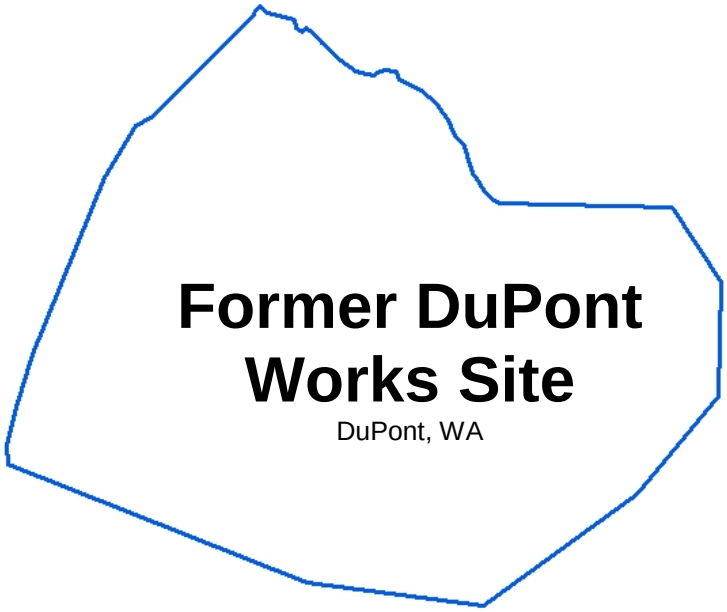
Date Rec'd: **7/24/2002**

Lab ID	Field ID	Field QC ID	Date Collected	Matrix	Temp Blank	Cooler °C:	Q [1]	Bias	RC
SW6010									
107500-01	02-SS-[PL-8-2]-D1-050		7/24/2002	Soil	NR*	NR*	none		
107500-02	02-SS-[PL-12-2]-D1-050		7/24/2002	Soil	NR*	NR*	none		

[1] If both a temperature blank and cooler temperature are recorded, the temperature blank will be considered most valid; if there is a significant discrepancy between the cooler temperature and the temperature blank, (> 5° C), the most extreme temperature will be used to qualify data for all associated samples - if the temperature is > 6° C, for all target analytes except metals and soil PCBs, flag all associated detected and non-detected results as estimated (J/UJ); for metals in water matrix only, if the temperature is < 2° C, flag all associated detected and non-detected results as estimated (J/UJ)

* NR = Not Reported

FINAL
Cleanup Action Plan



Prepared For:

Washington State Department of Ecology

Prepared By:

West Shore Corporation, NW
PIONEER Technologies Corporation

July 2003

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION 1-1

1.1 DECLARATION 1-1
1.2 APPLICABILITY 1-1
1.3 ADMINISTRATIVE RECORD 1-1
1.4 PREVIOUS WORK 1-1

SECTION 2 – SITE BACKGROUND 2-1

2.1 PROPERTY HISTORY 2-1
2.2 SITE INVESTIGATIONS 2-1
2.3 INTERIM REMEDIAL ACTIONS 2-1
2.4 RI/RA/FS 2-2
2.4.1 RI 2-2
2.4.2 RA 2-2
2.4.3 FS 2-2
2.5 PHYSICAL SITE CHARACTERISTICS 2-2
2.5.1 Topography 2-2
2.5.2 Geology 2-2
2.5.3 Hydrogeology 2-3
2.6 FUTURE LAND USE 2-3

SECTION 3 – NATURE AND EXTENT OF CONTAMINATION 3-1

3.1 SOIL QUALITY 3-1
3.1.1 Current Conditions 3-1
3.1.2 Lateral and Vertical Extent 3-1
3.2 GROUNDWATER QUALITY 3-1
3.2.1 DNT Data for Site Groundwater 3-1
3.2.2 DNT Data for Groundwater Discharging via Seeps to Puget Sound 3-1
3.2.3 Other Chemicals 3-1
3.3 SURFACE WATER QUALITY 3-2
3.4 FRESHWATER SEDIMENT 3-2

SECTION 4 – SOIL INDICATOR CHEMICALS AND CLEANUP STANDARDS 4-1

4.1 RISKS TO HUMAN HEALTH AND THE ENVIRONMENT 4-1
4.2 SELECTION OF SOIL INDICATOR CHEMICALS 4-1
4.3 OVERVIEW OF CLEANUP, SCREENING, AND REMEDIATION LEVELS 4-2
4.4 SITE CLEANUP, SCREENING, AND REMEDIATION LEVELS 4-2
4.4.1 Soil Cleanup Levels 4-2
4.4.2 Ecological Soil Screening Concentration for Lead 4-2
4.4.3 Soil Remediation Levels 4-2
4.4.4 Groundwater Cleanup Level for DNT 4-3
4.4.5 Summary of Cleanup and Remediation Levels 4-3
4.5 POINT OF COMPLIANCE 4-3
4.5.1 Soil Points of Compliance 4-3
4.5.2 Groundwater Point of Compliance 4-3

SECTION 5 – SELECTION OF A CLEANUP ACTION 5-1

5.1 REMEDIAL ACTION OBJECTIVES 5-1
5.2 APPLICABLE, RELEVANT AND APPROPRIATE REQUIREMENTS 5-1
5.3 SOIL CLEANUP ACTION ALTERNATIVE EVALUATION CRITERIA 5-3
5.3.1 Effectiveness 5-3
5.3.2 Implementability 5-3
5.3.3 Cost 5-3
5.4 GROUNDWATER CLEANUP ACTION ALTERNATIVES EVALUATION 5-3

5.5 REMEDIAL ALTERNATIVES EVALUATED AT THE SITE FOR SOIL 5-3
5.6 EVALUATION OF THE RETAINED CLEANUP ACTION ALTERNATIVES 5-4
5.6.1 Protective of Human Health and the Environment 5-4
5.6.2 Compliance with Cleanup Standards 5-4
5.6.3 Compliance with Applicable State and Federal Laws 5-4
5.6.4 Provision for Compliance Monitoring 5-5
5.6.5 Use of Permanent Solutions to the Maximum Extent Practicable 5-5
5.6.6 Provision of a Reasonable Restoration Time Frame 5-5
5.7 PREFERRED ALTERNATIVE FOR LARGE SCALE APPLICATIONS 5-5
5.8 PREFERRED ALTERNATIVE FOR SMALL SCALE APPLICATIONS 5-5
5.9 PREFERRED ALTERNATIVE FOR GROUNDWATER 5-5

SECTION 6 – PROPOSED CLEANUP ACTION DECISION 6-1

6.1 PROPOSED CLEANUP ACTION - LARGE SCALE APPLICATIONS 6-1
6.1.1 Remediation Units CM-1 through CM-8 and GC-1 through GC-9 6-1
6.1.2 Remediation Unit CM-09 6-1
6.1.3 Remediation Units OS-01, OS-2 NOC, OS-03 SOC and OS-04 6-1
6.2 DESCRIPTION OF PROPOSED CLEANUP ACTION - LARGE SCALE APPLICATIONS 6-1
6.2.1 Excavation 6-1
6.2.2 Soil Excavation Methods 6-2
6.2.3 Cap Construction 6-2
6.2.4 Haul/Stockpile 6-2
6.2.5 Verification Sampling and Analysis 6-2
6.3 PROPOSED CLEANUP ACTION – SMALL-SCALE APPLICATIONS 6-3
6.3.1 Miscellaneous Small Remediation Units: MSU-1, 2, 5, 6, 9, 11, 12, and 18-28 6-3
6.3.2 Miscellaneous Small Remediation Units: MSU-122-132 6-3
6.3.3 Miscellaneous Small Remediation Units: MSU-4, 8, 7, 10, 14-16, 76 and 87 6-3
6.3.4 Miscellaneous Small Remediation Units: MSU-3, 13, 29-68, 70-75, 77-86, 88-94, and 96-106 .. 6-3
6.3.5 Miscellaneous Small Remediation Units: MSU-133-138 6-4
6.3.6 Miscellaneous Small Remediation Units: MSU-69 and 108-120 6-4
6.3.7 Miscellaneous Small Remediation Units: NGRR-10 6-4
6.3.8 Miscellaneous Small Remediation Units: NGRR-01-09, 11-16, and 19-46 6-4
6.3.9 Miscellaneous Small Remediation Units: “Hot Spots” 6-5
6.3.10 Miscellaneous Small Remediation Units: MSUs-1-4, 8-16, 18, 20, 25-32, and 36 6-5
6.4 DESCRIPTION OF PROPOSED CLEANUP ACTION - SMALL SCALE APPLICATIONS 6-5
6.4.1 Off-Site Disposal at a Landfill 6-5
6.4.2 Cap/Cover 6-5
6.4.3 On-Site Deposition with Cap/Cover 6-6
6.4.4 Limited Use Alternatives 6-6
6.4.4.1 Capping 6-6
6.4.4.2 No Action 6-6
6.5 PROPOSED CLEANUP ACTION – GROUNDWATER 6-6
6.6 PERFORMANCE STANDARDS 6-6
6.6.1 Cap Construction 6-6
6.6.2 Soil Compliance Sampling 6-6
6.6.3 Groundwater Monitoring 6-7
6.6.4 Debris Evaluation 6-7
6.7 INSTITUTIONAL CONTROLS 6-7
6.8 EXPECTATIONS FOR CLEANUP ACTIONS 6-8
6.9 CLEANUP ACTION SCHEDULE 6-8
6.10 FIVE YEAR REVIEW 6-8

SECTION 7 – REFERENCES CITED 7-1

LIST OF TABLES

TABLE 4-1 – SOIL AND GROUNDWATER CLEANUP, SCREENING, AND REMEDIATION LEVELS FOR EACH LAND USE 4-4

LIST OF FIGURES

FIGURE 1-1 – SITE VICINITY AND LAYOUT 1-2
FIGURE 2-1 – FUTURE LAND USE AT THE SITE 2-4
FIGURE 6-1 – LARGE SCALE REMEDIATION UNITS 6-9
FIGURE 6-2 – MISCELLANEOUS SMALL REMEDIATION UNITS 6-10
FIGURE 6-3 – MISCELLANEOUS NARROW GAUGE RAILROAD REMEDIATION UNITS 6-11
FIGURE 6-4 – MISCELLANEOUS DEBRIS AND STOCKPILE REMEDIATION UNITS 6-12
FIGURE 6-5 – CLEANUP ACTION SCHEDULE 6-13

TABLE OF ACRONYMS AND ABBREVIATIONS

Acronym	Definition
TNT	2,4,6-Trinitrotoluene
BGS	Below Ground Surface
cPAH	Carcinogenic polycyclic aromatic hydrocarbon
CAP	Cleanup Action Plan
CL	Cleanup Level
COPCs	Chemicals of potential concern
DBD-OD sequence	Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift sequence
DNT	Dinitrotoluene (includes 2,4-dinitrotoluene and 2,6-dinitrotolune)
DuPont	E.I. duPont de Nemours and Company, Inc.
FS	Feasibility Study
IEUBK	Integrated Exposure Uptake Biokinetic Model for Lead
ISR	Interim Source Removal
msl	Mean sea level
MSUs	Miscellaneous Small Remediation Units
MTCA	Model Toxics Control Act
NGRR	Narrow Gauge Railroad
RME	Reasonable Maximum Exposure
RAO	Remedial Action Objectives
RI	Remedial Investigation
RL	Remediation Level
RU	Remediation Units
RCW	Revised Code of Washington
RA	Risk Assessment
Site	The Former DuPont Works Site
TPH	Total petroleum hydrocarbons
UST	Underground Storage Tank
WAC	Washington Administrative Code
Ecology	Washington State Department of Ecology
Weyerhaeuser	Weyerhaeuser Company

Section 1 – INTRODUCTION

This report presents the Washington State Department of Ecology's (Ecology) proposed cleanup action for the Former DuPont Works Site (Site), located in southwestern Pierce County, within the City of DuPont, Washington (Figure 1-1). This Cleanup Action Plan (CAP) is required as part of the site cleanup process under the Model Toxics Control Act (MTCA), Chapter 70.105D Revised Code of Washington (RCW), implemented by Ecology. The cleanup action decision is based on the Remedial Investigation (RI), Risk Assessment (RA) and Feasibility Study (FS) completed by the Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont) and other relevant documents in the administrative record.

This CAP includes the following:

- A summary of the history of operations, ownership, and disposal activities at the Site (Section 2).
- A summary of the efforts completed to date as Interim Source Removal (ISR) Actions (Section 2).
- A summary of the nature and extent of contamination as presented in the RI (Section 3).
- Cleanup and/or remediation levels for the Site, as presented in the RA, that are protective of human health and the environment (Section 4).
- Determination of the need for additional remedial actions (Section 5).
- Decision of which remedial alternatives, as presented in the FS, will be required for each cleanup unit (Section 6).

1.1 DECLARATION

Ecology has selected the remedies described in Section 6 because they will be protective of human health and the environment. Furthermore, the selected remedies are consistent with the preference of the State of Washington as stated in RCW 70.105D.030(1)(b) for permanent solutions. In addition, the chosen remedies were selected in accordance with the requirements identified in MTCA (Washington Administrative Code (WAC) 173-340-360 – Selection of Cleanup Actions).

1.2 APPLICABILITY

Cleanup and remediation levels specified in this CAP are applicable only to the Site. They were developed as a part of an overall remediation process under Ecology oversight, and, comply with MTCA.

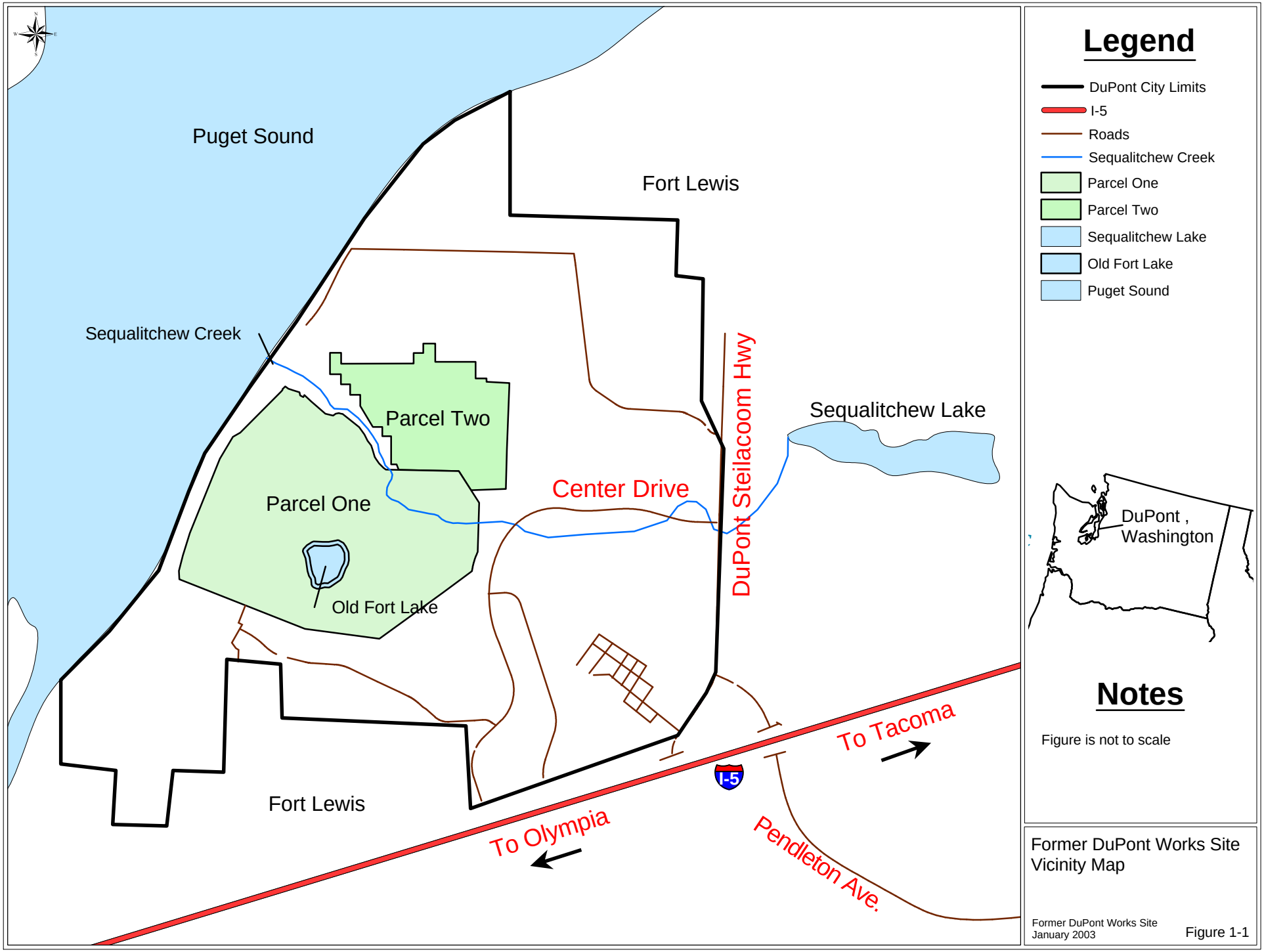
1.3 ADMINISTRATIVE RECORD

The documents used to make the decisions discussed in this CAP are on file in the administrative record for the Site. Major documents are listed in the reference section. The entire administrative record for the Site is available for public review by appointment at Ecology's Southwest Regional Office, located at 300 Desmond Drive, Lacey, WA 98504-7775. Please call (360) 407-6365 to set up an appointment.

1.4 PREVIOUS WORK

This CAP presents a brief description and history of the Site. Results from applicable Site studies and reports are summarized to provide background information pertinent to the CAP. These studies and reports include:

- URS and PIONEER Technologies Corporation. 2003. Remedial Investigation, Former DuPont Works Site, DuPont Washington.
- PIONEER Technologies Corporation. 2003. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, DuPont, Washington.
- West Shore Corporation NW. 2003. Feasibility Study for the Former DuPont Works Site, DuPont, Washington.



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure 1-1

Section 2 – SITE BACKGROUND

This Section summarizes the Site history, including the chronological history of the investigations, and ISR activities that have taken place at the Site, and describes the physical characteristics of the Site.

2.1 PROPERTY HISTORY

The Site property was originally used by Native Americans. In the 1830s, Europeans settled in the area and built Fort Nisqually, which was located in the northern portion of the Site. DuPont acquired the property in 1906 and constructed an explosives plant and the historical Village of DuPont as a company town for plant workers. DuPont continued to manufacture explosives at the Site until the mid 1970s, when it sold the property and adjacent areas to Weyerhaeuser. Weyerhaeuser still owns the Site. Activities at the Site during its operation and decommissioning resulted in the accumulation of residual chemicals in soils Site-wide and in groundwater.

2.2 SITE INVESTIGATIONS

Actions taken at the Site subsequent to the manufacturing shutdown in 1976 include the following:

- In 1985, Weyerhaeuser initiated studies to determine whether hazardous substances were present.
- In 1986, a Phase I Site Survey and Review was conducted to identify areas on Site that may be of environmental concern.
- In 1986, soil contamination was first documented and reported to Ecology.
- In 1987, a Phase II Site Characterization study was performed, which characterized the type, concentration, and distribution of constituents at 38 areas on the Site.
- In 1989, a Baseline Human Health Risk Assessment was performed using results of the Phase II survey.
- In 1991, Weyerhaeuser and DuPont signed a Consent Decree (No. 91 2 01703 1) with Ecology. This required the Companies to complete an RI, RA, and FS for the Site. The Site was divided into two main areas: Parcel 1 (approximately 636 acres); and Parcel 2 (approximately 205 acres).
- In 1994 and 1995, Draft RI, RA, and FS reports were submitted to Ecology.
- In 1996, based on the result of interim source removal actions, Ecology approved a Cleanup Action Plan (CAP) for Parcel 2 that provided for no further remediation activities except for the institutional controls to maintain the industrial use of Parcel 2.
- In 1997, Parcel 2 was deleted from the Consent Decree, and the deed restriction requiring institutional controls to maintain the industrial use was recorded in the Pierce County Auditor's Office.

Between 1990 and 2001, while studies and negotiations were ongoing, Weyerhaeuser and DuPont undertook interim source removal actions to clean up soil and/or debris at the Site, in accordance with MTCA and the Consent Decree.

2.3 INTERIM REMEDIAL ACTIONS

Interim source removals have been conducted at the Site between 1990 and 2001 to remove soil and/or debris from specific areas. These ISR activities were undertaken in specific areas referred to as RI areas, which were defined according to historical manufacturing and production operations at the Site. During the ISR activities soil at many of the pre-RI and RI sample locations was removed and therefore data collected previously from those locations are no longer representative of current Site conditions. Removal activities were summarized in a series of ISR memoranda (and in the RI) and have included:

- RI Areas 5 and 6 drum, soil, and debris removal.
- RI Area 8 pipeline, tank, and soil removal.

- Sympathetic detonations (RI Area 18).
- Dinitrotoluene-impacted soil removal (RI Areas 10, 18, 25, and 31).
- Lead and miscellaneous debris removal (RI Areas 18/1/2/3/4, 19C, 24, 30, 31, 35, and 36, and Maintenance Buildings).
- Mercury-impacted soil removal (RI Area 39).
- Underground storage tank (UST) removals (RI Areas 20A and 20B, 38, and 39).
- Site-wide lead and arsenic hot spot removal including RI Area LR-68.
- Lead and arsenic impacted soil removal [Foundation and Narrow Gauge Railroad (NGRR)].
- Lead and arsenic impacted soil removal (Sand and Topsoil Laydown Areas).

2.4 RI/RA/FS

In 2002, revised drafts of the RI, RA and FS were submitted to Ecology. These documents present the basis for the decisions selected for the Site and presented in this Report. A brief description of the contents of each of these reports is presented below.

2.4.1 RI

The purpose of the RI was to collect, develop, and evaluate sufficient information regarding the Site to enable completion of the RA and FS. The RI characterized the nature and extent of contamination in the context of past activities at the Site. The RI also presented the analytical data which represents current conditions at the Site (i.e. post-ISR) grouped by RI area.

2.4.2 RA

In contrast to the RI, the RA evaluated Site conditions in relation to future land uses at the Site. The RA identified default soil cleanup concentrations and presented the methods used to derive Site-specific soil concentrations that are protective of human health and ecological receptors based on future land use. These cleanup levels (CLs) and remediation levels (RLs) were compared to Site chemical concentrations in order to identify which areas required additional evaluation in the FS.

2.4.3 FS

The FS evaluated over 50 different remedial technologies or groupings of technologies to identify the alternatives with the highest potential to meet the remedial action objectives (RAOs). The FS divided the Site into Remediation Units (RUs) based upon land use type, or unique physical characteristics, and developed a preferred alternative for each RU. The FS provides the information necessary for Ecology to evaluate and select the remedial alternative appropriate for the Site.

2.5 PHYSICAL SITE CHARACTERISTICS

2.5.1 Topography

The Site is situated on a glacial outwash plain that slopes gently to the west, toward Puget Sound. The significant features of relief across the Site are numerous glacial kettles (depressions), the east-west trending valley of Sequalitchew Creek, a small kettle lake in the southern portion of the Former Production Area (Old Fort Lake), and the steep bluff bordering Burlington Northern Railroad property. The elevation across the Site generally ranges from 200 to 225 feet above mean sea level (msl), except within the kettles, which are at an elevation of approximately 150 feet msl. Before ISR activities began, the Site was generally forested with intermittent clearings associated with the former production activities.

2.5.2 Geology

The four major stratigraphic units beneath the Site include Steilacoom Gravels, Vashon Till, the Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift sequence (DBD-OB) (formerly known as the Kitsap Formation) (Borden and Troost. 2001) and the Salmon Springs Glaciation (formerly known as the Salmon Springs Formation). Each of these units is described below.

Steilacoom Gravels comprise the surficial soils of the Site and extend to a depth of 300 feet. The Steilacoom Gravels consist of brown and gray stratified sands and gravels, with cobbles and occasional zones of siltier sand. The Steilacoom Gravels were deposited during retreat of the final (Vashon) glaciation in high-energy meltwater channels, which originated in a proglacial lake located in the present-day Puyallup River valley to the east.

The Vashon Till consists of a high density, high silt content till that makes it a weak aquitard upon which perched water has been observed. The Vashon Till is underlain by the Vashon Advance Outwash, which was deposited by glacial rivers or streams during advance of the Vashon glaciation. The Advance Outwash becomes finer-grained with depth, typical of advance outwash deposition.

The DBD-OB sequence is a fine-grained, interglacial deposit approximately 70 to 100 feet thick, and very heterogeneous regionally. The DBD-OB sequence is present below the Site but does not extend west of a line about 2,500 feet inland from Puget Sound.

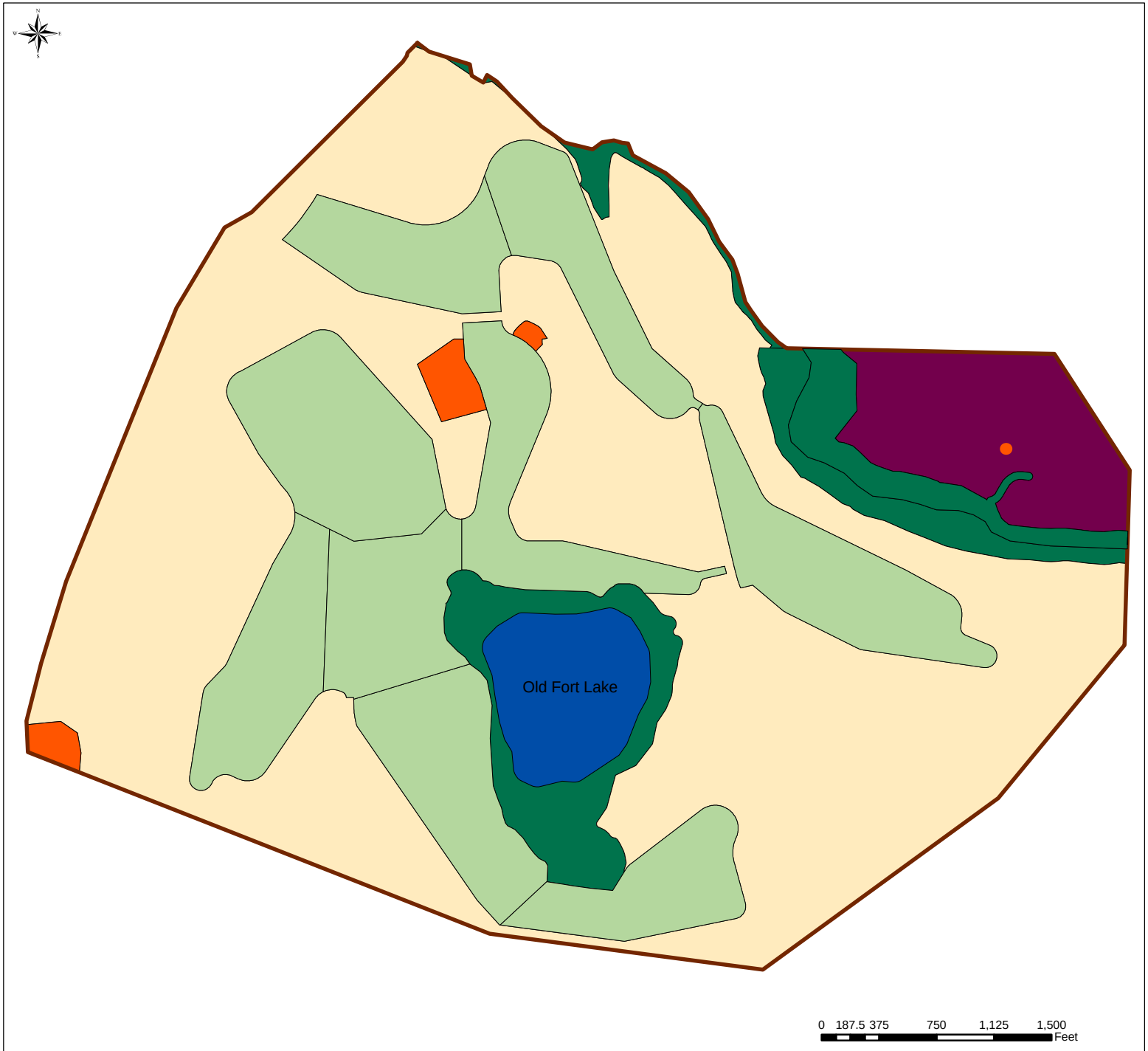
The Salmon Springs Glaciation was deposited in the glacial period preceding the DBD-OB sequence interglacial. Regional information indicates that the formation is 70 to 120 feet thick and contains zones of organic silt and till. The Sea Level Aquifer is a regionally extensive aquifer that occurs within the Salmon Springs Glaciation.

2.5.3 Hydrogeology

Two aquifers are present beneath the Site—the shallow Water Table Aquifer (20 to 105 feet below ground surface (BGS)) and the deeper Sea Level Aquifer (160 to 215 feet BGS). Across most of the Site, the relatively impermeable beds within the DBD-OB sequence (Aquitard) restricts vertical flow of groundwater and separates the Water Table Aquifer from the deeper Sea Level Aquifer. However, the Aquitard is absent west of the "Cutoff", which is located 500 to 2,500 feet east of Puget Sound, and roughly parallel to the shoreline. The "Cutoff" is the western extent of the Water Table Aquifer and is where the Sea Level Aquifer becomes unconfined (west of the "Cutoff"). Groundwater in the Water Table Aquifer flows toward the west-northwest, with local discharge via springs to upper Sequalitchew Creek. At the "Cutoff", groundwater from the Water Table Aquifer mixes with groundwater in the Sea Level Aquifer. Groundwater in the Sea Level Aquifer flows toward the west-northwest and discharges west of the "Cutoff" as seeps to Puget Sound.

2.6 FUTURE LAND USE

Based on a restrictive covenant, and in accordance with the Final Environmental Impact Statement, future use of the Site will include commercial, golf course, historical, industrial, and open space uses. Commercial use will include development of offices and retail businesses, and will comprise approximately 334 acres of the Site. Most of the soil in commercial areas will be covered by buildings, parking lots, and roads. The remaining soil will be either professionally landscaped or covered with sidewalks. A golf course will cover approximately 187 acres of the Site. Historical areas on the Site include the 1833 Hudson's Bay Fort, the Shell Midden Site, the 404 Burial Site, and the Methodist Mission site (the location of the monument is presented in Figure 2-1, but the size and actual location are unknown). In total, the 1833 Fort, Shell Midden, and the 404 site comprise approximately 4 acres of the Site. Weyerhaeuser, Weyerhaeuser Real Estate Company, City of DuPont, The Nisqually Point Defense Fund, Committee for the Preservation of the Nisqually Mission Historical Site, The Nisqually Delta Association and the DuPont Historical Society have a Memorandum of Agreement (MOA, 2000) that develops a framework for the establishment of a National Historic District along the banks of Sequalitchew Creek. This MOA is outside the scope of this cleanup project and will come into effect after the cleanup is completed. Industrial use may include activities ranging from mining gravel to development of light industrial facilities. The area proposed for industrial use is north of Sequalitchew Creek and comprises approximately 36 acres of the Site. Open space use, which will occur in four areas of the Site, will encompass a total area of approximately 73 acres. The location of each of these future use areas is presented in Figure 2-1.



Legend

- Industrial
- Historical
- Golf Course
- Old Fort Lake
- Open Space
- Parcel One
- Commercial

Notes

Historical location in the Industrial area is the Methodist Mission Marker. Actual location of the mission is unknown.

Future Land Use at the Site

Former DuPont Works Site
May 2003

Figure 2-1

Section 3 – NATURE AND EXTENT OF CONTAMINATION

This Section summarizes the nature and extent of contamination for each medium at the Site including soil, groundwater, surface water, and freshwater sediment. The potential risks associated with affected soils as well as the future land use for the Site are also presented.

3.1 SOIL QUALITY

3.1.1 Current Conditions

Site soil contamination occurs as two distinct categories; lead and arsenic impacted soils, and isolated small occurrences of total petroleum hydrocarbons (TPH), mercury, di and trinitrotoluenes (DNT/TNT), and/or benzo(a)pyrene impacted soils. This second group, referred to as Miscellaneous Small Remediation Units or MSUs throughout this Report, represents less than 1% of the total volume of contaminated soils.

3.1.2 Lateral and Vertical Extent

Lead and Arsenic Impacted Soils
Lead contamination was detected Site-wide. Arsenic contamination was generally detected within 25 feet of the former NGRR track beds but can occur in other discrete areas of the Site. The vertical extent of those chemicals was generally confined to a depth of less than 1 foot BGS in all areas except where acid was discharged, drywell locations, some production-related foundations, and disposal areas. The vertical extent was generally limited to a depth of less than 10 feet BGS in these areas.

Miscellaneous Small Units
The lateral extent of MSU soils was generally limited to production building foundations and waste disposal areas. The vertical extent of chemicals was generally confined to a depth of less than 1 foot BGS in all areas except where acid was discharged, drywell locations, some production-related foundations, and disposal areas. The vertical extent was generally limited to a depth of less than 10 feet in these areas. Debris painted with lead-based paint occur in soils throughout the Site. The majority of these occurrences is limited to production foundations and waste disposal areas but can occur in other discrete areas of the Site.

3.2 GROUNDWATER QUALITY

3.2.1 DNT Data for Site Groundwater

DNT is the only chemical that is of potential concern in groundwater. All other chemicals are either below levels of concern, were not detected, or are below background concentrations. Data from 34 rounds of combined pre-RI and RI groundwater sampling at 30 well locations indicate that low DNT concentrations have been consistently detected in 6 of 30 Site groundwater monitoring locations.

3.2.2 DNT Data for Groundwater Discharging via Seeps to Puget Sound

Site groundwater is discharging to the intertidal area of Puget Sound. The seep groundwater discharge is naturally saline due to saltwater intrusion, which disqualifies these seeps as drinking water sources in accordance with MTCA (the locations are also submerged at high tide). Two visible and accessible locations, Seep 1 and Seep 2, were sampled and total DNT has ranged from nondetect to 0.27 µg/L in the 25 samples collected from SEEP 1. DNT was not detected in SEEP 2. All detected DNT concentrations at SEEP 1 are at least 33 times lower than the surface water protective concentration of 9.1 µg/L.

3.2.3 Other Chemicals

In 1988, nitrate was detected in three Site monitoring wells. Because one of the monitoring wells is located along the eastern (upgradient) edge of the Site, off-Site sources of nitrate (such as animal pasturing) are possible. All three wells have had relatively low nitrate concentrations since 1988. Total cPAH concentrations in groundwater have all been low. With the exception of naturally occurring aluminum concentrations (also detected in background groundwater samples), all other dissolved metals were detected at low concentrations.

3.3 SURFACE WATER QUALITY

Three surface water bodies—Puget Sound, Sequalitchew Creek, and Old Fort Lake—occur within or adjacent to the Site. Puget Sound is a large saltwater body west of the Consent Decree area. Puget Sound directly or indirectly receives all groundwater and surface water discharge from the Site. Sequalitchew Creek is a perennial stream that originates in Sequalitchew Lake east of the Site and discharges into Puget Sound. In the dry season, the upper and lower reaches of the creek within the Site are dry. Old Fort Lake is a small glacial kettle lake that has no inlet or outlet. The lake is fed by groundwater from the Water Table Aquifer, and the lake level is an expression of the Water Table Aquifer.

Of the wide range of chemicals sampled for in Site surface water, only dissolved lead and dissolved copper were detected at elevated concentrations in one or more samples collected from Old Fort Lake and Sequalitchew Creek. Dissolved copper was the only chemical with confirmed elevated detections. Dissolved lead was detected infrequently at marginally elevated concentrations in both Old Fort Lake and Sequalitchew Creek. None of the lead detections were confirmed in preceding or subsequent sampling rounds. In addition, the concentrations of dissolved copper and lead detected in on-Site surface water are within the range of background concentrations detected in an area background (upstream) sampling location in Sequalitchew Creek (SW-4). Concentrations of dissolved copper and lead detected in on-Site surface water are within the range of background concentrations detected in other regional rivers and streams in Pierce County.

Based on these data, Ecology provided verbal agreement that No Further Action was required for surface water at the Site (pending the submittal of a summary of the data), indicating that chemicals detected in Site surface water do not require cleanup or any further action (Ecology 1996).

3.4 FRESHWATER SEDIMENT

Of the wide range of chemicals for which freshwater sediment samples were analyzed, no chemicals were detected at elevated concentrations. Lead was detected in Old Fort Lake sediments but at relatively low concentrations. Detected concentrations of metals were comparable to available background sediment data for the Puget Sound region.

Based on these data, Ecology provided verbal agreement that No Further Action was required for freshwater sediment at the Site (pending the submittal of a summary of the data), indicating that chemicals detected in Site freshwater sediment do not require cleanup or any further action (Ecology 1996).

Section 4 – SOIL INDICATOR CHEMICALS AND CLEANUP STANDARDS

This Section identifies the indicator chemicals and summarizes the Site-specific cleanup and remediation levels. MTCA requires the establishment of cleanup standards for individual sites. Cleanup standards consist of cleanup or remediation levels and points of compliance. Cleanup and remediation levels (CLs and RLs, respectively) determine the concentration at which a chemical does not pose a threat to human health or the environment. Material that exceeds a CL or RL is addressed through a remedy that prevents exposure to the material. Points of compliance represent the locations on the Site where CLs or RLs must be met.

4.1 RISKS TO HUMAN HEALTH AND THE ENVIRONMENT

Risks to human health and the environment are associated with potential exposure to residual chemicals in soil and debris present at the Site. Residual chemicals are those chemicals that remain in the soil, after the explosives manufacturing facility was decommissioned and after ISRs. Future users of the Site may be exposed via incidental soil ingestion. Ecological receptors may be exposed via ingestion of soil, plants, or soil biota from the areas where there are residual chemicals in soil.

4.2 SELECTION OF SOIL INDICATOR CHEMICALS

MTCA defines the criteria used to determine whether a chemical should be retained as an indicator chemical for the Site. When defining CLs or RLs at a site contaminated with several hazardous chemicals, Ecology may eliminate from consideration those contaminants that contribute a small percentage of the overall risk to human health and the environment. WAC 173-340-703(2) provides that a chemical may be eliminated from further consideration based on:

- The frequency of detection. If a compound is detected in 5% or less of samples analyzed, it may be appropriate to eliminate it;
- The concentration of the chemical. Chemicals with concentrations marginally above their cleanup standards may not be important in consideration of overall hazard and risk;
- The toxicity of the chemical. It may be suitable to delete chemicals of low toxicity;
- Environmental fate. Chemicals that readily degrade in the environment may not be of importance to overall hazard or risk. Conversely, those with highly-toxic degradation products should be included in an analysis of overall hazard and risk;
- The natural background levels of the chemical. MTCA regulates risks due to chemicals found at contaminated waste sites. The risks caused by chemicals at background concentrations are not addressed by MTCA;
- The mobility and potential for exposure to the chemical. Chemicals may be eliminated if the values for these factors are low.

A preliminary list of indicator chemicals was identified for the Site by eliminating from consideration those chemicals that were not detected in any sample. Following this screening step, there were 38 detected chemicals in surface soil and 52 detected chemicals in subsurface soil. A second screening step was performed in which the maximum detected concentration for each chemical was compared to the most conservative (i.e., the lowest) soil CLs and screening concentrations presented in MTCA for human and ecological receptors. Following this screening step, there were 18 indicator chemicals identified for surface soil, 20 indicator chemicals identified for subsurface soil, and 3 COPCs identified for subsurface soil greater than 15 feet BGS at the Site.

The RA evaluated all of the indicator chemicals to determine which chemicals posed unacceptable risks. The RA (see PIONEER 2003) identified the following chemicals as being of concern:

- Lead – Site wide.
- Arsenic – Site wide.

- TPH (Bunker C and non-Bunker C) – Four locations on-Site.
- Mercury – Five locations on-Site.
- TNT – Five locations on-Site.
- Benzo(a)pyrene – One location on-Site.
- Aldrin – One location on-Site.

The CLs or RLs that were developed in the RA for each of these chemicals is presented in the following sections.

4.3 OVERVIEW OF CLEANUP, SCREENING, AND REMEDIATION LEVELS

CLs, screening levels, and RLs were used to assess potential impacts to human health and the environment at the Site. CLs specified in MTCA are concentrations that are protective of humans for specific exposure scenarios (i.e., industrial land use and unrestricted future land use) (WAC 173-340-200). To supplement these MTCA table values, Ecology has approved Site-specific CLs for a select group of chemicals (including a Site-specific CL for arsenic in soil based on the area background concentration). In addition, Ecology performed an evaluation of the Site and identified a screening concentration for lead to evaluate the potential for terrestrial ecological impacts.

RLs are Site-specific levels based on protection of human health that are developed using exposure assumptions and other media-specific factors that reflect future Site conditions. RLs are calculated using human health risk assessment procedures and Site-specific information, as specified in WAC 173-340-708. In order to apply RLs institutional controls (such as deed restrictions) or engineering controls (such as a cap) are implemented for properties with residual contamination to ensure that the exposure conditions assumed in the derivation of these levels are maintained at the Site in the future.

4.4 SITE CLEANUP, SCREENING, AND REMEDIATION LEVELS

The RI documents the presence of contamination in soil and groundwater at the Site. CLs or RLs that have been developed for each of these media are presented below and summarized in Table 4-1.

4.4.1 Soil Cleanup Levels

CLs for soil are published by Ecology, and are default values that can be used at any site. These default CLs were applied to the industrial area located north of Sequalitchew Creek. These levels assume adult workers would be exposed to hazardous chemicals through incidental soil ingestion, and were calculated in accordance with WAC 173-340-745. Another CL used at the Site was 2,000 mg/kg for TPH (non-bunker C), which was obtained from the MTCA Method A Table, in WAC 173-340-900. In addition, Site-specific CLs for mercury, TPH (bunker C), total DNT, and TNT were approved for use at the Site by Ecology.

An area background soil concentration was determined and used to develop a CL for arsenic per WAC 173-340-709. As part of the RI investigation, soil samples were collected outside of the Consent Decree boundary to define the "Site Area Background" level of arsenic. As stipulated in WAC 173-340-709, twenty soil samples were collected to statistically establish area background levels. Based on the results of these samples, the Site area background concentration for arsenic is 32 mg/kg. This value represents the 90^{th} percentile value of the distribution of the background samples.

4.4.2 Ecological Soil Screening Concentration for Lead

Ecology has performed an evaluation of the Site and determined that lead is the indicator chemical for potential terrestrial ecological impacts. As part of this evaluation, Ecology determined that based on Site-specific information the potential species groups of concern included ground-feeding birds and herbivorous small mammals. The resulting soil lead screening level identified by Ecology is intended to be protective of wildlife, including birds and small mammals.

4.4.3 Soil Remediation Levels

The equations used to calculate RLs for all chemicals except lead were obtained from WAC 173-340-740. Soil RLs were calculated using these equations, considering the potential reasonable maximum exposure (RME) for humans under each future land use. For lead, EPA and Ecology have chosen to evaluate the potential adverse health effects

using a physiologically-based model. The model currently used by EPA for establishing lead RLs in non-residential areas is the Adult Lead Model (EPA, 1996). Using this model, Site-specific RLs were developed for golf course worker, commercial worker, and industrial worker scenarios. A hybrid approach using both the Adult Lead Model and the child Integrated Exposure Uptake Biokinetic Model for Lead (IEUBK), was used to derive a RL for open space areas.

4.4.4 Groundwater Cleanup Level for DNT

The groundwater CL for DNT was calculated in accordance with MTCA Method B, WAC 173-340-720. This default value was calculated based on the assumption that someone is living at the Site and their drinking water is obtained from groundwater.

4.4.5 Summary of Cleanup and Remediation Levels

Table 4-1 presents the soil cleanup, screening, and remediation levels for each land use and applicable media. These values were used in the RA and FS to evaluate the effectiveness of remedial actions for each chemical and RU.

4.5 POINT OF COMPLIANCE

The MTCA Cleanup Regulation defines the point of compliance as the point or points where CLs or RLs shall be attained (WAC 173-340-200). Once CLs or RLs are met at the point of compliance, the Site is no longer considered a threat to human health or the environment.

4.5.1 Soil Points of Compliance

For soil CLs and RLs the point of compliance is established in soils throughout the Site. The actual points of compliance will be located on the Site-wide grid nodes that are 75 feet apart. In instances where there are MSUs located 0 to 1 foot BGS, the point of compliance will be a 50 x 50 foot area that will be centered on or around each MSU area. The point of compliance for MSUs at a depth greater than 1 foot BGS will be 15 x 15 foot boxes and samples will be collected from each sidewall and the bottom of the excavation.

4.5.2 Groundwater Point of Compliance

For groundwater, each well is a point of compliance.

Table 4-1 – Soil and Groundwater Cleanup, Screening, and Remediation Levels for each Land Use

Chemical	Commercial and Golf Course Cleanup and Remediation Levels (mg/kg)	Golf Course Cap Remediation Levels (mg/kg)	Historical and Open Space Cleanup and Remediation Levels (mg/kg)	Industrial Cleanup and Remediation Levels (mg/kg)	Groundwater Screening Concentration (ug/L)
Explosives					
2,4,6-Trinitrotoluene	1.75[1.2]	1.75[1,2]	1.75[1]	1.75[1]	NA
DNT	3.0[3]	3.0[3]	3.0[3]	3.0[3]	0.13
Petroleum Hydrocarbons					
TPH (418.1) (Bunker C)	7,600[4]	7,600[4]	7,600[4]	7,600[4]	NA
TPH (418.1) (heavy oil, non-Bunker C)	2,000[5]	2,000[5]	2,000[5]	2,000[5]	NA
Inorganics					
Arsenic	60[6,7]	530[6,7]	32[8]	90[9]	NA
Lead	118[10]	4,100[6]	118[10]	1,000[11]	NA
Mercury	24[6]	24[6]	24[6]	24[6]	NA
PAHs					
Benzo(a)Pyrene	12.6[7]	109[7]	0.71[7]	18[10]	NA
Pesticides/PCBs					
Aldrin	5[6]	47[6]	0.3[6]	7.7[9]	NA

Notes:
[1] Soil concentration protective of groundwater approved by Ecology.
[2] Value is a cleanup level.
[3] Soil concentration for DNT (2,4-DNT plus 2,6-DNT) protective of human health and groundwater approved by Ecology.
[4] Ecology agreement for TPH that originated as Bunker C fuel. One Area has TPH that did not originate from Bunker C fuel. Those TPH data were compared to the MTCA Table A value of 2,000 mg/kg for heavy oils.
[5] MTCA Method A value for heavy oil.
[6] Based on Site-specific exposure factors approved by Ecology.
[7] Value is a remediation level.
[8] Based on Site-specific background concentration approved by Ecology.
[9] Calculated using MTCA Method C parameters.
[10] Ecological screening concentration.
[11] MTCA default value used for Parcel 2.

Section 5 – SELECTION OF A CLEANUP ACTION

5.1 REMEDIAL ACTION OBJECTIVES

Remedial Action Objectives (RAOs) are statements describing the actions necessary to protect human health and the environment through eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route. They are developed considering the appropriate CLs or RLs for each indicator chemical, the characteristics of the contaminated medium, the characteristics of the chemicals present, the migration and exposure pathways, the potential receptor points and other relevant regulations.

Soil and groundwater are the contaminated media of concern at the Site. People may be exposed to contaminated soil via ingestion while ecological receptors may be exposed via ingestion of soil, plants, and soil biota. Due to existing deed restrictions eliminating residential development, the most likely potentially exposed populations would be on-Site workers and older children who will have access to open space areas.

Given these potentially exposed populations and exposure pathways, the RAOs for the Site center around the prevention or minimization of exposure of humans and ecological receptors to impacted soils, but include:

- Achieving CLs or RLs that will be protective of human health and the environment; and
- Compliance with chemical-, location-, and action-specific Applicable or Relevant, and Appropriate Requirements (ARARs).

5.2 APPLICABLE, RELEVANT AND APPROPRIATE REQUIREMENTS

MTCA requires that all cleanup actions comply with applicable state and federal law, and further states that the term 'applicable state and federal laws' shall include legally applicable requirements and those requirements that the department determines are 'relevant and appropriate requirements' (WAC 173-340-710(1)). This section discusses applicable state and federal law, relevant and appropriate requirements, and local permitting requirements, which were considered in the FS and were of primary importance in selecting cleanup requirements in this CAP. If other requirements are identified at a later date, they will be applied to the cleanup actions at that time.

MTCA provides an exemption from the procedural requirements of several state laws, and from any laws authorizing local government permits or approvals for remedial actions (RCW 70.105D.090). Substantive requirements must be met. The substantive requirements currently known are incorporated into this CAP. If further additional substantive requirements are identified, the necessary steps to incorporate them will be taken. The procedural requirements of the following state laws are exempted:

- Chapter 70.94 RCW, Washington Clean Air Act;
- Chapter 70.95 RCW, Solid Waste Management, Reduction, and Recycling;
- Chapter 70.105 RCW, Hazardous Waste Management;
- Chapter 75.20 RCW, Construction Projects in State Waters;
- Chapter 90.48 RCW, Water Pollution Control; and
- Chapter 90.58 RCW, Shoreline Management Act of 1971.

WAC 173-340-710(4) sets forth the criteria that Ecology evaluates when determining whether certain requirements are relevant and appropriate for a cleanup. Those criteria are as follows:

(a) Whether the purpose for which the statute or regulations under which the requirement was created is similar to the purpose of the cleanup action;

(b) Whether the media regulated or affected by the requirement is similar to the media contaminated or affected at the site;

(c) Whether the hazardous chemical regulated by the requirement is similar to the hazardous chemical found at the site;

(d) Whether the entities or interests affected, or protected, by the requirement are similar to the entities or interests affected by the site;

(e) Whether the actions, or activities, regulated by the requirement are similar to the cleanup action contemplated at the site;

(f) Whether any variance, waiver, or exemption to the requirements are available for the circumstances of the site;

(g) Whether the type of place regulated is similar to the site;

(h) Whether the type and size of structure or site regulated is similar to the type and size of structure, or site, affected by the release or contemplated by the cleanup action; and

(i) Whether any consideration of use or potential use of affected resources in the requirement is similar to the use, or potential use, of the resources affected by the site, or contemplated cleanup action.

The following lists present the state and federal laws that contain the ARARs that apply to the cleanup action for the Former DuPont Works Site.

Potential CLs and Chemical-Specific ARARs

- The Model Toxics Control Act Chapter 173-340 WAC.

Potential Location-Specific Requirements

- Washington State Shoreline Management Act (Chapter 90.58 RCW; Chapters 173-18, 173-22, and 173-27 WAC).
- Pierce County Shoreline Management Use Regulation (Title 20).
- Pierce County Development Regulations—Critical Areas (Title 18E).
- Washington State Hydraulic Projects Approval (Chapters 75.20.100 Through 75.20.160 RCW; Chapter 220-110 WAC).
- The Fish and Wildlife Coordination Act.
- Endangered Species Act (16 USC 1531 et seq.; 50 CFR Parts 17, 225, and 402).
- Native American Graves Protection and Repatriation Act (25 USC 3001 Through 3013; 43 CFR Part 10) and Washington's Indian Graves and Records Law (Chapter 27.44 RCW).
- Archaeological Resources Protection Act (16 USC 470aa et seq.; 43 CFR Part 7).

Potential Action-Specific Requirements

- Washington Dangerous Waste Regulations (Chapter 173-303 WAC).
- Solid Waste Management Act (Chapter 70.95 RCW; Chapter 173-304 and 173-351 WAC).
- Water Quality Standards for Surface Waters of the State of Washington (Chapters 90.48 and 90.54 RCW; Chapter 173-201A WAC).
- Federal, State, and Local Air Quality Protection Programs.
- Department of Transportation Hazardous Materials Regulations (40 CFR Parts 171 Through 180).
- Occupational Safety and Health Act (29 CFR 1910).

- Washington State Water Well Construction Act (Chapter 18.104 RCW; Chapter 173-160 WAC).

5.3 SOIL CLEANUP ACTION ALTERNATIVE EVALUATION CRITERIA

Cleanup alternatives designed to meet RAOs were evaluated as part of the FS for the Site. The following criteria were used to screen technologies and processes to determine if the alternatives selected represent those that are permanent to the maximum extent practicable as defined by WAC 173-340-360 (3)(b).

5.3.1 Effectiveness

Effectiveness involves those criteria that evaluate the state of development of the technology, the ability to protect human health and the environment, and identifies potential negative impacts associated with the technology. Under this heading are the following MTCA criteria:

- Protectiveness: This evaluation considers the degree of protection each technology provides to human health and the environment, the extent to which reductions in risk, toxicity, and/or mobility are expected to be achieved, the time required to reduce risk and obtain cleanup standards, the off-Site and on-Site risks resulting from the implementation of the alternative, and the degree of improvement of the overall environmental quality.
- Permanence: This evaluation considers the degree to which the alternative permanently reduces the toxicity, mobilization or volume of the contaminants. This evaluation considers the materials treated, quantity of material treated, degree of toxicity, mobility, and volume reduction, degree to which the treatment is irreversible, and residuals type and quantity.
- Long Term Effectiveness: This evaluation considers the effectiveness of the process during the time when contaminant concentrations remain on-Site that are greater than CLs or RLs, the magnitude of risk with the alternative in place, and the adequacy and reliability of any Site controls.
- Management of Short Term Risks: This evaluation considers the effectiveness of the process in dealing with the potential impacts to human health and the environment during the implementation phase.
- Consideration of Public Concerns: This evaluation considers community concerns associated with the alternative, and how those concerns will be addressed.

5.3.2 Implementability

Implementability involves the technical and administrative feasibility of constructing, operating, and maintaining a particular remediation technology. Technical implementability has already been used in the preliminary screening. At this stage, the emphasis is placed on the institutional aspects of implementability, such as the ability to obtain the necessary permits, the availability of treatment, storage, and disposal services, and the availability of necessary equipment and skilled workers to implement the technology.

5.3.3 Cost

The cost for remediation work includes such items as installation and operation of process equipment, excavation, and disposal fees. The cost analysis is made on the basis of engineering judgment, and each process is evaluated as to whether costs are high, medium, or low relative to other process options in the same technology category.

5.4 GROUNDWATER CLEANUP ACTION ALTERNATIVES EVALUATION

Dinitrotoluene (DNT) has been detected in groundwater below the Site at concentrations above drinking water standards but consistently below the MTCA Method B value. Two alternatives where evaluated in the FS for the remediation of groundwater. They were Active Groundwater Treatment and Natural Restoration.

5.5 REMEDIAL ALTERNATIVES EVALUATED AT THE SITE FOR SOIL

The FS evaluated over 50 different technologies or combinations of technologies using the criteria presented in Secton 5.3 and recommended the following four remedial alternatives for detailed analysis. These alternatives where judged to be appropriate for large-scale applications (ranging from greater than 2 acres in size to total Site remediation) only.

- No Action;
- On-Site Deposition with Cap (i.e., highly durable, impermeable, engineered material) and Cover (i.e., clean soil layer that may include gravel layer);
- Off-Site Disposal at a Landfill; and
- Wet Screening with On-Site Deposition with Cap and Cover and Disposal of the Residual Soils at a Landfill.

The FS determined that there were five alternatives that should be further evaluated for small-scale applications (less than 2 acres in size or 5,000 cubic yards in volume). In addition to the No Action alternative, which may have limited applications and small isolated occurrences of chemicals that were not either used or generated as part of the manufacturing activities of decommissioning of the buildings at the Site, the four primary remedial alternatives (to be used on a small-scale basis) considered in the detailed analysis were as follows:

- Cap;
- Cover;
- Cap/Cover; and
- Off-Site Disposal at a Landfill.

The FS performed a detailed analysis of these remedial alternatives and recommended on-Site Deposition with Cap and Cover as the preferred alternative for large-scale applications and a combination of the above alternatives for small scale applications:

5.6 EVALUATION OF THE RETAINED CLEANUP ACTION ALTERNATIVES

The retained alternatives were evaluated using the following six criteria:

- Protection of Human Health and the Environment;
- Compliance with Cleanup Standards;
- Compliance with Applicable State and Federal Laws;
- Provision for Compliance Monitoring;
- Use of Permanent Solutions to the Maximum Extent Practicable; and
- Provision of a Reasonable Restoration Time Frame

The results of the evaluation for each criterion is presented below.

5.6.1 Protective of Human Health and the Environment

All alternatives, except No Action, protect human health and the environment. Ingestion of contaminated soil by on-Site workers and ingestion of soil, plants, or soil biota by ecological receptors are the primary pathways of concern. By removing the contaminated soils from the Site or covering them with a cap/cover system, these pathways are either eliminated or controlled. Institutional controls will prevent disruption to the cap/cover and thereby prevent exposure to contaminated soils. No Action does not meet cleanup standards and, thus, does not meet this threshold criterion.

5.6.2 Compliance with Cleanup Standards

All preferred alternatives, except No Action, achieve cleanup standards through either off-Site disposal or on-Site containment actions. No action does not meet cleanup standards and, thus, does not meet this threshold criterion.

5.6.3 Compliance with Applicable State and Federal Laws

All the retained alternatives comply with applicable state and federal laws as identified above, except No Action.

5.6.4 Provision for Compliance Monitoring

All alternatives could address these requirements by providing a program for compliance monitoring. A compliance monitoring plan, for groundwater, has been operational for the Site since 1989, will be updated as needed, and will be continued until CLs are met.

5.6.5 Use of Permanent Solutions to the Maximum Extent Practicable

To determine whether a cleanup action uses permanent solutions to the maximum extent practicable, the disproportionate cost analysis specified in the regulation was used (WAC 173-340-360(3)(e)). The analysis compared the costs and benefits of the cleanup action alternatives and requires the consideration of several factors. Costs are disproportionate to the benefits if the incremental costs of the alternative over that of a lower cost alternative exceed the incremental degree of benefits achieved by the alternative over that of the lower cost alternative. Based on the analysis and information completed in the FS, it has been determined that preferred alternative (On-Site Deposition with a Cap/Cover) in comparison to the other alternatives for large scale applications uses permanent solutions to the maximum extent practicable.

5.6.6 Provision of a Reasonable Restoration Time Frame

WAC 173-340-360(4) describes the specific requirements and procedures for determining whether a cleanup action provides for a reasonable restoration time frame, as required under subsection (2)(b)(ii). The factors that are used to determine whether a cleanup action provides a reasonable restoration time frame are set forth in WAC 173-340-360(4)(b). On-Site Deposition with a Cap/Cover has the shortest time frame of those retained for final analysis in the FS.

5.7 PREFERRED ALTERNATIVE FOR LARGE SCALE APPLICATIONS

Based on the above analysis, On-Site Deposition with Cap/Cover is the preferred alternative, followed by Wet Screening with On-Site Deposition, with Cap and Cover, and Disposal of the Residual Soils at a Landfill. Off-Site Disposal at a Landfill is the high cost alternative. No action has a low cost but does not meet cleanup standards and, thus, cannot be used except, possibly, in special circumstances, e.g., areas of ecological sensitivity.

5.8 PREFERRED ALTERNATIVE FOR SMALL SCALE APPLICATIONS

Like the FS, this CAP did not consider cost in the evaluation of alternatives for small scale applications. As such, Cap/Cover and Excavation, and Off-Site Disposal at a Landfill were selected as two of the three proposed preferred alternatives. On-Site Deposition with Cap/Cover was added as the third preferred alternative after further consideration. Capping could have limited application and No Action could be considered in areas of ecological sensitivity and in areas of small isolated occurrences of chemicals that were not either used or generated as part of the manufacturing activities of decommissioning of the buildings at the Site.

5.9 PREFERRED ALTERNATIVE FOR GROUNDWATER

Natural Restoration was selected as the preferred altervative for groundwater remediation. Active Groundwater Treatment was not selected since its cost would be substantial and disproportionate to the degree of risk reduction achieved.

Section 6 – PROPOSED CLEANUP ACTION DECISION

The proposed cleanup action for the Site for the different RUs is presented below. The different RUs are identified in Figure 6-1.

6.1 PROPOSED CLEANUP ACTION - LARGE SCALE APPLICATIONS

6.1.1 Remediation Units CM-1 through CM-8 and GC-1 through GC-9

Decision: Based on the analysis summarized in Section 5, the preferred alternative (On-Site Deposition with Cap/Cover) has been selected as the proposed cleanup action for these RUs.

Justification: The preferred alternative meets each of the threshold requirements and uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. The cost of the preferred alternative is less than the other alternatives and provides a similar level of protection for human health and the environment. The cap/cover system will reduce potential exposure routes and limit the migration of contaminants. The preferred alternative provides a reasonable restoration time frame and addresses public concerns.

6.1.2 Remediation Unit CM-09

Decision: Based upon the information presented in the RA, the No Action alternative has been selected as the proposed cleanup action for this RU.

Justification: Based upon the information presented in the RA, CM-09 will be in compliance with MTCA three-fold statistical criteria once isolated "hot spot" locations (MSU-29 and MSU-30) have been remediated. See Figure 6-2 for the location of these MSUs.

6.1.3 Remediation Units OS-01, OS-02 NOC, OS-03 SOC and OS-04

Decision: Based upon the information presented in the RA, the No Action alternative has been selected as the proposed cleanup action for these RUs. The location of the four open space RUs are presented in Figure 6-1.

Justification: Based upon the information presented in the RA, OS-01, OS-02 NOC, and OS-03 SOC will be in compliance with MTCA three-fold statistical criteria once isolated MSU locations (MSU-98 through 106) have been remediated. See Figure 6-2 for the location of these MSUs.

The OS-4 RU is the open space surrounding Old Fort Lake. There are no lead exceedances, but there are four locations that have arsenic concentrations marginally above the area background concentration of 32 mg/kg.

No Action is proposed for these RUs due to the special ecological sensitivity of the area. These RUs represent environmentally sensitive areas that contain a surface water body and steep slopes. As such, excavation in these areas would likely cause slope stability and sedimentation problems which could result in undue harm to these water bodies. Ecology has completed visual inspections of these RUs and has found diverse and abundant plant and wildlife communities. These factors have led to the determination that the greatest net environmental benefit would result from no remediation in these areas. No Action would cause less long-term harm to the local ecology in these RUs than any of the active remediation alternatives. This determination is supported by the public's strong desire to protect these sensitive areas.

6.2 DESCRIPTION OF PROPOSED CLEANUP ACTION - LARGE SCALE APPLICATIONS

6.2.1 Excavation

RUs that were not incompliance with the 3-fold criteria will be excavated to a depth of 1 foot.

6.2.2 Soil Excavation Methods

Excavation of soils not in compliance with Site-specific RLs for lead and arsenic would occur by one of the following methods. All excavation work done within the first three feet of the current ground surface will be monitored by trained archeologists to determine if cultural or archeological artifacts are present. If any artifacts are found they will be treated in the manner described in the Cultural Resource Protection Plan.

Scraping
The majority of the shallow soils (up to 1.0 foot deep) will be excavated using self-loading pan scrapers. This method would be used on those areas within Parcel 1 that are not historical or open space RUs. Some selected excavation could occur within the golf course areas. The general scraping process would be:

- Phase I - The upper six inches of soil would be removed, using a self-loading pan scraper.
- Phase II - The remaining six inches of soil would be graded into a windrow and picked up by the pan scraper. GPS will be used to confirm the initial depth, followed by a complete survey to confirm the depth excavated.

Other Excavation
In those areas not accessible to the pan scrapers (because of topography or other reasons), an excavator will be used to selectively excavate the soil in six to eight inch lifts until the desired depth of 1 foot is met. The excavated soil will be loaded into off-road haul trucks and transported to the PAs for placement. Direct pushing of soils into the PA is possible from areas adjacent to PAs GPS will be used to confirm the initial depth, followed by a complete survey to confirm the depth excavated.

All of the material excavated would be placed in the PAs within the golf course areas and rough-graded.

6.2.3 Cap Construction

A golf course will be constructed on the Site and will serve as engineered cover (cap) for contaminated soils and, if necessary, debris. The majority of this material will be moved from the commercial land use areas in Parcel 1 and consolidated in roughly 90 acres of the approximately 180-acre golf course footprint. These 90 acres would constitute the PAs. Only soils and debris that contain contaminant concentrations equal to or less than the golf course RLs would be placed in the PAs. Each PA would be capped with 18 inches of clean soil by one of the two methods listed below. This cap would be placed on any areas with in-situ contaminant concentrations (if not excavated) less than the golf course RL but greater than the Site-specific commercial RL.

Method One
Six inches of clean soil will be placed over 12 inches of pit run gravel. In this process, the gravel would act as an exposure barrier to ecological receptors. The six inches of clean soil would act as an additional exposure barrier to individuals most likely to be exposed—the golf course worker, who, on occasion, may find it necessary to install drainage ditches or repair irrigation pipes.

Method Two
Eighteen inches of “pit run” soil will be placed over a geotextile. In this case, the 18 inches of soil would act as the human exposure barrier and the geotextile will act as the ecological exposure barrier.

6.2.4 Haul/Stockpile

Excavated soil will be transported directly to future golf course placement areas (PAs) for deposition or transported to a central area and stockpiled in preparation for treatment or disposal.

6.2.5 Verification Sampling and Analysis

Verification soil samples will be collected from excavated areas and analyzed. Analytical results will be evaluated to determine compliance. If soil remaining in the excavation does not meet Site RLs or, if applicable, CLs, additional excavation and verification sampling and analysis will be performed.

6.3 PROPOSED CLEANUP ACTION – SMALL-SCALE APPLICATIONS

6.3.1 Miscellaneous Small Remediation Units: MSU-1, 2, 5, 6, 9, 11, 12, and 18-28

Decision: Based upon the information presented in the RA and FS, the Excavation and Off-Site Disposal at a Landfill alternative has been selected as the proposed cleanup action for these RUs. See Figure 6-2 for the location of these MSUs.

Justification: These MSUs contain isolated occurrences of a single contaminant in soil and represent a small in-place volume. This alternative meets each of the threshold requirements. Furthermore, since it would be costly to perform secondary treatment on soils, the preferred alternative uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. Due to the small volume of soil involved, this alternative provides a reasonable restoration time frame and addresses public concerns.

6.3.2 Miscellaneous Small Remediation Units: MSU-122-132

Decision: Based upon the information presented in the RA and FS, the Excavation and Off-Site Disposal at a Landfill alternative has been selected as the proposed cleanup action for these RUs. See Figure 6-2 for the location of these MSUs.

Justification: These MSUs contain isolated occurrences of chemicals that were not either used or generated as part of the manufacturing activities or decommissioning of the buildings at the Site. No action would be appropriate for small occurrences of cadmium since this contaminant has not been detected in groundwater, occurs in very low concentrations, has an average/mean concentration that is below the CL, has a low number of exceedances (less than 5%) of the CL in comparison to the number of detections and/or samples collected, and have no known source associated with activities at the Site.

6.3.3 Miscellaneous Small Remediation Units: MSU-4, 8, 7, 10, 14-16, 76 and 87

Decision: Based upon the information presented in the RA and FS, the Excavation and Off-Site Disposal at a Landfill alternative has been selected as the proposed cleanup action for these RUs. See Figure 6-2 for the location of these MSUs.

Justification: These MSUs contain occurrences of a similar mixture of contaminants (e.g., TPH mixture, nitroaromatic explosive compound mixture, etc.) in soil and represent a small in-place volume. This alternative meets each of the threshold requirements. Furthermore, since it would be costly to perform secondary treatment on soils, the preferred alternative uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. Due to the small volume of soil involved, this alternative provides a reasonable restoration time frame and addresses public concerns.

6.3.4 Miscellaneous Small Remediation Units: MSU-3, 13, 29-68, 70-75, 77-86, 88-94, and 96-106

Decision: Based on the analysis summarized above, the preferred alternative (On-Site Deposition and Cap/Cover) has been selected as the proposed cleanup action for these RUs. See Figure 6-2 for the location of these MSUs.

Justification: These MSUs represent locations in open space as well as locations outside PAs greater than 1 foot below ground surface where there are arsenic and/or lead exceedances. On-Site Deposition with Cap/Cover (including excavation) meets each of the threshold requirements. Furthermore, the preferred alternative uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. The cost of the preferred alternative is less than the other alternatives and provides a similar level of protection for human health and the environment. The cap/cover system will

reduce potential exposure routes and limit the migration of contaminants. The preferred alternative provides a reasonable restoration time frame and addresses public concerns.

6.3.5 Miscellaneous Small Remediation Units: MSU-133-138

Decision: Based upon the information presented in the RA and FS, the Cap/Cover alternative has been selected as the proposed cleanup action for these RUs. See Figure 6-2 for the location of this MSU.

Justification: This is the historical location known as the Fort Nisqually Cemetary (PI404). It is an area of special cultural significance. The application of a cap/cover is appropriate in this MSU where an exposure barrier is desired. This technology is appropriate for in-situ soils in these areas if the performance standards listed in Section 6.4 are met. Cap/Cover will be required over this entire MSU.

6.3.6 Miscellaneous Small Remediation Units: MSU-69 and 108-120

Decision: Based upon the information presented in the RA and FS, both the Cap/Cover and On-Site Deposition with Cap/Cover (including excavation) alternatives have been selected as the proposed cleanup action for these RUs. See Figure 6-2 for the location of these MSUs.

Justification: These are areas of special cultural significance known as the 1883 Fort Nisqually and the South Midden Site. Since archeological excavation is possible in these areas, a cap/cover will not be appropriate unless areas of the MSU can be isolated from further work and an exposure barrier is desired. No known contaminant concentrations in these areas exceed the remediation levels established for placement under the proposed golf course. As such, at a minimum, the following two alternatives will be applied at each sample location within these MSUs that exceeds the Site-specific RLs:

- Cap/Cover for 10 feet in each direction or the edge of the MSU, whichever is nearest the sample location. Cap/Cover is only possible in those areas of the MSU where institutional controls are in place to eliminate the potential for future excavation; or
- Excavation and On-Site Deposition with Cap/Cover for 25 feet in each direction or the edge of the MSU, whichever is nearest the sample location.

6.3.7 Miscellaneous Small Remediation Units: NGRR-10

Decision: Based upon the information presented in the RA and FS, the Cap/Cover alternative has been selected as the proposed cleanup action for this MSU. See Figure 6-3 for the location of this MSU.

Justification: This MSU is located within Sequalitchew Creek Canyon, an environmentally sensitive area. Asphalt capping (with a gravel sub-base) would create an effective exposure barrier within the track bed. This cap would be necessary across the entire track bed ranging from where the track bed encounters the natural slope of the canyon in both the uphill and downhill directions. The limited use of this technology would meet cleanup standards, be protective long-term (with active maintenance) and is cost effective.

6.3.8 Miscellaneous Small Remediation Units: NGRR-01-09, 11-16, and 19-46

Decision: Based on the analysis summarized above, the preferred alternative (On-Site Deposition and Cap/Cover) has been selected as the proposed cleanup action for these RUs. See Figure 6-3 for the location of these MSUs.

Justification: These MSUs represent sections of former NGRR track bed that are still in place. These areas were not remediated as part of previous ISRs because the Forest Practices Act Permit had not been granted at that time. On-Site Deposition with Cap/Cover (including excavation) meets each of the threshold requirements. Furthermore, the preferred alternative uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. The cost of the preferred alternative is less than the other alternatives and provides a similar level of protection for human health and the environment.

The cap/cover system will reduce potential exposure routes and limit the migration of contaminants. The preferred alternative provides a reasonable restoration time frame and addresses public concerns.

6.3.9 Miscellaneous Small Remediation Units: "Hot Spots"

Decision: These RUs are represented by soils with contaminant concentrations greater than golf course RLs that are discovered during the implementation of any cleanup action. Excavation and Off-Site Disposal at a Landfill alternative has been selected as the proposed cleanup action for these RUs.

Justification: Off-Site Disposal at a Landfill is required for any soils with contaminant concentrations greater than golf course RLs. This alternative meets each of the threshold requirements. Furthermore, since it would be costly to perform secondary treatment on soils, the preferred alternative uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. Due to the small volume of soil involved, this alternative provides a reasonable restoration time frame and addresses public concerns.

6.3.10 Miscellaneous Small Remediation Units: MSUs-1-4, 8-16, 18, 20, 25-32, and 36

Decision: These RUs are occurrences of in-place debris and stockpiled material. The regulatory status of this debris is unknown. As such, the Excavation and Off-Site Disposal at a Landfill alternative has been selected as the proposed cleanup action unless the debris passes the analytical testing process (for debris) listed in Section 6.4. If the debris passes the performance criteria it can either be placed in the golf course PAs or, if below regulatory limits, treated as solid waste. See Figure 6-4 for the location of these MSUs.

Justification: Off-Site disposal is required for any debris with contaminant concentrations greater than golf course RLs. This alternative meets each of the threshold requirements. Furthermore, since it would be costly to perform secondary treatment on debris, the preferred alternative uses permanent solutions to the maximum extent practicable. The incremental costs of the other retained alternatives are disproportionate to their incremental benefits. Due to the small volume of debris involved, this alternative provides a reasonable restoration time frame and addresses public concerns.

6.4 DESCRIPTION OF PROPOSED CLEANUP ACTION - SMALL SCALE APPLICATIONS

6.4.1 Off-Site Disposal at a Landfill

Under this alternative soils above Site-specific CLs for non-lead and non-arsenic contaminated soils would be excavated, loaded into 30-ton trucks and hauled to and disposed of at an off-Site landfill. Additional excavation would be required if either conformational or RI testing showed that they contained contaminant concentrations greater than CLs or RLs. The excavated soils would be stockpiled, sampled, and transported to an approved off-Site disposal facility.

6.4.2 Cap/Cover

This alternative involves the installation of an engineered cap/cover 18 inches in thickness using one of the two methods listed below. This cap would be placed on any golf course land use areas with in-situ contaminant concentrations less than the golf course remediation level but greater than the Site-specific commercial remediation level.

- **Method One:** Six inches of clean soil would be placed over 12 inches of pit run gravel. In this process, the gravel would act as an exposure barrier to ecological receptors. The six inches of clean soil would act as an additional exposure barrier to humans.
- **Method Two:** Eighteen inches of "pit run" soil would be placed over a geotextile. In this case, the 18 inches of soil would act as the human health exposure barrier and the geotextile will act as the ecological exposure barrier.

6.4.3 On-Site Deposition with Cap/Cover

In general, this alternative would involve the mass excavation of the existing soils containing contaminant concentrations above the CL but below the RL for a particular area, followed by the transfer, consolidation and capping of the excavated soils beneath the planned golf course. The cap would be constructed by one of the methods described in section 6.4.2.

6.4.4 Limited Use Alternatives

6.4.4.1 Capping

This alternative would involve the construction of an impermeable cap over existing soils containing contaminant concentrations above the CL but below the RL for a particular area. An example would be the use of an asphalt cap. In this case, the asphalt and sub-base would act as the human health and the ecological exposure barrier. No excavation of underlying soils would occur.

6.4.4.2 No Action

- No remediation activities would occur under this alternative.

6.5 PROPOSED CLEANUP ACTION – GROUNDWATER

Natural Restoration was selected as the preferred alternative for groundwater remediation. Active Groundwater Treatment was not selected since its cost would be substantial and disproportionate to the degree of risk reduction achieved.

6.6 PERFORMANCE STANDARDS

6.6.1 Cap Construction

The engineered cap/cover will be designed and constructed so that it acts as a protective barrier to direct contact with humans or animals. At a minimum the cap/cover will include:

Ecological Barrier: This will consist of a minimum of 12 inches of pit run gravel. This decision is based upon the determination of Ecology's Ecological Risk Specialist that there is low likelihood that soil biota will travel through this depth of gravel to get to underlying soils and on-Site observations which show that Steilacoom gravels do not support biological growth or activity. In lieu of gravels a geotextile that meets the same performance standards can be used.

Human Health Barrier: This barrier will consist of the soil necessary to make the cap/cover a minimum of 18 inches thick. If gravel is used for an ecological barrier the depth of soil cover will be no less than six inches. If geotextile is used the soil will be minimum of 18 inches thick. This decision is based upon the maximum depth in which a golf course worker is expected to excavate to make repairs to waterlines and irrigation piping.

Vegetated Areas: Additional soil will be required above the ecological and human health cap/cover in areas where vegetation will be planted. This soil will be thick enough to accommodate the root ball of any planted vegetation plus a total of four inches.

In setting these standards Ecology expects that engineering specifications will be developed during remedial design and will require approval by Ecology prior to implementation.

6.6.2 Soil Compliance Sampling

Large Application Soil Compliance Sampling
For soil CLs and RLs based on exposure via direct contact, the point of compliance is established for soils throughout the Site. Compliance verification samples will be collected on 75-foot centers after the contaminated soil has been removed. Five-point composite samples will be collected from 0 to 6 inches BGS and the area represented by the sample will be considered to be in compliance when the resulting concentrations are less than the Site- and land use-specific cleanup standards. If a sample exceeds the cleanup standards, one foot of additional soil will be excavated. No RU wide statistics will be used to evaluate compliance.

Miscellaneous Small Unit Soil Compliance Sampling

The point of compliance for surficial MSUs (i.e, 0 to 1 foot BGS) and debris areas will be 50 x 50 foot areas. One five-point composite confirmation sample (0 to 6 inches BGS) will be collected in every 50 x 50 foot area. The point of compliance for MSUs at a depth greater than one foot BGS will be 15 x 15 foot boxes and samples will be collected from each sidewall and the bottom of the excavation. The area represented by the sample will be considered to be in compliance when the resulting concentrations are less than the Site- and land use-specific cleanup standards. No MSU wide statistics will be used to evaluate compliance.

6.6.3 Groundwater Monitoring

Because the majority of detected DNT concentrations are consistently low, are not affecting the regional aquifer, are not affecting surface water, and the aquifer is not used as a drinking water source, Natural Restoration has been selected. Ecology agreed to the selection of this alternative by issuing a "No Active Remedial Action" letter for Site groundwater (Ecology 1996a).

Groundwater monitoring will be required at the Site until DNT concentrations below drinking water standards are obtained in four consecutive sampling rounds. Monitoring will discontinue after approval from Ecology. The wells that will be monitored for DNT as part of the cleanup action are monitoring wells MW-3, MW-6, MW-19, MW-22, production well W-2 (as long as it is operational), and a new monitoring well installed down gradient of RI Area 25. Seep 1 will be sampled during annual groundwater monitoring events after the surface soil mass excavation remediation work has been completed. Ecology may also require groundwater monitoring at other locations.

Groundwater monitoring and laboratory analysis shall follow the procedures outlined in the Management Plan for Remedial Investigation/Feasibility Study (Hart Crowser, 1992). Any adjustments or changes to this plan must be approved by Ecology prior to implementation. Reports shall be submitted using the same format as in the past.

The highest DNT concentration in groundwater ever detected at the Site was 3.8 ug/L in MW-27 in January of 1995. If any of the results from future groundwater sampling is greater than 3.8 ug/L Ecology will meet with Weyerhaeuser and DuPont to discuss the results.

6.6.4 Debris Evaluation

Contaminated debris occurs in two forms; lead painted metal, wood or brick, and elemental lead. Debris that is painted will be tested to determine if the paint is lead-based. If lead-based paint is present, a representative composite sample of painted debris will be collected, and sent to the Project Laboratory for analysis. The results will be reported in mg/kg.

Stockpiles or debris evaluated for lead-based paint will be designated based on the analytical results as follows:

- If the lead concentration is less than 118 mg/kg the material will be treated as fill.
- If the lead concentration is greater than 118 mg/kg but, less than 4,100 mg/kg the material will be moved to a placement area.
- If the lead concentration is greater than 4,100 mg/kg the material will be cleaned and/or disposed of off-Site.

6.7 INSTITUTIONAL CONTROLS

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous chemicals at the Site. Such measures are required to assure both the continued protection of human health and the environment, and the integrity of the cleanup action whenever hazardous chemicals remain at the Site at concentrations that exceed the applicable CL (WAC 173-340-440(1) and (4)).

Institutional controls are a critical component of this proposed cleanup action. Residual contamination will remain on-site beneath the cap/cover. Both physical controls and legal and administrative mechanisms will be used to ensure that current and future citizens and wildlife do not come into contact with residual contamination, and that the integrity of the cap/cover containment system is maintained. Institutional controls will take the form of

restrictive covenants placed with the deed. The restrictive covenants will limit Site use with the purpose of minimizing disturbance to the cap/cover system, and will prevent any unauthorized excavation on the property.

Deed restrictions to limit Site uses will be imposed for different land uses including commercial, recreational (golf course), historical, industrial, and open space. An additional deed restriction will be required for the property inside the golf course footprint that limits this property to that sole use and places restrictions on activities that could disturb the cap/cover.

A deed restriction shall also be placed upon the Site to restrict the use of groundwater to non-potable uses only, until such time as it meets cleanup levels.

6.8 EXPECTATIONS FOR CLEANUP ACTIONS

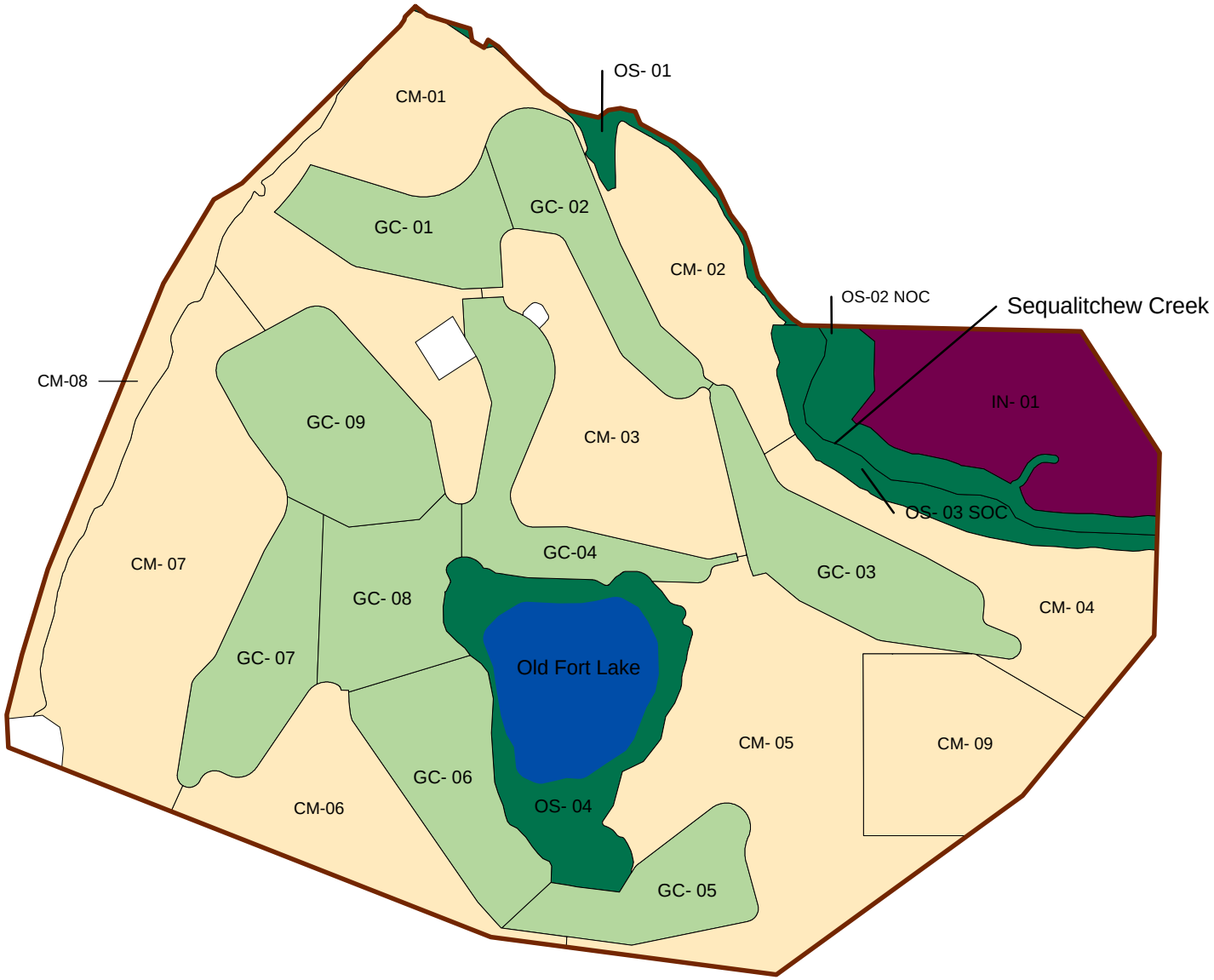
The Site contains two surface water bodies and has large volumes of contaminated soil that are remaining on-Site. Therefore, in accordance with the expectations outlined in WAC 173-340-370, the selected cleanup action will involve the consolidation of wastes, use active measures to prevent runoff from contacting waste materials, and actively prevent releases to groundwater.

6.9 CLEANUP ACTION SCHEDULE

A schedule for the Site cleanup is presented in Figure 6-5.

6.10 FIVE YEAR REVIEW

WAC 173-340-420 states that at sites where a cleanup action requires an institutional control, a periodic review shall be completed no less frequently than every five years after the initiation of a cleanup action. Since the lead and arsenic impacted soils will remain on-Site and institutional controls will be required, five-year reviews shall take place at this Site. Groundwater monitoring data shall be reviewed until applicable cleanup requirements are met.



Legend

- Parcel One
- Commercial
- Golf Course
- Industrial
- Open Space
- Old Fort Lake

Notes

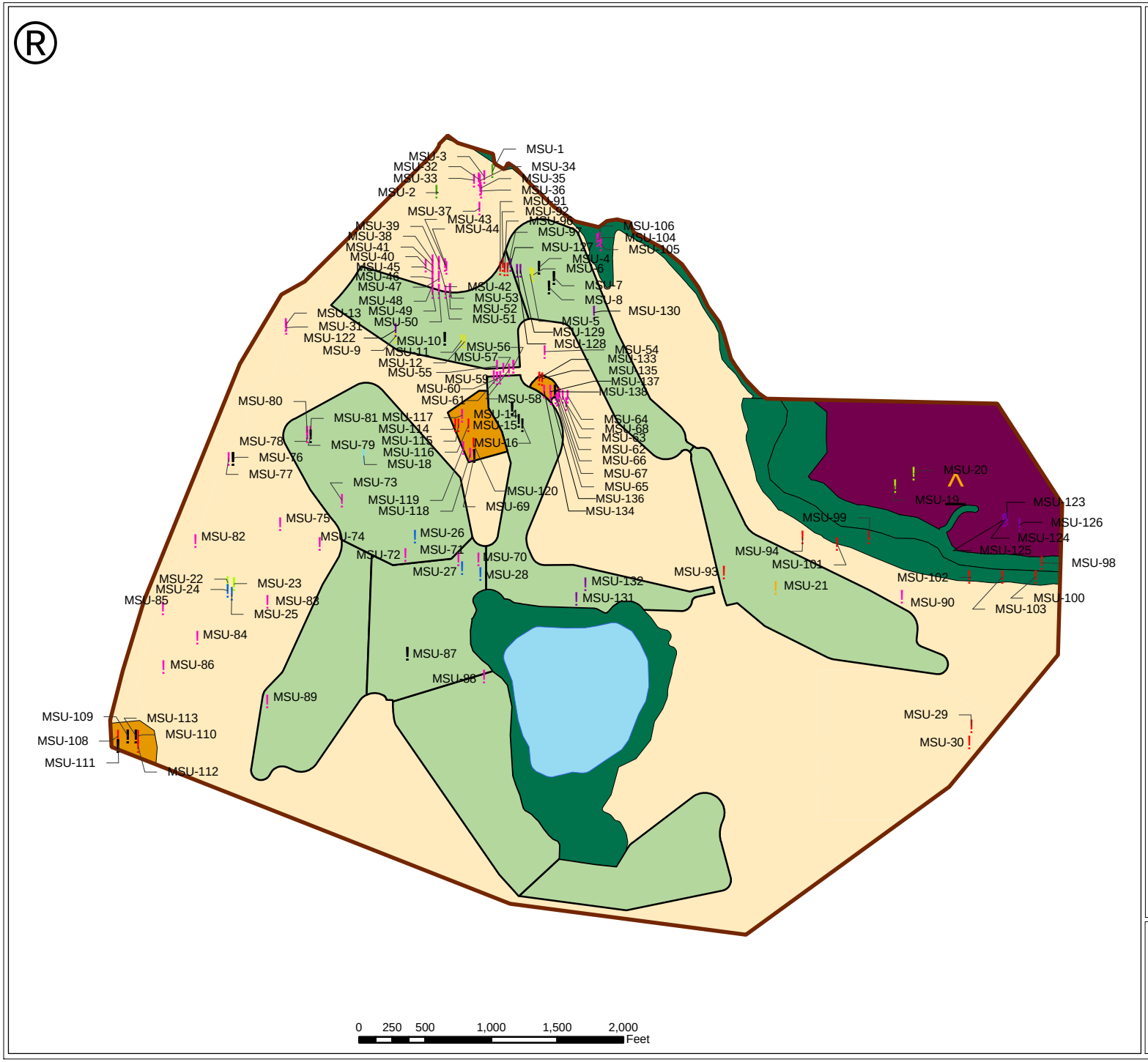
CM = Commercial
GC = Golf Course
IN = Industrial
NOC = North of Creek
SOC = South of Creek

Historical areas are not large scale remediation units. They are Miscellaneous Small Units.

Large Scale Remediation Units

Former DuPont Works Site
January 2003

Figure 6-1



Legend

- Parcel One
- Old Fort Lake
- Industrial
- Open Space
- Historical MSUs
- Golf Course
- Commercial
- ! Mixture of Contaminants

Single Contaminants

- ! Arsenic
- ! Cadmium
- ! Copper
- ! Lead
- ! Mercury
- ! Nitrobenzene
- ! TPH (418.1)
- ! Tetrachloroethene
- ! Trinitrotoluene, 2

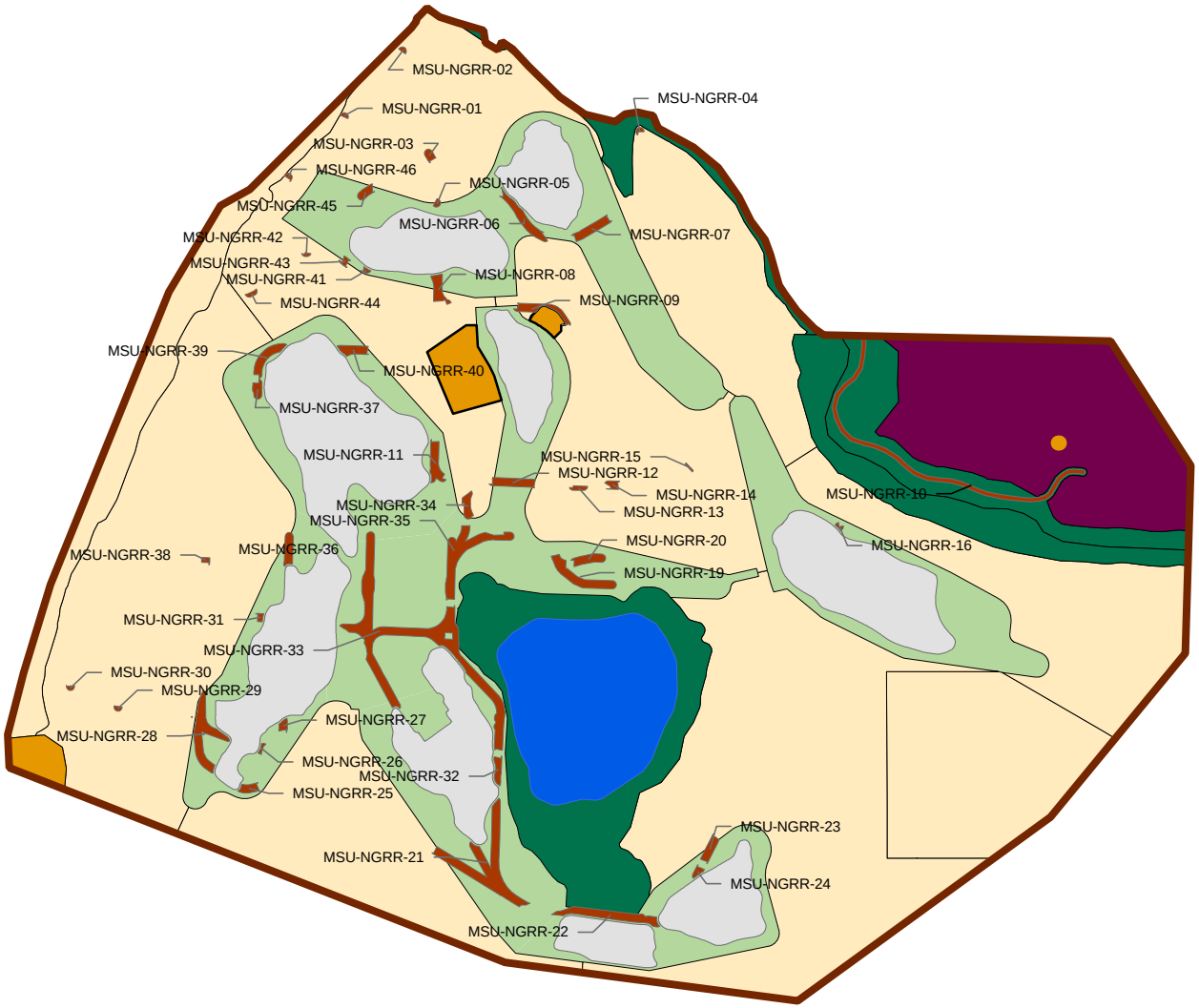
Notes

MSU = Miscellaneous Small Units
TNT = 2,4,6 Trinitrotoluene
TPH = Total Petroleum Hydrocarbons

Historical location in the Industrial area, indicated with a star, is the Methodist Mission Marker.
The actual location of the mission is unknown.

Miscellaneous Small Remediation Units

Former DuPont Works Site
July 2003
Figure 6-2



Legend

- Parcel One
- Old Fort Lake
- NGRR MSU
- Industrial
- Placement Areas
- Open Space
- Historical
- Commercial
- Golf Course

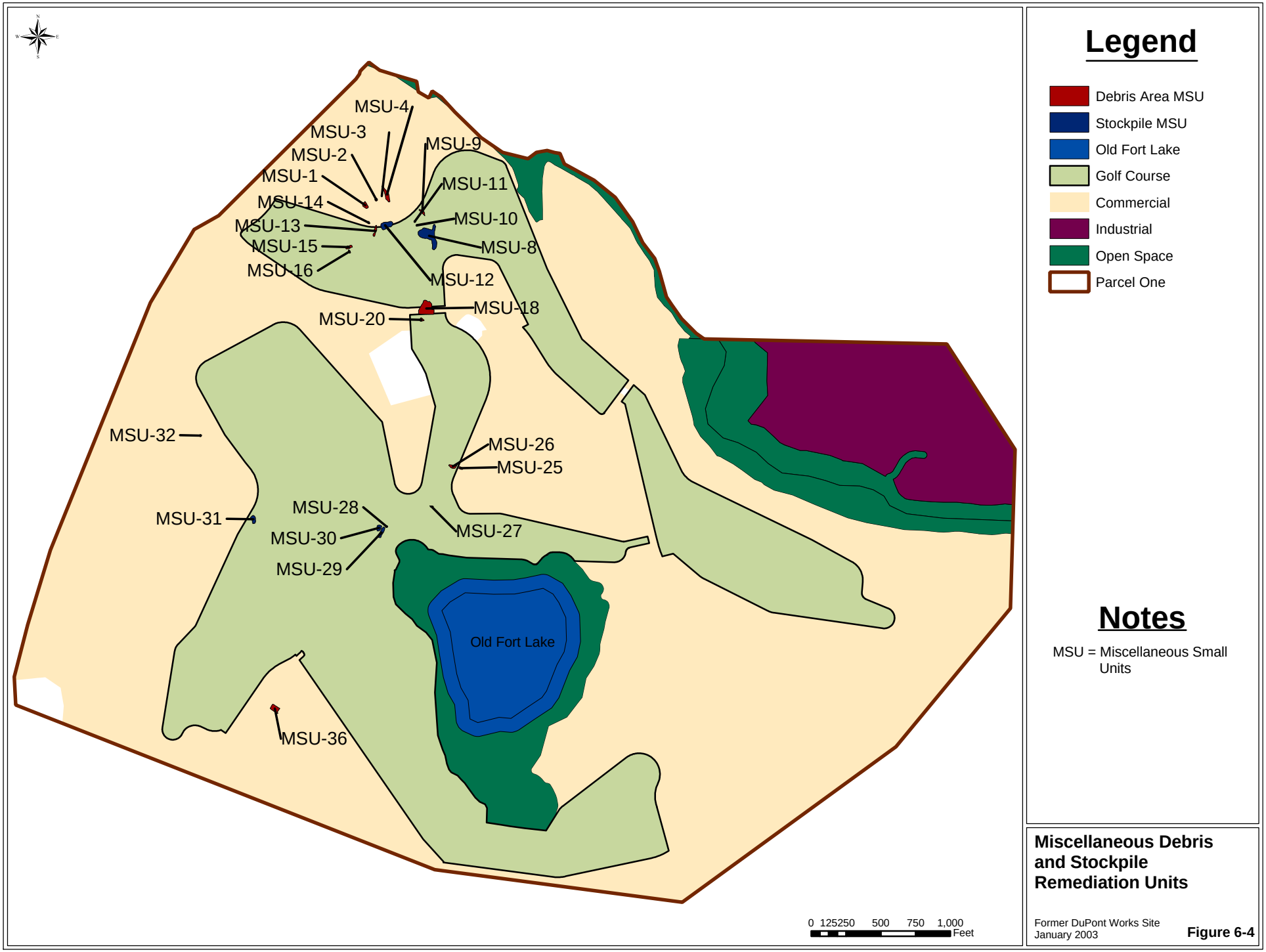
Notes

NGRR - Narrow Gauge Railroad
MSU - Miscellaneous Small Unit

Historical location in the Industrial area is the Methodist Mission Marker. The actual location of the mission is unknown.

Miscellaneous Narrow Gauge Railroad Remediation Units

Former DuPont Works Site
July 2003
Figure 6-3


MSU-4
MSU-3
MSU-2
MSU-1
MSU-14
MSU-13
MSU-15
MSU-16
MSU-9
MSU-11
MSU-10
MSU-8
MSU-12
MSU-18
MSU-20
MSU-32
MSU-26
MSU-25
MSU-31
MSU-28
MSU-30
MSU-29
MSU-27
Old Fort Lake
MSU-36
0 125250 500 750 1,000
Feet
Legend
Debris Area MSU
Stockpile MSU
Old Fort Lake
Golf Course
Commercial
Industrial
Open Space
Parcel One
Notes
MSU = Miscellaneous Small Units
Miscellaneous Debris and Stockpile Remediation Units
Former DuPont Works Site
January 2003
Figure 6-4

ID	Task Name	Duration	Start	Finish
1	PROJECT TOTAL	1078 days	Tue 4/30/02	Thu 6/15/06
2	DOCUMENT CREATION - RI/RA/FS (2002)	145 days	Tue 9/24/02	Mon 4/14/03
3	PUBLIC REVIEW OF RI/RA/FS/CAP	97 days	Wed 11/20/02	Thu 4/3/03
4	Issue all document to public	1 day	Wed 11/20/02	Wed 11/20/02
5	Public Comment Period - RI/RA/FS/CAP	66 days	Thu 11/21/02	Thu 2/20/03
6	Public Meeting - RI/RA/FS/CAP	5 days	Wed 1/22/03	Tue 1/28/03
7	Respond to questions - RI/RA/FS/CAP	20 days	Fri 2/21/03	Thu 3/20/03
8	Negotiation w/ Ecology	20 days	Fri 2/21/03	Thu 3/20/03
9	Document Revisions	15 days	Fri 3/7/03	Thu 3/27/03
10	Final document prep	5 days	Fri 3/28/03	Thu 4/3/03
11	APPROVAL, CONSENT DECREE	145 days	Tue 9/24/02	Mon 4/14/03
12	Consent Decree Draft	44 days	Tue 9/24/02	Fri 11/22/02
13	Consent Decree for the CAP Neg/Approval	14 days	Fri 11/1/02	Wed 11/20/02
14	Public Comment Period - RI/RA/FS/CAP	66 days	Thu 11/21/02	Thu 2/20/03
15	CAP Revisions	15 days	Fri 2/21/03	Thu 3/13/03
16	CAP Approved	22 days	Fri 3/14/03	Mon 4/14/03
17	REMEDIAL DESIGN - PHASE II	225 days	Tue 4/30/02	Mon 3/10/03
29	CORRECTIVE ACTION MANAGEMENT/OVERSIGHT	563 days	Tue 3/25/03	Thu 5/19/05
41	CORRECTIVE ACTION	307 days	Tue 4/15/03	Wed 6/16/04
42	Miscellaneous CA related items	300 days	Thu 4/24/03	Wed 6/16/04
51	Additional Sampling	22 days	Thu 4/24/03	Fri 5/23/03
54	Contractor Mobilization onto Site	7 days	Tue 4/15/03	Wed 4/23/03
55	Open Space (Crew 1)	78 days	Thu 4/24/03	Mon 8/11/03
60	Golf Course Area Remediation	50 days	Thu 4/24/03	Wed 7/2/03
67	Commercial/Placement Area Remediation	105 days	Thu 6/19/03	Wed 11/12/03
68	Mass Excavation Program (Crew 1)	98 days	Mon 6/30/03	Wed 11/12/03
77	Mass scrape, and deposit in PA, soils to 1.0 fe	86 days	Thu 6/19/03	Thu 10/16/03
85	CAP Construction	232 days	Tue 7/1/03	Wed 5/19/04
92	GC CONSTRUCT. OVERSIGHT	265 days	Wed 1/21/04	Tue 1/25/05
95	GOLF COURSE RELATED TASKS	404 days	Fri 4/25/03	Wed 11/10/04
104	FINAL REPORTING, ADDITIONAL WORK, CLOSURE	366 days	Mon 6/28/04	Mon 11/21/05
122	GOLF COURSE O&M	514 days	Mon 6/28/04	Thu 6/15/06
123	Grow In Management	255 days	Mon 6/28/04	Fri 6/17/05
124	Extra O&M (One year)	259 days	Mon 6/20/05	Thu 6/15/06
125	GROUNDWATER MONITORING (2003 - End of Project)	700 days	Mon 3/17/03	Fri 11/18/05
126	GOLF COURSE CONSTRUCTION	241 days	Mon 11/3/03	Mon 10/4/04

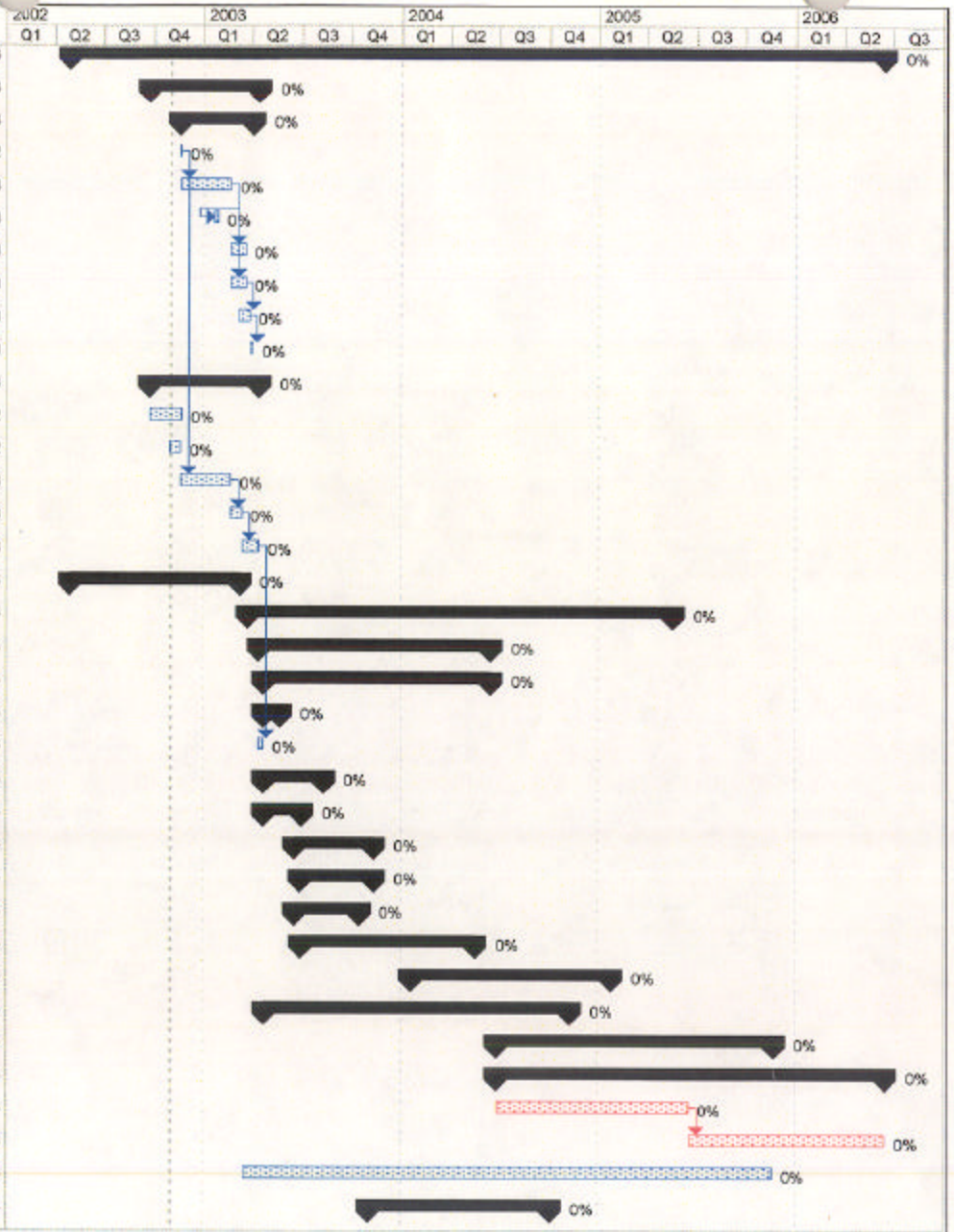


Figure 6-5 -- Cleanup Action Schedule
Date: Fri 11/1/02

Critical
Critical Split
Critical Progress
Task
Split
Task Progress
Baseline
Baseline Split
Baseline Milestone
Milestone
Summary Progress
Summary
Project Summary
External Tasks
External Milestone
Deadline

Section 7 – REFERENCES CITED

Borden, R.K. and K.G. Troost. 2001. Late Pleistocene Stratigraphy in the South-Central Puget Lowland, Pierce County, Washington. (Washington Division of Geology and Earth Resources Report of Investigations 33.

Ecology (Washington State Department of Ecology). 1996. Personal Communication from Mike Blum to Vern Moore/Weyerhaeuser Company regarding Russ McMillan's June 14, 1996 Draft Parcel 2 Cleanup Action Plan comments during Parcel 2 CAP Meeting. June 26, 1996.

EPA (United States Environmental Protection Agency) 1996. Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Exposures to Lead in Soil. Technical Review Workgroup for Lead. Adult Risk Assessment Committee.

Hart, Crowser & Associates, Inc. 1992. Management Plan for Remedial Investigation/Feasibility Study (RI/FS), Former DuPont Works Site, DuPont, Washington. January 17, 1992.

HRA (Historical Reasearch Associates). 2002. Cultural Resources Protection Plan for the former DuPont Works Site, DuPont, WA.

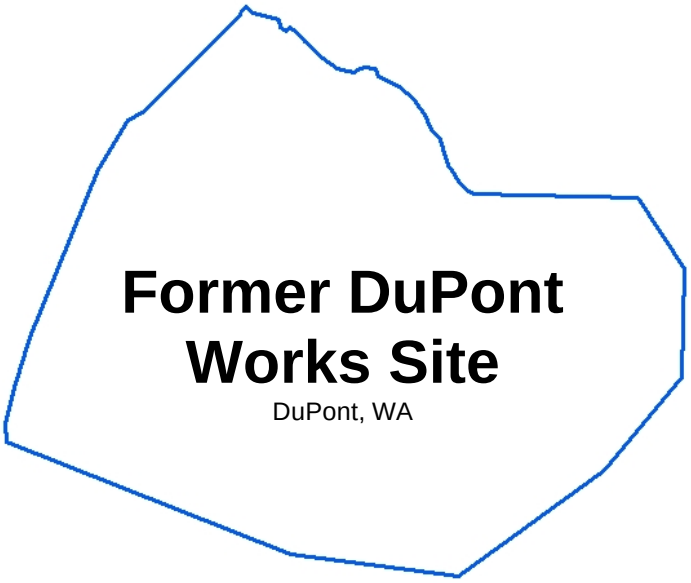
MOA (Memorandum of Agreement) 2000. Memorandum of Agreement Among Weyerhaeuser Company, Weyerhaeuser Real Estate Company, City of DuPont, The Nisqually Point Defense Fund, Committee for the Preservation of the Nisqually Mission Historical Site, The Nisqually Delta Association and the DuPont Historical Society. December 19, 2000.

PIONEER Technologies Corporation. 2003. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, DuPont, Washington.

URS, Inc. and PIONEER Technologies Corporation. 2003. Remedial Investigation, Former DuPont Works Site, DuPont, Washington.

West Shore Corporation NW. 2003. Feasibility Study for the Former DuPont Works Site, DuPont, Washington.

Final
Feasibility Study for the Former DuPont Works Site



Prepared For:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared By:

West Shore Corporation, NW

July 2003

Preface

P.1 Introduction

These Volumes present information developed as part of the Final Remedial Investigation, Risk Assessment, and Feasibility Study (RI/RA/FS) for the Former DuPont Works Site (Site) located in DuPont, WA (See Figure P-1). These reports were stipulated in a Consent Decree, effective July 1991, between the lead agency, Washington State Department of Ecology (Ecology), and the principle responsible parties, Weyerhaeuser Company (Weyerhaeuser) and E.I. duPont de Nemours and Company, Inc. (DuPont). Per the Consent Decree, the reports were developed in accordance with the Model Toxics Control Act Cleanup Regulation (MTCA). Draft RI/RA/FS reports were completed in 1994 and 1995, submitted to Ecology, and underwent public review. The draft Final RI/RA/FS reports, presented here, have been developed to satisfy comments on the draft reports and to accurately reflect existing conditions and future land use at the Site. In addition, these reports incorporate a variety of agreements that have been reached with Ecology following completion of the draft studies in 1994 and 1995.

P.2 Property History

The Site property was originally used by Native Americans. European settlement began in 1832, when the Hudson's Bay Company established a cabin/storehouse on nearby Puget Sound at the mouth of Sequalitchew Creek, northwest of the Site (City of DuPont, 1995). In 1833, Hudson's Bay built Fort Nisqually, which was located in the northern portion of the Site. Ten years later, a new Fort Nisqually was built at a location adjacent to but outside the eastern edge of the Site.

The DuPont Company acquired the property in 1906 and constructed an explosives plant and the historical Village of DuPont as a company town for plant workers (the historical village area is located approximately 1 mile southeast of the Site). DuPont continued to manufacture explosives at the Site until the mid 1970s, when it sold the property and adjacent areas to the Weyerhaeuser Company. Weyerhaeuser and its subsidiary, Weyerhaeuser Real Estate Company (WRECO), still own the majority of the approximately 2,500 acres in the area, which they named Northwest Landing. Northwest Landing is a planned community in the City of DuPont and includes the Site. WRECO has begun to develop Northwest Landing on some of its lands within the City, but cannot develop the Site until the cleanup has been completed.

P.3 Site Regulatory History

The Site was used for the manufacture of commercial explosives from 1909 to 1976. Production of explosive material ceased and decommissioning of the buildings began in 1976, when Weyerhaeuser purchased the property from DuPont. As part of the cleanup process, asbestos was removed, salvageable materials were taken out, and structures were either burned or demolished. Actions taken at the Site subsequent to the shutdown in 1976 include the following:

- In 1985, Weyerhaeuser initiated studies to determine whether hazardous substances were present.
- In 1986, a Phase I Site Survey and Review was conducted to identify areas on Site that may be of environmental concern.
- In 1986, soil contamination was first documented and reported to Ecology.
- In 1987, a Phase II Site Characterization study was performed, which characterized the type, concentration, and distribution of constituents at 38 areas on the Site.

- In 1989, a Baseline Human Health Risk Assessment was performed using results of the Phase II survey.

- In 1991, Weyerhaeuser and DuPont signed a Consent Decree (No. 91 2 01703 1) with Ecology, where they agreed to study the Site and complete an RI, RA, and FS. The Site was divided into two main areas: Parcel 1 (approximately 636 acres); and Parcel 2 (approximately 205 acres).

- In 1994 and 1995, Draft RI, RA, and FS reports were submitted to Ecology and underwent public review.

- In 1996, based on the result of interim source removal actions, Ecology approved a Cleanup Action Plan (CAP) for Parcel 2 that provided for no further remediation activities except for the institutional controls to maintain the industrial use of Parcel 2.

- In 1997, Parcel 2 was deleted from the Consent Decree, and the deed requiring institutional controls to maintain the industrial use was recorded in the Pierce County Auditor's Office.

- Between 1990 and 2001, while studies and negotiations were ongoing, Weyerhaeuser and DuPont undertook numerous interim source removal actions to clean up soil and/or debris at the Site, in accordance with MTCA and the Consent Decree.

P.4 Description of Reports

In fulfillment of the provisions of the Consent Decree, RI, RA, and FS reports were prepared. A description of the contents of each of these reports is presented below.

- **RI** – The purpose of the RI was to collect sufficient information regarding the Site to enable the completion of the RA and FS. The RI characterizes the nature and extent of contamination based on the existing conditions at the Site. The RI Report presents the analytical data for the media that have been collected at the Site. The data are presented for each RI area, which was defined based on historical manufacturing and production operations at the Site.

- **RA** – In contrast to the RI, the RA evaluates Site conditions in relation to future land uses at the Site. The RA identifies default soil cleanup levels, and presents the methods used to derive Site-specific soil levels that are protective of human health and ecological receptors based on future land use. These cleanup levels and remediation levels are compared to Site constituent concentrations in order to identify which areas require additional evaluation in the FS.

- **FS** – The FS evaluates alternative potential cleanup methods designed to meet the remedial action objectives for the Site. The FS Report provides information for Weyerhaeuser and DuPont to recommend alternatives for remediation of selected areas, including both no action and action alternatives. Ecology will evaluate the FS and select the remedial measures it believes are appropriate. Weyerhaeuser and DuPont will complete the needed detailed design and implementation of the remedy selected by Ecology in the Cleanup Action Plan.

P.5 Report Organization and Documents

This RI/RA/FS report should be reviewed together to better understand the relationship between the Site study activities. The RI/RA/FS are interdependent Reports that are organized as follows:

Volume I – RI and Appendices
Appendix A - Field Procedures
Appendix B - Soil Quality Data
Appendix C - Groundwater, Surface Water and Freshwater Sediment Quality Data
Appendix D - Laboratory Physical Soils Testing

Appendix E - Data Quality Assessment

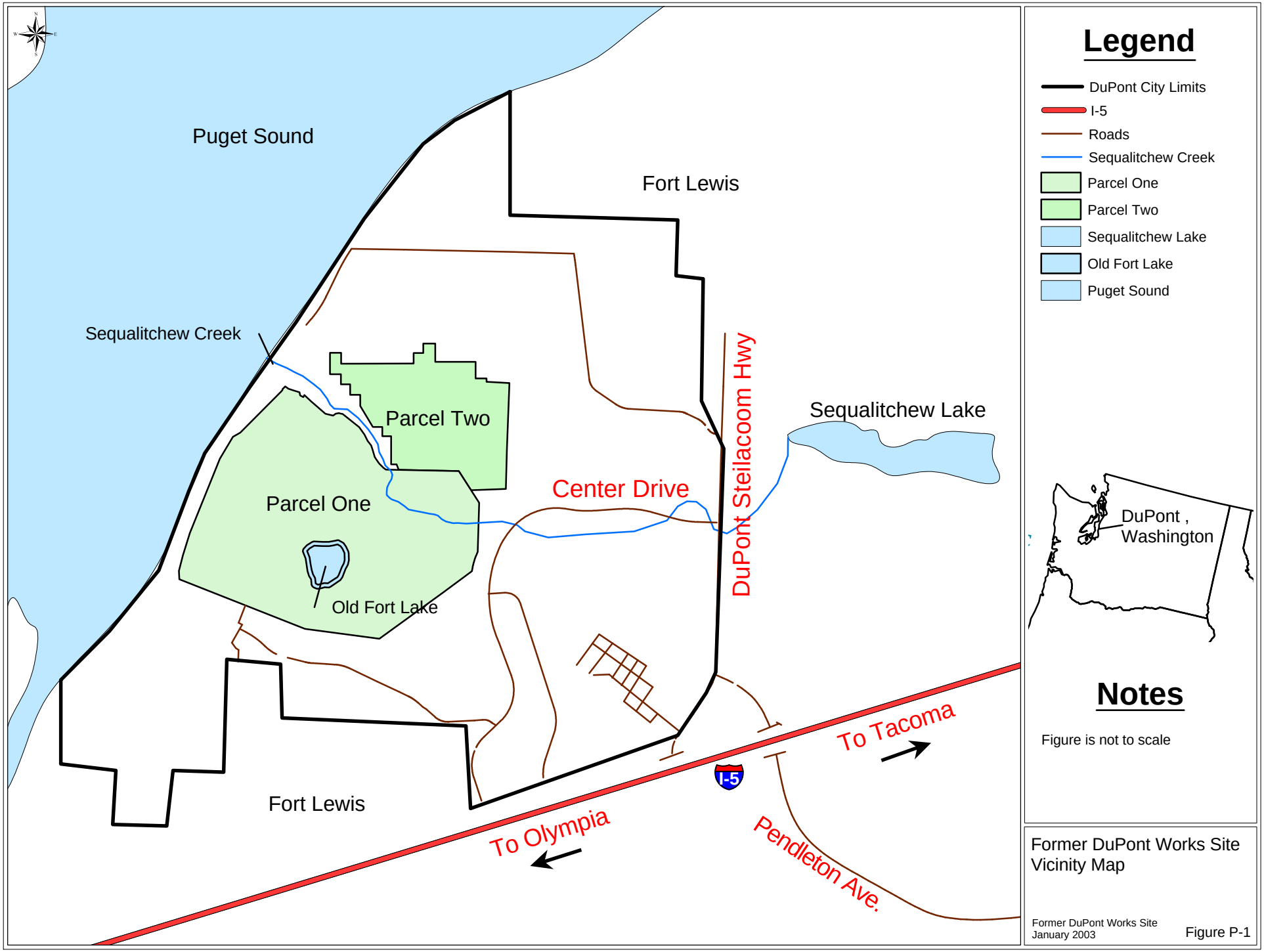
Volume II - RA and Appendices

Appendix A – Ecological Risk Assessment Summary
Appendix B – Evaluation Unit Sample Groupings
Appendix C – Letters and Other Documentation of Site-Specific Determinations
Appendix D – Toxicity Information For Select Constituents
Appendix E – Cleanup Level and Remediation Level Calculations
Appendix F – Summary Statistics and Comparison to Standards

Volume III - FS and Appendices

Appendix A – Description of Remediation Technologies for Soil
Appendix B – Overview of Soil Testing Procedures and Data Interpretation
Appendix C – Lead and Arsenic Soil characterization and Treatability Studies
Appendix D – Arsenic Wet Screening Study
Appendix E – Ranking of Alternatives
Appendix F – Cost Estimate for Remedial Alternatives Analyzed in Detail
Appendix G – Estimation of Minimum Soil Volume Required for Cost-Effective On-Site Treatment
Appendix H – Development of Soil Remediation Levels for the Golf Course Groundskeeper
Appendix I – Impracticability of Groundwater Remediation at the Former DuPont Works Site, DuPont, Washington.

An Executive Summary is included with each Volume.



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure P-1

P.6 References

City of DuPont. 1995 Comprehensive Plan. Adopted July 25, 1995.

MTCA (Model Toxics Control Act Cleanup Regulation). Chapter 173-340 WAC. Feb. 12, 2001. Ecology Publication 94-06.

Table of Contents

EXECUTIVE SUMMARY 1
ES.1 Introduction 1
ES.2 Background Information 1
ES.3 Interim Source Removal 1
ES.4 FS Purpose and Process 2
ES.5 Remedial Action Objectives 2
ES.6 Remediation Units and Soil Volumes 2
ES.7 Identification and Screening of Technologies 3
ES.7.1 Effectiveness 3
ES.7.2 Implementability 4
ES.7.3 Cost 4
ES.7.4 Consideration of Public Concerns 4
ES.8 Treatability Studies 4
ES.9 Detailed Analysis of Alternatives 5
ES.10 Preferred Alternatives 5

CHAPTER 1 – INTRODUCTION 1-1
1.1 Introduction 1-1
1.2 Site Description and History 1-1
1.3 Interim Source Removal 1-2
1.4 RI and RA Summary 1-2
1.4.1 Soil 1-3
1.4.2 Debris 1-3
1.4.3 Groundwater 1-3
1.5 Future Land Use 1-3
1.6 Identification of Remediation Units 1-3
1.7 FS Purpose and Report Organization 1-3
1.8 References for Chapter 1 1-13

CHAPTER 2 – REMEDIAL ACTION OBJECTIVES 2-1
2.1 Introduction 2-1
2.2 Potentially Applicable State and Federal Requirements for the FS 2-1
2.2.1 Introduction 2-1
2.2.2 Applicable State and Federal Laws 2-2
2.3 Potential Cleanup Levels and Chemical-Specific ARARs 2-2
2.4 Potential Location-Specific Requirements 2-3
2.5 Potential Action-Specific Requirements 2-4
2.6 Screening of ARARs 2-6
2.7 References for Chapter 2 2-9

CHAPTER 3 – ESTIMATED VOLUMES OF SOIL FOR REMEDIATION 3-1
3.1 Introduction 3-1
3.2 Definition of Remediation Units 3-1
3.3 Soil Volumes 3-1
3.4 Soil Volume Estimation Procedures 3-2
3.4.1 In-Place Volumes of Impacted Soil 3-3

CHAPTER 4 – IDENTIFICATION AND SCREENING OF TECHNOLOGIES 4-1
4.1 Introduction 4-1
4.2 Development of Candidate Technologies and Process Options 4-1
4.3 Technology Screening 4-2
4.3.1 Preliminary Screening 4-2
4.3.2 Technologies That Rely On Stabilization/Solidification 4-2

4.3.3 Initial Qualitative Screening 4-2
4.4 Representative Processes Selected for the Development of Alternatives 4-3

CHAPTER 5 – TREATABILITY STUDIES 5-1
5.1 Introduction 5-1
5.2 Treatability Study Objectives 5-1
5.3 Treatability Study Approach 5-2
5.3.1 Lead- and Arsenic-Impacted Soils Characterization Study - Hazen Research Inc. 5-3
5.3.2 Arsenic Wet Screening Study - Hart Crowser, Inc. 5-3
5.3.3 Arsenic Speciation Analysis - Battelle Pacific Northwest Laboratory (PNL) 5-3
5.3.4 Bench-Scale Soil Leaching Study – State University of New York, Buffalo 5-3
5.3.5 Bench-Scale Soil Leaching Study - Weyerhaeuser Analytical and Testing Services 5-4
5.4 Interpretation of Results 5-4
5.4.1 Physical Screening/Soil Washing 5-4
5.5 Conclusions and Recommendations 5-6
5.5.1 Soil Characterization 5-6
5.5.2 Volume Reduction 5-7
5.5.3 Metal Dissolution/Removal 5-7
5.6 References for Chapter 5 5-29

CHAPTER 6 – DEVELOPMENT AND SCREENING OF ALTERNATIVES 6-1
6.1 Introduction 6-1
6.2 Screening Criteria 6-1
6.2.1 Effectiveness 6-1
6.2.2 Implementability 6-2
6.2.3 Cost 6-2
6.2.4 Consideration of Public Concerns 6-2
6.2.5 Ecology Cleanup Technology Preference 6-2
6.3 Assembly of Alternatives - Groundwater 6-3
6.3.1 Description and Screening of Alternatives – Groundwater 6-3
6.4 Assembly of Alternatives - Soil 6-3
6.5 Description and Screening of Alternatives 6-4
6.5.1 No Action 6-4
6.5.2 Capping 6-5
6.5.3 Cover 6-6
6.5.4 Cap/Cover 6-7
6.5.5 On Site Deposition, Cap and Cover 6-8
6.5.6 Offsite Disposal at a Landfill 6-9
6.5.7 Wet Screening, Classification, and Disposal of the Residual Soils at a Landfill 6-10
6.5.8 Wet Screening with On Site Deposition, Cover and Cap and Disposal of the Residual Soils at a Landfill 6-11
6.5.9 Wet Screening with Stabilization and On-Site Deposition and Cap/Cover 6-12
6.5.10 Soil Washing with Wet Screening, Classification, Acid/Base Extraction, and Disposal of the Residual Soils at a Landfill 6-13
6.5.11 Soil Washing with Wet Screening, Classification, Chelant Extraction, and Disposal of the Residual Soils at a Landfill 6-14
6.6 Ranking of Alternatives 6-15
6.7 Summary of Selected Alternatives 6-15
6.8 Retained Alternatives: Large Scale Applications 6-16
6.9 Retained Alternatives: Small Scale Applications 6-16

CHAPTER 7 – DETAILED ANALYSIS OF ALTERNATIVES AND SELECTION OF PREFERRED ALTERNATIVES 7-1
7.1 Introduction 7-1
7.2 Description of the Alternatives Retained for Detailed Analysis – Large Scale Applications 7-2

7.2.1 No Action 7-2
7.2.2 Common Activities 7-2
7.2.3 On-Site Deposition, Cap and Cover 7-2
7.2.4 Off-Site Disposal at a Landfill 7-4
7.2.5 Wet Screening with On-Site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill 7-4
7.3 Comparative Detailed Analysis of Alternatives – Large Scale Applications 7-4
7.3.1 Long-Term Effectiveness and Permanence 7-5
7.3.2 Reduction of Toxicity, Mobility, and Volume 7-6
7.3.3 Short-Term Effectiveness 7-7
7.3.4 Implementability 7-9
7.3.5 Cost 7-10
7.3.6 Consideration of Public Concerns 7-11
7.4 Summary of the Detailed Analysis 7-11
7.5 Preferred Alternative for Large Scale Applications 7-11
7.6 Retained Alternatives: Small Scale Applications 7-11
7.6.1 No Action 7-11
7.6.2 Cap 7-12
7.6.3 Cover 7-12
7.6.4 Cap/Cover 7-12
7.6.5 Off-Site Disposal at a Landfill 7-13
7.7 Comparative Detailed Analysis of Alternatives – Small Scale Applications 7-13
7.7.1 Long-Term Effectiveness and Permanence 7-14
7.7.2 Reduction of Toxicity, Mobility, and Volume 7-14
7.7.3 Short-Term Effectiveness 7-15
7.7.4 Implementability 7-16
7.7.5 Cost 7-16
7.7.6 Consideration of Public Concerns 7-16
7.8 Summary of the Detailed Analysis – Small Scale Applications 7-16
7.9 Preferred Alternative for Small Scale Applications 7-16
7.10 Comparative Detailed Analysis of Alternatives – Groundwater 7-17
7.10.1 Long-Term Effectiveness and Permanence 7-17
7.10.2 Reduction of Toxicity, Mobility, and Volume 7-17
7.10.3 Short-Term Effectiveness 7-17
7.10.4 Implementability 7-18
7.10.5 Cost 7-19
7.10.6 Consideration of Public Concerns 7-19
7.11 Summary of the Detailed Analysis 7-19
7.12 Preferred Alternative for Groundwater 7-19

CHAPTER 8 – CONCEPTUAL DESIGN OF THE PREFERRED ALTERNATIVES 8-1
8.1 Introduction 8-1
8.2 Conceptual Design by Remediation Unit (Large Scale Applications) 8-1
8.3 Conceptual Design (Small-Scale Applications and Miscellaneous Small RUs) 8-3
8.4 Groundwater 8-4
8.5 Estimate of Total Site Remediation Cost 8-4
8.5.1 Cost for Remediation: Preferred Alternative – Large and Small Scale Applications 8-5
8.5.2 Cost of Groundwater Remediation 8-5
8.5.3 Cost for Total Site Remediation 8-5

APPENDIX A – DESCRIPTION OF REMEDIATION TECHNOLOGIES FOR SOIL A-1
A.1 Introduction A-1
A.2 No Action A-1
A.3 Institutional Controls A-1
A.3.1 Access Restriction A-1
A.3.2 Monitoring A-2

A.4 Containment A-2
A.4.1 Cover A-3
A.4.2 Cap A-3
A.4.3 Liner A-3
A.4.4 Cap/Cover A-4
A.5 Dust Control A-4
A.6 Removal A-4
A.6.1 Excavation and Off-Site Disposal A-5
A.7 Immobilization A-5
A.7.1 Solidification/Stabilization A-6
A.8 Treatment A-7
A.8.1 Recycling A-7
A.8.2 Thermal Treatment A-7
A.8.3 Physico-Chemical Separation A-8
A.9 References for Appendix A A-11

APPENDIX B – OVERVIEW OF SOIL TESTING PROCEDURES AND DATA INTERPRETATION B-1
B.1 Whole Soil Procedures B-1
B.2 Soil Fraction Procedures B-3

APPENDIX C – LEAD AND ARSENIC SOIL CHARACTERIZATION AND TREATABILITY STUDIES C-1
C.1 INTRODUCTION C-1
C.2 TREATABILITY STUDY REQUIREMENTS C-1
C.3 BASIS FOR TREATABILITY STUDY SELECTION AND DESIGN C-1
C.3.1 Treatability Study Objectives C-1
C.3.2 Rationale and Constraints C-2
C.4 TREATABILIITY STUDY APPROACH AND INITIATIVES C-2
C.4.1 Regulatory Analyses C-3
C.4.2 Physical Analyses C-3
C.4.3 Chemical Analyses C-3
C.5 SUMMARY DESCRIPTION AND RESULTS OF TREATABILITY STUDIES COMPLETED C-4
C.5.1 Introduction C-4
C.5.2 Other Initiatives Supporting Hazen Studies C-4
C.5.3 Lead-Impacted Soils C-5
C.5.4 Test Results C-6
C.5.5 Interpretation of Results C-9
C.5.6 Arsenic-Impacted Soils C-11
C.5.7 Test Results C-12
C.5.8 Interpretation Results C-14

APPENDIX D – ARSENIC WET SCREENING STUDY D-1
D.1 Objective and Overview D-1
D.2 Treatability Sample Collection D-1
D.3 Treatability Study Procedure D-2
D.3.1 Physical Testing D-2
D.3.2 Chemical Testing D-3
D.3.3 Treatability Study Results D-4
D.3.4 Conclusion D-4

APPENDIX E – RANKING OF ALTERNATIVES E-1

APPENDIX F – COST ESTIMATE FOR REMEDIAL ALTERNATIVES ANALYZED IN DETAIL F-1
F.1 Capital Cost F-1
F.1.1 Direct Capital Costs F-1
F.1.2 Indirect Capital Costs F-2
F.2 Total Estimated Cost F-2

APPENDIX G – ESTIMATION OF MINIMUM SOIL VOLUME REQUIRED FOR COST-EFFECTIVE ON-SITE TREATMENT G-1
G.1 Assumptions G-1
G.2 Conclusion G-1

APPENDIX H – DEVELOPMENT OF SOIL REMEDIATION LEVELS FOR THE GOLF COURSE GROUNDSKEEPER H-1
H.1 Introduction H-1
H.2 Development of Soil Remediation Levels for Golf Course Groundskeepers H-1
H.2.1 Equation Input Values H-2
H.2.2 Exposure Factors H-2
H.2.3 Toxicity Values H-2
H.2.4 Benchmark Values H-3
H.3 Development of Soil Remediation Levels for Lead H-3
H.4 References for Appendix H H-11

APPENDIX I – IMPRACTABILITY OF GROUNDWATER REMEDIATION AT THE FORMER DUPONT WORKS SITE, DUPONT, WA I-1
I.1 Introduction I-1
I.2 Site Groundwater Poses No Risk to Human Health or the Environment I-2
I.2.1 Site Groundwater Poses No Risk to Human Health I-2
I.2.2 Site Groundwater Poses No Risk to the Environment I-2
I.3 Groundwater Recovery Will Occur Naturally I-3
I.4 The DNT Source Has Been Removed I-3
I.5 Rapid Natural Groundwater Flushing in Site Aquifers I-3
I.6 Technical Infeasibility Considerations I-3
I.7 Cost of Active Groundwater Remediation I-4
I.7.1 Groundwater Pumping Rate Estimates. I-5
I.7.2 Sea Level Aquifer (SLA) Assumptions I-6
I.7.3 Preliminary Cost Estimate for Groundwater Remediation I-6
I.8 Conclusions I-7
I.9 References for Appendix I I-11

ATTACHMENT A - GROUNDWATER RISK SCREENING EVALUATION

ATTACHMENT B – SUPPORTING INFORMATION FOR PROBABILISTIC FLOW RATE ESTIMATES

List of Tables

Table 2-1 – Risk-Based Remediation Levels 2-7
Table 3-1 – Estimate of In-Situ Impacted Soil Volume for Each RU 3-5
Table 4-1 – Preliminary Screening of Technologies and Process Options 4-5
Table 4-2 – Evaluation of Process Options 4-11
Table 5-1 – Soil Characterization Parameters by Treatment Technology 5-9
Table 5-2 – Soil Characterization Parameters by Category 5-11
Table 5-3 – Summary of Treatability Studies 5-13
Table 5-4 – Lead-Soil Characterization Study Summary of Test Results-Hazen Research 5-15
Table 5-5 – Arsenic-Soil Characterization Study Summary of Test Results-Hazen Research 5-21
Table 5-6 – Arsenic Wet Screening Study 5-23
Table 5-7 – Arsenic Speciation Tests 5-25
Table 5-8 – Summary of UB Soil Washing Evaluation (State University of New York) 5-27
Table 6-1 – Estimated Low and High Range Unit Costs 6-17
Table 7-1 – Estimated Time Frames by Alternative 7-21
Table 7-2 – Estimated Low and High Range Direct Costs 7-23
Table 7-3 – Estimated Low and High Range Indirect Costs 7-25
Table 7-4 – Estimated Low and High Range Total Costs 7-27
Table 7-5 – Summary of Detailed Analysis 7-29
Table 8-1 – Summary of Remediation Costs: Preferred Alternative – Large and Small Scale Applications 8-7
Table 8-2 – Summary of Site Remediation Costs 8-9
Table C-1 – Soil Characterization Procedures by Category C-19
Table C-2 – Soil Characterization Procedures by Treatment Technology C-23
Table C-3 – Lead-Soil Characterization Study-Hazen Research-Summary of Test Results C-25
Table C-4 – Arsenic-Soil Characterization Study-Hazen Research-Summary of Test Results C-31
Table D-1 – Whole Samples Total Arsenic Results 250/500-Foot Grid and Narrow Gauge Railroad Track D-7
Table D-2 – Arsenic Distribution With Grain Size D-9
Attachment D-1 – Wet Screening Process Data for Hart Crowser and Hazen Research Arsenic Treatability Studies D-11
Table E-1 – Screening of Alternatives E-3
Table E-2 – Weighting Factors Used for Ranking Alternatives E-5
Table E-3 – Comparative Analysis of Alternatives Using Selected Weighting Factors E-7
Table F-1 – High and Low Range Estimated Costs F-5
Table F-2 – Estimated Low and High Range Direct Costs F-7
Table F-3 – Estimated Low and High Range Indirect Costs F-9
Table F-4 – Estimated Low and High Range Total Costs F-11
Table F-5 – Estimated Low and High Remediation Costs for Miscellaneous Small Remediation Units F-13
Table F-6 – Summary of Site Remediation Costs F-15
Table H-1 – Soil Golf Course Groundskeeper Soil Remediation Levels H-5
Table H-2 – Input Parameters and Results of the Adult Lead Model H-7
Table H-3 – Golf Course Groundskeeper Soil Remediation Levels H-9
Table I-1 – Summary of Cost Estimates for Implementing Groundwater Pump and Treat for the Former DuPont Works Site I-9

List of Figures

Figure 1-1 – Former DuPont Works Site Vicinity Map 1-5
Figure 1-2 – Land Use and Remediation Units 1-7
Figure 1-3 – Miscellaneous Small Remediation Units 1-9
Figure 1-4 – Method for Screening Remedial Alternatives 1-11
Figure 3-1 – Areas Where Mass Excavation Will Occur 3-7
Figure 6-1 – Relationship of Screening Criteria to the Evaluation Criteria 6-19
Figure C-1 – Flow sheet for Sample Preparation and Testing C-33
Figure G-1 – Sensitivity of Remediation Costs to Volume of Soil Treated G-3

ACRONYMS

Acronym	Definition
2,4-DNT	2,4-dinitrotoluene
2,6-DNT	2,6-dinitrotoluene
AKART	All known, available, and reasonable treatment
AOC	Area of Contamination
ARAR	Applicable or relevant and appropriate requirement
ASIL	Ambient source impact level
AST	Above-ground storage tank
BDAT	Best demonstrated available technology
CEC	Cation exchange capacity (see Appendix B)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CGEST	University of Cincinnati Center for GeoEnvironmental Science and Technology
CL or RL	Statistical action level
cPAH	Carcinogenic polycyclic aromatic hydrocarbons
CSL	Cleanup Screening Level
CY	Cubic yards
DERS	DuPont Environmental Remediation Services
DNT	Dinitrotoluene
DuPont	E.I. DuPont de Nemours & Co.
Ecology	Washington State Department of Ecology
ELP	Equilibrium leaching procedure
EPA	U.S. Environmental Protection Agency
FS	Feasibility study
GANC	Generalized acid neutralization capacity (see Appendix B)
ISD	Inorganic solid debris
ISV	*In situ* vitrification
K_d	Soil: water partitioning coefficient
LDRs	Land disposal restrictions
M	Million
MANC	Metals with acid neutralization capacity (see Appendix B)
MDL	Method detection limit
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
MMAN	Monomethylamine nitrate
MTCA	Model Toxics Control Act
NAX	Nitroaromatic explosives
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NFA	No further action
NGRR	Narrow gage railroad
O&M	Operation and maintenance
ODW	EPA Office of Drinking Water
PAH	Polycyclic aromatic hydrocarbons

PH	pH (— $\log_{10}$ hydrogen ion concentration)
PNL	Pacific Northwest Laboratory
PPE	Personal Protective Equipment
PSAPCA	Puget Sound Air Pollution Control Agency
PSI	Pounds per square inch
PW	Problem waste
QA/QC	Quality assurance/quality control
QAPP	Quality Assurance Project Plan
RA	Risk assessment
RAO	Remedial action objective
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
Redox	Reduction/oxidation potential (see Appendix B)
RGANC	Reverse generalized acid neutralization capacity (see Appendix B)
RI	Remediation investigation
RI/FS	Remedial investigation and feasibility study
RL	Remediation Level
RMANC	Reverse metals with acid neutralization capacity (see Appendix B)
RREL	Risk Reduction Engineering Laboratory
SAR	Synthetic acid rain (see Appendix B)
SARA	Superfund Amendments and Reauthorization Act
SEM	Scanning electron microscopy (see Appendix B)
Site	Former DuPont Works Site
SITE	Superfund Innovation Technologies Evaluation
SMS	Sediment Management Standard
SQS	Sediment Quality Standard
T-BACT	Best available control technologies for toxics
TCLP	Toxicity characteristic leaching procedure (see Appendix B)
TGA	Thermal gravimetric analysis
TNT	2,4,6-trinitrotoluene
TPH	Total petroleum hydrocarbons
UB	State University of New York at Buffalo
UCL	Upper confidence limit
USC	United States Code
USDA	United States Department of Agriculture
UST	Underground storage tank
VISITT	Vendor Information System for Innovative Treatment Technologies
VOA	Volatile organics analysis
VOC	Volatile organic compounds
WAC	Washington Administrative Code
Weyerhaeuser	Weyerhaeuser Company
XRF	X-ray fluorescence (Appendix B)
µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter

EXECUTIVE SUMMARY

ES.1 Introduction

The Weyerhaeuser Company and the E.I. duPont De Nemours Company in accordance with a Consent Decree with the Washington State Department of Ecology (Ecology) conducted this Feasibility Study (FS). The Consent Decree calls for the completion of a Remedial Investigation (RI), Risk Assessment (RA), and FS for the Former DuPont Works Site (Site). The RI/RA/FS are being conducted in accordance with the Washington State Model Toxics Control Act (MTCA).

This FS report is a companion document to the RI and the RA reports. These documents should be reviewed together to better understand the relationship between the Site study activities.

The work conducted for this FS fulfills the requirements under MTCA and the RI/RA/FS Consent Decree for selecting cleanup alternatives that are protective of human health and the environment, and provide a reasonable approach to Site cleanup. The information provided in this FS will be incorporated into a Cleanup Action Plan that will outline the specific details of how the preferred alternatives will be implemented during Site cleanup.

ES.2 Background Information

The Site is located in southwestern Pierce County within the City of DuPont, Washington. Activities at the Site during its operation as an explosives manufacturing facility resulted in the accumulation of residual chemicals in soils Site wide. The highest concentrations occur in areas associated with former building foundations, in areas where manufacturing materials were disposed and along the Narrow Gauge Railroad (NGRR) tracks. The RI investigated soil, surface water, groundwater, and sediment and determined that soil was the only medium of concern. Accordingly, soil and associated debris are the only media addressed in this FS. The RA evaluated chemical concentrations in soil detected during the RI and determined that of the 213 constituents evaluated in the RA, 11 (aldrin, arsenic, benzo(a)pyrene, dinitrotoluene, copper, lead, mercury, nitrobenzene, TNT, tetrachlorethene, and TPH) were identified for remedy in the FS.

ES.3 Interim Source Removal

In accordance with MTCA (WAC 173-340-430) and the Consent Decree for the Site (Sections D and E), interim source removal has been conducted to remove soil and/or debris from 21 RI Areas of the Site between 1990 and 2001. Actions were conducted for five primary reasons:

- To minimize the potential for transport of residual constituents in soil by removing the sources, protect groundwater, and thereby minimize potential future environmental impacts;
- To remove soil and/or debris with high concentrations of constituents to improve the safety and environmental conditions at the Site;
- To remove debris (such as drums and other demolition material overlying fill and native soils) and facilitate a more complete and accurate RI;
- To minimize delays in the Site RI, RA, and FS process; and
- To prepare for the final remediation of the Site.

For each interim source removal, complete work plans were developed, reviewed by Ecology, and revised in accordance with their comments. Prior to the initiation of any interim source removal, Ecology's

approval to start was obtained. In addition, Ecology was communicated with regularly during these activities either by regular Site visits, periodic telephone calls or monthly reports.

The interim source removals are described in a series of Interim Source Removal Memoranda that are briefly summarized in the RI. The total volume of materials removed from the Site during interim source removal (through September 2001) included: approximately 60,900 tons of soil; 9,700 tons of debris; 1,540 tons of soil and debris mixtures; 4,836 drums; 69,204 gallons of liquids; and 170 cubic yards (CY) of asbestos-containing material. Materials were recycled off-Site, incinerated off-Site, or sent to an approved landfill.

Because Interim Source Removals (ISRs) have been performed, the current Site conditions have changed significantly. Therefore, this is a focused FS that addresses the residual constituents contained in soil and debris.

ES.4 FS Purpose and Process

The purpose of this FS is to present the information needed for decision makers to identify the best alternatives for Site cleanup. To do this the following steps were performed:

- Developed Remedial Action Objectives (RAOs) that protect human health and the environment and considered federal and state regulatory criteria;
- Grouped Site Areas requiring remediation into manageable units (i.e., remediation units) and estimated soil volume for each constituent in each unit;
- Developed a list of technologies that were potentially applicable to the Site and conducted initial qualitative screening of the technologies by evaluating the technology's effectiveness in meeting the criteria listed in MTCA;
- Conducted treatability studies to evaluate the selected technologies and evaluated the results;
- Developed the alternatives for Site remediation and screened them against MTCA criteria to select alternatives for detailed analysis;
- Conducted a detailed analysis of the alternatives for Site remediation; and
- Described the preferred alternative for each Site remediation unit.

ES.5 Remedial Action Objectives

RAOs were developed to comply with chemical, location, and action-specific applicable, relevant, and appropriate requirements (ARARs) and achieve cleanup standards that will be protective of human health and the environment for the Site. Cleanup and remediation levels for Site cleanup have been established through negotiation with Ecology. The derivation of these levels is discussed within the text of the RA and are based on protection of human health and the environment, and the potential risk associated with future land uses. Remediation levels (RL) were developed for four planned future land uses: open space, golf course, historical, and commercial. This FS will discuss engineering controls associated with each preferred alternative that will be used to modify the RLs discussed in the RA. These adjusted RLs have been discussed and approved by Ecology as protective of human health and the environment under the described conditions. The RAOs for the Site set the goal of the remediation, which is to prevent exposure to soils containing constituents above the cleanup levels or RLs.

ES.6 Remediation Units and Soil Volumes

The RI used historical Site information to establish 25 discrete areas of the Site. These RI areas were not used in either the RA or this FS due to the large variance in size between the RI areas and the lack of

total Site coverage. As an alternative, both the RA and this FS divided the Site into similar areas referred to as Evaluation Units (EUs) in the RA and Remediation Units (RU) in the FS. Of the 26 RUs investigated in the RA, 25 were identified for further evaluation in the FS. Forty-nine additional RUs were added to the FS to address discrete locations of contaminants (referred to as Miscellaneous Small RUs). These 150 RUs are described below, and the contamination found within them are the focus of this FS.

- **Golf Course RUs:** These RUs are those to be included within the golf course footprint. There are nine golf course RUs.

- **Open Space RUs:** These RUs are those included within the open space areas of the Site. There are four Open Space RUs.

- **Commercial Area RUs:** These RUs are those included within the areas of the Site planned for commercial use. There are nine Commercial Area RUs.

- **Historical RUs:** These three RUs make up the areas of the Site that have historic significance.

- **Miscellaneous Small RUs:** These remediation units are small, discreet units that have unique characteristics from the other large RU's. The unique characteristics can include the specific mixture of constituents in the unit, the deposition pattern of constituents in the unit, a localized "hot spot" that remained after ISR or a specific, unique location (NGRR). Due to the unique characteristics, it's more effective and practical to manage these units separately from the other larger RU's.

Soil volumes were estimated using the data collected during the RI, interim source removal activities and, in some cases, the square footage of each RU. Maps were produced showing the location and extent of constituents based on these data. The square footage of the area of the mapped locations, where the constituent concentrations do not or are not expected to meet the cleanup or remediation level, was multiplied by an estimated depth of excavation to calculate the soil volume. Soil volume estimates are based on the current Site data. The actual volume of soil to be removed during remedial action will be determined by confirmation sample data collected during remediation. The total estimated volume of in-place soil that does not meet the cleanup or remediation level prior to the selection of a remedy is approximately 1,243,000 cubic yards on an excavated basis. There is also debris on-Site (estimated at approximately 14,800 bank cubic yards) that will be managed during the cleanup action.

ES.7 Identification and Screening of Technologies

Over 50 different technologies or groupings of technologies were evaluated during this FS. Protection of human health and the environment and compliance with all RAOs (including ARARs) were established as threshold criteria since they must be met by the alternative for it to be retained for further evaluation. To expedite the screening process, only alternatives that are able to meet the threshold criteria were developed. The following MTCA criteria were used to assess the technology's ability to meet RAOs.

ES.7.1 Effectiveness

The criteria used to assess effectiveness are defined as:

Protectiveness: This evaluation considers the degree of protection each technology provides to human health and the environment.

Permanence: The degree to which the alternative permanently reduces the toxicity, mobilization or volume of the contaminants.

Long-Term Effectiveness: The evaluation of the effectiveness of the process during the time when contaminant concentrations remain on-Site that are greater than cleanup levels or remediation levels, and the magnitude of risk with the alternative in place.

Management of Short-Term Risks: This evaluation considers the effectiveness of the process dealing with the potential impacts to human health and the environment during the implementation phase.

ES.7.2 Implementability

Implementability includes both operational Implementability and administrative feasibility. Operational Implementability refers to the ability to construct and reliably operate the remediation alternative. It includes operation, maintenance, replacement, and monitoring of the technical components of an alternative. Administrative feasibility refers to the ability to obtain approvals from city/county/state officials/agencies; the availability of treatment, storage, and disposal services; and the availability of specific equipment.

ES.7.3 Cost

The cost for remediation work includes such items as installation and operation of process equipment, excavation, and disposal fees. Cost estimates were developed from a variety of sources including: technology unit costs developed by the project team, vendor information, published cost-estimating guides, and prior experience with similar technologies. Cost was not a primary screening criteria in the initial stages.

ES.7.4 Consideration of Public Concerns

MTCA requires an evaluation of any local community concerns over the alternative and how the alternative addresses those concerns.

ES.8 Treatability Studies

In some cases additional research was needed to evaluate a technology. Because the primary constituents present in Site soils are lead and arsenic, for which destruction technologies are not commercially available, treatability studies were performed to characterize the soil and to evaluate the potential for remediation by volume reduction, a primary goal of MTCA, and immobilization technologies. A comprehensive laboratory testing program was completed to determine how, and in what form, constituents are distributed in the soils and how readily different constituents in the soils can be treated using different technologies. Five combinations of treatment technologies were evaluated as part of the treatability studies:

- *Wet Screening and Classification* to evaluate the potential for separating the soil into different size fractions (physical separation) and to determine the concentrations of lead and arsenic in each size fraction;

- *Dry Screening and Classification* to evaluate the potential for separating the soil into different size fractions (physical separation) and to determine the concentrations of lead and arsenic in each size fraction;

- *Soil Washing with Acid/Base Extraction* to evaluate removal of constituents from the soil by dissolving them in a liquid and further processing that liquid to recover the extracted metals;

- *Solidification/Stabilization* to evaluate their ability to immobilize (chemically fix) concentrated metal constituents; and

- *Recycling to a Thermal Process* (e.g., a lead smelter) to determine if the finer soil fractions with high metals concentrations produced by a physical separation process could be disposed by a Thermal Process.

The primary findings of the treatability studies indicate:

- The soils can be sorted by size fractions;

- The contaminants can be immobilized by stabilization technologies;

- Use of physical separation technologies can result in a gravelly coarse fraction that can be re-used on the Site as clean soil and a fine fraction that contains metals above the remediation levels. This process will effectively decrease the volume of impacted soil requiring treatment to between 45 to 90 percent, depending on the extent of treatment; and

- The contaminants either do not leach or have very low leachability under normal environmental conditions.

ES.9 Detailed Analysis of Alternatives

The detailed analysis identifies and discusses how the remedial actions would be implemented (e.g., excavation, sampling, analysis) for each of the remedial alternatives. The treatment options are discussed relative to how they apply to the RUs. The evaluation criteria are the same as used for the screening of alternatives but a more detailed evaluation was conducted to enable selection of the preferred alternatives. In addition to the No Action alternative (no Site cleanup activities), which was retained as a baseline for comparison purposes, three other remedial alternatives were retained for detailed analysis. They were:

- **On-Site Deposition with Cap/Cover:** This alternative includes the excavation and placement of contaminated soils in discrete locations of the proposed golf course land use area and the capping of them with an engineered cap/cover that would prevent exposure to humans and animals.

- **Off-Site Disposal at Landfill:** This alternative includes the excavation, transport and disposal of contaminated soils in an approved landfill.

- **Wet Screening with On-Site Deposition and Off-Site Disposal of Residuals:** The excavation and wet screening of contaminated soils to separate them into a coarse clean fraction and a fine fraction that can be disposed of at an approved landfill. Soils not requiring disposal would be placed in discrete areas of the proposed golf course and capped with an engineered cap/cover that would prevent exposure to humans and animals.

The detailed analysis was performed to evaluate the No Action and three primary alternatives to ultimately develop preferred alternatives.

ES.10 Preferred Alternatives

During the final evaluation it became apparent that some of the alternatives that were not retained for total Site cleanup were potentially useful in remediating small-scale and Miscellaneous Small RUs. As such, two sets of preferred alternatives were developed; those for large-scale applications and those for small-scale applications and Miscellaneous Small RUs. The selected preferred alternatives defined for cleanup action for each remediation unit are shown below:

Preferred Alternative	Application
Large Scale Applications	
Excavation with On-Site Deposition and Cap/Cover	Golf Course RUs Commercial Land Use RUs
No Action	Open Space RUs
Small Scale Applications	
Cap/Cover	Historical
Excavation with Off-Site Disposal	Miscellaneous Small RUs • Similar mixture of contaminants • Similar deposition method • Small occurrence(s) of a single contaminant • Contamination "hot spots" discovered during final cleanup • Debris
Cap (asphalt)	Miscellaneous Small RUs • Sequalitchew Creek NGRR
Cover	Golf Course Land Use RUs • Fill Areas
No Action	Small occurrences of chemicals that are naturally occurring or where not part of the manufacturing process.

Chapter 1 – INTRODUCTION

1.1 Introduction

This chapter presents the general scope, purpose, and organization of this report.

E.I. duPont de Nemours & Co. (DuPont), the Weyerhaeuser Company (Weyerhaeuser), and the Washington State Department of Ecology (Ecology) have agreed to complete a Remedial Investigation (RI), Health Risk Assessment (RA), and Feasibility Study (FS) for the Former DuPont Works Site (Site) under the terms and conditions defined in Consent Decree No. 91-2-01703-1.

The RI, RA, and FS were conducted according to provisions of the Washington State Model Toxics Control Act (MTCA) as administered by Ecology. Under MTCA, Ecology provides guidance and criteria for the selection of cleanup actions (WAC 173-340-360). MTCA specifies criteria for selecting cleanup actions, which include the permanence of the action, protectiveness, cost, long-term effectiveness, management of short-term risks, implementability and consideration of public concerns. Under MTCA, Ecology also provides general information on the content of a feasibility study (WAC 173-340-350). This FS follows that guidance.

This FS report is a companion document to the RI and RA and should be reviewed in conjunction with these reports.

1.2 Site Description and History

The Site is located in southwestern Pierce County, within the City of Dupont, as shown on Figure 1-1. The former DuPont Works occupied an 841-acre fenced area and included Parcel 1 and Parcel 2 areas, as referenced in the Consent Decree. Remediation of Parcel 2 has been completed and this parcel was released for development by Ecology in December of 1997. This FS only addresses Parcel 1 (i.e., The Site).

The Site is bordered by Weyerhaeuser property to the north and west and WRECO property on the east, and south (Figure 1-1). Burlington Northern railroad property is adjacent to the Weyerhaeuser open space to the west. Puget Sound is located to the west of the Burlington Northern Railroad property.

Activities at the Site during operation of an explosives manufacturing facility resulted in the accumulation of residual chemicals in soils:

- In areas associated with former building foundations;
- In areas where lead paint was used and/or stored;
- In areas where manufacturing materials were stored;
- Along the narrow gauge railroad tracks;
- In waste disposal areas; and
- In low concentrations Site-wide.

1.3 Interim Source Removal

In accordance with MTCA (WAC 173-340-430) and the Consent Decree for the Site (Sections D and E), interim source removal (also referred to as interim cleanup actions) has been conducted to remove soil and/or debris from discrete locations throughout the Site. This work was done between 1990 and 2001. Actions were conducted for five primary reasons:

- To minimize the potential for transport of residual constituents in soil by removing the sources, protect groundwater, and thereby minimize potential future environmental impacts;
- To remove soil and/or debris with high concentrations of constituents to improve the safety and environmental conditions at the Site;
- To remove debris (such as drums and other demolition material overlying fill and native soils) and facilitate a more complete and accurate RI;
- To minimize delays in the Site RI, RA, and FS process; and
- To prepare for the final remediation of the Site.

For each interim source removal (ISR), complete work plans were developed, reviewed by Ecology, and revised in accordance with their comments. Prior to the initiation of any ISR, Ecology's approval to start was obtained. In addition, Ecology was communicated with regularly during these activities either by regular Site visits, periodic telephone call and/or monthly reports.

The ISR was described in a series of Interim Source Removal Memoranda submitted to Ecology following work scope completion. These memoranda referenced in the RI, present the results and provided additional details of each activity.

The total volume of materials removed from the Site during ISR (through December, 2001) included: 60,900 tons of soil; 9,700 tons of debris; 1,540 tons of soil and debris mixtures; 4,836 drums; 69,204 gallons of liquids; and 170 cubic yards (CY) of asbestos-containing material. Materials were recycled off-Site, incinerated off-Site, or sent to an approved landfill.

As a result of these efforts, this is a focused FS, which addresses the residual constituents contained in soil and debris, and the contaminated stockpiled soil generated during ISR.

1.4 RI and RA Summary

The RI investigated four media (i.e., soil, surface water, groundwater, and sediment) and determined that only soil and groundwater were media of concern. The RA evaluated the soil information presented in the RI for compliance against Site-specific cleanup levels (CLs) and remediation levels (RLs). Because chemical constituents in media other than soil and groundwater meet Site-specific CLs and RLs, this FS will focus on these media only. Minor amounts of contaminated debris are also present on-Site and will be addressed in this FS.

The RA identified 25 areas to be addressed in the FS. The basis for determination of any area requiring no further action (NFA) is described in the RA. The RA also identified CLs and RLs associated with future Site land use. Chapter 6 of this FS further evaluates these risks and land uses to assess the value of engineering controls associated with the preferred alternatives to attain the RAOs.

1.4.1 Soil

The sample data collected during the RI indicated that soil on the Site initially contained lead, arsenic, mercury, 2,4-dinitrotolouene and 2,4-dinitrotoluene (DNT), 2,4,6-trinitrotoluene (TNT), total petroleum hydrocarbons (TPH), and carcinogenic polycyclic aromatic hydrocarbons (cPAH) above MTCA screening levels.

Interim Cleanup or Source Removal Actions remediated many of these locations. These interim actions were effective in reducing the potential for impacts to the groundwater by leachable constituents and by excavating, designating, and disposing of soil which would have been difficult to treat on the Site. This FS refers to conditions within each area after completion of these actions.

1.4.2 Debris

Contaminated debris generated during ISR was disposed of off-Site based on characterization sample analytical results. Additional debris remains in-situ and will be addressed in this FS and during final cleanup action.

1.4.3 Groundwater

The RI and RA reported that groundwater impacts (concentrations above drinking water standards) are limited to one contaminant, dinitrotoluene. These concentrations are very close to the drinking water standard and have slowly been slowing decreasing. Groundwater will be discussed further in Chapter 6.

1.5 Future Land Use

The RA and FS assume certain Site land uses. They are divided at Sequalitchew Creek, with industrial uses planned for the area north of the creek and commercial, historical, and recreational (golf course) land uses planned for the areas south of the creek. Open space will occur along Sequalitchew Creek, and will encompass Old Fort Lake and surrounding land. This land use configuration is presented in Figure 1-2. Land use was used as a basis to develop exposure scenarios in the RA to derive preliminary land use and chemical specific CLs and RLs. Further evaluation was done to assess the impacts of engineering controls associated with the alternatives chosen for further evaluation in Chapter 8. In some cases these engineering controls were used to modify the RLs used in the RA and to estimate the impacted soil volumes.

1.6 Identification of Remediation Units

The area of contamination (AOC) policy developed by Ecology (Ecology, 1991) clarifies the definitions of generation and disposal as they apply to waste soil and debris found on MTCA sites. In 1993, Ecology determined that an AOC, which includes all areas within the Consent Decree Boundary (Figure 1-1), would allow on-Site consolidation, handling, and treatment of soil from various Areas on the Site.

Remediation units (RU) are groupings of the Site locations with like land uses. Each RU grouping will be treated with similar technologies and, thus, can be addressed as a single entity for the purposes of the FS. Remediation units were developed to address the residual contamination and associated soil volumes remaining after ISR (as described in Section 1.2). This FS generally uses RUs based on land size and land use type rather than similar chemical types and concentrations, RI Areas, or where deposition of these chemicals is believed to have occurred by similar mechanisms (e.g., application of herbicides). This was done to address the public's concerns over the large variance in size between the RI areas and the lack of total Site coverage. These RUs are shown on Figure 1-2 and described in section 3.2. The exceptions are Miscellaneous Small RUs, which are either small in size or have similar and/or unique characteristics. These RUs are shown on Figure 1-3.

1.7 FS Purpose and Report Organization

The primary focus of this FS is to address soil impacted by lead and arsenic. Soils impacted by other contaminants and contaminated debris occur on Site but comprise relatively small volumes. These

occurrences are referred to as "Miscellaneous Small RUs" throughout this FS. An evaluation of applicable remedial approaches for these RUs is contained in Chapter 7 and in Chapter 8.

The relationship between each section of this FS report and the process used for development and screening of remedial alternatives is presented on Figure 1-4.

This FS report is organized as follows:

- Chapter 2 summarizes RAOs designed to protect human health and the environment. The RAOs take into consideration remediation or cleanup levels identified in the RA and relevant state and federal regulations. The relevant cleanup or remediation levels form the basis of the estimated impacted soil volumes and are also used to assess the feasibility of potential remedial alternatives.

- Chapter 3 defines the RUs and summarizes the impacted soil volumes that will be addressed by the cleanup action.

- Chapter 4 describes applicable technologies and associated process options, and summarizes the screening of those technologies. Preliminary screening was performed based on professional judgment of the effectiveness of the technology and process options to remediate Site soil. Following the preliminary screening to eliminate technologies that are not suitable to remediate constituents at the Site, specific processes were assembled to represent a range of options for each technology. A qualitative screening of process options was then conducted based on effectiveness, implementability, and cost screening criteria. After this screening, at least one specific process was selected to represent each retained technology for combination into plausible remedial alternatives.

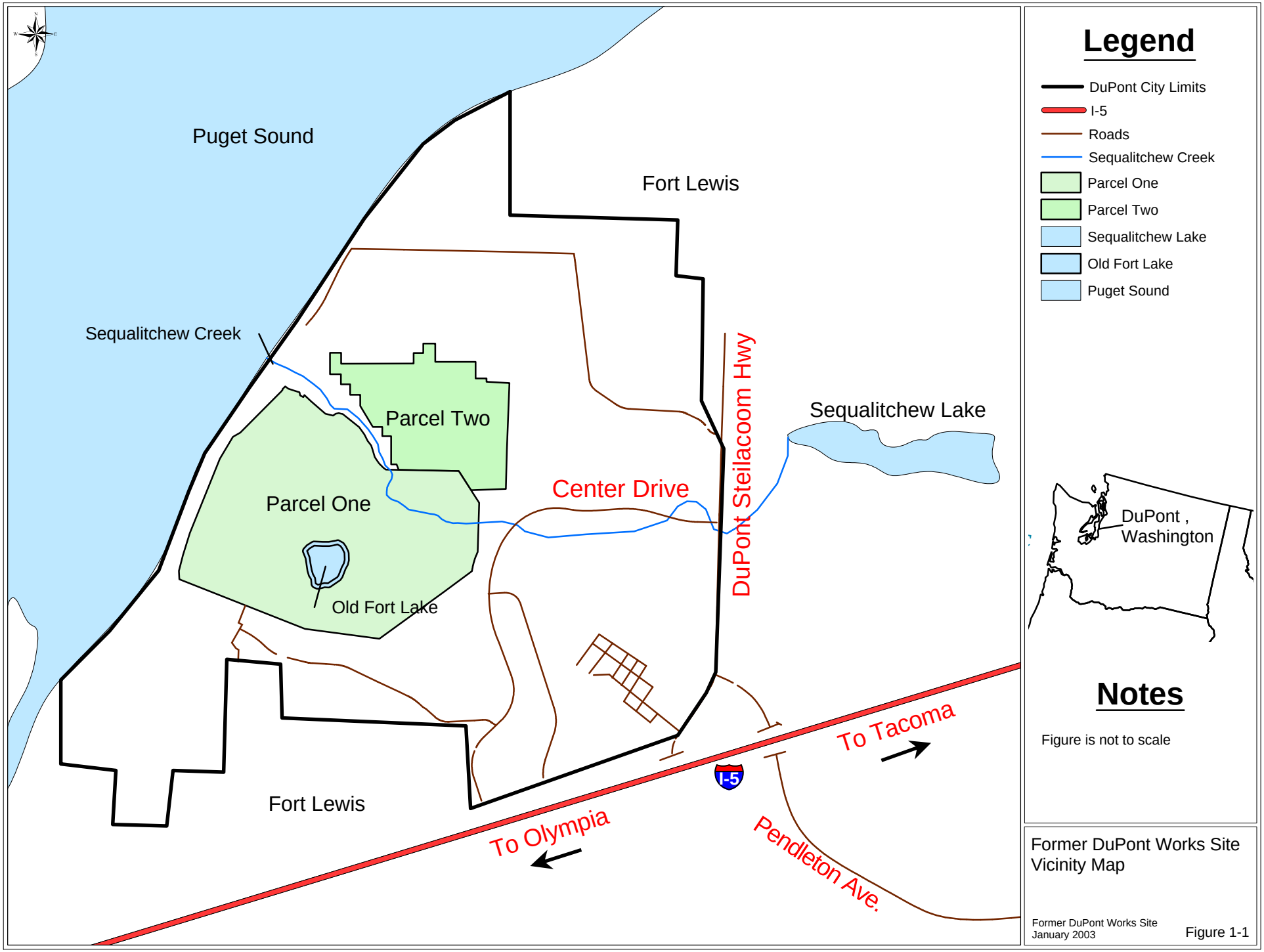
- Chapter 5 summarizes the scope, results, and recommendations from the treatability studies performed on various impacted soils.

- Chapter 6 describes and evaluates the application of remedial alternatives (groups of applicable technologies) to the cleanup action at the Site. Initially, groups of applicable technologies were assembled into alternatives that would be plausible for remediation of Site soils. Then, a quantitative screening of each alternative was conducted. The difference between this screening and the initial screening as discussed in Chapter 4 is that the criteria were weighted and the alternatives scored by the FS team (Appendix E), and the individual elements of each criterion were examined in detail.

- Chapter 7 describes the detailed analysis of remedial alternatives. This section includes an analysis and ranking of the remedial alternatives based on the same set of evaluation criteria used in Chapter 6 applied with greater detail. A comparative analysis identifies the performance of the retained remedial alternatives for each criterion. Cost is evaluated in detail using generic unit costs and recent vendor estimates for direct costs. Indirect costs associated with contingency, engineering design, administration, construction oversight, and community relations are also estimated. The recommended alternative for each RU grouping is selected in this section.

- Chapter 8 defines the recommended strategy for the Site cleanup action. The proposed steps for implementation of the selected alternative are described, pairing the selected alternatives with applicable remediation units and land use. Treatment alternatives for Miscellaneous Small RUs, containing other constituents and constituent mixtures, are also detailed.

Throughout this report, tables and figures are presented at the end of each chapter in which they are discussed. These chapters are supplemented by eight appendices, which provide supporting documentation of items discussed in the text.



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure 1-1

Legend

- Commercial
- Golf Course
- Historical
- Old Fort Lake
- Industrial
- Open Space

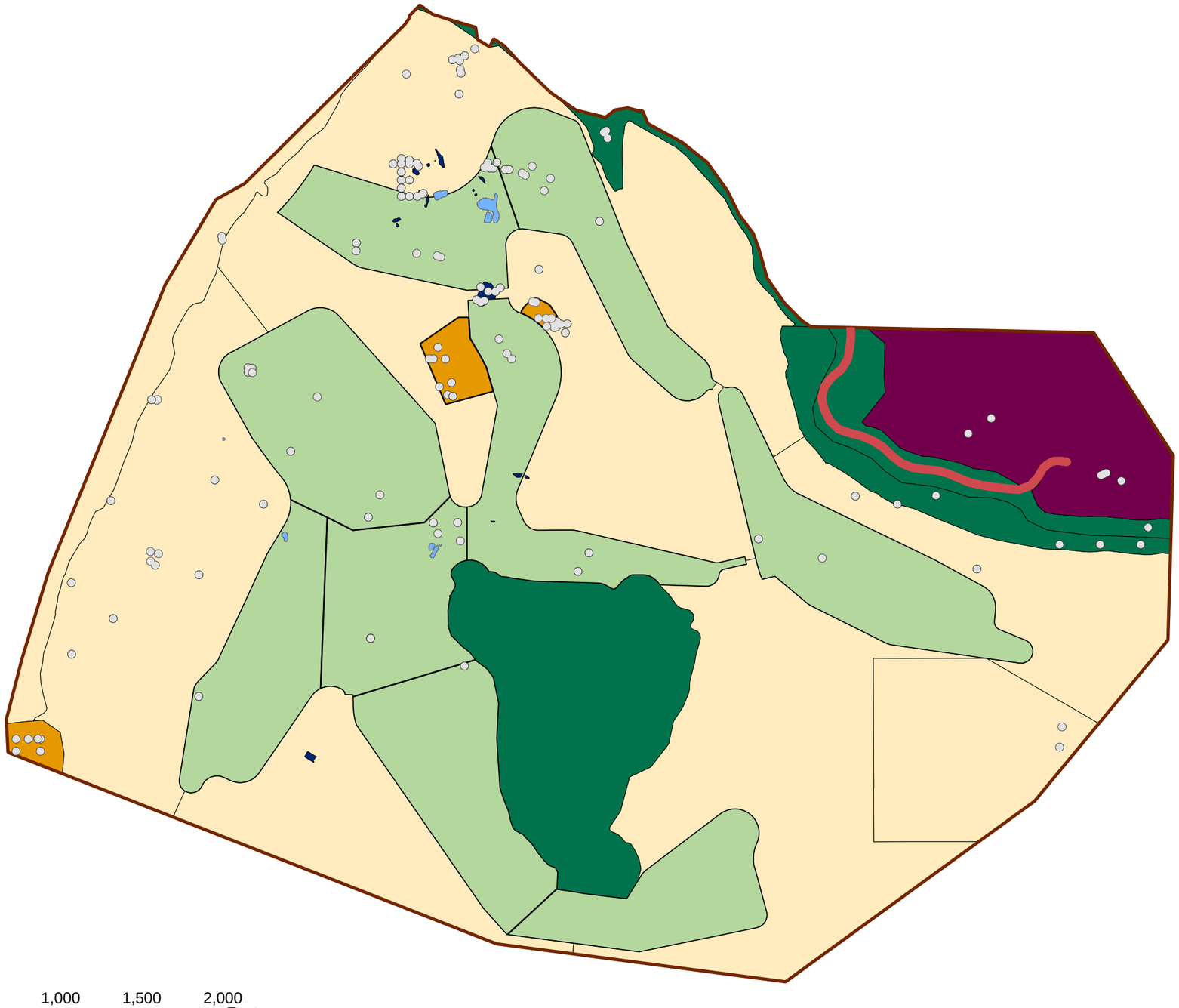
Notes

GC - Golf Course
CM - Commercial
HI - Historical
IN - Industrial
NOC - North of Creek
SOC - South of Creek

Land Use and Remediation Units

Former DuPont Works Site
September, 2002

Figure 1-2



0 250 500 1,000 1,500 2,000
Feet

Legend

Miscellaneous Small Units

- Debris Areas
- NGRR Miscellaneous Subunit
- Stockpiles
- Exceedence Locations

Evaluation Units

- Parcel One
- Industrial EU
- Open Space EU's
- Commercial EU's
- Golf Course EU's

Notes

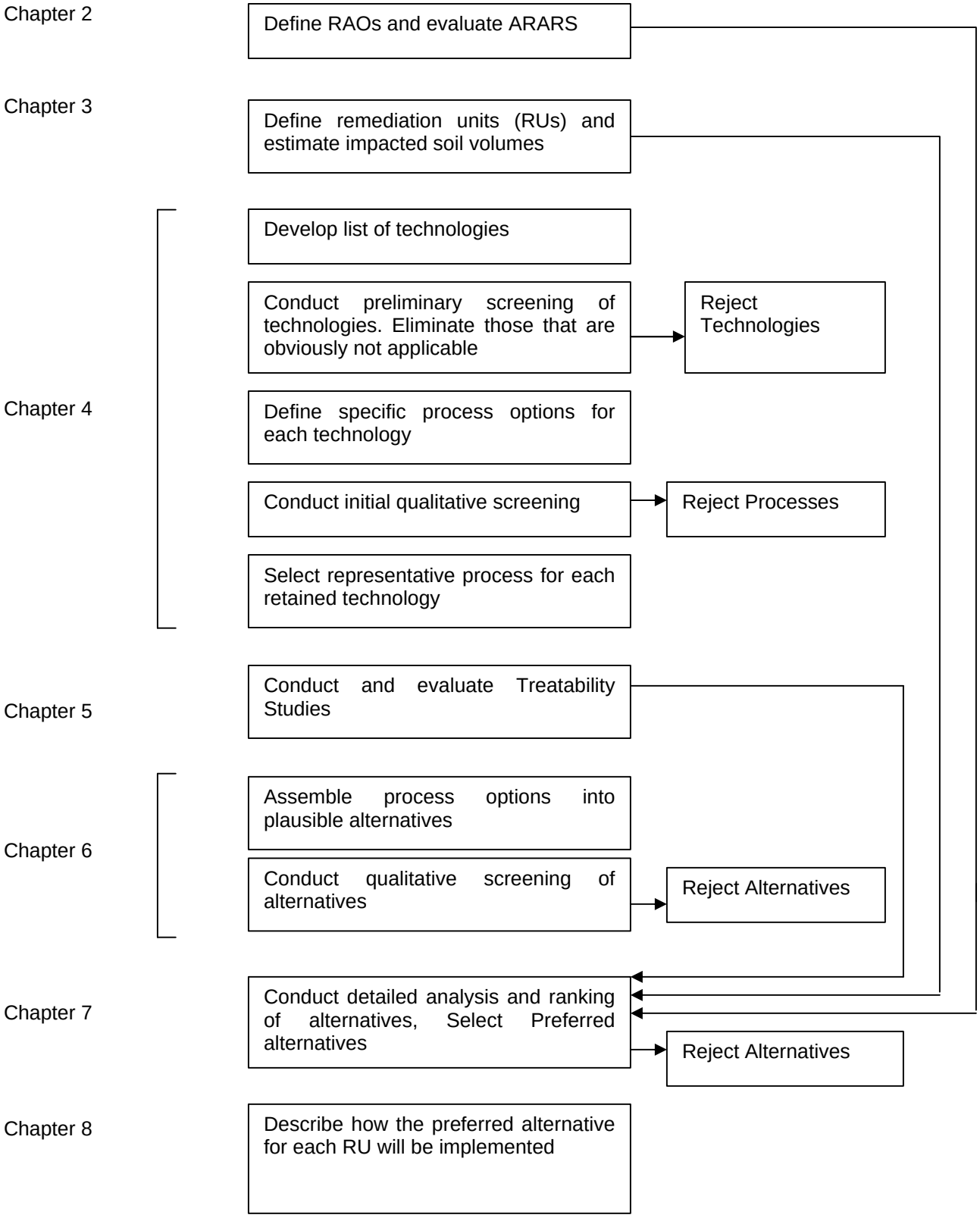
NGRR - Narrow Gauge Railroad

Miscellaneous Small Remediation Units

Former DuPont Works Site
July 2003

Figure 1-3

Figure 1-4 – Method for Screening Remedial Alternatives



1.8 References for Chapter 1

DuPont Environmental Remediation Services and Hart Crowser, 1994. Draft Risk Assessment, Former DuPont Works Site, Dupont, Washington. December 14, 1994.

Ecology, 1991. Inter-program Policy Memorandum on Contamination, Washington State Department of Ecology Toxics Cleanup Program, August 20, 1991.

EPA, 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA.

Hart Crowser, 1994d. Remedial Investigation, Former DuPont Works Site, Dupont, Washington. June 30, 1994.

Chapter 2 – REMEDIAL ACTION OBJECTIVES

2.1 Introduction

The remedial action objectives (RAOs) of future cleanup actions at the Site are to provide remedial alternatives that protect human health and the environment (WAC 173-340-350). The proposed RAOs for the Site are designed to:

- Achieve CLs or RLs that will be protective of human health and the environment; and
- Comply with chemical-, location-, and action-specific applicable, relevant, and appropriate requirements (ARARs).

MTCA (Chapter 173-340 WAC) requires that cleanup actions meet Cleanup Standards at least as stringent as those under the Superfund Amendments and Reauthorization Act of 1986 (SARA), and WAC 173-340-710 requires that all cleanup actions be in compliance with applicable state and federal laws. Section 121 (d) of the SARA requires cleanup actions at Superfund sites to attain the "applicable or relevant and appropriate" requirements of federal and state environmental laws and regulations.

Because of the complexity of the Site, a Site-specific RA using land use specific exposure scenarios was used to develop CLs and RLs protective of human health and the environment (WAC 173-340-700 (3)(c)).

Section 2.2 discusses applicable or relevant and appropriate requirements (ARARs) for the cleanup action(s) at the Site, as specified under MTCA and federal regulations. Section 2.3 presents chemical-specific requirements based on ARARs and risk-based CLs or RLs. Sections 2.4 and 2.5 discuss the location and action-specific ARARs for the Site cleanup action(s). Section 2.6 summarizes the various RAOs identified from a consideration of ARARs and Site-specific risks. These RAOs form the basis for remediation alternatives presented in subsequent sections of this FS report.

2.2 Potentially Applicable State and Federal Requirements for the FS

2.2.1 Introduction

The specific standards that help to determine when RAOs have been met for Site cleanup under a MTCA consent decree are applicable state and federal laws. The selected remedies in the FS must be protective of human health and the environment and comply with these laws.

MTCA (Chapter 90.105D RCW) governs investigation and cleanup of the Site. Cleanup standards in the MTCA regulations (WAC 173-340) consist of the following:

- Cleanup or remediation levels for hazardous substances present at a site (constituent concentrations in affected media).
- Points of compliance (locations where cleanup levels must be met).
- Other regulatory requirements of applicable state and federal laws (requirements that apply to a site because of the type of action and/or the location of the site).

This section of the FS addresses the following: applicable state and federal laws for the cleanup action(s) at the Site, as specified under MTCA; chemical-specific CLs or RLs based on the MTCA regulations and the ARARs; and state and federal laws that apply to cleanup locations and cleanup actions.

2.2.2 Applicable State and Federal Laws

Under MTCA, "applicable state and federal laws" are all legally applicable requirements and those requirements that Ecology determines are relevant and appropriate. Therefore the definition is similar to the federal Superfund concept of "applicable or relevant and appropriate requirements" or ARARs. The term ARARs is used throughout the MTCA regulations and is also used here.

In WAC 173-340-710, MTCA defines legally applicable requirements as those cleanup standards, standards of control, and other environmental protection requirements, criteria, or limitations adopted under state or federal law that specifically address a hazardous substance, cleanup action, location, or other circumstances at a site.

MTCA defines "relevant and appropriate requirements" using the same words as those in Superfund guidance: *"those cleanup standards, standards of control, and other human health and environmental requirements, criteria, or limitations established under state or federal law that, while not applicable to the hazardous substance, cleanup action, location, or other circumstance at a site, address problems or situations sufficiently similar to those encountered at the site that their use is well suited to a particular site"* (italics added). The criteria used to make this determination are presented in WAC 173-340-710(4)(a)-(i).

Remedial actions conducted under a consent decree with Ecology must comply with the substantive requirements of the ARARs but are exempt from their procedural requirements (e.g., obtaining permits and approvals) (WAC 173-340-710(9)). Specifically, this exemption applies to requirements under the Washington State Water Pollution Control Act, Solid Waste Management Act, Hazardous Waste Management Act, Clean Air Act, State Fisheries Code, and Shoreline Management Act. It also applies to local laws requiring permits or approvals.

This section includes a discussion of the three types of ARARs: chemical-, location-, and action-specific. The definitions of these ARAR types and the potential ARARs for the Site that fall into these categories are presented in the following subsections.

2.3 Potential Cleanup Levels and Chemical-Specific ARARs

The remediation of contaminated Site media must meet the cleanup standards developed under MTCA and also meet chemical-specific ARARs. Chemical-specific ARARs include those requirements that regulate the acceptable amount or concentration of a constituent that may be found in or released to the environment.

MTCA requires that CLs or, if allowed, RLs be derived for contaminated media at hazardous waste sites. Ecology allows the use of site-specific data to determine risk-based CLs and RLs. If a calculated CL is less than the natural background concentration or the detection limit, the cleanup level would be set at background or the detection limit, whichever is higher (WAC 173-340-700(4)(d)). The RA used this approach to determine the appropriate CLs or RLs. Institutional controls, as defined by MTCA, can be used in conjunction with remedial actions in developing the cleanup alternatives. Table 2-1 summarizes the CLs and RLs approved for the Site by Ecology. This list was used in the RA to evaluate Site contamination. This list is not inclusive and will require re-evaluation based upon the preferred alternative.

MTCA also requires ecological evaluations at sites that may pose a threat to the terrestrial environment (WAC 173-340-7490 and 173-340-7491). These evaluations may be either simplified (WAC 173-340-7492) or site-specific (WAC 173-340-7493). The RA used Site-specific data to determine ecological soil screening level that is protective of ecological receptors. This screening level was used to screen the evaluation units (EUs).

2.4 Potential Location-Specific Requirements

Location-specific ARARs are those requirements that restrict the concentration of hazardous substances or the performance of activities solely because they occur in specific locations. For each of the following location-specific ARARs, a determination of whether they are applicable or are relevant and appropriate will be made after a detailed development of each FS alternative. A discussion of the location-specific ARARs that potentially apply to the Site follows.

Washington State Shoreline Management Act (Chapter 90.58 RCW; Chapters 173-18, 173-22, and 173-27 WAC): The substantive requirements of this statute and its implementing regulations apply to activities within 200 feet of shorelines in the state, which includes the shoreline of Sequalitchew Creek (WAC 173-18-310) and associated wetlands, but not the shoreline of Old Fort Lake (WAC 173-20-560) or Puget Sound which is over 200 feet from the Site. Proposed remedial actions must be consistent with the policies and goals of the approved Washington State coastal zone management program and with the policies and shorelands use designations of the local jurisdiction's shoreline master plan (Pierce County shoreline designation maps, WAC 173-22-0636).

Pierce County Shoreline Management Use Regulation (Title 20): Shorelines within Pierce County include all marine shorelines, shorelines and associated wetlands of streams with a mean annual flow of at least 20 cubic feet per second (cfs), and lakes and associated wetlands that are at least 20 surface acres (Old Fort Lake is approximately 13 acres). The flow rate of Sequalitchew Creek peaks in the spring and was measured in 1999 at approximately 25 cfs. Pierce County regulation provides constraints on "use activities" such as dredging and shoreline disposal of fill.

Pierce County Development Regulations—Critical Areas (Title 18E): This regulation protects critical areas by limiting any actions that are planned within 150 feet of a wetland or 35 feet of a stream, or near geologic hazard areas (steep slopes) or fish and wildlife habitat areas. Pierce County has mapped in an atlas, critical areas and wetlands in areas it has surveyed. This regulation establishes required buffer zones for actions adjacent to any of the above critical areas. Such actions could include any work along Sequalitchew Creek, and Old Fort Lake.

Washington State Hydraulic Projects Approval (Chapters 75.20.100 Through 75.20.160 RCW; Chapter 220-110 WAC): This statute and its implementing regulations apply to any work conducted in Puget Sound or within the designated shoreline that changes the natural flow or bed of the water body (and therefore has the potential to affect fish habitat). The requirements include bank protection (WAC 220-110-050), saltwater technical provisions, and prohibited work times in saltwater areas, such as juvenile salmon outmigration periods. Any work along Sequalitchew Creek will involve consultation with the Washington State Department of Fish and Wildlife (WDFW) to determine appropriate mitigation measures.

The Fish and Wildlife Coordination Act: The Fish and Wildlife Coordination Act requires actions that will result in the control or structural modification of any natural body of water for any purpose, to protect the fish and wildlife resources that may be affected by the action. The U.S. Fish and Wildlife Service (USFWS) and appropriate state agencies must be consulted to ascertain the means and measures necessary to mitigate, prevent, and compensate for project-related losses and to enhance resources. This regulation applies to any actions taken on Sequalitchew Creek. Fish species using Sequalitchew Creek include chum salmon (O*ncorhyncus keta)*, coho salmon (O*ncorhyncus kisutch*), and cutthroat trout (*Salmo clarki)*. Adult chum are reported to spawn in the lower 650 feet of the creek.

Endangered Species Act (16 USC 1531 et seq.; 50 CFR Parts 17, 225, and 402) : This act protects fish, wildlife, and plants species whose existence is threatened or endangered (T/E). The Coho salmon and the bald eagle are candidate T/E species in the Puget Sound ecologically significant unit. The requirements of this regulatory program apply to cleanup actions that may affect a listed T/E species or designated critical habitat. Applicability will be determined via discussions with the USFWS and the

National Marine Fisheries Service (NMFS), as appropriate. A biological assessment could be required by the agencies to evaluate whether the remedial action is likely to affect endangered species.

Native American Graves Protection and Repatriation Act (25 USC 3001 Through 3013; 43 CFR Part 10) and Washington's Indian Graves and Records Law (Chapter 27.44 RCW): These statutes prohibit the destruction or removal of Native American cultural items (human remains and associated funerary objects, graves, cairns, pictographs, glyptics, or other painted records) and require written notification of their inadvertent discovery to the appropriate agencies and Native American tribe. Because the Site area has been occupied or otherwise used by Native American tribes, remediation activities could uncover Native American graves or other protected items; therefore these programs are applicable to the Site cleanup, but only if the listed items are found. The remedial action must cease in the area of the discovery; a reasonable effort must be made to protect the items discovered before such activity is resumed; and notice must be provided as described above.

Archaeological Resources Protection Act (16 USC 470aa et seq.; 43 CFR Part 7): This program sets forth requirements that are triggered when archaeological resources are discovered. It requires that excavation of these resources be conducted under a permit by professional archaeologists. These requirements apply only if archaeological items are discovered during implementation of the selected remedy.

National Historic Preservation Act (NHPA) (16 USC 470 et seq.; 36 CFR Parts 60, 63, and 800): This regulatory program sets forth a national policy of historic preservation and provides a process that must be followed to ensure that impacts of actions on archaeological, historic, and other cultural resources are considered. NHPA requirements apply to federal sites but should be considered when evaluating location specific ARARs at the Site.

2.5 Potential Action-Specific Requirements

Action-specific ARARs are requirements that define acceptable management practices and are usually specific to certain kinds of activities that occur or technologies that are used during the implementation of cleanup actions.

Washington Dangerous Waste Regulations (Chapter 173-303 WAC): These requirements potentially apply to the identification, generation, accumulation, and transport of hazardous/dangerous (hazardous) wastes at the Site. Under Ecology's Area of Contamination (AOC) policy, if contaminated soil is managed within an AOC, it is not considered to be “generated” as a hazardous waste, even if constituent concentrations would cause it to exceed regulatory levels and ordinarily be called a hazardous waste. Ecology may set an AOC or AOCs for a site-undergoing cleanup under a MTCA Consent Decree. Hazardous waste requirements would therefore not apply unless the wastes resulting from the Site cleanup action were moved outside the boundary of the AOC.

Federal land disposal restrictions (LDRs) under 40 CFR Part 268 require that hazardous wastes be treated prior to being disposed of in a land-based disposal unit. EPA has developed special LDRs for contaminated soil and debris. The treatment standards for these substances are expressed as numerical limits and treatment methods, respectively. These standards would generally not apply to contaminated media disposed of within an AOC; however, they could be relevant and appropriate.

Solid Waste Management Act (Chapter 70.95 RCW; Chapter 173-304 and 173-351 WAC): Potential Site cleanup actions include on-Site treatment and consolidation of solid wastes. MTCA specifically includes the solid waste landfill closure requirements as a potential ARAR. If wastes or contaminated soil are to be disposed of on-site, the design requirements of the solid waste landfill regulations may be relevant and appropriate. These design standards include slope, cover, and other structural requirements.

Water Quality Standards for Surface Waters of the State of Washington (Chapters 90.48 and 90.54 RCW; Chapter 173-201A WAC): This regulation is an action-specific ARAR because the remedial actions at the Site (e.g., soil movement and disposal) must not result in any exceedance of surface water quality standards (unless a short-term modification of water quality has been approved by Ecology ahead of the activity; see WAC 173-201A-110). Surface water quality standards such as turbidity, temperature, and metal limits could apply to the remedial actions.

Ecology has designated Puget Sound as a Class A (excellent) water body; Sequalitchew Creek is also a Class A surface water body. Old Fort Lake would fall into the Lakes class. These classifications determine the beneficial uses that must be maintained for the surface water thus labeled and, therefore, the water quality standards as well (i.e., the higher the water quality, the more stringent the standard may be).

This regulation also governs the discharge of wastewater to surface water and groundwater, including discharges from municipal sewer systems to surface water or groundwater. Finally, it provides for use of best management practices for stormwater management on construction sites. Specifically, Chapter 173-216 WAC requires that all known, available, and reasonable treatment (AKART) be used to remove contaminants from wastewater prior to discharge to meet state surface water and groundwater quality standards.

Federal, State, and Local Air Quality Protection Programs: Regulations promulgated under the federal Clean Air Act (42 USC 7401) and the Washington State Clean Air Act (Chapter 70.94 RCW) governs the release of airborne contaminants from point and non-point sources. Local air pollution control authorities such as the Puget Sound Clean Air Agency (PSCAA) have also set forth regulations for implementing these air quality requirements.

Chapter 173-460 WAC, Controls for New Sources of Toxic Air Pollutants, requires that point-source emissions for major sources of regulated air toxics be treated using best available control technologies for toxics (T-BACT) prior to discharge, and that emissions do not cause ambient air concentrations of these chemical constituents to exceed established ambient source impact levels (ASILs). Chapter 173-460 WAC establishes ASILs for several of the chemical constituents at the Site, including arsenic, mercury, TNT, and PAHs. Similar requirements and ambient concentration limits have been adopted by PSCAA under Regulation III, and it is these local requirements, which are at least as stringent as the state and federal requirements, that apply to the Site.

Department of Transportation Hazardous Materials Regulations (40 CFR Parts 171 Through 180): The U.S. DOT has promulgated regulations that govern the transportation of hazardous materials, including packaging, labeling, placarding, and communications and emergency response requirements. The U.S. DOT and state regulations will apply to any hazardous materials transported off-site as part of the remediation.

Washington State Water Well Construction Act (Chapter 18.104 RCW; Chapter 173-160 WAC): This regulation governs the minimum standards for construction, maintenance, and abandonment of wells, including both water supply wells and resource protection wells (e.g., monitoring wells). These regulations will apply to any Site monitoring wells that are closed (abandoned) as part of the remedial action or new wells installed.

City of DuPont Regulations and Standards: The City of DuPont has established regulations and standards which governs the minimum standards for grading and setbacks from sensitive areas and wetlands. These substantive requirements of these regulations and standards, as they relate to the cleanup process, will be met and addressed as part of the remedial design process.

2.6 Screening of ARARs

A screening of ARARs was conducted to assess their applicability to the Site. Only those that were determined to be applicable were retained as an RAO. The following list identifies the ARARs that are potentially applicable to the Site.

Potential Cleanup Levels and Chemical-Specific ARARs

- The Model Toxics Control Act (Chapter 173-340 WAC).

Potential Location-Specific Requirements

- Washington State Shoreline Management Act (Chapter 90.58 RCW; Chapters 173-18, 173-22, and 173-27 WAC).
- Pierce County Shoreline Management Use Regulation (Title 20).
- Pierce County Development Regulations—Critical Areas (Title 18E).
- Washington State Hydraulic Projects Approval (Chapters 75.20.100 Through 75.20.160 RCW; Chapter 220-110 WAC).
- The Fish and Wildlife Coordination Act.
- Endangered Species Act (16 USC 1531 et seq.; 50 CFR Parts 17, 225, and 402).
- Native American Graves Protection and Repatriation Act (25 USC 3001 Through 3013; 43 CFR Part 10) and Washington's Indian Graves and Records Law (Chapter 27.44 RCW).
- Archaeological Resources Protection Act (16 USC 470aa et seq.; 43 CFR Part 7).

Potential Action-Specific Requirements

- Washington Dangerous Waste Regulations (Chapter 173-303 WAC).
- Solid Waste Management Act (Chapter 70.95 RCW; Chapter 173-304 and 173-351 WAC).
- Water Quality Standards for Surface Waters of the State of Washington (Chapters 90.48 and 90.54 RCW; Chapter 173-201A WAC).
- Federal, State, and Local Air Quality Protection Programs.
- Department of Transportation Hazardous Materials Regulations (40 CFR Parts 171 Through 180).
- Washington State Water Well Construction Act (Chapter 18.104 RCW; Chapter 173-160 WAC).
- City of DuPont Regulations and Standards.

Table 2-1 – Risk-Based Remediation Levels

Constituent	Site Specific Cleanup Levels[1] (mg/kg)	MTCA Method C Industrial Cleanup Level[2] (mg/kg)	Commercial Remediation Level (mg/kg)	Golf Course Land Use Remediation Level (mg/kg)	Historical Remediation Level (mg/kg)	Open Space Remediation Level (mg/kg)
Explosives						
Total DNT	3.0	–	–	–	–	–
2,4,6-Trinitrotoluene	1.75	1,750	1,230	1,230	172	172
Inorganics						
Arsenic	32	90	60	60	32[4]	32[4]
Lead[3]	–	1,000	2,100	2,100	1,500	1,500
Mercury	24	1,050	737	737	247	247
Pesticides						
Aldrin	–	7.7	5	5	0.3	0.3
TPHs and PAHs						
Bunker C	7,600	–	–	–	–	–
Benzo(a)Pyrene	–	18	13	13	0.7	0.7

Notes:
[1]Where remediation levels were calculated for both carcinogenic and noncarcinogenic effects, the value shown in the table is the lower of the two values.
[2]Industrial Cleanup levels were calculated using equations and exposure factors for MTCA Method C (WAC 173-340-745)
[3]Except for the Industrial lead soil level, which is the historical MTCA Method C industrial value, all other lead values were derived by Ecology using the lead biokinetic models for children and adults (Ecology, 1999a).
[4]Value is site-specific background level for arsenic. This level was approved for use by Ecology (Ecology, 1999b).
– = Not developed.

2.7 References for Chapter 2

URS Corporation (URS). 2000. *Cultural Resources Protection Plan, Remedial Investigation/Feasibility Study,* Appendix G. Former DuPont Works Site, Dupont, Washington.

Ecology (Washington State Department of Ecology). 1999a. Non-Residential Remediation Levels at the Former DuPont Works Site. Memo from Mike Blum to Vern Moore and Izzy Zanikos. May 3, 1999. (Memo is presented in Appendix C).

Ecology (Washington State Department of Ecology). 1999b. Soil Arsenic Non-Residential Remediation Levels. Memo from Mike Blum to Vern Moore and Izzy Zanikos. June 25, 1999. (Memo is presented in Appendix C).

EPA, 1992. Guidance on Risk Characterization for Risk Managers and Risk Assessors. Memorandum from F. Henry Habicht II, Deputy Administrator, to Assistant and Regional Administrators. February 26, 1992.

Pioneer Technologies Inc., 2002. Draft Risk Assessment, Former DuPont Works Site, Dupont, Washington. March 15, 2002.

Hart Crowser, 1992. Management Plan, Remedial Investigation/Feasibility Study, Former DuPont Works Site, Dupont, Washington. January 17, 1992.

Chapter 3 – ESTIMATED VOLUMES OF SOIL FOR REMEDIATION

3.1 Introduction

This chapter describes the following:

- Site remediation units are defined in Section 3.2;
- Section 3.3 describes the procedures that were used to estimate the impacted soil volumes, and present the volumes of in-place soils by RU type; and
- Section 3.4 summarizes the total estimated soil volume that is addressed in this FS.

3.2 Definition of Remediation Units

RUs are generally defined in this FS as areas of the Site with similar future land uses. The exception is the Miscellaneous Small RUs where the RUs were grouped by distinct constituent types, concentrations, or where deposition of those constituents is believed to have occurred by similar mechanisms. The names and descriptions of the remediation units that are used throughout this FS report are as follows:

Golf Course RUs: All property inside the golf course footprint. There are nine golf course RUs comprising 187 acres. The amount of remediation required in these RUs is related to the alternative selected and ranges from the entire 187 acres to less than 100 acres under a limited cap/cover scenario. Under a limited cap/cover scenario, roughly 73 acres would be used for soil placement and cap/cover.

Open Space RUs: These RUs represent the open space areas of the Site. Four open space RUs occur on-Site. They are North Sequalitchew Creek Canyon, South Sequalitchew Creek Canyon (broken into two RUs) and the Old Fort Lake Greenbelt. These RUs represent 73 acres.

Commercial RUs: All Site property planned for commercial development. There are nine Commercial RUs consisting of approximately 334 acres.

Historical RUs: These RUs make up the areas of the Site that have historic significance. Three historical RUs occur on-Site consisting of approximately 6 acres. They are the Fort Nisqually Cemetery (45PI404), the south Shell Midden (45PI72), and the 1833 Fort Nisqually Site (45PI55. An additional historic site, the small Shell Midden (45PI485) along Sequalitchew Creek, is included in the Sequalitchew Creek open space RU and will be addressed in the same manner as the remainder of that RU.

Miscellaneous Small Remediation Units: These remediation units are those that have unique characteristics and are small in size (less than 2 acres) and volume (requiring excavation of less than 5,000 CY). These unique characteristics could be any of the following:

- Similar mixture of contaminants;
- Similar deposition method (localized spill, localizes disposal site, etc.);
- Small occurrence(s) of a single contaminant;
- Contaminant “hot spots” discovered during final cleanup;
- Debris; and
- Location: An example would be sections of the Narrow Gauge Railroad track within Sequalitchew Creek Canyon. This RU is represented by the linear length of the track and the width of track bed from the toe of the uphill slope and the crest of the downhill slope.

3.3 Soil Volumes

Estimates of soil volume were based on interpretation of sample data collected during the RI and subsequent ISR or characterization efforts. Volumes reported below are pre-remedy estimates. The

actual amount of soil to be excavated during the cleanup action will increase or decrease based on effectiveness of the remedy chosen as verified by the actual field sampling data (i.e., confirmation samples) obtained during the cleanup action, or the error inherent in the volume estimation process.

Only in-situ soils with lead and/or arsenic concentrations above the respective CLs or RLs are included in the estimated soil volumes for remediation. Additional volumes of non-lead and non-arsenic soils are associated with Miscellaneous Small RUs. Estimating the final volume of in-place impacted soil that must be addressed in miscellaneous small units with certainty is very difficult. These units are small and have many unique characteristics. For these units, an alternate approach based on Site knowledge and good technical judgment was developed that will provide reasonable estimates. This approach estimates the total volume associated with contamination discovered as a result of confirmation sampling as 0.5% of the total know volume of arsenic and lead impacted soil. As such, the total volume associated with Miscellaneous Small RUs equals the total known volume plus 0.5% of the total lead and arsenic impacted soil volume Site-wide.

3.4 Soil Volume Estimation Procedures

Soil volumes were estimated using the Pre-RI and RI analytical data and verification sample analytical data from the ISR and maps generated for the RI and RA reports. Excavated volumes are calculated by multiplying the in-place soil volumes by a "fluff" factor, which accounts for volume expansion that results from excavation. Based on laboratory and field measurements of Site soils, an excavation fluff factor of 1.25 was used. These volumes, in some cases, were converted to tons on a 1 CY = 1.4 tons basis. This conversion was developed from actual site data recorded during the 2001 Soil Screening Interim Cleanup Action.

Generally, the excavation depth used to estimate excavated soil volume was 1.25 feet. This estimate is based upon the 95% upper confidence level (UCL) of the actual vertical extent of lead and arsenic contamination statistically above the Site-specific RLs (determined to be 1 foot in depth) and a reasonable safety factor of 25%. The following assumptions/process were used to determine the 95% UCL.

- Each sample point was evaluated to assess the vertical extent of contamination. The depth of each constituent was determined by using the bottom of the sample interval above the RL in a test pit, boring, or hand auger exploration. (No interpolation was used when determining the depth). When surface samples only were above the RL, the depth was set at one foot.
- Once the sample evaluation was complete the sample data was evaluated using Ecology's Threefold Statistical Process to determine at which depth compliance could be reached.

Due to the complexity of the Site and the difficulty in predicting the presence and location of isolated occurrences of lead and arsenic contamination above the Site-specific RLs, four separate methods were used to determine the lateral extent of contamination in each RU.

- For localized contamination, the lateral extent associated with a sample point above the RL was assumed to be 25 feet from the limit of the bermed area or limit of the former building foundation. This estimate was based on best professional judgment of a reasonable scenario for deposition of the constituent, such as construction material (lead sheeting on floors, workbenches). When no depositional constraints were present near the sample location, a 25-foot-square area centered over the sample location approximated the limit of impact. When two or more adjacent samples were above the RL and none of the depositional constraints were present, the area between the sample locations was included.
- The estimate of impacted soil volumes in the Narrow Gauge Railroad Tracks (NGRR) was based on sample analytical results which show that arsenic concentrations decreased significantly beyond 25 feet (see the RI). The length of impacted NGRR was interpolated between sampling locations with concentrations that are above and below the RL.
- For those areas of the Site where concentrations of lead and arsenic contamination approached the RLs, the prediction of the presence or absence of contamination becomes

difficult and impractical. In these areas the entire square footage of the RU was deemed to be contaminated.

- Debris volume was determined assigning an in-situ volume of 740 CY per known location. This estimate assumes a 50-foot by 50-foot lateral occurrence, which is 8 feet deep.

Note that these assumptions were used only for estimating impacted volumes. Actual volumes and limits of excavations will be determined by confirmation sampling conducted during the cleanup action.

3.4.1 In-Place Volumes of Impacted Soil

The following estimates of soil volume were calculated using the assumptions listed. Table 3-1 presents the estimates of in-situ volume of impacted soils by RU. They represent impacted volumes prior to the selection of any remedy. The selection of a remedy will change these volumes either upward or downward.

Golf Course RUs: The estimated in-place contaminated soil volume in the golf course RUs is 301,693 CY. Using the "fluff" conversion factor of 1.25, the excavated volume is 377,117 CY.

Open Space RUs: The estimated in-place contaminated soil volume in these RUs is 117,773 CY. Using the "fluff" conversion factor, the excavated volume is 147,217 CY.

Commercial RUs: The estimated in-place contaminated soil volume in these RUs is 554,987 CY. Using the "fluff" conversion factor, listed above, the excavated volume is 693,733 CY.

Historical RUs: The in-place contaminated soil volume in these RUs is 9,680 CY. Using the conversion factor, listed above, the excavated volume is 12,100 CY.

Miscellaneous Small RUs: The known volumes of the soil requiring remediation, for each Miscellaneous Small RU, are as follows:

- Similar mixture of contaminants: There are 3 locations where this type of occurrence is present. Using the criteria listed above this equates to approximately 173 CY excavated volumes of soil.
- Similar deposition method: There are 9 locations where this type of occurrence is present. Using the criteria listed above this equates to approximately 184 CY excavated volumes of soil.
- Small occurrence(s) of a single contaminant: There are 113 locations where this type of occurrence is present. Using the criteria listed above this equates to approximately 4,689 CY excavated volumes of soil.
- Contamination "hot spots" discovered during final cleanup: Since the impacted soil quantity in "discovered hot spots" is unknown, the impacted soil volume will be estimated at 0.5% of the total lead- and arsenic-impacted soil. As such, the in-situ contaminated soil volume in these RUs is 4,630 CY. Using the "fluff" conversion factor of 1.25, the excavated volume is 5,788 CY.
- Debris: Debris occurs both as stockpiled material and in-situ. Interim source removal/cleanup actions have discovered 20 discrete in-situ debris locations. Their depth and regulatory status is unknown. As such, it was assumed that each of these locations represent 740 CY excavated volume of contaminated debris for a total of 18,500 CY.
- Sequalitchew Creek NGRR: Approximately 2,000 linear feet of NGRR track bed remains in Sequalitchew Creek Canyon that will require remediation. This represents an estimated in-place volume of impacted soil of 1,852 CY. Using the "fluff" conversion factor of 1.25, the excavated volume is 2,315 CY. Estimated Soil Volumes Summary

Table 3-1 presents a summary of estimated in-place soil volumes above RLs for the Site organized by RU. The total excavated volume of soil associated with each remediation unit is also presented in the table. The total estimated volume of excavated soil and debris that may require remediation is approximately 1,261,815 CY. Figure 3-1 identifies the areas where mass excavation will occur.

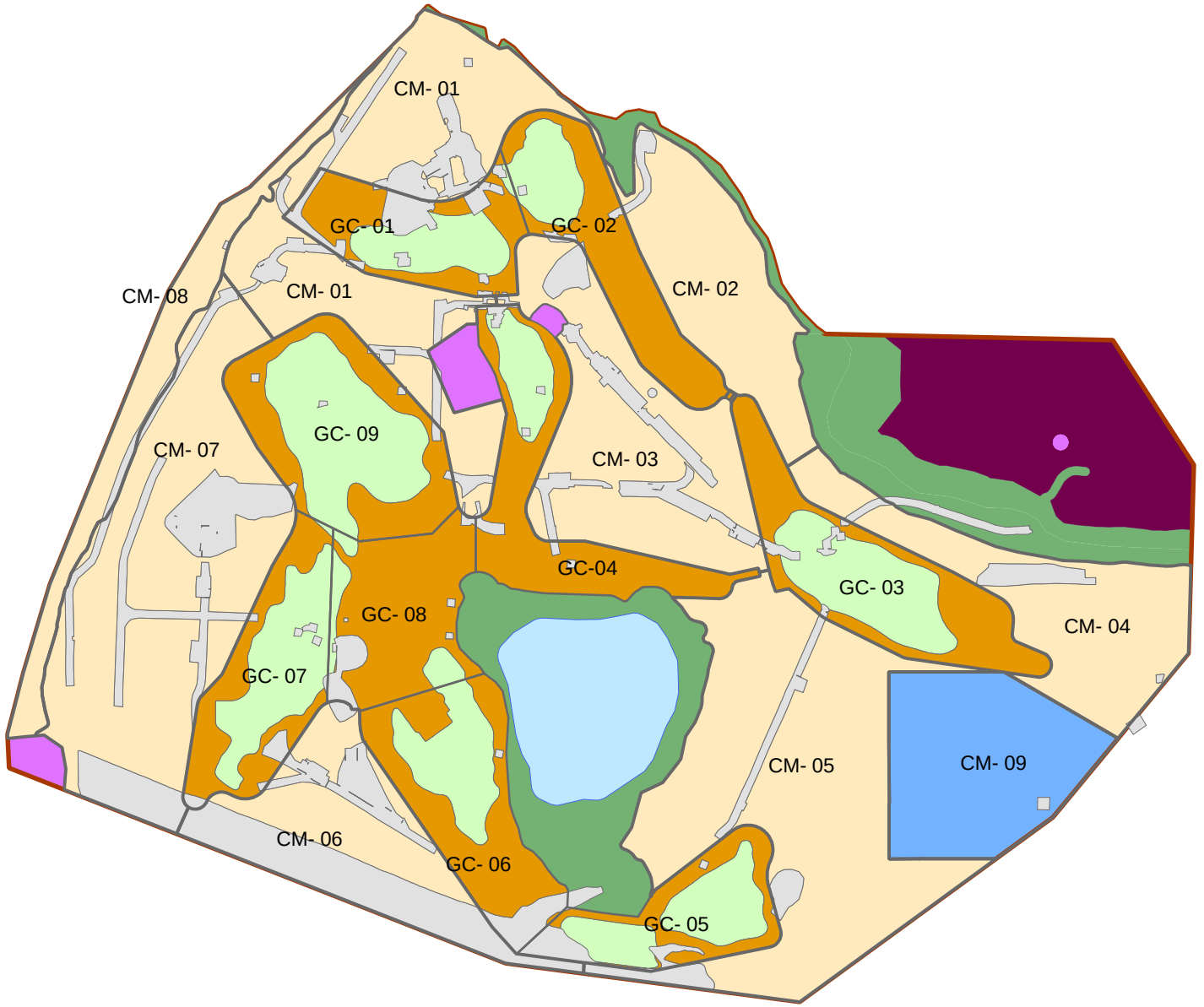
These estimated soil volumes are to be used as the basis for:

- The screening of technologies and process options (Chapter 4);
- Screening and analysis of alternatives (Chapters 6 and 7);
- Selecting the preferred alternative (Chapter 8); and
- The development of scope for treatability studies (Chapter 5).

Table 3-1 – Estimate of In-Situ Impacted Soil Volume for Each RU

Remediation Unit Type - Mass Excavation	Number of RUs	Acreage	In-situ Volume (CY)	Excavated Volume (CY)	Weight in Tons
Golf Course	8	187	301,693	377,117	527,963
Commercial	11	344	554,987	693,733	971,227
Open Space	3	73	117,773	147,217	206,103
Historic	3	6	9,680	12,100	16,940
Miscellaneous Small RUs	**Occurrences**				
Similar Mixtures	3		139	173	243
Similar Deposition	9		147	184	257
Single Contaminant	113		3,751	4,689	6,564
"Hot Spots"	NA		4,630	5,788	8,103
Sequalitchew Creek NGRR	2,000		1,852	2,315	3,241
TOTAL VOLUME - Soil			994,652	1,243,315	1,740,641
Debris	20		14,800	18,500	25,900
TOTAL VOLUME - Soil and Debris			1,009,452	1,261,815	1,766,541

Notes:
NA = Not applicable.



Legend

- Historical Area
- Golf course area to be scraped
- Commercial area to be scraped
- Old Fort Lake
- Open Space
- Consent Decree Boundary
- ISR Excavations SOC
- Area in Compliance
- Industrial Area
- Placement Area

Notes

Scraped area omits Placement Area, ISR Excavations, Historical Areas, Open Space, and Industrial Areas in the calculation.

Total commercial acres to be scraped: 251.9 acres

Area scraped in each unit:
CM-01: 38.9 acres
CM-02: 23.8 acres
CM-03: 30.6 acres
CM-04: 26.3 acres
CM-05: 60.0 acres
CM-06: 12.4 acres
CM-07: 45.3 acres
CM-08: 14.6 acres

Total golf course acres to be scraped: 104.4 acres

Area scraped in each unit:
GC-01: 7.7 acres
GC-02: 13.2 acres
GC-03: 13.1 acres
GC-04: 15.6 acres
GC-05: 5.8 acres
GC-06: 13.2 acres
GC-07: 8.7 acres
GC-08: 15.2 acres
GC-09: 12.0 acres

ISR: Interim Source Removal
SOC: South of Creek

Historical location in the Industrial area is the Methodist Mission Marker. Actual location of the mission is unknown.

Scraped Units

Former DuPont Works Site

July 2003

Figure 3-1

Chapter 4 – IDENTIFICATION AND SCREENING OF TECHNOLOGIES

4.1 Introduction

This chapter summarizes the development of a list of preliminary screening of technologies and associated process options, and initial qualitative screening of technologies. Section 4.2 presents a list of databases reviewed in developing a list of potentially applicable technologies. Section 4.3 describes the technology screening process. Preliminary screening was performed using engineering judgment to assess the effectiveness of each technology in reducing potential Site risks. Technologies that passed through the preliminary screening were then further qualitatively screened, based on effectiveness, implementability, and cost. Tables 4-1 and 4-2 provide a synopsis of this information. Section 4.4 summarizes representative process options (at least one for each technology) that were selected following qualitative screening for compilation into remedial alternatives as presented in Chapter 6. Appendix A presents a detailed discussion of the general response actions, process options, or technologies, including limitations for cleanup of soils containing certain metals and mixtures of metals.

The screening of technologies and process options in this section focuses on the soil volumes defined in Chapter 3. Additionally, the RAOs summarized in Chapter 2 form the basis for the preliminary screening of technologies and process options.

4.2 Development of Candidate Technologies and Process Options

A list of potentially applicable technologies and process options was developed using the following resources:

- Vendor Information System for Innovative Treatment Technologies (VISITT) database, Version 2.0;
- EPA Risk Reduction Engineering Laboratory (RREL) database;
- EPA Superfund Innovative Technologies Evaluation (SITE) demonstrations;
- Remedial Technologies Screening Matrix and Reference Guide, USEPA and U.S. Air Force, July 1993;
- In-house DuPont Company experience;
- In-house consultant and contractor experience;
- Other consultant reports;
- Treatability studies for other sites; and
- Literature survey.

The technologies are grouped according to "general response actions." These are the broad categories of remedial measures that may be implemented alone or in combination to meet the RAOs. The potentially applicable technologies and process options are presented in the first three columns of Table 4-1. Note that process options are a subset of technologies and describe the different systems, equipment, or chemical processes that were considered as potentially applicable alternatives for remediation of the Site. The fourth column of the table includes a brief description of each process option. This description is included to aid the reader in understanding each process option.

4.3 Technology Screening

Screening of potentially applicable technologies was performed in two steps. First, a preliminary screening was performed to identify technologies that may be applicable to the Site. The preliminary screening was based on a technology's broad-based effectiveness in reducing Site risks. The technologies selected on the basis of preliminary screening then went through a second tier of screening, an initial qualitative screening.

4.3.1 Preliminary Screening

The preliminary screening eliminated technologies or process options, which, for technical reasons, could not be implemented or would not be effective (i.e., technically infeasible), including the following:

- Technologies that have been demonstrated only in a laboratory;
- Technologies that cannot achieve the Cleanup Standards required at the Site; and
- Technologies that are not applicable to the Site for practical reasons.

Table 4-1 summarizes the preliminary screening of technologies and process options. Technologies and process options deemed not applicable are indicated by shading. For example, cryogenic freezing was not a suitable immobilization technology since this process is not a permanent solution. The last column of Table 4-1 presents a brief comment on the applicability of the process option, based on the technology's ability to achieve RAOs. These comments provide explanation as to why a particular process option was retained for further evaluation or rejected.

4.3.2 Technologies That Rely On Stabilization/Solidification

Past interim source/cleanup actions have removed the majority of the known soil locations where lead and arsenic concentrations could potentially be above levels at which characteristic dangerous waste limits could apply. As such, technologies that rely on the mass stabilization of soils to reduce the leachability of lead and arsenic-impacted soils to below the hazardous designation were not retained. Stabilization was retained for further evaluation where the alternative concentrates the contaminants into a smaller volume (i.e. Wet Screening with Stabilization, On-Site Deposition and Cap/Cover).

4.3.3 Initial Qualitative Screening

The process options retained from the preliminary screening were evaluated in the initial qualitative screening. MTCA requires that technologies and processes are screened to determine if the alternatives selected for further evaluation represented those that were permanent to the maximum extent practicable (as defined by WAC 173-340-360 (3)(b)). For this phase of screening the MTCA required criteria were grouped in the following manner:

Effectiveness: Effectiveness contains those criteria that evaluate the state of development of the technology, the ability to protect human health and the environment, and identifies potential negative impacts associated with the technology. Under this heading are the following MTCA criteria:

- Protectiveness: This evaluation considers the degree of protection each technology provides to human health and the environment, the extent to which reductions in risk, toxicity, and/or mobility are expected to be achieved, the time required to reduce risk and obtain cleanup standards, the off-Site and on-Site risks resulting from the implementation of the alternative, and the degree of improvement of the overall environmental quality.
- Permanence: This evaluation considers the degree to which the alternative permanently reduces the toxicity, mobilization or volume of the contaminants. The evaluation considers the materials treated, quantity of material treated, degree of toxicity, mobility, and volume reduction, degree to which the treatment is irreversible, and residuals type and quantity.

- Long Term Effectiveness: This evaluation considers the effectiveness of the process during the time when contaminant concentrations remain on-Site that are greater than CLs or RLs, the magnitude of risk with the alternative in place, and the adequacy and reliability of any Site controls.

- Management of Short Term Risks: This evaluation considers the effectiveness of the process in dealing with the potential impacts to human health and the environment during the implementation phase.

- Consideration of Public Concerns: This evaluation considers any local community concerns over the alternative and how the alternative addresses those concerns.

Implementability: Implementability involves the technical and administrative feasibility of constructing, operating, and maintaining a particular remediation technology. Technical implementability has already been used in the preliminary screening. At this stage, the emphasis is placed on the institutional aspects of implementability, such as the ability to obtain the necessary permits; the availability of treatment, storage, and disposal services; and the availability of necessary equipment and skilled workers to implement the technology.

Cost: The cost for remediation work includes such items as installation and operation of process equipment, excavation, and disposal fees. The cost analysis is made on the basis of engineering judgment, and each process is evaluated as to whether costs are high, medium, or low relative to other process options in the same technology category.

Table 4-2 summarizes the evaluation of the general response actions, technologies, and process options retained after the preliminary screening. In Table 4-2, process options that do not meet the screening criteria and were not considered acceptable based on this initial qualitative screening are indicated by shading. The remaining process options and technologies were retained for further development, assembly, and analysis as remedial alternatives in Chapter 6.

4.4 Representative Processes Selected for the Development of Alternatives

The technologies selected from the two-step screening process include several process options. The "cover" technology, for example, includes eight process options (clean soil cover, re-vegetation, synthetic membrane cap, clay cap, asphalt cap, asphalt/concrete cap, cement cap, and multimedia cap). Many of these process options are similar since they reduce potential exposure. To include all combinations of process options in the development of alternatives would result in the evaluation of hundreds of alternatives with limited benefit.

In some cases, the various process options are sufficiently different in their performance that one would not adequately represent the other. In these cases, more than one process option may be selected for a technology type. For example, under the volume reduction technology it was concluded that classification and screening were sufficiently different in performance and cost for both to be included in the remedial alternative development.

The following soil process options were selected as representative:

Technology	**Representative Process Option(s)**
Access Restrictions	• Deed Restrictions
Monitoring	• Soil Sampling
Cover	• Soil Cover
Cap	• Synthetic Membrane • Asphalt/Concrete Cap • Portland Cement Cap • Multimedia Cap
Cap/Cover	• Multimedia Cap • Soil and Gravel Cap
Dust Control	• Water Spraying • Plastic Cover
Immobilization	• None Selected
Excavation	• Conventional Equipment
Off-Site Disposal	• Hazardous Waste Landfill • Demolition Debris Landfill
Recycling	• None Selected
Thermal	• None Selected
Volume Reduction	• Solvent/Chelant Extraction • Acid or Base Extraction • Soil Classification • Sieving and Screening

These technologies and representative process options are discussed in greater detail in Appendix A. The actual process options to be used will be defined in the Cleanup Action Plan. The technologies and representative process options identified in this section are combined into alternatives in Chapter 6 and evaluated in more detail in the remainder of this FS.

Table 4-1: Preliminary Screening of Technologies and Process Options

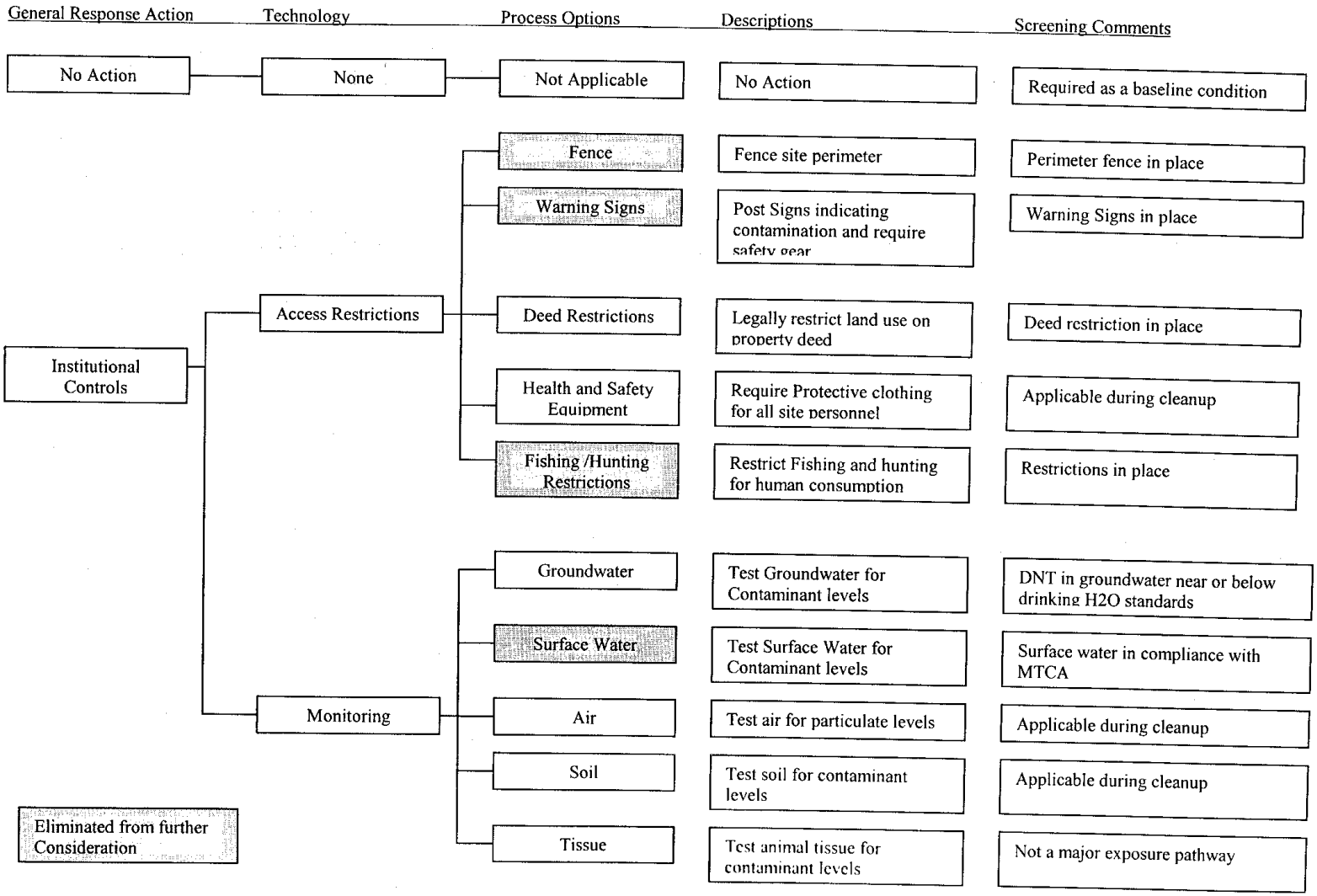


Table 4-1: Preliminary Screening of Technologies and Process Options

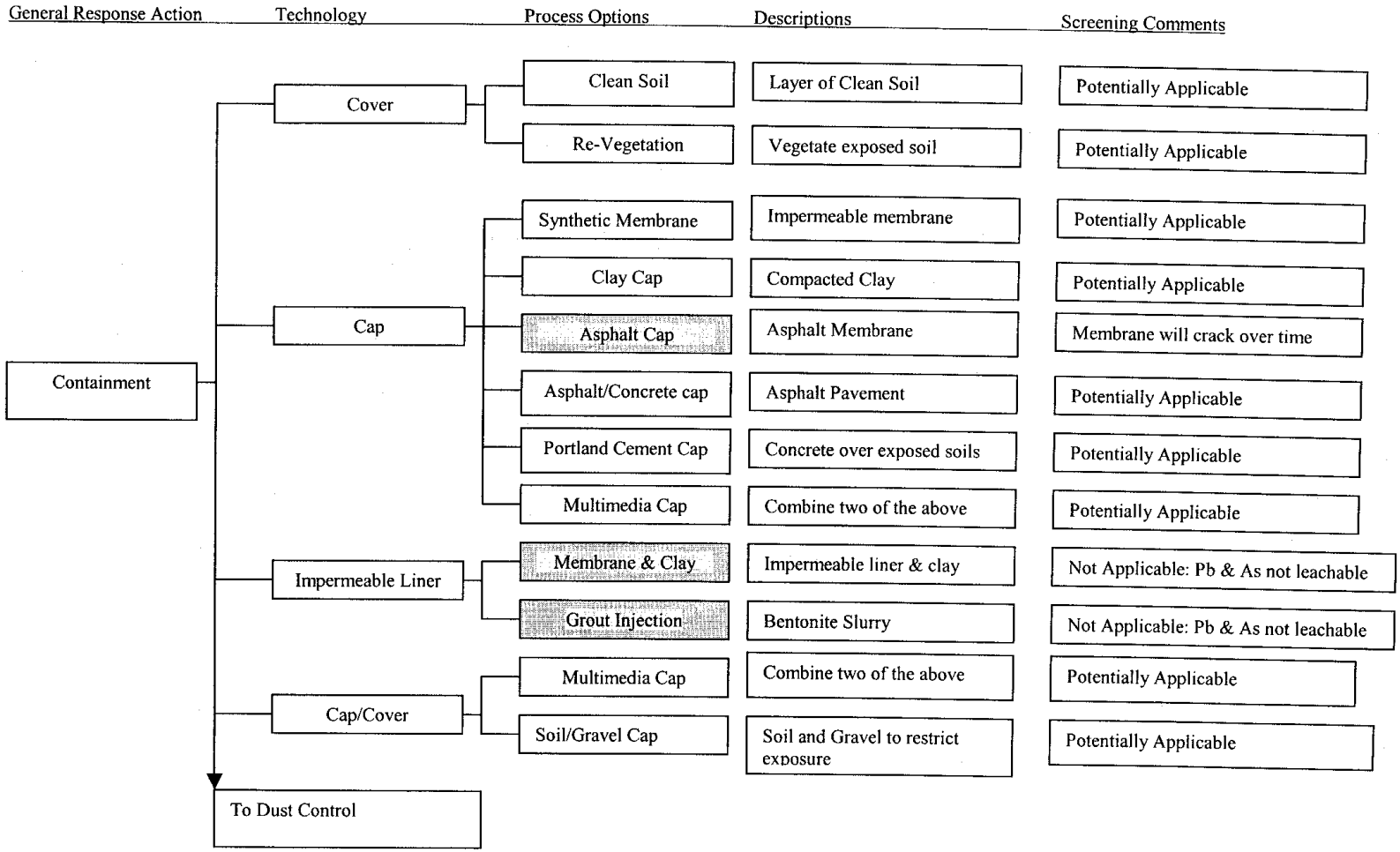


Table 4-1: Preliminary Screening of Technologies and Process Options

General Response Action	Technology	Process Options	Descriptions	Screening Comments
Containment	Dust Control	Water Spraying	Wet Exposed Soils to prevent dust	Potentially Applicable
		Dust Suppressants	Apply chemical binder to exposed Soils to prevent dust	Potentially Applicable
		Wind Fence	Barrier to deflect wind	Irregular wind direction
		Plastic Cover	Plastic cover over exposed soils	Potentially Applicable
		Vegetation	Temporary vegetation cover over exposed soils	Timeframe for growth inhibits production

Eliminated from further Consideration

Table 4-1: Preliminary Screening of Technologies and Process Options

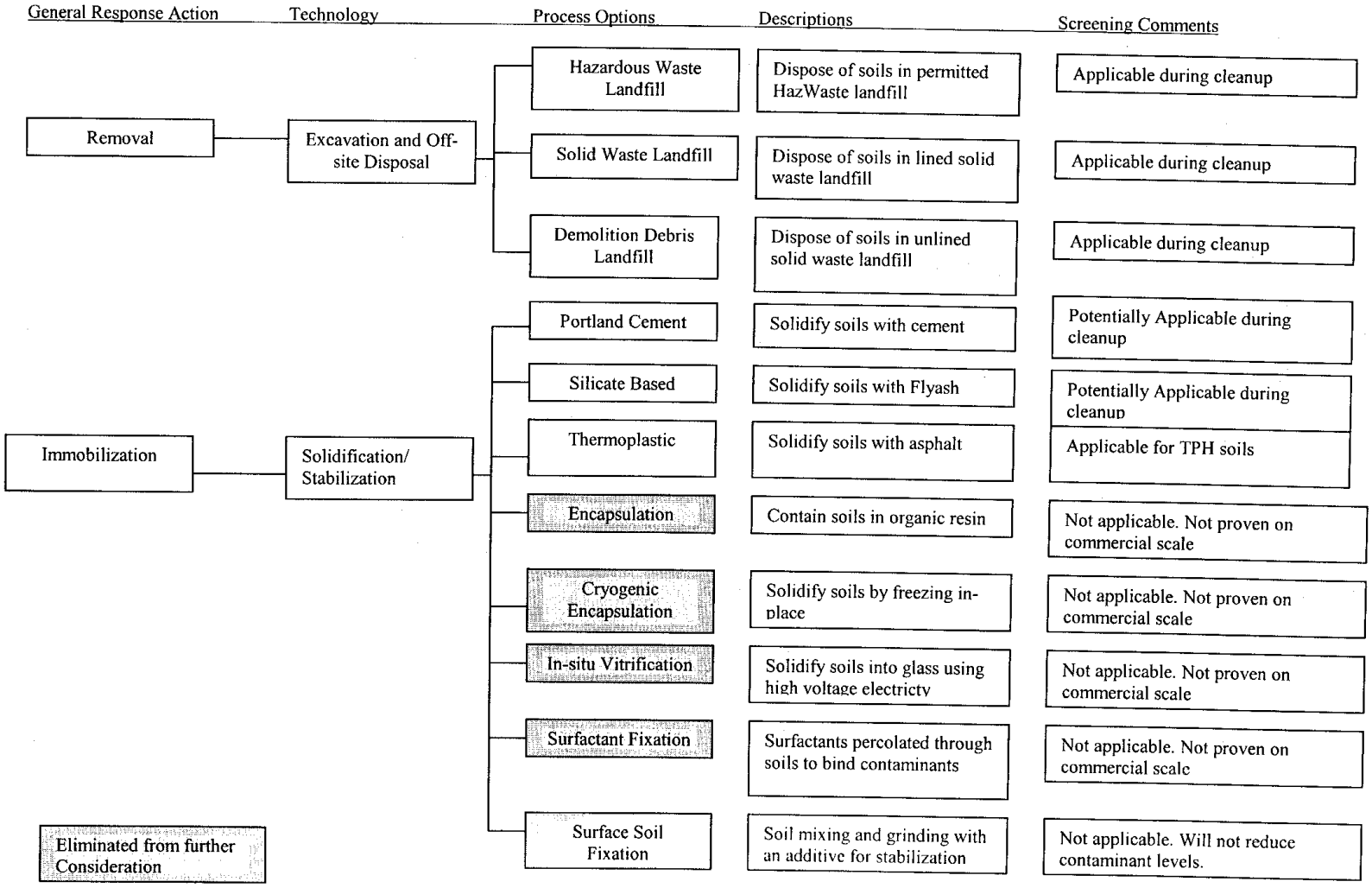


Table 4-1: Preliminary Screening of Technologies and Process Options

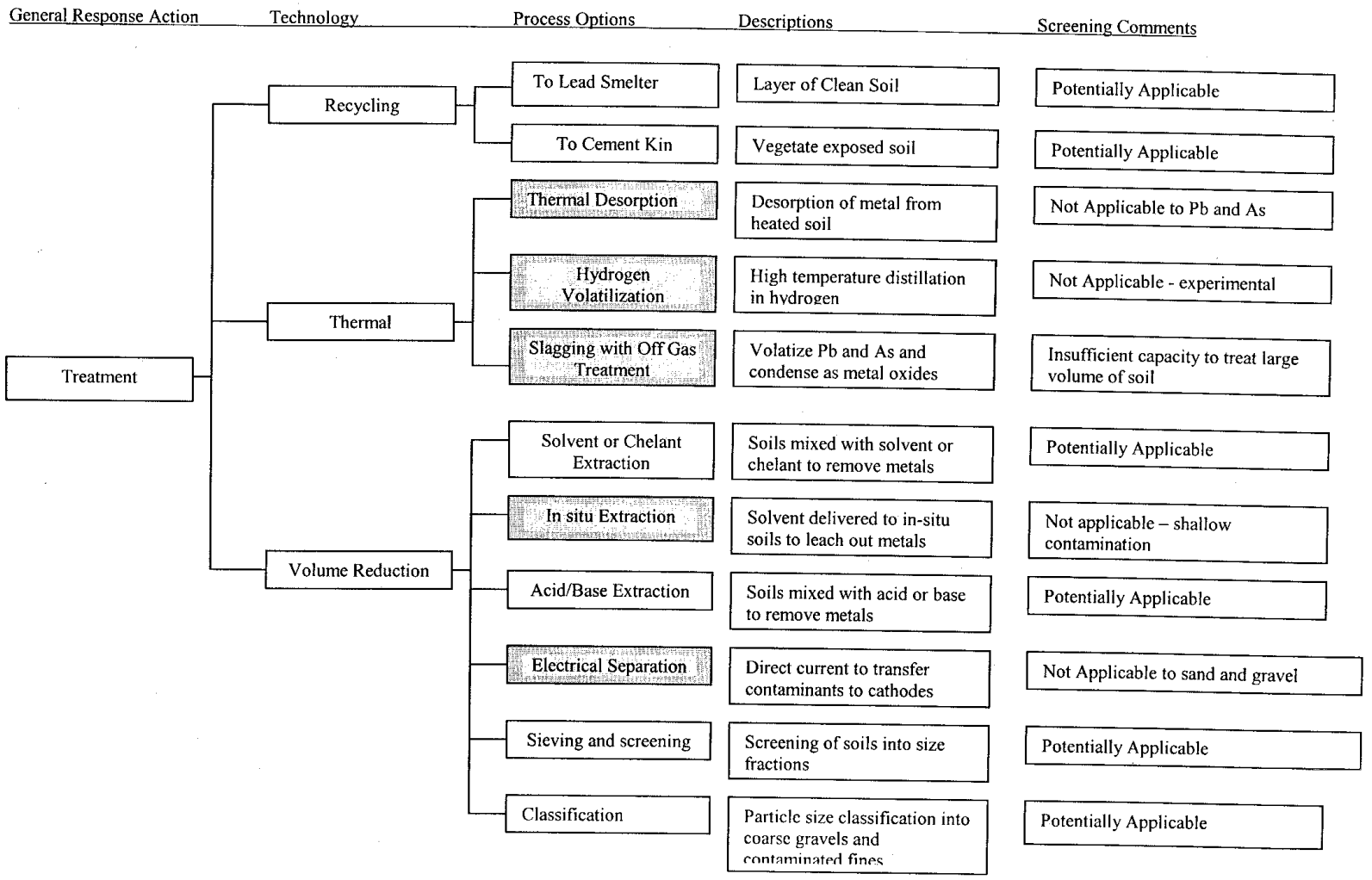


Table 4-2: Evaluation of Process Options

General Response Action	Technology	Process Option	Effectiveness	Implementability	Cost
No Action	None	None	Not Effective, Unacceptable to Companies and Ecology	Easily Implemented	Very low
Institutional Controls	Access Restrictions	Deed Restrictions	Some effect in reducing exposure, does not reduce contamination	Easily Implemented	Low
		Health and Safety	Some effect in reducing exposure, does not reduce contamination	Easily Implemented	Low
	Monitoring	Groundwater	Useful for documenting conditions, does not reduce contamination	Easily Implemented	Low
		Air	Useful for documenting conditions, does not reduce contamination	Easily Implemented	Low
		Soil	Useful for documenting conditions, does not reduce contamination	Easily Implemented	Low
Containment	Cover	Clean Soil	Moderately effective in reducing exposure	Easily Implemented	Low
		Re-vegetation	Marginal effect in reducing exposure	Easily Implemented	Low
	Cap	Synthetic Membrane	Effective in reducing exposure	Easily Implemented	Moderate
		Clay Cap	Tends to crack over time	Clay not readily available	Moderate
		Asphalt/Concrete Cap	Effective in reducing exposure	Easily Implemented	Moderate
		Portland Cement Cap	Effective in reducing exposure	Easily Implemented	Moderate
		Multimedia Cap	Effective in reducing exposure	Easily Implemented	Moderate
	Cap/Cover	Multimedia Cap	Effective in reducing exposure	Easily Implemented	Moderate
		Soil/Gravel Cap	Effective in reducing exposure	Easily Implemented	Moderate
	Dust Control	Water Spraying	Effective in reducing dust during remediation	Conventional construction practice	Low
		Dust Suppressants	Effective in reducing dust during remediation	Conventional construction practice	Moderate
		Plastic Cover	Effective in reducing dust from stockpiles	Conventional construction practice	Low

Eliminated from further consideration

Table 4-2: Evaluation of Process Options

General Response Action	Technology	Process Option	Effectiveness	Implementability	Cost
Removal	Excavation and Off Site Disposal	To Hazardous Waste Landfill	Effective in eliminating contamination on site, does not reduce contamination.	Moderately easy to implement	High
		To Solid Waste Landfill	Not effective for contaminated soils	Easily implemented	Moderate
		To Demolition Debris Landfill	Not effective for contaminated debris Effective for clean debris	Easily implemented	Low
Immobilization	Solidification/Stabilization	Portland Cement	Effective for wide range of chemicals, does not reduce total concentration of contaminates in soils	Easily implemented	Moderate
		Silicate- Based	Effective for wide range of chemicals, does not reduce total concentration of contaminates in soils	Easily implemented	Moderate
		Thermoplastic	Effective for wide range of chemicals, does not reduce total concentration of contaminates in soils	Easily implemented	High
Treatment	Recycling	Recycle to Lead Smelter	Effective for Lead	Difficult to implement due to availability of smelters	High
		Recycle to Cement Kiln	Effective for chemical which pass TCLP	Difficult to implement due to availability of Kilns	Low
	Volume Reduction	Solvent/Chelant Extraction	Effective in reducing volume of contaminated soil	Easily implemented	High
		Acid/Base Extraction	Effective in reducing volume of contaminated soil	Easily implemented	High
		Sieving and Screening	Effective in reducing volume of contaminated soil	Easily implemented	Low to Moderate
		Classification	Effective in reducing volume of contaminated soil	Easily implemented	Moderate

Eliminated from further consideration

Chapter 5 – TREATABILITY STUDIES

5.1 Introduction

This chapter describes treatability studies that were conducted to further evaluate the technical and economic feasibility of applying the selected technologies to Site soils impacted by lead and arsenic.

Section 5.2 describes the objectives of the treatability studies; Section 5.3 describes the approach taken and summarizes the treatability studies conducted; Section 5.4 summarizes the pertinent results and provides an interpretation to be used in the selection of alternatives (Chapter 6) and their subsequent detailed analysis (Chapter 7). Section 5.5 summarizes the conclusions of the treatability studies and provides recommendations for additional treatability work.

5.2 Treatability Study Objectives

Extensive treatability studies were mainly completed prior to 2000/2001. They were mainly used to help understand lead/arsenic distribution and interactions with Site soils. The studies were also used to investigate ways to address high concentrations of lead- and arsenic-impacted soil. The 2000/2001 ISR actions removed the high concentrations of lead and arsenic soil (above "dangerous waste limits").

Only small amounts of high concentrations of lead and arsenic soil now remain, after 2000/2001, and these soils are in the miscellaneous small RUs. Though the pre-2000/2001 treatability studies will not play a major role in selecting/evaluating preferred alternatives for final cleanup, since they were geared to high concentrations of soils, they are still presented in this Chapter. The treatability studies still provide background, understanding and insight into how remaining lead- and arsenic-impacted soils can be managed to meet RAOs.

Various treatability studies were conducted to aid in the evaluation of treatment technologies related to physical screening and/or soil washing with extraction. This group of technologies was identified in Chapter 4 as a key component in developing remedial alternatives (Chapter 6) and their subsequent detailed analysis (Chapter 7). These studies where also useful in the design and completion of the 2001 Wet Screening ISR Program. The focus of these studies was to obtain data to:

- Confirm the suitability of these technologies for Site-specific soils;
- Identify potential problems associated with these technologies for application at the Site; and
- Define additional treatability work that may be conducted prior to Site remediation.

Lead- and arsenic-impacted soil remediation technologies that take advantage of the concentration distribution of constituents between the different size fractions of the soil matrix were the primary technologies investigated. Typically, higher concentrations of metals are associated with the smaller grain size soil fractions. By physically segregating the soils into two or more fractions, the following would be obtained:

- A coarse fraction that contains metal concentrations below remediation or cleanup levels that can be returned to the Site as soil for backfill; and
- One or more fine fractions that contain metal concentrations above remediation or cleanup levels that will require further treatment.

Wet Screening and Classification processes were investigated for their ability to achieve physical segregation. Soil Washing with Extraction was examined for constituent extraction potential. Recycling to a Thermal Process was investigated to assess the potential for treating the finer separated soil fractions that would be expected to exceed the remediation or cleanup levels.

The principal objectives of the treatability studies were to:

- Determine the grain size distribution of soil present at the Site;
- Determine the constituent distribution by soil grain size;
- Determine the chemical nature of the constituent; and
- Evaluate volume reduction potential by removal of "clean" soil fractions.

Table 5-1 summarizes the relevant soil characterization parameters used to assess the viability of the above-referenced treatment technologies.

5.3 Treatability Study Approach

The treatability study program used comprehensive soil characterization and speciation studies and bench-scale treatability testing to obtain data on the fundamental physical and chemical properties of the impacted soils. An overview of the program and the pertinent results are summarized in Appendices C and D.

The soil characterization parameters, a description of how the parameters are used, and the specific test types are presented in Table 5-2. (More detailed definitions of the parameters and the testing procedures are summarized in Appendix B.) The soil characterization parameters are organized in Table 5-2 as follows:

Physical Properties that may impact materials handling (e.g., during excavation, stockpiling, treatment, and residuals management). These include particle size distribution and Atterberg limits (liquid limit, plastic limit, and plasticity index) that are used to determine the USDA soil classification. Other physical properties measured were moisture content and bulk density of both loose and packed soil.

Regulatory Analyses to determine regulatory classification of waste streams which provides information for management and disposal of treatment residuals in accordance with federal, state, and local regulations.

Chemical Analyses to gather information on soil chemistry, soil mineralogy, soil/constituent interactions, and the distribution, speciation, and mobility of the lead and arsenic constituents. The chemical analyses and the information they provide include the following:

- pH and Generalized Acid Neutralization Capacity (GANC) measure the alkalinity or acidity of the soil and indicate inherent buffering capacity;
- GANC and Reverse GANC (RGANC) are soil leaching tests that measure a soil's capacity to buffer an acid or a base. This information can be used to design solidification/stabilization design mixes. It can also be an aid in designing acid or base extraction treatment processes;
- Organic carbon and anions analyses indicate the potential to provide bonding sites for heavy metals;
- Soluble cations analysis indicates the potential for competition with the heavy metals for bonding sites; and
- Scanning Electron Microscopy (SEM) and sequential extractions determine the specific chemical form of the metal in the soil matrix and the bonding mechanism. This information may be used when chemical reactions such as metals dissolution (in soil washing processes) and metals precipitation (removal of metals from solvent used in a soil washing process) are included in soil treatment.

Because of constituent concentrations for soil samples vary both vertically and horizontally, samples were analyzed for total constituents prior to conducting treatability testing. Thus, treatability study sample results were representative of the bulk of the Site soils likely to require cleanup action.

Table 5-3 lists the treatability studies conducted in support of lead and arsenic remediation at the Site. A detailed soil characterization program conducted by Hazen Research Inc. (Hazen), at its facility in Golden, Colorado, represents the majority of the treatability study work. Constituent speciation work, physical screening studies, and bench-scale technology evaluations were performed by Battelle Pacific Northwest Laboratories, Hart Crowser, State University of New York, and Weyerhaeuser Analytical and Testing Services.

The following sections briefly describe each treatability study and summarize the results. In addition, the results are evaluated in terms of the physical parameters (soils handling properties), technical feasibility of the remediation alternatives, and chemical parameters.

5.3.1 Lead- and Arsenic-Impacted Soils Characterization Study - Hazen Research Inc.

This study involved soil samples collected from Site areas impacted by lead and arsenic, and included detailed characterization and speciation analysis of the lead- and arsenic-impacted soils. Soil sampling for the characterization study used a statistical procedure based on EPA SW-846 guidance, recognized technical literature on sampling and analysis, and the experience of the Project Team. The sampling procedure enabled recovery of representative composite samples of impacted soils from randomly sampled grids in areas of the Site known to contain elevated concentrations of lead and arsenic.

Complete results for the lead and arsenic characterization are detailed in the final reports prepared by Hazen Research (1993a through 1993f and 1994a through 1994c). Six composite samples of lead-impacted soil and three composite samples of arsenic-impacted soil were collected from different Areas of the Site. The characterization results are summarized in Tables 5-4 and 5-5 for lead and arsenic, respectively. A full description of the Hazen Research soil characterization studies for lead and arsenic, and a discussion of the results obtained, is provided in Appendix C.

5.3.2 Arsenic Wet Screening Study - Hart Crowser, Inc.

Arsenic treatability studies were performed by Hart Crowser to better define the distribution of arsenic concentration with respect to soil particle size through the use of particle size distribution testing and associated arsenic analysis of sized soil fractions. Samples were collected in the Reference Grid Area, and the NGRR area to supplement the results of the Hazen arsenic characterization study completed on samples from Areas 18 and 36 and the NGRR. A summary of the results is provided in Table 5-6 and further details of the treatability study procedures and results are presented in Appendix D.

5.3.3 Arsenic Speciation Analysis - Battelle Pacific Northwest Laboratory (PNL)

Battelle PNL performed limited arsenic speciation analysis on soil samples collected from Areas 5, 25, and 38, and in the NGRR area. The purpose of this study was to identify ionic species of arsenic and investigate the presence of arsenic forms in Site soils potentially impacted by acid production (Areas 5 and 25), the use of arsenic-based herbicides (NGRR), or arsenic-based paint/ink (Area 38). The results are summarized in Table 5-7.

5.3.4 Bench-Scale Soil Leaching Study – State University of New York, Buffalo

A screening of non-proprietary soil leaching chemistries was performed by the Department of Civil Engineering at the State University of New York at Buffalo (UB) (State University of New York at Buffalo, 1994). The efficacy of various soil washing extraction agents and leaching conditions were evaluated for removing lead from a lead-impacted soil sample (-8 to +200 mesh fractions) from Area 40 of the Site. The results of this study are summarized in Table 5-8.

5.3.5 Bench-Scale Soil Leaching Study - Weyerhaeuser Analytical and Testing Services

To investigate the potential for using non-proprietary leaching chemistries to remove arsenic from the Site soils, a leaching study was carried out at the laboratories of Weyerhaeuser Analytical and Testing Services (Weyerhaeuser ATS). Several leaching solutions were applied to -1/4 inch by +200 mesh fractions of combined soil samples from Area 18 and the NGRR area. The effects of pH and liquid:solid ratio were investigated as well as performance under single-stage batch and multistage countercurrent extraction regimes. The results of the study are presented in Appendix C.

5.4 Interpretation of Results

In this section, the results of the treatability studies are discussed by treatment technology using the parameters relevant to each technology as presented in Table 5-1. For each parameter, the results that are applicable to handling and remediation of Site soils are discussed.

5.4.1 Physical Screening/Soil Washing

The relevant characterization test results for physical screening/soil washing with dissolution technologies (as shown in Table 5-1) are silt/clay content, constituent distribution with regard to particle size, surface area calculations, Atterberg Limits, organic carbon, GANC/RGANC, MANC/RMANC, and Sequential Extraction for speciation analysis.

The silt/clay (less than 200 mesh particle sizes) content of the Site soils ranged between 6% and 15 % for the samples tested, well below the 40% upper limit generally considered likely to limit the effectiveness of soil washing processes. The sand (greater than 200 mesh and smaller than 1/4 inch particle sizes) content of the Site soils varies between 26% and 53% and the gravel (greater than 1/4 inch particle sizes) content varies between 38% and 66% by weight.

The lead content in the silt/clay fraction of the Site soils is substantial at between 27% and 67% of total lead in soil, which suggests that significant volume reduction of lead-impacted soil could be achieved by separating the fine material from the whole soil. Classification to separate soil at the 100 mesh cut point would represent recovery of about 90% of whole soil mass suitable for on-Site deposition in appropriate land use areas.

Wet screen particle size distribution test results and corresponding chemical analyses results for separated size fractions indicate that between 84% and 97% of the soil lead is concentrated in the sand and silt/clay fractions. These fractions represent between 40% and 62% by weight of the whole soil. These results indicate that recovery of the cobbles and gravel fraction (representing between 38% and 60% of the whole soil) as "clean" material could be readily achieved using conventional wet screening or soil washing to achieve segregation of Site soils into different size fractions.

The arsenic content in the silt/clay fraction of the soils is between 51% and 71% of total arsenic in soil (corresponding concentrations range between 186 and 2,550 mg/kg), which suggests that significant volume reduction of arsenic-impacted soil could be achieved by separating the fine material from the whole soil. Classification to separate soil at the 100 mesh cut point would represent recovery of about 90% of whole soil mass suitable for on-Site deposition in appropriate land use areas.

Particle size distribution test results for Site soils and corresponding chemical analyses results for separated size fractions indicate that between approximately 79% and 92% of the soil arsenic is concentrated in the sand and silt/clay fractions. These fractions represent between 27% and 56% of the whole soil. These results indicate that recovery of the cobbles and gravels fraction (representing between 44% and 73% of the whole soil) as "clean" material could be readily achieved using conventional wet screening or soil washing to achieve segregation of Site soils into different size fractions.

For water-based soil washing processes, the wet screening and Sequential Extraction test results indicate that, because of the low aqueous solubility of lead or arsenic from Site soils, little or no water treatment provisions would be necessary.

The surface area calculations for each of the soil size fractions indicate, as expected, that the majority of the total soil surface area is contained in the silt and clay (64% to 83%), with less in the sands (17% to 36%), and least in the cobbles and gravel (<1% to 2%).

In the case of Areas 7 and 18, the lead distribution by size fraction increases with reducing size fraction and increasing surface area; these results indicate that lead bonding and binding is mostly surface-related. The lead distribution for Areas 36 and 40 in the sand and silt/clay fractions does not proportionally follow surface area distribution; this indicates that lead is not only surface bound but is also associated with other particulate matter present in the soil matrix. In the case of Area 36 soils, SEM confirmed the presence of particulate lead. The presence of metallic lead suggests that density separation techniques may need to be incorporated into the design of a soil washing system.

The arsenic distribution by size fraction for the Area 36 sample increases with reducing size fraction and increasing surface area; these results indicate that arsenic bonding and binding is mostly surface-related.

The very low silt/clay content and results of the Atterberg Limits testing show that the Site soils are non-plastic and should be both amenable to processing by physical screening equipment and easy to handle with conventional earth-moving equipment.

The organic carbon content of the Site soils (0.6% to 6.9%) is below the 10% upper limit generally considered to reduce removal efficiency in a soil washing system because of contaminant-carbon bonding. The inclusion of an organic carbon removal unit operation should not be necessary.

The GANC/RGANC results show that the Site soils have little buffering capacity and will not require the addition of large amounts of acid (to mobilize lead species) or base (to mobilize arsenic species) in a chemically enhanced soil washing system to achieve the desired pH change.

The ELP results (0.02 to 0.06 mg/L) demonstrate very low lead solubility with synthetic acid rain. The wet screening and Sequential Extraction test results also demonstrate that the lead species are relatively insoluble in water. The lead was more soluble in acetic acid solutions, as demonstrated by TCLP, GANC, and Sequential Extraction test data. These results indicate that lead is essentially immobile under normal environmental conditions, but can be mobilized under more rigorous leaching conditions.

The MANC/RMANC equilibrium lead concentrations in the aqueous phase occur between additions of 2 to 40 equivalents of acid/kg soil and between additions of 2 to 40 equivalents of base/kg. One stage acidic and alkaline leaching at 20:1 liquids:solids ratio can remove 45% to 75% of the lead using 2N acetic acid, or 13% to 40% lead using 2N sodium hydroxide. This indicates that acidic leaching has potential for use in conjunction with wet screening and other physical (gravity, density, and high-energy attrition) treatment techniques. Even under severe leaching, a maximum of 75% lead removal is achieved because of the presence of some extremely leach-resistant forms of lead.

In the consideration of MANC/RMANC equilibrium arsenic concentrations, high acetic acid concentrations (approximately 14 equivalents of acid/kg soil) were required to leach arsenic, whereas RGANC indicated that about two base equivalents/kg soil were required for optimum leaching. One stage acidic/alkaline leaching at 20:1 liquids:solids ratio can remove 2% to 4% of the arsenic using 2N acetic acid, but amounts of between 74% and 80% can be removed using 2N sodium hydroxide. These results indicate that chemical leaching using alkaline reagents has potential for use in conjunction with wet screening and other physical treatment techniques. Conversely, mildly acidic conditions might be employed in a soil washing with dissolution treatment scenario to ensure that arsenic remains concentrated in the fines fraction, which could subsequently be stabilized.

In the sized fractions examined, Sequential Extraction data show that lead is predominantly present as carbonate, specifically adsorbed and ion-exchangeable forms, as well as being associated with iron and manganese oxides and organic material. This speciation information also indicates that further lead removal could be achieved in a chemically enhanced (acidic) soil washing or leaching treatment system.

Sequential Extraction data show that arsenic is predominantly present, in the sized fractions examined, in association with iron and manganese oxides and organic material. Speciation analyses performed on selected sized fractions (gravity separated as appropriate) using SEM confirmed the Sequential Extraction test results. The Battelle PNL speciation analysis also indicates that, in the areas of the Site sampled (Areas 5, 25, 38, and NGRR), arsenic is largely present as As(5). This speciation information supports the conclusion that chemically enhanced (basic) soil washing or leaching treatment could be used to liberate arsenic from the soils.

The results of the UB soil washing with dissolution study provide further support for considering a chemically enhanced treatment application. The study shows that strong mineral acid extractants (specifically, hydrochloric and perchloric acid) at approximately pH 1 were effective at significantly reducing (by greater than 60%) lead concentrations by approximately 1,400 mg/kg in the sand fraction of Site soils. TCLP lead values for treated samples ranged from 0.3 to 0.5 mg/L. Less acidic conditions (pH 3) were also effective if a chelating agent (such as EDTA) was added.

The results of the Weyerhaeuser ATS leaching study confirm the leaching data generated under the Hazen study and further demonstrate that sodium hydroxide caustic solutions are effective in removing arsenic from the Site soils. In single-stage batch extractions, solutions of sodium hydroxide at approximately pH 11.5 removed up to 57% of arsenic from sand fractions containing initial concentrations of around 100 mg/kg; sodium carbonate solutions gave similar results but required significantly higher reagent doses. A strong dependency on pH was shown in the leaching tests and there was no evidence that leaching performance was constrained by arsenic solubility. A batch extraction test examining relative leaching efficiencies between subfractions of the tested soil showed a slightly better performance for the larger subfraction. No significant improvements in overall leaching performance were observed in simulated countercurrent tests. Further investigation of washing process configuration, solids hold-up times, temperature, and aqueous extract treatment/recycling will need to be completed to decide if a leaching step should be included as part of a soil washing treatment application.

5.5 Conclusions and Recommendations

This section summarizes the conclusions from the various treatability studies relating to the viability assessment of physical screening/soil washing with dissolution.

5.5.1 Soil Characterization

The TCLP results for lead and arsenic obtained for the treatability samples indicate that most Site soils do not exhibit a RCRA hazardous toxicity characteristic associated with these metals.

Physical analysis data show that the Site soils are moderately well sorted (i.e., more coarse fraction and a relatively low silt/clay content), non-plastic, and classify as sand and sandy-loam. Excavation and materials handling of the soils should be relatively easy using conventional equipment and methods, and the soils should be amenable to processing by physical screening and mixing equipment.

The Site soils are essentially neutral and possess little acidic or basic buffering capacity. This is advantageous for both solidification/ stabilization and soil washing with dissolution processes in that the amounts of binder or leaching chemical needed to achieve the desired treatment performance will be minimized. The unamended soils will not be corrosive to excavation, materials handling, or processing equipment.

Based on speciation analysis data, soil lead is present mainly as carbonate, specifically adsorbed and ion-exchangeable forms, and in association with iron and manganese oxides and organic material. Lead constituents are present both in association with soil surfaces (surface bonding/binding) and as free metallic particles within the soil matrix. Arsenic speciation analysis data show that soil arsenic exists predominantly as arsenate (+5 valence state) and occurs mostly in association with iron oxides and the organic portion of the soil. Arsenic bonding and binding is primarily associated with the smaller soil particles with a high surface area per unit mass.

Leaching data show that both lead and arsenic are essentially insoluble and immobile under normal environmental conditions. Under both acidic and basic leaching conditions, soil lead can be leached (more readily mobilized under the former), although some extremely leach-resistant forms of lead are indicated. Soil arsenic can be readily mobilized under moderately basic leaching conditions but is difficult to remove at low pH. This is consistent with the information yielded by the lead and arsenic speciation analyses.

The Site soils have a low organic carbon content and so no interference or inhibitory affects associated with potential carbon-heavy metal bonding/binding would be expected for either solidification/stabilization or physical screening/soil washing with dissolution treatment.

5.5.2 Volume Reduction

For both lead and arsenic, significant proportions of these constituents were measured in the silt/clay fraction of the soil. Separation of the fines from the whole soil would be effective in concentrating a substantial proportion of the metals into a relatively small soil volume. This will potentially reduce the volume of significantly impacted soils requiring subsequent treatment or disposal.

A comparison of soil particle distribution and associated chemical distribution data with remediation and cleanup levels was made. The results indicated that recovery, as “clean soil”, of the cobbles and gravel fraction (40% to 60% of soil by weight) can be achieved by dry and wet screening, respectively. More aggressive soil washing and secondary treatment can achieve recovery of the sand, cobble, and gravel fractions (90% or more of soil by weight) as "clean" material.

5.5.3 Metal Dissolution/Removal

Strong hydrochloric acid or perchloric acid solutions at low pH (approximately pH 1) are effective at significantly reducing lead concentrations in the Site soils. Similar leaching performances can be achieved with these acids at more moderate pH (approximately pH 3) if a chelant (EDTA) is added to the leaching solution.

In the case of arsenic-impacted soils, strong sodium hydroxide and sodium carbonate solutions (approximately pH 12 or greater) are able to effectively remove arsenic in a single-stage batch extraction regime. Leaching performance does not appear to be constrained by arsenic solubility, and might be improved under a multi-stage countercurrent leaching process configuration.

The use of acidic/caustic leaching in conjunction with physical screening processes is indicated to have potential for reducing concentrations of lead and arsenic in the sand fraction of the soil or in the sands and fines combined. This approach merits further evaluation.

Table 5-1 - Soil Characterization Parameters by Treatment Technology

Soil	Treatment Technology	Test Types
Whole Soil and Fractions	Stabilization/Solidification	GANC/RGANC MANC/RMANC Total Carbon, Inorganic and Organic Carbon RCRA Appendix IX SemiVOCs TCLP (inorganic and semiVOCs) Moisture Content Speciation Analysis of Fractions
	Physical Screening/Soil Washing for Dissolution	Constituent Distribution with Particle Size Surface Area Calculations Silt/Clay Content MANC/RMANC during GANC/RGANC Organic Carbon Speciation Analysis of Fractions Atterberg Limits
	Smelting/Thermal Recovery	Total Constituent Concentration Constituent Distribution with Particle Size XRF Scan (mineralogy) Silica Content (by XRF) Moisture Content Total Carbon RCRA F039 Listed Metals

Abbreviated terms used in this table are defined in Appendix B.

353415\5-1.tbl

Table 5-2 - Soil Characterization Parameters by Category

Soil	Category	Information Use	Test Types
Whole Soil	Physical Handling	Provides information on how soil will behave during excavation and in treatment processes.	Surface Area Calculations (Lead only) Particle Size Distribution Soil Plasticity (Atterberg Limits) USDA Soil Classification Density (loose and packed) Moisture Content
	Regulatory	Provides information to enable regulatory waste code classification.	Total Constituent Concentration TCLP Constituent Concentrations RCRA Appendix IX Total Metal Concentration TCLP (inorganics and semiVOCs) RCRA Appendix IX Inorganics RCRA Appendix IX SemiVOCs pH
	Soil Chemistry	Provides information on contaminant/soil interactions to further general understanding of soil properties and used in evaluating treatment technologies.	Bonding/Binding Anions Soluble Cations Carbon (total/inorganic/organic) GANC/RGANC
	▸ Anions	Provides an indication of availability of bonding/binding sites for heavy metals (anions can combine with metals to form low solubility salts)	Sulfide Sulfate Phosphate Carbonate/Bicarbonates
	▸ Soluble Cations	Can compete with heavy metals for bonding/binding sites (ion-exchange sites, anions).	Calcium Sodium Magnesium Potassium Manganese Iron
	▸ Carbon Balance	Organic carbon can bond/bind with metals.	Total Carbon Inorganic (fixed) Carbon (by TGA) Organic Carbon (by difference)

Table 5-2 - Soil Characterization Parameters by Category

Soil	Category	Information Use	Test Types
Whole Soil, Continued	▸ Alkalinity/Acidity, Buffering Capacity	Provides indications of how soil will respond to acid/base changes.	pH Redox GANC/RGANC
	Mobility and Leachability	Provides information on mobility in, and availability to, the environment.	TCLP (inorganics and semiVOCs) Equilibrium Leaching Procedure (lead only) (SAR-F039 List Metals) MANC during GANC/RGANC GANC/RGANC
Soil Fractions	Regulatory	Provides information on metals of regulatory concern to enable proper management/disposal.	F039 List Metals
	Soil Chemistry	Provides information on contaminant/ soil interactions to further general understanding of soil properties and used in evaluating treatment technologies.	Cation Exchange Capacity (CEC) (Lead only) Total Iron and Manganese Total Chloride
	Speciation	Provides information on what specific chemical forms of metals are present and how metals are bound within soil. Aids in determination of impact to environment and technology selection.	Sequential Extraction Scanning Electron Microscopy (SEM) X-Ray Diffraction (XRD) X-Ray Fluorescence (XRF) - Mineralogy

Abbreviated terms used in this table are defined in Appendix B.

Table 5-3 - Summary of Treatability Studies

Type of Study	Organization Performing Treatability Study	Location of Study	Target Constituent	Summary of Scope	Areas of Site Sampled
Soil Characterization	Hazen Research, Inc.	Golden, CO	Lead and Arsenic	Complete characterization (see Table 5-1 and Table 5-2)	7, 18, 36, 40, 18, 36, NGRR, Hot Spot Soils
Soil Washing/Leaching	Department of Civil Engineering, State University of New York	Buffalo, NY	Lead	Test various extraction agents and leaching conditions to remove lead	40
Constituent Speciation	Battelle Pacific Northwest Laboratories	Sequim, WA	Arsenic	Identify ionic and organic species of arsenic	5, 25, 36, NGRR
Wet Screening	Hart Crowser, Inc.	Seattle, WA	Arsenic	Determine distribution of arsenic between soil size fractions	18, 36, NGRR
Soil Leaching	Weyerhaeuser Analytical and Testing Services	Federal Way, WA	Arsenic	Test potential of non-proprietary leaching solutions for removal of arsenic	18, NGRR

Note: NGRR = Narrow Gauge Railroad Track

Additional Studies Performed but not considered during evaluation of technologies

Type of Study	Organization Performing Treatability Study	Location of Study	Target Constituent	Summary of Scope	Areas of Site Sampled
Solidification/ Stabilization	Center for GeoEnvironmental Science & Technology, University of Cincinnati	Cincinnati, OH	Lead and Arsenic	Evaluate ability of 3 types of binding mixes to stabilize lead and arsenic	36, 40

Table 5-4 Lead-Soil Characterization Study Summary of Test Results-Hazen Research [1]
Sheet 1 of 4

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Sample Verification (Pulverized Head)						
Total Lead in mg/kg (avg. of three)	475	180	870	2,110	660	3,570
TCLP Lead in mg/L	1.7	0.3	4.6	1.3	1.2	21.4
RCRA Hazardous, D008	no	no	no	no	no	yes
Physical Materials Handling						
Particle Size Distribution in % (gravel, sand, silt)	56,32,12	38,53,9	61,32,7	43,42,15	60,32,8	53,37,10
Soil Plasticity (Atterberg Limits)	non-plastic	non-plastic	non-plastic	non-plastic	non-plastic	non-plastic
USDA Soil Classification	sand	sandy loam	sand	sand	sand	sand
Density (loose/packed) in g/cm^3	1.3/1.4	1.3/1.5	1.6/1.9	1.1/1.5	1.2/1.6	1.1/1.4
Moisture Content in %	12.2	9.8	5.0	20.5	11.7	17.0
pH (10% solids slurry)	4.4	6.0	6.3	7.3	5.4	5.8
Regulatory						
Total Lead in mg/kg (RCRA Appendix IX)	380	260	540	1,700	590	3,000
TCLP Lead in mg/L	2.0	0.3	4.7	1.4	0.9	18
RCRA Appendix IX Inorganics	none of concern	none of concern	none of concern	none of concern	none of concern	none of concern
RCRA Appendix IX SemiVOCs	none of concern	low level semiVOCs	low level semiVOCs	low level semiVOCs	none of concern	none of concern

Notes:
[1]Further description of the tests and interpretation of these results is provided in Section 5 text and in Appendix C.

Table 5-4 Lead-Soil Characterization Study Summary of Test Results-Hazen Research [1]
Sheet 2 of 4

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Soil Chemistry						
Bonding/Binding Anions in mg/kg (total)	2,600	2,500	2,640	10,650	4,175	7,190
Soluble Cations in mg/kg (total)	81	24	77	261	66	94
Total/Inorganic/Organic Carbon in %	3.3/0/3.3	2.5/0.7/1.8	1.1/0.2/0.9	6.9/0/6.9	4.2/0/4.2	4.2/0/4.2
Net Acid/Base Potential in tons of $CaCO_3$/1,000 tons of soil	-10.9	-7.5	1.0	2.8	-24.4	-16.1
GANC/RGANC	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered
equivalents acid to reach pH<4	2	2	2	4	2	2
equivalents base to reach pH>10	2	2	2	2	2	2
Leaching and Mobility						
TCLP Lead in mg/L	2.0	0.3	4.7	1.4	0.9	18.0
Equilibrium Leaching Procedure						
leachate lead in mg/L	0.019	0.05	0.032	0.02	0.059	0.064
equilib. partition coefficient (K)	2.2E+04	1.0E+04	2.0E+04	8.1E+04	1.1E+04	6.3E+04
MANC/RMANC equilib. lead conc. (acid/base) in mg/L	15/7	4/3	33/8	48/14	15/13	90/25
Speciation						
Sequential Extraction	majority of lead in carbonate, specifically adsorbed, and exchangeable forms	majority of lead in carbonate, specifically adsorbed, and exchangeable forms	majority of lead in carbonate, specifically adsorbed, and exchangeable forms	majority of lead associated with carbonates, iron and manganese oxides, and organic material	majority of lead associated with carbonates, iron oxides, and organic materials	majority of lead associated with carbonates, iron and manganese oxides, and organic material
SEM/XRD	positive ID of lead sulfate and lead sulfide	positive ID of lead carbonate, lead oxide, and lead-manganese oxide	positive ID of lead carbonate, lead silicate, metallic lead, and lead-iron oxide	positive ID of lead carbonate, lead silicate, lead oxides,	positive ID of lead silicate, lead oxides, lead phosphate,	positive ID of lead oxides (manganese, tin, aluminum,

Notes:
[1]Further description of the tests and interpretation of these results is provided in Section 5 text and in Appendix C.

Table 5-4 Lead-Soil Characterization Study Summary of Test Results-Hazen Research [1]
Sheet 2 of 4

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
				and lead-iron oxide	and lead-iron oxide	and iron)

Notes:
[1]Further description of the tests and interpretation of these results is provided in Section 5 text and in Appendix C.

Table 5-4 Lead-Soil Characterization Study Summary of Test Results-Hazen Research [1]
Sheet 3 of 4

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Soil Chemistry						
Cation Exchange Capacity in meq/100g	34.6	84.2	49.6	98.1	111.0	95.9
Chloride in mg/kg	100	<100	<100	500	100	260
Iron/Manganese in mg/kg	23,350/620	34,238/838	39,979/775	63,630/990	30,050/1,150	95,820/1,090
Regulatory						
F039-List Metals	As, Pb, Ba, Cr	As, Pb, Ba, Cr	As, Pb, Ba, Cr	Pb, Ba, Cr, Zn	As, Pb, Zn	As, Pb, Ba, Cu, Zn
Physical Screening/Soil Washing						
Silt and Clay Content in %	12	9	7	15	8	10
Lead Distribution by Particle Size % of total lead in gravel/sand/silt	16/29/55	3/30/67	10/63/27	5/56/39	13/48/39	3/58/39
Total Lead Conc. in mg/kg by Particle Size (gravel/sand/silt)	130/420/2,170	50/310/3,970	180/2,100/3,980	195/2,310/4,350	130/950/3,320	130/4,260/10,600
Surface Area Calculations % of total surface area in gravel/sand/silt	<1/17/83	<1/36/64	2/22/76	<1/18/82	1/23/76	1/20/79
Organic carbon in %	3.3	1.8	0.9	6.9	4.2	4.2
GANC/RGANC	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered
equivalents acid to reach pH<4	2	2	2	4	2	2
equivalents base to reach pH>10	2	2	2	2	2	2
MANC/RMANC equilib. lead conc. (acid/base) in mg/L	15/7	4/3	33/8	48/14	15/13	90/25
% Lead Leached under MANC/RMANC (acid/base)	60/29	44/30	75/18	45/13	45/40	50/14

Notes:
[1]Further description of the tests and interpretation of these results is provided in Section 5 text and in Appendix C.

Table 5-4 Lead-Soil Characterization Study Summary of Test Results-Hazen Research [1]
Sheet 4 of 4

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Stabilization/Solidification						
GANC/RGANC	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered
MANC/RMANC Minimum Lead Concentration in mg/L/pH Range	<1/5.5 to 6.8	<1/4.6 to 6.1	<1/4.8 to 8.5	1/6.3 to 12.5	1/5.1 to 8.9	1/6.3 to 7.8
Total/Inorganic/Organic Carbon in %	3.3/0/3.3	2.5/0.7/1.8	1.1/0.2/0.9	6.9/0/6.9	4.2/0/4.2	4.2/0/4.2
RCRA Appendix IX SemiVOCs	none of concern	low level semiVOCs	low level semiVOCs	low level semiVOCs	none of concern	none of concern
TCLP Lead in mg/L	2.0	0.3	4.7	1.4	0.9	18
Moisture Content in %	12.2	9.8	5.0	20.5	11.7	17.0
Smelting/Thermal Recovery						
Total Lead in mg/kg	380	260	540	1,700	590	30,00
Lead Distribution by Particle Size % of total lead in gravel/sand/silt	16/29/55	3/30/67	10/63/27	5/56/39	13/48/39	3/58/39
Total Lead Conc. in mg/kg by Particle Size (gravel/sand/silt)	130/420/2,170	50/310/3,970	180/2,100/3,980	195/2,310/4,350	130/950/3,320	130/4,260/10,600
Silica Content in % (gravel/sand/silt)	-/69/59	-/-/33	-/-/45	-/56/28	-/-/28	-/50/29
Moisture Content in %	12.2	9.8	5.0	20.5	11.7	17.0
Total Carbon in %	3.3	2.5	1.1	6.9	4.2	4.2

Notes:
[1]Further description of the tests and interpretation of these results is provided in Section 5 text and in Appendix C.

Table 5-5 - Arsenic-Soil Characterization Study
Summary of Test Results
Hazen Research

Whole Soil Procedures	Area 18	Area 36	RR Track Area
Physical Materials Handling			
Particle Size Distribution (PSD) in % (Gravel/sand/silt)	66/26/8	60/30/10	52/39/9
Arsenic Distribution with PSD in % (Gravel/sand/silt/slimes)	12/28/35/25	18/30/47/5	7/22/63/8
pH (10% solids slurry)		6.2	
Regulatory			
TCLP Arsenic in mg/L (conducted at 4.9 pH)	<0.03	<0.07	<0.03
RCRA Hazardous, D004	No	No	No
Soil Chemistry			
Total Arsenic in mg/kg	41	29	353
GANC/RGANC	Unbuffered	Unbuffered	Unbuffered
Equivalents acid to reach pH<4	>14	>14	2
Equivalents base to reach pH>10	2	<2	2
Leaching and Mobility			
TCLP Arsenic in mg/L	<0.03	<0.07	0.03
MANC/RMANC minimum arsenic Concentration (acid/base) in mg/L: pH	0.007:3.8/ 0.05:5.0	0.007:3.7/ 0.035:8.8	0.045:3.2/ 0.28:5.2
MANC/RMANC equilibrium Arsenic concentration (acid/base) in mg/L	0.25/2.7	0.06/1.5	2/22
% Arsenic Leached under GANC/RGANC (acid/base)	3/75	4/80	2/74

Table 5-5 - Arsenic-Soil Characterization Study
Summary of Test Results
Hazen Research

Soil Fraction Procedures	Area 18	Area 36	NGRR Track Area
Sequential Extraction	Majority of arsenic associated with the organic fraction and, to a lesser extent, with the non-crystalline iron oxide fractions.	Majority of arsenic associated with the organic and non-crystalline iron oxide fractions and, to a lesser extent, with the crystalline iron oxide fraction.	Majority of arsenic associated with the crystalline iron oxide and organic fractions and, to a lesser extent, with the non-crystalline iron oxide fraction.
SEM	Very little arsenic detected, but associated mainly with iron oxide. Also associated with silicates, and present as iron-arsenic-phosphate.	Arsenic associated mainly with iron oxide (including suspected goethite); arsenic also detected in particles (containing Fe, Al, Ca, and Si) attached to carbon-charcoal particles and with lead-manganese-oxide.	Arsenic associated mainly with iron oxide and organic material. Also positive identification of iron-arsenic-phosphate, lead-arsenic-sulfate and potassium-iron-sulfate.
XRF	Presence of silica-alumina-iron matrix	Presence of silica-alumina matrix	Presence of silica-alumina-iron matrix

Table 5-6 - Arsenic Wet Screening Study

Summary of Test Results and Statistical Evaluation
Hart Crowser Labs

Soil Fraction Type	Screen Size	Mass Distribution by Soil Size Fraction in % by wt.	Mean Arsenic Concentration in mg/kg	Cumulative Mean Concentration in mg/kg
Summary of Arsenic Data for Grid Samples from Lead Reference Area				
Gravel	+1	18.00	7.46	7.46
	-1+1/2	26.00	8.67	8.26
	-1/2+1/4	16.70	9.87	8.68
Sand	-1/4+8m	8.70	17.29	9.86
	-8m+16m	4.50	30.45	11.23
	-16m+30m	5.00	45.66	13.43
	-30m+60m	7.60	58.21	17.19
	-60m+100m	3.60	84.05	20.01
	-100m+200m	2.50	120.47	22.50
Silt	-200m	7.30	181.90	32.44
Summary of Arsenic Data for Samples from Narrow Gage Railroad Track Area				
Gravel	+1	18.00	21.15	21.15
	-1+1/2	21.50	32.06	28.26
	-1/2+1/4	17.50	49.45	35.25
Sand	-1/4+8m	11.80	81.37	43.13
	-8m+16m	5.40	110.75	47.96
	-16m+30m	7.50	158.45	57.68
	-30m+60m	7.80	249.18	74.72
	-60m+100m	2.30	602.18	88.47
	-100m+200m	1.90	876.61	105.03
Silt	-200m	6.30	1,689.61	203.32

Table 5-7 - Arsenic Speciation Tests

Summary of Test Results

Sample ID	Arsenic Concentration in $\mu g/g$			
	As +3	As +5[1]	MMA[2]	DMA[3]
25-As-SP-1	<1.6	71.9 (>93.7%)	<1.6	<1.6
LR-20	<1.6	75.3 (>94.0%)	<1.6	<1.6
LR-60	<1.6	228 (>97.9%)	<1.6	<1.6
LR-104	<1.6	358 (>95.7%)	<1.6	12.9
5D-VS-34	2.2	500 (>98.9%)	<1.6	<1.6
38-As-SP-1	1.9	567 (>99.1%)	<1.6	<1.6

Notes:
[1]The values in parenthesis indicate the proportion of the As +5 species
[2]MMA = Monomethyl arsinic acid
[3]DMA = Dimethyl arsinic acid

Table 5-8 Summary of UB Soil Washing Evaluation (State University of New York)

Extractant	pH	Temp in °C	Liquid:Solid Ratio	Remaining Soil Lead in mg/kg (Number of Readings)	TCLP Lead in mg/L (Number of Readings)
HCl	1	25	20:1	611 ± 166 (3)	
HCl	1	25	20:1	941 ± 951 (3)	0.50 ± 0.50 (3)
HCl	1	25	10:1	444 ± 24 (5)	0.47 ± 0.14 (3)
HCl	1	25	5:1	579 ± 61 (5)	1.47 ± 1.74 (3)
HCl	2	25	20:1	703 ± 627 (3)	0.20 ± 0.00 (3)
HCl	3	25	20:1	1359 ± 77 (5)	
HCl	3	25	20:1	1223 ± 382 (3)	
HCl	3	50	20:1	1259 ± 66 (5)	
H_2SO_4	1	25	20:1	720 (1)	
H_2SO_4	3	25	20:1	1111 ± 110 (5)	
$HClO_4$	1	25	20:1	449 ± 96 (5)	0.33 ± 0.14 (3)
$HClO_4$	3	25	20:1	1228 ± 116 (5)	
HCl/0.5M NaCl	3	25	20:1	1170 ± 130 (4)	
H_2SO_4/0.5M NaCl	1	25	20:1	851 ± 97 (5)	0.60 ± 0.25 (3)
HCl/0.005M EDTA	1	25	20:1	607 ± 145 (5)	0.37 ± 0.29 (3)
HCl/0.01M EDTA	3	25	20:1	644 ± 53 (5)	0.67 ± 0.14 (3)
HCl/0.01M EDTA	3	50	20:1	1045 ± 171 (4)	1.17 ± 0.14 (3)
HCl/0.01M Salicylate	3	25	20:1	1248 ± 147 (4)	

Notes:
The soil extractions were completed in a 24-hour batch extraction.

Remaining soil lead concentrations are given as the mean ± 95% CL (number of readings), after 24 hours of batch washing, with measurement outliers omitted. Readings were considered to be outliers if their values were greater than the initial lead concentration of 1,401 mg/kg.

The maximum proportion of lead released by soil washing during these experiments was 68 percent, achieved with HCl as the extractant at a pH = 1, at 25 degrees centigrade, and a 10:1 liquids:solids ratio.

5.6 References for Chapter 5

Hazen Research, Inc., 1993a. "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 18 - Nitrator No. 1.." August 26, 1993.

Hazen Research, Inc., 1993b. "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 26." August 31, 1993.

Hazen Research, Inc., 1993c. "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 7 Kettle." September 21, 1993.

Hazen Research, Inc., 1993d. "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 40 Packhouse." September 30, 1993.

Hazen Research, Inc., 1993e. "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 40 Pulverizer." October 1, 1993.

Hazen Research, Inc., 1993f. "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 40 Glazemill." October 4, 1993.

Hazen Research, Inc., 1994a. "Laboratory and Bench-Scale Characterization Studies for Arsenic-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Narrow Gage Railroad Track Area." April 7, 1994.

Hazen Research, Inc., 1994b. "Laboratory and Bench-Scale Characterization Studies for Arsenic-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 18 Hot Spot." April 18, 1994.

Hazen Research, Inc., 1994c. "Laboratory and Bench-Scale Characterization Studies for Arsenic-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site, Area 36." March 24, 1994.

State University at New York at Buffalo, 1994. "Evaluation of Soil Washing Extraction Agents and Processes for Remediating Heavy Metal Contaminated Soil From Weyerhaeuser Area 40 Pulverizer (-8m +200m Tails)", March 2, 1994.

Chapter 6 – DEVELOPMENT AND SCREENING OF ALTERNATIVES

6.1 Introduction

This chapter combines the technologies and process options, retained from the Chapter 4 screening, into working remedial alternatives. These alternatives are further screened by evaluating to what degree the alternatives can reduce the potential for exposure identified in the RA. Each alternative was evaluated for all remediation units. Those alternatives that meet the screening criteria and can be effectively applied to Site soils were retained for detailed analysis in Chapter 7. The remedial alternatives applicable to Miscellaneous Small Remediation Units are described in Section 8.3.

Section 6.2 describes the alternative screening criteria. Section 6.3 assembles the technologies and process options retained from Chapter 4 into remedial alternatives. Section 6.4 describes and screens each alternative, and Section 6.5 ranks the alternatives based on the outcome of the screening process. Section 6.6 presents a summary of the alternatives retained for detailed analysis in Chapter 7.

6.2 Screening Criteria

Like the initial technology screening, alternative screening was based on three criteria: effectiveness, implementability, and cost (as described in Section 4.3.3). Figure 6-1 shows the relationship between these three screening criteria and the eight MTCA evaluation criteria used in the detailed analysis of alternatives in Chapter 7. Unlike the initial technology screening, the relative importance of the criteria are different, with more emphasis on the effectiveness of the alternative in attaining the RAOs and cleanup standards and less emphasis on implementability and cost. Effectiveness was emphasized because it encompasses five of the seven evaluation criteria used in Chapter 7 and because MTCA guidance places particular importance on permanence, one of the sub-criteria of effectiveness.

6.2.1 Effectiveness

For alternative screening, effectiveness is the primary criterion. Key sub-criteria (of effectiveness) used in the screening of alternatives are listed below. The protection of human health and the environment, and compliance with cleanup standards as listed in WAC 173-340-700 and/or WAC 173-340-7490(6)(f) are "threshold criteria" since they must be met by the alternative for it to be retained for further evaluation in Chapter 7. Those alternatives that did not meet these threshold criteria (with the exception of No Action) were not retained for further evaluation. The sub-criteria of effectiveness used to assess effectiveness are defined as:

Protectiveness: This evaluation considers the overall protection each technology provides to human health and the environment including the degree to which existing risks are reduced, the time required to reduce risk and obtain cleanup standards, the off-Site and on-Site risks resulting from the implementation of the alternative and the degree of improvement of the overall environmental quality.

Permanence: This evaluation considers the degree to which the alternative permanently reduces the toxicity, mobilization or volume of the contaminants including the adequacy of the alternative/technology in reducing or elimination of releases of the contaminant, degree to which the treatment is irreversible, and the characteristics and quantity of the treatment residuals generated. Since lead and arsenic are the contaminants of concern, one of the MTCA criteria, destruction, is not obtainable by any of the listed alternatives and will not be evaluated.

Long-Term Effectiveness: This evaluation considers the effectiveness and reliability of the process during the time when contaminant concentrations remain on site that are greater than cleanup levels including the magnitude of risk with the alternative in place, the degree of certainty that the alternative/technology will be successful, and the adequacy and reliability of any Site controls.

Management of Short-Term Risks: This evaluation considers the effectiveness of the process dealing with the potential impacts to human health and the environment during the construction and implementation phase and the effectiveness of the measures to manage such risks.

6.2.2 Implementability

Implementability includes both operational implementability and administrative feasibility. Operational implementability refers to the ability to construct and reliably operate the remediation alternative. It includes operation, maintenance, replacement, and monitoring of the technical components of an alternative. Administrative feasibility refers to the ability to obtain approvals from city/county/state officials/agencies, the availability of treatment, storage, and disposal services, and the availability of specific equipment.

6.2.3 Cost

The alternatives screening cost estimates were developed from a variety of sources including technology unit costs developed by the project team, vendor information, published cost-estimating guides, and prior experience with similar technologies. In this evaluation, treatment includes construction and treatment activities necessary for attaining the RAOs. The screening level cost estimates do not include the contingency, administration, maintenance, or long-term monitoring costs since these costs will not impact the relative cost differences between alternatives unless the alternative does not include long-term monitoring. These cost estimates are used for the screening of the alternatives only and should not be considered to represent the total remediation cost associated with the cleanup of the Site. Estimated costs presented in this chapter represent the direct cost that would be realized if the alternative being evaluated were implemented to address the total volume of contaminated soil listed in Chapter 3. Table 6-1 lists these costs. Chapter 7 presents the potential total costs for implementation of the alternatives that were retained for the detailed analysis.

6.2.4 Consideration of Public Concerns

MTCA calls for the evaluation of local community potential concerns over the alternative and how the alternative addresses those concerns. For this FS it has been determined that with the exception of the No Action Alternative, each of the remaining alternatives share the common public concerns of protection of cultural and historical sites and artifacts, long-term public health, and short-term public health. The latter two are key components of Long-Term Effectiveness and Management of Short-Term Risks and will be addressed under those headings. A cultural resource protection program has been in place at the Site for many years and will be followed during the cleanup. The cultural protection plan will also be a key component of the Cleanup Action Plan for this site. Since the same amount of soil excavation will be required, little, if any, difference exists between the action-related alternatives in addressing cultural resource concerns. As such, we will focus on concerns that are unique to each alternative but not those that are “global” in nature.

6.2.5 Ecology Cleanup Technology Preference

Ecology summarizes its cleanup technology preference guidance for the selection of remedial alternatives in WAC 173-340-350 (8)(c)(i)(C). The guidance sets a relative ranking for technologies. The following technologies are listed in order of descending preference by Ecology:

- Reuse or recycling;
- Destruction or detoxification;
- Separation or volume reduction, in combination with reuse, recycling, destruction, or detoxification;
- Immobilization;

- On-Site or off-Site disposal;
- On-Site isolation or containment; and
- Institutional controls and monitoring.

6.3 Assembly of Alternatives - Groundwater

Two alternatives have been selected for the remediation of groundwater; natural restoration and active groundwater treatment. Chapter 7 will further evaluate these alternatives and describe the preferred alternative.

6.3.1 Description and Screening of Alternatives – Groundwater

Active Groundwater Treatment: Available technologies for the active treatment of impacted groundwater are very limited and would require, for this Site, the pumping of very large quantities (up to 7,000 gallons per minute) of water. Groundwater pump and treat is the only active groundwater remediation technology which could be applied at the Site for the following reasons:

- Groundwater which would be targeted for remediation is deep (100 to 200 feet below surface) and laterally extensive. preventing use of impermeable barriers, gates, or other groundwater isolation techniques;
- DNT (the single contaminant) has low volatility, preventing use of sparging or other venting technologies ;
- Although DNT can be degraded through natural in situ processes, only biological degradation could potentially occur in Site aquifers and attempting to enhance this process as part of a remediation program would likely be infeasible;
- DNT readily degrades by photolysis (half-life on the order of days; Etnier, 1987), but this process will not occur in aquifers;
- DNT can be transformed to formic and acetic acids, but only at temperatures at which water would not persist (520°F; Etnier, 1987); and
- DNT in water degrades through biological processes under some aerobic and anaerobic conditions (Spanggord. 1980; Etniert 1987), but the metabolism of DNT is strongly dependent on environmental conditions and the presence of viable microorganisms (ATSDR, 1989). Biodegradation of DNT may be occurring naturally in Site aquifers, yet attempting to establish or enhance appropriate natural microorganism populations (e.g. , by introducing nutrients) in Site aquifers would likely be infeasible because of the size of the Site and the substantial depth of the aquifers.

Natural Restoration: Natural restoration is the process in which the source of the contamination is removed and the water is left to clean itself up naturally. Active monitoring is typically a part of natural restoration.

6.4 Assembly of Alternatives - Soil

This FS defines alternatives for soils as a collection of technology process options that can be combined to effectively address a given remediation unit. In general, technologies/process options that are effective for one remediation unit are also effective for other remediation units. There are some exceptions to this; for example, the alternate chosen in ecologically or historically sensitive areas may not be the same as those within industrial or commercial areas.

Based on the initial screening of technologies (presented in Chapter 4) and the results of the treatability studies (presented in Chapter 5), the following alternatives were formulated and ranked independently for all remediation units:

- No Action;
- Capping;
- Cover;
- Cap/Cover;
- On Site Deposition, Cap and Cover;
- Off-Site Disposal at a Landfill;
- Wet Screening, Classification, and Disposal of the Residual Soils at a Landfill;
- Wet Screening with On-Site Deposition, Cap and Cover and Disposal of the Residual Soils at a Landfill;
- Wet Screening with Stabilization and On-Site Deposition and Cover;
- Soil Washing with Wet Screening, Classification, Acid/Base Extraction, and Disposal of the Residual Soils at a Landfill; and
- Soil Washing with Wet Screening, Classification, Chelant Extraction, and Disposal of the Residual Soils at a Landfill.

Ten potential remedial alternatives, in addition to No Action, were developed for the Site. Each alternative will attain varying degrees of risk reduction under the proposed land use plan.

6.5 Description and Screening of Alternatives

This section presents a brief description of each alternative and discusses the performance of each alternative against the three screening criteria. Alternatives which are most likely to attain the RAOs are identified for further evaluation in Chapter 7.

6.5.1 No Action

No action means that no remedial activities will be implemented to clean up the Site.

Effectiveness:

- Protectiveness: The No Action alternative does not attain the Site ecological or human health standards. As such this alternative will not meet cleanup standards as listed in either WAC 173-340-700 or WAC 173-340-7490(6)(f). Since no action would occur there would be no reduction in risk.
- Permanence: No action does not reduce toxicity, mobility or volume and is not a permanent solution.
- Long Term Effectiveness: Since this alternative does not attain cleanup standards or reduce risk, toxicity or mobility it is not effective over the long-term.

- Management of Short Term Risks: Since no activities occur under this alternative, short-term risks associated with implementation would not occur.

- Consideration of Public Concerns: No action would result in denied access to the Site. Development of commercial, historical and golf course land use areas would not be allowed by this alternative.

Implementability: This alternative does not meet the needs of the current Site development plans or Ecology's cleanup standards. Development of commercial, historical and golf course land use areas would be limited by this alternative. Since no construction activities will be required as part of this alternative, it could be readily implemented.

Cost: There is no initial remediation cost associated with the implementation of this alternative since no activities are performed.

Considerations: No Action does not have the ability to meet RAOs consistent with Ecology's ecological and human health standards but has the lowest initial cost. It was retained during the detailed analysis to provide comparison with other remedial alternatives.

6.5.2 Capping

Capping consists of the installation of a layer of highly durable, impermeable, engineered materials over the Site soils containing contaminant concentrations above the CL but below the RL. No excavation of soils would occur as part of this alternative.

Effectiveness:

- Protectiveness: Both Site wide and discrete area capping could meet cleanup standards as listed in WAC 173-340-7490(6)(f). Preventing direct contact exposure with soil above the CL would significantly reduce risk. The time frame for this action would be dependant upon the size of the area capped. Capping of the entire Site would require approximately 3.3 years. Off-Site risk would be limited to implementation (see Management of Short Term Risks) and ongoing on-Site risks would be minimal. The reduction in exposure risk would improve the overall environmental condition of the Site.

- Permanence: There would be no reduction in toxicity or volume. Mobility would be reduced due to the impermeable nature of the Cap material. Capping does not represent a permanent remedy.

- Long Term Effectiveness: Once complete, capping would greatly reduce residual risk. Long-term effectiveness of a capping remedy relies on an effective O&M program. Such programs can be effective with active management.

- Management of Short Term Risks: Since this alternative does not include the excavation of contaminated soils, short term exposure risk would be less than excavation related alternatives.

- Consideration of Public Concerns: Large scale capping would not meet the public's wish to return the property to viable use or Weyerhaeuser Real Estate's plans to develop the property. Lesser scale application could meet all concerns.

Implementability: Site wide capping could potentially result in limiting land use and development in the capping area. This alternative does not meet the current needs of the Site development plans. Capping is a common remedy and could be applied. Small-scale applications could be effectively implemented.

Cost: A direct cost range of $79 million (M) to $129.6M is estimated for implementation of this alternative. Long-term cap maintenance costs would also be incurred.

Considerations: Capping would be effective in meeting the RAOs for the Site but is not permanent. Capping also may restrict future Site development. It could be considered in small-scale areas where roads, asphalt trails, parking areas, or buildings are planned. It is also costly to apply. This alternative may have some limited use and will be retained for further evaluation in Chapter 7.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.5.3 Cover

A cover involves the installation of a clean soil layer over areas of the Site that contain soil with concentrations of constituents above the CL but below the RL. The installation of a cover over these soils may meet the RAOs by reducing direct contact exposure. At a minimum the cover would equal 18 inches in depth for the protection of human health and 6 inches in depth (gravel only) for the protection of ecological receptors. No excavation of soils would occur as part of this alternative.

Effectiveness:

- Protectiveness: Both Site wide and discrete area cover could, depending on the thickness of the cover, meet cleanup standards as listed in WAC 173-340-7490(6)(f). Preventing direct contact exposure with soil above the CL would significantly reduce risk. The time frame for this action would be dependent upon the size of the area covered. Covering of the entire Site would require approximately 2.4 years. Off-Site risk would be limited to implementation (see Management of Short Term Risks) and ongoing on-Site risks would be minimal. The reduction in exposure risk would improve the overall environmental condition of the Site. The placement of a topsoil cover in golf course, treeless open space, and historical land use areas could, depending on thickness, be an effective exposure barrier.

- Permanence: Cover, in itself, does not represent a permanent remedy. There would be no reduction in mobility, toxicity or volume.

- Long Term Effectiveness: The residual risk would be greatly reduced once a complete cover was in place. Long-term effectiveness of a cover remedy relies on an effective O&M program. Such programs can be effective with active management.

- Management of Short Term Risks: Since this alternative does not include the excavation of contaminated soils, short term exposure risk would be less than excavation related alternatives.

- Consideration of Public Concerns: Total Site cover would not meet the public's wish to return the property to viable use or Weyerhaeuser Real Estate's plans to develop the property. Lesser scale applications could meet all concerns.

Implementability: This alternative can meet the current needs of the Site development plans in areas where treeless open space, historical, or golf course land uses are planned. Installation of a soil cover across broad areas may be difficult to implement because of development restrictions in the covered area and the availability of cover material. Cover over smaller areas can be easily completed since smaller quantities of soils are readily available on Site and can be placed easily because of the typically flat topography of the Site.

Cost: A direct cost range of $43M to $72M is estimated for implementation of this alternative. Clean soil from on-Site sources makes the cost less for installation of soil cover in selected areas.

Considerations: Cover would be effective in meeting the RAOs for the Site, but is not permanent. Cover would also restrict future Site development. It could be considered on a small-scale in areas of environmental or historic sensitivity. As such, it was retained for further evaluation in Chapter 7.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.5.4 Cap/Cover

Cap/Cover consists of the placement of 18 inches of soil over the Site soils containing contaminant concentrations above the CL but below the RL. The cap would consist of a layer of high durability, engineered materials or layer of gravel. A 12-inch to 18-inch soil cover would then be placed on top of the cap to further prohibit exposure to the underlying soils. The installation of the cap/cover would meet the RAOs by preventing direct contact exposure with soil above the CL. This combination would act as an exposure barrier to both ecological receptors and humans. No excavation of soils would occur as part of this alternative.

Effectiveness:

- Protectiveness: Cap/Cover could meet cleanup standards as listed in WAC 173-340-7490(6)(f) in both Site wide and smaller applications. Since cap/cover incorporates the best of both the cap and cover alternatives risk would be further reduced. The time frame for this action would be dependent upon the size of the area capped. Cap/Cover of the entire Site would require approximately 2.8 years. Off-Site risk would be limited to implementation (see Management of Short Term Risks) and ongoing on-Site risks would be minimal. The reduction in exposure risk would improve the overall environmental condition of the Site.

- Permanence: There would be no reduction in toxicity or mobility. This alternative does not represent a permanent remedy.

- Long Term Effectiveness: The residual risk would be greatly reduced once a complete cover was in place. Long-term effectiveness of a capping remedy relies on an effective O&M program. Such programs can be effective with active management.

- Management of Short Term Risks: Since this alternative does not include the excavation of contaminated soils, short term exposure risk would be less than excavation related alternatives

- Consideration of Public Concerns: Large-scale cap/cover would not meet the public's wish to return the property to viable use or Weyerhaeuser Real Estate's plans to develop the property. Restricting the use of this alternative to the golf course, open space, and historical land use areas would meet all concerns.

Implementability: Large scale capping could potentially result in limiting land use and development in the capped area. This alternative does not meet the current needs of the Site development plans. Isolated use of this alternative could be useful in preventing exposure to soil with contaminant concentrations above CLs. Capping is a common remedy and could be applied.

Cost: A direct cost range of $26.6M to $41.5M is estimated for implementation of this alternative. Long-term cap maintenance costs would also be incurred.

Considerations: Cap/Cover would be effective in meeting the RAOs for the Site, but is not permanent. Cap/Cover would also restrict future Site development and could be considered in golf course, historical areas and open space areas where exposure prevention and protection of habitat are desired. As such, it was retained for further evaluation in Section 7.

Adjustments to remediation levels: The risk-based remediation or cleanup levels used in the RA for soil located within the golf course and open space land use areas are based on frequency of exposure and do not consider the installation of a soil cover over impacted soil. The application of an engineered cap/cover will further reduce the potential risk of exposure thereby increasing the effective RL. Ecology has determined that the effective remediation levels for lead- and arsenic-contaminated soils in areas of

the Site that will have a cap/cover are 4,100 mg/kg and 530 mg/kg, respectively. Justification of this decision is included in Appendix H.

6.5.5 On Site Deposition, Cap and Cover

On-Site Deposition, Cap and Cover includes the excavation of soils containing contaminant concentrations above the RL in one land use, transferring it to a land use area within the area of contamination (AOC) where it is below the RL for that land use, and using a cap/cover combination to prevent exposure. The cap would consist of a layer of high durability, engineered materials or layer of gravel over the deposited soils. A soil cover would then be placed on top of the cap to further prohibit exposure to the underlying soils. The installation of the cap/cover would meet the RAOs by preventing direct contact exposure with soil above the CL. Implementation of this alternative allows integration of the deposition of soil with the design of the golf course.

Effectiveness: On-Site deposition with cap/cover is allowed under MTCA and may be effective in meeting site cleanup standards and RAOs. Although volume and toxicity are not modified, soil would be placed in a land use area where the exposure risks are reduced based on restricted access and the protection afforded by the cap/cover.

- Protectiveness: This alternative would meet cleanup standards as listed in WAC 173-340-7490(6)(f). Risk would be reduced in two ways. The cap/cover would prevent direct exposure and the consolidation of the contaminated soils in a smaller area would lessen the probability of direct contact. The timeframe necessary to complete this action is approximately 2.8 years.

- Permanence: There would be no reduction in toxicity, or mobility. This alternative does not represent a permanent remedy.

- Long Term Effectiveness: Once complete this alternative would greatly reduce residual risk. Long-term effectiveness of a capping remedy relies on an effective O&M program. Such programs can be effective with active management. This alternative is particularly applicable within the golf course land use areas since the operations of a golf course would ensure the competence of the cap/cover.

- Management of Short Term Risks: Since this alternative includes excavation, it represents an increased risk when compared to non-excavation alternatives. It does represent the least risk of the alternatives that involve excavation. An aggressive dust control program and air monitoring could minimize short-term risks. These efforts have been successful in the past in controlling potential risks.

- Consideration of Public Concerns: This alternative would meet the public's wish to return the property to viable use and WRECO's plans to develop the property. Restricting the use of the alternative to the golf course land use areas would meet all concerns.

Implementability: If restricted to the golf course this alternative can meet the current needs of the Site development plans and can be easily implemented using conventional soils excavation, handling, and transportation equipment. Since the AOC has been defined by Ecology as the land inside the Consent Decree Boundary, soil could be deposited in areas where future Site development would not be restricted.

Cost: An approximate direct cost of $13M to $21.6M is estimated for implementation of this alternative. Clean soil from on-Site sources makes the cost of installation of a soil cover low.

Considerations: This alternative provides for placing soil in land use areas associated with lower exposure risks. This alternative would also consolidate the contaminated soils into discrete areas, and thus is more effective than wholesale covering or capping of the Site. Soil cover may restrict future Site

development but not to the degree that whole cover or capping would. The volume of impacted soil would not be reduced.

Adjustments to remediation levels: A key component of this alternative is the installation of an 18-inch soil cap/cover (as described in Section 7.2.3) The risk-based remediation or cleanup levels used in the RA for soil located within the golf course and open space land use areas are based on frequency of exposure and do not consider the installation of a soil cover over impacted soil. The application of an engineered cap/cover will further reduce the potential risk of exposure thereby increasing the effective RL. Ecology has determined that the effective remediation levels for lead- and arsenic-contaminated soils in areas of the Site that will have a cap/cover are 4,100 mg/kg and 530 mg/kg, respectively. Justification of this decision is included in Appendix H.

6.5.6 Offsite Disposal at a Landfill

This option involves excavation of soil above the CLs, transport, and off-Site disposal. Soil would be characterized based on RI and confirmation sample results.

Effectiveness:

- Protectiveness: Off-Site disposal would be effective in meeting the cleanup standards for the Site as listed in WAC 173-340-700. The timeframe necessary to complete this action is approximately 7.6 years.

- Permanence: Since no soil exceeding the cleanup standards would remain on-Site, volume and toxicity would be reduced on-Site but not at the disposal facility. This alternative represents a permanent solution.

- Long Term Effectiveness: This alternative is effective for the Site. Soil would have to be managed at the disposal facility over the long-term.

- Management of Short Term Risks: This alternative would involve the greatest amount of excavation and hauling of any of the retained alternatives. As such, the risks from dust and truck traffic would increase proportionally. An aggressive dust control program and air monitoring could minimize short-term risk to dust exposure. These efforts have been successful in the past in controlling potential risks. The high volume of truck traffic could cause a significant amount of added risk.

- Consideration of Public Concerns: Trucking of the soil off-Site would require approximately 44,000 truckloads over 5.6 years. Truck traffic has been an issue with the public in the past.

Implementability: This alternative can meet the current needs of the Site development plans. It can be implemented using standard excavation practices.

Cost: A direct cost range of $181M to $248.8M is estimated for implementation of this alternative.

Considerations: This alternative represents the highest reasonable cost for remediation of the Site. Implementing more costly alternatives to remediate the Site would not be warranted. No volume reduction would be attained by this alternative. It is, however, the most permanent and will be retained for further evaluation in Chapter 7.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.5.7 Wet Screening, Classification, and Disposal of the Residual Soils at a Landfill

This option includes the excavation of soil above CLs, wet screening the soil into at least two soil fractions, and deposition of the clean coarser fraction on the Site. The concentrated finer fractions would be disposed of at a landfill. The results of the 2001 Screening Program and an evaluation of the treatability study data, presented in Chapter 5, indicates that the cut point for generating a clean coarse fraction and a concentrated finer fraction will depend on the initial contaminant concentration in the soil. For the purposes of evaluation, this FS considered this cut point to be ½ inch. As such, total volume of soil requiring off-Site disposal is likely to be approximately 76 percent. The residual soil could require stabilization at the landfill. No on-Site deposition of soils above the CLs would occur under this alternative. No cover or cap would be used.

Effectiveness:

- Protectiveness: Classification and off-Site disposal could be effective in meeting the cleanup standards for the Site as listed in WAC 173-340-700. The timeframe necessary to complete this action is approximately 4.4 years.

- Permanence: Since no soil exceeding the cleanup levels would remain on Site, volume and toxicity would be reduced on-Site but not at the disposal facility. This alternative represents a permanent solution.

- Long Term Effectiveness: Since all soil contaminant concentrations on-Site would not exceed cleanup standards, this alternative would be effective long-term. Soil shipped off-Site would have to be managed at the disposal facility over the long-term.

- Management of Short Term Risks: All wet screening and soil washing alternatives represent an increase in materials handling compared to other retained alternatives. As such, the risks from dust increase proportionally. An aggressive dust control program and air monitoring could minimize short-term risk to dust exposure. These efforts have been successful in the past in controlling potential risks.

- Consideration of Public Concerns: Trucking of the soil off-Site would require approximately 34,000 truckloads over 4.0 years. Truck traffic has been an issue with the public in the past.

Implementability: This alternative could be implemented using existing soil treatment and handling technologies. Disposal of contaminated fines soil at a landfill could be implemented but would require up to 34,000 truckloads. Based on data from 2001 Screening Program, water generated by the wet screening process could be filtered to remove suspended contaminants and recycled.

Cost: A direct cost range of $61.9M to $110.6M is estimated for implementation of this alternative. As a conservative approach, it was assumed that the residual material would require stabilization at the landfill. Wet screening and a classification cut point of ½ inch (24 percent volume reduction) were used in the cost evaluation.

Considerations: This alternative has the potential for significant soil volume reduction, is permanent and uses conventional soil handling technologies. It is, however, a time consuming and expensive process that would cause significant public concern (truck traffic). Since the time, benefit and increased public concern outweigh the benefits (vs. similar volume reduction alternatives) it will not be retained for further evaluation.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.5.8 Wet Screening with On Site Deposition, Cover and Cap and Disposal of the Residual Soils at a Landfill

This option includes the excavation of soil above Site-specific RLs, wet screening the soil to separate it into "clean" and contaminated fractions, off-Site disposal of the contaminated fines, and the deposition and cover/cap of the clean, coarser fraction on the Site.

Wet screening the soil into two soil fractions, one larger and one smaller than about -200 mesh, will generate a clean coarser fraction and a concentrated finer fraction which could be disposed of at a landfill. Since the finer fraction of soil from the wet screening operation will contain higher concentrations of lead or arsenic than the excavated, untreated soil, stabilization may be required at the landfill. The results of the 2001 Screening Program indicates that the total volume of soil requiring off-Site disposal is likely to be less than 10 percent.

The coarse "clean" fraction would be transferred to discrete locations within the golf course land use areas and covered with an 18-inch thick cap/cover combination to prevent exposure. The cap would consist of a layer of high durability, engineered materials or layer of gravel placed over the deposited soils or soils which contain contaminant concentrations above the CL but below the RL. A soil cover would then be placed on top of the cap to further prohibit exposure to the underlying soils. The installation of the cap/cover would meet the RAOs by preventing direct contact exposure with soil above the CL.

Effectiveness:

- Protectiveness: This alternative could be effective in meeting the cleanup standards for the Site as listed in WAC 173-340-700. Although mobility and toxicity are not modified, volume would be reduced and the soil would be placed in a land use area where the exposure risks are reduced. The timeframe necessary to complete this action is approximately 3.6 years.

- Permanence: There would be no reduction in toxicity or mobility. This alternative is not a permanent remedy.

- Long Term Effectiveness: Once complete, this alternative would greatly reduce residual risk. Long-term effectiveness of a cap/cover remedy relies on an effective O&M program. Such programs can be effective with active management. This alternative is particularly applicable within the golf course land use areas since the operations of a golf course would ensure the competence of the cap/cover.

- Management of Short Term Risks: All wet screening, and soil washing alternatives represent an increase in materials handling compared to other retained alternatives. As such, the risks from dust increase proportionally. An aggressive dust control program and air monitoring could minimize short-term risk to dust exposure. These efforts have been successful in the past in controlling potential risks.

- Consideration of Public Concerns: No additional public concerns are anticipated.

Implementability: If on-Site deposition is restricted to discrete areas within the golf course land use area, treeless open space, and historical land use areas this alternative can meet the current needs of the Site development plans and can be easily implemented using conventional soils excavation, handling, and transportation equipment.
Cost: A direct cost range of $59.9M to $99M is estimated for implementation of this alternative.

Considerations: This alternative has the potential for significant soil volume reduction, and uses conventional soil handling technologies. It is a less time consuming and expensive process than similar volume reduction alternatives and would reduce public concern over truck traffic. This alternative provides for placing soil in land use areas associated with lower exposure risks. Future Site development restrictions due to soil covers may be limited to the golf course areas only. Since this alternative has

benefits in time, cost and decreased public concern (vs. similar volume reduction alternatives) it will be retained for further evaluation.

Adjustments to remediation levels: A key component of this alternative is the installation of an 18-inch soil cap/cover (as described in Section 7.2.3) The risk-based remediation or cleanup levels used in the RA for soil located within the golf course and open space land use areas are based on frequency of exposure and do not consider the installation of a soil cover over impacted soil. The application of an engineered cap/cover will further reduce the potential risk of exposure thereby increasing the effective RL. Ecology has determined that the effective remediation levels for lead- and arsenic-contaminated soils in areas of the Site that will have a cap/cover are 4,100 mg/kg and 530 mg/kg, respectively. Justification of this decision is included in Appendix H.

6.5.9 Wet Screening with Stabilization and On-Site Deposition and Cap/Cover

This option includes the excavation of soil above the RL, wet screening of the soil, stabilization of the contaminated fraction, and deposition and cover/cap of the clean, coarser fraction on the Site.

Wet screening the soil into two soil fractions, one larger and one smaller than about -200 mesh, will generate a clean coarser fraction and a concentrated finer fraction which would require stabilization prior to deposition. The results of the 2001 Screening Program indicate that the total volume of soil requiring stabilization is likely to be less than 10 percent.

Both the coarse "clean" fraction and the stabilized material would be transferred to discrete areas within the golf course land use areas and covered with an 18-inch thick cap/cover combination to prevent exposure. The cap would consist of a layer of high durability, engineered materials or a layer of gravel over the deposited soils or soils which contain contaminant concentrations above the CL but below the RL. A soil cover would then be placed on top of the cap to further prevent exposure to the underlying soils. The installation of the cap/cover would meet the RAOs by preventing direct contact exposure with soil above the CL.

Effectiveness:

- Protectiveness: Wet screening would be effective in reducing the volume of contaminated soil on Site. It would not lower contaminant concentrations in the fines (the concentration would increase) and thus would not meet the cleanup standards for Site soils. Stabilization of the finer fraction would reduce leachability/mobility and, if placed into a monolithic unit, would reduce the total surface area available for direct contact. The timeframe necessary to complete this action is approximately 3.7 years.

- Permanence: Mobility and volume would be reduced. Toxicity would not be addressed. Since this alternative would not meet cleanup standards, this is not a permanent solution.

- Long Term Effectiveness: This alternative is effective long-term in reducing leachability and, since it is combined with a cover, somewhat reduces the risk of long-term exposure. Long-term effectiveness of a cap/cover remedy relies on an effective O&M program. Such programs can be effective with active management. This alternative is particularly applicable within the golf course land use areas since the operations of a golf course would ensure the competence of the cap/cover.

- Management of Short Term Risks: All wet screening and soil washing alternatives represent an increase in materials handling compared to other retained alternatives. As such, the risks from dust increase proportionally. An aggressive dust control program and air monitoring could minimize short-term risk to dust exposure. These efforts have been successful in the past in controlling potential risks.

- Consideration of Public Concerns: No additional public concerns are anticipated.

Implementability: Both stabilization and wet screening are conventional technologies and the implementation of these technologies in combination would not require special considerations. This alternative can meet the current needs of the Site development plans. Monitoring of the stabilized soil may be required.

Cost: A direct cost range of $46.6M to $84M is estimated for implementation of this alternative.

Considerations: This alternative does not meet cleanup standards and will not retained for detailed analysis.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.5.10 Soil Washing with Wet Screening, Classification, Acid/Base Extraction, and Disposal of the Residual Soils at a Landfill

This option includes the excavation of soil above the RL, wet screening the soil at about 4 mesh (6 mm), deposition of the clean coarser fraction on the Site, further classification of the -10 mesh soil to separate a concentrated fine residual fraction (approximately -200 mesh), acid or base extraction of metals from the -10 mesh to +200 mesh fraction, deposition of the cleaned fraction on-Site, and disposal of the -200 mesh fraction at a landfill. Treatability studies indicate that acid extraction of soil containing lead can be attained using an acid mixture with a pH range from 1 to 3. Arsenic is more leachable under base conditions between pH 10 and pH 12. These extraction methods, in combination with classification, may be effective in cleaning impacted soil, and returning about 90 percent of the soil to the Site. Note that a lower classification cut point of 200 mesh (vs. 100 mesh) was selected to enhance metals recovery in the -10 mesh +200 mesh fraction using extraction chemicals. Metals extracted by this alternative would be precipitated and disposed of at a landfill along with non-metal sludge that may accumulate.

Effectiveness:

- Protectiveness: This alternative could be effective in meeting the cleanup standards for the Site as listed in WAC 173-340-700. Soil Washing would be effective in reducing the volume of contaminated soil. Acid extraction would be effective for soils containing lead only, and base extraction would be effective for soils containing arsenic only. No soil above CLs would remain on the Site. The timeframe necessary to complete this action is approximately 5.5 years.

- Permanence: Since no soil above CLs would remain on the Site, this is a permanent solution.

- Long Term Effectiveness: This alternative is effective long-term.

- Management of Short Term Risks: All wet screening and soil washing alternatives represent an increase in materials handling compared to other retained alternatives. Soil washing adds an additional risk associated with the handling of treatment chemicals. As such, the risks from dust increase proportionally. Aggressive chemical handling and dust control programs and air monitoring could minimize short-term risk. These efforts have been successful in the past in controlling potential risks.

- Consideration of Public Concerns: No additional public concerns are anticipated.

Implementability: Soil washing technologies (wet screening, classification, and acid/base extraction) use common processes, and the implementation of these technologies in combination would not require special considerations. This alternative can meet the current needs of the Site development plans and no soil above the RLs would remain on Site. Handling of acids and bases during the treatment process

would require special precautions. No commercial application of base extraction of soils containing arsenic is known.

Cost: A direct cost range of $76.9M to $120M is estimated for implementation of this alternative. The -200 mesh soil and precipitated concentrates (10% of whole soil) would be disposed of off-Site as a characteristic hazardous waste.

Considerations: This alternative has the potential to reduce volume, toxicity, and mobility. Additionally, a low volume of material would require off-Site disposal. Acid/base handling on the Site may reduce the short-term effectiveness. It is, however, a time consuming and expensive process that could also be ineffective short-term due to acid/base handling on the Site. Since these factors outweigh the benefits (vs. similar volume reduction alternatives) it was not retained for further evaluation.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.5.11 Soil Washing with Wet Screening, Classification, Chelant Extraction, and Disposal of the Residual Soils at a Landfill

This option includes the excavation of soil above the RL, wet screening the soil at about 4 mesh (6 mm), deposition of the clean coarser fraction on the Site, further classification of the -10 mesh soil to separate a concentrated fine residual fraction (approximately -200 mesh), chelant extraction of metals from the -10 mesh to +200 mesh fraction, deposition of the cleaned finer fraction in the excavation or other on-Site area, and disposal of the -200 mesh fraction at a landfill. Note that a lower classification cut point of 200 mesh (vs. 100 mesh) was selected to enhance metals recovery in the -10 mesh +200 mesh fraction using extraction chemicals. Metals extracted by this alternative would be precipitated and disposed of at a landfill along with any non-metal sludge that may accumulate. Recycling of the extracted metals and -200 mesh fraction may be implemented if this material can meet the strict requirements of the thermal recycling vendors (smelters).

Effectiveness:

- Protectiveness: Soil Washing may be effective in reducing the volume of contaminated soil on site. Chelant extraction has been implemented effectively on soil containing lead. Recent research being performed with soil washing technology indicates that arsenic extraction using a chelant is questionable. The effectiveness of this alternative in treating Site soils with lead or arsenic is therefore uncertain. No soil above cleanup standards would remain on the Site. The timeframe necessary to complete this action is approximately 5.5 years.

- Permanence: Since no soil above CLs would remain on the Site, this is a permanent solution.

- Long Term Effectiveness: This alternative is effective long-term.

- Management of Short Term Risks: All wet screening and soil washing alternatives represent an increase in materials handling compared to other retained alternatives. Soil washing adds and additional risk associated with the handling of treatment chemicals. As such, the risks from dust increase proportionally. Aggressive chemical handling and dust control programs and air monitoring could minimize short-term risk. These efforts have been successful in the past in controlling potential risks.

- Consideration of Public Concerns: No additional public concerns are anticipated.

Implementability: Wet screening and classification can be readily implemented using common soil treatment and handling technologies. This alternative can meet the current needs of the Site development plans and no soil above the CLs would remain on the Site. The implementation of this alternative on soil impacted by arsenic would be considered innovative and the implementation would

require significant effort during the start-up period. Handling of chelants could require special precautions.

Cost: A direct cost range of $75.3M to $120M is estimated for implementation of this alternative. The -200 mesh soil and precipitated concentrates (10% of whole soil) will be disposed of off-Site as a hazardous waste.

Considerations: This alternative may be effective in treating lead soil, but is has questionable effectiveness and implementability for arsenic only soil. It is also a time consuming and expensive process that could also be ineffective short-term due to chelant handling on the Site. As such, it will not be retained for further analysis.

Adjustments to remediation levels: No adjustments to the remediation levels used in the RA are warranted for this alternative.

6.6 Ranking of Alternatives

Ranking of the alternatives, described and discussed in Section 6.4, was conducted using the criteria defined in Section 6.2. The project team independently ranked the alternatives and the results were compiled into a single ranking for each alternative (Appendix E). This allowed the semi-quantitative ranking of the best and least favorable alternative for the particular criterion.

Different weightings were applied to the criteria to examine the sensitivity of the ranking results as the weightings were varied. For lead- and arsenic-impacted soils, the weighting factor had a small effect on the overall ranking of the alternatives. The alternatives were close in each case and the highest ranked alternatives still ranked high following the application of different weightings.

6.7 Summary of Selected Alternatives

No Action and three remedial alternatives of the eleven described and evaluated in this chapter were retained for further detailed analysis in Chapter 7. The alternatives retained for detailed analysis were:

- No Action;
- Off-Site Disposal at a Landfill;
- On Site Deposition, Cap and Cover; and
- Wet Screening with On-Site Deposition, Cap and Cover and Disposal of the Residual Soils at a Landfill

Four additional alternatives were retained for small scale or “spot” applications. These were:

- Cap;
- Cover;
- Cap/Cover; and
- Off-Site Disposal at a Landfill.

The selection of each of the alternatives was based on the ability of the alternative to provide a higher level of effectiveness, implementability, and/or lower cost than other alternatives that use similar technologies. This results in the best alternatives for each technology being retained for the detailed analysis. Two of the alternatives (No Action and Off-Site Disposal at a Landfill) were retained for cost comparison.

A summary of why each of the alternatives was retained is presented below.

6.8 Retained Alternatives: Large Scale Applications

No Action: Even though it does not meet cleanup standards by either the criteria listed in WAC 173-340-700 or WAC 173-340-7490(6)(f), the No Action alternative was retained for comparative purposes. It represents the low cost alternative.

Off-Site Disposal at a Landfill: This alternative meets cleanup standards and is permanent (for the Site). It was, therefore, retained for further evaluation. This alternative also represents the highest reasonable cost, which would be incurred by a cleanup action. This alternative represents the high cost option.

On Site Deposition, Cap and Cover: This alternative meets cleanup standards, meets RAOs, minimizes risks, is easily implemented, and represents reasonable costs. It is the most protective of the containment (cap or cover) alternatives and was, therefore, retained for further evaluation.

Wet Screening with On-Site Deposition, Cap and Cover and Disposal of the Residual Soils at a Landfill: This alternative represents the most practical of the volume reduction alternatives. It is effective (meets cleanup standards), is easily implemented, has been proven to be successful (2001 Screening Program), has the lowest overall cost and represents the lowest short-term risk of this group of technologies. For these reasons this alternative was retained for further evaluation.

6.9 Retained Alternatives: Small Scale Applications

Even though large-scale applications of the following technologies may be either ineffective (do not meet RAOs) or are overly expensive for the benefit they offer, they may be appropriate for Miscellaneous Small Units. They will be evaluated further in Section 8.3.

- **No Action:** No Action may be appropriate in locations where special considerations apply. These areas could include those areas of environmental sensitivity, special cultural significance or locations of contaminants that meet certain criteria.

- **Cap:** Asphalt capping may be appropriate where trails, or parking lots are planned. Limited use of this technology would meet cleanup standards, be protective long-term (with active maintenance) and is cost effective.

- **Cover:** A thick soil cover may be appropriate where disturbance of in-situ soils could cause significant harm to areas of environmental sensitivity, or special cultural significance.

- **Cap/Cover:** The application of a cap/cover (as described in Section 7.2.3) may be appropriate where an exposure barrier is desired. This technology is as appropriate for in-situ soils as it is for areas of soil deposition especially in areas of special cultural significance.

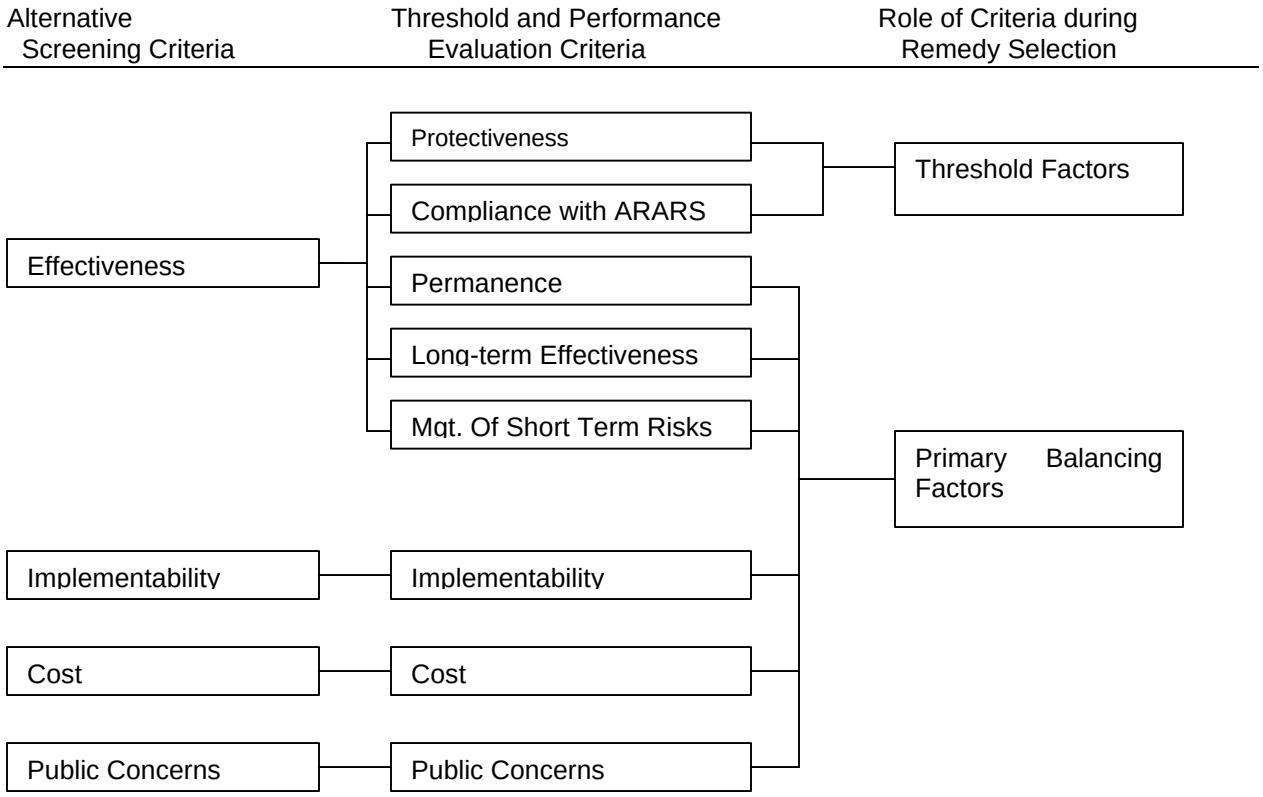
- **Off-Site Disposal at a Landfill:** Excavation and disposal of small volumes of contaminated soils could be appropriate. This technology has particular value in remediating “Miscellaneous Small RUs”.

TABLE 6-1 - ESTIMATED LOW AND HIGH RANGE UNIT COSTS

LOW RANGE UNIT COSTS ALTERNATIVE	APPROX. TOTAL COST ($)
No Action	$0
Cover	$43,200,000
Capping	$79,200,000
Cap/Cover	$21,600,000
On-site Deposition with Cap/Cover	$13,248,000
Off-site Disposal at Landfill	$181,296,000
Soil Washing with chelants and offsite disposal	$75,312,000
Soil Washing with acid and offsite disposal	$76,896,000
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$46,656,000
Wet Screening, Classification and Disposal at Landfill	$61,920,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$59,904,000

HIGH RANGE UNIT COSTS ALTERNATIVE	APPROX. TOTAL COST ($)
No Action	$0
Cover	$72,000,000
Capping	$129,600,000
Cap/Cover	$41,472,000
On-site Deposition with Cap/Cover	$21,600,000
Off-site Disposal at Landfill	$248,832,000
Soil Washing with chelants and offsite disposal	$120,096,000
Soil Washing with acid and offsite disposal	$120,096,000
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$84,096,000
Wet Screening, Classification and Disposal at Landfill	$110,592,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$99,216,000

Figure 6-1 – Relationship of Screening Criteria to the Evaluation Criteria



Chapter 7 – DETAILED ANALYSIS OF ALTERNATIVES AND SELECTION OF PREFERRED ALTERNATIVES

7.1 Introduction

This chapter evaluates how each alternative, retained from the screening of alternatives in Chapter 6, would be applied to each RU at the Site and presents a comparative analysis of these alternatives. Some alternatives evaluated in Chapter 6 are not appropriate for smaller scale applications (less than 2 acres in size or 5,000 cubic yards in volume). As such, this section will be include both the evaluation of the preferred alternative for larger scale (ranging from greater than 2 acres in size to total Site remediation) and the alternatives that may be used for small scale applications less than 2 acres.

In addition to the No Action alternative, which is retained as a baseline, the three primary remedial alternatives (to be used on a large scale basis) considered in the detailed analysis are as follows:

- On-Site Deposition, Cap and Cover;
- Off-Site Disposal at a Landfill; and
- Wet Screening with On-Site Deposition, Cap and Cover and Disposal of the Residual Soils at a Landfill.

In addition to the No Action alternative, which may have limited applications, the four primary remedial alternatives (to be used on a small-scale basis) considered in the detailed analysis are as follows:

- Cap;
- Cover;
- Cap/Cover; and
- Off-Site Disposal at a Landfill.

The details of how each alternative is able to successfully treat soils from different RUs are crucial to evaluating the alternatives. Not all RUs can be treated by each alternative; an alternative may be selected as the preferred alternative based on its effectiveness in treating a particular RU. The applicability of the alternatives to each specific RU is discussed in Chapters 5 and 6.

Section 7.2 describes the alternatives being retained for detailed analysis and identifies the large-scale RUs and volumes of soil which these alternatives may treat. Section 7.3 is the comparative detailed analysis of these alternatives. It also describes the evaluation criteria and rates each alternative. Section 7.4 summarizes the analysis of the alternatives. Section 7.5 describes the preferred alternatives for large-scale RUs, and any adjustments that implementation of the alternative would have on Site-specific RLs.

Section 7.6 describes the alternatives being retained for detailed analysis and for use in small-scale applications and Miscellaneous Small RUs. Section 7.7 is the comparative detailed analysis of these alternatives. It also describes the evaluation criteria and rates each alternative. Section 7.8 summarizes the analysis of the alternatives. Section 7.9 describes the preferred alternatives.

The detailed analysis of alternatives presents comparative results on the performance of each alternative for each RU. The most consistently performing alternatives are described in detail in Chapter 8.

7.2 Description of the Alternatives Retained for Detailed Analysis – Large Scale Applications

The following descriptions of alternatives are presented as they would be implemented for the RUs described in Section 3.2. These descriptions define how the alternative achieves the RAOs.

7.2.1 No Action

This alternative is retained for the purpose of comparing the current Site condition to the result of implementing any of the other remedial alternatives. No Action does not meet cleanup standards and will not be used for large-scale applications.

7.2.2 Common Activities

Certain common activities will be required for remediation of Site soils when the remedial alternatives involve excavation of in-place soil. These common activities include excavation, stockpiling, characterization and verification sampling and analysis, and regulatory classification of stockpiled soils prior to off-Site disposal, treatment, or on-Site deposition.

Analytical Field Screening: Where necessary (e.g., debris areas), field-screening samples will be collected to guide the cleanup action and allow for more cost-effective excavation of the impacted soil.

Site Preparation: Clearing and grubbing would be done once approval to proceed is given by Ecology. During this task, all vegetation would be removed from the areas to be excavated. Vegetation would be chipped and deposited on-Site. The work areas will be inspected by trained archeologists to determine if cultural or archeological artifacts are present. If any artifacts are found they will be treated in the manner described in the Cultural Resource Protection Plan that will be part of the Cleanup Action Plan (CAP) for the Site.

Excavation: Soil above the RL will be excavated to a depth of one foot of soil in impacted areas as delineated by the RI or by additional sample data, except in specific areas where soils are impacted at depths greater than one foot.

Verification Sampling and Analysis: Verification soil samples (i.e., 5-point composites) will be collected from the excavated area and analyzed. Analytical results will be evaluated to determine compliance. If soil remaining in the excavation does not meet Site RLs or, if applicable, CLs, additional excavation and verification sampling and analysis will be performed.

Haul/Stockpile: Excavated soil will be transported directly to either a low exposure risk area (e.g., golf course areas) for deposition or transported to a central area and stockpiled in preparation for treatment or disposal.

7.2.3 On-Site Deposition, Cap and Cover

General Process: In general, this alternative would involve the mass excavation of the top one foot of soil in targeted areas of the project Site, followed by the transfer of the excavated soil, and the consolidation of these soils in selected locations on-Site. Additional excavation would be required for soil greater than one foot below current ground surface if either confirmational or RI testing showed that they contained contaminant concentrations greater than CLs. Each of these consolidation locations would be capped and lie beneath the planned golf course.

Excavation Methods: Excavation of soils greater than the Site-specific RLs for lead and arsenic would occur by the following methods. All excavation work done within the first three feet of the current ground surface will be monitored by trained archeologists to determine if cultural or archeological artifacts are present. If any artifacts are found they will be treated in the manner described in the Cultural Resource Protection Plan that will be part of the Cleanup Action Plan (CAP) for the Site.

Method 1) Scraping: The majority of the shallow soils (up to 1.0 foot deep) will be excavated using self-loading pan scrapers. This method would be used on those areas within Parcel 1 that are not historical or open space RUs. Some selected excavation could occur within the golf course areas. The general scraping process would be:

- Phase I – The upper six inches of soil would be removed, using a self-loading pan scraper.

- Phase II - The remaining six inches of soil would be graded into a windrow and picked up by the pan scraper. If gravel were encountered prior to reaching the target depth, further excavation would be terminated at the gravel layer. The gravel represents a natural barrier to penetration of the subsurface by burrowing organisms. GPS will be used confirm the initial depth, followed by a complete survey to confirm the depth excavated.

Method 2 – Selected Excavation:

- In those areas not accessible to the pan scrapers (because of topography or other reasons), an excavator will be used to selectively excavate the soil in six to eight inch lifts until the desired depth of one foot. The excavated soil will be loaded into off-road haul trucks and transported to the PAs for placement. Direct pushing of soils into the PA is also possible for areas adjacent to the PAs. GPS will be used to confirm the initial depth, followed by a complete survey to confirm the depth excavated.

All of the material excavated, by either method, will be placed in the placement/consolidation areas (PAs) within the golf course areas and rough-graded.

Cap Construction: A golf course would be constructed on the project Site as an engineered cover (cap) for contaminated soils and, if necessary, contaminated debris. The majority of this material would be imported from the commercial land use areas of Parcel 1 and consolidated in roughly 73 acres of the approximately 180-acre golf course footprint. These 73 acres would constitute the PAs. Only soils and debris that contain contaminant concentrations equal to or less than the golf course remediation levels would be placed in the PAs. Each PA would be capped with 18 inches of clean soil by one of the following two methods listed below. This cap would also be placed on any areas within the golf course with in-situ contaminant concentrations (if not excavated) less than the golf course remediation level but greater than the Site-specific commercial remediation level.

- **Method One:** Six inches of clean soil would be placed over 12 inches of pit run gravel. In this process, the gravel would act as an exposure barrier to ecological receptors. The six inches of clean soil would act as an additional exposure barrier to individuals most likely to be exposed—the golf course worker, who on occasion may find it necessary to install drainage ditches or repair irrigation pipe.
- **Method Two:** Eighteen inches of “pit run” soil would be placed over a geotextile. In this case, the 18 inches of soil would act as the human health exposure barrier and the geotextile will act as the ecological exposure barrier.

Application: This alternative is potentially applicable to the following RUs:

- Golf Course RUs, and

- Commercial RUs

The volume of impacted soil associated with these RUs is approximately 714,000 CY.

7.2.4 Off-Site Disposal at a Landfill

General Process: This alternative would involve the excavation of a minimum of one foot of soil in targeted areas of the project Site. Since the planned golf course would not be constructed under this option the acreage excavated and, thus, the volume would be larger than other retained alternatives. Additional excavation would be required for soil greater than one foot below current ground surface if either conformational or RI testing showed that they contained contaminant concentrations greater than CLs. The excavated soils would be stockpiled, sampled, and transported to an approved off-Site disposal facility.

Application: This alternative is potentially applicable to the following RUs:

- Golf Course RUs;
- Commercial RUs ; and

The volume of impacted soil associated with these RUs is approximately 1,190,500 CY.

7.2.5 Wet Screening with On-Site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill

General Process: This alternative would involve the excavation of a minimum of one foot of soil in targeted areas of the project Site. Additional excavation would be required for soil greater than one foot below current ground surface if either confirmational or RI testing showed that they contained contaminant concentrations greater than CLs. These soils would be stockpiled prior to wet screening. Wet screening, as described in Chapter 6, is an effective technology for reducing the total volume of soil needing treatment. Based on the treatability study conclusions and the results of the 2001 Screening Program, it is assumed that wet screening will concentrate the lead and arsenic in the soil into 10 percent of the original soil volume. The residual soils would be loaded into 30-ton haul trucks, transported to and disposed of at an approved landfill. The process soil that met Site-specific golf course remediation levels would be transported to the golf course PAs for on-Site deposition and contained under a cap/cover. Section 7.2.3 describes the cap construction methods.

Application: This alternative is potentially applicable to the following RUs:

- Golf Course RUs;
- Commercial RUs; and

The volume of impacted soil associated with these RUs following wet screening is approximately 714,000 CY.

7.3 Comparative Detailed Analysis of Alternatives – Large Scale Applications

The following analysis provides information for the selection of a preferred alternative for each RU. This detailed analysis of alternatives will be comparative. The advantages and disadvantages of each retained alternative are identified and compared against the other alternatives to determine their relative performance according to each criterion.

The threshold criteria—protection of human health and the environment and compliance with cleanup standards—are those criteria that must be met for the alternative to have been retained from the screening described in Chapter 6. Each retained alternative meets the threshold criteria for lead and arsenic soils, with the exception of No Action, which is retained for comparison with the current Site condition.

The comparative analysis describes the evaluation criteria and presents the most favorable alternative first and includes the remaining alternatives in decreasing order of ability to satisfy the criteria.

The criteria to be used for the comparative detailed analysis of alternatives include the following:

- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, and volume;
- Short-term effectiveness;
- Implementability;
- Cost; and
- Consideration of Public Concerns.

7.3.1 Long-Term Effectiveness and Permanence

Long-term effectiveness measures the effectiveness of the cleanup action after the cleanup standards have been met. The primary focus of this comparison is to weigh the controls that may be necessary to manage the treatment residuals or untreated soil. This is done in two ways: by assessing the magnitude of the residual risk; and by assessing the adequacy of the individual controls to manage the treatment residuals or untreated soil. This long-term effectiveness comparison does not consider the residual risk or controls that may be associated with the off-Site landfill alternatives. The evaluation of "certainty of success" was omitted from this evaluation since each of the cleanup alternatives being evaluated will need to attain cleanup standards before demobilization can occur. The cleanup of the Site will be performed over a period of time during which "success" can be measured with a high degree of certainty for each process.

Magnitude of Residual Risk on Site: Each remedial alternative will have low residual risk since each will leave only acceptable concentrations of constituents (below either cleanup or remediation levels) on Site. Some alternatives have less residual risk than others. Excavation of soil above the RL means that the Site meets the remediation levels, which are based on acceptable levels of risk. The following discussion relates to the relative magnitude of low residual risk from residual soils generated by each alternative.

- The least residual risk on Site will be associated with Off-Site Disposal at a Landfill. Implementation of this alternative will result in no soil above the CL remaining on the Site.
- Slightly more residual risk will be associated with the Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill and On-Site Deposition with Cap and Cover alternatives, which include off-Site disposal of soils exceeding the golf course RL. Risk is further reduced by minimizing the potential for direct contact exposure routes with the use of a Cap/Cover.
- The No Action alternative would not modify the current Site condition and residual risk would be similar to the current risk. Future land uses would be restricted and current access restrictions would be maintained.

Adequacy and Reliability of Controls: The adequacy and reliability of controls relate to future land uses at the Site. Long-term development plans would impact only the No Action alternatives.

- Off-Site Disposal at a Landfill will require the lowest degrees of long-term management. Environmental audits of appropriate off-Site landfill facilities have determined that current controls implemented at those facilities are acceptable.

- Both On-Site Deposition with Cap/Cover and Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill rely on the Cap/Cover to reduce the potential for exposure to humans and ecological receptors. The Site development plans support the long-term management of these soils if they are located under the golf course.

- No Action would require that general access to impacted areas be restricted. Application of various institutional controls may be required to prevent exposure.

7.3.2 Reduction of Toxicity, Mobility, and Volume

This evaluation criterion addresses Ecology's preference for selecting remedial alternatives that use treatment technologies that permanently and significantly reduce toxicity, mobility, and volume of the constituents in Site soils. This evaluation focuses on the ability of alternatives to reduce the total volume of impacted soils, and irreversibly reduce mobility and toxicity of the constituents.

Implementation of any of the alternatives, except No Action, will address the highest concentrations of constituents in the soil.

Total Volume Reduction: Reduction of the volume of impacted soils is compared in this evaluation. Because metals are present in Site soils, destruction/reduction of the elemental constituents is not an option; thus, only soil volume reduction is considered.

- Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill has the potential to reduce the total impacted soil volume by up to 90 percent. As such, it represents the alternative that results in the highest amount of volume reduction.

- Off-Site Disposal at Landfill, On-Site Deposition with Cap/Cover and No Action would not reduce the volume of impacted soil. Off-Site Disposal would result in the material being transported from the Site and placed in an engineered landfill.

Mobility Reduction. The reduction of mobility is based on the alternative's ability to permanently prevent constituents from transport along potential exposure pathways. Since stabilization and other technologies that reduce leachability do not meet cleanup standards, the pathway considered is direct contact. Alternatives that involve excavation of soil above the RLs would permanently reduce the potential for direct contact exposure in the excavation area by removing the source of constituents.

- Off-Site Disposal at a Landfill would result in all soil above CLs being transported to a controlled landfill, where the mobility of the constituents would have to be controlled with liner and cap containment for the long term.

- Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill would indirectly reduce the mobility of the constituents because this treatment results in a smaller portion of the impacted Site soils being available as a potential future source for migration. The coarse material returned to the Site would not be a significant source for direct contact exposure. This alternative also reduces the possibility of direct contact with contaminated soil by using a Cap/Cover.

- The On-Site Deposition with Cap/Cover alternative also reduces the possibility of direct contact with contaminated soil by using a Cap/Cover. Developing and following health and safety procedures could limit exposure to workers during future subsurface construction or maintenance at deposition locations.

- No Action would not reduce the mobility of the constituents at the Site.

Toxicity Reduction: This evaluation is based on the ability of the alternative to destroy or convert the Site constituents to a less toxic form. Lead and arsenic in Site soils are elemental, and their destruction is not practical. None of the retained alternatives are intended to reduce the toxicity of lead or arsenic in soil.

7.3.3 Short-Term Effectiveness

This evaluation criterion addresses the effects of the alternative during the construction and implementation phases of the cleanup action. Each alternative is evaluated with respect to the potential impact on human health of the surrounding community, site workers, and the environment.

Potential Community Exposure during Implementation: This aspect of short-term effectiveness addresses any risk that results from implementation of the proposed alternative, such as dust generation during materials handling and transportation, and air emissions resulting from equipment operation. Dust generation would require monitoring so that the level of dust generated during soil handling does not exceed allowable levels in downwind areas. Dust control methods (i.e. applying water to work areas prior to and during excavation) would be required. The air quality impacts would be monitored to protect both Site workers' health and safety. In addition, work done within 500 feet of the southern boundary of the Site would require perimeter dust monitoring and dust prevention measures. Transportation of soils off-Site may have a very low potential for exposure. As a result the quantity of material being treated on-Site and/or transported to an off-Site landfill is the basis for this evaluation.

- No Action has the lowest risk associated with implementation since no soil is treated or removed from the Site.

- On-Site Deposition with Cap/Cover will require management of dust generation associated with the blending and amendment of soil or excavation and deposition. Only a small volume of soil would be transported off-site with this alternative.

- Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill, since it would be concentrating contaminants, would generate a greater volume of soil that requires off-site disposal than On-Site Deposition with Cap/Cover. It also requires a greater degree of soil handling since not only is the same volume of soil excavated, as On-Site Deposition, but it is also screened. This alternative will require management of dust generation associated with the excavation and handling of the soil, and during any subsequent deposition of treated soils on the Site.

- Off-Site Disposal at a Landfill will require the most controls to minimize risk associated with dust generation. Dust generation associated with the excavation of the soil and transportation will require management because all soils above CLs will be transported to an appropriate landfill.

Potential Worker Exposure during Implementation: This factor assesses potential threats that may be posed to the workers and the effectiveness and reliability of protective measures that would be taken during implementation of the cleanup action.

Personal protective equipment (PPE) appropriate for the type of potential exposure would be worn to reduce worker exposure. Workers would be trained in the health and safety procedures appropriate for their respective tasks, and operation of equipment (trucks, backhoes, and other heavy equipment) and would comply with the appropriate safety regulations.

Several alternatives would generate dust and/or require transportation to a landfill during implementation. Dust generation will be managed by wetting the soil during handling, paving the centralized treatment area, and/or covering stockpiles when not adding or removing material. Transportation of soil to the landfill will be managed by conforming to applicable Department of Transportation regulations.

The total volume of material handled and the use of water or extraction solutions are the leading criteria for this evaluation.

- Since no excavation, transport or processing of contaminated soils occur, No Action has the lowest potential for worker exposure.

- On-Site Deposition with Cap/Cover requires management of dust generated during the excavation, transport and on-Site placement of soils, and the construction of the Cap/Cover.

- Off-Site Disposal at a Landfill requires management of dust generated during the excavation, transportation and off-Site disposal of the soils.

- Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill will require management of dust generated during excavation, processing, transport and on-Site placement of soils, construction of the Cap/Cover, and transportation and off-Site disposal of the soils. In addition, workers will require additional PPE to prevent injury from the moving parts of the screening plant.

Potential Environmental Impacts: This factor addresses the potential adverse environmental impacts that may result from the implementation of the alternative and evaluates the mitigation measures which could be implemented to prevent or reduce these impacts. Potential environmental impacts include but are not limited to: dispersion of constituents; treatment water releases; spills; and wildlife exposure. All alternatives (except No Action) are believed to have the same impacts during the initial excavation of soils.

- Since no remedy would be implemented No Action has the lowest potential for adverse impacts on the environment during the implementation. It does, however, represent the alternative with the highest residual risk since no cleanup would have taken place.

- Off-Site Disposal at Landfill will have the lowest potential for adverse impacts on the environment during the implementation.

- On-Site Deposition with Cap/Cover will have a low potential for environmental impacts. The lead and arsenic constituents contained in soils amenable to cleanup action by these methods do not readily leach. If soil spills occur from the loading of trucks, they will be re-excavated. The underlying soils will be sampled to ensure the completeness of the cleanup.

- Since the screening plant would be placed upon a containment pad designed for the containment of soil and water spills, the Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill alternative will have a low potential for adverse impacts. It will have greater potential for impacts (vs. the above alternatives) due to increased handling of the soil. Process water is expected to contain only low to negligible metal concentrations, so the impact of a release of process water, if it occurred, would be low.

Time to Achieve RAOs: This factor estimates the time required to achieve the RAOs for the Site. The reduction of the constituent concentrations in the Site soil or the exposure risk to meet RAOs will be achieved by each alternative except the No Action alternative. The alternatives could be implemented in a timeframe that is principally limited by the time to complete excavation, verification sampling and analysis and, for the Off Site Disposal at a Landfill alternative, the time required to load and transport the contaminated soil off site. For the purposes of the cost evaluation the following was assumed:

- No Action would be completed immediately.

- On-Site Deposition with Cap/Cover was the fastest active alternative with a duration of 2.8 years.

- Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill alternative would require approximately 3.6 years to complete. This duration is based on a processing rate of about 1,250 tons per day, a six-month mobilization and start-up period, and a six-month demobilization and cleanup period.

- Off-Site Disposal at a Landfill will have the longest duration, 7.6 years, since the number of available trucks and the maximum truckloads per day limit the process. Table 7-1 lists the timeframes of each retained alternative.

7.3.4 Implementability

The Implementability criterion addresses the technical feasibility of implementing the alternative and the availability of materials and services. This evaluation will focus on the following criteria: ability and reliability of the technology to operate as would be required by the design and implementation schedule; ease of undertaking additional cleanup actions; and availability of services and materials. Additional criteria, such as availability of equipment, availability of commercially demonstrated technologies, administrative and regulatory requirements, scheduling, availability of appropriately sized equipment, construction access, and monitoring access, are considered to have minor impacts on the retained alternatives being evaluated in this section.

Ability and Reliability of Technology: This evaluation relates to the technical difficulties and unknowns associated with the alternative. Technical problems associated with the implementation of the alternative may prevent attainment of the remediation or cleanup levels or result in delays in the cleanup schedule.

- No technical difficulties or problems would be associated with the No Action alternative.

- On-Site Deposition with Cap/Cover would be readily implementable.

- Off-Site Disposal at a Landfill would be readily implementable. Capacity of the landfill is not a limiting factor and only small transportation problems are anticipated. No delays in the excavation and disposal process are anticipated.

- Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill could be readily implemented. Wet screening technologies have been proven on large scales at several sites and have been successfully used on the Site. Only minor delays associated with the startup of a process containing a number of mechanical operations are anticipated.

Ease of Undertaking Additional Actions: This evaluation discusses what, if any, future cleanup actions may be necessary and how difficult it would be to implement such additional actions after soil treatment by one or more of the alternatives.

- No Action would not modify existing Site conditions so that additional actions would be easy to implement.

- Off-Site disposal would be considered a permanent solution. Further cleanup actions would not be anticipated following the implementation of these permanent disposal and/or treatment alternatives.

- Any additional actions associated with the On-Site Deposition with Cap/Cover and Wet Screening with On-site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill would be associated with the placement areas. As long as permanent structures, such as buildings, are not constructed on top of PAs in the golf course land use area, subsequent action, if required, could be readily implemented in these areas.

Availability of Services and Materials: This evaluation considers the availability of the materials and equipment to implement the alternative, as well as the availability of contractors to provide competitive

bids. Cleanup actions directed toward soil impacted with lead and arsenic have been and are currently being implemented throughout the Northwest, North America, and Europe. Many vendors were questioned regarding the technology they use, and the information they provided was used in the screening of alternatives. These same vendors continue to provide updates on their activities and new developments in the technologies as a result of field demonstrations of soil treatment. The screening of alternatives also identified remedial technologies that are not complex to operate and use common construction processes and equipment. Based on these considerations, the availability of services and the necessary materials to achieve the RAOs are not anticipated to be a limiting factor and are unlikely to impact schedule for any of the remedial alternatives.

7.3.5 Cost

This evaluation includes an assessment of costs that may be incurred during the cleanup action. The evaluation considers three cost categories: direct cost; indirect cost; and long-term operation and maintenance (O&M) cost and present the sum for each alternative.

Direct Capital Costs: Direct capital costs are considered to be those costs associated with the implementation of the remedial alternative for impacted soil at the Site. These costs are associated with construction, equipment, Site preparation, operation/maintenance, and disposal. Direct costs were obtained from several sources, including vendor solicitations, previous experience, and actual costs for disposal of soil generated during interim source removal at the Site. The ranges of direct costs compiled from these sources are presented in Tables 7-2.

Indirect Capital Costs: Indirect capital costs are those costs associated with administration, community relations, engineering design, construction oversight, and contingency for the alternative. These costs were estimated based on previous experience during interim source removal. Detailed tables of the cost estimates are provided in Appendix F. Tables 7-3 presents a summary of estimated indirect remediation costs.

Total Costs: Table 7-4 presents a summary of the total costs estimated for each alternative. They are:

- No Action represents the "no cost" option.
- On-Site Deposition with Cap/Cover represents the second lowest cost, ranging between $ 13.2 MM and $ 21.6MM.
- Based upon the costs associated with the 2001 Screening program costs for Wet Screening with On-Site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill would range between $46.6MM and $ 79.6MM. The average of this range is approximately 4.6 times higher than the average cost for On-Site Deposition with Cap/Cover.
- Off-Site Disposal at a Landfill represents the high cost estimate ranging between $ 181.3MM and $ 248.8MM. The average of this range is approximately 12.6 times higher than the average cost of On-Site Deposition with Cap/Cover and approximately 2.7 times higher than the average cost of Wet Screening with On-Site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill

Accuracy of Estimate: The estimates used on Tables 7-2 through 7-4 present the range of estimated total costs. These estimates of remedial action cost are assumed to be accurate to within -30 percent and +30 percent of the estimate where both estimates could vary by –30 to +30 percent of the listed value. In effect, the estimated "Best Estimate" remedial action cost would be defined as average of the high and low estimate. Additionally, cost estimates, which overlap by about 50 percent, should be considered equal for the purpose of this evaluation.

Note that the estimated total cost of Site remediation based on the preferred alternatives and the cost of completed ISR work at the Site is presented in Chapter 8.

7.3.6 Consideration of Public Concerns

MTCA calls for the evaluation of any local community concerns over the alternative and how the alternative addresses those concerns. Concerns over protection of cultural and historical sites and artifacts, long-term public health, and short-term public health have been addressed above. Concerns related to any additional short-term impacts, not covered above, are focused on the danger of truck traffic during off-Site disposal.

- On-Site Deposition with Cap/Cover represents the least public health and safety concerns since it represents the alternative with the least volume of soil leaving the Site and, with the installation of the Cap/Cover, minimizes the potential for exposure.

- Public concerns associated with Wet Screening with On-Site Deposition, Cap and Cover and Disposal of Residual Soil at a Landfill would be slightly higher than On-Site Deposition with Cap/Cover since more truck traffic would occur due to the greater volume of soil requiring off-Site disposal.

- Off-Site Disposal at a Landfill would require approximately 44,000 truckloads over 5.1 years and, thus, would cause great public concern.

- Public health and safety concerns should be highest under the No Action alternative since there would be no reduction in contaminant concentrations or potential for exposure.

7.4 Summary of the Detailed Analysis

Table 7-5 summarizes each alternative based on the results of comparative detailed analysis. For each evaluation criteria, each alternative was discussed in descending order of performance according to that criterion. Table 7-5 was prepared by giving the highest performing alternative a score of 1 and the weakest performing alternative a score of 5. In cases where it was not possible to distinguish performance given between alternatives, those alternatives were discussed together and given equal scores.

The subtotal scores for each evaluation criteria category (e.g. long-term effectiveness, Implementability, etc.) and the overall score for the sum of all criteria are presented in Table 7-5. Note that the lowest score indicates the best performance. The results obtained using this method are based on an equal weighting of each sub-criteria. This approach is consistent with MTCA guidance, which emphasizes the permanence of the selected remedial alternatives.

7.5 Preferred Alternative for Large Scale Applications

Based on the best overall score, On-Site Deposition with Cap/Cover is the preferred alternative followed by the Wet Screening alternative. Off-Site Disposal at a Landfill received the highest score making it the least attractive alternative. No action also received a good score because of its low cost but does not meet cleanup standards and, thus, cannot be used except in special circumstances (areas of ecological sensitivity).

This summary of the ranking of each alternative based on the comparative detailed analysis is further developed in Chapter 8, which describes the preferred alternatives in more detail.

7.6 Retained Alternatives: Small Scale Applications

7.6.1 No Action

No action may have some applicability to some land use areas that are highly ecologically sensitive and isolated occurrences of chemicals. The Sequalitchew Creek Canyon (excluding railroad tracks), and the open space setbacks surrounding Old Fort Lake, require special consideration to the impacts required to

cleanup existing contamination (largely low concentrations) vs. impacts to the local ecology if no action was taken. This net environmental benefit evaluation indicates that no action is a positive approach for these areas.

No action may also be appropriate for small isolated occurrences of chemicals that were not used or generated as part of the manufacturing activities or decommissioning of the buildings at the Site. For No Action to be an appropriate alternative the following conditions must be met:

- The contaminant must not have been detected in groundwater;
- Their concentrations are low (near the cleanup level);
- The average/mean concentration is below the cleanup level;
- The number of exceedances (less than 5%) of the cleanup level are low in comparison to the number of detections and/or samples collected; and
- No known sources for these contaminants are associated with activities at the Site.

7.6.2 Cap

General Process - Cap Construction: In general, this alternative would involve the construction of an impermeable cap over existing soils containing contaminant concentrations above the CL but below the RL for a particular area. An example would be the use of an asphalt cap. In this case, the asphalt and subbase would act as the human health exposure barrier and the geotextile will act as the ecological exposure barrier. No excavation of underlying soils would occur.

Applicable: This alternative is potentially applicable to the following RUs:

- Open Space RUs; and
- Commercial RUs.

7.6.3 Cover

General Process - Cover Construction: In general, this alternative would involve the construction of a thick (> 3 feet) soil cover over existing soils containing contaminant concentrations above the CL but below the RL for a particular area. A key component of this alternative is the required thickness of the cover necessary to create an effective barrier to human and ecological exposure. No excavation of underlying soils would occur.

Applicable: This alternative is potentially applicable to the following RUs:

- Historical Areas;
- Golf Course RUs; and
- Open Space RUs.

7.6.4 Cap/Cover

General Process – Cap/Cover: This alternative involves the same cap/cover process described in Section 7.3 above but on a smaller scale. No excavation of underlying soils would occur.

In general this includes the construction of an engineered cap/cover 18 inches in thickness using one of the two methods listed below. This cap would be placed on any golf course land use areas with in-situ contaminant concentrations less than the golf course remediation level but greater than the Site-specific commercial remediation level.

Method One: Twelve inches of clean soil would be placed over six inches of gravel. In this process, the gravel would act as an exposure barrier to ecological receptors. The 12 inches of clean soil would act as an additional exposure barrier to humans.

Method Two: Eighteen inches of "pit run" soil would be placed over a geotextile. In this case, the 18 inches of soil would act as the human health exposure barrier and the geotextile will act as the ecological exposure barrier.

Applicable: This alternative is potentially applicable to the following RUs:

- Historical Areas;
- Golf Course RUs; and
- Open Space RUs.

7.6.5 Off-Site Disposal at a Landfill

General Process – Cap/Cover: This alternative involves the same process described in Section 7.3 above but on a smaller scale. Soils above Site-specific CLs for non-lead and arsenic contaminated soils would be excavated, loaded into 30-ton trucks and hauled to and disposed of at an off-Site landfill.

Applicable: This alternative is potentially applicable to the following RUs:

- Miscellaneous Small RUs;
- Historical Areas;
- Golf Course RUs; and
- Open Space RUs.

7.7 Comparative Detailed Analysis of Alternatives – Small Scale Applications

The following analysis uses the same criteria as listed in Section 7.2 above and provides information for the selection of a preferred alternative for each grouping of Miscellaneous Small Remediation Units.

The threshold criteria—protection of human health and the environment and compliance with cleanup standards—remain the same as those for large scale applications. Each retained alternative meets the threshold criteria for lead and arsenic, with the exception of No Action, which is retained for special considerations only.

The criteria to be used for the comparative detailed analysis of alternatives, as described in section 7.3 above, include the following:

- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, and volume;
- Short-term effectiveness;

- Implementability; and
- Considerations on Public Concerns.

7.7.1 Long-Term Effectiveness and Permanence

Magnitude of Residual Risk on-Site: Each remedial alternative will have low residual risk since each will leave only acceptable concentrations of constituents (below the RL) on-Site. Some alternatives have less residual risk than others. Excavation of soil above the RL means that the Site meets the remediation levels, which are based on acceptable levels of risk. The following discussion relates to the relative magnitude of low residual risk from treated soil residuals generated by each alternative.

- The least residual risk on-Site will be associated with Off-Site Disposal at a Landfill. Implementation of this alternative will result in no known soil above chemical-specific CLs.
- Since they will meet clean up standards residual risk will be associated with the Cap, Cover or Cap/Cover alternatives be within limits acceptable to Ecology. Of these three alternatives, the least amount of residual risk is associated with the Cap and Cap/Cover alternatives. The effectiveness in reducing residual risk for the Cover alternative is associated with the thickness of the cover. A thick cover (>3 feet) represents the same degree of residual risk as the other two alternatives.
- The No Action alternative would not modify the current Site condition and residual risk would be similar to the current risk.

Adequacy and Reliability of Controls: The adequacy and reliability of controls relate to future land uses at the Site. Long-term development plans could impact three of the alternatives: Cap, Cover and Cap/Cover.

- The Off-Site Disposal at a Landfill alternative will require the lowest degrees of long-term management.
- The Site development plans support the long-term management of the Cap, Cover and/or Cap/Cover alternatives.
- No Action would require that general access to some impacted areas be restricted. Application of various institutional controls may be required to prevent exposure.

7.7.2 Reduction of Toxicity, Mobility, and Volume

Volume Reduction: Because metals are present in Site soils, destruction/reduction of the elemental constituents is not an option. Thus, only soil volume reduction can occur. None of the retained alternatives reduces the volume of impacted soils; off-Site Disposal at a Landfill transfers the volume of impacted soil to the landfill.

Mobility Reduction: The pathway considered is direct contact. Alternatives, which involve excavation of soil above the RL, would permanently reduce the potential for direct contact exposure in the excavation area by removing the source of contamination.

- Off-Site Disposal at a Landfill would result in all soil above CLs being transported to a controlled landfill, where the mobility of the contaminants would have to be controlled by containment in the long-term.
- Capping, Cover and Cap/Cover result in constituents being placed in a controlled land use area. The potential for constituents in the soil to become available for direct contact is reduced by these

controls. Developing and following health and safety procedures could limit exposure to workers during future subsurface construction or maintenance at deposition locations.

- No Action would not reduce the mobility of the contaminants at the Site.

Toxicity Reduction: No alternatives are intended to reduce the toxicity of lead or arsenic in soil.

7.7.3 Short-Term Effectiveness

This evaluation criterion addresses the effects of the alternative during the construction and implementation phases of the cleanup action. Each alternative is evaluated with respect to the potential impact on human health of the surrounding community, Site workers, and the environment.

Potential Community Exposure during Implementation: Dust generation would be the primary concern during implementation and would need to be monitored so that the level of dust generated during soil handling does not exceed allowable levels in downwind areas. Dust control methods (i.e. applying water to work areas prior to and during excavation) would be required. Work done within 500 feet of the southern and eastern boundaries of the Site would require perimeter dust monitoring and dust prevention measures. The air quality impacts would be monitored to protect Site workers' health and safety. Transportation of soils off-Site may have a very low potential for exposure. As a result the quantity of material being excavated on-Site and/or transported to an off-Site landfill is the basis for this evaluation.

- No Action has the lowest risk associated with implementation since no soil is treated or removed from the Site.

- Cap, Cover and Cap/Cover will require management of dust generated during any excavation of soils and with the construction of the cap, cover or cap/cover. Since no contaminated materials will be used to construct these features no additional exposure risk is represented by one alternative vs. another. No off-Site transportation of soil would occur with these alternatives.

- Off-Site Disposal at a Landfill will require the most controls to minimize risk associated with dust generation. Dust generation associated with the excavation of the soil and transportation will require management because all soils above CLs will be transported to an appropriate landfill.

Potential Worker Exposure during Implementation: Personal protective equipment (PPE) appropriate for the type of potential exposure would be worn to reduce worker exposure. Workers would be trained in the health and safety procedures appropriate for their respective tasks, and operation of equipment (trucks, backhoes, and other heavy equipment) and would comply with the appropriate safety regulations.

The total volume of material handled and the use of water or extraction solutions are the leading criteria for this evaluation.

- No Action has the lowest worker exposure associated with implementation.

- Cap, Cover and Cap/Cover require management of dust generated during any excavation of soils and the construction of the cap and/or cover. Since no contaminated materials will be used to construct these features no additional exposure risk is represented by one alternative vs. another.

- Off-Site Disposal at a Landfill requires management of dust generated during the excavation of the contaminated soil, and management of transportation because all soils above the CL would be transported to the appropriate landfill.

Potential Environmental Impacts: All alternatives (except No Action) are believed to have the same impacts during the initial excavation of soils.

- No Action and Off-Site Disposal at Landfill will have the lowest potential for adverse impacts on the environment during the implementation.

- Cap, Cover and Cap/Cover will have a low potential for environmental impacts. The lead and arsenic constituents contained by these alternatives do not readily leach into the environment and represent very low potential for environmental impact. The Cap alternative, using an impermeable material, would further lower the already low potential by preventing water infiltration through the impacted soils.

Time to Achieve RAOs: Due to the small volumes associated with the remaining alternatives there is no difference in time to meet RAOs, with the exception of No Action which will require no time but does not meet RAOs.

7.7.4 Implementability

Due to the small-scale nature of this evaluation factors that impact implementability are, generally, comparable.

Ability and Reliability of Technology: No Action would not pose technical difficulties or problems. All remaining alternatives would be readily implementable.

Availability of Services and Materials: The availability of services and the necessary materials to achieve the RAOs are not anticipated to be a limiting factor and are unlikely to impact schedule for any of the remedial alternatives.

7.7.5 Cost

Cost will not be used as a evaluation criteria for small-scale applications. This decision was made for the following reasons:

- Costs associated with small-scale applications vary little between alternatives; and

- The majority of the applications that would use these alternatives have either special considerations (historic or ecological sensitively) or will only be defined (volume, time, etc.) once remediation occurs (Miscellaneous Small RUs).

7.7.6 Consideration of Public Concerns

Due to the small-scale of these applications there is little difference between alternatives. An exception occurs in areas of the Site that have great public interest (such as Sequalitchew Creek Canyon). As such, a detailed description of the processes that will be used to address these “special concerns” will be presented in Section 8.1.

7.8 Summary of the Detailed Analysis – Small Scale Applications

Due to the small volumes associated with small scale applications an analysis involving weighting of criteria was not done. Selection of the preferred alternative was weighted toward permanence, net environmental benefit and impact to historical sites.

7.9 Preferred Alternative for Small Scale Applications

Since cost was not considered in this evaluation, Cap/Cover and Off-Site Disposal are the preferred alternatives for small-scale applications. Capping could have limited applications. No action is applicable in areas of ecological sensitivity and for small isolated occurrences of chemicals that were not used or generated as part of the manufacturing activities or decommissioning of the buildings at the Site.

This summary of the ranking of each alternative based on the comparative detailed analysis is further developed in Section 8.1 and Section 8.3, which evaluates the preferred alternatives against Small RUs and the Miscellaneous Small Units, respectively.

7.10 Comparative Detailed Analysis of Alternatives – Groundwater

The following analysis uses the same criteria as listed in Section 7.2 above and provides information for the selection of a preferred alternative for groundwater. This detailed analysis of the two alternatives (Natural Restoration and Active Groundwater Treatment) will be comparative; the advantages and disadvantages of each retained alternative are identified and compared against the other alternative to determine their relative performance according to each criterion.

7.10.1 Long-Term Effectiveness and Permanence

Magnitude of Residual Risk on-Site: Each remedial alternative will have low residual risk since each would be conducted until groundwater reaches drinking water standards. As such, there is no difference between the alternatives.

Adequacy and Reliability of Controls: Both Active Treatment and Natural Restoration would rely upon deed restrictions to restrict the use of groundwater to non-potable uses. As such, there is no difference between the alternatives.

7.10.2 Reduction of Toxicity, Mobility, and Volume

Volume Reduction: Secondary treatment associated with the Active Groundwater Treatment alternative would destroy/reduce a small quantity of DNT that may be recovered. It would not, however, destroy/reduce residual DNT concentrations below the drinking water standard; the target of the treatment process. Natural Restoration would not destroy/reduce DNT.

Mobility Reduction: The pathway considered is direct contact. Each remedial alternative would limit transport since each would be conducted until groundwater reaches drinking water standards. As such, there is no difference between the alternatives.

Toxicity Reduction: Secondary treatment associated with the Active Groundwater Treatment alternative would destroy a small amount DNT that could be captured as part of the process. Natural Restoration would not destroy DNT.

7.10.3 Short-Term Effectiveness

This evaluation criterion addresses the effects of the alternative during the construction and implementation phases of the cleanup action. Each alternative is evaluated with respect to the potential impact on human health of the surrounding community, Site workers, and the environment.

Potential Community Exposure during Implementation: This aspect of short-term effectiveness addresses any risk that results from implementation of the proposed alternative, such as direct contact with contaminated groundwater, exposure to treatment chemicals, if any, during transport and air emissions resulting from equipment operation.

- Natural Restoration has the lowest risk associated with implementation since no actions, other than monitoring, occur.

- Active Groundwater Treatment involves the pumping, processing and treating up to 7,000 gallons of groundwater per minute (gpm). The storage of water and transportation of any treatment chemicals would require management especially during off-site transport.

Potential Worker Exposure during Implementation: This factor assesses potential threats that may be posed to the workers and the effectiveness and reliability of protective measures that would be taken during implementation of the cleanup action.

- Natural Restoration has the lowest risk associated with implementation since no actions, other than monitoring, occur.

- Active Groundwater Treatment, due to the magnitude of the process, involves a significant increase in risk associated with mechanical and safety hazards. Chemical hazards associated with any treatment chemicals would require special care.

Potential Environmental Impacts: Potential environmental impacts include but are not limited to: dispersion of constituents; erosion control in case of a release of treated water; spills of treatment chemical, if any; and wildlife exposure.

- Natural Restoration has the lowest risk associated with implementation since no groundwater is stored and treated.

- Active Groundwater Treatment, due to the magnitude of the process, involves a significant increase in the potential risk of releases stored or treated water. Treatment ponds would have to be created causing an attractive nuisance to wildlife, chemical hazards could exist due to treatment chemicals.

Time to Achieve RAOs: The time to complete either alternative is unknown. Gradually declining terms in DNT concentrations indicate that groundwater will eventually be naturally restored. Active Treatment will require up to 20 years, or longer, (Appendix I) to reach RAOs. Pump and treat systems poor historical performance in achieving drinking water standards could indicate that RAOs may never be reached.

7.10.4 Implementability

The Implementability criterion addresses the technical feasibility of implementing the alternative and the availability of materials and services.

- Natural Restoration requires no implementation.
- Active Groundwater Treatment involves the construction, operations and maintenance of an extremely large treatment facility. Successfully implementing this alternative would be very difficult. The historical performance of groundwater pump and treat systems in restoring aquifers to drinking water standards has been poor suggesting that groundwater pump and treat to achieve drinking water standards everywhere in an aquifer may be technically infeasible (Appendix I).

Ability and Reliability of Technology: This evaluation relates to the technical difficulties and unknowns associated with the alternative.

- Natural Restoration is reliable and poses no technical difficulties.

- Pump and treat systems (Active Groundwater Treatment) have a poor historical performance in achieving drinking water standards. Concentrations in Site groundwater are already low enough that active groundwater pump and treat would likely be little or no more effective than natural restoration in removing the last residual DNT from Site aquifers

Availability of Services and Materials: Natural Restoration requires no services or materials. Pump and treat systems are readily available for small applications but not for the size required to treat the large volumes of groundwater at the Site. The treatment facility would have to be custom made. As such, materials would not be readily available.

7.10.5 Cost

Cost is a major factor in the determination of the preferred alternative of groundwater remediation.

- Natural Restoration involves the monitoring of groundwater until drinking water standards are met. The cost of this activity is roughly $ 9,000 per year.

- Active Groundwater Treatment will require between $33,000,000 and $58,000,000.

7.10.6 Consideration of Public Concerns

Since the goal of each alternative is groundwater concentrations below drinking water standards there is little difference between alternatives.

7.11 Summary of the Detailed Analysis

Analysis of the alternatives results in the following conclusions:

- Both Natural Restoration and Active Treatment will reach the same goal; drinking water standards; and thus, represent the same residual risk of exposure;

- Both Natural Restoration and Active Treatment will use deed restrictions to control future groundwater use;

- Active Groundwater Treatment could reduce/destroy a small amount of DNT;

- Active Groundwater Treatment represents a significantly greater risk for potential community, worker, and environmental exposure during implementation;

- Active Groundwater Treatment would be much more difficult to implement and may not be effective in reaching RAOs;

- Active Groundwater Treatment is much more costly; and

- Both Natural Restoration and Active Treatment address public concerns.

7.12 Preferred Alternative for Groundwater

The cost for Active Groundwater Treatment at the Former DuPont Works Site (Site) to meet the DNT drinking water screening level would be substantial and disproportionate to the degree of risk reduction which could be achieved. Therefore, in accordance with MTCA (WAC 173-340-360), it is impractical to consider active groundwater remediation at the Site for an end use (drinking water) that is not planned. Appendix I discusses the impracticability of this alternative. This conclusion is based on the following:

- Site groundwater poses no risk to human health or the environment.

    - Because off-Site drinking water supplies will supply more than double the full projected population of DuPont through the year 2020 , Site groundwater is not currently and will not in the future be used as a drinking water source (due to a deed restriction).

    - Future Site development plans will include deed restrictions as necessary to prevent drilling of drinking water supply wells;

    - Even assuming a hypothetical drinking water exposure that does not and will not exist at the Site, the highest DNT concentrations currently in Site aquifers (less than 0.5 µg/L) represent a worst-case risk of less than 4×10^{-6}, which meets a risk threshold of 10^{-5};

  - Current DNT concentrations pose no risk to golfers, other visitors, or golf course maintenance workers who would be most likely to encounter Site groundwater on a regular basis when it is used for golf course irrigation; and

  - Site groundwater poses no risk to any Site ecological environment (including Sequalitchew Creek and Old Fort Lake) or off-Site ecological environment (e.g. Puget Sound).

- Natural groundwater recovery will occur following the completed interim DNT source removal. Removal of more than 40,000 cubic yards of DNT-impacted Site soils has been completed, thus the source of DNT to Site groundwater has been removed;

- Already low DNT concentrations in Site groundwater may decline further because Site aquifers are highly permeable and DNT is mobile, allowing natural flushing of DNT from the groundwater system and further reductions over time in the already low risk under a hypothetical drinking water scenario; and

- The current Site groundwater monitoring program will continue to document the DNT concentrations over time,

- Acknowledging groundwater pump and treat systems poor historical performance in achieving drinking water standards, the existing DNT concentrations in Site groundwater would represent a reasonable remediation endpoint at sites where active remediation is under consideration or underway.

- The cost to implement active groundwater remediation would be excessive, with preliminary estimates ranging between 33 and 58 million dollars. Consistent with the intent of MTCA and CERCLA, resources should be directed toward making substantive reductions in overall Site risk, which will be best accomplished at this Site by addressing other contaminants remaining in soils.

Considering the above, Natural Restoration is the preferred alternatives for groundwater.

TABLE 7-1 - ESTIMATED TIMEFRAMES BY ALTERNATIVE
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON

Estimate of Time to Completion (Work days)	Pre/Post-Construction		CONSTRUCTION				
Alternative	Design	Permitting and Reporting	Work Days (WD)	Additional WD: Screening	Additional WD: Disposal	Total Work Days	Total Years
No Action	0	0	0	0	0	0	0
On-Site Deposition, Cap and Cover;	100	303	306			709	2.8
Off-Site Disposal at a Landfill; and	100	303	415		1,083	1,902	7.6
Wet Screening with On-Site Deposition, Cap/Cover and Disposal of the Residual Soils at a Landfill.	170	303	306	100	10	889	3.6

TABLE 7-2 - ESTIMATED LOW AND HIGH RANGE DIRECT COSTS
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON

LOW RANGE UNIT COSTS ALTERNATIVE	APPROX. TOTAL COST ($)
No Action	$0
On-site Deposition with Cap/Cover	$9,200,000
Off-site Disposal at Landfill	$125,900,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$41,600,000

HIGH RANGE UNIT COSTS ALTERNATIVE	APPROX. TOTAL COST ($)
No Action	$0
On-site Deposition with Cap/Cover	$15,000,000
Off-site Disposal at Landfill	$172,800,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$68,900,000

Table 7-3 – Estimated Low and High Range Indirect Costs

LOW RANGE COSTS BY ALTERNATIVE	APPROX. DESIGN COSTS	APPROX. PUBLIC RELATIONS	APPROX. OVERSIGHT	APPROX. ADMIN & REPORTING	APPROX. Contingency	APPROX. TOTAL INDIRECT COSTS
	5%	1%	10%	3%	25%	
No Action	$0	$0	$0	$0	$0	$0
On-site Deposition with Cap/Cover	$460,000	$92,000	$920,000	$276,000	$2,300,000	$4,048,000
Off-site Disposal at Landfill	$6,295,000	$1,259,000	$12,590,000	$3,777,000	$31,475,000	$55,396,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$2,080,000	$416,000	$4,160,000	$1,248,000	$10,400,000	$18,304,000

HIGH RANGE COSTS BY ALTERNATIVE	APPROX. DESIGN COSTS	APPROX. PUBLIC RELATIONS	APPROX. OVERSIGHT	APPROX. ADMIN & REPORTING	APPROX. Contingency	APPROX. TOTAL INDIRECT COSTS
	5%	1%	10%	3%	25%	
No Action	$0	$0	$0	$0	$0	$0
On-site Deposition with Cap/Cover	$750,000	$150,000	$1,500,000	$450,000	$3,750,000	$6,600,000
Off-site Disposal at Landfill	$8,640,000	$1,728,000	$17,280,000	$5,184,000	$43,200,000	$76,032,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$3,445,000	$689,000	$6,890,000	$2,067,000	$17,225,000	$30,316,000

Table 7-4 – Estimated Low and High Range Total Costs

	LOW RANGE BY ALTERNATIVE TOTAL COST ($)	HIGH RANGE BY ALTERNATIVE TOTAL COST ($)	"BEST ESTIMATE" BY ALTERNATIVE TOTAL COST ($)
No Action	$0	$0	$0
On-site Deposition with Cap/Cover	$13,248,000	$21,600,000	$17,424,000
Off-site Disposal at Landfill	$181,296,000	$248,832,000	$215,064,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$59,904,000	$99,216,000	$79,560,000

Table 7-5 – Summary of Detailed Analysis

Alternative		Long-Term Effectiveness and Permanence						Short-Term Effectiveness			
	Residual Risk	Adequacy and Reliability of Controls	Reduction of Volume	Reduction of Mobility	Reduction of Toxicity	**Subtotal**	Community Exposure	Worker Exposure	Environmental Impacts	Time to Achieve RAOs	**Subtotal**
No Action	4	4	4	4	4	**20**	4	4	4	4	**16**
On-site Deposition with Cap/Cover	2	1	3	3	2	**11**	1	1	2	1	**5**
Off-site Disposal at Landfill	1	2	3	3	2	**11**	3	3	3	3	**12**
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	2	1	2	3	2	**10**	2	2	1	2	**7**

	Implementability				**Cost**	**Overall Total Score**
Alternative	**Ability and Reliability of Technology**	**Additional Actions**	**Availability Services/ Materials**	**Subtotal**		
No Action	1	1	1	**3**	**1**	**40**
On-site Deposition with Cap/Cover	2	3	1	**6**	**2**	**24**
Off-site Disposal at Landfill	2	2	1	**5**	**4**	**32**
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	4	4	1	**9**	**3**	**29**

Chapter 8 – CONCEPTUAL DESIGN OF THE PREFERRED ALTERNATIVES

8.1 Introduction

The previous chapters of this FS report provide a description of the processes, which have been used to select appropriate remedial alternatives. Chapter 2 defines the objectives of the cleanup action (RAOs). Chapter 3 identifies the soil volumes, which require treatment. Chapter 4 identifies applicable technologies and process options, which can effectively treat the soils to meet the RAOs. Chapter 5 presents the findings of treatability studies performed on Site soil to better define the applicability of various technologies. Chapters 6 and 7 evaluate and compare alternatives and select a preferred alternative that can be used to cleanup the Site.

This section describes how the Site cleanup can be achieved using the preferred alternatives. Section 8.2 describes how the preferred alternative will be used in each RU to achieve cleanup goals. Section 8.3 describes the alternative to be used for Miscellaneous Small RUs. Section 8.4 summarizes an estimate of the total remediation cost for the entire Site.

8.2 Conceptual Design by Remediation Unit (Large Scale Applications)

This section describes the preferred alternatives and how they may be applied to each remediation unit.

Golf Course RUs: Golf Course RUs are defined by the property inside the golf course footprint, other than Miscellaneous Small Units. They consist of the following four sub-units:

- Golf Course Placement/Deposition Areas (PA): These are discrete areas within the golf course footprint that will be used to deposit soils from other RUs. Each PA will be capped with the Cap/Cover described in Section 7.2.3. No excavation is planned in these areas unless soils occur that that have arsenic or lead concentrations above the golf course remediation levels (i.e., 530 mg/kg for arsenic and 4,100 mg/kg for lead). These soils will be treated as “Hot Spots” as described in Section 8.3.
- Non-PA Areas within Golf Course RUs: This is the property within the Golf Course RUs that is not a PA. Soils in these areas will be excavated and placed within the PAs. Following the excavation of these soils, the resulting surface soils will be sampled (i.e., 5-point composite samples collected on a 75 foot grid) and if found to be above the golf course remediation level, re-excavated. In the unlikely event that confirmation sampling identifies soils that have arsenic or lead concentrations above the golf course remediation levels, they will be treated as “Hot Spots” as described in Section 8.3.
- Foundations within Golf Course RUs: Foundations of the former manufacturing building remain within the non-PA areas of the golf course. Elevated levels of lead contamination can occur in the vicinity of these foundations if the buildings were lined with lead sheeting or were either painted with or stored lead-based paint. The lead concentrations decrease significantly with increased distance from the foundation. As such, an excavation limit of 25 feet from the foundation wall will be used. No excavation will be done outside the 25-foot excavation limit. An excavator will be used to complete all the planned work. No bulldozers or scrapers will be used to excavate these soils. Excavated soils will be hauled by truck. All excavated soils will be placed in a PA **if their concentrations do not exceed golf course remediation levels**. In the unlikely event that confirmation sampling identifies soils that have arsenic or lead concentrations above the golf course remediation levels (i.e., 530 mg/kg for arsenic and 4,100 mg/kg for lead), these soils will be treated as “Hot Spots” as described in Section 8.3. Water will be used within the work area and on haul roads to control dust. All decisions on the need for further excavation will be based upon a “pass/fail” system in which if a sample exceeds screening concentrations the excavation will be deepened. No statistics will be used. Excavation and sampling will

continue until cleanup goals are met. Foundations that are located within placement areas will not be excavated.

- NGRR within Golf Course RUs: NGRR sections occur within the GC land use area. Past sampling determined that soils within 25 feet of NGRR centerlines can contain elevated arsenic concentrations. All soils within the 25 feet the NGRR centerline will be excavated to a depth of 1.5 feet. The sides of the rail bed will be excavated first, followed by the rail bed itself. The excavated soil will be hauled, by truck, to the nearest placement area and deposited unless, in the unlikely event that confirmation sampling identifies soils that have arsenic concentrations above the golf course remediation levels (i.e., 530 mg/kg for arsenic). These soils will be treated as "Hot Spots" as described in Section 8.3. Water will be used within the work area and on haul roads to control dust. All decisions on the need for further excavation will be based upon a "pass/fail" system in which if a sample exceeds screening concentrations the excavation will be deepened. No statistics will be used. Excavation and sampling will continue until cleanup goals are met. NGRR tracks that are located in PAs will not be excavated.

Open Space RUs: Open Space RUs consist of all Site property that will be left in its current condition. There are four open space RUs on-Site. Sequalitchew Creek NGRR has been excluded and will be considered a Miscellaneous Small Unit. They are Sequalitchew Creek Canyon (OS-01), open space north of Sequalitchew Creek (OS-02 NOC), open space south of Sequalitchew Creek (OS-3 SOC) and Old Fort Lake (OS-03).

The OS-1 RU is adjacent (i.e., south of) to Sequalitchew Creek. There are three locations where the lead concentrations exceed the ecological screening level and these three locations are classified as Miscellaneous Small Units (MSUs) and will be excavated.

There are several locations in OS-2 and OS-3 RUs where the arsenic or lead concentrations exceed the open space cleanup or remediation levels. These exceedances (including the former LR-68 hot spot which is the only location where remediation will occur on a side hill) are associated with former roads, hot spots, or are included in the Sequalitchew Creek NGRR MSUs.

The OS-4 RU is the open space surrounding Old Fort Lake. There are no lead exceedances, but there are four locations that have arsenic concentrations marginally above the area background concentration of 32 mg/kg.

No Action (other than MSU excavation) is proposed for Open Space RUs due to their special ecological sensitivity. The justification for this proposal is centered on the following five factors:

- Habitat: These RUs consist of vibrant ecological communities. Such habitat is important to the local ecosystem considering the amount of habitat that will be eliminated due to the remediation of all areas surrounding them.
- Low Contaminant Concentrations: Contaminant concentrations in these areas are low, with few locations where the Site-specific human health CLs are exceeded.
- Proximity to surface water: These RUs contain or are located within 100 feet of a surface water body. As such, excavation in these areas could cause significant impact, such as slope instability and potential sedimentation.
- Topography: These RUs have steep topological conditions. As such, containment of runoff from excavation activities could be problematic.
- Accessibility: Due to the steep topography, human exposure in these RUs will be limited to established travel routes.

Commercial RUs: Commercial RUs are defined by the property inside the Site that is planned for commercial land use applications, other than Miscellaneous Small Units. Soils in these RUs will be

excavated to a depth of 1.0 foot, and placed within the Golf Course land use PAs. Following the excavation of these soils, the resulting surface soils will be sampled, (i.e., 5-point composite samples collected on a 75 foot grid) and if found to be above the remediation level for the golf course land use, re-excavated. In the unlikely event that confirmation sampling identifies soils that have arsenic or lead concentrations above the golf course land use RLs, they will be treated as "Hot Spots" as described in Section 8.3.

Historical RUs: These RUs make up the areas of the Site that have historic significance, as defined by a listing with the Office of Archaeology and Historic Preservation. At this time three historical RUs are known to exist on-Site. They are:

- Fort Nisqually Cemetery: (45PI404)
- Shell Midden: (45PI72)
- 1833 Fort Nisqually Site (45PI55)
- Each of these areas are small in size (less than 2 acres) and could contain discrete locations where arsenic or lead concentrations above the Site-specific remediation levels (i.e., 60 mg/kg for arsenic and 118 mg/kg for lead) occur. As such, these RUs and/or the discrete areas they contain will be treated as either "small-scale applications" or "Hot Spots" as described in Section 8.3. Mass excavation will not be done in these RUs.

8.3 Conceptual Design (Small-Scale Applications and Miscellaneous Small RUs)

The selected remedy for each historical RU will be protective of human health and the environment and will be dependent on how the land is going to be used in the future. A different remedy may be selected for an area depending on who is going to use the land (e.g., children versus adults). Stakeholders' concerns regarding the cultural resources associated with each historical RU will also be a consideration in the remedy selection process. For example, based on cultural resource concerns, capping may be appropriate for one site (e.g., Fort Nisqually Cemetery) and inappropriate for another (e.g., Shell Midden).

The selection of the preferred alternative for these RUs was performed in Chapter 7. This section summarizes how each alternative will be applied to each remediation unit.

Historical RUs: Each of these areas are small in size (less than 2 acres) and could contain discrete locations where arsenic or lead concentrations above the Site-specific remediation levels (i.e., 60 mg/kg for arsenic and 118 mg/kg for lead). As such, these RUs and/or the discrete areas qualify as either a "small-scale application" or a "Hot Spot." They are:

- Fort Nisqually Cemetery (45PI404);
- Shell Midden (45PI72); and
- 1833 Fort Nisqually Site (45PI55).

RI and other characterization data show that discrete locations within the boundary of these RUs contain lead concentrations greater than CLs. These sites are of important historical significance and should be left undisturbed to the highest degree possible. To do this, no excavation will take place, and a Cap/Cover (as described in Section 7.6.5) will be installed over the contaminated soils to prevent direct contact. A deed restriction, prohibiting excavation in the areas covered by the Cap/Cover, will be necessary to ensure the long-term effectiveness of the Cap/Cover.

Golf Course Land Use RUs: No excavation will occur unless Site-specific RLs are exceeded. Soils with contaminant concentrations exceeding RLs are considered miscellaneous small remediation unit "Hot Spots" and will be remedied by the methods described in the following section.

Miscellaneous Small Remediation Units: Miscellaneous Small Remediation Units are defined as soils impacted by contaminants or contaminant mixtures that have an in-situ volume believed to be smaller than 5,000 CY. This volume was determined to be the limit below which extensive evaluation of remedial

alternatives or implementation of specialized on-Site treatment technologies would not be cost effective. Appendix G presents the procedures and assumptions used in defining the "small" remediation units.

- Similar mixture of contaminants: Soils above Site-specific CLs or RLs would be excavated, loaded, and hauled to an off-Site landfill for disposal, using 30-ton trucks.
- Similar deposition method: Soils above Site-specific CLs or RLs would be excavated, loaded, and hauled to an off-Site landfill for disposal, using 30-ton trucks.
- Small occurrence(s) of a single contaminant: The preferred alternatives for these MSUs is Excavation and Off-Site Disposal, where soils with selected contaminant concentrations above Site-specific CLs or RLs would be excavated, loaded, and hauled to an off-Site landfill for disposal, using 30-ton trucks, and No Action. No action would be appropriate for small occurrences of cadmium which has not been detected in groundwater, occurs in very low concentrations, has an average/mean concentration below the cleanup level, has a low number of exceedances (less than 5%) of the cleanup level in comparison to the number of detections and/or samples collected, and has no known source associated with activities at the Site.
- Contamination "hot spots" discovered during final cleanup: Soils above Site-specific CLs or RLs would be excavated, loaded, and hauled to an off-Site landfill for disposal, using 30-ton trucks.
- Debris: Debris with contaminant concentrations above Site-specific CLs or RLs would be excavated, loaded, and hauled to an off-Site landfill, using 30-ton trucks.
- Sequalitchew Creek NGRR: This RU is represented by the linear length of the track and the width of track bed from the toe of the uphill slope and the crest of the downhill slope. Soil with contaminant concentrations above Site-specific CLs or RLs would be excavated, loaded, and hauled to an off-Site landfill, using 30-ton trucks. The remainder of the track bed will be covered with a gravel subbase and capped with asphalt. This Cap will act as an exposure barrier to both human and ecological receptors.

8.4 Groundwater

Natural Restoration has been selected as the preferred alternative for the remediation of residual DNT in groundwater. Groundwater monitoring would be required on an annual basis until the monitoring wells reach compliance (represented by four consecutive sampling rounds showing DNT concentrations in the groundwater represented by that well are below the drinking water standard of 0.13 µg/L). Once this has been achieved the well will be closed by the proper methods (Chapter 18.104 RCW; Chapter 173-160 WAC) after approval from Ecology. Sampling of the remaining wells will continue until they reach compliance. Seep 1 will be sampled during the annual groundwater monitoring event after the surface soil mass excavation remediation work has been completed.

The highest DNT concentration in groundwater ever detected at the Site was 3.8 ug/L in MW-27 in January of 1995. If any of the results from future groundwater sampling is greater than 3.8 ug/L Weyerhaeuser and DuPont will meet with Ecology to discuss the results.

8.5 Estimate of Total Site Remediation Cost

The estimate of cost for the preferred alternative in this FS is based upon the application of the large-scale alternative (On-Site Deposition with Cap/Cover) for the majority of the Site and a combination of small-scale alternatives for small-scale and Miscellaneous Small RUs. The preferred alternative for each RU or small unit is summarized below:

Remediation Unit Type:	***Preferred Alternative***
Large Scale Applications	
Golf Course Land Use RUs	On-Site Deposition with Cap/Cover
Commercial RUs	On-Site Deposition with Cap/Cover
Open Space RUs	No Action

Small Scale Applications	
Historical RUs	Cap or Cap/Cover, On-Site Deposition with Cap/Cover
Golf Course Fill Areas	Cap or Cap/Cover
Small Miscellaneous RUs	
Similar mixture of contaminants	Off-Site Disposal at a Landfill
Similar deposition method:	Off-Site Disposal at a Landfill
Small occurrence(s) of a single contaminant	Off-Site Disposal at a Landfill, No Action
Contamination "hot spots" discovered during final cleanup	Off-Site Disposal at a Landfill
Debris (contaminated)	Off-Site Disposal at a Landfill
Sequalitchew Creek NGRR	Off-Site Disposal at a Landfill of "Hot Spots" and Cap (with asphalt) of NGRR track bed
Groundwater	
Site Wide	Natural Restoration

8.5.1 Cost for Remediation: Preferred Alternative – Large and Small Scale Applications

The costs for remediation of both large scale (the golf course land use RUs (excluding fill areas), commercial RUs and open space RUs) and small scale applications (Historical RUs, Golf Course Land Use fill areas and Miscellaneous Small RUs) are presented in Table 8 -1.

8.5.2 Cost of Groundwater Remediation

The cost for total Site remediation is approximately $ 9,000.00 per year. For this FS a 10-year period is estimated bringing the total to $ 90,000.00.

8.5.3 Cost for Total Site Remediation

The cost for total Site remediation, for the preferred alternatives, is presented in Table 8-2.

Table 8-1 – Summary of Remediation Costs: Preferred Alternative – Large and Small Scale Applications

Estimated Low and High Remediation Costs for Large Scale Applications

PREFERRED ALTERNATIVE:	LOW RANGE TOTAL COST	HIGH RANGE TOTAL COST	"BEST ESTIMATE" TOTAL COST
On-site Deposition with Cap/Cover	$13,248,000	$21,600,000	$17,424,000

Estimated Low and High Remediation Costs for Miscellaneous Small Remediation Units

RU TYPE	LOW RANGE TOTAL COST	HIGH RANGE TOTAL COST	"BEST ESTIMATE" TOTAL COST
Similar Mixtures	$ 63,370	$ 63,926	$ 68,833
Similar Deposition	$ 63,370	$ 63,926	$ 68,833
Single Contaminant	$ 63,370	$ 63,926	$ 68,833
"Hot Spots"	$ 636,965	$ 642,550	$ 691,876
Debris	$ 759,684	$ 766,344	$ 825,174
Sequalitchew Creek NGRR	$ 633,704	$ 639,259	$ 688,333
Total	$ 2,220,635	$ 2,240,103	$ 2,411,884

Table 8-2 – Summary of Site Remediation Costs

Item	"Best Estimate" of Cost
Proposed Remediation in FS [(1)]	$ 17,424,000
Miscellaneous Small RUs	$ 2,411,884
Groundwater[(2)]	$ 90,000
Total Cost of Site Remediation	$ 19,925,884

[(1)] Based upon preferred alternative listed in Section 8 and costs in Appendix F
[(2)] Based upon preferred alternative listed in Section 8 and costs listed in Appendix I

APPENDIX A – *DESCRIPTION OF REMEDIATION TECHNOLOGIES FOR SOIL*

A.1 Introduction

This appendix describes the remediation technologies and corresponding process options associated with each general response action listed in Section 4.3. The information in this appendix forms the basis for the screening of the technologies presented in Tables 4-1 and 4-2. The general response actions, technologies, and process options are organized in this appendix in the same order they are arranged on the tables.

The general response actions identified for the remediation of metals- impacted soils at the Former DuPont Works Site (Site) include:

- No Action;
- Institutional controls;
- Containment;
- Removal;
- Treatment; and
- Stabilization.

The technology performance is compared with the chemical concentrations observed at the Site and the remediation or cleanup level considered appropriate for the land use are presented on the figures. All the technologies are able to meet the RAOs.

A.2 No Action

The No Action alternative is retained throughout the feasibility study process. It provides a baseline to compare the other alternatives to evaluate their effectiveness. The no action response literally means leaving the Site exactly as it exists at the time of preparation of the FS.

A.3 Institutional Controls

Institutional Controls are physical or legal restrictions used to prevent exposure to Site constituents. Typically, exposure is prevented or reduced by restricting access to the Site or to potential constituent receptors—such as groundwater or wildlife. The toxicity, volume, and mobility of the constituents are not reduced.

For these restrictions to be effective, they require understanding and compliance by the population being protected. Two types of institutional controls (technologies)—access restrictions and monitoring—are described below.

A.3.1 Access Restriction

Access restriction falls into two basic types: physical restrictions and legal restrictions. The physical restrictions are usually easy to implement and very cost-effective. The legal restrictions are also easy to implement and restrict future use of the property.

Fence: Fencing a site is an inexpensive and effective method for restricting access. Simple fences (such as chain-link) accomplish significant reduction of potential human exposure. If required, special fences

can be constructed to keep out wildlife. Fencing does not prevent access to small burrowing animals or birds. Well-constructed fences may last many years with little maintenance. Since the Site will be developed as recreational, commercial, and industrial areas, fences will have little applicability. They are currently used to restrict access to the Site during the RI and interim source removal and will continue to be used during future cleanup actions.

Warning Signs: Warning signs are also very effective at restricting access at very little cost. They are most effective when used with fencing. Since the Site will be developed as recreational, commercial, and industrial areas, warning signs will have little applicability. They are currently used to restrict access to the Site during ongoing activities.

Deed Restrictions: Deed restrictions may be useful in preventing accidental exposure due to activities of future property owners. The deed restriction notifies future owners of specific Site conditions to prevent activities that may release constituents or increase exposure. Generally, Site-wide deed restrictions would reduce the value of the Site.

Fishing/Hunting Restrictions: These restrictions reduce human exposure by reducing the consumption of potentially impacted tissues. Since zoning prohibits hunting on the Site and no fish-bearing surface water body is present on the Site, this restriction is effectively in-place.

Health and Safety Equipment: Using appropriate health and safety equipment and supplies is essential for individuals working on the Site during the cleanup action and Site development. When used properly, equipment such as protective clothing, boots, and a respirator can prevent exposure.

A.3.2 Monitoring

Monitoring can be used to prevent exposure by detecting contaminant migration. Early detection of the contaminant allows corrective action to be taken prior to exposure. At this Site, monitoring may be relevant to the following media:

- Groundwater;
- Air (during cleanup action only); and
- Soil.

Air monitoring is particularly useful during remedial construction because of the greater risk of exposure from dust. Verification sampling of the soil can be used during construction to verify that the contamination has been addressed.

Groundwater and surface water monitoring is useful in situations where there is uncertainty as to how a constituent might migrate to and in the aquifer, or in the surface water.

Since groundwater or surface water has not been impacted by lead and arsenic during the operation of the facility there is little chance that groundwater will be impacted following cleanup action. Groundwater and surface water monitoring may be required in association with stabilization or related to existing DNT-impacted groundwater contamination.

A.4 Containment

Containment uses physical barriers to either prevent direct exposure to the constituent or prevent migration of the constituent into the environment. Migration may be prevented by either preventing movement of the impacted medium or preventing a transport agent—such as water—from contacting the impacted medium. Containment technologies do not change the nature of the constituent but reduce risk by preventing exposure to the constituent.

Four containment technologies for soil are discussed below; cover, cap, liner and cap/cover.

A.4.1 Cover

Covers are characterized by a physical barrier between the impacted medium and the atmosphere. Usually, the purpose of a cover is to prevent or reduce contact between the impacted medium and precipitation. Covers also serve to prevent exposure to wind and to prevent direct contact by humans or animals.

Covers are used when there is extensive subsurface contamination that is difficult to remove or remediate in-place. Covers are often used over stabilized material or residues from other treatment technologies. Covers may also be used over soil with constituent concentrations below remediation levels, but still above cleanup levels, to prevent direct contact and further reduce residual risk.

Clean Soil Cover: A clean soil cover consists of the placement of imported clean soil on top of the soil to be covered. It prevents direct contact with the covered soil and provides a good substrate for vegetation. As vegetation will prevent erosion, little maintenance of the soil cover may be required. It is an effective low cost option when no leachable constituents of concern are present.

Re-vegetation: Although it can be used alone, re-vegetation is usually associated with some form of soil cap. The vegetative cover protects the cap from wind and rain erosion. It can also prevent direct contact with uncapped impacted soil during the cleanup action process and reduce windblown dust. Re-vegetation does not, however, prevent direct contact to plants or burrowing animals.

A.4.2 Cap

Engineered Cap (Synthetic Membrane, Clay, Asphalt, Asphalt Concrete, Portland Cement Concrete, Multimedia): Low permeability caps can be constructed from a variety of materials, or combinations of several materials. Materials that may be used in cap design, either individually or in combination, include synthetic polymer membranes, clay, asphalt, asphalt concrete, or Portland cement concrete. These materials are subject to damage so that engineered caps require long-term maintenance. Engineered caps are the most effective covers to reduce percolation of rain through the covered soil. Since lead and arsenic in low concentrations are not leachable, engineered caps have some limited use at the Site.

A.4.3 Liner

Liners are characterized by a physical barrier between the impacted medium and the underlying soil or groundwater. The main purpose of the liner is to reduce water movement from an impacted zone to clean zones. Usually, the impacted soil is placed in a prepared, lined basin and eventually capped. Liner materials include **synthetic membrane** and **clay** although often a combination of the two is used (**multimedia liner**) (EPA, 1985). Unless a nearby source of clay is available, clay is not usually economical. There is no ready source of clay near the Site. DNT is the only constituent at the Site that is leachable and it has been almost entirely removed during interim source removal. Consequently, a liner would have limited use as a containment technology. A lined basin may be considered for on-Site placement of stabilized concentrated fines but an engineered cap over the stabilized soil would prevent infiltration and leaching more cost effectively. Liners will not be retained for further analysis.

***In Situ* Liner** can be created using **grout injection**. In this process, low permeability grout is injected in a grid pattern across the Site. The grout permeates the soil underlying the impacted zone creating a continuous layer of very low permeability material. The biggest advantage of this method is that the impacted soil does not have to be excavated. This can be important if the contamination extends to a great depth. Disadvantages include expense and ensuring that the grout layer is continuous. This method is not appropriate for the Site where most of the constituents are located in the upper foot of soil.

A.4.4 Cap/Cover

Cap/Cover is the combination of an engineered cap or liner and soil cover. It prevents direct contact with the covered soil and provides a good substrate for vegetation. As vegetation will prevent erosion, limited/little maintenance of the soil cover may be required. It is an effective low cost option when no leachable constituents of concern are present.

A.5 Dust Control

Dust control is typically important only during cleanup action (excavation, screening). There are two basic types of dust control: binding agents and barriers.

Water Spraying: This is the most common binding agent used for dust control. It is used on virtually all construction jobs. It has the disadvantage that it is temporary and requires frequent reapplication. Applied at the correct flow rate, the water will not infiltrate to the groundwater.

Dust Suppressants: Chemicals or binding agents such as liquid asphalt last longer. These have the disadvantages that they may be toxic and are more expensive than water. Biodegradable dust suppressants are available, such as wood fiber suspended in water. This material is sprayed over the surface, as for water, to form a protective crust, although it does not dry as quickly. Because the dust suppressant caps are typically thin, they are susceptible to cracking, especially under traffic loading.

Wind Fences: A wind fence is a barrier that is placed around the perimeter of the area to be protected. It deflects the wind from the susceptible area preventing it from entraining dust particles. Wind fences are useful when constant activity prevents covering of susceptible areas and the wind blows from a constant direction. These are unlikely conditions at the Site; therefore, this option will not be considered in further analyses.

Plastic Covers: Plastic covers are another form of barrier. When soil piles sit for long periods of time, they can be covered with plastic. Plastic covers are effective regardless of the direction the wind is blowing. Plastic covers are currently used on the soil stockpiles at the Site.

Vegetation: One type of permanent dust control is vegetation. Vegetation can work both as a binding agent and as a barrier. Plant roots bind soil particles to the surface at the same time that the plant above the ground reduces near-surface wind speeds. Site development is expected to include landscaping and vegetation. Hydro-seeding may be used to establish a grass-type vegetation after cleanup action and before landscaping. Since vegetation is already part of the Site development plan, it will not be carried into further analyses.

A.6 Removal

Removal is a rapid method to move the soil from the uncontrolled environment of the impacted site to a controlled treatment or disposal area. Except for *in situ* methods, removal is required for all remedial alternatives.

Removal technologies do not change the nature of the constituent but reduce risk when combined with treatment or disposal technologies.

Excavation of impacted soils can normally be accomplished with conventional construction equipment such as scrapers, backhoes, bulldozers, and front-end loaders. Some excavation is required for virtually all remedial alternatives except No Action. In some special situations, such as on steep slopes, or near buildings and utilities, special equipment may be necessary.

A.6.1 Excavation and Off-Site Disposal

Off-site disposal is a proven, effective remedial technology. Sites can be quickly and permanently cleaned up, although the nature and toxicity of the constituent is not changed. The main disadvantage of off-site disposal is the potential liability associated with mismanagement of the contained waste in the receiving landfill.

Hazardous Waste Landfill: Disposal in a hazardous waste landfill is a proven technology. This type of management is usually reserved for wastes that have been characterized as state dangerous or RCRA (federal) hazardous wastes based on their properties or characteristics or because they have been explicitly listed in state and federal hazardous waste regulations (e.g., Chapter 173-303 WAC and 40 CFR Parts 260 through 270). Thus the properties, characteristics, or constituents of these hazardous wastes warrant special, RCRA landfill disposal requirements.

The EPA Land Disposal Restrictions (LDRs) require that hazardous wastes be subjected to minimum levels of treatment and/or contain minimum concentrations of hazardous constituents before they, or residues from their treatment, can be land disposed of. Off-site land disposal of soils that are hazardous wastes may require treatment of concentrations that are above LDR concentrations.

Solid Waste Landfill: This technology involves disposal in a lined landfill with a leachate collection system. Solid waste landfills are the prime repository for municipal trash and garbage. Some solid waste landfills also accept industrial waste including problem waste.

Chapter 173-304 WAC defines problem wastes as "(a) soils removed during the cleanup of a remedial action site, or a dangerous waste site closure or other cleanup efforts and actions and which contains harmful substances but are not characterized dangerous wastes, or (b) dredge spoils..." Regulations that deal specifically with problem waste (PW) management and disposal have not yet been developed (as of March 1994). Disposal as a PW may be suitable for stabilized soil which passes the toxicity characteristic leaching procedure (TCLP) tests or for mixture of non-hazardous impacted soils with constituent concentrations above the Cleanup Standard.

Demolition Debris Landfill: Demolition debris landfills are unlined. Debris landfills have been used for debris disposal during interim source removal and additional disposal of non-hazardous debris is anticipated as part of future cleanup action. Disposal of the Site soils in this type of landfill would not be appropriate.

A.7 Immobilization

Immobilization is a response action designed to accomplish at least one of the following (EPA, 1986):

- Improve the handling and physical characteristics of the soil;
- Decrease the surface area available for the transfer of constituents from the soil; and/or
- Limit the solubility of the constituents in the soil.

Immobilization is often used in conjunction with disposal of material in a commercial landfill (EPA, 1985).

Immobilization encompasses two technologies: solidification and stabilization (or fixation). The emphasis of the first is to create a high strength material which will reduce the exposure to the impacted soil by direct contact. The second technology focuses on reducing the constituents mobility within the matrix. Those two technologies overlap as some solidification reagents also have a fixation effect and vice versa. Often, both effects are desired. Consequently, solidification and stabilization will be considered as one technology.

A.7.1 Solidification/Stabilization

Common solidification reagents include **Portland cement** and **silicate-based** materials like fly-ash and polysilicate mixtures. These reagents have been used for many years in road construction and also provide stabilization for certain metals. Portland cement is effective to fix lead, and arsenic has been successfully stabilized with a polysilicate mixture.

Arsenic chemistry is complex, involving a variety of valence states and ionic species, and both inorganic and organic species. Arsenic oxides and sulfides can be stabilized but not the organic species (contained in herbicides). The arsenic oxide (found in flue dust from non-ferrous smelting operations) is soluble in both acid and basic environments. Lead is soluble mostly in an acid environment. The range of pH in which both lead and arsenic oxide will be stabilized is narrow. The stabilization of arsenic oxide and lead-impacted soil is difficult.

Mix design for solidification must be determined by bench-scale testing with the actual Site soil.

Other, innovative techniques include **thermoplastic** solidification and **encapsulation**. In thermoplastic solidification, the soil is sealed in a matrix such as asphalt bitumen. This technique requires specialized equipment. Asphalt incorporation is a thermoplastic solidification method which is also a recycling process for the impacted soil. It can be applied only to soil passing TCLP tests and therefore is unlikely to be an option for most soils above the statistical action levels (SALs). Encapsulation uses an organic binder or resin to physically contain waste materials either by containing individual soil particles or a cluster of particles. The encapsulation processes are generally proprietary and expensive.

Cryogenic encapsulation is a temporary solidification process only. A large power supply is required to keep the ground frozen. No temporary solidification is required at the Site; therefore, this process will not be further analyzed.

One common method of fixation is to use **sorbents,** such as fly-ash or bentonite, to absorb free liquid and produce a solidified waste. Other additives can be use to chemically fix constituents by forming an insoluble precipitate or complex. Many proprietary mixes exist to fix various constituents. This technology is not applicable at the Site since the impacted soils do not contain free liquids.

Fixation can be also be achieved *in situ* or *ex situ* by **surfactant fixation**, often a proprietary process. This technology utilizes the application of specific inorganic and organic reagents which readily percolate through the impacted soils. They reduce heavy metals to their lowest valence state and render them insoluble as stable organometallic complexes. The detoxified soils achieve the TCLP requirements and are no longer leachable. This technology has been demonstrated only for low metal concentrations (lead and cadmium: 10 to 15 mg/kg) and may require toxic amounts of surfactant at higher concentrations. This technology will not be retained for further analysis.

Surface Soil Fixation employs soil mixing and grinding with addition of a fixating agent to homogenize concentrations in the surficial soil and stabilize the metals. The homogenization action results in a reduction of isolated elevated concentrations in the surficial 6 inches of soil. The fixating agent may be a constituent modifying the pH of the soil thus lowering the leachability potential of the metal or a proprietary additive forming a chemical bond with the metal for stronger fixation. Proprietary additives for strong fixation may not be necessary since none of the TCLP results for arsenic were above the limit of 5 mg/L. Surface soil fixation could be applied to mitigate direct contact risk by aggregating the fines. The addition of cement can result in the formation of a granular material that could be used as a subgrade under areas such as parking lots.

In situ **Vitrification (ISV)** is a process whereby impacted soils are melted with a high electrical current and then allowed to cool to form a stable glass-like material. ISV is a patented process developed by Battelle Pacific Northwest Laboratory for the U.S. Department of Energy as an in-place stabilization technique (Hansen, 1988). At the high temperatures created (over 1,700 degrees Celsius), organic

material undergoes chemical change by pyrolysis (thermal destruction in the absence of oxygen). The products of pyrolysis rise to the surface as off-gases which must be collected, monitored, and treated. Inorganics are immobilized by chemical incorporation in the melt and solidified with the residual product. The residual ISV product offers 20 to 45 percent volume reduction, and excellent structural, weathering, and biotoxicity properties.

Full scale tests with ISV have been conducted on a variety of soil types (Fitzpatrick et al., 1986; Timmons, 1989). The full scale unit has four electrodes spaced about 18 feet apart. This results in a melt zone about 30 feet wide.

Buried metal in the soil can cause short-circuiting problems for the ISV process depending on the physical state of the objects. Fitzpatrick et al. (1986) states that soil with up to 5 percent metal, by weight, can be vitrified. In recent tests, soils with up to 15 percent metal, by weight, have been successfully melted (Timmons, 1989).

In situ vitrification is not an appropriate process for the Site since most of the metal contamination is distributed in the first foot of soil.

A.8 Treatment

Treatment technologies permanently reduce the toxicity and/or volume of the constituent or impacted material. The cleaned soil can then be returned to the site, disposed of as clean fill, or placed in a landfill. Treatment technologies for metals-impacted soils include recycling, and thermal and soil washing processes.

A.8.1 Recycling

Lead Smelter: Recycling lead-impacted soil to a smelter involves recovery of lead from the soil by the same process which extracts lead from ore. A minimum soil lead content of 10 percent by weight is expected to be required for acceptance by the smelter. The presence of other metal constituents may be problematic as they would volatilize, remain in the slag as a waste product, or impact the quality of the lead metal product.

Cement Kiln: Impacted soil could also be recycled to a cement kiln where the volatile metals would be removed in the off-gas and recovered in the baghouse, and the heavy metals incorporated into the cement at low concentrations. The soil would have to pass the TCLP tests before being accepted by the cement kiln. This is an unlikely option for Site soils.

A.8.2 Thermal Treatment

Thermal treatment does not destroy metals. Lighter metals will volatilize, heavy metals will remain in the soil. Important concerns are potential air emissions and the liability associated with the residuals.

In general, thermal treatments are characterized by high costs based on energy consumption.

Slagging with Off-Gas Treatment: This process is a two-stage, high temperature system. The temperature inside the reactor section is between 1,400 and 1,850°C. In the high-temperature reducing atmosphere, metals such as lead, arsenic, and cadmium are vaporized from the waste. Less volatile metals such as copper, nickel, and cobalt, if present in sufficient quantities, coalesce as a molten alloy phase. The remaining components of the waste, which may include metal oxides such as those of iron, melt in a molten slag.

Products from the reactor are passed to a slag separator. The process gases are drawn from the slag separator through the off-gas system where the vapors are post-combusted with ambient air and condensed as metal oxides. The gases are subsequently cooled, and the mixed metal oxide particulate is collected in a baghouse before discharge to the atmosphere. This process significantly reduces the

volume of impacted material. The metal oxide particulates and the slag are withdrawn from the reactor and recycled or disposed of according to their toxicity.

Fixed and transportable full-scale treatment units exist. Their maximum treatment rate is 2.5 tons per hour, which will not be adequate to treat all the impacted soils within a reasonable time frame. This process will not be retained for further analysis.

Thermal Desorption: As mercury is fairly volatile compared to other metals (boiling point 356.9°C), thermal desorption can be used to recover it from soil. The impacted soil is heated to the point where mercury begins to volatilize; the vapors are collected and treated to recover the mercury. This process is only applicable to mercury and would leave other metals in the soil. As only small amounts of mercury contaminated soils occur on the Site, this technology was not retained for further analysis.

Hydrogen Volatilization: Hydrogen volatilization is a process in which lead is recovered by high temperature distillation in hydrogen. It is an experimental technology demonstrated only in the laboratory and will not be retained for further analysis.

A.8.3 Physico-Chemical Separation

Physico-chemical separation removes the constituent from the medium with a combination of physical (scrubbing, classifying) and chemical processes (solvent extraction, solubilization).

Solvent or Chelant Extraction: Soil is placed in a tank with a solvent or chelant. The mixture is agitated, and the solvent or chelant is used to extract the constituent from the soil matrix. Clean soil is returned to the Site and the solvent or chelant is treated to remove the constituent and is recycled. Concentrated residues from the solvent/chelant recovery process are then further treated or disposed of. EDTA, citric acid, and other solvents and chelants have been used with various metals. Solvent/chelant extraction is site-specific and generally requires a pilot study prior to system design. It has the advantage of returning most of the soil, clean, to the Site.

Solvent/chelant extraction is generally done in a batch process, where a volume of soil is placed in a mixing tank in one batch, treated, and then removed. Each batch of soil may be washed more than once with fresh solvent.

***In Situ* Extraction:** In this process, lagoons are constructed over the impacted area. Water is allowed to infiltrate through the impacted soil into the underlying groundwater. The groundwater is then extracted for treatment and recycled back to the lagoons. This is a very simple process that is most useful when groundwater contamination already exists. If not, there is a risk of not capturing all of the infiltrating water and causing a groundwater problem. Another disadvantage is that fine-grained soils can greatly slow the process. Because contamination at the Site is shallow and water is a poor solvent for metals, this technology was not retained for further analysis.

Acid or Base Extraction: Impacted soils are washed with an acid or base leaching solution to concentrate the metals in solution. Other chemicals can be added to facilitate metals solubilization. The washed soil is then separated from the leaching solution and the soil may require neutralization before being backfilled on the Site. The solution is treated to recover the metals, by precipitation, reverse osmosis, or ion exchange. Precipitation produces a sludge containing the metals which can be recycled or disposed of at a RCRA landfill. Selective ion exchange can recover individual metals but is only cost-effective for recovery of precious metals. Reverse osmosis produces a concentrated solution of metals which requires further treatment. Acid extraction has been demonstrated as effective for lead. Most arsenic chemical constituents are not removed by acid. Basic solutions are more effective. As for solvent or chelant extraction, acid/base extraction has the advantage of returning most of the soil, clean, to the Site.

Electrical Separation: Electrokinetic soil processing is an *in situ* semi-continuous process for the removal of heavy metals, radionuclides, and organic bases from fine-grained silty clays. The application of a low intensity, direct current applied across the impacted soil, results in removal of the constituents through mass transfer mechanisms of diffusion, and ion migration. The pollutants present in the soils are removed in cycles. One cycle will typically capture 75% to 95% of the original constituent and will require 2 to 3 months. Each cycle involves application of direct current, removal of the constituents at the cathodes in either soluble or precipitated forms, and replacement of the lost soil moisture.

This technology is not cost-effective in sands and gravels and therefore not applicable to the Site.

Screening: Screening is a common pretreatment process for other types of treatment since oversized particles cannot be processed by equipment associated with soil washing and thermal treatment methods. In this process, soil is fed into a wire mesh screen to remove oversized particles. Most metal constituents in soil are bound up in the finer fraction of soil particles so screening also reduces the volume of impacted soil by removing the larger particles which do not exceed the Site-specific remediation levels.

Screening can be a dry or wet process depending on the degree of separation sought. Dry screening will not remove all the fines from the cobbles/gravel, especially if the soil is moist. Its advantage is that water handling is avoided. Wet screening uses water spray to wash the fines off the gravel and improve the degree of separation. The wash water will be carried with the fines and may require treatment. Wet screening generally allows separation to a finer mesh than dry screening.

Classification: Classification is a group of water-based processes which typically uses mineral processing technology (jigs, spirals, flotation, hydrocyclones, attritioning). The process generates a clean soil fraction, an impacted sludge or cake consisting of soil fines, other concentration material, and process water. The waste and concentrates may require treatment prior to recycling. The sludge may be recycled to a lead smelter (if the lead is highly concentrated) or a cement kiln, or disposed of in a RCRA landfill. A pilot-scale test is necessary to determine the feasibility of this technology for a given soil. Classification has the advantage of returning a large fraction of the soil, clean, to the Site while not involving the handling and treatment of chemicals (solvent, acid, or base). Classification may be a more or less complex process depending on the concentration rate desired and the equipment required to achieve that concentration.

A.9 References for Appendix A

Bhatty, M.S.Y., 1987. Fixation of metallic ions in Portland Cement. Superfund 1987: 140-145.

EPA Risk Reduction Engineering Laboratory (RREL) Database, Version 4.0.

EPA Superfund Innovative Technologies Evaluation (SITE) demonstrations.

EPA Vendor Information System for Innovative Treatment Technologies (VISITT) Database, Version 2.0.

EPA, 1983. "Project Summary, Mobile System for Extracting Spilled Hazardous Materials from Excavated Soils." USEPA, R. Scholz and J. Milanowski. EPA/600/52-83-100.

EPA, 1985. "Handbook: Remedial Action at Waste Disposal Sites," Hazardous Waste Engineering Research Laboratory, Office of Research and Development, USEPA, Cincinnati, Ohio.

EPA, 1986. "Handbook for Stabilization/Solidification of Hazardous Waste," EPA 540/2-86/001, Hazardous Waste Engineering Research Laboratory, Office of Research and Development, USEPA, Cincinnati, Ohio.

EPA, 1988. "Technology Screening Guide for Treatment of CERCLA Soils and Sludges." USEPA, Washington, D.C., September 1988.

EPA, 1991a. "EPA's Mobile Volume Reduction Unit for Soil Washing." USEPA, H. Masters and B. Rubin. EPA/500/D-91/201.

EPA, 1991b. "Superfund Engineering Issue: Treatment of Lead-Contaminated Soils." USEPA, Office of Solid Waste and Emergency Remedial Response, Washington, D.C., April 1991. EPA 540/2-91/009.

EPA and U.S. Air Force, 1993. "Remediation Technologies Screening Matrix, Reference Guide." USEPA, Office of Solid Waste and Emergency Response Technology Innovation Office, Washington, D.C. 20460 and U.S. Air Force, Environics Directorate, Armstrong Laboratory, Tyndall Air Force Base, Florida 32403, July 1993. EPA 542-B-93-005.

Fitzpatrick, V.F., C.L Timmerman, and J.L. Berelt, 1986. "*In Situ* Vitrification - A Candidate Process for *In Situ* Destruction of Hazardous Waste," Seventh Superfund Conference, Washington, D.C., December 1986.

Hansen, J.E., 1988. Letter from Geosafe Corporation, Kirkland, Washington to Hart Crowser, dated June 25, 1988.

Hart Crowser, 1992. Mercury/Lead Leaching Study, Area 39 Soils, Former DuPont Works Site, Dupont, Washington.

Henderson, L., T. Delfino, M. Rafferty, T. Kimura, S. Takeshima, D. Lovell, and D. Yang, 1993. "*In Situ* Fixation of Arsenic and Heavy Metals in Soils." AIChE 1993 Summer National Meeting, Techniques for Solidification/Stabilization of Soils and Sludges, Seattle, Washington, July 1993.

Timmons, D.M., 1989. "In Situ Vitrification of Wastes Contaminated with Mercury, Arsenic, Organo-Chlorine Pesticides, and PCBs." Air & Waste Management International Symposium on Treatment of Contaminated Soils, Cincinnati, OH, February 1990.

APPENDIX B – *OVERVIEW OF SOIL TESTING PROCEDURES AND DATA INTERPRETATION*

B.1 Whole Soil Procedures

Sample Preparation: Upon receipt, the soil sample was coned and quartered, and blended and split to produce a more homogeneous head sample.

Stage Crushing: Throughout the course of this program, samples assayed for chemical constituents were crushed prior to analysis. The fines were separated out and the oversize was crushed again. The entire process was repeated until the desired particle size was achieved. This helped to ensure that a representative sample was assayed.

Sample Verification Testing: After sample preparation, three grab samples were collected. Each sample was analyzed for total lead. The TCLP was performed on a composite of the three samples, with leachate analysis for total lead. These analyses were performed on a rush or priority basis to check whether the lead sample collected was representative of the lead concentrations at the Site, based on the results of previous sampling events.

Moisture Content: The sample was air dried and the moisture content was reported as a percent weight loss. This provided an indication of how wet or sticky a soil was and how dry that soil can be made by stockpiling in a dry area. This information was useful for materials handling and technology selection.

Soil Bulk Density: This parameter, measured as kilograms soil per cubic meter, provided an exact conversion from volume to weight. Loose density was representative of soil in an excavated condition, while packed density was representative of *in situ* conditions. The sample for packed density measurement was not compressed, but was prepared by tapping the container so that the soil settled.

Soil Plasticity (Atterberg Limits): The liquid and plastic limits, and plasticity index are qualitative measurements indicating soil plasticity. This information provides an indication of how sticky the soil is, and how it deforms and flows (rheology). The information was used for identification and classification of fine-grained soil and clays. It was useful for materials handling, when choosing excavation and mixing equipment for implementation of treatment technologies.

Particle Size Distribution: Soil was divided into approximately nine size fractions ranging from cobbles/gravel, coarse to fine sands, and silt/clay by wet screening. The particle size distribution was used in determining the USDA soil classification. Each size fraction and the residual water were then analyzed for total lead. The weight and lead distributions were reviewed to determine which particle size fractions contained the lead and which fractions are "clean". This information was used to evaluate the effectiveness of soil washing and the quality of the wash water. Highly contaminated fractions may be further analyzed for lead species.

Standard USDA Soil Classification: The soil classification was determined from the soil particle size distribution, plasticity information, and visual observation. The various groupings of this classification system was devised by the ASTM committee to correlate in a general way with the geotechnical engineering behavior of soils. The classification was useful in understanding the behavior of the soil in materials handling and treatment processes.

RCRA Appendix IX Semivolatile Organic Compounds: This information was needed for regulatory purposes and constituent screening. Information on concentrations of semivolatile organic compounds is also important when evaluating treatment technologies, since they may interfere with performance or may be released as emissions. Samples were not assayed for volatile organic compounds, since many of the

sample homogenization and preparatory procedures permit volatilization. Additionally, samples were not assayed for pesticides, herbicides, PCBs, dioxins, and furans, since historical evidence and prior analyses do not indicate the presence of these constituents at the areas studied at the Site.

RCRA Appendix IX Inorganic Compounds: This information was needed for regulatory purposes and constituent screening. While this study was primarily concerned with lead-affected soils, the soils in the study contained other metals of regulatory concern. Treatment processes which concentrate lead or extract/leach lead in a particular soil fraction (soil washing) may also concentrate or extract other heavy metals.

Soluble Cations: Calcium, sodium, magnesium, and potassium were measured. These soluble cations can impact the system solubility and compete with heavy metal constituents for binding/bonding sites and anionic species. In general, cations are retained in soil types with higher clay content and surface area. Cations exhibit relatively low mobility in clay and silty clay soils and moderate to high mobility in sandy, loamy sand, and sandy loam soil.

Anions: Sulfide, sulfate, phosphate, carbonates, and bicarbonates are naturally occurring anions in soil which provide bonding and binding sites for heavy metals and soluble cations. In general, anions exhibit relatively low mobility in clay and silty clay soils and moderate to high mobility in other soil types.

Carbon Content: Total carbon is measured from the carbon dioxide evolved during combustion of a sample in an oxygen atmosphere. Inorganic or fixed carbon is determined by thermal gravimetric analysis (TGA). TGA involves heating a sample under an argon atmosphere at a known rate until first the moisture and then the volatile matter are driven out of the soil. Air is then introduced to oxidize any remaining material (fixed carbon) until only the ash remains. Inorganic (fixed) carbon is reported as a weight percent of the original sample. Organic carbon is determined to be the difference between the total and inorganic carbon. Organic carbon content is another indication of the soil's natural ability to bond and bind with constituents. Carbon content information was useful in evaluating both stabilization and soil washing technologies.

pH: This is a measure of the acidity or alkalinity of the soil. This information was used to determine whether the soil is RCRA hazardous because it exhibits the RCRA characteristic of corrosivity. Initial pH of the soil is a useful piece of information needed in calculating stabilization mix designs or in determining the effectiveness of acidic or basic soil washing.

Redox Potential: This is a measure of whether the soil is in an oxidizing or reducing state. Several elements can exist as part of the structure of soil minerals in more than one oxidation state. For example, manganese (Mn) can exist in soil as Mn+2, Mn+3, or Mn+~. Arsenic (As) can exist as As+5, or As+3. The particular species which will be present depends upon the oxidation-reduction (i.e., redox) status of the soil.

Acid-Base Potential: This is a quantitative measure of the soil's buffering capacity. The amount of neutralizing bases present in the soil are reported as tons of calcium carbonate per 1,000 tons of soil. A positive number indicates that the soil is basic. Conversely, a negative number indicates that the soil is acidic. A close relationship exists between the total sulfur content of the soil and the net potential acidity. This information was useful in calculating stabilization mix designs or in determining the effectiveness of acidic or basic soil washing.

Generalized Acid Neutralization Capacity (GANC) and Reverse GANC: This test is a single-batch leaching procedure that utilizes a series of dried samples extracted for a 48-hour time period with an increasingly acidic leachant (or an increasingly basic leachant for the reverse GANC). A 20:1 liquid to solids ratio was used to duplicate the conditions of the TCLP. Equivalents of 2N acetic acid (or 2N sodium hydroxide per kilogram of dried solids) are plotted versus final solution pH. This information indicates the

buffering capacity of the material, and can be used to calculate stabilization mix designs or to determine the effectiveness of acidic or basic soil washing.

Metals with Acid Neutralization Capacity (MANC) and Reverse MANC: This test quantifies the concentration of a metal released when an amount of acetic acid (or sodium hydroxide) in equivalents is used to reduce (or increase) the pH of a solution. For each acidity (or alkalinity) value of the GANC (or reverse GANC), the concentration of a metal released was measured after a 48-hour time period. Equivalents of 2N acetic acid (or 2N sodium hydroxide) per kilogram of dried solids are plotted versus the concentration of a metal. While the GANC plot depicts the relationship between acid (or base) addition and pH (buffering capacity), the MANC plot depicts the relationship between acid (or base) addition and metal concentration (solubility). When the GANC and MANC are plotted on the same figure, the minimum solubility point for a metal is shown to correspond to a specific pH range. This information was used in calculating stabilization mix designs and in determining the effectiveness of acidic or basic soil washing (based on solubility of metals).

Toxicity Characteristic Leaching Procedure (TCLP): The TCLP is designed to determine the mobility of constituents in a waste. A solid waste exhibits the RCRA characteristic of toxicity if, using the TCLP test procedures, the extract from a representative sample of the waste contains any of a set list of constituents at or above certain concentrations. This information was required for regulatory classification, and proper handling and disposal of the waste soil. The TCLP and associated criterion may be used to set the remediation cleanup goals. The TCLP was used as a measure of the chemical performance of treatment technologies. Since the TCLP is an extremely aggressive acid equilibrium leaching procedure (20:1 liquid to solid ratio, small solid particle size, and 18-hour contact time), the TCLP results may also be used to calculate distribution coefficients, if the initial constituent concentrations are known.

Equilibrium Leaching Procedure (ELP): This is a leaching procedure that uses synthetic acid rain (SAR) to simulate weathering conditions at a site. It uses the same solid particle size and liquid to solid ratio (20:1) as the TCLP; however, it provides a more realistic leaching scenario since it uses 60% sulfuric acid/ 40% nitric acid SAR (instead of acetic acid) and a contact time of 96 hours (instead of 18 hours) to further ensure that the leaching is more realistic of site conditions and has been given time to achieve equilibrium. Lead assays are performed on both the leachate and solids to provide a complete mass balance for the calculation of distribution coefficients.

Surface Area Calculations: For each soil fraction or particle size range, the amount of surface area was calculated in square meters per kilogram. The smaller the particle size, the larger the surface area. Based on the weight distribution of the various soil fractions, the surface area distribution was calculated. In general, the majority of the surface area are associated with the fines or silt/clay fraction. The fine particles often exhibit adsorption, cation exchange capacity, and other binding and bonding properties.

B.2 Soil Fraction Procedures

FO39 List Metals: Treatment processes which concentrate lead or extract/ leach lead in a particular soil fraction (soil washing) may also concentrate or extract other heavy metals. This information was needed for constituent screening and regulatory purposes, to ensure proper handling and disposal of the soil.

Chloride: This is a naturally occurring inorganic anion which can affect the mobility of constituents. Chloride compounds are very soluble and therefore very mobile. This information was useful in determining the species and mobility of metals and, therefore, the impact to the environment.

Iron and Manganese: Heavy metals can bond and bind with iron-manganese oxide surfaces in the soil. This information was useful in determining the species and mobility of metals and, therefore, the impact to the environment.

Cation Exchange Capacity (CEC): The CEC is defined as the total amount of water soluble cations adsorbed by negative charges on a unit mass of soil. In general, the silt/clay fraction exhibits the highest CEC, since it has the most surface area. The adsorption process is reversible, and the equilibrium relationship can be expressed by K_d, the distribution coefficient. CEC is one component of the soil that is responsible for the soil's buffer capacity. Buffering mechanisms that involve metal cations in solution are affected by the extent of adsorption to cation exchange sites on soil particle surfaces. In arid regions, the accumulation of calcium, sodium, magnesium, and potassium salts may result in the saturation of a soil's cation exchange capacity with these cations. The tendency for these cations to produce hydroxide ions is the factor controlling the amount of hydrogen ions in the water phase of the soil (and thus the pH). Carbonate minerals (calcium carbonates, sodium carbonates, and magnesium carbonates) can buffer the hydrogen ion content (pH) of water in a soil system.

Sequential Extraction: This procedure is a wet chemical method in which a series of specific reagents is sequentially applied to a soil sample, and the lead content is measured in each extractant. Each reagent selectively removes lead that has been bound or adsorbed to the soil matrix in a specific way. The sequence of reagents is such that each reagent is more aggressive than the previous one. The results of this test indicate the species of lead present and the way in which the lead is bound to the soil. This information was valuable in determining impact to the environment and in evaluating treatment technologies.

Scanning Electron Microscopy (SEM): SEM is a sophisticated technique to determine constituent species by viewing the material under extremely high magnification. SEM analyzes individual soil particles and can identify both crystalline and amorphous structures. This information on constituent species was valuable in determining mobility and impact to the environment, and in evaluating treatment technologies.

X-Ray Fluorescence (XRF): This scan is performed to determine soil mineralogy. While the results are reported as compounds (mainly oxides and metals), the scan actually identifies major, minor, and trace elements (approximately 40). Results are reported as a weight percentage of the total sample. Carbon dioxide is also analyzed by a coulometric method, to aid in the material balance. The difference between the total weight of the soil and the weight percentage of minerals may be attributable to water. Information on soil mineralogy aids in the understanding of soil/ contaminant interactions including contaminant species, binding/bonding and mobility.

APPENDIX C – *LEAD AND ARSENIC SOIL CHARACTERIZATION AND TREATABILITY STUDIES*

C.1 INTRODUCTION

Treatability studies were performed to assist in the selection of appropriate Cleanup Actions for impacted soils at the former DuPont Works Site (the "Site"). The studies were selected to address constituents impacting significant soil volumes; these constituents were lead and arsenic. This document will address: the requirements for treatability studies; the basis for treatability study selection and design; the treatability study approach and initiatives taken; a summary description of the treatability studies completed and the study results; a summary of interpretations made; and finally, conclusions drawn from the treatability studies and recommendations for additional treatability work.

C.2 TREATABILITY STUDY REQUIREMENTS

The specific requirements of the treatability studies were determined based on the need to generate technical data to assist with the screening and selection of potential soil remediation technologies for lead- and arsenic-impacted soils. The lead and arsenic studies were designed with regard to the principal candidate technology categories identified through preliminary Feasibility Study (FS) screening. Chapter 4 provides an overview of the type of data required to assess the effectiveness of these types of technologies. The constituent-specific portions of Chapter 5 (5.3 and 5.4) contain a discussion of the treatability study results and their relevance to the evaluation of each technology category.

The treatability studies were carried out to meet the objectives described in Chapter 3. They include characterization studies performed by Hazen Research, Inc. (Hazen), in addition to speciation work, screening studies, and bench-scale technology evaluations performed by Hart Crowser, Battelle Pacific Northwest Laboratories, the State University of New York, the University of Cincinnati, and Weyerhaeuser Analytical and Testing Services.

C.3 BASIS FOR TREATABILITY STUDY SELECTION AND DESIGN

C.3.1 Treatability Study Objectives

The general objectives of the overall treatability study program, together with specific objectives with respect to soil characterization, are set out below.

- Provide sufficient information necessary to fully define the soil remediation problems presented and determine the specific requirements of the candidate technologies.

- Expedite the evaluation process prescribed by Model Toxics Control Act (MTCA) and so assist the selection of appropriate Cleanup Action Alternatives (CAA's) for soils impacted by the major constituents of concern, i.e.,
  - Provide information/data on treatment technology effectiveness;
  - Enable CAA's to be compared and evaluated on an equal basis;
  - Provide, in conjunction with available relevant literature, sufficient characterization and performance data to allow treatment alternatives to be developed and evaluated during FS detailed analysis;

- Help reduce performance uncertainties for treatment alternatives to acceptable levels to enable remedy selection; and

- Support the Interim Source Removal program.

- Provide preliminary supporting data for the design of selected CAA's and help define further data requirements needed prior to Cleanup Action implementation.

Specific soil characterization objectives are:

- To help fill gaps in physical and chemical Site characterization data pertinent to soil handling and to the treatment options developed;

- To determine, in detail, the physio-chemical nature of constituent/soil matrix interactions and thereby answer basic questions regarding constituent distribution and speciation, soil bonding/binding characteristics, and constituent leachability/mobility; and

- To provide information on the prospects for reducing volumes of significantly impacted soils through the use of physical screening techniques to segregate soils by particle size.

C.3.2 Rationale and Constraints

The rationale for the selection and design of the treatability study program was based on several basic criteria. These criteria, which in some cases represent constraints on the scope of the program, are summarized below.

- The treatability studies should address the major constituents of concern under the FS, i.e., those impacting significant (greater than 5,000 yds^3) soil volumes at levels exceeding the Working Hypothesis screening levels. These constituents of concern are lead and arsenic.

- The studies should be tailored to obtain appropriate data to assist in the determination of the technical viability of the principal candidate remediation technology categories identified through preliminary FS screening (see Chapter 2). The range of data obtained via the studies should reflect the broad range of innovative technology types and treatment approaches under consideration.

- The studies should be capable of fully characterizing the impacted soil matrices and the complex soil/chemical interactions (this criterion is further addressed in the opening discussion under Section C.4 below).

- The scope and duration of the studies should be consistent with the schedule for completion of the Remedial Investigation (RI) and FS activities.

C.4 TREATABILIITY STUDY APPROACH AND INITIATIVES

U.S. Environmental Protection Agency (EPA) analytical protocols are widely used in environmental remediation programs to determine the appropriate designation of potential 'waste' materials. These protocols include measuring the total or leachable concentrations of chemical constituents in the subject material (e.g., using SW-846 and Toxicity Characteristic Leaching Procedure (TCLP) methods), as well as testing the material for the characteristics of ignitability, corrosivity, reactivity, and toxicity. The protocols are designed to assist in determining whether any regulatory waste classification is applicable, so that the material may be managed, treated, and disposed of appropriately.

However, when dealing with a complex matrix such as soil impacted by chemical constituents, additional characterization information regarding physical and chemical properties and constituent/soil interactions is needed. In addition to assisting the assessment of regulatory classification, potential impact to human

health and the environment, and decisions regarding cleanup goals, this information is necessary to thoroughly evaluate which treatment technologies and processing conditions are applicable.

In this case, the treatability study approach principally involved a series of carefully devised laboratory tests directed at detailed characterization of representative soil samples impacted by the major chemical constituents of concern. The characterization testing program was designed with emphasis placed on the examination of complex soil/constituent (metal) interactions. The types of soil characterization information obtained relate to how constituents are held/bound in the soil matrix, what chemical form (speciation) constituents exist, and in what soil fractions (distribution) they reside. Associated information was also obtained to describe the soil composition (chemical and mineral content as well as particle size distribution) and assess the mobility/leachability of the bound constituents. The overall intent of the soil characterization studies was to provide a wide range of physical and chemical data giving insight into the viability and suitability of the principal candidate remediation technology categories referenced in Chapter 2, and to provide an efficient and cost-effective means of narrowing the field of potential Cleanup Action Alternatives. The physical analyses were primarily aimed at providing data, which will indicate how the soils will behave physically during materials handling, and physical treatment steps, while the chemical and speciation analyses were directed more towards identification of technological applicability.

The soil characterization methods and procedures described, by category, in the following paragraphs were selected for use in the lead and arsenic constituent initiatives, based on their ability to physically and chemically characterize metals-impacted soils. Further information is provided in Tables C-1 and C-2, "Soil Characterization Procedures", which lists each of the analyses included in the characterization studies (performed by Hazen), and specifies the type of information that can be determined from each analysis. The three categories presented below are used as the basis for the presentation and discussion of the treatability study results in Section C.5.

C.4.1 Regulatory Analyses

Regulatory analyses are designed to determine the regulatory classification of the waste, so that the waste may be managed, treated, and disposed of properly. Regulatory analyses include the RCRA Appendix IX list inorganics and semi-volatile organics. The Toxicity Characteristic Leaching Procedure (TCLP) was performed to determine whether the soil exhibited the RCRA characteristic of toxicity, and therefore should be assigned an EPA Characteristic Hazardous Waste Number.

C.4.2 Physical Analyses

Physical analyses are aimed at gathering data to indicate how the soil will behave physically during excavation, materials handling, and treatment processes. The physical analyses include particle size distribution and Atterberg limits (liquid limit, plastic limit, and plasticity index) that are used to determine the standard USDA soil classification. Other physical properties measured are moisture content and bulk density of both loose and packed soil.

C.4.3 Chemical Analyses

Chemical analyses are aimed at gathering information on soil chemistry, soil mineralogy, soil/constituent interactions, and constituent distribution, speciation, and mobility. The pH and Generalized Acid Neutralization Capacity (GANC) are measured of the soil's alkalinity or acidity and inherent buffering capacity. GANC and Reverse GANC data can also be used to assist the potential effectiveness of stabilization and soil washing/leaching treatments. The TCLP and Equilibrium Leaching Procedure (ELP) are both measures of leaching or mobility of the constituent. Organic carbon and anions can bond with heavy metals, reducing their mobility. Soluble cations can compete with heavy metals for bonding sites, increasing heavy metal solubility. X-ray diffraction, scanning electron microscopy, and sequential extractions are all used to determine which specific chemical form of the metal is present in the soil and how it is bound

The data quality objectives under the characterization studies were primarily to generate high quality technical data for use in performing evaluations and supporting positions developed under the FS. Only those procedures intended to determine the regulatory classification of the soil were performed strictly according to EPA SW-846 protocols. Under subcontract to Hazen, Evergreen Analytical, Inc. performed the regulatory analysis for the RCRA Appendix IX total inorganics (including lead, arsenic, and mercury) and semi-volatile organics, TCLP, and TCLP leachate organics and semi-volatile organics. The remainder of the analyses, performed by Hazen, was not completed according to strict SW-846 analytical protocols; however, every effort was made to ensure high quality data were generated. This approach was consistent with the main goal of this program, to generate high quality analytical information for technology screening purposes, rather than to produce legally defensible regulatory classification data. All procedures are documented and commercially available.

To supplement the laboratory characterization testing outlined above, additional speciation screening studies, and bench-scale treatability work was carried out to assist with a more detailed examination of the viability of soil washing and solidification/stabilization technologies.

C.5 SUMMARY DESCRIPTION AND RESULTS OF TREATABILITY STUDIES COMPLETED

C.5.1 Introduction

The majority of the treatability study work is represented by the laboratory and bench-scale soil characterization studies performed under contract by Hazen at their facility in Golden, Colorado. These studies involved soil samples from Site Areas known to be impacted by lead and arsenic, and include detailed characterization and speciation analysis of the lead- and arsenic-impacted soils. Soil sampling for the characterization studies utilized a statistical procedure based on EPA SW-846 guidance, recognized technical literature on sampling and analysis, and the experience of the Project Team. The sampling procedure enabled recovery of representative composite samples of impacted soils from randomly sampled grids in designated Areas of the Site determined, from pre-RI and RI information, to contain elevated concentrations of lead and arsenic.

The Hazen studies were supplemented by several additional specific initiatives performed by other commercial organizations and Universities, as outlined in Section C.5.2 below. Sections C.5.3 and C.5.6 present summaries of the constituent-specific work, focusing on the Hazen characterization studies, and include interpretations of the treatability study data generated. In the case of the lead-impacted soils characterization study (included in Section C.5.3), the work was part of a broader multi-site program conducted by DuPont to characterized company-wide lead remediation needs. The scope and detail of the DuPont study were greater than necessary for the purposes of this FS; only pertinent parts of the study and results are summarized here.

C.5.2 Other Initiatives Supporting Hazen Studies

Hazen's work was supplemented with subsequent treatability study initiatives performed by other commercial organizations and Universities. These are listed below with a brief description of the study scope for each.

BENCH-SCALE SOIL LEACHING STUDY – STATE UNIVERSITY OF NEW YORK, BUFFALO

A screening evaluation of the non-proprietary soil leaching chemistries was performed by the Department of Civil Engineering at the State University of New York at Buffalo (UB). The efficacy of various soil washing extraction agents and leaching conditions were evaluated for removing lead from a lead-impacted soil sample (-8 to +200 mesh fractions) from Area 40 (Pulverizer) of the Site, provided by Hazen. The results of this soil leaching study are contained in the final report prepared by UB researchers entitled Evaluation of Soil Washington Extraction Agents ad Processes for Remediating Heavy Metal Contaminated Soil from Weyerhaeuser Area 40 Pulverizer," March, 1994.

SOLIDIFICATION/STABILIZATION SCREENING STUDY – UNIVERSITY OF CINCINNATI

The University of Cincinnati Center for GeoEnvironmental Science and Technology (CGEST) conducted solidification/stabilization screening tests on soil fines (-200 mesh) samples from Areas 36 and 40 (Glazemill and Pulverizer) of the Site provided by Hazen to evaluate the ability of three non-proprietary binder mixes to solidify and stabilize lead-impacted soils. The effects of lead-designed solidification/stabilization binder mixes on arsenic contained in the Area 36 sample were also investigated. The results of this screening study are contained in the final report prepared by CGEST researchers entitled "Solidification/Stabilization Screening for Integrated Lead Remediation Program", 1993.

BENCH-SCALE SOIL LEACHING STUDY – WEYERHAEUSER ANALYTICAL & TESTING SERVICES

To investigate the potential for utilizing non-proprietary leaching chemistries to remove arsenic from the Site soils, a leaching study was carried out at the laboratories of Weyerhaeuser Analytical and Testing Services (Weyerhaeuser ATS). Under this three-phase study, several leaching solutions were applied to -1/4" by +200 mesh fractions of combined soil samples from Area 18 and the Narrow Gage Railroad area. The effects of pH and liquid:solid ratio were investigated as well as performance under single-stage batch and simulated multistage countercurrent extraction regimes.

ARSENIC SPECIATION ANALYSIS – BATTELLE PACIFIC NORTHWEST LABORATORY

Battelle Pacific Northwest Laboratory (Battelle PNL) performed limited arsenic speciation analysis on soil samples from Areas 5, 25, 38, and the Narrow Gage Railroad area. The purpose of this study was to identify ionic species of arsenic and investigate the presence of organic arsenic forms in Site soils potentially impacted by acid production (Areas 5 and 25), the use of arsenic-based herbicides (Narrow Gage), or arsenic-based paint/ink (Area 38).

WET SCREENING TESTING ON ARSENIC-IMPACTED SOIL – HART CROWSER

Additional arsenic treatability studies were performed by Hart Crowser to better define the distribution of arsenic concentration with respect to soil particle size, through the use of particle size distribution testing and associated arsenic analysis of sized soil fractions. Samples were taken in the 250/500 – foot arsenic soil sampling grid area (including Areas 18 and 36) and the Narrow Gage Railroad area to supplement the results from the Hazen arsenic characterization study completed on samples from the same areas.

C.5.3 Lead-Impacted Soils

Fifty-five gallon composite soil samples were collected from each of the following Consent Decree Areas, one sample per Area: Area 7 (Kettle), Area 18 (Nitrator Number 1), and Area 36 (Lead Melting). Three soil samples were also collected from Area 40, one each from the Pulverizer, Glazemill, and Packhouse locations. The method of sample collection was detailed in the sampling plan for each Area; a brief summary is described below.

Previous sampling results were used as a basis for establishing sampling grids in each Area. For each grid area (containing 100 nodes), a random number generator was used to select 25 discrete sample locations. Sub-areas, within the identified Consent Decree Areas, shown by previous sampling results to exhibit lead concentration below the MTCA Method A screening level of 250 mg/kg were not included in the sampling regime. Only soils that contained lead concentrations greater than 250 mg/kg were included (i.e., "hot spots" were in effect, sampled).

The soil samples for each grid area were taken from shallow depth intervals that were chosen to represent the soil to be potentially remediated based on previous vertical delineation. Approximately two gallons of soil were collected from each of the 25 selected sampling locations. The 25 samples were then composited into one 50-gallon samples from each area samples were shipped to Hazen in 55-gallon drums.

Composite sampling was chosen to adequately represent each area because the resulting soil homogenization is a simulation of the mixing that would occur during full-scale excavation and ex-situ

treatment. It is not significant that this sampling approach did not allow a thorough evaluation of lead concentration variability on technology performance, since these issues will be addressed in any future pilot testing.

Upon receipt of the soil samples, Hazen personnel prepared and tested the samples as outlined in Figure C-1,"Flow sheet for Sample Preparation and Testing". Portions of the samples from Areas 36 and 40 (Glazemill and Pulverizer) were sent to CGEST for the solidification/stabilization screening study, and portions of the sample from Area 40 (Pulverizer) were sent to UB for the bench-scale soil washing evaluation.

C.5.4 Test Results

Complete results for all of the procedures conducted under the lead characterization study are detailed in the final reports prepared by Hazen for each of the six samples tested. The reports are entitled "Laboratory and Bench-Scale Studies for Characterizing Lead-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site", (August-October, 1993). The characterization results are summarized in Table C-3, "Summary of Lead-Soil Characterization Test Results"; the results are presented according to the information categories indicated in Section 4.0. An expanded summary of selected results is presented below in the same format as Table C-3, with limited interpretation.

REGULATORY ANALYSIS

The total lead concentrations, as determined by Method 6010 as part of the RCRA Appendix IX metals analysis, ranged from 260 mg/kg to 3,000 mg/kg for the six composite soil samples tested. The TCLP lead analyses results indicate that the soil samples from Areas 7, 18, 36, and 40 (Pulverizer and Glazemill) were not RCRA D008 hazardous, based on the regulatory limit of 5 mg/1. However, the soil sample from the Packhouse area of Area 40 exceeded the RCRA D008 regulatory threshold with a TCLP lead result of 18 mg/l; the corresponding total lead assay for this sample was 3,000 mg/kg.

TCLP analysis for the other metals and organics was also conducted. The results indicate that the Site soil does not exhibit the RCRA toxicity characteristic for any of these constituents.

There were other RCRA Appendix IX metals present, but these were at very low concentrations in all cases (the highest values were in the Packhouse and Pulverizer areas of Area 40, with zinc concentrations up to 2,500 mg/kg and moderate concentrations of copper and barium). No RCRA Appendix IX semi-volatile organics were present in the soil samples from Areas 7 and 40 (Glazemill and Packhouse). Extremely low levels (ppb) of semi-volatiles were present in the samples from Areas 18, 36, and 40 (Pulverizer). The semi-volatile constituents were polynuclear aromatic hydrocarbons (PAHs), which appear to be related to petroleum-based materials previously identified at the Site.

PHYSICAL ANALYSIS

Physical testing determined that the USDA standard soil classification was "sand" for the samples from Areas 7, 36, and 40, and "sandy loam" for the sample from Area 18. The results of the Atterberg Limits tests indicate that all six-soil samples were non-plastic, suggesting that soil excavation and processing can be managed in a straightforward manner.

The particle size distribution test results for the soil samples ranged from 38 to 61% cobbles/gravel (greater than 4 mesh), 32 to 53% sands (less than 4 and greater than 200 mesh), and 7 to 15% silt/clay (less than 200 mesh). This data indicates that the soil is amendable to standard physical screening or size classification-type soil washing treatment.

The moisture content results ranged from approximately 5 to 20%; loose and packed densities ranged from 1.1 to 1.6 grams/cubic centimeter (g/cm3) (or approximately 0.9 to 1.3 tons/cubic yard (tons/yd3)) and from 1.4 to 1.9 g/cm3 (or approximately 1.2 to 1.6 tons/yd3), respectively. The density data is given to represent ex-situ and in-situ soils, respectively, and reflects typical ambient moisture.

The pH of the soil samples ranged from 4.4 to 7.4 in a slurry (10% solids) of soil and demineralized water. Since the soil is mildly acidic to neutral, it will not be corrosive to excavation, materials handling, and other treatment equipment.

The physical analyses data collectively indicate that materials handling of the Site soils, including provisions for dust control should be uncomplicated and accomplished using conventional equipment and methods.

CHEMICAL ANALYSIS

Lead assays performed using Method 7420 on pulverized heads of whole soils for each of the six samples determined total lead concentrations (average of three readings) in the range of 180 to 3,600 mg/kg.

Anions considered likely to produce metal salts of low solubility were investigated in the soil samples. Those found to be present were sulfide, sulfate, phosphate, and carbonates. Total concentrations of these low solubility bonding/binding anions present in the samples from Areas 7, 18, and 36 ranged from approximately 2,500 to 2,650 ppm. The total concentrations of these anions in the samples from Area 40 ranged from approximately 4,200 to 10,700 ppm. In general, the level of anions in the soils is substantially greater (up to 10X) than the total lead concentration, indicating that low solubility metal salts can potentially form. Evidence of such compounds in the soils was provided using more sophisticated speciation techniques, as discussed in later sections.

The presence of soluble cations, which can compete with any soluble lead species for soil adsorption sites, soil ion exchange sites and binding anions, was also screened. Competing cations investigated were calcium, sodium, magnesium and potassium. The total leachable concentration of these cations present in the soil sample from Area 18 was very low at less than 50 ppm. The total leachable concentrations of cations present in the samples from Areas 7, 36, and 40 (Glazemill and Packhouse) were low, ranging from 50 to 100 ppm. The total leachable concentration of cations present in the soil sample from the Pulverizer area of Area 40 was also low at less than 300 ppm. These results indicate that soluble lead should be able to bind with soil at adsorption and ion exchange sites since competition is not severe. The results are consistent with sequential extraction speciation results discussed later.

Organic carbon (organic matter) content is important as it can bind with heavy metals and can potentially interfere with soil treatment processes. The organic carbon present in the soil samples from Areas 7, 18, and 36 ranged from 0.9 to 3.3%; no detectable levels of inorganic (fixed) carbon were reported for these samples. The organic carbon present in the samples from Area 40 ranged from 4.2 to 6.9%; the inorganic carbon content of these samples ranged from non-detect to 0.7%. These levels are considered moderately low from a soil treatment perspective and should not interfere with implementation or performance of soil washing, solidification/stabilization and other technologies. Sequential extraction was used to determine how much lead was associated with organic matter in the soil.

The results of X-Ray Fluorescence analysis (XRF) indicate the presence of a soil matrix comprising silica, alumina and iron oxide, with minor amounts of sodium, magnesium, potassium, phosphorus, sulfur, titanium and calcium. These results are to be expected for the type of soils present at the Site.

The Generalized Acid Neutralization Capacity (GANC), Reverse GANC (RGANC), and pH analyses data indicate that the soil samples ranged from slightly acidic to neutral and had little acidic or basic buffering capacity.

Results of the Sequential Extraction tests performed on selected sized fractions indicate that the majority of the lead was present in carbonate, specifically adsorbed, and in ion-exchangeable forms in samples from Areas 7, 18, and 36. For the Area 40 samples, the majority of the lead was shown to be associated with carbonates, iron and manganese oxides, and organic material.

Speciation analyses performed on selected sized fractions (gravity separated as appropriate) using Scanning Electron Microscopy (SEM) and X-Ray Diffraction (XRD) gave positive identification of lead in the following forms: lead carbonate, lead oxide, lead-iron oxide, lead-manganese oxide, lead-tin oxide, lead-aluminum oxide, lead sulfate, lead sulfide, lead silicates, lead phosphates, and metallic lead.

LEACHING/MOBILITY

The TLCLP lead analytical results are summarized in the Regulatory Analysis section, above.

The Equilibrium Leaching Procedure (ELP) results demonstrate very low lead solubility with synthetic acid rain (0/02 to 0.06 mg/l). The wet screening and Sequential Extraction test results also demonstrate that the lead species are relatively insoluble in water. However, the lead was more soluble in acetic acid solutions, as demonstrated by TCLP, GANC, and Sequential Extraction test data. These results indicate that lead is essentially immobile under normal environmental conditions, but can be mobilized under more rigorous leaching conditions.

Under the GANC and RGANC tests, one stage acidic and alkaline leaching at 20:1 liquid/solids ratio removed a range of 45 to 75% of the lead using 2N (normal) acetic acid, and a range of 13 to 40% of the lead using 2N sodium hydroxide. This indicates that lead is more readily mobilized under acidic, as opposed to basic, leaching conditions, but also indicates the presence of some extremely leach-resistant forms of lead.

SOLIDIFICATION/STABILIZATION SCREENING – UNIVERESITY OF CINCINNATI (CGEST)

Three non-proprietary binding mixes (two containing Portland cement and one containing a combination of cement kiln dust and fly ash) were used to screen solidification/stabilization technology, using -200 mesh fractions of soil samples from Areas 36 and 40 (Glazemill and Pulverizer) supplied to CGEST by Hazen. The following are the main results after 28 days of curing:

- All three design mixes passed TCLP, with lead leachate results ranging from 0.29 to 1.5 mg/l;
- The amount of lead that leached in the TCLP tests ranged from 0.44 to 2.73% of the total lead in the treated sample (initial untreated soil lead concentrations ranged from 2,900 to 3,200 mg/kg);
- The end point pH in the TCLP tests ranged from 5.2 to 8.2; and
- Unconfined Compressive Strength (UCS) data for the prepared samples of fine material with Portland cement binder ranged between 18 and 96 pounds per square inch. The fine material treated with kiln dust/fly ash did not set within the 28-day curing time and strength analysis could not be completed.

BENCH-SCALE SOIL WASHING STUDY – STATE UNIVERSITY OF NEW YORK, BUFFALO (UB)

The Department of Civil Engineering at the UB examined soil leaching through laboratory and bench-scale experiments. The efficacy of various soil leaching extraction agents and conditions was evaluated for removing lead from a lead-impacted soil sample (-8 to +200 mesh fractions) from Area 40 (Pulverizer). The results relevant to the evaluation of treatment technologies are summarized below:

- Soil lead was reduced to less than one-half the initial mean concentration of 1,401 +/- 244 mg/kg (95% confidence interval) in approximately one-third of the soil leaching experiments conducted.
- The lowest soil lead concentration (444 +/- 24 mg/kg) was achieved using hydrochloric acid at a pH of 1 with a liquids/solids ratio of 10:1, and at 25 deg C;
- Strong mineral acid extractants containing the chloride ion (HC1, HC1O4) were the most effective at removing lead from the soil;

- Significant lead removal (>50%) was achieved with an HC1 extraction solution at more moderate pH (~3) with the addition of EDTA as a complexing (chelating) agent; and

- TCLP lead values for the treated soil samples ranged from 0.3 to 0.5 mg/l.

C.5.5 Interpretation of Results

The Hazen soil characterization results which bear most significantly on the viability and effectiveness of solidification/stabilization, physical screening/soil washing, and smelting/thermal recovery technologies for remediating lead-impacted soils are listed in Table C-3. A brief discussion of key results from the characterization study, including implications for technology selection, is provided below. Results of the UB bench-scale soil washing tests and the CGEST solidification/stabilization screening tests are also discussed briefly, as appropriate.

SOLIDIFICATION/STABILIZATION

As indicated in Table 3, the characterization test information most relevant for the evaluation of solidification/stabilization remediation technology are GANC/RGANC, Metals Acid Neutralization Capacity (MANC)/Reverse MANC, organic carbon, RCRA Appendix IX semi-volatiles, TCLP, and moisture content.

As previously mentioned, the GTANC, RGANC, and pH analyses indicate that the Site soils sampled are mildly acidic to neutral and have little acidic or basic buffering capacity. The low buffering capacity is advantageous for a solidification/stabilization process because a minimum amount of binder would need to be added to buffer the soil, add reserve alkalinity, and drive lead solubility to low values. Based on the GASNC and MANC plots, the optimal pH (corresponding with the minimum lead solubility) for the Site soils for solidification/stabilization treatment lies in the range of moderately acidic to moderately basic (pH 4-10).

The carbon analysis results indicate that the organic carbon content in the Site soils (0.9 to 6.9%) is typically below levels (<10%) that would be expected to inhibit curing in a solidification/stabilization process. However, with regard to the stabilization of soil fines (-200 mesh), the CGEST study indicates that fly ash/kiln dust binders require longer curing times than Portland cement binders.

The RCRA Appendix IX semi-volatiles results indicate that semi-volatiles are either absent in the Site soils or present only in very low concentrations. These results indicate the application of a straightforward solidification/stabilization treatment. Some semi-volatile organics (sugars, alcohols) can be difficult to solidify/stabilize and may inhibit curing of treated material.

Only one of the six samples analyzed for TCLP exceeded the RCRA D008 regulatory threshold of 5 mg/l, the Area 40 (Packhouse) soil sample (18 mg/l). No other constituents exceeded TCLP threshold levels. These results indicate that if solidification/stabilization treatment were applied to the Site soils, the TCLP lead leachability criterion would be readily met. The solidification/stabilization screening performed by CGEST further supports this conclusion. Here, several conventional binding mixes were tested on soil fines from Areas 36 and 40 (Glazemill and Pulverizer) and yielded TCLP results well below the 5 mg/l RCRA Land Disposal Restriction (LDR) treatment standard, on the stabilized soils (0.29 to 1.5 mg/l).

The moisture content results for the Site soils were variable, ranging from approximately 5 to 20%. Moisture content is the most sensitive input variable in solidification/stabilization system design and requires careful control during implementation. At the levels measured in this case, based on the CGEST solidification/stabilization screening work where moisture contents were in the range of 40 to 50%, a requirement for make-up water is indicated.

PHYSICAL SCREENING/SOIL WASHING

The characterization test results of most relevance for the evaluation of physical screening/soil washing remediation technologies (as shown in Table C-3) are silt-clay content, lead distribution with regard to

particle size, surface area calculations, Atterberg Limits, organic carbon, GANC/RGANC, MANC/RMANC, and Sequential Extraction.

The silt/clay content of the Site soils, ranging between 7% and 15% for the samples tested, is quite low, and well below the 40% upper limit generally considered likely to limit the effectiveness of soil washing processes. The lead content in the silt/clay fraction of the Site soils is substantial at between 27% and 67% (corresponding concentrations range from 2,170 mg/kg to 10,600 mg/kg). These results suggest that significant beneficial volume reduction of lead-impacted soil could be achieved by separating the fine material from the whole soil.

Wet screen particle size distribution test results and corresponding chemical analyses results for separated size fractions indicate that between 84% and 97% of the soil lead is concentrated in the sand and silt/clay fractions. These fractions represent between 40% and 62% by weight of the whole soil. These results indicate that recovery of the cobbles/gravel fraction (representing between 38% and 60% of the whole soil) as "clean" material could be readily achieved using conventional wet screening or classification-type soil washing.

For water-based soil washing processes, the wet screening and Sequential Extraction test results indicate that, due to the low aqueous solubility of lead in Site soils, little or no water treatment provisions would be necessary.

The surface area calculations for each of the soil size fractions indicate, as expected, that the majority of the total soil surface area is contained in the silt/clay (64% to 83%), with less in the sands (17 to 36A%), and least in the cobbles/gravel (<1% to 2%). In the case of Areas 7 and 18, the lead distribution by size fraction increases with reducing size fraction and increasing surface area; these results indicate that lead bonding and binding is mostly surface related. The lead distribution for Areas 36 and 40 in the sand and silt/clay fractions does not proportionally follow surface area distribution; this indicates that lead is not only surface bound but is also associated with other particulate matter present in the soil matrix. In the case of Area 36 soils, SEM confirmed the presence of particulate lead.

The Atterberg Limits results show that the "sand" and "sandy loam" soil is non-plastic and should be both amenable to processing by physical screening equipment and easy to handle with conventional earth-moving equipment.

The organic carbon content of the Site soils (0.6% to 6.9%) is below the 10% limit generally considered as the value above which complications in a soil washing system can arise due to contaminant-carbon bonding. The inclusion of an organic carbon removal unit operation should not be necessary.

The GANC/RGANC results, as mentioned previously, show that the Site soils have little buffering capacity and would not require the addition of large amounts of acid in a chemically enhanced soil-washing scenario, to achieve a desired pH change.

The MANC/RMANC equilibrium lead concentrations in the aqueous phase occur between additions of 2 to 40 equivalents of acid/kg soil and between additions of 2 to 40 equivalents of base/kg. One stage acidic and alkaline leaching at 20:1 liquids/solids ratio can remove 45% to 75% of the lead using 2N acetic acid, or 13% to 40% lead using 2N sodium hydroxide. This indicates that acidic leaching has potential for use in a soil washing system to clean the Site soils, possibly in conjunction with wet screening and other physical (gravity, density, and high-energy attrition) treatment techniques. It is important to note, however, that even under severe leaching, lead removal is not complete as can be explained by the presence of some extremely leach-resistant forms of lead.

Sequential Extraction data show that lead is predominantly present, in the sized fractions examined, as carbonate, specifically adsorbed, and non-exchangeable forms, as well as being associated with iron and manganese oxides and organic material. This speciation information, which is supported by the SEM and

XRD results, also indicates that further lead removal could be achieved in a chemically enhanced (acidic) soil washing or leaching treatment scenario.

The results of the UB soil washing study provide further support for considering a chemically enhanced soil washing or leaching treatment application. The study showed that strong mineral acid extractants (specifically, hydrochloric and perchloric acid) at approximately pH 1 were effective at significantly reducing (by greater than 60%) lead concentrations of approximately 1,400 mg/kg in the sand fraction of Site soils. TCLP lead values for treated samples ranged from 0.3 to 0.5 mg/l. Less acidic conditions (pH 3) were also effective if a chelating agent (such as EDTA) was added. Other conclusions drawn from this study, such as those relating to the detailed behavior of complexing compounds and the effects of temperature and liquid/solids ratio, as well as aqueous extract treatment/recycling, will be essential issues to consider when deciding on whether to include leaching in a soil washing treatment approach.

SMELTING/THERMAL RECOVERY

The characterization test results of primary importance for the evaluation of smelting/thermal recovery remediation technology are total lead concentrations, moisture content, RCRA F039 listed metals, and soil mineralogy results.

Cost effective treatment of RCRA D008 wastes by smelters requires that lead content in the feed soils be on the order of 6 to 8% by weight or that the soil contain at least 80% silica (silica is a flux agent used in smelting). Since total average lead concentrations in the Site soils lie in a range of only 180 to 3,600 mg/kg (i.e. 0.4% maximum), and even the highest measured concentration in the silt/clay fraction is only 1.1%, the soils would not be suitable for smelting without intensive pre-processing to concentrate lead into the finer soil fractions. Silica content for Site soils ranges from 30 to 60%, which also indicates that the soil is not suitable as a silica flux replacement in smelting. Though the possibility of using smelting to treat concentrated soil-washing residuals does still exist, the technical and economic viability would require further investigation.

The maximum acceptable moisture content of a smelter feed soil is 10%. This may place a further constraint on the smelting application for the Site soils; concentrated fines/residuals from a soil washing process would likely need to be passed through an advanced dewatering step.

The RCRA F039 metals analyses indicate the present of other metals including: antimony, arsenic, barium, chromium, copper, nickel, selenium, vanadium, and zinc. Though present at low concentrations, these metals are potential impurities in certain smelter products that may restrict the facilities that could potentially handle the soils or treatment residuals.

The XRF analysis results indicate the presence of a silica-alumina-iron oxide matrix, with minor amounts of sodium, magnesium, potassium, phosphorus, sulfur, titanium, and calcium. The presence of these elements is expected in sandy and silty soils. They could, however, adversely affect the viability of smelting/thermal recovery as impurities in the system.

C.5.6 Arsenic-Impacted Soils

Soil samples for the Hazen study were collected from each of the following areas of the Site (one sample per area): Area 18, Area 36, and the Narrow Gage Railroad area. In addition to the characterization work performed by Hazen, Hart Crowser performed a laboratory wet screening study to better define the concentration distribution in relation to soil particle size on samples from these same areas. An additional five soil samples from the 250/500-foot arsenic sampling grid area (including Areas 18 and 36), and five samples from the Narrow Gage Railroad area were collected for the Hart Crowser study. The sample collection methods are summarized in the following paragraphs.

Previous sampling results were used as a basis for establishing sampling grids in each area. For the Area 18 and 36 grids, a random number generator was used to select 25 discrete sample locations. Some parts of the Site, within targeted areas, shown by previous sampling results to exhibit arsenic

concentrations below the Site background level of 32 mg/kg were not included in the sampling regime. The Narrow Gage area was segregated into 100 linear segments along the railroad track; 25 segments were randomly selected for collection of three-point composite samples, which were composited into a 55-gallon sample. For the Hart Crowser screening study, ten five-point composite samples were collected at locations identified during the RI (including the December 1993, Phase I Arsenic Sampling) as areas of elevated arsenic.

The soil samples for each grid area were taken from a shallow depth interval (0-1 foot) chosen to represent the soil to be potentially remediated based on previous vertical delineation. Composite sampling was chosen to adequately represent each area because the resulting soil homogenization is a simulation of the mixing that would occur under full-scale excavation and ex-situ treatment operations. Arsenic concentration variability issues will be more specifically addressed in any future pilot testing.

Approximately two gallons of soil were collected from each of the 25 selected sampling locations for the Hazen study. The 25 samples were then composited into one representative 50-gallon sample for each area and shipped to Hazen in 55-gallon drums. Upon receipt of the soil samples, Hazen personnel prepared and tested the samples. Portions of the samples from Area 18 and the Narrow Gage Railroad area were sent to Weyerhaeuser ATS for the bench-scale soil leaching study.

C.5.7 Test Results

Complete results for all the procedures conducted under the arsenic characterization study are detailed in the final report prepared by Hazen for each of the three samples tested. The reports are entitled "Laboratory and Bench-Scale Chacterization Studies for Arsenic-Contaminated Soil from DuPont/Weyerhaeuser Remediation Site," (March-April, 1994). The characterization results are summarized in Table 4, "Summary of Arsenic-Soil Characterization Test Results". The results are presented according to the information categories indicated in Section 4.0. An expanded summary of selected results is presented in the following sections, with limited interpretation. Further data interpretation, as applicable to specific remediation technology categories, is provided in Section 5.4.2.

REGULATORY ANALYSIS

The TCLP arsenic analyses results for each of the soil samples were less than 0.07 mg/l and indicate that the samples were not RCRA D004 hazardous, based on the regulatory limit of 5 mg/l. TCLP analysis for the other metals and organics was also conducted on the sample from Area 36; the results indicate that the soil does not exhibit the RCRA hazardous toxicity characteristic for any of these constituents.

PHYSICAL ANALYSIS

Physical testing determined that the USDA standard soil classification was "sand" for the soil samples from each of the three Areas. The results of the Atterberg Limits tests indicate that the samples from Areas 36 and 18 (by inference from analysis performed on a different composite sample from Area 18) were non-plastic.

The particle size distribution test results for the soil samples ranged from 52% to 66% cobbles/gravel, 26 to 39% sands, and 8 to 10% silt/clay.

For the Area 36 sample, the moisture content measured 5% and the loose and packed densities measured 1.6 and 1.9 g/cm3 (or approximately 1.3 and 1.6 tons/yd3), respectively. Also, the pH of a soil slurry measured 6.3, which indicates that the soil will not be corrosive to excavation, materials handling, or other treatment equipment.

Many of the physical analyses performed on the lead samples were not considered necessary when studying arsenic-impacted soils because much of the general information gathered from the lead characterization/treatability studies could be applied to soils across the Site for the purposes of evaluating potential treatment technologies. The physical analyses data collectively indicate that materials handling of the Site soils will not be complicated.

CHEMICAL ANALYSIS

Arsenic assays performed using Method 7060 on pulverized heads of whole soils for each of the three samples tested determined total arsenic concentrations in the range of 29 to 353 mg/kg.
Concentrations of low solubility bonding/binding anions and soluble cations, and organic carbon content for the Area 36 sample were measured at 2,640 ppm, 77 ppm, and 0.9%, respectively as reported under the lead characterization study. Although these analyses were not performed on the Area 18 sample, existing data from the lead characterization study composite sample from Area 18 indicates that the soils from Areas 18 and 36 have similar chemical characteristics.

The XRF analyses data indicate the presence of a silica=alumina-iron matrix with lesser amounts of sodium, magnesium, potassium, and calcium. These results are to be expected for the type of soils present at the Site and are consistent with the results from the lead characterization study.

The GANC/RGANC and pH analyses data show that the soil samples were essentially neutral and had no appreciable acidic or basic buffering capacity.

Sequential Extraction test results for selected sized fractions indicate that, for all samples, the occurrence of arsenic in the selected sized fractions examined was mostly in association with iron oxides and the organic portion of the soils.

Speciation analyses performed on selected sized fractions (gravity separated as appropriate) using SEM confirmed and Sequential Extraction test results that arsenic as associated with iron oxides and with the organic portion of the soil. SEM also gave positive identification of arsenic in the following forms or associations: iron-arsenic-phosphate, potassium-iron-sulfate, silicates, manganese oxides, and lead-arsenic-sulfate. An overall assessment of the SEM results suggests that arsenic exists predominantly in the +5 valence state.

LEACHING/MOBILITY

The TCLP arsenic analytical results are summarized in the Regulatory Analysis section, above.

Under the GANC and RGANC tests, one stage acidic/basic leaching at 20:1 liquids/solids ratio removed a range of two to four percent of the arsenic using 2N (normal) acetic acid, and 74% to 80% using 2N sodium hydroxide, respectively. This indicates that arsenic is more readily mobilized under basic, rather than acidic, leaching conditions. In general, the solubility of arsenic in the RGANC test was ten times higher than the corresponding solubility in the GANC test. This can be explained by reference to the sequential extraction results, which indicate the predominant arsenic forms and associations identified in the Site soils. Arsenic compounds in the +5 valence state are soluble under oxidizing conditions and at high pH.

The arsenic was more soluble in weak sodium hydroxide solutions than under moderate acetic acid leaching conditions, as demonstrated by TCLP, GANC, and Sequential Extraction test data. These results indicate that arsenic is essentially insoluble and immobile under normal environmental conditions, but can be mobilized under more rigorous high pH (caustic) leaching conditions.

BENCH-SCALE SOIL LEACHING STUDY – WEYERHAEUSER ATS

The potential of solutions of sodium hydroxide and sodium carbonate (at varying strengths, with and without phosphate addition) to extract arsenic from -1/4" to +200m fractions of the Site soil were investigated in single-stage batch extraction experiments under a study performed by Weyerhaeuser ATS. The effect of changes in liquid/solids ratio was evaluated, and the relative leaching efficiencies achieved for several sub-fractions of the soil sample examined. A simulation of a potential multi-stage countercurrent field extraction process was also conducted. The principal finds of this study are as follows:

- Soil arsenic concentrations were reduced by a maximum of 57% from a starting concentration of between 103 and 113 mg/kg in a single-stage batch extraction at an end point pH of 11.5 with 0.02 N sodium hydroxide and a liquid/solids ratio of 20:1. Similar performance was achieved with a sodium carbonate solution, although asignificantly higher reagent dose (e.g. 0.33 N) was necessary.

- A phosphate solution at near neutral pH was able to reduce arsenic concentrations by up to 10%. Extraction efficiencies of up to 25% were achieved in experiments evaluating the performance of phosphate in conjunction with alkali; appreciable pH buffering by phosphate was, however, seen, particularly in solutions including sodium carbonate.

- Leaching performance was shown to vary as a function of end point pH under the extraction experiments (increased sharply with increasing pH over the range of reagent strengths tested).

- Caustic leaching performance was not constrained by arsenic solubility under tests involving liquid/solids ratios of between 5:1 and 20:1.

- A somewhat greater percentage reduction in soil arsenic concentration was seen for the larger sub-fraction in a single-stage batch extraction examining relative leaching efficiencies for three sub-fractions of the tested soil.

- The overall leaching performances achieved under single stage batch and simulated multi-stage countercurrent extractions were comparable.

WET SCREENING TESTING – HART CROWSER

A total of five composite soil samples from the 250/500-foot arsenic sampling grid area and five samples from the Narrow Gage Railroad area were taken for wet screening analysis. The analysis involved separation of the whole soil into a series of size fractions for subsequent total arsenic analysis. The data generated were combined with the wet screening data derived for arsenic-impacted soil samples from Area 18, Area 36 and the Narrow Gage Railroad area under the Hazen study, the presence of higher arsenic concentrations in the smaller size fractions was consistently shown by these results. The combined results were subjected to a statistical evaluation (involving calculation of cumulative mean arsenic concentrations with reducing size fraction) to allow various “cut points” to be examined in consideration of potential remediation scenarios featuring soil size separation.

SPECIATION ANALYSIS – BATTELLE PACIFIC

Data from the Battelle Pacific speciation study indicate that, in the areas of the Site sampled (Areas 5, 25, 38, and Narrow Gage Railroad), arsenic is largely present as As(V). As(III), the common reduced form, accounts for less than one percent of the total soil arsenic. One sample in the Narrow Gage Railroad area contained about four percent organic (methylated) arsenic, which indicates the possible use of organic arsenic-based herbicides on the Site.

SOLIDIFICATION/STABILIZATION SCREENING – UNIVERSITY OF CINCINNATI (CGEST)

Three non-proprietary binding mixes (two featuring Portland cement and one featuring a combination of cement kiln dust and fly ash) were used to stabilize the -200-mesh fraction of a soil sample from Area 36 supplied to the University by Hazen. The initial arsenic concentration in the soil fraction was 205 mg/kg. All three design mixes passed TCLP following a 28-day curing period, with arsenic leachate results below the method detection limit (<0.1 mg/l).

C.5.8 Interpretation Results

The soil characterization results which bear most significantly on the viability and effectiveness of solidification/stabilization, physical screening/soil washing, and smelting/thermal recovery technologies for remediating arsenic-impacted soils are listed in Table C-2. A brief discussion of key results from the

characterization study, including implications for technology selection, is provided in the following sections. The results of the CGEST solidification/stabilization screening tests, the Hart Crowser wet screening testing, and the Weyerhaeuser ATS bench-scale soil leaching study are also discussed briefly, where appropriate.

SOLIDIFICATION/STABILIZATION

The characterization test information most relevant for the evaluation of solidification/stabilization remediation technology are GANC/RGANC, organic carbon, RCRA Appendix IX semi-volatiles, TCLP (inorganic and semi-volatiles), and moisture content.

As previously mentioned, the GANC/RGANC and pH analyses indicate that the Site soils sampled are neutral and have essentially no acid or basic buffering capacity. The low buffering capacity is advantageous for a solidification/stabilization process because it minimizes the amount of solidification/stabilization binder that would need to be added to buffer the soil and maintain the arsenic solubility at low values. Based on the GANC and RGANC plots only, the optimal pH for the Site soils (corresponding to minimum solubility) for solidification/stabilization treatment of arsenic is in the acidic range (pH 3 to 4). This is consistent with the speciation results since As(V) species are known to be very insoluble in acid. To ensure a practical treatment and sensible pH conditions, the target end point pH under TCLP testing should be only a slightly acidic pH 5 to 7.

The carbon analysis results indicate that the organic carbon content in the Area 36 Site soils (<1%), which is a measure of the soil's natural ability to bond and bind with arsenic and other constituents, is typically below levels (<10%) that would be expected to inhibit curing in a solidification/stabilization process. With regard to the stabilization of soil fines (-200 mesh), the CGEST study indicates that fly ash/kiln dust binders require longer curing times than Portland cement binders.

The RCRA Appendix IX semi-volatile organics results (produced for the Area 36 soil sample) indicate that semi-volatiles are either absent in the Site soils or present only in low concentrations. These results support the application of solidification/stabilization treatment since semi-volatiles can be difficult to stabilize/solidify and may inhibit curing of the treated material.

None of the TCLP results exceeded the RCRA D004 regulatory threshold of 5 mg/l and no other constituents exceed TCLP threshold levels. These results indicate that if solidification/stabilization were to be applied to the Site soils, the TCLP arsenic leachability criterion would be readily met. The solidification/stabilization screening performed by CGEST further supports this conclusion. Here, several conventional binding mixes were tested on soil fines (-200 mesh) from Area 36 and yielded TCLP results well below the 5 mg/l RCRA LDR treatment standard on the stabilized soils (measured levels were less than the method detection limit, 0.1 mg/l). It is important to note that the Area 36 soils analyzed in the CGEST study were also impacted with lead. Typically, lead stabilization requires alkaline conditions, while arsenic stabilization is best performed under more neutral to slightly acidic conditions. For the binders tested, the study showed that a slightly alkaline "balance" can be struck (end point pH's in the range 5.2 to 8.2 under TCLP testing) that will stabilize lead and also will not leach excessive arsenic. This is an important finding, warranting further consideration in the event that fines generated from a soil washing system campaigning a mixture of lead- and arsenic-impacted soils require further solidification/stabilization treatment.

The moisture content results for the Site soils were fairly variable, ranging form approximately 5% to 10% for Area 18 (by inference from results for the lead characterization study sample from the same Area) and Area 36. Moisture content is the most sensitive input variable in solidification/stabilization system design and requires careful control during implementation. At the levels measured in this case, based on the CGEST solidification/stabilization screening work where moisture contents were in the range of 40% to 50%, a requirement for make-up water is indicated.

PHYSICAL SCREENING/SOIL WASHING

The characterization test results of most relevance for the evaluation of physical screening/soil washing remediation technologies are silt/clay content, arsenic distribution with regard to particle size, surface area calculations, Atterberg Limits, organic carbon, GANC/RGANC, MANC/RMANC, and Sequential Extraction.

The silt/clay content of the Site soils, ranging between eight and ten percent for the samples tested, is well below the 40% limited generally considered likely to limit the effectiveness of soil washing processes. The arsenic content in the silt/clay fraction of the soils is substantial at between 51% to 71% (corresponding concentrations range between 186 and 2,550 mg/kg) and suggests that significant beneficial volume reduction of arsenic-impacted soil could be achieved by separating the fine material from the whole soil.

Particle size distribution test results and corresponding chemical results for separated size fractions under the Hazen and Hart Crowser wet screening studies indicate that between approximately 79% and 92% of the soil arsenic is concentrated in the sand and silt/clay fractions. These fractions represent between 27% and 56% of the whole soil. These results indicate that recovery of the cobbles and gravel fraction (representing between 44% and 73% of the whole soil) as "clean" material could be readily achieved using conventional wet screening or classification-type soil washing.

For water-based soil washing processes, the wet screening and Sequential Extraction test results indicate that, due to the low aqueous solubility of arsenic in Site soils under near-neutral pH conditions, little or no water treatment provisions would be necessary.

The surface area calculations for each of the soil size fractions of the Area 36 sample show, as expected, that the majority of the total soil surface area is contained in the silt/lay (~80%), with less in the sands (~20%), and least in the cobbles/gravel (<2%). The arsenic distribution by size fraction for the Area 36 sample increases with reducing size fraction and increasing surface area; these results indicate that arsenic bonding and binding is mostly surface related.

The Atterberg Limits results for the Area 36 soil sample show (as seen generally for all other Site samples tested) that the "sand" soil is non-plastic and should be amenable to processing by physical screening equipment and easy to handle by conventional earth-moving equipment.

The organic carbon content of the Area 36 soils is 0.9%, significantly below the 10% limit generally considered as the value above which complications in a soil Washington system can arise due to contaminant/carbon bonding. Although organic carbon data for the other arsenic characterization soil samples are not available, information from the lead characterization study (Section 5.3) indicates that the organic content of soils across the Site does not vary significantly. The inclusion of an organic matter removal unit operation in a soil washing process to address soil organic carbon should not be necessary.

The GANC/RGANC results show that the Site soils have little buffering capacity and will not require the addition of large amounts of base in a soil-washing scenario to achieve a desired pH change.

In the consideration of MANC/RMANC equilibrium arsenic concentrations, high acetic acid concentrations (approximately 14 equivalents of acid/kg soil) were required to leach arsenic, whereas RGANC indicated that about two base equivalents/kg soil were required for optimum leaching. One stage acidic/alkaline leaching at 20:1 liquids/solids ratio can remove two to four percent of the arsenic using 2N acetic acid, but amounts of between 74% and 80% can be removed using 2N sodium hydroxide. These results indicate that chemical leaching using alkaline reagents has potential for use in a soil washing process to clean the Site soils, possibly in conjunction with wet screening and other physical treatment techniques. Conversely, mildly acidic conditions might be employed in a soil washing treatment scenario to ensure that arsenic remains concentrated in the fines fraction, which could subsequently be stabilized.

Sequential Extraction data show that arsenic is predominantly present, in the sized fractions examined, in association with iron and manganese oxides and organic material. The results indicate that arsenic

species are not soluble in water or under acidic conditions, but can be solubilized under caustic conditions (the organic matter sequential extraction step uses sodium hydroxide and phosphate as the leachant). This speciation information supports the conclusion that chemically enhanced (basic) soil washing or leaching treatment could be used to liberate arsenic from the soils.

The results of the Weyerhaeuser ATS leaching study corroborate the leaching data generated under the Hazen study, and further demonstrate the potential for a chemically enhanced soil washing application, in that they show alkaline solutions to be effective in removing arsenic from the Site soils. In single-stage batch extractions, solutions of sodium hydroxide at approximately pH 11.5 removed up to 57% of arsenic from sand fractions containing starting concentrations of around 100 mg/kg; sodium carbonate solutions gave similar results but required significantly higher reagent doses. A strong dependency on pH was shown in the leaching experiments and there was no evidence that leaching performance was constrained by arsenic solubility. A batch extraction examining relative leaching efficiencies between sub-fractions of the tested soil showed a somewhat greater performance for the larger sub-fraction, and no significant improvements in overall leaching performance were seen in simulated multi-stage countercurrent tests. These various issues will require further investigation before decisions can be made for including leaching in a soil washing treatment application. Similarly, issues including solids hold-up times, temperature and aqueous extract treatment/recycling will need to be addressed.

SMELTING/THERMAL RECOVERY

The characterization test results of chief importance for the evaluation of smelting/thermal recovery remediation technology are total arsenic concentrations, moisture content, RCRA F039 listed metals, and soil mineralogy results.

Cost effective treatment of RCRA D004 waste by secondary smelters requires that arsenic content in the feed soil be on the order of that for lead recovery, i.e., 6-8% by weight. Since total average arsenic concentrations in the Site soils lie in a range of only 29 to 353 mg/kg (i.e., 0.035% maximum), and even the highest measured concentration in the silt/clay fraction is only 0.25%, the soils would not be suitable for smelting without intensive pre-processing to concentrate arsenic into the finer soil fractions. Because of the relatively low arsenic concentrations, the likelihood that smelting would be suitable to treat concentrated soil washing residuals is low.

The maximum acceptable moisture content of a smelter feed soil is 10%. This may place a further constraint on the smelting application for the Site soils; concentrated fines/residuals from a soil washing process would probably need to be passed through a dewatering step.

The RCRA F039 listed metals analyses indicate the presence of antimony, barium, chromium, copper, nickel, selenium, vanadium, zinc, and lead. Though present at low concentrations, these metals are potential impurities, which could adversely impact smelting/thermal recovery processes.

The XRF analysis indicates the presence of a silica-alumina-iron oxide matrix with minor amounts of sodium, magnesium, potassium, phosphorus, sulfur, titanium, and calcium. The presence of these elements is expected in sandy and silty soils. They could, however, adversely affect the viability of smelting/thermal recovery as impurities in the system.

Table C-1 – Soil Characterization Procedures by Category

Category	Test Group	Information Use	Test Types
Whole Soil	PHYSICAL HANDLING	Provides information on how soil will behave during excavation and in treatment processes.	Surface Area Calculations (Lead only) Particle Size Distribution Soil Plasticity (Atterberg Limits) USDA Soil Classification Density (loose and packed) Moisture Content
	REGULATORY	Provides information to enable regulatory waste code classification.	Total Constituent Concentration TCLP Constituent Concentrations RCRA Appendix IX Total Metal Concentration TCLP (inorganics and semiVOCs) RCRA Appendix IX Inorganics RCRA Appendix IX SemiVOCs pH
	SOIL CHEMISTRY	Provides information on contaminant/soil interactions to further general understanding of soil properties and to be used in evaluating treatment technologies.	Bonding/Binding Anions Soluble Cations Carbon (total/inorganic/organic) GANC/RGANC

Table C-1 – Soil Characterization Procedures by Category (Continued)

Category	Test Group	Information Use	Test Types
Whole Soil (Continued)	SOIL CHEMISTRY (Continued) -Anions	Provides an indication of availability of bonding/binding sites for heavy metals (anions can combine with metals to form low solubility salts).	Sulfide Sulfate Phosphate Carbonates/Bicarbonates
	-Soluble Cations	Can compete with heavy metals for bonding/binding sites (ion-exchange sites, anions).	Calcium Sodium Magnesium Potassium Manganese Iron
	-Carbon Balance	Organic carbon can bond/bind with metals.	Total Carbon Inorganic (fixed) Carbon (by TGA) Organic Carbon (by difference)
	-Alkalinity/Acidity, Buffering Capacity	Provides, and indications of, how soil will respond to acid/base changes.	pH Redox GANC/RGANC

Table C-1 – Soil Characterization Procedures by Category (Continued)

Category	Test Group	Information Use	Test Types
Whole Soil (continued)	MOBILITY AND LEACHABILITY	Provides information on mobility in, and availability to, the environment.	TCLP (inorganics and semiVOCs) Equilibrium Leaching Procedure (Lead only) (SAR-F039 List Metals) MANC during GANC/RGANC GANC/RGANC
Soil Fractions	REGULATORY	Provides information on metals of regulatory concern to enable proper management/disposal.	F039 List Metals
	SOIL CHEMISTRY	Provides information on contamination/soil interactions to further general understanding of soil properties and to be used in evaluating treatment technologies.	Cation Exchange Capacity (CEC) (Lead only) Total Iron and Manganese Total Chloride
	SOIL CHEMISTRY -Speciation	Provides information on what specific chemical forms of metals are present and how metals are bound within soil. Aids in determination of impact to environment and technology selection.	Sequential Extraction Scanning Electron Microscopy (SEM) X-Ray Diffraction (SRD) X-Ray Fluorescence (SRF) - Mineralogy

Table C-2 – Soil Characterization Procedures by Treatment Technology

Category	Treatment Technology	Test Types
Whole Soil and Fractions	Stabilization/Solidification	GANC/RGANC MANC Total Carbon, Inorganic and Organic Carbon RCRA Appendix IX SemiVOCs TCLP (inorganic and semiVOCs) Moisture Content Speciation Analysis of Fractions
	Physical Screening/Soil Washing	Constituent Distribution with Particle Size Surface Area Calculations Silt/lay Content MANC during GANC/RGANC Organic Carbon Speciation Analysis of Fractions
	Smelting/Thermal Recovery	Total Constituent Concentration Constituent Distribution with Particle Size XRF Scan (mineralogy) Silica Content (by XRF) Moisture Content Total Carbon

Table C-3 – Lead-Soil Characterization Study-Hazen Research-Summary of Test Results

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Sample Verification (Pulverized Head)						
Total Lead, mg/kg (avg. of three) TCLP Lead RCRA Hazardous, D008	475 1.7 no	180 0.3 no	870 4.6 no	2,110 1.3 no	660 1.2 no	3,570 21.4 yes
Physical Materials Handling						
Particle Size Distribution (cobbles/gravel, sand, silt/clay), % Soil Plasticity (Atterberg Limits) USDA Soil Classification Density (loose/packed), g/cm3 Moisture Content, % pH (10% solids slurry)	56/32/12 non-plastic sand 1.3/1.4 12.2 4.4	38/53/9 non-plastic sandy loam 1.3/1.5 9.8 6.0	61/32/7 non-plastic sand 1.6/1.9 5.0 6.3	43/42/15 non-plastic sand 1.1/1.5 20.5 7.3	60/32/8 non-plastic sand 1.2/1.6 11.7 5.4	53/37/10 non-plastic sand 1.1/1.4 17.0 5.8
Regulatory						
Total Lead, mg/kg (RCRA Appendix IX) TCLP Lead, mg/l RCRA Appendix IX Inorganics RCRA Appendix IX Semi-VOCs	380 2.0 none of concern none of concern	260 0.3 none of concern low level semi-VOCs	540 4.7 none of concern low level semi-VOCs	1,700 1.4 none of concern low level semi-VOCs	590 0.9 none of concern none of concern	3,000 18 none of concern none of concern

Table C-3 – Lead-Soil Characterization Study-Hazen Research-Summary of Test Results (Continued)

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Soil Chemistry						
Bonding/Binding Anions, ppm total	2,600	2,500	2,640	10,650	4,175	7,190
Soluable Cations, ppm total	81	24	77	261	66	94
Carbon (total/inorganic/organic), %	3.3/0/3.3	2.5/0.7/1.8	1.1/0.2/0.9	6.9/0/6.9	4.2/0/4.2	4.2/0/4.2
Net Acid/Base Potential, tons of CaCO3/1000 tons of soil	-10.9	-7.5	1.0	2.8	-24.4	-16.1
GANC/RGANC	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered	unbuffered
Equivalents acid to reach pH,4	2	2	2	4	2	2
Equivalents base to reach pH>10	2	2	2	2	2	2
Leaching and Mobility						
TCLP Lead, mg/l	2.0	0.3	4.7	1.4	0.9	18.0
Equilibrium Leaching Procedure						
Leachate lead, mg/l	0.019	0.05	0.032	0.02	0.059	0.064
Equilibrium partition coefficient, K	2.2E+04	1.0E+04	2.0E+04	8.1E+04	1.1E+04	6.3E+04
MANC/RMANC equilibrium lead conc. (acid/base), mg/l	15/7	4/3	33/8	48/14	15/13	90/25

Table C-3 – Lead-Soil Characterization Study-Hazen Research-Summary of Test Results (Continued)

Whole Soil Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Speciation						
Sequential Extraction	Majority of lead in carbonate, specifically adsorbed, and exchangeable forms	Majority of lead in carbonate, specifically adsorbed, and exchangeable forms	Majority of lead in carbonate, specifically adsorbed, and exchangeable forms	Majority of lead associated with carbonates, iron and manganese oxides, and organic material	Majority of lead associated with carbonates, iron oxides, and organic materials	Majority of lead associated with carbonates, iron and manganese oxides, and organic material
SEM/XSD	Positive ID of lead sulfate and lead sulfide	Positive ID of lead carbonate, lead oxide, and lead-manganese oxide	Positive ID of lead carbonate, lead silicate, metallic lead, and lead-iron oxide	Positive ID of lead carbonate, lead silicate, lead oxides, and lead-iron oxide	Positive ID of lead silicate, lead oxides, lead phosphate, and lead-iron oxide	Positive ID of lead oxides (manganese, tin, aluminum, and iron)
Soil Chemistry						
Cation Exchange Capacity, Meq/100g Chloride, mg/kg Iron/Manganese, mg/kg	34 100 23,350/620	84.2 <100 34,238/838	49.6 <100 39,979/775	98.1 500 63.630/990	111.0 100 30,050/1,150	95.9 260 95,820/1,090
Regulatory						
F039-List Metals	As, Pb, Ba, Cr	As, Pg, Ba, Cr	As, Pb, Ba, Cr	Pb, Ba, Cr, Zn	As, Pb, Zn	As, Pb, Ba, Cu, Zn

Table C-3 – Lead-Soil Characterization Study-Hazen Research-Summary of Test Results (Continued)

Whole Soil & Fraction Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Physical Screening/Soil Washing						
Silt/Clay Content, %	12	9	7	15	8	10
Lead Distribution by Particle Size (% of total lead in cobbles/gravel, sand, silt/clay)	16/29/55	3/30/67	10/63/27	5/56/39	13/48/39	3/58/39
Total Lead Conc. By Particle Size (cobbles/gravel, sand, silt/clay), mg/kg	130/420/2,170	50/310/3,970	180/2,100/3,980	195/2,310/4,350	130/950/3,320	130/4,260/10,600
Surface Area Calculations (% of total surface area in cobbles/gravel, sand, silt/clay)	<1/17/83	<1/36/64	2/22/76	<1/18/82	1/23/76	1/20/79
Organic carbon, %	3.3	1.8	0.9	6.9	4.2	4.2
GANC/RGANC Equivalents acid to reach pH<4 Equivalents base to reach pH>10	Unbuffered 2 2	Unbuffered 2 2	Unbuffered 2 2	Unbuffered 4 2	Unbuffered 2 2	Unbuffered 2 2
MANC/RMANC equilib. lead Conc. (acid/base), mg/l	15/7	4/3	33/8	48/14	15/13	90/25
% Lead Leached under MANC/RMANC (acid/base)	60/29	44/30	75/18	45/13	45/40	50/14

Table C-3 – Lead-Soil Characterization Study-Hazen Research-Summary of Test Results (Continued)

Whole Soil & Fraction Procedures	Area 7 (Kettle)	Area 18 (Nitrator)	Area 36 (Lead Melt)	Area 40 (Pulverizer)	Area 40 (Glazemill)	Area 40 (Packhouse)
Stabilization/Solidification						
GANC/RGANC MANC/RMANC Minimum Lead Concentration (mg/l)pH Range	Unbuffered <1/5.5 to 6.8	Unbuffered <1/4.6 to 6.1	Unbuffered <1/4.8 to 8.5	Unbuffered 1/6.3 to 12.5	Unbuffered 1/5.1 to 8.9	Unbuffered 1/6.3 to 7.8
Carbon (total/inorganic/organic), % RCRA Appendix IX SemiVOCs	3.3/0/3.3 none of concern	2.5/0.7/1.8 low level semiVOCs	1.1/0.2/0.9 low level semiVOCs	6.9/0/6.9 low level semiVOCs	4.2/0/4.2 none of concern	4.2/0/4.2 none of concern
TCLP Lead, mg/l Moisture Content, %	2.0 12.2	0.3 9.8	4.7 5.0	1.4 20.5	0.9 11.7	18 17.0
Smelting/Thermal Recovery						
Total Lead, mg/kg	380	260	540	1,700	590	3,000
Lead Distribution by Particle Size (% of total lead in cobbles/gravel, sand, silt/clay)	16/29/55	3/30/67	10/63/27	5/56/39	13/48/39	3/58/39
Total Lead Conc. By Particle Size (cobbles/gravel, sand, silt/clay), mg/kg	130/420/2,170	50/310/3,970	180/2,100/3,980	195/2,310/4,350	130/950/3,320	130/4,260/10,600
Silica Content (weight % in Cobbles/gravel, sand, silt/clay)	-/69/59	-/-/33	-/-/45	-/56/28	-/-/28	-/50/29
Moisture Content, %	12.2	9.8	5.0	20.5	11.7	17.0
Total Carbon, %	3.3	2.5	1.1	6.9	4.2	4.2

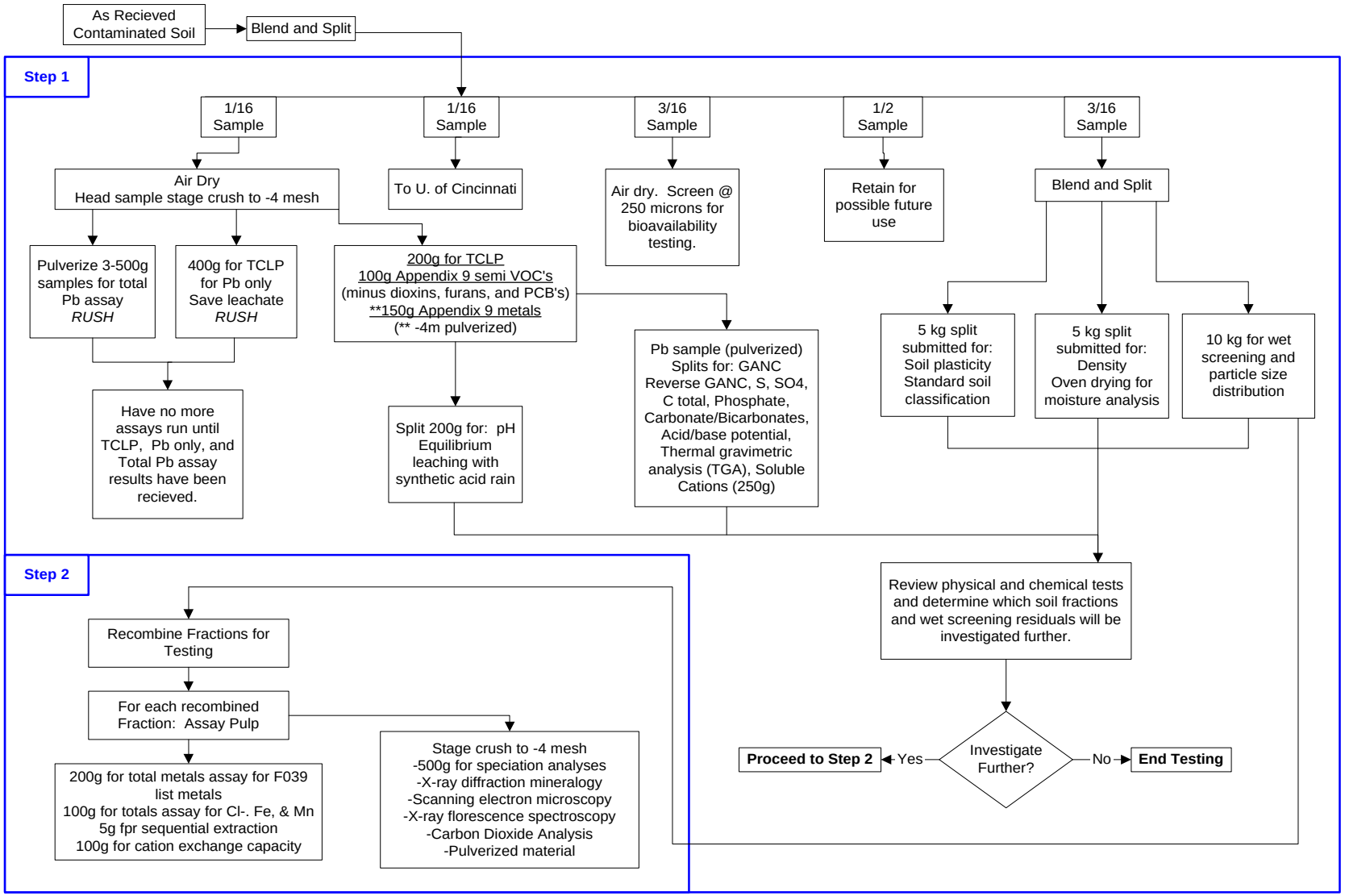
Table C-4 – Arsenic-Soil Characterization Study-Hazen Research-Summary of Test Results

Whole Soil Procedures			
Physical Materials Handling	**Area 18**	**Area 36**	**RR Track Area**
Particle Size Distribution (cobbles/gravel, sand, silt/clay), %	66/26/8	60/30/10	52/39/9
Arsenic Distribution by Particle Size (% of total arsenic in cobbles/gravel, sand, silt/clay, slimes)	12/28/35/25	18/30/47/5	7/22/63/8
pH (10% solids slurry)		6.2	
Regulatory			
TCLP Arsenic, mg/l (conducted at 4.9 pH)	<0.03	<0.07	<0.03
RCRA Hazardous, D004	no	no	no
Soil Chemistry			
Total Arsenic, mg/kg	41	29	353
GANC/RGANC	unbuffered	unbuffered	unbuffered
Equivalents acid to reach pH<4	>14	>14	2
Equivalents base to reach pH>10	2	<2	2
Leaching and Mobility			
TCLP Arsenic, mg/l	<0.03	<0.07	0.03
MANC/RMANC minimum arsenic Concentration (acid/base), mg/l: pH	0.007:3.8/ 0.05:5.0	0.007:3.7/ 0.035:8.8	0.045:3.2/ 0.28:5.2
MANC/RMANC equilibrium arsenic Concentration (acid/base), mg/l	0.25/2.7	0.06/1.5	2/22
% Arsenic Leached under GANC/RGANC (acid/base)	3/75	4/80	2/74

Table C-4 – Arsenic-Soil Characterization Study-Hazen Research-Summary of Test Results (Continued)

Soil Fraction Procedures			
Speciation	**Area 18**	**Area 36**	**RR Track Area**
Sequential	Majority of arsenic associated with the organic fraction and, to a lesser extent, with the non-crystalline iron oxide fractions.	Majority of arsenic associated with the organic and non-crystalline iron oxide fractions and to a lesser extent, with the crystalline iron oxide fraction.	Majority of arsenic associated with the crystalline iron oxide and organic fractions and, to a lesser extent, with the non-crystalline iron oxide fraction.
SEM	Very little arsenic detected, but associated mainly with iron oxide. Also associated with silicates, and present as iron-arsenic-phosphate.	Arsenic associated mainly with iron oxide (including suspected goethite); arsenic also detected in particles (containing Fe, Al, Ca, & Si) attached to carbon-charcoal particles and with lead-manganese-oxide.	Arsenic associated mainly with iron oxide and organic material. Also positive identification of iron-arsenic-phosphate, lead-arsenic-sulfate and potassium-iron-sulfate.
XRF	Presence of silica-alumina-iron matrix	Presence of silica-alumina matrix	Presence of silica-alumina-iron matrix

Figure C-1 – Flow sheet for Sample Preparation and Testing



APPENDIX D – *ARSENIC WET SCREENING STUDY*

D.1 Objective and Overview

The objective of performing additional arsenic treatability studies was to better define the distribution of arsenic concentration relative to soil particle size. Distribution data can be used to select a particle size "cut point" for remedial action that corresponds to the cleanup or remediation level for arsenic.

We analyzed soil samples from two areas of the Site, the Narrow Gage Railroad (NGRR) and the 250/500-foot arsenic soil sampling grid (Grid), to determine if the differences in average arsenic concentration are likely to impact the distribution with grain size. We combined the results of the Hart Crowser arsenic treatability studies with the previously performed Hazen arsenic treatability studies to determine the average arsenic concentration associated with different grain sizes.

A total of three Hazen arsenic study analyses were included in this evaluation. Hazen arsenic study results from the Area 36 - Melt Shop and the Area 18 - Hot Spot were incorporated in the evaluation of the Grid soil data. Hazen arsenic study results from the NGRR area were incorporated in the evaluation of the NGRR soil data.

Hart Crowser samples were collected close to locations identified during the RI sampling as areas of elevated arsenic concentrations. The RI sampling concentrations for the Grid and the NGRR, as well as concentrations for the whole sample and the pulverized whole sample from the treatability study, are presented in Table D-1.

The whole sample result represents the analysis of an aliquot of soil from the treatability study samples collected and analyzed using the same procedure used for the RI samples.

The pulverized whole sample result is the concentration in an aliquot of soil from the treatability study following pulverization of the entire soil sample.

D.2 Treatability Sample Collection

A total of ten 5-point composite samples were collected at selected locations that were previously sampled during the RI. Five samples were collected from the NGRR locations to provide samples that contained relatively high concentrations (400 to 950 mg/kg) of arsenic. The remaining five samples were collected from the 250/500-foot RI sampling grid; these were intended to provide treatability study samples containing lower arsenic concentrations (82 to 360 mg/kg). The ten samples were collected using the same procedure. A four-gallon sample was collected from a depth of 0 to 6 inches at each sampling location, using the same sampling procedure as for RI sample collection. Each 5-point composite sample was collected immediately adjacent to the previously sampled RI location. The sample was placed into a clean/lined bucket and appropriately labeled with the same RI sample number as used previously. Table D-1 summarizes the results from the treatability study sample locations and the associated total arsenic concentrations from previous RI analyses.

Several observations can be made by comparison of these data:

- The RI sample results have generally higher arsenic concentrations compared to the treatability study whole sample results.

- The results for the pulverized whole samples are all lower than the results of the non-pulverized whole sample. These results indicate that the higher concentration of arsenic is confined to smaller soil size fractions.

D.3 Treatability Study Procedure

The ten samples were analyzed using the same physical and chemical testing procedures. Physical testing of the samples was performed in the Hart Crowser Physical Laboratory. Chemical analysis for total arsenic was performed at Analytical Technologies, Inc. (ATI) in Renton.

D.3.1 Physical Testing

The following sample preparation and physical testing procedures were performed prior to the total arsenic analysis. Figure D-1 presents a schematic flow diagram of the procedure:

1) Initially, the entire 4-gallon sample was thoroughly mixed to improve homogeneity.

2) The sample was coned and quartered into four portions (approximately 1-gallon each). Three of the quarters were combined into one 3-gallon sieve sample.

3) A 4-oz sample aliquot was collected from the remaining 1-gallon sample and analyzed the aliquot for total arsenic at ATI. This sample is identified as a "whole sample". The remainder of this sample was crushed and pulverized until 50 percent of the sample passed the 100 mesh sieve. A 4-oz aliquot was collected from the pulverized sample and submitted for total arsenic analysis at ATI. This sample is identified as "pulverized whole sample."

4) The whole sample from Step 3 was dried, crushed, and pulverized to 50% passing the 100 mesh sieve.

5) A 4-oz aliquot of the material from Step 4 was collected and submitted to ATI for total arsenic analysis.

6) The 3-gallon sample was dry screened at 10 mesh.

7) The +10 mesh material from Step 6 was wet screened at 10 mesh (-10 mesh to Step 12).

8) The +10 mesh material from Step 7 was dried and sieved with screen sizes of 1", 1/2", 1/4" and 8 mesh.

9) The material retained was then weighed on the 1", 1/2", 1/4" and 8 mesh screens and calculated the >8 mesh percent.

10) After screening and weighing the dried +10 mesh material through 1", 1/2", 1/4", and 8 mesh sieves (Steps 4 and 7) the material retained on each sieve was pulverized so 50 percent of the material was <100 mesh. A 4-oz sample of the pulverized material was collected and sent to ATI for total arsenic analysis.

11) A 4-oz aliquot of each sample was collected and sent to ATI for total arsenic analysis.

12) The -10 mesh material from the wet screening and the -10 mesh from the initial dry screening were combined and dried.

13) The -10 mesh material was weighed for the >8 mesh percent calculation.

14) The -10 mesh material was homogenized and quartered, to produce one 1,000 gram sample aliquot. The remaining sample was held in the original sample container.

15) The 1,000 gram aliquot was wet screened at 200 mesh. (The -200 mesh water and slimes to Step 18). Two samples of the slime water were collected and analyzed for total arsenic (RR-545 and RR-528).

16) The dry +200 mesh material was weighed and then sieved through 16, 30, 60, 100, and 200 mesh sieves.

17) The material retained on these sieves was weighed and the <8 mesh percent was calculated.

18) The material retained on each sieve was pulverized so that at least 50 percent of the sample was <100 mesh. A 4-oz sample of the pulverized material was collected and sent to ATI for total arsenic analysis.

19) A sample of water and slimes from Step 15 was submitted to ATI for total arsenic analysis.

20) The -200 mesh water and slimes from Step 15 were dried and combined the -200 mesh material from Step 15 with the -200 mesh material from Step 16.

21) The dried -200 mesh material was weighed and sampled for total arsenic analysis at ATI.

The above procedures were followed for each of the samples. However, in two cases, modifications occurred during the analysis as noted below.

- Step 18 was not implemented as described above for sample RR-546. The temperature in the oven used to dry the -200 mesh samples from Step 13 was inadvertently increased to 430°C. Typical oven temperatures were approximately 80°C. The higher temperature may have reduced the total arsenic concentration in the sample because of the sublimation of the arsenic from the soil. As a result the -200 mesh material from sample RR-546 from Step 15 was sampled for analysis at ATI. This result will probably be more representative of the -200 mesh material.

- The +8 mesh material was coned and quartered following crushing and prior to pulverizing in order to expedite sample submittal to the lab for analysis. This resulted in about 250 grams of material being pulverized. Large samples of the -8 mesh material were also coned and quartered prior to pulverizing to expedite sample submittal. The reduction of sample size during this process should not impact the analytical result obtained for the particular sieve size because the soil is more uniform following crushing and splitting of the sample and is likely to include equal ratios of each grain size.

D.3.2 Chemical Testing

A total of 130 soil samples were submitted to ATI for total arsenic analysis. Since each sample was dried prior to screening and collecting the sample, the analytical results were reported on a wet weight basis. The differences between the treatability study and RI laboratory methods were compared. The treatability study and RI samples were prepared using SW-846 Method 3050 and, according to the QAPP in the Site Management Plan, analyzed by graphite furnace/atomic absorption (SW-846 Method 7060). This is a similar method used by ATI for all RI arsenic analyses. This is not the method used for the treatability studies performed by Hazen Research. Hazen used an American Society for Testing of Materials (ASTM) Method D 4606-86 which used a slightly more rigorous extraction procedure than was used by ATI. This may have resulted in the Hazen method extracting different amounts of arsenic from each soil sample relative to the amount extracted from a similar sample analyzed at ATI. Hazen used a hydride atomic absorption analysis method different from the graphite furnace analysis method used by ATI. We are unable to predict the impact that these differences may have on the analytical results without a detailed evaluation of these two analytical methods.

Two water samples were submitted to ATI for total arsenic analysis to determine potential dissolution of arsenic during the wet screening process. Samples were analyzed using SW-846 Method 7060, the same analytical procedure used when analyzing the soil samples.

D.3.3 Treatability Study Results

The results of the physical and chemical analysis for the Grid and NGRR soils are presented in Attachment D-1. Table D-2 presents the mean arsenic distribution and cumulative mean arsenic distribution with respect to grain size for both grid samples and railroad samples. A total of 7 samples (2 Hazen, 5 Hart Crowser) were analyzed to assess the arsenic distribution with respect to grain size in grid soil.

Grid Soil: Evaluation of the data generated during the analysis of grid soil is summarized below.

- For the 7 samples analyzed, the average grain size distribution was 60.7% Gravel, 32.0% Sand, and 7.3% Silt. The mean arsenic concentration for each grain size is presented in Table D-2. Based on the data for all of the grid soil samples presented in Attachment D-1, the range of arsenic distribution by soil type is presented below.

Size Fraction	Range of Total Arsenic Distribution in %
+1/4-inch (gravel)	8.4 to 21.4
-1/4-inch to +200 mesh (sand)	28.4 to 55.7
-200 mesh (silt)	22.9 to 47.0

- The calculated pulverized whole sample arsenic concentration and the result for the pulverized whole sample analysis was compared for each sample (see Attachment D-1). The percent difference of these concentrations ranged from +50 percent (Area 18 - Hazen Sample) to -20.0 percent (18R-461). This level of accuracy is attributed to the high degree of variation expected with the high concentrations of arsenic in the matrix.

Narrow Gage Railroad (NGRR) Soil: Evaluation of the data generated during the analysis of NGRR soil are summarized below. A total of 6 samples (1 Hazen, 5 Hart Crowser) were analyzed to assess the arsenic distribution with respect to grain size in NGRR soil.

- For the 6 samples analyzed the average grain size distribution was 57% Gravel, 36.7% Sand, and 6.3% Silt. The mean arsenic concentration for each grain size is presented in Table D-2. Based on the data for the NGRR soil samples presented in Attachment D-1, the range of arsenic distribution by soil type is presented below.

Size Fraction	Range of Total Arsenic Distribution in %
+1/4-inch (gravel)	7.1 to 12.7
-1/4-inch to +200 mesh (sand)	22.0 to 70.7
-200 mesh (silt)	17.4 to 62.8

- The calculated pulverized whole sample arsenic concentration and the result of the pulverized whole sample analysis was compared for each sample (Attachment A). The percent difference of these concentrations ranged from +83 percent (RR-545) to -13 percent (RR-528). This level of accuracy is attributed to the high degree of variation expected with the high concentrations of arsenic in the matrix.

D.3.4 Conclusion

The application of soil washing may be effective when applied to Site soil impacted by arsenic. This treatability study shows that a coarser low concentration fraction and a finer high concentration fraction can be readily attained. The determination of the particle size "cut point" for impacted soils is likely to vary

with the initial concentration of the feed soil. A lower "cut point" may be attained by implementing higher energy particle separation technologies, such as attrition scrubbing.

Table D-1 – Whole Samples Total Arsenic Results 250/500-Foot Grid and Narrow Gage Railroad Track

Sample Number	Total Arsenic Concentration in mg/kg		
	RI	Treatability Study	
	Whole Sample (ATI Result)	Whole Sample (ATI Result)	Pulverized Whole Sample (ATI Result)
250/500-Foot Grid			
LR-125E	110	71	34
LR-157	82	48	23
LR-207	140	54	31
LR-311	360	110	60
18R-461	100	74	35
Narrow Gage Railroad Track			
RR-515	550	370	220
RR-528	400	490	190
RR-536	480	550	120
RR-545	530	150	100
RR-546	950	340	81

TABLE D-2 - ARSENIC DISTRIBUTION WITH GRAIN SIZE
ARSENIC TREATABILITY STUDY
FORMER DUPONT WORKS SITE

AVERAGE ARSENIC DISTRIBUTION IN GRID SAMPLES

Screen Size	Mean Dist. in Percent by weight		Mean Conc. in mg/kg	Cumulative Mean Conc. in mg/kg*
+1	18.0%			
-1+1/2	26.0%	Gravel	7.46	7.46
-1/2+1/4	16.7%		8.67	8.26
	60.7%		9.87	8.68
-1/4+8m	8.7%			
-8m+16m	4.5%		17.24	9.86
-16m+30m	5.0%	Sand	30.45	11.23
-30m+60m	7.6%		45.66	13.43
-60m+100m	3.6%		58.21	17.19
-100m+200m	2.5%		84.05	20.01
	32.0%		120.47	22.50
-200m	7.3%	Silt		
	7.3%		181.90	32.44
	100.0%			

AVERAGE ARSENIC DISTRIBUTION IN NGRR SAMPLES

Screen Size	Mean Dist. in Percent by weight		Mean Conc. in mg/kg	Cumulative Mean Conc. in mg/kg*
+1	18.0%			
-1+1/2	21.5%	Gravel	21.15	21.15
-1/2+1/4	17.5%		32.06	28.26
	57.0%		49.45	35.25
-1/4+8m	11.8%			
-8m+16m	5.4%		81.37	43.13
-16m+30m	7.5%	Sand	110.35	47.96
-30m+60m	7.8%		158.45	57.68
-60m+100m	2.3%		249.18	74.72
-100m+200m	1.9%		602.18	88.47
	36.7%		876.61	105.03
-200m	6.3%	Silt		
	6.3%		1,689.61	203.32
	100.0%			

* The cumulative mean concentration is the sum of the products of the weight percent and the concentration divided by the cumulative coarser weight percents.

ATTACHMENT D-1
WET SCREENING PROCESS DATA FOR HART CROWSER AND HAZEN RESEARCH ARSENIC TREATABILITY STUDIES

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculated Head, mg/	Distrib. %
18R-461	+1"	35.6		6.5		16.6
	-1"+1/2"	26.2	gravel	9.0		16.9
	-1/2"+1/4"	11				0.0
		72.8			6.4	33.5
	-1/4"+8m	5.5				0.0
	-8m+10m	0.7				0.0
	-10m+16m	2.3				0.0
	-16m+30m	4.8	sand			0.0
	-30m+60m	6.6				0.0
	-60m+100m	2.3				0.0
	-100m+200m	1.8				0.0
		24		160.0		20.6
	-200m	3.2	silt/clay	200.0	12.0	20.6
		3.2				45.9
					200.0	45.9
	Total	100.0	TOTAL		14.0	100.0

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	74

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculate Head, mg/	Distrib. %
LR-125E	+1"	13.9		6.0		#DIV/0!
	-1"+1/2"	28	gravel	9.0		33.8
	-1/2"+1/4"	20.3				0.0
		62.2			5.4	67.0
	-1/4"+8m	9.6				0.0
	-8m+10m	0.9				0.0
	-10m+16m	2.2				0.0
	-16m+30m	2.7	sand			0.0
	-30m+60m	7.2				0.0
	-60m+100m	5.1				0.0
	-100m+200m	2.8				0.0
		30.5		90.0		41.3
	-200m	7.3	silt/clay	160.0	8.3	41.3
		7.3				91.7
					160.0	91.7
	Total	100.0				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	71

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculated Head, mg/	Distrib. %
LR-157	+1"	13.9		7.2		
	-1"+1/2"	33.6	gravel	7.1		
	-1/2"+1/4"	18.4				
		65.9				
	-1/4"+8m	8.2				
	-8m+10m	1.2				
	-10m+16m	2.4				
	-16m+30m	3.8	sand			
	-30m+60m	6.5				
	-60m+100m	2.8				
	-100m+200m	2.8		100.0		
		27.7				
	-200m	6.4	silt/clay	120.0		
	Total	100.0				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	48

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculate Head, mg/	Distrib. %
LR-207	+1"	9.9		5.8		
	-1"+1/2"	21.2	gravel	6.1		
	-1/2"+1/4"	13				
		44.10				
	-1/4"+8m	9.8				
	-8m+10m	2.3				
	-10m+16m	4.6				
	-16m+30m	9.4	sand			
	-30m+60m	12.2				
	-60m+100m	3.4				
	-100m+200m	3		89.0		
		44.7				
	-200m	11.2	silt/clay	120.0		
	Total	100.00				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	54

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculated Head, mg/	Distrib. %
LR-311	+1"	13.8		16.0		
	-1"+1/2"	22.8	gravel	9.3		
	-1/2"+1/4"	16.7				
		53.30				
	-1/4"+8m	10.5				
	-8m+10m	1.1				
	-10m+16m	3.4				
	-16m+30m	6.1	sand			
	-30m+60m	10				
	-60m+100m	4.4				
	-100m+200m	3.9		200.0		
		39.4				
	-200m	7.3	silt/clay	300.0		
	Total	100.0				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	110

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculated Head, mg/	Distrib. %
RR-528	+1"	21.3		15.0		
	-1"+1/2"	19.6	gravel	36.0		
	-1/2"+1/4"	18.7				
		59.60				
	-1/4"+8m	11.3				
	-8m+10m	1.1				
	-10m+16m	3.6				
	-16m+30m	7.8	sand			
	-30m+60m	9.8				
	-60m+100m	2.4				
	-100m+200m	2.8		1500.0		
		38.8				
	-200m	1.6	silt/clay	1800.0		
			slime/water	0.32 mg/l		
	Total	100.00				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	490

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculate Head, mg/	Distrib. %
RR-536	+1"	22.2		23.0		
	-1"+1/2"	22.2	gravel	50.0		
	-1/2"+1/4"	16.3				
		60.70				
	-1/4"+8m	10.9				
	-8m+10m	1.2				
	-10m+16m	3.1				
	-16m+30m	4.7	sand			
	-30m+60m	6.2				
	-60m+100m	2.4				
	-100m+200m	2.1		610.0		
		30.6				
	-200m	8.7	silt/clay	1200.0		
	Total	100.0				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1- gal before crushing	550

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculate Head, mg/	Distrib. %
RR-545	+1"	14		11.0		
	-1"+1/2"	22.7	gravel	26.0		
	-1/2"+1/4"	21				
		57.7				
	-1/4"+8m	11				
	-8m+10m	1.1				
	-10m+16m	2.9				
	-16m+30m	4.7	sand			
	-30m+60m	7.9				
	-60m+100m	3.5				
	-100m+200m	3.3		700.0		
		34.4				
	-200m	7.9	silt/clay	1100.0		
			slime/water	0.41 mg/l		
	Total	100.0				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	150

FORMER DUPONT WORKS SITE
J-3534-14
TREATABILITY STUDY
Revised : 14-Mar-02
WET SCREENING DATA FOR ARSENIC

Sample Identification	Screen Size	Distribution Wt. %	Solids Classification	Assay mg/kg	Arsenic Calculate Head, mg/	Distrib. %
RR-546	+1"	23.5		18.0		
	-1"+1/2"	22.6	gravel	24.0		
	-1/2"+1/4"	14.3				
		60.4				
	-1/4"+8m	10.5				
	-8m+10m	1.5				
	-10m+16m	4.2				
	-16m+30m	8.5	sand			
	-30m+60m	8				
	-60m+100m	1.3				
	-100m+200m	0.9		790.0		
		34.9				
	-200m	4.7	silt/clay	1600.0		
	Total	100.0				

Sample Identification	Total As mg/kg
Pulverized Head A	
Whole sample; 1-gal before crushing	340

APPENDIX E – *RANKING OF ALTERNATIVES*

Chapter 6 defines the performance of the alternatives against the alternatives screening criteria (effectiveness, implementability, and cost). Ranking of these alternatives using these criteria was conducted. All members of the FS project team independently ranked the alternatives and the results were compiled into a single ranking for each alternative. A semi-quantitative comparative method was adopted whereby each participant gave each alternative a score of "-2" for very poor "-1" for poor, "0" for average, "+1" for good or "+2" for very good performance according to a given criterion. The score of each participant was normalized to bring each person's average criterion ranking to "0" prior to compiling the results into a single ranking for each alternative and criterion. The comparative analysis allows the evaluation of all the alternatives against the single screening criterion. This allows the ranking mechanism to be used to assess the best and least favorable alternative for the particular criterion. Table E-1 summarizes the compiled results using weighting factors that place equal emphasis on each effectiveness criterion, implementability, and cost.

Different weighting factors were applied to the three screening criteria to examine the sensitivity of the ranking results as preference is given to different screening criteria. Four different weighting factor scenarios were applied to the alternatives to assess relative performance. These four scenarios emphasize the following criteria preferences.

- **Equal:** Effectiveness, implementability, and cost carry the same weight.
- **Favoring Cost:** Effectiveness and implementability are the same weight while cost carries twice the weight.
- **Favoring Effectiveness:** Implementability and cost have the same weight while effectiveness has five times the weight.
- **Favoring Effectiveness and Cost:** Effectiveness carries a total weight of five, one for each sub-criterion, cost carries a weight of three, and implementability carry a weight of two.

The sensitivity of ranking results to the weighting factor set used is presented in Table E-2.

The weighting of the screening criteria had a small effect on the overall ranking of the alternatives. The alternatives were close in each case and the highest ranked alternatives ranked high following the application of different weightings. The ranking of alternatives did not directly influence the selection of alternatives for further analysis. The ranking was performed as a preliminary step in the screening process and was only used as guidance. Table E-3 illustrates this point.

Table E-1 - Screening of Alternatives

Alternative	EFFECTIVENESS					IMPLEMENTABILITY	COST	SUM
	Protection of Human Health and the Environment	Compliance with ARARs	Reduction of Toxicity Mobility and Volume	Short Term Effectiveness	Long Term Effectiveness	Implementability	Cost	
No Action	-2	-2	-2	-1	-2	2	2	-5
Cover	0	0	0	0	-1	-1	1	-1
Capping	0	0	0	0	-1	-1	1	-1
Cap/Cover	0	1	0	0	0	0	0	1
On-site Deposition with Cap/Cover	1	2	0	0	1	1	1	6
Off-site Disposal at Landfill	2	2	2	-1	2	-1	-2	4
Soil Washing with chelants and offsite disposal	1	2	1	0	1	-1	-1	3
Soil Washing with acid and offsite disposal	1	2	1	-1	1	-2	-1	1
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	1	-2	2	-1	1	-1	-1	-1
Wet Screening, Classification and Disposal at Landfill	2	2	1	-1	2	-1	-2	3
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposa	1	2	1	1	1	0	0	6

Score

-2 Very Poor

-1 Poor

0 Average

1 Good

2 Very Good

Retained for further analysis

Table E-2 - Weighting Factors Used for Ranking of Alternatives

Former DuPont Works Site
DuPont, Washington

	Effectiveness					Implementability	Cost
Emphasis of Weighting Factors	Protection of Human Health and the Environment	Compliance with ARARs	Reduction of Toxicity, Mobility, and Volume	Short-Term Effectiveness	Long-Term Effectiveness	Implementability	Cost
Equal Weighting for Effectiveness, Cost, and Implementability	0.2	0.2	0.2	0.2	0.2	1	1
Favoring Cost	0.1	0.1	0.1	0.1	0.1	0.5	1
Favoring Effectiveness	1	1	1	1	1	1	1
Favoring Effectiveness and Cost	1	1	1	1	1	2	3

Table E-3 - Comparative Analysis of Alternatives Using Selected Weighting Factors

Weighting: 0.2, 0.2, 0.2, 0.2, 0.2, 1, 1 **Equal**	WEIGHTED SCORE
No Action	2.2
Cover	-0.2
Capping	-0.2
Cap/Cover	0.2
On-site Deposition with Cap/Cover	2.8
Off-site Disposal at Landfill	-1.6
Soil Washing with chelants and offsite disposal	-1
Soil Washing with acid and offsite disposal	-2.2
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	-1.8
Wet Screening, Classification and Disposal at Landfill	-1.8
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	1.2

Weighting: 0.1, 0.1, 0.1, 0.1, 0.1, 0.5, 1 **Favoring cost**	WEIGHTED SCORE
No Action	2.1
Cover	0.4
Capping	0.4
Cap/Cover	0.1
On-site Deposition with Cap/Cover	1.9
Off-site Disposal at Landfill	-1.8
Soil Washing with chelants and offsite disposal	-1
Soil Washing with acid and offsite disposal	-1.6
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	-1.4
Wet Screening, Classification and Disposal at Landfill	-1.9
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	0.6

Weighting: 1, 1, 1, 1, 1, 1, 1 **Favoring effectiveness**	WEIGHTED SCORE
No Action	-5
Cover	-1
Capping	-1
Cap/Cover	1
On-site Deposition with Cap/Cover	6
Off-site Disposal at Landfill	4
Soil Washing with chelants and offsite disposal	3
Soil Washing with acid and offsite disposal	1
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	-1
Wet Screening, Classification and Disposal at Landfill	3
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	6

Weighting: 1, 1, 1, 1, 1, 2, 3 **Favoring effectiveness and cost**	WEIGHTED SCORE
No Action	1
Cover	0
Capping	0
Cap/Cover	1
On-site Deposition with Cap/Cover	9
Off-site Disposal at Landfill	-1
Soil Washing with chelants and offsite disposal	0
Soil Washing with acid and offsite disposal	-3
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	-4
Wet Screening, Classification and Disposal at Landfill	-2
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	6

APPENDIX F – *COST ESTIMATE FOR REMEDIAL ALTERNATIVES ANALYZED IN DETAIL*

This appendix describes the procedures used in estimating capital costs. The estimating process generally follows the guidance provided by EPA for CERCLA sites, *Remedial Action Costing Procedures Manual*, although the Site is not being administered under the EPA CERCLA process. This guidance was selected as being appropriate because of the number of constituents identified during the RI.

F.1 Capital Cost

Capital costs are those costs that are incurred during the construction and implementation of the cleanup action. These include: unit price for each process element (e.g., excavation, treatment, disposal); engineering design; contingency allowance; construction oversight; administration; and community relations. Direct and indirect capital costs were developed separately since several of the indirect costs are estimated as a percentage of the direct costs.

F.1.1 Direct Capital Costs

The direct capital costs include estimates of the construction, implementation, and disposal costs. These costs were gathered from vendors who provided budgetary estimates based on specific Site information generated from the RI and the treatability studies. In general, the vendors responded with a range of costs that may be applicable for the remedial action of Site soils. The average low and high vendor unit cost estimates are presented in Table F-1. The variability between the low and high cost was expected since the vendors were not asked to provide a bid for services, which in many cases would require a pilot study or bench-scale treatability studies on Site soils.

Using the unit costs presented in Table F-1, estimated costs were assembled by summing the unit costs for each activity that are combined to comprise each alternative. Table F-2 presents an activity-by-activity cost estimate and a low and high total and overall direct costs for each of the alternatives analyzed in detail in Section 6.0. These estimates of remedial action cost are assumed to be accurate to within -30 percent and +30 percent of the estimate where both estimates could vary by –30 to +30 percent of the listed value. In effect, the estimated "Best Estimate" remedial action cost would be defined as average of the high and low estimate.

Several assumptions, listed below, were necessary to complete the direct capital cost estimates:

- Estimate of soil volumes is based on RI and ISR data, which are assumed to be accurate and complete;
- Cleanup or remediation levels for all constituents are assumed;
- Estimate of soil volumes was conducted according to the procedures and assumptions described in Section 3.0, and are the basis for the direct cleanup action costs; and
- Direct costs are based on the technology unit costs developed from vendor solicitation, engineering estimation, treatability study results, and past experience with similar technologies.

EPA guidance also recommends that the direct cost estimates include the estimated costs for equipment, land and site development needed to implement the cleanup action, buildings and services, and relocation costs. These costs were not included in the estimated direct cost for the following reasons:

- **Equipment**. At this time we anticipate that the remedial action will be done as by a contractor to Weyerhaeuser or DuPont. Subsequently, the cost for the purchase of equipment will likely be small in relation to the total cleanup action cost.

- **Land and Site Development**. Expenses associated with the preparation of the Site prior to implementing the remedial action are likely to be small in relation to the total cleanup action cost.

- **Buildings and Services Cost**. Buildings used by the contractors during interim source removal will again be utilized by the remedial action contractor, and no new facilities are anticipated. Services including electricity, garbage, sewer, and other utilities, which are not included in the unit cost of the remedial alternative, will be small in relation to the total action cost. The unit costs presented in Table F-1 are assumed to include the costs associated with this direct cost.

F.1.2 Indirect Capital Costs

Indirect capital costs are those costs associated with engineering design, contingency, construction oversight, administration, and community relations. These costs were estimated based on previous experience during interim source removal and the remedial investigation of the Site. Tables F-3 presents a breakdown of the estimated indirect costs by alternative.

The following assumptions were incorporated into the estimates for indirect cost for each alternative:

- Implementation will be directly related to the amount of soils handling;

- Engineering design costs are estimated at 5 percent of the direct costs;

- Construction oversight costs are estimated at 10 percent of the direct costs;

- Administrative and reporting costs are estimated at 3 percent of the direct costs;

- Contingency allowances are estimated at 25 percent of the direct costs; and

- Four public meetings may be held during the design, construction, operation, and closure of the selected cleanup action. The costs of this effort are estimated at 1 percent of the direct costs.

The following assumptions for developing indirect costs were also developed and are applicable to each remediation unit and remedial alternative:

- Construction oversight is provided by a third party contractor;

- Community relations will be provided by company representatives and a third party contractor; and

- Ecology oversight, administration, and public meeting costs are not included in the estimated costs.

EPA guidance also recommends that the license and permitting costs be included. These costs were not included in the estimated indirect capital cost since obtaining permits for remediation activities under a state cleanup action is not required. The cleanup must otherwise conform to the substantive requirements of the regulation.

F.2 Total Estimated Cost

The preceding cost estimates are the basis for the estimated total cost for all remediation units of the Site. The sum of the direct costs and indirect costs are presented for each remediation alternative in Table F-4. The range of low and high total costs represent the range of direct costs and the corresponding contingency and engineering design ranges which are based on a percentage of the direct costs. Costs for the remediation of Miscellaneous Small RUs are listed on Table F-5.

Based on the preferred alternatives presented in Chapter 8 for remediation of in-place and stockpiled Site soils, and the completed interim source removal described in Chapter 1, the best estimate of total cost for Site remediation was prepared and is presented in Table F-6. Including accrued costs for studies,

sampling, legal fees, and communications etc., the total cost of Site remediation is approximately $64,000,000.

Table F-1 – High and Low Range Estimated Costs

TABLE F-1 - HIGH AND LOW RANGE ESTIMATED UNIT COSTS
FORMER DUPONT WORKS SITE

Remedial Action Process Or Technology	High Cost Estimate	Low Cost Estimate	Unit Type
COVER (>3 FT. OF SOIL)	$2.50	$1.50	($/SF)
CAPPING	$4.50	$2.75	($/SF)
CAP/COVER	$1.25	$0.75	($/SF)
EXCAVATION	$5.00	$2.25	($/CY)
DRY SCREENING	$15.00	$7.50	($/TON)
WET SCREENING	$40.00	$22.00	($/TON)
SOIL CLASSIFICATION	$125.00	$50.00	($/TON)
ACID EXTRACTION	$150.00	$110.00	($/TON)
CHELANT EXTRACTION	$150.00	$100.00	($/TON)
IN-PLACE STABILIZATION	$250.00	$150.00	($/CY)
STABILIZATION USING RCC	$80.00	$40.00	($/CY)
EXCAVATED STABLIZATION AND PLACEMENT	$100.00	$40.00	($/CY)
EXCAVATED STABILIZATION ONLY	$75.00	$20.00	($/CY)
BACKFILL EXCAVATION	$5.00	$5.00	($/CY)
BACKFILL CLEAN FRACTION	$5.00	$5.00	($/CY)
GOLF COURSE COSTS	$0.70	$0.51	($/SF)
TRANSPORT OFF-SITE	$6.00	$6.00	($/TON)
OFF-SITE DISPOSAL AS PROBLEM	$80.00	$55.50	($/TON)
OFF-SITE DISPOSAL AS DANGEROUS	$136.00	$99.00	($/TON)
RECYCLING AT ASPHALT PLANT OR CEMENT KILN	$42.00	$35.00	($/TON)
PRECIPITATION OF METAL SOLUTION	$5.00	$5.00	($/GALLON)
RECYCLING AT SMELTER	$600.00	$400.00	($/TON)

TABLE F-2 - ESTIMATED LOW AND HIGH RANGE DIRECT COSTS
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON

LOW RANGE UNIT COSTS ALTERNATIVE	APPROX. TOTAL COST	COVER	CAPPING	CAP/COVER	EXCAVATE	WET SCREENING	SOIL CLASS.	ACID EXTRACT.	CHELANT EXTRACT.	STABILIZE USING RCC	Added Cost SOIL COVER	TRANSPORT OFF-SITE	OFF-SITE DISP/HAZ W/ STAB	PRECIP. OF METAL SOLUTION
		$1.50	$2.75	$0.75	$2.25	$22.00	$50.00	$110.00	$100.00	$40.00	$0.51	$6.00	$108.90	$5.00
	($)	($/SF)	($/SF)	($/SF)	($/CY)	($/TON)	($/TON)	($/TON)	($/TON)	($/CY)	($/SF)	($/TON)	($/TON)	($/GALLON)
No Action	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cover	$30,000,000	$30,004,128	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capping	$55,000,000	$0	$55,007,568		$0	$0	$0	$0	$0		$0	$0	$0	$0
Cap/Cover	$15,000,000	$0		$15,002,064	$0	$0	$0	$0	$0		$0	$0	$0	$0
On-site Deposition with Cap/Cover	$9,200,000	$0		$2,940,300	$1,723,925	$0	$0	$0	$0		$4,000,000	$0	$584,066	$0
Off-site Disposal at Landfill	$125,900,000	$0	$0	$0	$2,643,577	$0	$0	$0	$0	$0	$0	$6,435,988	$116,813,175	$0
Soil Washing with chelants and offsite disposal	$52,300,000	$0	$0	$0	$1,723,925	$23,598,621	$0	$0	$10,726,646		$0	$643,599	$11,681,317	$3,930,945
Soil Washing with acid and offsite disposal	$53,400,000	$0			$1,723,925	$23,598,621	$0	$11,799,311	$0		$0	$643,599	$11,681,317	$3,930,945
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$32,400,000	$0	$0	$0	$1,723,925	$23,598,621	$0	$0	$0	$3,064,756	$4,000,000			$0
Wet Screening, Classification and Disposal at Landfill	$43,000,000	$0	$0	$0	$1,723,925	$23,598,621	$5,363,323	$0	$0	$0	$0	$643,599	$11,681,317	$0
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$41,600,000	$0	$0	$0	$1,723,925	$23,598,621	$0	$0	$0		$4,000,000	$643,599	$11,681,317	$0

HIGH RANGE UNIT COSTS ALTERNATIVE	APPROX. TOTAL COST	COVER	CAPPING	CAP/COVER	EXCAVATE	WET SCREENING	SOIL CLASS.	ACID EXTRACT.	CHELANT EXTRACT.	STABILIZE USING RCC	Added Cost SOIL COVER	TRANSPORT OFF-SITE	OFF-SITE DISP/HAZ W/ STAB	PRECIP. OF METAL SOLUTION
		$2.50	$4.50	$1.25	$5.00	$40.00	$125.00	$150.00	$150.00	$80.00	$0.70	$6.00	$149.60	$5.00
	($)	($/SF)	($/SF)	($/SF)	($/CY)	($/TON)	($/TON)	($/TON)	($/TON)	($/CY)	($/SF)	($/TON)	($/TON)	($/GALLON)
No Action	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cover	$50,000,000	$50,006,880	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capping	$90,000,000	$0	$90,012,384		$0	$0	$0	$0	$0		$0	$0	$0	$0
Cap/Cover	$28,800,000	$0		$25,003,440	$3,830,945	$0	$0	$0	$0		$0	$0	$0	$0
On-site Deposition with Cap/Cover	$15,000,000	$0		$4,900,500	$3,830,945	$0	$0	$0	$0		$5,500,000	$0	$802,353	$0
Off-site Disposal at Landfill	$172,800,000	$0	$0	$0	$5,874,615	$0	$0	$0	$0	$0	$0	$6,435,988	$160,470,624	$0
Soil Washing with chelants and offsite disposal	$83,400,000	$0			$3,830,945	$42,906,584	$0	$0	$16,089,969		$0	$643,599	$16,047,062	$3,930,945
Soil Washing with acid and offsite disposal	$83,400,000	$0			$3,830,945	$42,906,584	$0	$16,089,969	$0		$0	$643,599	$16,047,062	$3,930,945
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$58,400,000	$0	$0	$0	$3,830,945	$42,906,584	$0	$0	$0	$6,129,512	$5,500,000			$0
Wet Screening, Classification and Disposal at Landfill	$76,800,000	$0	$0	$0	$3,830,945	$42,906,584	$13,408,308	$0	$0	$0	$0	$643,599	$16,047,062	$0
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$68,900,000	$0	$0	$0	$3,830,945	$42,906,584	$0	$0	$0		$5,500,000	$643,599	$16,047,062	$0

TABLE F-3 - ESTIMATED LOW AND HIGH RANGE INDIRECT COSTS
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON

LOW RANGE COSTS BY ALTERNATIVE	APPROX. DIRECT COSTS ($)	APPROX. DESIGN COSTS 5%	APPROX. PUBLIC RELATIONS 1%	APPROX. CONSTRUCTION OVERSIGHT 10%	APPROX. ADMIN. & REPORTING 3%	APPROX. TOTAL CONTINGENCY 25%	APPROX. TOTAL INDIRECT COSTS	APPROX. TOTAL COSTS
No Action	$0	$0	$0	$0	$0	$0	$0	$0
Cover	$14,600,000	$730,000	$146,000	$1,460,000	$438,000	$3,650,000	$6,424,000	$21,024,000
Capping	$55,000,000	$2,750,000	$550,000	$5,500,000	$1,650,000	$13,750,000	$24,200,000	$79,200,000
Cap/Cover	$17,500,000	$875,000	$175,000	$1,750,000	$525,000	$4,375,000	$7,700,000	$25,200,000
On-site Deposition with Cap/Cover	$8,400,000	$420,000	$84,000	$840,000	$252,000	$2,100,000	$3,696,000	$12,096,000
Off-site Disposal at Landfill	$126,900,000	$6,345,000	$1,269,000	$12,690,000	$3,807,000	$31,725,000	$55,836,000	$182,736,000
Soil Washing with chelants and offsite disposal	$53,000,000	$2,650,000	$530,000	$5,300,000	$1,590,000	$13,250,000	$23,320,000	$76,320,000
Soil Washing with acid and offsite disposal	$54,000,000	$2,700,000	$540,000	$5,400,000	$1,620,000	$13,500,000	$23,760,000	$77,760,000
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$33,000,000	$1,650,000	$330,000	$3,300,000	$990,000	$8,250,000	$14,520,000	$47,520,000
Wet Screening, Classification and Disposal at Landfill	$43,700,000	$2,185,000	$437,000	$4,370,000	$1,311,000	$10,925,000	$19,228,000	$62,928,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$42,300,000	$2,115,000	$423,000	$4,230,000	$1,269,000	$10,575,000	$18,612,000	$60,912,000

HIGH RANGE COSTS BY ALTERNATIVE	APPROX. TOTAL DIRECT COSTS ($)	APPROX. DESIGN COSTS 5%	APPROX. PUBLIC RELATIONS 1%	APPROX. CONSTRUCTION OVERSIGHT 10%	APPROX. ADMIN. COSTS 3%	APPROX. TOTAL CONTINGENCY 25%	APPROX. TOTAL INDIRECT COSTS	APPROX. TOTAL COSTS
No Action	$0	$0	$0	$0	$0	$0	$0	$0
Cover	$18,600,000	$930,000	$186,000	$1,860,000	$558,000	$4,650,000	$8,184,000	$26,784,000
Capping	$90,000,000	$4,500,000	$900,000	$9,000,000	$2,700,000	$22,500,000	$39,600,000	$129,600,000
Cap/Cover	$14,100,000	$705,000	$141,000	$1,410,000	$423,000	$3,525,000	$6,204,000	$20,304,000
On-site Deposition with Cap/Cover	$12,900,000	$645,000	$129,000	$1,290,000	$387,000	$3,225,000	$5,676,000	$18,576,000
Off-site Disposal at Landfill	$174,200,000	$8,710,000	$1,742,000	$17,420,000	$5,226,000	$43,550,000	$76,648,000	$250,848,000
Soil Washing with chelants and offsite disposal	$84,400,000	$4,220,000	$844,000	$8,440,000	$2,532,000	$21,100,000	$37,136,000	$121,536,000
Soil Washing with acid and offsite disposal	$84,400,000	$4,220,000	$844,000	$8,440,000	$2,532,000	$21,100,000	$37,136,000	$121,536,000
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$59,300,000	$2,965,000	$593,000	$5,930,000	$1,779,000	$14,825,000	$26,092,000	$85,392,000
Wet Screening, Classification and Disposal at Landfill	$77,800,000	$3,890,000	$778,000	$7,780,000	$2,334,000	$19,450,000	$34,232,000	$112,032,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$69,900,000	$3,495,000	$699,000	$6,990,000	$2,097,000	$17,475,000	$30,756,000	$100,656,000

TABLE F-4 - ESTIMATED LOW AND HIGH RANGE TOTAL COSTS
FORMER DUPONT WORKS SITE
DUPONT, WASHINGTON

	LOW RANGE BY ALTERNATIVE TOTAL COST ($)	HIGH RANGE BY ALTERNATIVE TOTAL COST ($)	"BEST ESTIMATE" BY ALTERNATIVE TOTAL COST ($)
No Action	$0	$0	$0
Cover	$43,200,000	$72,000,000	$57,600,000
Capping	$79,200,000	$129,600,000	$104,400,000
Cap/Cover	$21,600,000	$41,472,000	$31,536,000
On-site Deposition with Cap/Cover	$13,248,000	$21,600,000	$17,424,000
Off-site Disposal at Landfill	$181,296,000	$248,832,000	$215,064,000
Soil Washing with chelants and offsite disposal	$75,312,000	$120,096,000	$97,704,000
Soil Washing with acid and offsite disposal	$76,896,000	$120,096,000	$98,496,000
Wet Screening with Stabilization, On Site Deposition, Cap/Cover	$46,656,000	$84,096,000	$65,376,000
Wet Screening, Classification and Disposal at Landfill	$61,920,000	$110,592,000	$86,256,000
Wet Screening, On-site Deposition, Cap/Cover and Off-Site Disposal	$59,904,000	$99,216,000	$79,560,000

Table F-5 – Estimated Low and High Remediation Costs for Miscellaneous Small Remediation Units

Type	Low Cost	High Cost	"Best" Cost
Similar Mixtures	$ 63,370	$ 63,926	$ 68,833
Similar Deposition	$ 63,370	$ 63,926	$ 68,833
Single Contaminant	$ 63,370	$ 63,926	$ 68,833
"Hot Spots"	$ 636,965	$ 642,550	$ 691,876
Debris	$ 759,684	$ 766,344	$ 825,174
Sequalitchew Creek NGRR	$ 633,704	$ 639,259	$ 688,333
Total	$ 2,220,635	$ 2,240,103	$ 2,411,884

Table F-6 – Summary of Site Remediation Costs

Item	Best Estimate of Cost in $
Proposed Remediation in this FS[(1)]	17,424,000
Miscellaneous Small Units	$ 2,411,884
Source Removal Costs Accrued[(2)]	$46,000,000
Costs for Studies, Sampling, Legal, Communications, etc. Accrued[(2)]	$7,300,000
Total Cost of Site Remediation	$73,135,884

[(1)]Based on the preferred alternatives for remediation presented in Section 8.0 and costs in Appendix F.
[(2)]Actual cost through December 31, 2001.

APPENDIX G – *ESTIMATION OF MINIMUM SOIL VOLUME REQUIRED FOR COST-EFFECTIVE ON-SITE TREATMENT*

To estimate the minimum soil volume required for treatment on Site, the remediation cost per unit volume (CY) was plotted as a function of soil volume for high, low, and average cleanup action cost options as presented on Figure G-1.

G.1 Assumptions

- The high cost option is based on a high treatment cost of $200/CY and disposal as hazardous waste at $180/ton. The low cost option is based on a low treatment cost $90/CY and disposal as problem waste at $61.50/ton.

- Mobilization and demobilization costs were assumed to be $50,000 for the low cost option and $100,000 for the high cost option. These costs are based on ranges provided by vendors for stabilization and soil washing.

- All options include engineering design (12%) and contingency (25%) (10% engineering design and contingency are included in the off-Site disposal costs to account for costs of stockpile management and uncertainty in volume of impacted soil to be disposed of). Long-term maintenance and monitoring cost are not included.

- The average cost treatment is simply the arithmetic average of the high and low cost treatments.

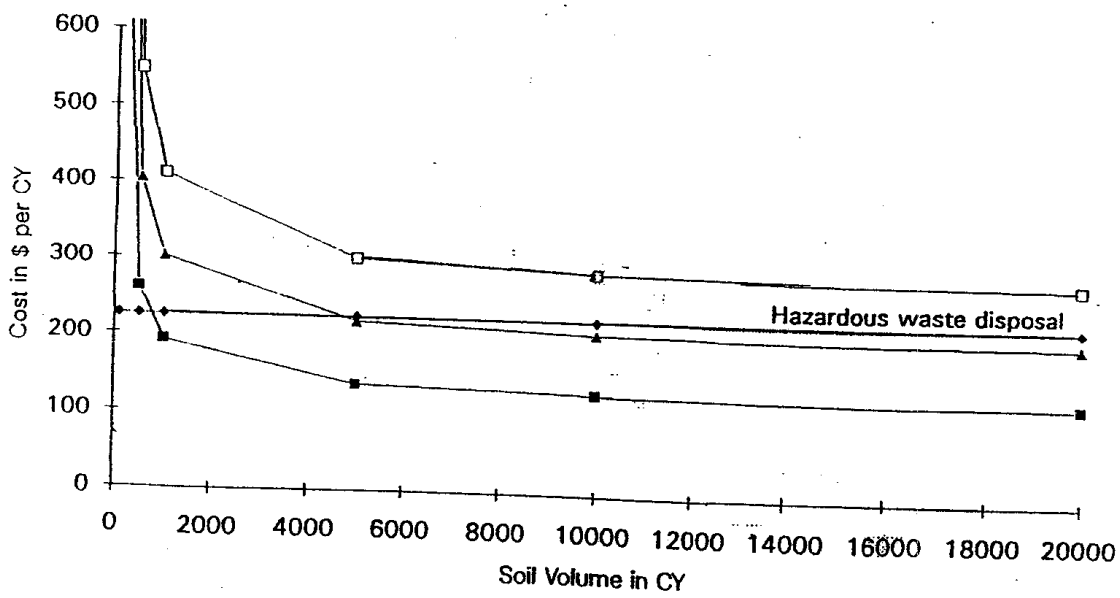
G.2 Conclusion

- If a soil can be characterized as problem waste, direct disposal at an industrial landfill is the best option.

- If the soil is hazardous, it becomes cost-effective to treat the soil with an average cost treatment when the volume is greater than approximately 5,000 CY.

- If the equipment has already been mobilized on Site for other impacted soils, and the mobilization cost does not need to be included in the cost per CY, then average cost treatment is always more cost-effective than disposal as hazardous waste.

Sensitivity of Remediation Costs to Volume of Soil Treated



High Cost Treatment
Average Cost Treatment
Low Cost Treatment

Figure G–1

APPENDIX H – *Development of Soil Remediation Levels for the Golf Course Groundskeeper*

H.1 Introduction

This appendix presents a summary of the approach used to calculate soil remediation levels for areas included in the golf course land use areas, assuming that an engineered cap is placed over the contaminated soil. The approach used to calculate these levels is the same as that used to calculate Site-specific cleanup standards presented in Chapter 3 of the Human Health and Ecological Risk Assessment for the Former DuPont Works Site (PIONEER, 2002).

The equations used to calculate soil remediation levels for the golf course evaluation units were obtained from the Model Toxics Control Act (MTCA) – Washington Administrative Code (WAC) 173-340-745. Soil remediation levels were calculated using these equations considering the potential reasonable maximum exposure for golf course groundskeepers who may occasionally contact contaminated soil beneath the cap during intrusive maintenance activities, such as repairing sprinkler lines.

The Environmental Protection Agency (EPA) has chosen to evaluate the potential health effects of lead using a physiologically based model. Therefore, lead has not been assigned the toxicity values required to calculate Site-specific remediation levels using the equations presented in WAC 173-340-745. The model developed by EPA for establishing lead remediation levels in non-residential areas is the Adult Lead Model (EPA, 1996).

H.2 Development of Soil Remediation Levels for Golf Course Groundskeepers

The equations and input values used to develop soil remediation levels for golf course groundskeepers potentially exposed to constituents of concern (COCs) identified in the RA (other than lead) based on incidental soil ingestion are presented below.

Equation for Noncarcinogens:

WAC 173-340-745-1 – Soil Remediation Level (mg/kg) = $$\frac{RfD \; x \; ABW \; x UCF \; x HQG \; x AT_n}{SIR \; x AB1 \; x EF \; x ED}$$

Equation for Carcinogens:

WAC 173-340-745-2 – Soil Remediation Level (mg/kg) = $$\frac{CRG \; x ABW \; x AT_c \; x UCF}{CPF \; x SIR \; x AB1 \; x EF \; x ED}$$

Where;

Parameter	Description
EF	= Exposure Frequency (days/year)
ED	= Exposure Duration (years)
SIR	= Soil Ingestion Rate (mg/day)
AB1	= Gastrointestinal Absorption Fraction (AB1) (unitless)
ABW	= Body Weight (kg)
ATn & ATc	= Averaging Time (days)
RfD	= Noncarcinogenic reference dose (mg/kg-day).

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$.

UCF = Unit conversion factor (mg/kg).

HQG = Hazard quotient goal (i.e., 1)

CRG = Cancer risk goal (i.e., 1E-05).

H.2.1 Equation Input Values

The input values for these equations consist of exposure factors, which describe the exposure patterns of the receptors (i.e., exposure frequency, exposure duration, ingestion rate, gastrointestinal absorption fraction, body weight, and averaging time); toxicity values (i.e., reference doses and carcinogenic potency factors), and benchmark values (i.e., target hazard quotients and target cancer risks). These input values are discussed below.

H.2.2 Exposure Factors

Exposure factors are used to estimate the likely intake level of a constituent. The exposure factors used to calculate remediation levels were approved by Ecology (Ecology, 1998) and are described below:

- *Exposure Frequency (EF)* – The number of days per year that a person is exposed. For the golf course groundskeeper exposure is assumed to occur 12 days/year (i.e., once per month).

- *Exposure Duration (ED)* – The number of years over which exposure is assumed to occur. For the golf course groundskeeper the exposure duration was assumed to be 20 years, which is the MTCA default value for worker exposure duration.

- *Soil Ingestion Rate (SIR)* – The amount of soil ingested per day of exposure. For the golf course groundskeeper the soil ingestion rate was assumed to be 100 mg/day.

- *Gastrointestinal Absorption Fraction (AB1)* – This is the percentage of a constituent that is available for absorption by the gastrointestinal tract once ingested. This is typically a constituent-specific value, but based on direction given by Ecology this value was conservatively chosen to be 100% for all constituents.

- *Body Weight (ABW)* – The average body weight, in kilograms, of the receptor being evaluated. For the golf course groundskeeper this value was assumed to be the MTCA default of 70 kg, the average weight of an adult (average of both females and males).

- *Averaging Time (Atn and Atc)* – The number of days over which exposure is averaged. Exposure levels for carcinogens are averaged over the lifetime of the exposed individual (i.e., 75 years) while exposure levels for noncarcinogens are averaged over the duration of exposure. Therefore, for carcinogens, the averaging time is calculated as the exposure frequency (days/year) X 75 year life expectancy. The averaging time for noncarcinogens is calculated as the exposure frequency (days/year) X exposure duration (years).

The exposure factors used to calculate soil remediation levels are presented in Table H-1.

H.2.3 Toxicity Values

The toxicity values used to develop soil remediation levels include noncarcinogenic reference doses (RfDs) and carcinogenic potency factors (CPFs) are presented in Table H-1. The following sources of toxicity information were consulted to identify the toxicity values used to develop the soil remediation levels:

- The Integrated Risk Information System (IRIS) (EPA, 2001).

- The Health Effects Assessment Summary Tables–Annual Update (HEAST) (EPA, 1997).

- Ecology's Cleanup Levels and Risk Calculation (CLARC) Table Updates (Ecology, 2001a).
- EPA Region IX Preliminary Remediation Goal (PRG) Tables (EPA, 2000).

Since multiple toxicity values were available for some chemicals, the sources of toxicity information were prioritized as follows to select the toxicity values used in the development of soil remediation levels:

1. IRIS values.
2. HEAST values.
3. CLARC table values.
4. PRG table values.

H.2.4 Benchmark Values

The last category of equation input values are the risk benchmark values, used to define the "acceptable" risk level for a person exposed to Site contamination. The benchmark values used are the hazard quotient goal (HQG), which is the benchmark for noncarcinogenic effects, and the cancer risk goal (CRG), which is the benchmark for carcinogenic risk. A description of these values is presented in Chapter 3 of the RA. In calculating soil remediation levels for the golf course groundskeeper, the benchmark values used were a HQG of 1.0 and a CRG of 1 in 100,000 (i.e., 1E-05) for individual constituents. These are the benchmark values for industrial exposures stipulated in MTCA (WAC 173-340-745).

H.3 Development of Soil Remediation Levels for Lead

EPA's Adult Lead Model used to calculate soil remediation levels for lead is described in Chapter 3 of the RA (PIONEER, 2002) and (EPA, 1996). The model input values used for the golf course groundskeeper are presented in Table H-2; the lead remediation level obtained from this calculation is presented in Table H-3 along with the other Site-specific remediation levels calculated for golf course development.

Table H-1 – Soil Golf Course Groundskeeper Soil Remediation Levels

Constituent	RfD[1]	CPF[1]	ABW[2]	Atn[2]	Atc[2]	UCF[2]	SIR[2]	AB1[2]	EF[2]	ED[2]	HQG[3]	CRG[3]	Soil Remediation Level (Noncarcingen) (mg/kg)	Soil Remediation Level (Carcinogen) (mg/kg)
Monomethylamine Nitrate	0.0081		70	7,300		1.0E+06	100	100%	12	20	1		172,463	
Nitroglycerine		0.014	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		57,031
2,4,6-Trinitrotoluene	0.0005	0.03	70	7,300	27,375	1.0E+06	100	100%	12	20	1	1.0E-05	10,646	26,615
Aluminum	1		70	7,300		1.0E+06	100	100%	12	20	1		21,291,667	
Arsenic (inorganic)	0.0003	1.5	70	7,300	27,375	1.0E+06	100	100%	12	20	1	1.0E-05	6,388	532
Copper	0.037		70	7,300		1.0E+06	100	100%	12	20	1		787,792	
Mercury	0.0003		70	7,300		1.0E+06	100	100%	12	20	1		6,388	
Benzo(a)anthracene		0.73	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		1,094
Benzo(a)pyrene		7.3	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		109
Benzo(b)fluoranthene		0.73	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		1,094
Benzo(k)fluoranthene		0.073	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		10,938
Chrysene		0.0073	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		109,375
Dibenz(a,h)anthracene		7.3	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		109
Indeno(1,2,3-cd)pyrene		0.73	70		27,375	1.0E+06	100	100%	12	20		1.0E-05		1,094
Aldrin	0.00003	17	70	7,300	27,375	1.0E+06	100	100%	12	20	1	1.0E-05	639	47

Equation Input Values:

Input	Definition	Units
RfD	Noncancer Reference Dose	mg/kg-day
CPF	Cancer Potency Factor	$(mg/kg\text{-}day)^{-1}$
ABW	Average Body Weight	kg
At_n	Averaging Time for Noncarcinogenic Effects	days
At_c	Averaging Time for Carcinogenic Effects	days
UCF	Unit Conversion Factor	mg/kg
SIR	Soil Ingestion Rate	mg/day
AB1	Gastrointestinal Absorption Rate	unitless
EF	Exposure Frequency	days/year
ED	Exposure Duration	years
HQG	Hazard Quotient Goal for Noncarcinogenic Health Effects	unitless
CRG	Cancer Risk Goal for Carcinogenic Health Effects	unitless

Equations:

Noncarcinogenic Soil Remediation Level (mg/kg):
WAC 173-340-745-1

$$\frac{RfD \times ABW \times UCF \times HQ \times AT_n}{SIR \times AB1 \times EF \times ED}$$

Carcinogenic Soil Remediation Level (mg/kg):
WAC 173-340-745-2

$$\frac{Risk \times ABW \times UCF \times AT_c}{CPF \times ASIR \times B1 \times EF \times ED}$$

Notes:
[1]RfDs and CPFs were obtained from (IRIS, 2001), (HEAST, 1997), (Ecology, 2001a), or (EPA, 2000).
[2]All exposure parameters were obtained from WAC 173-340-745 except the soil ingestion rate (SIR) and exposure frequency (EF). These are Site-Specific values.
[3]Risk goals were obtained from WAC 173-340-745.

Table H-2 – Input Parameters and Results of the Adult Lead Model

Input Parameter	Units	Golf Course Groundskeeper Parameter Value[1]
$PbB_{fetal,0.95}$	ug/dl	10
$R_{fetal/maternal}$	(unitless)	0.9
BKSF	ug/dl per ug/day	0.4
$GSD_{i,adult}$	(unitless)	1.81
$PbB_{adult,0}$	ug/dl	1.36
IR_S	g/day	0.100
AF_S	(unitless)	0.12
EF	days/year	52
AT	days/year	365
Results		
RBRG[3]	ug/g	4,134[2]

Notes:
[1]These Site-specific values were specified for use by Ecology (Ecology, 1997).
[2]This value was rounded down to 4,100 ug/g (note: 4,100 ug/g = 4,100 mg/kg).
[3]Risk-based remediation goal.

Table H-3 – Golf Course Groundskeeper Soil Remediation Levels[1]

Constituent	Golf Course Groundskeeper Soil Remediation Level (mg/kg)
Explosives	
2,4,6-Trinitrotoluene[2]	10,600
Inorganics	
Arsenic	530
Lead[3]	4,100
Mercury[4]	6,390
PAHs	
Benzo(a)Pyrene	109
Pesticides	
Aldrin	47

Notes:
[1]Where remediation levels were calculated for both carcinogenic and noncarcinogenic effects, the value presented in the table is the lower of the two values. The soil remediation levels presented in Table 3 have been rounded down from the values shown in Table 1.
[2]Based on agreement with Ecology, the Site-specific cleanup level for 2,4,6-Trinitrotoluene is 1.75 mg/kg (Ecology, 2001b)
[3]Value was derived using EPA's Adult Lead Model (EPA, 1996).
[4]Based on agreement with Ecology, the Site-specific cleanup level for mercury is 24 mg/kg (Ecology, 1993).

H.4 References for Appendix H

Ecology (Washington State Department of Ecology). 1993. Mercury Cleanup Levels Summary and Mercury/Lead Leaching Study. Letter from Mike Blum to Vern Moore, Linda Rudisel, and Jack Frazier. August 12, 1993.

Ecology (Washington State Department of Ecology). 1997. Residential Soil-Lead Cleanup Standard for Former DuPont Works Site. Memo from Mike Blum to Vern Moore and Jack Frazier. October 1, 1997.

Ecology (Washington State Department of Ecology). 1998. EPA's Adult Lead Model and Its Use in Washington State to Evaluate Risk. Memo from Mike Blum to the MTCA Science Advisory Board Members. October 27, 1998.

Ecology (Washington State Department of Ecology). 2001. Cleanup Levels and Risk Calculation (CLARC) Table Updates, Version 3.1, November, 2001.

Ecology (Washington State Department of Ecology). 2001b. Hot spot Interim Action Report. Letter from Mike Blum to Jim Odendahl and Ron Buchanan. January 11, 2001.

EPA (United States Environmental Protection Agency) 1996. Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Exposures to Lead in Soil. Technical Review Workgroup for Lead. Adult Risk Assessment Committee.

EPA (United States Environmental Protection Agency) 1997. The Health Effects Assessment Summary Tables- Annual Update (HEAST): FY 1997 Update. EPA/540-R-97-036. PB97-921199. July. OSWER, Washington, D.C.

EPA (United States Environmental Protection Agency) 2000. EPA Region IX Preliminary Remediation Goal (PRG) Tables. 2000 Update. http://www.epa.gov/region09/waste/sfund/prg/.

EPA (United States Environmental Protection Agency) 2001. The Integrated Risk Information System (IRIS). Environmental Criteria and Assessment Office, Cincinnati, Ohio. 4rd Quarter Update.

PIONEER (PIONEER Technologies Corporation) 2002. Human Health and Ecological Risk Assessment for the Former DuPont Works Site, Dupont, Washington.

APPENDIX I – *Impractability of Groundwater Remediation at the Former DuPont Works Site, DuPont, WA*

I.1 Introduction

The cost for pumping and treating groundwater at the Former DuPont Works Site (Site) to meet the DNT drinking water screening level would be substantial and disproportionate to the degree of risk reduction which could be achieved. Therefore, in accordance with MTCA (WAC 173-340-360, it is impractical to consider active groundwater remediation at the Site for an end use (drinking water) that is not planned. This conclusion is based on the following:

- Site groundwater poses no risk to human health or the environment.
- Because off-Site drinking water supplies will supply more than double the full projected population of DuPont through the year 2020, Site groundwater is not currently and will not in the future be used as a drinking water source (due to a deed restriction).
- Future Site development plans will include deed restrictions as necessary to prevent drilling of drinking water supply wells;
- Even assuming a hypothetical drinking water exposure that does not and will not exist at the Site, the highest DNT concentrations currently in Site aquifers (less than 0.5 µg/L) represent a worst-case risk of less than 4×10^{-6}, which meets a risk threshold of $1 \times l0^{-5}$;
- Current DNT concentrations pose no risk to golfers, other visitors, or golf course maintenance workers who would be most likely to encounter Site groundwater on a regular basis when it is used for golf course irrigation; and
- Site groundwater poses no risk to any Site ecological environment (including Sequalitchew Creek and Old Fort Lake) or off-Site ecological environment (e.g. Puget Sound).
- Natural groundwater recovery will occur following the completed interim DNT source removal. Removal of more than 40,000 cubic yards of DNT-impacted Site soils has been completed, thus the source of DNT to Site groundwater has been removed;
- Already low DNT concentrations in Site groundwater will decline further because Site aquifers are highly permeable and DNT is mobile. This allows for natural flushing of DNT from the groundwater system and further reductions over time in the already low risk under a hypothetical drinking water scenario; and
- The current Site groundwater monitoring program will continue to document the DNT concentrations over time.

Acknowledging groundwater pump and treat systems poor historical performance in achieving drinking water standards, the existing DNT concentrations in Site groundwater would represent a reasonable remediation endpoint at sites where active remediation is under consideration or underway.

The cost to implement active groundwater remediation would be excessive, with preliminary estimates ranging between 33 and 58 million dollars. Consistent with the intent of MTCA and CERCLA, resources should be directed toward making substantive reductions in overall Site risk, which will be best accomplished at this Site by addressing other contaminants remaining in soils.

I.2 Site Groundwater Poses No Risk to Human Health or the Environment

DNT is the only constituent present in Site groundwater at concentrations above drinking water screening levels. The concentrations of DNT in Site aquifers are very low (maximum 95% UCL is less than 0.5 µg/L) and do not represent a risk as explained below.

I.2.1 Site Groundwater Poses No Risk to Human Health

Based on data collected, the highest average DNT concentration in an aquifer beneath the Site is 0.47 µg/L (95% UCL for MW-22). The MTCA drinking water screening level of 0.13 µg/L is based on a 1×10^{-6} risk level. The worst-case risk based on a hypothetical Site drinking water exposure scenario (drinking current DNT concentration in MW-22 for 30 years) is less than 4×10^{-6} which is below the MTCA risk threshold of 1×10^{-5}.

Site groundwater is not being used for drinking water under current Site conditions, and it will not be used in the foreseeable future because adequate off-Site drinking water supply exists to meet future demand. For a projected full build-out population of 10,000 people at the year 2020 (McCamett, June 1995) and an average water consumption of 150 gallons per capita day (Clark et a1, 1977; Metcalf and Eddy, 1979; Linsley and Franzini, 1979), the City of DuPont will have an estimated maximum water demand of approximately 1.5 million gallons per day (MGD). The City of DuPont's existing water system will supply this demand while maintaining excess reserve capacity. The two existing Bell Hill wells have permitted water rights of 2.0 MGD; additions to the system may include an additional well(s) at Hoffman Hill which could potentially double the supply capacity. The Bell Hill wells are located hydraulically up-gradient of the Site and are incapable of drawing water from beneath the Site. As part of the Bell Hill water rights permitting process Ecology reviewed and concurred with technical evaluations (Hart Crowser, 1991) supporting the long-term safety of the Bell Hill water supply even under continuous maximum production. Similarly, Hoffman Hill is located cross-gradient of the Site and wells drilled there would be developed to prevent drawing any groundwater from beneath the Site. Off-Site water supply from the Bell Hill and Hoffman Hill well alone will support more than double the projected population of the City of DuPont, without additional water supply development.

There is no need for drinking water wells to be drilled within the Site under any foreseeable development scenario. As a final measure of protection, Site development plans will include institutional controls, as necessary, in the form of deed restrictions to prevent drilling of wells within the Site for the purpose of water supply.

In addition, Site groundwater poses little to no risk to golfers, visitors, or golf course maintenance workers from dermal contact with irrigation water or from drinking of irrigation water. Attachment A provides a screening evaluation of potential risk to a golf course worker, the person most likely to come in contact with irrigation water.

I.2.2 Site Groundwater Poses No Risk to the Environment

DNT concentrations discharging in seeps to Puget Sound are an order of magnitude below the surface water screening level (an ARAR) of 9.1 µg/L, which is protective of marine aquatic life. DNT was not detected in Sequalitchew Creek or springs discharging to it, or in Old Fort Lake, indicating no potential risk to freshwater aquatic life.

DNT was not detected in samples of marine sediments collected at locations where Site groundwater discharges to Puget Sound or in samples of freshwater sediments from Sequalitchew Creek or Old Fort Lake.

DNT is not detectable in surface water or sediments within or adjacent to the Site, and concentrations in Site groundwater discharging to Puget Sound are below the surface water quality standards.

I.3 Groundwater Recovery Will Occur Naturally

The extensive interim DNT source removal has been successful in removing the vast majority of DNT-impacted soils from the Site. Groundwater flow rates at the Site are very high leading to rapid flushing of the aquifers. As a result, natural recovery of Site groundwater should occur relatively rapidly.

I.4 The DNT Source Has Been Removed

Been 1992 and 1995, more than 40,000 cubic yards of Site soils with DNT concentrations above 3 mg/kg were removed in the five areas where DNT was detected above 1 mg/kg (RI Areas 5, 10, 18, 25, and 31). Data from hundreds of designation samples collected from excavated soils and hundreds of verification samples collected from the excavations suggest that the vast majority of DNT mass (nearly 5,300 kg. or more than 5 tons) has been removed from these two areas. These data, and verification data from the other smaller areas, indicate that the DNT source has been effectively removed from the Site. The most important step in facilitating natural groundwater restoration is removal of the source to prevent further DNT leaching to groundwater. This has been accomplished at the Site.

I.5 Rapid Natural Groundwater Flushing in Site Aquifers

Aquifers beneath the Site are highly permeable (including the exceptionally permeable Steilacoom Gravels), resulting in estimated groundwater flow rates likely on the order of 5,000 to 8,000 feet per year (median values for the Water Table and Unconfined Sea Level Aquifers from ranges presented in Hart Crowser, 1994). The large quantities of groundwater flushing naturally through the aquifers each year will be effective in further reducing the already low residual DNT concentrations in Site aquifers. There is sufficient water moving through the groundwater system under ambient conditions to achieve natural recovery (reducing DNT to below the drinking water screening level) without attempting to supplement the process with active groundwater treatment.

A pump and treat system would involve the same mechanism for aquifer restoration as is occurring naturally via groundwater discharge from the Site (that is removal of water containing DNT from the aquifer system). In a hypothetical pump and treat system, pumpage from the Sea Level Aquifer (SLA) would be approximately equal to the quantity of water discharging naturally from the Site via the SLA. A Site pump and treat system would also include pumping from a portion of the Water Table Aquifer (WTA). Preliminary pumping rate estimates indicate that pumpage from the WTA would comprise about 20 percent and pumpage from the SLA about 80 percent, of the total water pumped in a hypothetical Site pump and treat system (pumping rate estimates discussed below). Aggressive pump and treat of both Site aquifers would provide a 25 percent increase in water removed from the aquifer system relative to natural discharge, which, in time, could decrease the aquifer restoration time by only 20 percent relative to natural flushing. [A 20 percent decrease in time is based on a simple “batch flush” model ($t = \ln[Ct/Co] * PV * R / Q$; EPA, 1988). Increasing flow rare, Q, by 0.25 decreases restoration time, t, by 0.20 in this model. Other values in the equation would be constants for this demonstration.]

I.6 Technical Infeasibility Considerations

Groundwater pump and treat is the only groundwater remediation technology which could be applied at the Site for the following reasons:

- Groundwater which would be targeted for remediation is deep (100 to 200 feet below surface) and laterally extensive, preventing use of impermeable barriers, gates, or other groundwater isolation techniques;

- DNT has low volatility, preventing use of sparging or other venting technologies;

- Although DNT can be degraded through natural in situ processes, only biological degradation could potentially occur in Site aquifers and attempting to enhance this process as part of a remediation program would likely be infeasible;

- DNT readily degrades by photolysis (half-life on the order of days; Etnier, 1987), but this process will not occur in aquifers;

- DNT can be transformed to formic and acetic acids, but only at temperatures at which water would not persist (520°F; Etnier, 1987); and

- DNT in water degrades through biological processes under some aerobic and anaerobic conditions (Spanggord. 1980; Etniert 1987), but the metabolism of DNT is strongly dependent on environmental conditions and the presence of viable microorganisms (ATSDR, 1989). Biodegradation of DNT may be occurring naturally in Site aquifers, yet attempting to establish or enhance appropriate natural microorganism populations (e.g., by introducing nutrients) in Site aquifers would likely be infeasible because of the size of the Site and the substantial depth of the aquifers.

The National Research Council (NRC) Committee on Ground Water Cleanup Alternatives' published report lists "conventional pump and treat" as the only effective technology (out of 12 technology categories) for dissolved constituents, which are non-reactive or non-volatile (NRC, 1994). DNT in Site groundwater falls into this category.

In a pump and treat scenario, groundwater extracted from Site aquifers would be treated most cost-effectively using granular activated carbon (GAC). Recent studies at another site have demonstrated that GAC is considerably more cost-effective to use than advanced oxidation technologies (e.g. UV/Ozone) at low influent concentrations (Hart Crowser, 1993).

The historical performance of groundwater pump and treat systems in restoring aquifers to drinking water standards has been poor suggesting that groundwater pump and treat to achieve drinking water standards everywhere in an aquifer may be technically infeasible. This fact is widely acknowledged within the environmental industry, including the EPA (Travis and Doty, 1990; Doty and Travis, 1991; EPA, 1992; Makdisi, 1994). Of 77 pump and treat sites evaluated in the NRC (1994) report, eight small sites (pumping rates between 1 and 37 gpm; 5 were service stations) with volatile organic compounds (VOCs) had apparently achieved cleanup goals, some of which had the benefit of using venting/sparging to enhance VOC removal. In contrast, the Former DuPont Works Site is very large and hydro-geologically complex and DNT would need to be extracted solely through conventional groundwater pumping. Therefore, the time required for pump and treat to achieve the DNT drinking water standard throughout the Site could be approximately 10 to 20 years or longer, if it were to be implemented. One-half of the sites evaluated by the NRC have already been pumping and treating for at least 10 years without achievement of drinking water standards (NRC, 1994).

At other sites where groundwater concentrations are orders of magnitude higher than at this Site, pump and treat may make sense for reducing concentrations (thus reducing risk) to the extent practical. General evaluations of pump and treat performance suggest it would not be unreasonable to expend 50 percent of available resources (time and money) initially reducing groundwater concentrations by 90 percent, and then expend the remaining 50 percent attempting to remove the residual 10 percent (i.e., below some low asymptotic level). Maximum DNT concentrations at the Site would likely fall within the final one percent at sites where active groundwater remediation is undertaken.

I.7 Cost of Active Groundwater Remediation

The cost to implement active groundwater remediation (pump and treat) at the Site would be excessive, primarily because of the high groundwater flow rates and resulting large volume of water which would need to be extracted, treated, and reintroduced to Site aquifers.

I.7.1 Groundwater Pumping Rate Estimates.

The following analytical equation presented in Keely (1984) was used to estimate the pumping rate needed to capture all Site groundwater with DNT concentrations above 0.13 μg/L in the Water Table Aquifer and in the Sea Level Aquifer:

(1) Max width of capture zone (w) = Q / H v n (I)

where:

Q = pumping rate in ft^3/day;
H = initial saturated thickness in feet;
v = average linear groundwater velocity in ft/day; and n = effective porosity (dimensionless).

Because average linear velocity (v) is equal to Ki/n, effective porosity drops out of the equation. Rearranging the equation to solve for pumping rate (Q) then gives:

(2) Q = w H K i (2)

where:

Q, w, and H are defined above;
K = hydraulic conductivity in ft/day; and
i = hydraulic gradient in ft/foot.

Equation (2) was solved using Monte Carlo simulation to develop a probabilistic range of pumping rates which encompasses reasonable ranges of uncertainties in hydraulic parameters. The equation was solved independently for the Water Table Aquifer (assuming capture of groundwater in Area 18 with DNT above 0.13 μg/L) and the" Sea Level Aquifer (assuming capture of all groundwater in the Sea Level Aquifer with DNT above 0.13 μg/L) .The flow rates from the two aquifers were added to provide an estimated total system now rate for a hypothetical Site pump and treat system.

Hydraulic parameters were assigned assumed probability distributions based on information presented in the initial Draft RI (Hart Crowser, 1994). The assumptions follow, and are provided in Attachment B.
Water Table Aquifer (WTA) Assumptions:

- Hydraulic conductivity (K) was assigned a lognormal distribution with geometric mean of 5×10^{-2} cm/sec and a standard deviation of 10 percent of the mean. [This compares favorably with reliable pumping test results from Fort Lewis which provide a K estimate for the Water Table Aquifer (WTA) of 2×10^{-1} cm/sec, which is higher than the range presented in the initial RI. This value is consistent with the coarse-grained nature of the WTA. Based on this value and other WTA pumping test results presented in the initial Draft RI, we assumed 5×10^{-2} cm/sec as our best judgment estimate of an average K value. Because these flow rate estimates are most sensitive to uncertainty in K (which can vary by orders of magnitude) relatively small standard deviations (for both aquifers) were assumed about the mean values in an effort to provide a more tightly constrained, thus useful, range of resultant flow rates.]

- Horizontal hydraulic gradient (i) estimates for the WTA, ranging from 0.02 to 0.05 ft/ft are based on water table elevation contour maps. Hydraulic gradient for the WTA was assigned a triangular distribution with minimum, most likely, and maximum values of 0,02, 0.035 (midpoint of range), and 0.05 ft/ft, respectively,

- The thickness of the WTA was assigned a triangular distribution with minimum, most likely, and maximum values of 10, 30, and 50 feet, respectively, based on geologic information from drilling Site monitoring wells.

The width of the WTA to be captured was assigned a triangular distribution with minimum, most likely, and maximum values of 1,200, 1.600, and 2,000 feet, respectively, based on the locations of interim DNT

source removal excavations and groundwater flow directions presented in the Draft RI.

I.7.2 Sea Level Aquifer (SLA) Assumptions

- Hydraulic conductivity was assigned a lognormal distribution with geometric mean of 1 x 10^{-1} cm/sec (midpoint of the range presented in the Draft RI) and a standard deviation of 10 percent of the mean (as discussed above).

- Horizontal hydraulic gradient (i) estimates for the Unconfined SLA ranging from 0.005 to 0.02 ft/ft were based on water table elevation contour maps. Hydraulic gradient for the SLA was assigned a triangular distribution with minimum, most likely, and maximum values of 0.005, 0.013 (midpoint of range), and 0.02 ft/ft, respectively.

- The thickness of the SLA was assigned a triangular distribution with minimum, most likely, and maximum values of 80, 100, and 120 feet, respectively based on geologic information from drilling of a deep test well north of the Site which penetrated approximately 120 feet of saturated Steilacoom Gravels (Unconfined Sea Level Aquifer).

- The width of the SLA to be captured was assigned a triangular distribution with minimum, most likely, and maximum values of 2,000, 2,500, and 3.000 feet, respectively, based on the distribution of DNT within the Unconfined Sea Level Aquifer.

Using these parameter distributions as input, equation (2) was run as a Monte Carlo simulation using Crystal Ball software, a forecasting and risk analysis add-on to the Excel spreadsheet. The equation was solved for each aquifer 5,000 times by randomly selecting parameter values from the aquifer-specific probability distributions outlined above, and summing the flow rates from both aquifers into an estimated total system flow rate. The 5,000 estimates of the total system flow rate were automatically compiled into a probability distribution for which percentiles are provided. Attachment B provides the supporting information for the now rate estimates (including assumptions, forecasts, and statistical output).

Using the probability distribution for total system flow rate, we selected a range of system flow rates corresponding to 95 percent and 25 percent probabilities (i.e., a reasonable range of likely outcomes) for the purposes of developing a range of cost estimates. Based on the Monte Carlo simulation, the 5^{th} percentile value was approximately 3,500 gpm (95 percent probability that the flow rate would be at least that high; refer to page B-2 in Attachment B) and the 75^{th} percentile value was approximately 7,000 gpm (25 percent probability that it would be that high). This range of flow rates appears reasonable when compared with a relatively large-scale pump and treat system operating at Ponders Corner, approximately 5 miles from the Site, which had pumped 2,000 gpm from only the lower permeability portion (Advance Outwash) of the Water Table Aquifer (EPA, 1992).

I.7.3 Preliminary Cost Estimate for Groundwater Remediation

Using the estimates for pumping rates presented above, preliminary estimates of cost range from approximately $33 million (assuming pumping, treatment by granular activated carbon (GAC), and reintroduction to the aquifer of 3,500 gpm [5 MGD] for a 10-year duration) to approximately $58 million (assuming pumping, treatment, and reintroduction to the aquifer of 7,000 gpm [10 MGD] for a 20-year duration). A ten (10) year duration of operation was based on the findings of the NRC (1994) report, where one-half of all systems studied have already been operating 10 years or more (with a maximum of 21 years). As such, the twenty (20) year duration was used as the high-end estimate for the purposes of developing cost estimates.

The cost estimates were developed using EPA's Cost of Remedial Action (CORA) Model (CH2M Hill, 1990). The preliminary cost estimate included the following components;

- Installation of extraction wells;

- Installation of conveyance (piping) systems;
- Purchase and operation of granular activated carbon (GAC) treatment system (including carbon change out and off-Site thermal regeneration);
- Installation of re-introduction wells to return treated groundwater back to the aquifers (also used to help control saltwater intrusion in the Sea Level Aquifer);
- Performance monitoring for full period of operation; and
- Operation and maintenance of all systems for period of operation.

Table 1 provides a summary of CORA's estimated costs for constructing (capital costs) and operating and maintaining (O&M costs) a groundwater pump and treat system at the Site under four assumed scenarios (5 MGD for 10 or 20 years, and 10 MGD for 10 or 20 years). These cost estimates do not include pilot testing or engineering design.

I.8 Conclusions

For the Former DuPont Works Site, there is a clear case that the cost to implement active groundwater remediation would be substantial and disproportionate to any risk reduction it could achieve, as specified in MTCA.

- First, there is no risk to human health or the ecological environment posed by DNT in groundwater under any current or foreseeable future land use of the Sire; ample off-Site water supply exists to meet all future drinking water demand, and intuitional controls will be implemented, as necessary, during future Site development to prevent withdrawal of Site groundwater for drinking water use;
- Second, the DNT source at the Site has been removed so that natural recovery will be effective in further reducing the extremely low DNT concentrations currently detected in Site groundwater;
- Third, concentrations in Site groundwater are already low enough that active groundwater pump and treat would likely be little or no more effective than natural flushing in removing the last residual DNT from Site aquifers; and
- Finally, the cost to undertake groundwater pump and treat would be excessive, particularly since it would not provide a substantive reduction in Site risk.

The intent of MTCA and CERCLA is to focus cleanup resources to reduce overall Site risk under current and future land use. This will be accomplished at the Former DuPont Works Site by addressing Site soils, not Site groundwater.

Table I-1 – Summary of Cost[(1)] Estimates for Implementing Groundwater Pump and Treat for the Former DuPont Works Site

Scenario	Capital Cost	O & M Costs[(2)]	Total Cost
5 MGD for l0 years	$16.5	$16.7	$33
5 MGD for 20 years	$16.5	$23.0	$40
10 MGD for 10 years	$20.0	$27.0	$47
10 MGD for 20 years	$20.0	$38.0	$58

Notes:
[(1)]Cost estimates developed using CORA -EPA's Cost of Remedial Action Model (CH2M Hill, 1990). All costs in millions.
[(2)]Present worth based on 10% annual interest rate.

I.9 References for Appendix I

Agency for Toxic Substances and Disease Registry (ATSDR); 1989. Toxicological Profile for 2,4- and 2,6-Dinitrotoluene. Public Health Service, Center for Disease Control, Atlanta, GA.

CH2M Hill, 1990. Cost of Remedial Action (CORA) Model, version 3.0. Prepared under contract, no.68-01-7090.

Clark, J.W., W. Viessman Jr., and M.J. Hammer, 1977. Water Supply and Pollution Control Third Edition. Harper & Row Publishers, New York.

Doty, C.B. and C.C. Travis, 1991. The Effectiveness of Groundwater pumping as a Restoration Technology, Department of Energy, Oak Ridge National Laboratory , Health and Safety Research Division, Risk Analysis Section.

EPA, 1988. Interim Final Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites, EPA, Washington D.C., 100 pp.

EPA, 1992. Evaluation of Ground-Water Extraction Remedies: Phase II. Volumes 1 and 2. EPA Publication 9355.4-05A. February 1992.

Etnier. E.L., 1987. Water Quality Criteria for 2.4-Dinitrotoluene and 2.6- Dinitrotoluene. Oak Ridge, TN: Oak Ridge National Laboratory. U.S. Army Medical Research and Development Command. Project order no. 84PP4845.

Hart Crowser, 1991. Technical Memorandum to Don Davidson, Department of Ecology, regarding City of Dupont Water Supply Wells - Bell Hill No.1 and No.2, Additional Analyses in Support of the Water Rights Permit.

Hart Crowser, 1993. Final Remedial Investigation/Feasibility Study, Site F, Naval Submarine Base, Bangor. Bangor, Washington. November 12, 1993.

Hart Crowser, 1994. Draft Remedial Investigation, Former DuPont Works Site, Dupont. Washington, December 22, 1994.

Keely, J.F., 1984. Optimizing Pumping Strategies for Contaminant Studies and Remedial Actions. Groundwater Monitoring Review, v .4, No.3, pp. 63-74. Summer 1984.

Linsley, R.K. and J.B. Franzini, 1979. Water Resources Engineering Third Edition. McGraw-Hill Book Company. New York.

McCament, J.J., Weyerhaeuser Real Estate Company. Personal communication, June 1995.

Metcalf and Eddy. Inc.. 1919. Wastewater Engineering, Treatment, Disposa1 and Reuse Second Edition, Revised by George Tchobanoglous. McGraw-Hil1 Book Company. New York.

Makdisit R.S., What To Do When Pump and Treat Methods Fail to Achieve Ground-Water Cleanup Standards. The Hazardous Waste Consultant, v. 12. No.4. pp 2.25-2.26. July-August 1994.

National Research Council (NRC), 1994. Alternatives for Groundwater Cleanup. Developed by the Committee on Ground Water Cleanup

Alternatives, Water Science and Technology Board, Board on Radioactive Waste Management, and Commission on Geosciences, Environment, and Resources, National Academy Press, Washington D.C. 315 p.

Spanggord, R.J., T. Mill, T-W. Chou, W.R. Mabey. J.H. Smith, and S. Lee, 1980. Environmental Fate Studies on Certain Munitions Wastewater Constituents, Final Report, Phase II -Laboratory Studies. ADAO99256. SRI Intemational, Menlo Park, CA.

Travis, C.C. and C.B. Doty, 1990. Can Contaminated Aquifers at Superfund Sites be Remediated?, Environmental Science and Technology , v. 24, no.10. pp. 1464-1466.

ATTACHMENT A
GROUNDWATER RISK SCREENING EVALUATION

ATTACHMENT A
GROUNDWATER RISK SCREENING EVALUATION

The potential risks associated with groundwater at the Site are expected to be minimal because the future uses are limited and because the RI results indicate that low concentrations of DNT represent the only Site-related constituents present in the groundwater.

Irrigation of the golf course after the Site is developed represents the only potential future use of groundwater at the Site. No other future uses are planned because the City of Dupont will provide water for all residential and industrial uses. Golfers or occasional visitors are not expected to come in contact with the irrigation water on any significant basis. Thus, risks were quantified for exposure by a golf course worker responsible for operating the irrigation system. Risks were evaluated assuming dermal contact with irrigation water as well as drinking of the irrigation water. Because of the greater potential frequency and duration of contact with irrigation water, a golf course worker represents the most conservative exposure scenario. Highly conservative assumptions were used throughout this screening evaluation to provide a high level of confidence that use of Site groundwater for golf course irrigation will be protective of human health.

The potential cancer risks associated with exposure to groundwater are below 1×10^{-6}, even with the highly conservative assumptions used in this screening evaluation. Therefore, groundwater does not represent a media of concern for impact to human health. The potential risks were quantified as presented below:

Dermal Contact with Groundwater

The dermally absorbed dose is calculated with the following equation:

$$DAD = \left(\frac{DA_{event} \times EV \times ED \times EF \times A}{BW \times AT} \right)$$

Where:

DAD =	dermally absorbed dose in mg/kg-day
DA_{event} =	absorbed dose per event in mg/cm^2-event
EV =	event frequency in events/day
ED =	exposure duration in years
EF =	exposure frequency in days/year
A =	skin surface area available for contact in cm^2

BW = body weight in kg
AT = averaging time in days

The following values were substituted into the above equation:

DA_{event} = 5.9×10^{-9} mg/cm^2-event; as calculated separately below
EV = 1 event/day; which assumes that a groundskeeper sets up and attends to watering systems once per day
ED = 9 years
EF = 180 days/year; a Site-specific value suitable for the Pacific Northwest climate
A = 2,000 cm^2; equal to the average surface area of an adult's hands and forearms
BW = 70 kg; MTCA and EPA default value
AT= 25,550 days; the averaging time for carcinogens (70 years) times 365 days/year

DA_{event} is calculated with the following equation:

$$DA_{event} = 2K_p C_v \sqrt{\frac{6\,\tau\, t_{event}}{\pi}}$$

Where:
K_p= chemical-specific permeability constant in cm/hour
C_v= chemical concentration in water in mg/cm^3
τ = lag time in hours; this term is used to account for chemicals entering the skin at a rapid rate during initial contact (a non-steady state phenomenon)
t_{event}= the duration of the exposure event in hours
π = pi; a constant equal to 3.14

Values of 3.8×10^{-3} cm/hour and 1.1 hour for K_p and τ, respectively, were taken from EPA (1992). The value of K_p for 2,4-DNT was used as the higher value for the two given DNT isomers. t_{event} was assumed to be equal to 0.5 hour, which is a conservative approximation of the amount of time a golf course worker might be in contact with irrigation water per exposure event. C_v was assumed to be 0.76 μg/L, the highest DNT concentration ever detected in Site aquifers (converted to 7.6×10^{-7} mg/cm^3) as an additional measure of conservatism.

Calculating DA_{event} with the above values results in $DA_{event} = 5.9 \times 10^{-9}$. Substituting this into the equation used to calculate DAD results in DAD = 1×10^{-8}. Multiplying DAD by the oral CSF of 0.68 gives an estimated

risk by this pathway of 7×10^{-9}, or 7 in 1 billion. Therefore, potential incremental risks associated with this pathway are well below thresholds of risk management consideration, even with the highly conservative assumptions that a worker would have their arms immersed in water containing maximum Site DNT concentrations for a period of one-half hour every day for 180 days per year.

For EF, the upper-bound default for worker exposure is normally 250 days/year. However, the climate in the Pacific Northwest is such that golf course irrigation is not expected to exceed 6 months per year. Assuming the golf course is operating 7 days per week for 6 months, an EF of 180 days/year was assumed. This further assumes that the golf course will be watered on every one of those 180 days, which is a conservative assumption.

The event time and frequency of 0.5 hour/event, 1.0 event/day, respectively, may not capture the actual conditions by which a worker is exposed. Assuming that a worker makes contact with the irrigation equipment or with materials that have come into contact with the irrigated sections of the golf course, exposure may, in fact, occur with greater frequency for much shorter periods of time. To examine this, the above calculations were repeated with $\tau_{event} = 0.1$ hour (six minutes), and EV = 16 events/day. That is, an individual makes contact with irrigation water for 6 minutes out of every 15 minutes for four hours each working day, which are highly conservative assumptions. With these values substituted in the above equations, $DA_{event} = 2.6 \times 10^{-9}$, DAD = 7.7×10^{-8}, and the risk is determined to be 5×10^{-8}, or 5 in 100 million. Therefore, exposures of greater frequency and shorter time still results in estimated potential incremental risks well below risk management thresholds.

Ingestion of Groundwater

The orally absorbed dose is calculated with the following equation:

$$Intake = (mg/kg\text{-}day) = \left(\frac{CW \times IR \times EF \times ED}{BW \times AT}\right)$$

Where:

CW =	chemical concentration in water in mg/L
IR =	ingestion rate in liters/day
EF =	exposure frequency in days/year
ED =	exposure duration in years
BW =	body weight in kg

AT = averaging time (period over which exposure is averaged - days)

The following values were substituted into the above equation:

CW = 0.76 μg/L, the highest detected DNT concentration in groundwater at the Site
IR = 1 liter/day. This equals half of the EPA default IR of 2 liters/day
EF = 180 days/year; a site-specific value suitable for the Pacific Northwest climate
ED = 9 years
BW = 70 Kg; MTCA and EPA default value
AT = 25,550 days; the averaging time for carcinogens (70 years) times 365 days/year

The value of 1 liter per day for the IR is based on the assumption that a golf course worker consumes half their daily intake of 2 liters/day from irrigation water while at work. This represents a highly conservative assumption since it assumes a worker would preferentially drink water from the golf course irrigation system rather than the water specifically provided for drinking water at the golf course (from the City of Dupont water supply). Because water used for irrigation may not be suited for drinking water purposes, the assumption of any drinking water exposure to irrigation water, much less half of their intake, is highly conservative. Values for CW, EF, ED, BW, and AT are the same as used above for dermal exposure.

Potential risk was calculated for both carcinogenic and non-carcinogenic end points for exposure to DNT in drinking water using EPA guidance (1989). A cancer slope factor of 0.68 and an oral reference dose of 0.001 mg/kg-day were used. The cancer risk was calculated as 5×10^{-7}, considerably below 1 in 1 million (10^{-6}). The non-cancer risk was calculated as 7×10^{-4}, much less than a hazard quotient of 1.0. These calculated risks are well below risk management thresholds.

References for Attachment A

EPA, 1989. Risk Assessment Guidance For Superfund. Human Health Evaluation Manual Part A. EPA 1985.701A, July 1989.

EPA, 1992. Dermal Exposure Assessment: Principles and Applications. Interim Report. Office of Research and Development, Washington, DC. EPA/600/8-91/011B. January 1992.

ATTACHMENT B
SUPPORTING INFORMATION FOR PROBABILISTIC FLOW RATE ESTIMATES

Crystal Ball Report

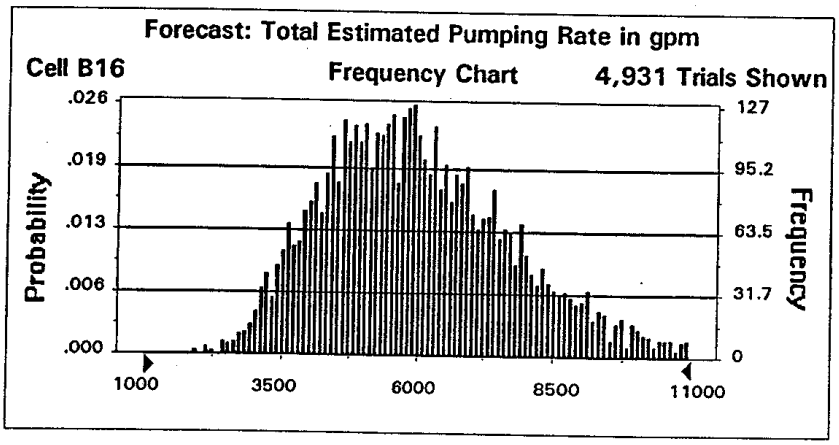
Forecast: Total Estimated Pumping Rate in gpm **Cell: B16**

Summary:

Display Range is from 1000 to 11000
Entire Range is from 1912 to 16401
After 5,000 Trials, the Std. Error of the Mean is 26

Statistics:

	Value
Trials	5000
Mean	6101
Median (approx.)	5868
Mode (approx.)	5897
Standard Deviation	1847
Variance	3411761
Skewness	0.82
Kurtosis	4.23
Coeff. of Variability	0.30
Range Minimum	1912
Range Maximum	16401
Range Width	14488
Mean Std. Error	26.12



Forecast: Total Estimated Pumping Rate in gpm (cont'd) **Cell: B16**

Percentiles:

Percentile	Value (approx.)
0%	1912
5%	3529
25%	4754
50%	5868
75%	7202
95%	9406
100%	16401

End of Forecast

Forecast: WTA Pumping Rate in gpm (cont'd) **Cell: B14**

Percentiles:

Percentile	Value (approx.)
0%	187
5%	530
25%	866
50%	1186
75%	1611
95%	2474
100%	6654

End of Forecast

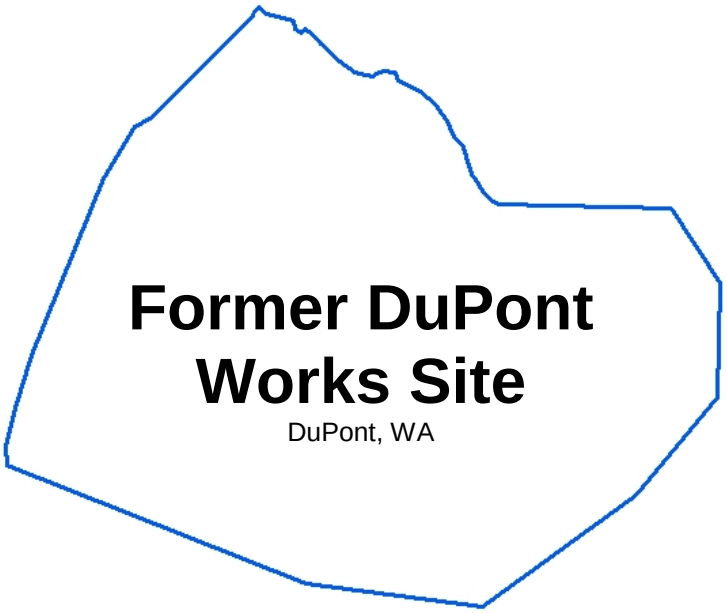
Forecast: SLA Pumping Rate in gpm (cont'd) **Cell: F14**

Percentiles:

Percentile	Value (approx.)
0%	1191
5%	2416
25%	3549
50%	4533
75%	5821
95%	8045
100%	15022

End of Forecast

FINAL
Remedial Investigation for the Former DuPont Works Site



Prepared For:

The Weyerhaeuser Company **And** **E.I. duPont de Nemours and Company**

Prepared By:

URS, Inc.
1501 Fourth Avenue, Suite 1400
Seattle, WA 98101

Modified by:

PIONEER TECHNOLOGIES CORPORATION

2612 Yelm Hwy SE, Suite B
Olympia, WA 98501-4826
Phone: 360.570.1700
Fax: 360.570.1777
www.uspioneer.com

July 2003

PREFACE

This volume, the Remedial Investigation for the Former DuPont Works Site (the Site), is the first of a series presenting information developed as part of the Final Remedial Investigation, Risk Assessment, and Feasibility Study (RI/RA/FS) for the Site, located in DuPont, Washington. Preparation of these reports was stipulated in the July 1991 Consent Decree, between the Washington State Department of Ecology (Ecology) and the potentially liable parties, (PLP) Weyerhaeuser Company (Weyerhaeuser) and E.I. DuPont de Nemours and Company (DuPont). Per the Consent Decree, the reports were developed in accordance with the Model Toxics Control Act (MTCA) cleanup regulations. Draft RI/RA/FS reports were completed in 1994 (Hart Crowser 1994d, 1994e, 1994f) and submitted to Ecology. The Final RI/RA/FS reports have been developed to satisfy comments on the draft reports and to accurately reflect existing conditions and planned future land use at the Site. These reports incorporate agreements reached with Ecology between 1991 and 2001.

A brief description of each report follows:

- **Remedial Investigation.** The purpose of this RI was to collect, develop, and evaluate sufficient information regarding the Site to enable the completion of the RA and FS. The RI characterizes the nature and extent of contamination in the context of past activities at the Site. The RI report presents the analytical data that have been collected at the Site. The data are presented for each RI area; these areas were defined on the basis of historical manufacturing and production operations at the Site.
- **Risk Assessment.** The RA evaluates Site conditions in relation to planned future land uses at the Site. The RA identifies soil cleanup concentrations and presents the methods used to derive Site-specific soil concentrations that are protective of human health and ecological receptors. These cleanup goals are compared to Site constituent concentrations in order to identify the areas that require additional evaluation in the FS.
- **Feasibility Study.** The FS evaluates alternative potential cleanup methods designed to meet the remedial action objectives. The FS report provides information for Weyerhaeuser and DuPont to recommend alternatives for remediation of selected areas, including both no action and action alternatives. Ecology will evaluate the FS and select the remedial measures it believes are appropriate in the Cleanup Action Plan. Weyerhaeuser and DuPont will complete the needed detailed design and implementation of the remedy selected by Ecology.

EXECUTIVE SUMMARY

The purpose of this Remedial Investigation (RI) is to collect, develop, and evaluate sufficient information regarding the Former DuPont Works Site (the Site) to characterize the nature and extent of contamination in the context of past activities at the Site (Figure 1-1). This RI report presents the analytical data that have been collected at the Site. The data are presented for each RI area (Figure 1-2 and Table 1-1), as defined on the basis of historical manufacturing and production operations at the Site.

PROPERTY HISTORY

The Site property was originally used by Native Americans. In the 1830s, Europeans settled in the area and built Fort Nisqually in the northern portion of the Site. Ten years later, the Fort was rebuilt at a location adjacent to but outside the eastern edge of the Site.

E.I. DuPont de Nemours and Company (DuPont) acquired the property in 1906 and constructed an explosives plant and the historical village of DuPont as a company town for plant workers. DuPont continued to manufacture explosives until the mid-1970s, when it closed the manufacturing operations and sold the property to the Weyerhaeuser Company (Weyerhaeuser). Weyerhaeuser and its subsidiary Weyerhaeuser Real Estate Company (WRECO) still own approximately 2,500 acres in the area that they named Northwest Landing. Northwest Landing is a planned community within the City of DuPont and it includes the Site. WRECO has begun to develop Northwest Landing on some of its lands within the City, but no development of the Site has occurred.

REGULATORY HISTORY

The Site was used for the manufacture of commercial explosives from 1909 to 1976. Production of explosive materials ceased and cleanup of the buildings began in 1976. As part of the cleanup process, asbestos was removed, salvageable materials were taken out, and structures were either burned or demolished. Actions taken at the Site subsequent to Weyerhaeuser's purchase include the following:

- In 1985, studies were conducted were concluded to determine whether hazardous substances were present.
- In 1986, a Phase I Site Survey and Review was performed was performed to identify areas of environmental concern on Site.
- In 1986, soil contamination was documented and reported to the Washington State Department of Ecology (Ecology).
- In 1987, a Phase II Site Characterization study was performed.
- In 1989, a Baseline Human Health RA was conducted.
- In 1991, Weyerhaeuser and DuPont signed a Consent Decree (No. 91 2 01703 1) with Ecology, in which they agreed to study the Site and complete an RI, RA, and FS.
- In 1994 and 1995, Draft RI, RA, and FS reports were submitted to Ecology (Hart Crowser 1994d, 1994e, 1994f).
- In 1996, Ecology approved a Cleanup Action Plan for a portion of the area (Parcel 2).

- In 1997, Parcel 2 was deleted from the Consent Decree, and a deed requiring institutional controls to maintain the industrial use of the parcel was recorded in the Pierce County Auditor's office.
- Between 1990 and 2001, Weyerhaeuser and DuPont undertook Interim Source Removal (ISR) actions to clean up soil and/or debris at the Site, in accordance with the Model Toxics Control Act (MTCA) and the Consent Decree.

SCOPE OF RI CHARACTERIZATION

The scope of the Site RI includes sample collection, laboratory analyses, data evaluation, and presentation of sampling results from four environmental media, as follows:

- 21,933 soil sample analyses (5,182 samples)
- 1,181 freshwater sediment sample analyses (20 samples)
- 12,038 groundwater sample analyses (283 samples)
- 1,528 surface water sample analyses (344 samples)

All RI data were collected in accordance with the Site Management Plan (Hart Crowser 1992a). Only those data representing current Site conditions within the Consent Decree Boundary (CDB) have been used in this RI. Data from sampling points that were removed during ISRs have been deleted from the RI database because they no longer represent current Site conditions.

SOIL QUALITY

Sampling Approach

Soil sampling locations were chosen on the basis of historical maps, former DuPont employee information, other Site information, statistical needs, and public comments. Additional samples were collected on the basis of an evaluation of initial sampling results, to evaluate whether the lateral and vertical extent of constituents of concern had been determined. Each RI sample was analyzed for one or more constituents.

Sampling Results

The RI areas from which soil samples were collected are shown in Figure 1-2. Data from the pre-RI and RI sampling and analysis indicate that the highest constituent concentrations occur in surface soil samples collected in the vicinity of production building foundations and waste disposal locations. Constituents of concern found in the production/disposal locations are associated with activities that occurred during facility operations.

Interim Source Removals

Many ISRs were conducted at the Site between 1990 and 2001. These activities have been summarized in a series of ISR memoranda (see Section 5 for references) and include the following:

- Areas 5 and 6 drum, soil, and debris removal

- Area 8 pipeline, tank, and soil removal
- Sympathetic detonations (Area 18)
- Dinitrotoluene (DNT)-impacted soil removal (Areas 10, 18, 25, and 31)
- Lead and miscellaneous debris removal (Areas 18/1/2/3/4, 19C, 24, 30, 31, 35, and 36, and Maintenance Buildings)
- Mercury-impacted soil removal (Area 39)
- Underground storage tank (UST) removals (Areas 20A, 20B, 38, and 39)
- Sitewide lead and arsenic hot spot removal including Area LR-68
- Lead- and arsenic-impacted soil removal around foundations and along the narrow-gauge railroad (NGRR)
- Lead- and arsenic-impacted soil removal (Sand Laydown Area)
- Lead- and arsenic-impacted soil removal (Topsoil Laydown Area)

Many of the pre-RI and RI sampling points were removed during the interim actions, and these data are no longer representative of current Site conditions. Therefore, all removed data points have been omitted from this RI.

Existing Conditions

Under current Site conditions, constituents of concern detected in Site soils at elevated concentrations are the following:

- Lead
- Arsenic
- Total petroleum hydrocarbons (TPH) (Bunker C and non-Bunker C)
- Mercury
- Trinitrotoluene (TNT)
- Benzo(a)pyrene

Other constituents have been detected in soil but, just because a constituent is detected does not mean it is above levels of concern.

Lateral and Vertical Extent

The lateral extent of the constituents detected in Site soil and debris was generally limited to production foundations and waste disposal areas, with the exception of lead and arsenic, which were also detected Sitewide, at concentrations above or near background soil concentrations. The vertical extent of constituents was generally confined to a depth of less than 1 foot in all areas except acid discharge areas, drywell locations, some production-related foundations, and disposal areas, where the vertical extent was generally limited to a depth of less than 10 feet.

EXECUTIVE SUMMARY

SITE GEOLOGY

The major stratigraphic units located beneath the Site are described in Section 3 and summarized in this section.

Steilacoom Gravels constitute the surficial soils of the Site and extend to a depth of about 300 feet. The Steilacoom Gravels consist of brown and gray stratified sands and gravels, with cobbles and occasional zones of siltier sand. The Steilacoom Gravels were deposited during the retreat of the final (Vashon) glaciation in high-energy meltwater channels. Below the Steilacoom Gravels is the Vashon Till.

The Vashon Till consists of a high-density, high-silt-content till that makes it a weak aquitard. The Vashon Till is underlain by the Vashon Advance Outwash, deposited by glacial rivers or streams during the advance of the Vashon glaciation. The Advance Outwash becomes finer grained with depth, typical of advance outwash deposition. Below the Advance Outwash is the Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift sequence (hereafter referred to as the DBD-OB sequence) (formerly known as the Kitsap Formation).

The DBD-OB sequence is a fine-grained, interglacial deposit, approximately 70 to 100 feet thick, and very heterogeneous regionally. The DBD-OB sequence is present below the Site but does not extend west of a line about 2,500 feet inland from Puget Sound. Below the DBD-OB sequence is the Salmon Springs Glaciation (formerly know as the Salmon Springs Formation), which was deposited in the glacial period preceding the DBD-OB sequence interglacial. Regional information indicates that the formation is 70 to 120 feet thick and contains zones of organic silt and till. The Sea Level Aquifer, a regionally extensive aquifer, occurs within the Salmon Springs Glaciation.

SITE HYDROGEOLOGY

Two aquifers occur beneath the Site—the shallow Water Table Aquifer extends from 20 to 105 feet below ground surface and the deeper Sea Level Aquifer is located between 160 and 215 feet below ground surface. Across most of the Site, the relatively impermeable Aquitard (formerly known as the Kitsap Aquitard) restricts vertical flow of groundwater and separates the Water Table Aquifer from the deeper Sea Level Aquifer. This aquitard is absent west of the "Cutoff" (formerly known as the Kitsap Cutoff), which is located 500 to 2,500 feet east of Puget Sound and roughly parallel to the shoreline. The "Cutoff" is the western extent of the Water Table Aquifer and the point at which the Sea Level Aquifer becomes unconfined. Groundwater in the Water Table Aquifer flows west-northwest, with local discharge via springs to upper Sequalitchew Creek. Groundwater in the Sea Level Aquifer flows west-northwest and discharges west of the "Cutoff" as seeps to Puget Sound.

GROUNDWATER QUALITY

Based on the groundwater data presented in the 1994 Draft RI report, Ecology issued a "No Active Remedial Action" letter for Site groundwater (Ecology 1996a). Long-term monitoring for DNT continues.

DNT Data for Site Groundwater

Data from 35 rounds of combined pre-RI and RI groundwater sampling at up to 30 locations (October 1988 through March 2001) indicate the consistent detection of DNT concentrations at marginally elevated concentrations in 6 of 30 Site groundwater monitoring locations. DNT has been detected inconsistently in one additional groundwater monitoring well at marginally elevated concentrations. If detected, the range of total DNT concentrations in groundwater is from 0.019 *u*g/L to 0.78 *u*g/L. DNT has been detected only in monitoring wells located downgradient of areas where DNT has been detected at elevated concentrations in soils (Areas 5, 18, and 31). The DNT groundwater concentrations are expected to decline over time as a result of the removal of DNT-containing soils. Based on ISR work and well data, Ecology determined that "no active remedial action" was needed and long-term monitoring at selected wells would be sufficient (Ecology 1996a).

DNT Data for Groundwater Discharging via Seeps to Puget Sound

The two seep sampling locations (Figure 3.1-1) represent discharge of Site groundwater to the intertidal area of Puget Sound. This groundwater discharge is naturally saline due to salt water intrusion, which disqualifies it as a drinking water source in accordance with MTCA. Total DNT concentrations have ranged from nondetect to 0.27 µg/L in the 25 samples collected from SEEP 1 over the period of monitoring. DNT has not been detected in SEEP 2. All detected DNT concentrations at SEEP 1 have been at least 33 times lower than the protective surface water concentration of 9.1 µg/L. Based on this comparison, DNT in groundwater discharging from the Site via seeps to Puget Sound poses no concern to human health or the environment.

Other Constituents

In 1988, nitrate was detected in three of the Site monitoring wells. Because one of these three monitoring wells is located along the eastern (upgradient) edge of the Site, off-Site sources of nitrate (such as animal pasturing) are possible. All three wells have had relatively low nitrate concentrations since 1988. Total carcinogenic polycyclic aromatic hydrocarbon (cPAH) concentrations in groundwater have all been low. With the exception of concentrations of naturally occurring aluminum (detected in background groundwater samples), all other dissolved metals were detected at low concentrations. No other constituents of concern that were analyzed for have been detected in Site groundwater.

SURFACE WATER FEATURES

Three surface water bodies—Puget Sound, Sequalitchew Creek, and Old Fort Lake—are located within or adjacent to the Site. Puget Sound is a large saltwater body located along the western boundary of the Burlington Northern property west of the Site. Puget Sound directly or indirectly receives all groundwater and surface water discharge from the Site. Sequalitchew Creek is a perennial stream that originates in Sequalitchew Lake east of the Site and discharges into Puget Sound. In the dry season, the upper and lower reaches of the creek within the Site are dry. Old Fort Lake is a small glacial kettle lake that has no inlet or outlet. The lake is fed by groundwater from the Water Table Aquifer, and the lake level is an expression of the Water Table Aquifer.

SURFACE WATER AND FRESHWATER SEDIMENT QUALITY

Surface Water

Constituents detected at elevated concentrations in Sequalitchew Creek and Old Fort Lake are consistent with those detected at the area background (upstream) sampling location in Sequalitchew Creek (SW-4, Figure 3.1-1) and in other rivers and streams in Pierce County.

Freshwater Sediment

None of the wide range of constituents analyzed for in sediment samples was detected at elevated concentrations. Lead was detected in Old Fort Lake sediments at low concentrations. Detected concentrations of other metals were comparable to available background freshwater sediment data for the Puget Sound region.

Based on the data presented in the 1994 Draft RI report, Ecology verbally agreed to No Further Action for all surface water and freshwater sediments within the CDB at the Site (Ecology 1996d).

Additional soil samples, groundwater samples, surface water and freshwater sediment samples, and marine sediment samples were collected outside the CDB. These data will be presented in a separate report.

TABLE OF CONTENTS

Preface iii

Executive Summary v

Abbreviations and Acronyms xvii

Section ONE Introduction 1-1

1.1 site location and physical setting 1-1
1.2 Property History 1-1
1.3 Regulatory History 1-2
1.4 remedial investigation report objectives 1-2
1.5 field investigations 1-4
1.6 report organization 1-5

Section TWO Soil Characterization 2-1

2.1 sitewide soil conditions 2-1
2.2 area background soil quality 2-1
2.2.1 Summary of Results 2-2
2.2.2 Comparison With Regional Background Soils 2-2
2.3 introduction to area-specific soil quality 2-3
2.4 area 6—crystallizer drum area soil quality 2-4
2.4.1 History of Activities 2-4
2.4.2 Soil Conditions 2-4
2.4.3 Constituents in Soil 2-5
2.5 Area 7—Waste Drainage Pit (Old Salt Lake) soil quality 2-5
2.5.1 History of Activities 2-5
2.5.2 Soil Conditions 2-5
2.5.3 Perched Water Occurrence 2-6
2.5.4 Constituents in Soil 2-7
2.6 ISR for this area is described in Section 2.20.15. Area 10—Aluminum water gel area soil quality 2-7
2.6.1 History of Activities 2-7
2.6.2 Soil Conditions 2-7
2.6.3 Constituents in Soil 2-7
2.7 Area 11—water gel wash-up waste pit area soil quality 2-8
2.7.1 History of Activities 2-8
2.7.2 Soil Conditions 2-8
2.7.3 Constituents in Soil 2-8
2.8 area 12—works magazine landfill soil quality 2-8
2.8.1 History of Activities 2-8
2.8.2 Soil Conditions 2-9
2.8.3 Constituents in Soil 2-10
2.9 Area 16—kettle beneath area 5 soil quality 2-11
2.9.1 History of Activities 2-11

2.9.2 Soil Conditions 2-11
2.9.3 Constituents in Soil 2-12
2.10 Area 18/1/2/3/4—nitroglycerin production and powderline area soil quality 2-13
2.10.1 History of Activities 2-13
2.10.2 Soil Conditions 2-14
2.10.3 Constituents in Soil 2-15
2.11 Area 25—acid production area soil quality 2-15
2.11.1 History of Activities 2-15
2.11.2 Soil Conditions 2-16
2.11.3 Constituents in Soil 2-16
2.12 Area 26—waste acid recovery area and kettle soil quality 2-17
2.12.1 History of Activities 2-17
2.12.2 Soil Conditions 2-17
2.12.3 Constituents in Soil 2-19
2.13 area 31—burning ground soil quality 2-19
2.13.1 History of Activities 2-19
2.13.2 Soil Conditions 2-20
2.13.3 Constituents in Soil 2-20
2.14 area 38—carton production area and drywell soil quality 2-20
2.14.1 History of Activities 2-20
2.14.2 Soil Conditions 2-21
2.14.3 Constituents in Soil 2-21
2.15 areas of potential concern soil quality 2-21
2.15.1 AP-A Powder Test Ground 2-21
2.15.2 AP-B Smokeless Powder Dump 2-22
2.15.3 AP-C Smokeless Powder Nitrating/Grinding House 2-23
2.15.4 AP-D Asphalt Paint Building 2-24
2.15.5 AP-E Main Transformer House 2-24
2.15.6 AP-F Nitrocotton Area 2-25
2.15.7 AP-G Decontamination Areas 2-25
2.16 site reference area soil quality 2-27
2.16.1 Lead 2-27
2.16.2 Arsenic 2-28
2.17 historical railroad grades soil quality 2-32
2.17.1 History of Activities 2-32
2.17.2 Soil Conditions 2-33
2.17.3 Constituents in Soil 2-33
2.17.4 Distribution of Constituents in Soil 2-33
2.18 Sequalitchew Creek Canyon soil quality 2-34
2.18.1 2001 Sequalitchew Creek Characterization 2-34
2.18.2 Area LR-68 Characterization 2-35
2.19 miscellaneous areas soil quality 2-36
2.20 interim source removal areas 2-36
2.20.1 Areas 5 and 6 DNT Waste Drum Areas 2-37
2.20.2 Area 8 Bunker C Pipeline and Former ASTs 2-38
2.20.3 Area 18 Sympathetic Detonation 2-38

2.20.4 Area 19 Maintenance Areas 2-39
2.20.5 Area 20 Underground Storage Tanks 2-40
2.20.6 Area 24A Upper Power House 2-40
2.20.7 Area 30 Railroad Debris 2-41
2.20.8 Area 31 Ravine Near Burning Ground 2-41
2.20.9 Area 35 Tar Barrel Area 2-41
2.20.10 Area 36 Lead Melt House 2-41
2.20.11 Area 38 Underground Storage Tank 2-42
2.20.12 Area 39 Laboratory 2-42
2.20.13 Lead-Contaminated Debris Removal—Areas 18S, 19C, and 31 2-42
2.20.14 DNT Soil Removal—Areas 10, 18, 25, and 31 2-43
2.20.15 Lead and Arsenic Hot Spots 2-44
2.20.16 Foundation, NGRR, Hot Spot, and Top Soil Laydown Area 2-44
2.20.17 Sand Laydown Areas 2-46

Section THREE Groundwater Characterization 3-1

3.1 Hydrogeologic characterization 3-1
3.1.1 Site Geology 3-1
3.1.2 Site Hydrogeology 3-4
3.1.3 Surface Water Features 3-12
3.2 Groundwater quality characterization 3-13
3.2.1 Groundwater Sampling Conducted to Date 3-13
3.2.2 Background Groundwater Quality Results 3-16
3.2.3 Constituents in Groundwater 3-16
3.2.4 No Active Remedial Action Required for Groundwater 3-24

Section FOUR Surface Water and Freshwater Sediment Characterization 4-1

4.1 surface water and freshwater sediment sampling 4-1
4.1.1 Surface Water 4-1
4.1.2 Freshwater Sediment 4-1
4.2 surface water quality 4-2
4.2.1 Old Fort Lake Surface Water Quality 4-2
4.2.2 Sequalitchew Creek Surface Water Quality 4-2
4.2.3 Summary of Surface Water Quality Data 4-3
4.3 Freshwater sediment quality 4-4
4.3.1 Old Fort Lake Freshwater Sediment Quality 4-4
4.3.2 Sequalitchew Creek Freshwater Sediment Quality 4-4
4.3.3 Summary of Freshwater Sediment Quality 4-5
4.4 No further action for surface water or freshwater sediments 4-5

Section FIVE References 5-1

TABLE OF CONTENTS

Tables

1-1 Status of Site Areas

2.2-1 Summary Statistics of Soil Quality in Area Background Samples

2.2-2 90th Percentile Metals Concentrations in Site Area and Regional Background Samples

3.1-1 Summary of Hydraulic Conductivity (K) Estimates

3.1-2 Hydraulic Conductivity (K) Estimates Based on Application of Kozeny-Carmen Equation to Grain Size Data

3.2-1 Summary of Groundwater Sampling (by Location) Conducted to Date

3.2-2 Number of Usable Data Points (Analyses) for Each Groundwater Sampling Location

4.1-1 Number of Usable Data Points (Analyses) for Each Surface Water Sampling Location

Figures

1-1 Vicinity Map

1-2 Former DuPont Works Site Map, RI and Interim Soil Removal Areas

2.2-1 Area Background Soil Sampling Location Plan

2.3-1 Legend for Area-Specific Soil Location Maps

2.4-1 Area 6 Soil Sample Locations

2.5-1 Area 7 Soil Sample Locations

2.6-1 Area 10 Soil Sample Locations

2.7-1 Area 11 Soil Sample Locations

2.8-1 Area 12 Soil Sample Locations

2.9-1 Area 16 Soil Sample Locations

2.10-1 Area 1/2/3/4 Soil Sample Locations

2.10-2 Area 18 Boring Soil Sampling Locations, Sheet 1/4

2.10-3 Area 18 Surface Soil Sample Locations, Sheet 2/4

2.10-4 Area 18 Test Pit Soil Sample Locations, Sheet 3/4

2.10-5 Area 18 Verification Soil Sample Locations, Sheet 4/4

2.10-6 Area 18 Hand Auger Soil Sample Locations

2.11-1 Area 25 Soil Sample Locations

2.12-1 Area 26 Soil Sample Locations

2.13-1 Area 31 Soil Sample Locations

2.14-1 Area 38 Soil Sample Locations

2.15-1 Area AP-A and AP-C Soil Sample Locations

2.15-2 Area AP-B Soil Sample Locations
2.15-3 Area AP-D, -E, and -G Soil Sample Locations
2.15-4 Area AP-F Soil Sample Locations
2.16-1 Area 18-Reference Soil Sample Locations
2.16-2 Area 31-Reference Soil Sample Locations
2.16-3 Lead Reference Soil Sample Locations
2.17-1 Historical Railroad Soil Sample Locations
2.18-1 Creek Soil Sample Locations
2.19-1 Candidate North Soil Sample Location
2.19-2 Candidate South Soil Sample Location
2.19-3 North of Creek Soil Sample Locations
2.19-4 Miscellaneous Soil Sample Locations
2.20-1 Areas 5/5D Soil Sample Locations
2.20-2 Area 8 Soil Sample Locations
2.20-3 Area 19 Soil Sample Locations
2.20-4 Area 24 Soil Sample Locations
2.20-5 Area 30 Soil Sample Locations
2.20-6 Area 36 Soil Sample Locations
2.20-7 Area 39 Soil Sample Locations
2.20-8 Sand Laydown Areas Verification Soil Sample Locations
3.1-1 Groundwater and Surface Water Sampling Location Plan
3.1-2 Generalized Subsurface Profile A-A'
3.1-3 Generalized Subsurface Profile B-B'
3.1-4 Water Table Elevation Contour Map—April 1992
3.1-5 Water Table Elevation Contour Map—August 1992
3.1-6 Water Table Elevation Contour Map—December 1992
3.1-7 Long-Term Hydrographs for Wells in the Water Table Aquifer
3.1-8 Long-Term Hydrographs for Wells in the Sea Level Aquifer
3.2-1 Total DNT Concentrations in Groundwater Over Time (MW-3 and MW-6)
3.2-2 Total DNT Concentrations in Groundwater Over Time (MW-8 and MW-15)

3.2-3 Total DNT Concentrations in Groundwater Over Time (MW-19 and MW-22)

3.2-4 Total DNT Concentrations in Groundwater Over Time (MW-27)

3.2-5 Groundwater DNT Concentrations as a Function of Groundwater Elevation

3.2-6 Nitrate Concentrations in Groundwater Over Time

3.2-7 Total Aluminium vs. Total Suspended Solids (TSS)
Total Arsenic vs. Total Suspended Solids (TSS)

3.2-8 Total Beryllium vs. Total Suspended Solids (TSS)
Total Chromium vs. Total Suspended Solids (TSS)

3.2-9 Total Lead vs. Total Suspended Solids (TSS)
Total Nickel vs. Total Suspended Solids (TSS)

4.1-1 Surface Water and Freshwater Sediment Sampling Location Plan

Appendices

A Field Procedures and Logs

B Soil Quality Data

C Groundwater, Surface Water, and Freshwater Sediment Quality Data

D Laboratory Physical Soils Testing

E Data Quality Assessments

ABBREVIATIONS AND ACRONYMS

AA	atomic absorption
ACM	asbestos-containing material
ACTIVE	Active Construction
AP	area of potential concern
AST	aboveground storage tank
ATI	Analytical Technologies Inc.
CAP	Cleanup Action Plan
CDB	Consent Decree Boundary
cm/sec	centimeter per second
cPAHs	Carcinogenic polycyclic aromatic hydrocarbons
DERS	DuPont Environmental Remediation Services
DNB	1,3-dinitrobenzene
DNT	dinitrotoluene (includes 2,4-DNT and 2,6-DNT)
DuPont	E.I. DuPont de Nemours and Company
Ecology	Washington Department of Ecology
EIS	environmental impact statement
EM	electromagnetic
EPA	U.S. Environmental Protection Agency
ESM	ESM Consulting Engineers, LLC
FS	feasibility study
gpm	gallon per minute
ISD	inorganic solid debris
ISR	interim source removal
LDR	land disposal restrictions
LR	lead reference
µg/L	microgram per liter
µm	micrometer
mg/kg	milligram per kilogram
mg/L	milligram per liter
MMAN	monomethylamine nitrate
msl	mean sea level
MTCA	Model Toxics Control Act

NAX	nitroaromatic explosives (includes TNT, 2,4-DNT, 2,6-DNT, NB, DNB, and TNB)
NB	nitrobenzene
ncPAHs	noncarcinogenic polycyclic aromatic hydrocarbons
NFA	no further action
NG	nitroglycerin
NGRR	narrow-gauge railroad
OC	organochlorine
OP	organophosphorus
PAHs	polycyclic aromatic hydrocarbons, also called polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyl
PID	photoionization detector
PVC	polyvinyl chloride
RA	risk assessment
RI	remedial investigation
RU	remedial unit
SLA	sand laydown area
SVOC	semivolatile organic compound
TCLP	toxicity characteristics leaching procedure
TDS	total dissolved solids
TNB	1,3,5-trinitrobenzene
TNT	2,4,6-trinitrotoluene
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TSS	total suspended solids
UST	underground storage tank
VOC	volatile organic compound
Weyerhaeuser	Weyerhaeuser Company
WRECO	Weyerhaeuser Real Estate Company
XRF	x-ray diffraction

This section summarizes the site history, site location and physical setting, the objectives of the Remedial Investigation (RI) report, the objectives of the field investigations, and the report organization. Much of the previous investigation work conducted at the Site is summarized in the pre-RI Phase I and Phase II reports (Hart Crowser 1986 and 1987, respectively). Pre-RI work is defined as any site investigation work done prior to the start of the formal RI agreed to in the 1991 Consent Decree. It includes any sampling activities that occurred prior to 1992. The management plans for this work are provided in the RI/Feasibility Study (FS) Management Plan (Hart Crowser 1992a). Previous reports and studies are referenced or briefly summarized where appropriate.

1.1 SITE LOCATION AND PHYSICAL SETTING

The Site is located in southwestern Pierce County, within the City of DuPont. The 636-acre Parcel 1 area within the Consent Decree Boundary (CDB) is the location of the Former DuPont Works (DuPont). Parcel 1 is bordered by the Weyerhaeuser Company (Weyerhaeuser) property to the north and west, and Weyerhaeuser Real Estate Company (WRECO) property to the east and south (Figure 1-1). Burlington Northern Railroad property is adjacent to Weyerhaeuser open space to the west. Puget Sound is located to the west of the Burlington Northern Railroad property. The Parcel 1 area within the CDB is referred to as the "Site" throughout the remainder of this document.

The Site is situated on a glacial outwash plain that slopes gently to the west, toward Puget Sound. The significant features of relief across the Site are numerous glacial kettles (depressions), the east-west-trending valley of Sequalitchew Creek, a small kettle lake in the southern portion of the Site (Old Fort Lake), and the steep bluff on the west. The elevation across the Site generally ranges from 200 to 225 feet above mean sea level (msl), except within the kettles, which are at an elevation of approximately 150 feet msl. The Site is generally partially cleared or forested, with intermittent clearings.

1.2 PROPERTY HISTORY

The Site property was originally used by Native Americans. European settlement began in 1832, when the Hudson Bay Company established a cabin/storehouse on nearby Puget Sound at the mouth of Sequalitchew Creek, northwest of the Site (City of DuPont 1995). In 1833, the Hudson Bay Company built Fort Nisqually in an area in the northern portion of the Site. Ten years later, Fort Nisqually was rebuilt at a location adjacent to but outside the eastern edge of the Site.

DuPont acquired the Site in 1906 and constructed an explosives plant. The historical village of DuPont, Washington, is approximately 1 mile southeast of the Site. DuPont continued to manufacture explosives until the mid-1970s, when it ceased operations and sold the Site and adjacent areas to Weyerhaeuser. Weyerhaeuser and its subsidiary WRECO still own the majority of the approximately 2,500 acres in the area known as Northwest Landing. Northwest Landing is a planned community within the City of DuPont and it includes the Site. WRECO has begun to develop Northwest Landing on some of its lands within the City, but no development of the Site has occurred.

1.3 REGULATORY HISTORY

The Site was used for the manufacture of commercial explosives from 1909 to 1976. Production of explosive materials ceased and decommissioning of the buildings began in 1976. As part of the decommissioning process, asbestos was removed, salvageable materials were taken out, and many structures were either burned or demolished. Actions taken at the Site subsequent to the shutdown in 1976 include the following:

- In 1985, Weyerhaeuser initiated studies to determine whether hazardous substances were present.
- In 1986, a Phase I Site Survey and Review was conducted to identify areas of the Site that may be of environmental concern.
- In 1986, soil contamination was first documented and reported to the Washington State Department of Ecology (Ecology).
- In 1987, a Phase II Site Characterization study was performed, which characterized the type, concentration, and distribution of constituents at 38 areas on the Site.
- In 1989, a Baseline Human Health Risk Assessment (RA) was performed using results of the Phase II survey.
- In 1991, Weyerhaeuser and DuPont signed a Consent Decree (No. 91 2 01703 1) with Ecology, in which they agreed to study the Site and complete an RI, RA, and FS. The Site was divided into two main areas: Parcel 1 (approximately 636 acres) and Parcel 2 (approximately 205 acres).
- In 1994 and 1995, Draft RI, RA, and FS reports were submitted to Ecology and underwent public review.
- In 1996, based on the result of interim source removal (ISR) actions, Ecology approved a Cleanup Action Plan (CAP) for Parcel 2 that provided for no further remediation activities except for the institutional controls to maintain the industrial use of Parcel 2.
- In 1997, Parcel 2 was deleted from the Consent Decree, and the deed requiring institutional controls to maintain the industrial use of the parcel was recorded in the Pierce County Assessor's office.
- Between 1990 and 2001, while studies and negotiations were ongoing, Weyerhaeuser and DuPont undertook ISR actions to clean up soil and/or debris at the Site, in accordance with the Model Toxics Control Act (MTCA) and the Consent Decree.

1.4 REMEDIAL INVESTIGATION REPORT OBJECTIVES

The purpose of the RI was to collect, develop, and report sufficient information regarding the Site to enable the completion of the RA and FS. The RI characterizes the nature and extent of contamination in the context of past activities at the Site. The RI report presents the analytical data for the media that have been collected at the Site. The data are presented for each RI area (Figure 1-2), as defined on the basis of historical manufacturing and production operations at the Site.

This RI summarizes the results of soil, groundwater, surface water, and sediment investigations conducted within the CDB. These investigations were conducted in accordance with the RI Management Plan (Hart Crowser 1992a). The Management Plan included an evaluation of locations outside of the CDB. The results of these investigations are or will be the topic of additional reports. In addition to the sampling specified in the RI Management Plan, soil verification data following ISRs and additional characterization data were collected in selected areas within the CDB.

The scope of the Site RI includes sample collection, laboratory analyses, data evaluation, and presentation of sampling results from four environmental media, as follows:

- 21,933 soil sample analyses (5,182 samples)
- 1,181 freshwater sediment sample analyses (20 samples)
- 12,038 groundwater sample analyses (283 samples)
- 1,528 surface water sample analyses (344 samples)

Because of the number and extent of interim actions conducted, many of the pre-RI and RI sampling points were removed during these activities and are no longer representative of current site conditions. Only those data representing current Site conditions within the CDB are included in this RI report. Samples excavated during ISR were removed from the RI database and were not used to characterize the Site.

The historical areas identified in the Consent Decree for further investigation and addressed in this document include the following:

- Area 1—Nitroglycerin Wash Water Gutter
- Area 2—Nitroglycerin Spill at No. 2 Nitrating and Separating House
- Area 3—Nitroglycerin Spill Along Gutter Line
- Area 4—Lead Residual at No. 2 Nitrating and Separating House
- Area 5—DNT Waste Drum Area
- Area 6—Crystallizer Drum Area
- Area 7—Waste Drainage Pit (Old Salt Lake)
- Area 10—Aluminum Water Gel Area
- Area 11—Water Gel Wash-Up Waste Pit Area
- Area 12—Works Magazine Landfill
- Area 16—Kettle Beneath Area 5
- Area 18—Nitroglycerin Production and Powderline Area
- Area 24—Upper Powerhouse
- Area 25—Acid Production Area
- Area 26—Waste Acid Recovery Area and Kettle
- Area 31—Burning Ground

- Area 38—Box Production Area and Drywell

The Consent Decree also identified Area 40, the Black Powder Area; however, as discussed previously, this area (also known as Parcel 2) has already been cleaned up and is no longer part of the Consent Decree process. For the purposes of the RI, Areas 1 through 4 and Area 18 have been combined into Area 18/1/2/3/4 to facilitate soil quality characterization.

The following seven areas were also identified as areas within the CDB for further investigation, based on additional historical information review.

- AP-A—Powder Test Ground
- AP-B—Smokeless Powder Dump (Phase II—Site 22)
- AP-C—Smokeless Powder Nitrating/Grinding House
- AP-D—Asphalt Paint Building
- AP-E—Main Transformer House
- AP-F—Nitrocotton Area (Drying House and Bunkers)
- AP-G—Decontamination Areas (Phase II—Site 23)

Three additional areas (Site Reference Area, LR-68, and narrow-gauge railroad [NGRR]) were identified for further study during the RI field activities. In addition to the areas identified above for RI evaluation, historical Site areas and miscellaneous Sitewide hot spot areas (Areas 1, 2, 3, 4, 5, 6, 8, 10, 18, 19, 20, 25, 26, 30, 31, 35, 36, 38, 39, and others), were approved by Ecology for ISR. Areas 15 and 32 have had early independent cleanup actions completed. ISR activities are discussed in Section 2.20. Table 1-1 summarizes the above information.

Specific objectives associated with the RI characterization phase of the project included the following:

- Determination of the lateral and vertical distribution of soil contamination within the RI areas
- Evaluation of the distribution and concentrations of constituents in Site groundwater, surface water, and freshwater sediments
- Refinement of the Site hydrogeologic conceptual model of the multi-aquifer groundwater system
- Determination of aquifer properties and groundwater flow rates
- Determination of representative area background concentrations for the Site soil and groundwater

1.5 FIELD INVESTIGATIONS

Pre-RI field investigations are summarized in the Phase I and Phase II Site Characterization Reports (Hart Crowser 1986 and 1987, respectively). The studies summarized in this report were conducted for Weyerhaeuser and DuPont between 1987 and September 2001. Studies performed after 1992 were conducted in accordance with the RI/FS Management Plan (Hart Crowser 1992a). Studies completed prior to 1992 where done using standard professional practices. The

Management Plan was prepared in consultation with Ecology, the public, and other participating agencies, in accordance with the following process:

- The Draft Management Plan (Hart Crowser 1992a) was reviewed by Ecology and revised in accordance with Ecology's comments between August 1991 and January 1992.
- The Draft Management Plan was available for public review between December 1991 and January 1992.

Field investigations conducted to meet the specific objectives stated above include:

- Surficial and deep soil sampling and analysis in 24 production-related areas
- Systematic sampling of soils outside of the production-related areas
- Water level measurements and surface water and freshwater sediment sampling and analysis in two surface water bodies—Sequalitchew Creek and Old Fort Lake
- Water level measurements, aquifer testing, and groundwater sampling and analysis for the Water Table and Sea Level Aquifers, including sampling and analysis of discharge at springs
- Area background soil and groundwater sampling and analysis

1.6 REPORT ORGANIZATION

Subsequent sections of this RI report are organized by medium—soil quality characterization by area (Section 2), groundwater characterization (Section 3), and surface water and freshwater sediment characterization (Section 4). Section 5 consists of a list of references cited in the report. Following the text are supporting tables and figures. All figures and tables were developed on the basis of information provided to URS in an analytical database submitted in final form for this RI on April 1, 2002 (Pioneer 2002). Appendices contain a discussion of field procedures and field exploration logs (Appendix A); soil quality data tables (Appendix B); and groundwater, surface water, and freshwater sediment quality data tables (Appendix C). Appendix D includes grain size distribution data for soil samples collected during the RI. Appendix E includes the data quality assessments for all data.

This section presents the findings of the RI soil characterization efforts at the Site. Information provided for each area in Sections 2.4 through 2.20 varies depending on the complexity of the area and the number and extent of detected constituents. Appendices A and B present field procedures and soil quality summary tables, respectively.

2.1 SITEWIDE SOIL CONDITIONS

Steilacoom Gravels constitute the surficial soils of the Site. The Steilacoom Gravels consist of brown and gray stratified sands and gravels, with cobbles and occasional zones of siltier sand. The Steilacoom Gravels were deposited during the retreat of the final (Vashon) glaciation in high-energy meltwater channels, which originated in a proglacial lake located in the present-day Puyallup River valley to the east (Walters and Kimmel 1968).

Over much of the eastern and central portions of the Site, the thickness of the Steilacoom Gravels typically ranges from 20 to 40 feet in these glacial meltwater channels. Along the western margin of the Site, the outwash channels feed into a large glacial delta (Sequalitchew Delta) within which the Steilacoom Gravels are more than 300 feet thick (extending below sea level). Cross-bedded gravel layers are commonly observed to dip toward Puget Sound within these deltaic deposits in the western portion of the Site.

Soil horizons developed on top of the Steilacoom Gravels consist of dark brown to dark gray, gravelly, sandy loam with variable percentages of organic matter and volcanic ash (Spanaway and Everett Series; Anderson et al. 1955). These soil horizons range in thickness from a few inches to approximately 3 feet depending on topography and vegetation. Soils developed on the geologic kettle floors include layers with higher silt and organic contents, indicating that the depressions may have been periodically flooded since the retreat of the Vashon glaciation, creating alternately dry and marshy conditions.

2.2 AREA BACKGROUND SOIL QUALITY

Twenty RI soil samples (BG-501 through BG-520) and three pre-RI soil samples (BG-SS-2, BG-SS-3, and BG-SS-5) were collected from outside of the CDB to define "Site area background" soil quality in accordance with MTCA. The majority of samples were obtained from locations to the south and east. Three samples were obtained from the coastal bluff to the north of the Site, as shown in Figure 2.2-1. The samples were positioned in locations that (1) have the same basic characteristic as Site soils, (2) have not been influenced by releases from the Site, and (3) have not been influenced by releases from other localized human activities, in accordance with WAC 173-340-709(2). Sampling locations were chosen to minimize the potential influence of airborne particulates settling on Site soils.

The Site area background soil samples were collected from undisturbed vegetated areas, with no apparent anthropogenic influences. The upper 6 inches of soil were composited after scraping away 1 to 4 inches of forest duff from the surface. Soils were generally described as moist, brown to black, silty, gravelly sand and are typical of the soils developed on top of the Steilacoom Gravels. Site area background soil samples were analyzed for the full list of parameters analyzed in on-Site soil samples, including 14 metals, polycyclic aromatic hydrocarbons (PAHs), nitrates, nitroaromatic explosives (NAX), nitroglycerine (NG), monomethylamine nitrate (MMAN), total petroleum hydrocarbons (TPH), semivolatile organic

compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and organochlorine (OC) and organophosphorus (OP) pesticides. Ten additional samples (BG-511 through BG-520) were collected from similar locations outside the CDB and analyzed only for arsenic (Figure 2.2-1).

2.2.1 Summary of Results

A summary of Site area background soil quality is presented in Table 2.2-1. Metals, which are common and natural components of soil minerals, were the primary constituents detected. Nitrates, which are also naturally occurring, ranged from 0.8 to 4.2 mg/kg and averaging 2 mg/kg.

Organic Constituents

Low concentrations of three PAHs (acenaphthene, benzo(a)pyrene, and chrysene) were detected in at least one sample. PAH compounds are found in natural environments as a result of wood decay, forest fire, or other natural causes (Howard 1990). The presence of PAHs in area background samples does not diminish the samples' suitability or representativeness. In studies of background soil quality in rural areas (Harper-Owes 1985; Boyce and Michelsen 1993), PAH compounds were reported in a majority of soil samples at concentrations comparable to those reported in the Site area background samples (i.e., hundredths to tenths of one part per million).

Bis(2-ethylhexyl)phthalate, a common laboratory contaminant, was detected in three samples at concentrations close to or below the detection limit. No other VOCs or SVOCs were detected above their respective detection limits. No TPH, NAX, NG, MMAN, PCBs, or pesticides were detected in the Site area background samples. Based on the absence of organic anthropogenic constituents in the soil analyses, this set of samples is appropriate for defining area background quality in the vicinity of the Site.

Metals

Of the 14 metals tested (priority pollutant metals plus aluminum), thallium was not detected in any of the background samples; selenium was detected in only 1 sample; and mercury was detected in 3 of the 10 samples. The other metals were detected in all or a majority of the samples. Three background samples collected during the pre-RI produced comparable values for five of these metals (aluminum, antimony, chromium, lead, and zinc), and these three samples are included in the evaluation of background soils.

2.2.2 Comparison With Regional Background Soils

Metals concentrations for the Site area background soils were compared with regional background concentrations from Puget Sound (Ecology 1994). This Ecology background study did not address four metals (antimony, selenium, silver, and thallium). For these metals, other available references were used (Harper-Owes 1985; METRO 1985; Shacklette and Boerngen 1984). The 90th percentile concentrations of metals in the Site area background soils were calculated for comparison purposes. It should be noted that for several metals, only 11 of 14 samples were available; however, the data distributions were lognormal except for selenium and thallium, which had mostly censored data. The 90th percentile Site area and Puget Sound regional background concentrations are compared in Table 2.2-2.

The majority of metals exhibit comparable 90th percentile concentrations between the Site area background samples and Puget Sound regional background samples. The Site area background 90th percentile concentrations for five metals (antimony, arsenic, cadmium, lead, and mercury) are above the regional 90th percentiles. The 90th percentile arsenic concentration in Site area background samples (33 mg/kg) is above the 90th percentile arsenic concentration of 7.3 mg/kg reported for the Puget Sound (Ecology 1994). Ecology has accepted this value for arsenic as being representative of area background even though it is above MTCA Method A and B levels. The 90th percentile lead concentrations in Site area background samples (52 mg/kg) is above the 90th percentile lead concentration of 24 mg/kg reported for the Puget Sound (Ecology 1994).

The 90th percentile concentrations for antimony and mercury for the Site area background samples are also above the 90th percentile regional values. The Site area background 90th percentile concentration for cadmium is marginally above the Puget Sound regional value.

The 90th percentile concentrations for aluminum, beryllium, chromium, copper, nickel, selenium, silver, zinc, and thallium for the Site area background samples are equal to or less than the 90th percentile Puget Sound regional background concentrations.

2.3 INTRODUCTION TO AREA-SPECIFIC SOIL QUALITY

Sections 2.4 through 2.19 present the soil quality information collected for each of the RI areas and areas of potential concern (APs). Each area-specific section includes the history of activities, subsurface conditions encountered, and constituents detected in soils. It should be noted that just because a constituent is detected in soil does not mean that it is above levels of potential concern. Section 2.20 presents a summary of the results from ISR actions. The purpose of this section is to present current Site data. Sample analytical results were not compared to regulatory criteria in this RI. The current analytical data set for soil quality analyses for each area (pre-RI, RI, additional characterization samples, and ISR verification samples), including detection limits, is presented in Appendix B.

Validated analytical results from the RI project laboratories were used. Duplicate analyses were excluded. During Site work, nearly 1,000 field screening analyses were collected for dinitrotoluene (DNT) (Modified EPA Method 8090), TPH, arsenic and lead (x-ray diffraction [XRF]). Good correlations were established between the screening results and laboratory confirmation results for each constituent except arsenic (XRF interference). In all cases, the screening data were used only for field characterization and ISR work and were not retained in the database developed for this RI (Pioneer 2002).

Pre-RI characterization data were included if these data were of sufficient quality. Pre-RI data that were excluded from the Site database are the following:

- Oil and grease data (EPA Method 413.2) due to the nonspecificity of the analytical methods (i.e., this method measures natural oils and greases in addition to petroleum constituents)
- Selected PCB and PAH data due to insufficient detection limits
- Samples composited from greater than 5-foot vertical intervals
- Samples that could not be accurately relocated in the field based on field evidence (e.g., staking, flagging, or pre-RI exploration plans [pre-RI locations were not surveyed])

Although selected area soil samples were analyzed for potential metals leachability using the toxicity characteristics leaching procedure (TCLP), all of these sampling locations were excavated during the 2000 ISR, with the exception of one sample in Area 26 (addressed in the RA and FS). Therefore the TCLP analyses are not representative of current site conditions and are not discussed further in this RI.

One or more figures, showing sampling locations, are included for each area. Figure 2.3-1 is the legend for all the area-specific figures. In areas where ISR excavation or grading has occurred, depths for all samples (both pre- and postexcavation) within excavations less than 2 feet deep are referenced to the existing excavation grade. Depths for all samples (both pre- and postexcavation) within excavations greater than 2 feet deep are referenced to original (preexcavation) grade. Exceptions to this reporting convention are for Area 5, the Area 31 ravine, and all interim corrective actions that occurred after 1999. Depths for samples within these two areas are referenced to existing excavation grade. The depth assumptions used for data presentation in this report may not represent actual future elevations. References to samples collected at specific depths in boreholes are cited by the area in which they were collected, the type of collection method, and the sampling depth. For example, sample 7-B-503 represents "Area 7, borehole 5, sampled at 3 feet."

Borehole sampling locations are shown in a figure as 7-B-5 without an indication of the sampling depth. The individual samples and depths from each borehole are included in the soil quality tables provided in Appendix B.

Because of the number and extent of interim actions conducted, many of the pre-RI and RI sampling points were removed during these activities and are no longer representative of current Site conditions. Therefore, these data are not presented in the RI. All figures and tables were developed on the basis of information provided to URS in an analytical database submitted in final form for this RI on April 1, 2002 (Pioneer 2002).

2.4 AREA 6—CRYSTALLIZER DRUM AREA SOIL QUALITY

2.4.1 History of Activities

According to former DuPont employees, Area 6 was used for disposal of defective 55-gallon ammonium nitrate drums used at the ammonium nitrate plant.

2.4.2 Soil Conditions

During the excavation of a test pit in the center of the former ammonium nitrate plant foundation, a concrete slab was encountered approximately 3 feet below grade. Subsequently, test pit 6-TP-501 was relocated along the western edge of the foundation, where excavation to a depth of 10 feet was possible. At this location, fill containing demolition debris (e.g., bricks and mortar) was encountered to a depth of 5 feet. A 4-foot vertical length of 3-foot-diameter steel casing filled with soil was observed between depths of 1 and 5 feet. Along the northern wall of the excavation, the concrete foundation was observed to extend to a depth of 6 feet below grade. Below the concrete foundation, Steilacoom Gravels were encountered to a depth of 10 feet. Soils in 6-TP-501 were later excavated to a depth of 10 feet during ISR. Steilacoom Gravels

were also observed to a depth of 10 feet in 6-TP-502, located north of the foundation (Figure 2.4-1).

2.4.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 6 included eight total metals, TPH, and nitrate. Each of these analytes was detected in at least one sample from Area 6.

The RI soil quality data and associated sampling depths for Area 6 are summarized in Table B-1.1. Sampling locations are shown in Figure 2.4-1.

TPH concentrations in Area 6 range from 23 to 1,900 mg/kg. Results from the paraffin investigation (Hart Crowser 1996) indicated that the TPH in Area 6 was heavy oil-range petroleum, not paraffin.

ISR for this area is described in Sections 2.20.1 and 2.20.16.

2.5 AREA 7—WASTE DRAINAGE PIT (OLD SALT LAKE) SOIL QUALITY

2.5.1 History of Activities

This natural geologic kettle formation, defined as Area 7 and historically referred to as Old Salt Lake, received liquid and slurry wastes from the main powerhouse tank moats; oil residues from boilers, boiler blow down, and sewer drainage; and waste salts from the former nitric acid plant since the early 1900s. Waste materials were discharged via a subsurface pipeline to a swale leading into the south side of the kettle. Aerial photographs (1942 and 1961) indicate that liquid levels appear to have been near the upper limit of the kettle perimeter at various times in the past.

2.5.2 Soil Conditions

The general subsurface materials encountered within the Area 7 kettle consist of a fine-grained, non-native fill material overlying Steilacoom Gravels. The fill material consists of very light to dark gray silt- and clay-sized material mixed with variable percentages of sand, gravel, and wood fragments. The fine-grained material was observed to be finely laminated in some locations and interbedded with buried soil horizons (roots) in other locations, indicative of episodic fill deposition.

The fill material was observed to cover most of the kettle floor and much of the swale leading into the kettle from the south. The fill was not observed on the kettle walls or outside of the kettle. The fill thickness increased toward the kettle center, as was clearly observed in an observational test pit, 7-TP-501, excavated from the southern kettle wall toward the kettle center (Figure 2.5-1). Within the kettle bottom, the fill thickness was variable, typically extending to depths of 5 to 13 feet below grade, with a maximum observed thickness of 18 feet in 7-B-503.

Beneath the fill, Steilacoom Gravels were encountered to the depth of exploration below the kettle floor (75 feet in 7-B-503). Monitoring well MW-1, located immediately north of the Area 7 kettle (Figure 2.5-1), penetrated 220 feet of Steilacoom Gravels. The water table in the unconfined portion of the Sea Level Aquifer (Steilacoom Gravels) is at a depth of approximately 180 feet below grade at MW-1 (approximately 165 feet below the kettle bottom).

A thin discontinuous layer of weathered Bunker C residue (hardened tar-like material) occurred over more than half of the surface at the bottom of the kettle and over the lower portions of the kettle walls. The residue was not encountered more than approximately 4 to 6 inches below grade in any pre-RI or RI explorations. In addition, a viscous Bunker C oil staining occurred at the surface in the swale and in the southwestern portion of the kettle.

Green and yellow staining of the gravels was observed in all subsurface explorations within the kettle, except test pits 7-TP-502 and 7-TP-504, which were located along the lower kettle walls. A faint sulfur-like odor was also detected in subsurface samples (to 15 feet) of the fill material from the three RI borings within the kettle. This odor was generally not discernible in the open test pit excavations. Gravels at the surface in the kettle were typically bleached, pitted, and crumbly, indicating deterioration related to historical discharge of wastes from the acid production area. Gravels in the subsurface also showed signs of deterioration, although not to the same degree as the surficial fill materials.

2.5.3 Perched Water Occurrence

During drilling of RI boring 7-B-503 in July 1992, vertically discontinuous zones of perched water were encountered between depths of approximately 20 and 33 feet in Steilacoom Gravels underlying the fill material. However, in this boring and in others, no low-permeability soil units (e.g., silts), which would constitute a significant perching unit for groundwater, were observed within the Steilacoom Gravels.

In accordance with the Sampling and Analysis Plan (Hart Crowser 1992a), a monitoring well was installed within the zone of apparent perched saturation encountered in boring 7-B-503. During attempted well development the day after installation, the well bailed dry after one casing volume was removed, suggesting that the zones of saturation are discontinuous. Due to the lack of water level recovery, no significant well development could be achieved in the perched-zone well. Groundwater from the perched-zone monitoring well 7-B-503 was sampled after the well was bailed dry. The water bailed from the well was observed to be exceptionally turbid. Sufficient water was collected for analyses of total and dissolved metals, NAX, and PAHs. These data are discussed in Section 3.2. Monitoring well 7-B-503 was dry during the August 1992 round of water level measurements and in all subsequent rounds of water level measurements and groundwater sampling.

Saturated conditions were not encountered to a depth of approximately 29 feet during drilling of the RI borings 7-B-501 and 7-B-502 in February 1992. Zones of saturation were encountered in some of the pre-RI borings drilled to similar depths in December 1986 and April 1987. A piezometer installed in pre-RI boring 7-B-4 was dry within 1 week after its installation, indicating that the saturation is transient.

The observations from drilling in this kettle, and in the kettles in Areas 16 and 26 (discussed in Sections 2.9 and 2.12, respectively), indicate that zones of saturation beneath the kettles are transient and discontinuous (both laterally and vertically). The water observed during drilling may represent infiltrating wetting fronts rather than zones of true saturation. This would also be consistent with the lack of observed lower permeability layers (e.g., silts), which would act to perch infiltrating water.

2.5.4 Constituents in Soil

Laboratory analyses performed on soil samples from Area 7 included up to nine total metals, TPH (Bunker C), explosives, SVOCs, PAHs, pesticides, and PCBs. All of these analytes were detected in at least one sample from Area 7, except for explosives, which were not detected in any samples from this area.

The RI soil quality data and associated sampling depths for Area 7 are summarized in Tables B.2-1 through B.2-6 in Appendix B. Sampling locations are shown in Figure 2.5-1.

2.6 ISR FOR THIS AREA IS DESCRIBED IN SECTION 2.20.15. AREA 10—ALUMINUM WATER GEL AREA SOIL QUALITY

2.6.1 History of Activities

Interviews with former DuPont employees indicate that residual aluminum water gel (consisting of salts, nitrates, aluminum, and gelling agents) was reportedly buried in an area approximately 10 feet by 12 feet in Area 10. During pre-RI field work, two test pits were excavated and two soil samples were collected for analyses.

2.6.2 Soil Conditions

During the RI, three test pits (10-TP-501, 10-TP-502, and 10-TP-503) were excavated to a depth of 10 feet to confirm pre-RI results and assess the vertical extent of constituents. During the excavation of one test pit, approximately 1 dozen deteriorated water gel bags were observed in the top 2 feet. Some of the bags contained residual water gel. Scattered yellow spheroidal pellets (flake trinitrotoluene [TNT], according to a former DuPont employee) were observed in the sand. Two soil samples were analyzed for nitrate and aluminum; one sample was analyzed for TNT only; and one sample was analyzed for NG, DNT, and TNT.

2.6.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 10 included up to 14 total metals, explosives, SVOCs, and PAHs. Total metals, SVOCs, and explosives were detected in at least one sample from Area 10. The compound bis(2-ethylhexyl)phthalate, the only SVOC detected, was found in a single sample at a concentration near the detection limit and was therefore qualified. PAHs were not detected in any samples from Area 10. Elevated TNT (270 and 840 mg/kg) and DNT (3 mg/kg) concentrations were found. These locations were remediated during the 1999, 2000, and 2001 ISR efforts (see Section 2.20). SVOCs, NG, and lead were not detected in these pre-RI samples. Nitrate concentrations (3.0 and 3.4 mg/kg) were within the range of background concentrations.

The soil quality data, associated depths, and analytes for Area 10 are summarized in Tables B.3-1 through B.3-3 in Appendix B. Sampling locations are shown in Figure 2.6-1.

ISR work conducted in Area 10 is described in Sections 2.20.14 and 2.20.16.

2.7 AREA 11—WATER GEL WASH-UP WASTE PIT AREA SOIL QUALITY

2.7.1 History of Activities

Area 11 was used for disposal of water gel wash-up material and associated packaging materials. The disposal area, a shallow depression approximately 50 by 50 feet, was reportedly detonated as part of plant decommissioning prior to Weyerhaeuser's acquisition of the property. During pre-RI sampling, six plastic mesh bags about 2 feet long by 10 inches wide and containing a grayish powder were found on the surface. Fill materials encountered during excavation of six pre-RI test pits included a fine-grained material (possibly sawdust) with interbedded leaves and sticks.

Pre-RI sampling data from test pit 11-TP-6 indicated slightly elevated TNT concentrations. Concentrations of lead, nitrate, NG, and MMAN were not elevated.

2.7.2 Soil Conditions

One 28-foot boring (11-B-501) and four 10-foot test pits (11-TP-501 through 11-TP-504) were completed for the RI within and around the former disposal area to define the lateral and vertical extent of TNT and DNT and to assess the potential presence of other constituents. The boring was advanced at the approximate center of the shallow depression. Fill material observed during pre-RI sampling was not encountered during advancement of this boring or during excavation of the RI test pits. Steilacoom Gravels were encountered to the depth of exploration in all RI explorations. At 17 feet below ground surface, an approximately 1-foot zone of water was observed perched on a 2-foot layer of till-like material observed at a depth of 18 to 20 feet. This zone appears to be similar to the zone of groundwater observed perched on till during the drilling of monitoring wells MW-22/MW-27 to the north (refer to Section 3.1).

2.7.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 11 included up to 14 total metals, TPH, explosives, SVOCs, and PAHs. Total metals, TPH, and explosives were detected in at least one sample from Area 11. SVOCs and PAHs were not detected in any samples from this area.

The RI soil quality data, associated depths, and analytes for Area 11 are summarized in Tables B.4-1 through B.4-4 in Appendix B. Area 11 sampling locations are shown in Figure 2.7-1.

2.8 AREA 12—WORKS MAGAZINE LANDFILL SOIL QUALITY

2.8.1 History of Activities

Materials related to explosives packaging activities in the Works Magazine were reportedly buried in shallow excavations in several areas of the Works Magazine Landfill. Materials identified or reportedly buried (by former DuPont employees) include explosives packaging, auto shop wastes, empty ammonium nitrate drums, and residual water gel. Seven units of the landfill, designated 12-1 through 12-7, were identified in the pre-RI work. As discussed below,

Unit 12-4 was deleted from further evaluation because only native materials were observed in subsurface explorations.

A total of 29 pre-RI test pits were excavated to determine the presence or absence of buried materials and to provide soil samples from the units.

During pre-RI sampling in Area 12, elevated MMAN concentrations were found at one location each in Unit 12-1 (2,900 mg/kg), Unit 12-2 (1,000 mg/kg), and Unit 12-6 (30,000 mg/kg). Concentrations of other constituents in the pre-RI samples were not elevated.

2.8.2 Soil Conditions

During the RI, 5 soil borings and 24 test pits were completed within and around the former disposal units to define the lateral and vertical extent of MMAN and to assess the potential presence of other constituents in this area. Boring and test pit locations and approximate debris boundaries are shown in Figure 2.8-1. Debris fill was encountered at several explorations within the landfill units. Steilacoom Gravels were encountered in all explorations outside of the fill areas. Native soils from a gravel borrow pit located north of Unit 12-2 were used to cover debris in Units 12-1, 12-2, 12-3, 12-5, and 12-6.

Unit 12-1

Debris, including empty water gel bags and plastic and metal strapping, was observed in 6 of 10 test pits and in the one boring in this unit. Generally, debris extended from depths of approximately 2 to 6 feet and was covered on the surface by 1 to 2 feet of dark brown, gravelly sand. The fill materials area measured approximately 150 by 20 feet.

Unit 12-2

Debris was observed in all 18 test pits and in both borings in this unit. Generally, debris extended from depths of approximately 2 to 8 feet and was covered on the surface by 1 to 2 feet of dark brown, gravelly sand. Debris consisted of water gel bags, some with residual water gel, wooden posts, paraffin-coated cardboard boxes, railroad ties, asbestos-containing material, and other mixed solid waste (e.g., old truck tires, tin cans, plastic, foam rubber, and metal banding). All asbestos-containing material (ACM) was removed and disposed of at an approved landfill during the RI excavation by TLH Abatement Inc. Unit 12-2 is the largest of the units, and the fill materials area measured approximately 550 by 150 feet. Unit 12-2 is bounded on the north by a gravel borrow pit from which native soils were historically obtained for covering the landfill units.

Unit 12-3

Debris was observed in all six test pits excavated in this unit. Generally, debris extended from depths of approximately 2 to 6 feet and was covered on the surface by 1 to 2 feet of dark brown, gravelly sand. Debris included water gel bags with residual water gel, and plastic tubing. The fill materials area measured approximately 210 by 50 feet.

Unit 12-4

Unit 12-4 is a 10- by 200-foot depression that apparently was never filled. The depression may be a gravel borrow pit similar to the one north of Unit 12-2. Three test pits were excavated in this unit (Figure 2.8-1). No debris was observed during excavation of the pre-RI or RI explorations, or during an RI field reconnaissance. Therefore, Unit 12-4 was not evaluated further.

Unit 12-5

Debris was observed in all six test pits excavated in this unit. Generally, debris extended from depths of approximately 2 to 6 feet and was covered on the surface by 1 to 2 feet of dark brown, gravelly sand. Debris included packaging materials (pressed cardboard and plastic strapping). The fill materials area measured approximately 125 by 75 feet.

Unit 12-6

Debris was observed in three of five test pits, but not in the one soil boring in this unit. Generally, debris extended from depths of approximately 2 to 7 feet and was covered on the surface by 1 to 2 feet of dark brown, gravelly sand. Observed debris included white plastic tubing containing residual water gel, and other mixed solid waste (e.g., tin cans, ceramics, and glass jars). Based on test pit excavations, this unit appears connected to Unit 12-7.

Unit 12-7

Debris was observed in two of three test pits, but not in the one soil boring in this unit. Debris included white plastic tubing containing residual water gel, and cardboard. Based on test pit excavations of Units 12-6 and 12-7, the two units appear to be connected (as shown in Figure 2.8-1). Dimensions of the fill materials for this combined unit area are approximately 200 by 20 feet.

Inter-Unit Test Pits

Debris was observed in two of five test pits excavated between delineated landfill areas. Debris included empty water gel bags and mixed solid waste (e.g., logs, styrofoam, cardboard, and plastic banding). Both test pits containing debris (12-TP-501 and 12-TP-505) are located within redefined unit boundaries (Units 12-2 and 12-5, respectively) (Figure 2.8-1). All other inter-unit test pits contained only native material and thus do not appear to be associated with any landfill unit.

2.8.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 12 included up to 14 total metals, TPH, explosives, SVOCs, PAHs, pesticides, and PCBs. The TPH (Method 418.1) results were associated with paraffin-coated cardboard except in one location where automobile parts were observed (test pit 12-2-TP-9). Paraffin wax is generally regarded as biologically inert. Additionally, no carcinogenic PAHs (cPAHs) were detected in 22 samples analyzed from this area. All of these analytes were detected in at least one sample from Area 12, except for pesticides and PCBs, which were not detected in any samples from this area.

Tables B.5-1 through B.5-6 in Appendix B detail the RI soil quality data, associated depths, and analytes in Area 12. Figure 2.8-1 shows the sampling locations.

2.9 AREA 16—KETTLE BENEATH AREA 5 SOIL QUALITY

2.9.1 History of Activities

Area 16 encompasses the large natural geologic kettle beneath Area 5, referred to as the DNT Waste Drum Area. Former DuPont employees reported that the kettle received cooling waters and liquid wastes from the acid production area (Area 25) to the west and southwest. Historical aerial photographs indicate the kettle periodically contained water during plant operation. The liquids were discharged to the Area 16 kettle through a pair of pipes that daylighted near the top of the kettle walls. Erosional gullies formed beneath the pipe outfalls and extended down the kettle walls to the kettle floor. These gullies and surrounding soils were removed during the Area 5 ISR documented by Hart Crowser (1994c).

During pre-RI sampling in Area 16, elevated lead concentrations were found. To facilitate staging of the Area 5 ISR, the upper foot of soil was graded in the Area 16 kettle bottom following the first phase of RI soil sampling. The approximate limit of the graded area, which transitions into the Area 5 ISR excavation area on the west, is shown in Figure 2.9-1. RI soil borings 16-B-501 and 16-B-505 and surface samples 16-SS-504 through 16-SS-523 were completed after the grading. All depths in Tables B.6-1 through B.6-7 in Appendix B and in Figure 2.9-1 are referenced to the current grade.

2.9.2 Soil Conditions

The generalized sequence of soils encountered in the Area 16 kettle consisted of scattered fill materials overlying varying thicknesses of soil developed on Steilacoom Gravels. Most fill materials from the base of the Area 5 hillside were removed during the Area 5 ISR. Bunker C residue was observed as a thin discontinuous surficial layer over portions of the ungraded kettle bottom.

A veneer of finer-grained soils typically less than 4 feet thick occurred over much of the kettle bottom. Because finer-grained materials are continually being eroded and transported from the kettle walls down slope, the thickest accumulation of fine-grained soils was found in the kettle bottom rather than on the kettle walls.

Beneath the surficial soil veneer, the Steilacoom Gravels were encountered to the exploration depth of 75 feet in boring 16-B-501. On-site monitoring wells indicated that the sequence continues uninterrupted to below msl (to depths of over 200 feet outside of the kettle). Regional information indicates that the Steilacoom Gravels extend to more than 100 feet below msl, nearly 250 feet below the kettle bottom.

Data from the four monitoring wells surrounding the kettle (MW-2, MW-3, MW-4, and MW-5; see Figure 3.1-1) and the deep soil boring within the kettle bottom (16-B-501) indicate that the Area 16 kettle is located west of the "Cutoff" (formerly known as the Kitsap Cutoff), which is the western extent of the Aquitard (formerly known as the Kitsap Aquitard) and Water Table Aquifer, as discussed in Section 3.1. Although Area 16 is located west of the "Cutoff", the water table surface continues to slope relatively steeply beneath the kettle. A 30- to 40-foot drop in

water table elevation was observed from the east side (MW-4 and MW-5) to the west (MW-2 and MW-3) side of the kettle. Based on the elevation of the kettle bottom (140 to 145 feet), the water table lies 100 to 120 below the floor of the kettle basin.

Thin zones of saturation appear to exist in the shallow soils beneath the Area 16 kettle, but the saturation is transient and discontinuous (both laterally and vertically). Zones of silty sand were encountered within the stratified sands and gravels, but they are also laterally and vertically discontinuous. No continuous perching units (e.g., competent silts) were observed within the 75-foot-deep exploration beneath Area 16.

Wet soil samples were described in several intervals of the pre-RI and RI borings within Area 16. A piezometer screened between depths of 28 and 32 feet in pre-RI boring 16-B-4 contained water for a few weeks following its installation in spring 1987, suggesting a perched zone of saturation. However, the piezometer was dry during drilling of the RI soil borings in February 1992, following a period of relatively heavy rainfall. The tip of the water level sounder was wet following the measurements, suggesting the piezometer end cap had water in it at times. The piezometer was also dry during RI drilling in July 1992.

During drilling of the RI borings in February 1992, a few inches of water were observed in one of the three borings (16-B-504) between depths of approximately 9 and 14 feet. In borings 16-B-502 and 16-B-503, and at other depths in 16-B-504, samples were described in the field as wet, yet no standing water was measured in the borehole. This condition was also observed during drilling in the other two kettles (Area 7 and Area 26). In these cases, the wet samples may represent infiltrating wetting fronts rather than perched zones of saturation.

Boring 16-B-501, drilled in July 1992, was completed as a monitoring well to sample perched water if present, in accordance with the Sampling and Analysis Plan (Hart Crowser 1992a). No standing water was observed in the boring during drilling. The bottom of the well screen was set on a thin interval of silty sand; however, no water was observed in this well at the time of installation or in any of the subsequent rounds of groundwater sampling or water level measurements.

These combined observations, along with those from the other on-site kettles (Sections 2.5 and 2.12), indicate that perched water is not present beneath the kettles.

2.9.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 16 included up to eight metals, TPH (Bunker C), explosives, SVOCs, PAHs, pesticides, and PCBs. All of these analytes, except for SVOCs, were detected in at least one sample from Area 16. Endrin, detected in one sample, was the only pesticide detected. In addition, PCB-1254, detected in one sample, was the only PCB compound detected. SVOCs were not detected in any samples from this area. Based on site characterization results, detectable lead, barium, and chromium remain in this area.

Tables B.6-1 through B.6-7 in Appendix B provide a summary of the RI results and associated depths for Area 16. Figure 2.9-1 shows the sampling locations.

2.10 AREA 18/1/2/3/4—NITROGLYCERIN PRODUCTION AND POWDERLINE AREA SOIL QUALITY

2.10.1 History of Activities

This large area was used for the production of NG and dynamite. Area 18/1/2/3/4 encompasses the NG production area (Area 18 North and Area 1/2/3/4) and five dynamite production and packaging lines (Area 18 South), two cartridge dynamite lines, two gelatin dynamite lines (one of which was converted to water gel production in the 1960s), and one smokeless powder production line.

Area 18 North and Area 1/2/3/4 NG production facilities included nitrators, separators, and neutralizers. Two separate process lines (Nitrator No. 1, Separator No. 1, and a combined Nitrator/Separator House No. 2) were constructed between 1907 and 1909, along with associated Neutralizer House No. 1 and No. 2. A third separate process line consisting of Nitrator/Separator House No. 3 and Neutralizer No. 3 was added in 1915. Nitrator No. 1 and Separator No. 1 were burned as part of decommissioning in 1925; an explosion eliminated Combined Nitrator/Separator House No. 2 in 1938. A new facility was built over the remains of the original. The remaining facilities were burned during Site decommissioning between 1976 and 1977.

Area 1/2/3/4 includes the following specific sites:

- Area 1—NG Wash Water Gutter
- Area 2—NG Spill at No. 2 Nitrating and Separating House
- Area 3—NG Spill Along Gutter Line
- Area 4—Lead Residual at No. 2 Nitrating and Separating House

This area was investigated because of the potential for residual NG, lead debris, and wastewaters associated with NG production. As part of the production process, residual NG was settled out of the wash water during both the separating and neutralizing phases and reintroduced to the manufacturing process. Wash water (following NG settling) was then sent to a wash water gutter system (Area 1) that ran north of the combined nitrating/separating houses. In later years, wash waters, particularly from the neutralizers, were sent to seepage ponds adjacent to the individual facilities.

In the mid-1950s, a spill of approximately 300 pounds of NG occurred near the south steps of the No. 2 Nitrating and Separating House (Area 2). According to former DuPont employees, this spill was treated with sodium sulfide and later detonated during plant decommissioning. In 1961, approximately 100 to 200 pounds of NG were spilled from the NG gutter system (Area 3), and this area was treated with sodium sulfide and later detonated. Area 4 encompasses the debris resulting from decommissioning of the No. 2 Nitrating and Separating House, which contained lead sheeting.

The Powderline Area (18 South) included facilities to mix dynamite ingredients, pack cartridges, and box finished products. Facilities including mixing houses (in the central portion of Area 18), cartridge houses, and packing houses, followed a process line organization. Three lines were initially developed south of the NG area: two for cartridge dynamite (talley mix) and one for gelatin dynamite. The gelatin line ran along the eastern edge of the area. A fourth line, also for

gelatin, was added to the west in 1915. By the 1950s, the fourth line and one of the talley mix lines had been eliminated. The eastern line served for DNT gelatin production and subsequently was converted to water gel production in the 1960s.

The nitrostarch/smokeless powderline was constructed west of the other powderline facilities in 1916. It included four storehouses, four drying houses, a screening house, and a nitrating house. The facilities were converted in 1923 to reprocess surplus cordite and smokeless powder that had been returned by the U.S. military. The powder was reground to manufacture blasting compounds for farm use (sodatol and pyrotol). The reprocessing was completed in 1927. The buildings were burned during decommissioning in 1931.

Materials reportedly handled or present at these facilities include waste acid (with trace amounts of NG), lead, NG, MMAN, DNT, TNT, and nitrostarches. Lead linings, washtubs, and pipes were commonly used in the foundations of production facilities to contain process liquids or spills and reduce accidental sparking.

During the pre-RI site characterization, 101 samples were collected for constituent testing from 69 test pits and 9 hand augers in Areas 1, 2, 3, 4, and 18. Additional test pits were excavated for characterization of subsurface conditions. Constituent analytical results indicated elevated lead concentrations. TNT, DNT, and NG concentrations were not elevated. Aside from common laboratory solvents, VOCs were generally not detected. Subsequent to the pre-RI site characterization, many of these sampling points were removed during ISR and are no longer representative of current site conditions.

2.10.2 Soil Conditions

A variety of fill layers and non-native materials were observed in test pits from this area. Fill soils are generally composed of slightly silty, sandy gravel and gravelly sand—essentially regraded, local Steilacoom Gravels. Many of the production facilities had been bunkered by sloping berms of fill soil built up against the foundation walls. In addition, a variety of non-native materials (e.g., timbers) are mixed into fill soils.

Lead

Lead debris was observed at the surface or uncovered in the subsurface at several localities (at test pits 4-TP-2, 4-TP-7, 18-TP-16, 18-TP-32, and 18-TP-37; surficial soil from 4-TP-2, 4-TP-7, and 18-TP-37 was removed during ISR). Intact, 1/8-inch-thick lead sheeting over concrete floor pads was also observed (test pits 4-TP-8, 18-TP-17, and 18-TP-18; surficial soil in all three of these locations was removed during ISR). Most of this elemental lead was observed in the nitrators and neutralizers and has since been removed during ISR of lead debris.

Washwater Gutters

A buried concrete gutter was observed in a series of test pits that were originally designated as Area 1 (1-TP-6 through 1-TP-11). The gutter and an associated lateral gutter system carried residual process wash waters from the separators and neutralizers. The gutters were wood-covered troughs, concrete structures approximately 1 foot-wide and lined with tar. They led to a filtering house before wash waters were discharged to the ground in the vicinity of a 5-foot-deep depression at the western end of the main gutter. Most of the wash water system was no longer used after the 1950s, and subsequent site activities buried the gutters beneath 1 to 5 feet of fill.

Potential Asbestos-Containing Materials (ACM)

Where lead-lined floors were observed in the old foundations, the lead sheeting was sometimes separated from the concrete pad by a thin layer of potential ACM (4-TP-8 and 18-TP-18). Elsewhere, potential ACM was associated with metal ductwork (18-TP-550 and 18-TP-553) and shingles (18-TP-2). Potential ACM fragments were also noted with demolition debris in a number of explorations (18-TP-1, 18-TP-9, 18-TP-23, 1234-TP-503, and 18-TP-534). The top foot of soil was later excavated from locations 18-TP-534 and 18-TP-23 during ISR. Materials suspected by the field personnel to be potential ACM were evaluated by the on-site asbestos abatement contractor, TLH Abatement Inc. Any materials confirmed to be ACM by TLH Abatement Inc. were handled and disposed of by TLH Abatement Inc. at an appropriate landfill.

DNT/TNT Residual

During the RI characterization work, residual DNT/TNT was identified near the DNT Heater and Melt Houses (south of Neutralizer Nos. 1 and 2), the Gelatin Mixing House No. 1, and the Dynamite Mixing House Nos. 1 and 2. As a result of these observations, a program to systematically locate and remove residual DNT/TNT was initiated in the central part of Area 18. Initially, a peripheral zone of surface soils surrounding the DNT Heater Houses and Mixing Houses was inspected for residual DNT/TNT by systematically scraping and exposing the upper few inches of soil cover with a bulldozer. Suspected residual DNT/TNT was field tested using a colorimetric indicator test. The scraping operations uncovered additional residual DNT/TNT locations, most within a 150-foot radius of these foundations.

2.10.3 Constituents in Soil

Laboratory analyses that were performed on soil samples from Area 1/2/3/4 included up to eight metals, explosives, VOCs, SVOCs, and PAHs. All of these analytes, except for SVOCs, were detected in at least one sample from Area 1/2/3/4. NG, detected in one sample, was the only explosives compound detected. SVOCs were not detected in any samples from this area.

Laboratory analyses that were performed on soil samples from Area 18 included up to eight metals, TPH, explosives, PAHs, and nitrate. All of these analytes were detected in at least one sample from Area 18. Many of these sampling points were removed during ISR and are no longer representative of current site conditions.

The RI and ISR verification data for Area 18 and Area 1/2/3/4 are summarized in Tables B.7-1 through B.7-6 in Appendix B. Figure 2.10-1 shows the sampling locations for Area 1/2/3/4, and Figures 2.10-2 through 2.10-6 show the sampling locations for Area 18.

ISR work conducted in Area 18 is described in Section 2.20.3, 2.20.13, 2.20.14, 2.20.15, and 2.20.16.

2.11 AREA 25—ACID PRODUCTION AREA SOIL QUALITY

2.11.1 History of Activities

Area 25 encompasses the facilities used for production of sulfuric and nitric acids and for storage of the production process materials (e.g., sulfur). Changes occurred in the layout of the acid

production area over the period of operations (1900s to 1970s). Maps showing two sets of composite historical features for the area developed from historical DuPont plant maps and aerial photographs were included in the Sampling and Analysis Plan (Hart Crowser 1992a).

Elevated lead concentrations were observed in pre-RI samples collected from Area 25.

Surficial grading of much of the northern portion of Area 25 was conducted to prepare staging and stockpile laydown areas in support of Area 5 ISR activities. In addition, surficial grading of a stockpile laydown area was conducted in the southern portion of Area 25 during ISR at the Trivelene melt house. Limits of graded areas and the limit of the Trivelene melt house excavation are shown in Figure 2.11-1. All sampling depths listed in Tables B.8-1 and B.8-2 in Appendix B and in Figure 2.11-1 are referenced to existing grade.

2.11.2 Soil Conditions

Steilacoom Gravels were observed to a depth of 10 feet in all Area 25 test pits. A 1- to 2-foot-thick veneer of demolition debris containing bricks, crushed rock, and deteriorated gravels was observed in 7 of the 24 RI test pits excavated in Area 25.

Sampling was also conducted to delineate the extent of surficial demolition debris within and adjacent to Areas 25 and 26. The debris appears to be associated with the demolition of the former buildings in the acid production (Area 25) and acid recovery (Area 26C) areas during plant decommissioning. For the purposes of this sampling, the samples were labeled AP-H to differentiate them from samples collected within the Area 25 and Area 26 production areas. However, the field reconnaissance of the debris indicated that, although the debris was observed outside the current boundaries of Areas 25 and 26, it was not widespread enough to warrant consideration as a separate area. As a result, the lead data from the AP-H sampling locations have been integrated with the data from Areas 25 and 26, and the surficial debris were evaluated as part of Areas 25 and 26. Thus, AP-H is not discussed further in this RI.

A brick wall was observed between depths of 1.5 and 4 feet in the sidewall of 25-TP-505, excavated within the former converter house foundation used in manufacturing sulfuric acid. Lead debris and ceramic pipe were observed in the upper foot of fill at 25-TP-503, excavated within the former scrubber house. A 3.5- by 6-foot, 1.5-foot-thick concrete slab was removed from the wall of this test pit during excavation. The bottom of the slab was weathered and stained a dark yellow color, likely related to the sulfuric acid production process. A similar yellow staining was observed with deteriorated gravels to a depth of 10 feet in this test pit. At 25-TP-514, the end of a clay drain pipe was observed in the north wall of the excavation, and deteriorated gravels were encountered to a depth of 12 feet, with bleached gravels from 12 to 14 feet. Surficial soils in 25-TP-514 were later excavated during ISR. Deteriorated gravels were also observed between depths of 1 and 4 feet in 25-TP-516, below 1 foot of nonweathered soil that appears to be fill.

2.11.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 25 included up to eight total metals, explosives, VOCs, SVOCs, and PAHs. Total metals and explosives were detected in at least one sample from Area 25. Many of these samples were removed during ISR and are no longer

representative of current site conditions. VOCs, SVOCs, and PAHs were not detected in any samples from this area.

Tables B.8-1 and B.8-2 in Appendix B provide an overview of the RI soil quality data for Area 25. Figure 2.11-1 shows the sampling locations.

ISR work conducted in Area 25 is described in Section 2.20.14 and 2.20.16.

2.12 AREA 26—WASTE ACID RECOVERY AREA AND KETTLE SOIL QUALITY

2.12.1 History of Activities

This area includes the facilities used for recovery of spent acids returning from the NG production area. Initially, both sulfuric and nitric acids were recovered in separate facilities. Subsequent (post-1940) processing methods substantially reduced the number of facilities. The area also includes two geologic kettles (Units 26A and 26B) located south of the recovery facilities (Figure 2.12-1). According to former DuPont employees, the large kettle (Unit 26A) received liquid discharge from the acid recovery area, the plant laundry, and the truck wash and vehicle maintenance facility. Aerial photographs from 1976 show liquid within this kettle. Historical information including aerial photographs indicate that the Unit 26B kettle did not receive liquid wastes.

The former waste acid recovery buildings (Unit 26C) and the small kettle (Unit 26B) were included within Area 25 (Acid Production Area) for the pre-RI site characterization (Hart Crowser 1987). Since Units 26B and 26C include facilities for storage and reprocessing of waste acids, rather than production of acids, these waste acid recovery buildings and both kettles have been included in Area 26 for evaluation in the RI.

During pre-RI sampling in Area 26, elevated lead, cPAH, and DNT concentrations were found.

2.12.2 Soil Conditions

Unit 26A and Unit 26B Kettles

Native soils within the kettles consist of 1 to 10 feet of dark gray, silty, gravelly sand with occasional silt lenses and abundant organic matter (surficial sandy loam), overlying brown, stratified sands and gravels (Steilacoom Gravels), which extend beyond the depth of exploration (100 feet at boring 26-B-503 within Unit 26A). The upper silty sand is thicker at the northern end of the Unit 26A kettle—up to 9 to 10 feet thick at 26-B-5, 26-B-501, and 26-TP-502, compared with 2 to 3 feet thick along the southern edge of the kettle. Some silty to slightly silty zones were encountered in the Steilacoom Gravels, but they appear to be discontinuous between explorations.

The Water Table Aquifer and Aquitard were not encountered to an elevation of approximately 70 feet msl in 26-B-503. This boring was drilled to a total depth of 100 feet specifically to confirm the presence or absence of the aquifer and aquitard at this location. This observation confirms the findings from MW-6 and the current hydrogeologic interpretation that the "Cutoff" (discussed in Section 3.1) is located east of Area 26.

Similar to conditions encountered in the other kettles (Area 7 and Area 16) during drilling of the pre-RI and RI borings, wet soil samples were commonly recovered without the ability to detect water in the auger. These conditions likely indicate wetting fronts infiltrating downward and are consistent with conditions encountered in the other kettles (Sections 2.5 and 2.9).

A zone of saturation was encountered, and a piezometer was installed (screened between depths of 19.5 and 24.5 feet) in the pre-RI boring 26-B-2, which was drilled in April 1987. Water was measured in the piezometer 2 weeks after its installation (Hart Crowser 1987). The piezometer had no measurable water in it during drilling of the RI borings in February and July 1992.

No NG was detected in the three samples collected from 26-TP-508 (within the former NG waste acid storage location) or in the sample collected from pre-RI test pit 25-TP-6, located downslope of the former building. In the Unit 26B kettle, lead debris removal was conducted in the location of the former NG waste acid storage and freezing house (the limit of excavation is shown in Figure 2.12-1).

Unit 26C—Waste Acid Recovery Area

Demolition debris was also encountered in six test pits (26-TP-510 through 26-TP-515) excavated in and around the former waste acid recovery buildings located north of the Unit 26A kettle (Figure 2.12-1). The debris consisted predominantly of bricks and crushed rock, with smaller quantities of wood and ceramic and lead piping. A graded veneer of demolition debris less than 2 feet thick was observed at the surface over much of Unit 26C and east of the road bounding the unit on the east. Beneath the debris, the soils were essentially the same as those observed elsewhere in Area 26—2 to 3 feet of dark gray, silty, gravelly sand overlying Steilacoom Gravels to the depth of exploration. Several additional samples (AP-H samples) were collected within and outside the limit of this debris. The locations of AP-H samples in the vicinity of Area 26 are included in Figure 2.12-1.

Lengths of 4-inch-diameter ceramic pipe were observed at depths of 1 to 2 feet in test pits 26-TP-510 and 26-TP-513. The pipe appeared to be in place (undisturbed) in 26-TP-513, but not in 26-TP-510. In 26-TP-513, the pipe sloped to the south, toward the Unit 26A kettle. A 12-inch-diameter ceramic pipeline, which also appeared to be in place and sloped toward the south, was observed across the full length of 26-TP-511. The ceramic pipe in each of the three test pits was oriented approximately north-south. In addition to the ceramic pipes, an 8-foot length of 3-inch-diameter lead pipe that did not appear to be part of a pipeline was pulled out of the north wall of 26-TP-512, at a depth of 1 foot. There was no indication that this lead pipe was connected to any other piping.

Discharge locations for several pipes were observed along the northern rim of the Unit 26A kettle. At one location a few feet upslope of hand auger 26-HA-502 (Figure 2.12-1), outlets for four pipes were found—a rusted 2-inch-diameter steel pipe and three ceramic pipes (with 4-, 8-, and 12-inch diameters). This location was later excavated to a depth of 10 feet during ISR. From what was visible at the location of the outlets and in the test pits, all pipes appear to originate from the acid recovery area located to the north. In addition, a length of 6-inch pipe was observed lying on the slope below the former Ammonia Neutralizing House, but the pipe did not appear to be in place. The pipe was near the top of an erosion gully that extends into the Unit 26A kettle (test pit 26-TP-502 was excavated within this gully; see Figure 2.12-1).

Stained soils were commonly observed at the surface and at depth in the Unit 26C test pits. Crumbly, deteriorated gravels and rock fragments (fill), commonly bleached or stained, were observed on the surface of much of the area including immediately downslope of the pipe outfalls (26-HA-502). Beneath the surface, rusty yellow soil staining was observed in the three test pits where ceramic piping was observed (26-TP-510, 26-TP-511, and 26-TP-513). In 26-TP-510, the staining was minor and did not appear to be associated with the piping. In 26-TP-511, the soil staining started at a coupling between sections of the 12-inch ceramic pipe and spread laterally with depth, extending to the depth of exploration (11 feet). A small area of stained soil was observed beneath a coupling in the 4-inch ceramic pipe at a depth of 3 feet along the south wall of test pit 26-TP-513. Similar staining was observed between depths of 4 to 10 feet along the west wall of the test pit, but it was not continuous with the staining next to the pipe and did not appear to be related to the 4-inch ceramic pipe. No other piping was observed in this test pit. Soil at test pit locations 26-TP-11 through 26-TP-13 and 26-TP-15 was later excavated to a depth of 3 to 4 feet during ISR.

Deteriorated, stained gravels were also observed in the upper 3 feet of 26-TP-514 (no pipes were observed). The upper 2 feet of silty sand in this test pit was interbedded with a colored, ash-like material. At a depth of 7 feet, cemented gravels were found; they appeared to be native—not concrete or other man-made material. Several unsuccessful attempts to penetrate the material were made, including enlarging the test pit. The material was too dense to be sampled, even using the backhoe. This condition was not observed in any other exploration on site.

2.12.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 26 included up to nine metals, TPH (non-Bunker C), explosives, SVOCs, and PAHs. All of these analytes were detected in at least one sample from Area 26. Many of these samples were removed during 1999, 2000, and 2001 ISRs and are no longer representative of current site conditions. Two phthalate compounds, detected in a single sample, were the only SVOCs detected in any of the samples. Analyses were also performed for Bunker C fuel, diesel, gasoline, kensol, kerosene, and Stoddard solvent in two selected soil samples. These compounds were not detected in either sample.

Tables B.9-1 through B.9-5 in Appendix B present an overview of the RI soil sampling results from Area 26. Figure 2.12-1 shows the sampling locations.

ISR work conducted in Area 26 is described in Sections 2.20.15 and 2.20.16.

2.13 AREA 31—BURNING GROUND SOIL QUALITY

2.13.1 History of Activities

Materials from the Site were burned for many years at this location. Within a fenced area of the burning ground, 6 to 24 inches of highly variable material overlying sandy gravel soils were uncovered during the pre-RI field work. This material consisted of black, ash-rich, tar-like residue with rusting iron, glass, ceramic fragments, and varying amounts of lead debris. A mound of burned residual materials was present in the center of the burning ground. Visible lead debris and lead-coated steel grating and bricks were also observed within a 10- by 100-foot area. Solid debris, including rusting metals and ceramics, was observed adjacent to and north of the

burning ground during pre-RI investigations. Several partially buried drums were located in a depression (ravine) south of the burning ground. Other buried materials included charcoal, ash, bricks, glass, auto body parts, and pipes.

Fifty-four soil samples were collected from 21 test pits, 1 boring, and 2 surface locations during the pre-RI work. The pre-RI soil samples had elevated concentrations of DNT, TNT, lead, and cPAHs.

2.13.2 Soil Conditions

Debris and/or fill material was encountered in RI test pits 31-TP-501, 31-TP-502 (1 to 3 feet of soil was later excavated from this location during ISR) and soil boring 31-B-501 (3 feet of soil was later excavated from this location during ISR), all within the burning ground, and in 31-TPH-508, which was excavated during ISR of the Area 31 ravine. Debris consisted of brick fragments, lead debris, nails, scrap metal, and glass. Depth to water in the five RI borings ranged from 17 to 22 feet below ground surface.

2.13.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 31 included up to 10 total metals: TPH, explosives, SVOCs, PAHs, and PCBs. All of these analytes, except for PCBs, were detected in at least one sample from Area 31. TPH was detected once at a concentration near the detection limit and the result was therefore qualified. In addition, the only SVOC detected was bis(2-ethylhexyl)phthalate, in three samples at concentrations near the detection limit; these results were also qualified. PCBs were not detected in any samples from this area.

Tables B.10-1 through B.10-6 in Appendix B detail the soil sampling explorations and depths of sample collection and summarize the soil quality data in Area 31. Figure 2.13-1 shows the sampling locations.

ISR efforts in 1999, 2000, and 2001 removed the majority of the elevated concentrations in Area 31. ISR work for this area is described in Sections 2.20.8, 2.20.13, 2.20.14, and 2.20.15.

2.14 AREA 38—CARTON PRODUCTION AREA AND DRYWELL SOIL QUALITY

2.14.1 History of Activities

Area 38 encompasses the buildings used for production and labeling of the cartons used to package and ship the products from the Site. Packaging materials were originally wooden boxes, which over time were replaced by paraffin (wax)-coated cardboard cartons. Both cardboard printing and paraffin coating activities occurred in this area. Water and/or solvents used to clean printing equipment in the box factory reportedly drained through a wooden trough from the building into a drywell, which is an approximately 3-foot-square, 7-foot-deep, wood-lined location approximately 15 feet south of the box factory.

Five surface samples were collected in Area 38 as part of the pre-RI sampling program. Elevated lead concentrations were observed in the pre-RI samples from beneath the trough and the drywell bottom.

2.14.2 Soil Conditions

Subsurface explorations were conducted within the drywell (38-B-501) and beneath the trough that leads from the box factory to the drywell (38-TP-501).

Soil boring 38-B-501 was advanced to a depth of 16 feet below the drywell bottom (23 feet below grade). A gray, fine-grained non-native fill material with a noticeable sulfur smell was encountered in the first 2 to 3 feet below the drywell bottom. Steilacoom Gravels with minor silt were encountered below this material to the depth of exploration.

Fill containing wood debris, copper wire, and ACM was encountered to a depth of 6 feet below grade in 38-TP-501. The ACM observed in the test pit was removed by TLH Abatement Inc. and disposed of at Thun Field Landfill in Puyallup, Washington. The debris fill was localized to a 3- to 4-foot-wide area immediately beneath the surficial wooden trough. Undisturbed Steilacoom Gravels were observed on either side of the fill and beneath it (below 6 feet).

2.14.3 Constituents in Soil

Laboratory analyses performed on soil samples from Area 38 included up to 14 total metals, TPH, diesel, gasoline, explosives, VOCs, SVOCs, PAHs, and pesticides. Total metals, TPH, SVOCs, and PAHs were detected in at least one sample from Area 38. Results from the paraffin investigation (Hart Crowser 1996) indicated that the TPH in Area 38 was diesel-range and oil-range TPH, not paraffin. Many of these samples were removed during 1999, 2000, and 2001 ISRs and are no longer representative of current site conditions. The only SVOCs detected were two phthalate compounds, each detected in single samples. The detected concentrations were near the detection limits; therefore, these results were qualified. Explosives, VOCs, diesel, gasoline, and pesticides were not detected in any samples from Area 38.

The RI soil quality data and associated sampling depths in Area 38 are summarized in Tables B.11-1 through B.11-7 in Appendix B. Sampling locations are shown in Figure 2.14-1.

ISR work conducted in Area 38 is described in Sections 2.20.11 and 2.20.16.

2.15 AREAS OF POTENTIAL CONCERN SOIL QUALITY

In response to Ecology comments, the Sampling and Analysis Plan for the APs provided in the Management Plan (Hart Crowser 1992a) was expanded to include test pits at one or more locations within each AP, as discussed in Hart Crowser (1992b).

Laboratory analyses were performed on soil samples from the seven APs (AP-A through AP-G). Results from these analyses are discussed separately in the following subsections.

2.15.1 AP-A Powder Test Ground

History of Activities

Area AP-A was defined to address a former "powder test ground" (explosives detonation area) that operated during the 1950s and 1960s. Specific features associated with the area no longer exist. The test ground, as shown on a 1955 historical map, measures approximately 125 by 75 feet. The test ground was located near the western plant boundary, west of the main powerhouse

within the CDB. A review of aerial photographs suggested two possible areas that corresponded to the 1955 historical map location: one immediately west of the former nitrostarch nitrating building (Area AP-C) and the other farther west within the CDB. The latter correlates with distances from nearby structures, as shown on the historical map, but is not observed as a distinct clearing in aerial photographs (as is the former location).

Before locations were staked for the RI sampling, an extensive field reconnaissance of the area was conducted. No indication of features potentially associated with historical testing was evident other than a location south of the area, which appeared to be unnaturally flat. Explorations were located to provide coverage of both potential areas and the flat area to the south. The exploration locations are shown in Figure 2.15-1.

Soil Conditions

During the RI, one test pit was completed and two surface samples were collected in AP-A. Undisturbed Steilacoom Gravels were encountered to a depth of 5 feet in APA-TP-501 (Figure 2.16-3).

Constituents in Soil

Laboratory analyses performed on soil samples from Area AP-A included total metals and explosives. Both analytes were detected in at least one sample from Area AP-A. Analytical data for soil samples collected from AP-A during the RI are presented in Tables B.14-2, and B.12-1 through B.12-7 in Appendix B. Sampling locations are shown in Figure 2.15-1.

2.15.2 AP-B Smokeless Powder Dump

History of Activities

Smokeless powder, which consisted of nitrate, cellulose, NG, and plasticizers, was stockpiled in three structures in this area between World War I and 1928. Two test pits were sampled in this area during the pre-RI sampling (Site 22 in Hart Crowser 1987). NG was not detected in the sample from either pre-RI test pit.

Soil Conditions

During the RI, two test pits and two surface samples were completed in AP-B. Undisturbed Steilacoom Gravels were encountered in both APB-TP-501 (later excavated to a depth of 5 feet during ISR) and APB-TP-502. Bricks were observed at the surface approximately 20 feet west of the APB-TP-502 location, and they were the reason the exploration was located there. Short stakes and string were also observed around the bricks, indicating possible archaeological excavations in conjunction with a reported historic oxen trail running through this area to Puget Sound. Prior to excavation at this location, field personnel conferred with archaeologist Dr. Richard Daugherty of Western Heritage, who gave permission for excavation to proceed. No cultural resources were observed in the immediate vicinity either in the excavation or on the surrounding surface. The exploration locations are shown in Figure 2.15-2.

Constituents in Soil

Laboratory analyses performed on soil samples from Area AP-B included explosives and nitrate. Nitrate was detected in at least one sample from Area AP-B. Explosives were not detected in any samples from this area. The soil quality data are summarized in Tables B.12-1 through B.12-7 in Appendix B.

2.15.3 AP-C Smokeless Powder Nitrating/Grinding House

History of Activities

Between 1916 and 1928, nitration of nitrocellulose and nitrostarch was conducted in this building. During the same time period, smokeless powder pellets were ground into fine powder for use as an admixture in the dynamite process.

Soil Conditions

During the RI, two test pits and one observational test pit were completed, and 14 surface samples were collected in AP-C. Undisturbed Steilacoom Gravels were observed in APC-TP-501, and later excavated during ISR to a depth of 5 feet. At the time of sampling, small pieces of lead debris were observed on the Nitrating/Grinding House foundation and on the ground adjacent to the foundation. Review of the architectural plans and sections for this building indicated possible lead lining in a portion of the former building. As a result, additional surfaces samples (APC-SS-505 through APC-SS-514; surficial soil at locations APC-SS-505 through APC-SS-509 was later excavated during ISR) were collected and analyzed for lead. Test pit APC-TP-502 was excavated at the mixed acid storage area to evaluate metals concentrations at depth, and later it was excavated to a depth of 1 to 3 feet during ISR. Some bleached gravels were observed between depths of 1 and 7 feet in this test pit. The exploration locations are shown in Figure 2.15-1.

Historical architectural plans indicated that a “sump well” might be present adjacent to the southwest corner of the nitrator foundation. Observational test pit APC-TP-503, covering a surface area of approximately 30 by 18 feet, was excavated to a depth of about 4 feet in this area to look for subsurface evidence of this feature (Figure 2.15-1). No evidence of a sump well was observed in the large excavation.

Demolition debris (mostly wood) was observed at the surface in the location of the northern room of the Nitrating/Grinding House, which was pile-supported.

Constituents in Soil

Laboratory analyses performed on soil samples from Area AP-C included total metals, explosives, and nitrate. All three parameters were detected in at least one sample from Area AP-C. Many of these samples were removed during 1999, 2000, and 2001 ISRs and are no longer representative of current site conditions. The soil quality data for the AP-C area are summarized in Tables B.12-1 through B.12-7 in Appendix B. Sampling locations are shown in Figure 2.15-1.

2.15.4 AP-D Asphalt Paint Building

History of Activities

This building was used prior to the 1940s for heating asphalt for coating structures such as the NG gutters in the NG production area. Although called an asphalt paint "kettle" on historical maps, the term kettle at this building refers to the melting pot and facility function, rather than to a glacial kettle (geologic depression), as the term is used elsewhere in this report.

Soil Conditions

During the RI, one test pit was completed in AP-D. AP-D occurs within an area covered with a veneer (0 to 2 feet thick) of disturbed soils, crushed rock, and demolition debris (e.g., bricks and mortar). There was no surficial evidence of the former Asphalt Paint Building in the vicinity. The extent of this demolition debris was discussed in Sections 2.11 and 2.12.

To look for subsurface evidence of the building foundation, APD-TP-501 was excavated along an approximately 20-foot length in the location of the former building, as determined from historical maps (Figure 2.12-1 and Tables B.9-1 through B.9-5 in Appendix B). Fill with demolition debris similar to the surface materials was observed to a depth of 3 feet in this excavation. Occasional small pieces of hard tar-like material and lead debris were observed in the upper 6 inches of fill. Native Steilacoom Gravels were observed below a depth of 3 feet. Due to the significant surface disturbance, the proposed surface samples APD-SS-501 and APD-SS-502 were not collected.

Constituents in Soil

Laboratory analyses performed on soil samples from Area AP-D included total metals, TPH, explosives, SVOCs, and PAHs. Total metals, TPH, and PAHs were detected in at least one sample from Area AP-D. Explosives and SVOCs were not detected in any samples from this area. Analytical data for soil samples collected from AP-D during the RI are presented in Appendix B, Tables B.12-1 through B.12-7.

2.15.5 AP-E Main Transformer House

History of Activities

Although two powerhouses were located at the plant, the Puget Sound Power and Light Company was its main source of electrical power. The transformer house served as the main power and switching yard throughout the period of manufacturing operations.

Soil Conditions

During the RI, 2 test pits and 13 surface samples were completed in AP-E. Bricks and demolition debris are scattered around the surface of the former Main Transformer House. In APE-TP-501, located immediately adjacent to the building foundation, 6 inches of the brick debris was underlain by a 2- to 3-inch layer of black silty soil, which was underlain by

Steilacoom Gravels to a depth of 5 feet. In APE-TP-502, excavated along the eastern edge of the foundation, native soils were observed beneath approximately 1.5 feet of sandy gravel fill. Some debris from the foundation was also observed down the slope in the vicinity of surface soil sample location APE-SS-501.

Constituents in Soil

Laboratory analyses performed on soil samples from Area AP-E included total metals, TPH, and PCBs. Total metals and TPH were detected in at least one sample from Area AP-E. Many of these samples were removed during 1999, 2000, and 2001 ISR and are no longer representative of current site conditions. PCBs were not detected in any samples from this area. Analytical data for soil samples collected from AP-E during the RI are presented in Tables B.12-1 through B.12-7 in Appendix B. Sampling locations are shown in Figure 2.15-3.

2.15.6 AP-F Nitrocotton Area

History of Activities

Drying and screening of nitrocotton fibers as additives to the dynamite process were conducted in this area from the early years of production until their use was discontinued in 1960. The facilities were burned as part of the plant decommissioning.

Soil Conditions

During the RI, 1 test pit, 1 hand-augered boring, and 23 surface samples were completed in AP-F. Metal and wood debris was observed at the surface within the berms surrounding the Nitrocotton Dry House (APF-TP-501) and the Dry Cotton Store House (APF-SS-502). Debris was not observed below grade in APF-TP-501, where Steilacoom Gravels were observed to a depth of 5 feet.

Constituents in Soil

Laboratory analyses that were performed on soil samples from Area AP-F included metals, explosives, and nitrate. Metals and nitrate were detected in at least one sample from Area AP-F. Many of these samples were removed during 1999, 2000, and 2001 ISR and are no longer representative of current site conditions. Explosives were not detected in any samples from this area. Analytical data for soil samples collected from the AP-F during the RI are presented in Tables B.12-1 through B.12-7 in Appendix B. Sampling locations are shown in Figure 2.15-4. Based on site characterization results, detectable lead, barium, and chromium remain in this area.

2.15.7 AP-G Decontamination Areas

History of Activities

Plant equipment was cleaned of incidental residual NG and residual explosives at a decontamination facility from at least the late 1950s through the early 1970s. Decontamination

consisted of hot water washes, application of NG remover (alcohol, acetone, and sodium sulfide), and neutralization with either glycerin or diethylene glycol.

Two areas near the maintenance shop facilities were identified as locations of possible equipment cleaning activities. Field efforts to identify the first (referred to as the southern unit) located demolition debris (bricks and concrete foundation) at the location.

The second (referred to as the northern unit) appeared on historical maps from the 1950s labeled as the "decontamination bath." Scaled distances from the map suggested a location in this area slightly northwest of an existing large rectangular concrete slab. Review of the 1961 aerial photograph identified a small, square structure located where a small, square concrete slab now exists. The aerial photograph indicates equipment was originally stored on a graded area to the north and was subsequently stored on the large rectangular concrete slab. This decontamination facility remained on the Site up to the time of plant decommissioning. Remaining features include the laydown slab and the smaller, square concrete slab that served as the foundation for the decontamination structure.

The southern unit was identified as Site 23 in the pre-RI, although both areas subsequently were tested. NG, TNT, and DNT were not detected in samples from either pre-RI test pit. Based on a review of prior sampling efforts and information from additional aerial photograph review, additional tests during the RI appeared to be warranted and the two localities were redesignated as AP-G.

Sampling locations focused on proximity to structural features and areas susceptible to runoff collection from cleaning operations. In addition, a test pit (APG-TP-502, discussed below, and later removed during ISR work) was excavated at the more northwestern location identified through historical mapping to ascertain whether activities could have occurred at this location rather than at the more obvious confirmed features.

Soil Conditions

During the RI, three test pits and one observational test pit were completed, and three surface samples were collected in AP-G. In the northern unit, a variety of equipment and scrap metal was being stored on the large rectangular concrete slab next to APG-SS-501 and APG-SS-502. Some scrap metal and piping were also stored on the smaller, square concrete slab adjacent to the southeastern corner of the large slab.

Steel rebar and electrical wiring were observed in the upper 2 feet of APG-TP-504, excavated between the large and small slabs (Figure 2.15-3). A 1-inch-diameter steel water supply pipe was encountered 1.5 feet below grade in APG-TP-501, excavated within a shallow swale leading away from the area. Other than the piping and wiring, only Steilacoom Gravels were observed in these two test pits.

APG-TP-502 (an observational test pit, where no samples were collected) was excavated in a very small depression (apparently natural) at the location northwest of the rectangular concrete slab. This excavation was conducted to look for any evidence of the former decontamination bath structure, and thereby confirm the more recent interpretation of the historical aerial photographs, which indicated that the bath was located at the small northern slab. There were no surficial indications of a structure or other man-made disturbance anywhere in the vicinity of

APG-TP-502. Similarly, there were no indications of subsurface disturbance noted in the excavation.

APG-TP-503 was excavated next to the former building (concrete foundation and bricks remaining) in the southern unit (Figure 2.16-3). Native Steilacoom Gravels were encountered to the 5-foot depth of exploration in this excavation. APG-SS-503 was completed in a shallow natural depression downslope of the former building.

Constituents in Soil

Soil samples from Area AP-G were analyzed for explosives and metals. Explosive compounds were not detected in any samples from this area. Analytical data for soil samples collected from AP-G during the RI are assigned to the Site Reference Area and presented in Tables B.14-1 and B.14-2 in Appendix B. All AP-G sampling locations are shown in Figure 2.16-3.

ISR in the AP areas was conducted in areas AP-B and AP-C as described in Section 2.20.16.

2.16 SITE REFERENCE AREA SOIL QUALITY

The Site Reference Area includes the portion of the Site that lies within the CDB but outside the production/disposal areas that received more detailed environmental characterization. Two exceptions are a reference grid of surface samples in Areas 18 and 31 (Area 18-Reference and Area 31-Reference), which were analyzed for arsenic and are included in this section to allow a better understanding of the distribution and sources of arsenic on a Sitewide basis (Figures 2.16-1 and 2.16-2 and Tables B.13-1 and B.13-2). Historical research has not identified any activities or manufacturing processes that would impact the soil quality in these outlying areas. Historical activities in the Site Reference Area were primarily restricted to transportation corridors.

Due to the elevated lead concentrations in many areas of the Site, soils beyond the designated production facilities and disposal areas were evaluated for lead. Similarly, elevated arsenic concentrations were found in peripheral areas, apparently unrelated to specific production or disposal areas. Therefore, arsenic was evaluated using a systematic Sitewide investigation.

Surface (0- to 6-inch depth) samples were collected from 70 locations in the Site Reference Area and analyzed for lead. Later, these same locations, as well as an additional 23 reference locations in Area 18, were resampled for arsenic. Because elevated arsenic concentrations were frequently encountered in the soil samples and the arsenic distribution was not well defined after the initial round of sampling, more comprehensive arsenic sampling was subsequently conducted in the Site Reference Area. An additional 485 surface samples and 48 subsurface samples (to a 2-foot depth) were collected to better define the Sitewide distribution of arsenic.

2.16.1 Lead

The Site Reference Area was systematically sampled on a staggered grid of 500-foot centers (Figure 2.16-3). Surface samples were analyzed for lead (Lead Reference [LR] Area) using both XRF and atomic absorption (AA) techniques. Subsequently, the five highest concentrations (in samples LR-19, LR-38, LR-62, LR-68, and LR-102) were crossed with additional samples offset by 125 feet to assess the spatial extent of lead in these locations.

Following initial review of the data, more detailed assessments were completed in the area of samples LR-68 and LR-62.

XRF Versus AA Lead

Surface soil samples were screened in the field with a portable XRF probe calibrated to Site soils. Twenty-five samples were selected at random and submitted to a laboratory for confirmation analyses by AA. The five highest XRF readings were also submitted for confirmation analysis. Lead determinations by XRF and AA are well correlated ($r^2 = 0.90$) and support the use of XRF as a screening tool.

Two samples (LR-91 and LR-104) were classified as outliers and omitted from the correlation because XRF and AA results differed for these samples by an order of magnitude. The discrepancy likely resulted from inherent differences in the analytical techniques: XRF measures a surface area of the soil, whereas AA is a volumetric extraction. In addition, XRF is probably more susceptible to high bias imparted by random sampling of small pieces of particulate lead. In both of the outlier samples, the laboratory results were substantially lower than the field screening results, so omission of these samples is conservative in terms of using the regression to predict lead concentrations based on XRF screening.

XRF and AA data were combined to evaluate data during Site characterization. AA lead determinations were preferentially used where laboratory confirmation data exist; otherwise, XRF values were used. The use of XRF data is likely conservative because the regression model suggests that screening values tended to overestimate the analytical lead concentrations. For example, an XRF value of approximately 400 mg/kg equates to an analytical lead concentration of 250 mg/kg (as predicted, on average, by the regression model). Although screening data proved useful during Site characterization, they were not retained in the database developed for this RI (Pioneer 2002).

Spatial Distribution of Lead

Most of the elevated lead concentrations occur along the perimeters of designated production areas in the north-central part of the Site and are likely derived from these adjacent facilities (Figure 2.16-3).

2.16.2 Arsenic

Soil arsenic concentrations above site-specific background levels (i.e., 33 mg/kg) were observed in unrelated areas across the Site. Many of the results showed no apparent relationship to production facilities, disposal sites, or specific point sources. In order to evaluate the potential Sitewide distribution of arsenic, the Site Reference Area and Area 18-Reference were sampled on 500-foot centers for arsenic. Table B.14-1 and B.13-1 in Appendix B present analytical results for arsenic in the Site Reference Area and Area 18-Reference, respectively. Initial results from the 500-foot grid indicated that moderately elevated arsenic concentrations range across the Site.

Subsequently, a comprehensive Sitewide sampling program targeting the source and distribution of arsenic was implemented. This program included the following elements:

- **Grid Sampling of the Site Reference Area on 250-Foot Centers.** The Site Reference Area was sampled using a higher resolution grid (303 samples, including the original 500-foot grid samples). The grid was also extended into the Area 18-Reference (124 samples) (Figure 2.16-1).
- **Fine-Scale Grid Sampling in Two Areas.** A second phase of fine-scale grid sampling (10- to 125-foot centers) was conducted in two areas where relatively high arsenic concentrations were observed based on the 250-foot grid. One area of detail is located just south of Area 26, and the other area is located in the central part of the Area 18-Reference (120 samples).
- **Depth Sampling at Selected Locations.** At grid locations with elevated arsenic, hand-augered samples were collected from subsurface depths to define the vertical extent of arsenic in Site Reference Area soils (52 samples).
- **Arsenic Speciation Analyses.** Soil samples with known elevated arsenic concentrations from various areas were submitted for speciation analyses in an attempt to identify potential arsenic source(s) (6 samples).
- **Sampling of Utility Corridors and Motor Houses.** To evaluate the hypothesized use of arsenical herbicides for weed control, two cleared utility corridors on the bluff were sampled (16 samples). In addition, surface soils near several motor houses in Area 18 were sampled (8 samples).
- **Sampling of Railroad Grades.** Both narrow-gauge and standard-gauge railroad grades were extensively sampled for arsenic, and selected locations were sampled for lead. These results are presented in a separate discussion (see Sections 2.17 and 2.18). The data indicate that standard-gauge railroad samples and samples collected 50 or more feet from the narrow-gauge tracks were not statistically different from the Site Reference Area samples; therefore, these samples were included in the Site Reference Area (84 samples).

Spatial Distribution of Arsenic

Grid sampling for arsenic on 250-foot centers did not reveal clear or consistent distribution patterns. The following general observations can be made, although exceptions occur:

- Elevated arsenic concentrations are found in some stretches along the property boundary, particularly near the main gate on the southeast boundary, and along the bluffs northwest of Area 18.
- Elevated arsenic concentrations are found near the periphery of certain areas with known elevated arsenic concentrations.
- Elevated arsenic concentrations appear to be locally related to edge effects from railroad corridors, e.g., along the mainline track, which follows the southern bank of Sequalitchew Creek, just inside the eastern boundary of the site (note, however, that samples within 25 feet of the narrow-gauge tracks were not included in the Site Reference Area [see Sections 2.17 and 2.18]).
- Arsenic concentrations are apparently reduced in areas where ISR has disturbed surface soils (e.g., the northern part of Area 18/1/2/3/4).

Fine-scale sampling at 10-foot and 25-foot intervals did not identify any clearer spatial relationships. Alternately high and low concentrations occurred even among closely spaced samples.

Vertical Distribution of Arsenic

Hand-augered borings were completed in 26 locations on the reference grid to delineate the vertical extent of arsenic in soils. Hand-auger locations were selected on the basis of elevated surface concentrations (ranging from 82 to 390 mg/kg) as well as to provide representative coverage across the Site. Subsurface samples were collected at 0.5- to 1-foot and 1- to 2-foot-depth intervals to complement existing surface samples at a 0- to 0.5-foot depth.

Results of the subsurface sampling indicate that elevated arsenic concentrations are largely restricted to the upper 6 inches of soil. Elevated arsenic concentrations were infrequently encountered at depth.

Arsenic Speciation Analyses

Three samples with high total arsenic concentrations from the Site Reference Area and three samples from other Site areas with elevated arsenic concentrations were submitted to the Battelle Laboratory in Sequim, Washington, for arsenic speciation analyses, in an attempt to identify potential arsenic source(s). Arsenic speciation analyses quantified the oxidized (As-V) and reduced (As-III) forms of inorganic arsenic, as well as organic (methylated) arsenic species.

Speciation analyses indicated that arsenic is largely present in its oxidized state (As-V). The common reduced form of arsenic (As-III) accounted for less than 1 percent of the total soil arsenic. In addition, organic (methylated) arsenic accounted for about 4 percent of the total soil arsenic in one sample (LR-104). Both inorganic arsenic acid (As-V) and methylated forms of arsenic acid are used in the formulation of arsenic-based herbicides. Inorganic arsenic-based herbicides are more persistent, whereas organic forms are more readily decomposed. Potential arsenic sources are discussed further in the subsection "Sources of Sitewide Arsenic."

Utility Corridors and Motor Houses

To further evaluate and substantiate the potential historical use of arsenic-based herbicides to control weeds and reduce fire hazard, two utility corridors along the coastal bluffs ("UC-" sample designation, assigned to Site Reference Area, Table B.14-1, Figure 2.16-3) and several motor houses in the Area 18 dynamite production area ("MH-" sample designation, assigned to Area 18, Table B.7-1, Figures 2.10-2 and 2.10-3) were sampled for arsenic.

Results from the utility corridor sampling indicated that moderate concentrations of arsenic (19 to 88 mg/kg) are present in the soil (see Figure 2.16-3). However, soil arsenic concentrations within the corridors, where weed control may have been conducted, are not significantly different from soil concentrations in samples collected outside of the corridors in adjacent vegetated areas. Arsenic concentrations in the utility corridor samples are slightly elevated relative to concentrations in samples from the Site Reference Area. These data do not suggest that utility corridors received above-average herbicide applications. Vegetation in the corridors was possibly controlled by hand.

Results from the motor house sampling indicate that locally high arsenic concentrations (up to 460 mg/kg) are present in the immediately surrounding soil. Seven of eight sample concentrations were elevated. Particularly high arsenic concentrations were detected in samples from motor houses adjacent to the Gelatin Box Packing House No. 2 (140 mg/kg, 18-MH-4, Table B.7-1, Figure 2.10-2), and the Gelatin Cartridge House No. 1 (460 mg/kg, 18-MH-1, Table B.7-1, Figure 2.10-3). Because of their sparking potential, motor houses constituted fire hazards and were, therefore, isolated from the actual dynamite production facilities. These data suggest that motor houses may have received arsenic-based herbicide applications to keep the areas weed free and thereby minimize the potential for fires.

Sources of Sitewide Arsenic

The use of arsenic-based herbicides throughout the Site as an arsenic source is consistent with the available data. According to a former DuPont employee, fire prevention was a primary concern at the Site, particularly in areas where the explosive hazard was high. Weed control through herbicide application was a main component of the facility maintenance program, although the specific compositions of the herbicides used on the Site are not known. Arsenic-based herbicides were commonly used from the early 1900s.

The use of arsenic-based herbicides to reduce fire and explosive hazards is consistent with the following observations and analyses:

- Moderate concentrations of arsenic are widespread throughout the Site and not specifically associated with production activities.
- Arsenic concentrations are spatially heterogeneous and vary over short distances, consistent with the patchy distribution that might result from localized spray applications.
- Elevated arsenic concentrations are surficial in nature and largely confined to the upper 6 inches of soil.
- Speciation analyses indicate that most arsenic is present in an oxidized, inorganic form, such as arsenic acid, which was a common formulation for arsenic-based herbicides.
- Elevated arsenic concentrations are found in Area AP-E (the transformer house), in Area AP-F (the nitrocotton storage), in certain parts of Area 18 (i.e., near the packing houses and motor houses), and in the detail grid south of Area 26 (near the pulp drying houses)—all areas of potential fire and explosive hazard.
- According to a former DuPont employee, herbicides were stored in a warehouse in Area 38; elevated arsenic concentrations were found in Area 38, including in soil adjacent to both of the storage buildings on the east side of the box factory.
- Elevated arsenic concentrations are consistently found along the narrow gauge railroad tracks, which were maintained by DuPont crews, because it was very important to keep explosives transportation corridors free of fire hazards (see Section 2.17).

Arsenic was also a likely by-product of the burning of pyrite during the acid production process. Pyrite originates in sulfide deposits, which can contain arsenic. Arsenic could occur in association with the pyrite burning process or disposal associated with the acid production area. This source may account for elevated arsenic concentrations in Areas 25, 5, and 16. In

particular, arsenic associated with liquid waste conveyed in discharge pipes to the adjacent kettle (Area 5/16) is associated with the subsurface occurrence of arsenic in these areas, which is unique relative to the surficial distribution of arsenic elsewhere on the Site.

Unsubstantiated Sources of Arsenic

Other sources of arsenic have been considered but are not substantiated by constituent testing results and do not appear to be supported by Sitewide arsenic distribution.

Facility decommissioning could have contributed arsenic to soils around buildings if arsenic-based paints were used. Twenty-six samples of building paint were analyzed, and only two samples contained elevated arsenic (810 and 2,800 mg/kg); the remaining samples contained concentrations near or below the detection limit of 50 mg/kg. In addition, elevated arsenic concentrations do not appear to be localized around building foundations. Because only a small percentage of historic building paints contained appreciable arsenic, the paint appears to be an unlikely source.

Three sulfur samples were tested for arsenic impurities, since arsenic may be associated with sulfur ore deposits; however, the results ranged from nondetections to 7 mg/kg. Ten railroad ties were analyzed to determine whether they may have been treated with arsenic-based wood preservative. Low to moderate concentrations of arsenic (maximum of 120 mg/kg) were detected in the tie samples (see Section 2.17), indicating that the ties likely received arsenic during surficial herbicide applications along the rail lines, but were not dipped in arsenic-based preservative. During Site sampling, hand trenching of the railroad grades at 10 locations was conducted to determine whether fill material might have been added to the railroad grade and could potentially be a source of arsenic. The trenching activities indicated slag-like material was not used as grade foundation, but rather the railroad grades were constructed with local Steilacoom Gravels. A former DuPont employee indicated that approximately 1 percent arsenic was commonly added to strengthen lead sheathing and fixtures used in the production facilities. However, arsenic concentrations are not elevated at the Lead Melt House (Area 36), and the presence of arsenic and lead, in general, is not correlated at the Site.

Analytical data for soil samples collected in the Site Reference Area during the RI are presented in Tables B.13-1 through B.13-2 and B.14-1 through B.14-4 in Appendix B (except as noted in the section “Utility Corridors and Motor Houses”). Figures 2.16-1 through 2.16-3 show the sampling locations (except as noted in the section “Utility Corridors and Motor Houses”).

ISR work conducted for lead and arsenic hot spots in 1999, 2000, and 2001 removed the majority of the elevated concentrations. The ISR work is described in Sections 2.20.15 and 2.20.16. Following ISR, mercury remains in the Area 31-Reference Area.

2.17 HISTORICAL RAILROAD GRADES SOIL QUALITY

2.17.1 History of Activities

Two types of railways served the areas within the Site during its operation. An NGRR connected the various production and material storage areas within the facility. A standard gauge railway, operated by the Northern Pacific Railroad, brought raw materials to storage facilities in the plant (e.g., in the acid production and black powder production areas) and

transported finished products from the plant. Many of the rails (both narrow- and standard-gauge) were removed during facility decommissioning, but the railroad grades remain in most locations. The locations of the historical narrow-gauge and standard-gauge grades are shown in Figure 2.17-1.

Surface soils along narrow-gauge and standard-gauge railroad grades within the Site were sampled for arsenic at approximately 500-foot intervals. Based on these results, selected stretches of the grades were sampled at 100-foot intervals to evaluate more detailed spatial variability in arsenic concentration; samples were also collected at 25- and 50-foot distances from the edges of the grades to evaluate arsenic concentrations laterally away from the grades. Based on surficial (0 to 0.5 foot) arsenic concentrations, samples were collected at depth (0.5 to 1 foot and 1 to 2 feet) at 20 locations and analyzed for arsenic. In addition, lead analyses were conducted on the grades on 20 surface soil samples and 6 samples from depth.

Figure 2.17-1 shows all railroad grade sampling locations and arsenic concentrations from surface samples (0 to 0.5 foot). Tables B.15-1 and B.15-2 in Appendix B provide all data for the railroad grade samples.

2.17.2 Soil Conditions

Steilacoom Gravels were encountered at all sampling locations along both the narrow-gauge and standard-gauge grades. The Steilacoom Gravels were used as fill in those portions of the grades that were built up. No non-native fill materials were observed during the RI.

2.17.3 Constituents in Soil

Elevated arsenic concentrations are located on portions of the narrow-gauge and standard-gauge grades. Elevated lead concentrations were also found in four sampling locations. Many of these samples were removed during 1999, 2000, and 2001 ISRs and are no longer representative of current site conditions.

Laboratory analyses that were performed on Site Reference soil samples from the Historical Railroad Grades included lead and arsenic, as discussed above. Up to 12 other total metals, gasoline, diesel, and TPH were also analyzed in five soil samples. Total metals and gasoline were detected in at least one sample from this area. Diesel and TPH were not detected in any samples from this area.

2.17.4 Distribution of Constituents in Soil

Arsenic in Surface Soils

The sampling results indicate that surficial (0 to 0.5 foot) arsenic concentrations are substantially higher on the narrow gauge grades than on the standard-gauge grades.

Interviews with former DuPont employees indicated that the NGRRs historically have been sprayed with herbicides to control weeds as a fire-protection measure. The general consistency in elevated arsenic concentrations along the NGRR grades supports focused application of arsenic-based herbicide as a likely source for the detected arsenic.

The distribution of arsenic along individual stretches of the narrow-gauge lines appears to relate closely to (1) when a line was used, (2) how long a line was used, and (3) whether explosive compounds were handled on or near the line. These generalized patterns are apparent when segmenting the railway corridors and associated arsenic data into functional/temporal areas. Higher surficial arsenic concentrations correspond to the primary production lines and transportation routes (e.g., Area 18 powder lines used for the longest period of time [Gel Mix 1 Line and Dynamite Mix Lines 1 and 2] and the transportation loop connecting the finished product storehouses and the burning ground). These facilities were operated the longest. Other production lines operated for shorter periods of time, such as the Smokeless Powder Line and the Gel Mix 3 Line, show considerably lower arsenic concentrations. Based on these data, the following observations can be made:

- Detected arsenic concentrations likely relate to application of arsenical herbicides to control weeds as a fire protection measure.
- Applications likely occurred between the late 1920s and the early 1960s.
- Concentrations along a specific segment tend to be relatively higher in proximity to manufacturing facilities (with the exception of the primary narrow-gauge shipment line).
- Frequency, concentration, and/or extent of application is greater in explosives manufacturing areas and considerably less for raw materials production areas (e.g., Acid Production Area and the Crystallizer Plant).
- Elevated arsenic concentrations were found at NGRR intersections.
- The standard-gauge railroad apparently did not receive arsenical herbicide treatment due to its infrequency of use, delivery locations, and maintenance by Northern Pacific Railway personnel. Information from a former DuPont employees indicates that the Northern Pacific maintained its rail lines by burning the weeds along the tracks.

Lead in Surface Soils

The NGRR used gas/diesel or electric locomotives at various times during plant operation. The locomotives are possible sources for localized lead concentrations along the railroad grades. Over the duration of railroad use, spot discharges from batteries used in the electric locomotives could have been a potential source for detected lead concentrations. Wear of Babbitt bearings or other metals used for railroad stock could also have been a source for lead on the railroad grades.

ISR work conducted in the NGRR corridor is described in Section 2.20.16.

2.18 SEQUALITCHEW CREEK CANYON SOIL QUALITY

2.18.1 2001 Sequalitchew Creek Characterization

This work, completed between January 10, and 16, 2001, was isolated to within, and immediately adjacent to, the NGRR track bed between the site access road and the Burlington Northern Railroad. This RI reports only the data collected between the site access road and the Parcel 1 boundary. Data collected outside the CDB will be the subject of a future report. The

purpose of this work was to determine if arsenic and lead contamination is present. Sampling was conducted as follows:

- Approximately 2,250 linear feet of NGRR track was divided into 75- by 20-foot sections, and a sampling grid was established in each section.
- A field check was made to determine if site conditions justified adjustments to the sampling grid. The sampling sections and locations were referenced to the existing LR-68 sampling location (e.g., the sample that is 75 feet west of LR-68 was labeled LR-68-75W).
- Ecology was contacted. Two Ecology employees visited the work area to determine if any changes to the grid were necessary. No changes were made.
- A five-point composite soil sample was collected within each 75- by 20-foot section.
- 30 samples were collected and taken to Sound Analytical Services for analysis for lead and arsenic (Method 6010).

The analytical results for arsenic and lead are presented in Tables B.16-1 through B.16-5. Figure 2.18-1 shows the sampling locations.

The following conclusions can be made on the basis of these results:

- **Arsenic.** Arsenic was detected in each sample and the concentration consistently exceeded background concentrations. Two locations had elevated concentrations. These locations were excavated and disposed of during the 2001 ISR (see Section 2.20.16).
- **Lead.** Lead was detected in each sample. One location had a very high concentration (9,200 mg/kg). This location was excavated and disposed of during the 2001 ISR (see Section 2.20.16).

2.18.2 Area LR-68 Characterization

During RI grid sampling in the Site Reference Area, elevated lead concentrations were observed about 20 feet downslope of the rail line running along the east bank of Upper Sequalitchew Creek. Additional lead samples were collected around the original sample (LR-68) and at 100-foot intervals along the downslope bank of the rail line within the CDB. Two additional locations with elevated lead were discovered along the rail line, southeast of LR-68. There is no documented source at this location in historical records. The source of the metals may be associated with railcar maintenance practices or railcar Babbitt bearings/machinery wear.

Twenty-seven surficial soil samples were collected along the rail line. Miscellaneous debris, including metal, ceramic debris, and bricks, was observed in surficial soils in the vicinity of sample LR-68. No debris was observed in samples collected from depths of 1 to 3 feet or from the two other locations with elevated lead concentrations along the rail line southeast of LR-68.

Laboratory analyses performed on Site Reference Area soil samples from LR-68 included total lead and arsenic, as discussed above.

Soil quality data, associated depths, and analytes for Area LR-68 are summarized in Table B.16-1 through B-16-5 in Appendix B. Figure 2.18-1 shows the sampling locations. (Note that one sample each from LR-68 was assigned to Area 31 and Miscellaneous Areas; these samples are therefore shown in Table B.10-1, Figure 2.13-1 and Table B.19-1, Figure 2.19-4, respectively.)

Although, the majority of the elevated concentrations in the area of LR-68 were removed during the 2001 ISR (see Section 2.20.16), elevated concentrations of lead and arsenic remained. Any remaining impacted soils will be evaluated in greater detail in the RA and FS.

ISR work conducted in the Sequalitchew Creek Canyon is described in Section 2.20.16.

2.19 MISCELLANEOUS AREAS SOIL QUALITY

Additional site characterization was conducted at miscellaneous areas across the Site. These data were collected between 1999 and 2001. The purpose of this work was to further characterize the nature and extent of arsenic and lead impacts in these areas. The additional characterization was conducted in three sets of areas:

- Candidate Areas
- North of Creek Areas
- Miscellaneous Historical Areas

Work in the Candidate Areas was a result of public comment on the Site Environmental Impact Statement (EIS) regarding whether parts of the property could be left in their natural condition without requiring remediation. Sampling in historical areas was focused on the Fort Nisqually Cemetery (45PI404) and the south Shell Midden (45PI72). The remaining characterization was conducted in miscellaneous areas north of the creek associated with the Hot Spot ISR (Section 2.20).

Sampling was conducted as follows for the Candidate Areas and Miscellaneous Historical Areas:

- The soil sampling locations for the three areas were determined relative to the Sitewide 150-foot sampling grid, which extended from the northwest corner of the Site. Ecology and the Project Team agreed that subdividing this larger grid into 75-foot sections was adequate for characterizing these areas.
- The samples were labeled according to their position in the grid (e.g., the sample in row 60 and column 32 was labeled R60C32) and remedial unit (RU) location. The location of each sample was surveyed by ESM Consulting Engineers, LLC (ESM).
- North of the Creek Area characterization sampling locations were determined on the basis of the location of hot spots. Characterization samples were collected from each side of a hot spot excavation in order to confirm that the extent of the excavation was adequate.
- A discrete soil sample was collected at each grid point.
- More than 750 samples (including field duplicates) were collected and taken to Sound Analytical Services for analysis for lead and arsenic (Method 6010).

The analytical results for arsenic and lead are presented in Tables B.17-1, B.18-1, and B.19-1. Figures 2.19-1 through 2.19-4 show the sampling locations for the Candidate Areas, North of Creek Areas, and Miscellaneous Historical Areas, respectively.

2.20 INTERIM SOURCE REMOVAL AREAS

The following interim actions were conducted as allowed under the July 1991 Consent Decree signed by Weyerhaeuser, DuPont, and Ecology. This section briefly describes each ISR. More

details for each ISR action are provided in documents listed in Section 5. ISR areas include Areas 5, 6, 8, 10, 18, 19, 20, 24, 25, 30, 31, 35, 36, 39; the hot spot removal areas; sand laydown areas (SLAs); and the Foundation, NGRR, and topsoil laydown areas.

For the interim actions conducted between 1990 and 1993, DuPont Environmental Remediation Services (DERS) conducted source removals (unless otherwise noted). In many cases Olympus Environmental Services provided excavation services for the work. Hart Crowser provided on-site technical assistance and field oversight to DERS and collected appropriate samples during the interim actions. All soil samples were analyzed at Analytical Technologies Inc. (ATI) and/or the Hart Crowser *FAST* Lab (on-site mobile laboratory), unless otherwise noted.

For the interim actions conducted between 1999 and 2001, Active Construction (ACTIVE) conducted source removals. West Shore Corporation, NW, provided oversight, and sample collection was conducted by URS. All soil samples were analyzed at Multichem or Sound Analytical.

All interim actions were detailed in work plans that were reviewed and approved by Ecology prior to the start of work.

2.20.1 Areas 5 and 6 DNT Waste Drum Areas

Area 5 is the hillside above the Area 16 glacial kettle where discarded containers such as 55-gallon drums, demolition debris, and refuse were placed. During pre-RI work, over 1,000 observable drums were noted. Pre-RI soil characterization sampling and drum contents profiling identified the presence of NAX, TPH, PAHs, acids, metals, isopropanol, and glycol. Area 6 is a ravine located to the east of the Area 5/16 glacial kettle.

The purpose of the interim action in Area 5/6 was to remove, clean, and dispose of drums, debris, fill and impacted soil. DERS performed the work between September 1990 and October 1993, in six phases: drum removal, drum decontamination and recycling, waste debris/soil removal, fill removal and screening, impacted soil removal, and verification soil sampling. Asbestos was encountered at various stages of the interim action and was removed by TLH Abatement, Inc. under the direction of Prezant Associates and DERS.

A total of 4,602 drums were removed from Areas 5 and 6. Of the total, 3,601 were apparently empty, 1,279 contained DNT residual, 3 contained TNT residual, and 259 contained non-NAX contents including petroleum products (oils, tars, grease, glycerin, paraffins, salts, ammonium nitrate, glycol, acids, isopropanol, and rain water). A total of 33 apparently empty drums (one contained paraffin and one contained blasting wire) were found in other areas of the Site.

Area 6 contained approximately 1,600 drums; all but seven of the drums were empty. According to the field screening results, four of the unempty drums contained residual ammonia salts and three contained paraffins (nonhazardous waxes).

RI characterization soil samples were collected after the drum removal around the perimeter of the large volume of debris and fill in Area 5. A small volume of debris in Area 6 was removed during ISR. The sampling results for soil/fill material indicated elevated concentrations of metals, DNT, TPH, and cPAHs. Native soils beneath the fill contained no elevated concentrations.

Approximately 25,050 cubic yards of debris and soil were removed from Area 5 and appropriately segregated, stockpiled, and/or disposed of. Final soil verification samples indicated that all NAX met the target interim action levels.

Numerous characterization, verification, and designation samples were collected and analyzed during each phase of work for this interim action. The ISR in Area 5/6 is reported in Hart Crowser (1994c).

Impacted soils remaining on the Area 5 hillside contain elevated concentrations of one or more of four metals (arsenic, lead, cadmium, and mercury), TPH, and PAHs. The majority of these locations were excavated and removed during the 1999, 2000, and 2001 ISR work. Any remaining impacted soils will be evaluated in greater detail in the RA and FS.

Soil quality data, associated depths, and analytes for Area 5 are summarized in Table B.20-1 through B.20-9 in Appendix B. Figure 2.20-1 shows the sampling locations.

2.20.2 Area 8 Bunker C Pipeline and Former ASTs

The purpose of the interim action was to remove the former Bunker C pipeline and associated TPH-impacted soils along the pipeline and in the former aboveground storage tank (AST) area. The pipeline carried Bunker C fuel from the lower powerhouse and wharf area to the upper powerhouse. DERS removed TPH-impacted soils and the pipeline between January 1992 and August 1993. Approximately 29,100 cubic yards of soil and forty 55-gallon drums of residual product/cleaning waters were removed. The entire level portion of the pipeline and associated lead packing in the pipe joints were removed. The sloped section of the pipeline was cleaned and grout filled for abandonment in place.

Prior to source removal, 58 characterization soil samples were collected and analyzed for TPH. Selected samples were analyzed for PAHs, total lead, VOCs, and SVOCs. Following source removal, 48 verification soil samples were collected and analyzed for TPH. Selected samples were analyzed for PAHs. Forty-seven designation samples were collected from Area 8 stockpiles and analyzed for TPH prior to appropriate disposal.

With one exception, the ISR effectively removed all TPH soils where the concentration was above the Bunker C product-specific level of concern to a depth of 15 feet. The one exception is addressed in the FS and the remainder of Area 8 will not be addressed further.

ISR and verification sampling in Area 8 are discussed in Hart Crowser (1994b). An Ecology letter dated October 9, 1996, gave approval to backfill the excavations associated with the pipelines and aboveground Bunker C storage tanks in this area (Ecology 1996c).

Soil quality data, associated depths, and analytes for Area 8 are summarized in Table B.21-1 through B.21-6 in Appendix B. Figure 2.20-2 shows the sampling locations.

2.20.3 Area 18 Sympathetic Detonation

To minimize potential health and safety risks associated with potential explosive residuals within the former manufacturing foundations, an interim action involving sympathetic detonations was conducted where there had been historical use of NG.

Although the facilities in Area 18/1/2/3/4 were burned during site decommissioning, safety concerns were raised by the possibility that residual NG, TNT, or DNT might have permeated the remaining concrete foundations and adjacent soils. To reduce this potential hazard, an ISR was conducted involving a series of sympathetic detonations at selected foundations and along transport lines, primarily in the north and central part of the area—in the nitrators, neutralizers, and mixing houses.

Yenter Environmental Services and DERS conducted sympathetic detonations in 1992. The first phase of detonations was conducted at 15 foundations. The second phase was conducted in two additional foundations, various drainage ditches, and miscellaneous wash-down areas. Sympathetic detonations were repeated three times at each foundation's location following foundation removal.

At locations where residual explosives were suspected, detonations were set off. If residual explosive material was present in sufficient quantity, a secondary (sympathetic) explosion would result. As part of the ISR, foundation debris containing lead was sorted, removed, and appropriately disposed of; associated cover and berm soils were stockpiled. Where possible, lead debris was segregated and recycled. Following the sympathetic detonations, test pits were excavated at the foundations to characterize postdetonation soil quality, because many of the soils and fill materials evaluated during the pre-RI sampling were subsequently removed and/or stockpiled during these activities.

As part of the sympathetic detonation program, the concrete splash box next to the NG waste acid storage location in Unit 26B was detonated. The charge produced a second detonation, indicating that residual NG may have been present in the box. Secondary sympathetic detonations were not noted at other locations.

Following this work the soil berms, concrete walls, and timbers were demolished and removed. Soil excavated in association with the removal was stockpiled for designation and appropriate disposal. Following excavation of foundations, characterization soil samples were collected and incorporated into the RI database. Soil samples were analyzed for NAX, NG, and total metals.

Most of the elevated arsenic and lead concentrations remained after the initial ISR in Area 18 were remediated during the 1999, 2000, and 2001 ISRs. Any remaining impacted soils will be evaluated in greater detail in the RA and FS.

Sympathetic detonation activities and verification sampling in Areas 18 are discussed in Hart Crowser (1993b).

2.20.4 Area 19 Maintenance Areas

The purpose of the interim action was to remove paint and petroleum-stained soils at the former Paint Shop (19A) and Oil House (19B). DERS removed TPH- and lead-impacted soils and inorganic solid debris (ISD) between March and September 1992. Approximately 20 cubic yards of soil and 15 cubic yards of concrete and metal debris were removed from these areas.

For Area 19A, seven characterization, verification, and designation soil samples were collected and analyzed for PAH, TPH, VOCs, or total metals. For Area 19B 27 characterization, verification, and designation soil samples were collected and analyzed for PAH, TPH, VOCs, lead, or total metals.

ISR efforts effectively removed the majority of all constituents of concern to a depth of 15 feet. Any remaining impacted soils will be evaluated in detail in the RA and FS.

ISR and verification sampling in Areas 19A and 19B are discussed in Hart Crowser (1993c), in Area 19C in Hart Crowser (1993h).

Soil quality data, associated depths, and analytes for Area 19 are summarized in Table B.22-1 and B.22-2 in Appendix B. Figure 2.20-3 shows the sampling locations.

2.20.5 Area 20 Underground Storage Tanks

The ISR effectively removed all constituents on concern to a depth of 15 feet. Therefore, Area 20 will not be addressed further.

Removal, verification sampling, and closure of the Area 20 underground storage tanks (USTs) are documented in Hart Crowser (1991d). Additional removal of soil associated with an AST in Area 20B is documented in Hart Crowser (1993a). Ecology issued a letter specifying No Further Action (NFA) for Areas 20A and 20B (Ecology 1993a).

2.20.6 Area 24A Upper Power House

The Upper Power House was served by the Area 8 Bunker C Pipeline and used Bunker C fuel to power the entire former facility. The ISR in this area was conducted in several phases between 1989 and 1992. The purpose of the interim action was to demolish the Upper Power House including the powerhouse stack. Prior to demolition activities, characterization and lead abatement were conducted. Procedures were established for removal or containment of any remaining lead-paint-impacted material as part of demolition activities.

The 150-foot-high powerhouse stack was initially demolished by a U.S. Army special forces demolition team from Fort Lewis, Washington, on April 29, 1991. Between June 12 and June 18, 1991, CEcon Corporation completed the demolition and disposal of the generated material and associated ACM from the stack. The powerhouse was demolished during subsequent activities. All materials from these demolition activities were appropriately disposed of off Site following waste designation.

Removal of Bunker C TPH material from the Area 8 pipeline, which terminated in the powerhouse, was conducted in association with the Area 8 ISR. Pre-RI characterization in Area 24 identified TPH-impacted material in 4 of 5 hand-auger samples collected from the powerhouse floor sumps. Material from the sumps was removed along with other demolition material.

Soil quality data, associated depths, and analytes for Area 24A are summarized in Table B.21-1 through B.21-3 in Appendix B. Figure 2.20-4 shows sampling locations.

Analysis of the data indicated further action may be required after the ISR and, therefore, this area will be evaluated in greater detail in the RA and FS.

ISR and verification soil sampling in Area 24A are discussed in Hart Crowser (1991e and 1992h).

2.20.7 Area 30 Railroad Debris

The purpose of the interim action was to remove inorganic solid debris (ISD) containing lead in accordance with the Land Disposal Restrictions (LDRs) to decrease potential sources of lead to area soils. DERS removed ISD (approximately 80 cubic yards of soil and 60 cubic yards of timber debris) from Area 30 between March 26 and April 7, 1992. Less than 1 cubic yard of ISD lead was segregated from the excavated materials. Seven soil verification samples were collected and analyzed for lead, TPH, and 13 total metals. Three stockpile designation samples were also collected and analyzed following removal.

Analysis of the data indicated further action may be required after the ISR; therefore, this area will be evaluated in greater detail in the RA and FS.

ISR and verification soil sampling in Area 30 are discussed in Hart Crowser (1993d).

Soil quality data, associated depths, and analytes for Area 30 are summarized in Table B.24-1 in Appendix B. Figure 2.20-5 shows the sampling locations.

2.20.8 Area 31 Ravine Near Burning Ground

DERS removed debris from the ravine area between October 12 and 14, 1992. Approximately 400 cubic yards of soil and 60 cubic yards of debris were removed from the site, including five empty 55-gallon drums and one 55-gallon drum containing tar. Six verification/designation soil samples were collected and analyzed for NAX, arsenic, lead, mercury; one of these was analyzed for PAHs and TPH following removal. Five designation soil samples were collected from area stockpiles and analyzed for NAX, arsenic, lead, mercury, and TPH; three of these were analyzed for pesticides and PCBs, and PAHs.

Analysis of the data from the source removal action indicate that no further action is required in this area.

ISR and verification soil sampling in Area 31 Ravine are discussed in Hart Crowser (1993e).

2.20.9 Area 35 Tar Barrel Area

The ISR effectively removed all constituents of concern to a depth of 15 feet. Therefore, Area 35 will not be addressed further.

2.20.10 Area 36 Lead Melt House

The purpose of the interim action was to remove ISD containing lead in accordance with the LDRs to decrease potential sources of lead to area soils. DERS removed soil and debris at the Lead Melt House from March 25 to March 30, 1993. Approximately 6 cubic yards of soil and 5 cubic yards of debris were removed. Forty-nine soil characterization samples were collected and analyzed for total lead. Concentrations of total lead ranged from not detected to 120,000 mg/kg. Five samples were also analyzed for 13 metals. Four verification/designation soil samples were collected following removal.

Elevated arsenic and lead remained after the initial ISR. These locations were remediated further during the 1999, 2000, and 2001 ISRs. Any remaining impacted soils will be evaluated in greater detail in the RA and FS.

Antimony was detected in one of five samples at a marginally elevated concentration. However, because the antimony detection occurred in a sample with elevated lead and arsenic concentrations, antimony will not be addressed further.

ISR and verification soil sampling in Area 36 are discussed in Hart Crowser (1993f).

Soil quality data, associated depths, and analytes for Area 36 are summarized in Table B.23-1 in Appendix B. Figure 2.20-6 shows the sampling locations.

2.20.11 Area 38 Underground Storage Tank

During the RI soil sampling in Area 38, the fill spout for a UST was observed approximately 20 feet west of the drywell. The contents of the tank were sampled, and the tank was subsequently removed in accordance with Washington State UST regulations. No petroleum product or staining was observed within the tank excavation. Air monitoring (by an HNU photoionization detector [PID] and Draeger tube samples for benzene) indicated no evidence of VOCs. No petroleum compounds were detected in verification soil samples collected within the tank excavation, indicating that the tank did not leak. The UST sampling and removal activities for Area 38 are summarized in a UST Closure Report submitted to Ecology (Hart Crowser 1992f). Ecology issued a letter specifying NFA for the Area 38 UST (Ecology 1993b).

2.20.12 Area 39 Laboratory

The purpose of the interim action was to remove mercury-contaminated soils. DERS removed soils with mercury at the Former Laboratory from March 2 to August 14, 1992. A sump, drainline, UST, and 85 feet of piping were removed. Approximately 1,600 cubic yards of soil were excavated and disposed of off Site. Seventy-six soil characterization samples were collected and analyzed for VOCs, SVOCs, and metals. Five samples were analyzed for mercury speciation by the Battelle Marine Sciences Laboratory. Thirty-four verification soil samples were collected following excavation.

Elevated arsenic, lead, and mercury were detected in one or more samples following ISR in Area 39; therefore, the area will be evaluated in greater detail in the RA and FS.

ISR and verification soil sampling in Area 39 are discussed in Hart Crowser (1993g). Removal, verification sampling, and closure of the UST in Area 39 are documented in Hart Crowser (1992g). On May 6, 1993, Ecology issued a letter specifying NFA for the Area 39 UST (Ecology 1993c).

Soil quality data, associated depths, and analytes for Area 39 are summarized in Table B.26-1 through B.26-6 in Appendix B. Figure 2.20-7 shows the sampling locations.

2.20.13 Lead-Contaminated Debris Removal—Areas 18S, 19C, and 31

The purpose of the interim action was to remove ISD containing lead in accordance with the LDRs to decrease potential sources of lead to area soils. These areas were identified for removal based on visual observations of ISD lead. DERS removed visible ISD lead and soil from Areas 18S (Powderline Area Gelatin Cartridge House No. 3), 19C (Lead Shop), and 31 (Burning Ground) during the first phase of removal in May 1992. The extent of lead debris (not lead concentrations) formed the basis for source removal excavation limits. In July 1993, a second

phase of work removed DNT-impacted soils in Area 31. This was a removal action separate from the one described in Section 2.20.14. Approximately 115 cubic yards of soil and 45 cubic yards of debris were removed from Area 18S. Approximately 55 cubic yards of soil and 25 cubic yards of debris were removed from Area 19C. Approximately 70 cubic yards of ISD lead and associated soil, 40 cubic yards of DNT-impacted soil and 35 cubic yards of debris were removed from Area 31.

Following ISR, 3, 5, and 11 verification soil samples were collected from Areas 18S, 19C, and 31, respectively. Samples from Area 18S were analyzed for total metals, TPH, NAX, and NG. Samples from Area 19C were analyzed for metals. Samples from Area 31 were analyzed for total metals, NAX, and TPH (one sample).

Elevated concentrations of lead remained in soil in Areas 18S, 19C, and 31 after the initial ISR. These areas were remediated further during 1999, 2000, and 2001 ISRs. Any remaining impacted soils will be evaluated in greater detail in the RA and FS. ISR and verification soil sampling for ISD lead in these areas are discussed in Hart Crowser (1993h).

2.20.14 DNT Soil Removal—Areas 10, 18, 25, and 31

The purpose of the interim action was to remove DNT-impacted soil to decrease potential sources of DNT to site groundwater. DERS removed approximately 37,500 cubic yards of DNT-impacted soil from Areas 10, 18, 25, and 31 in February and October 1993.

Following ISR in Area 10, eight verification soil samples (10-VS-1 through 10-VS-8) were collected from the bottom and along the excavation sidewalls. Surficial soil at locations 10-VS-3 and 10-VS-5 was later excavated during subsequent ISR.

In Area 18, residual DNT/TNT-containing soils were excavated in the vicinity of the five foundations. During the excavation at Gelatin Mixing House No. 1, a 4-inch-diameter ceramic/iron pipe filled with DNT/TNT residual was observed. The pipe discharged to the southeast of the mixing house foundation, where crystalline residual was observed. The residual DNT/TNT at the pipe discharge location—approximately 75 by 50 feet and up to 6 inches thick—was carefully excavated as part of the ISR. To address the potential for similar discharge pipes associated with other foundations, a series of continuous trenches was excavated on all four sides of all dynamite and gelatin mixing houses, at distances of 25 to 100 feet from the foundations. No additional discharge lines were observed during the trenching at any of the mix houses.

Following ISR, 6, 173, 16, and 7 verification soil samples were collected from Areas 10, 18, 25, and 31, respectively. All samples were analyzed for NAX. In Area 18, 17 samples were analyzed for total lead, and 2 samples were analyzed for four metals (arsenic cadmium, lead, and mercury). Four samples in Area 25 and all seven samples in Area 31 were analyzed for total lead.

ISR successfully removed soil containing DNT above the ISR excavation target level of 1 mg/kg, and any associated TNT. Analytical results for the verification soil samples indicate that DNT concentrations in the remaining soils were not elevated, with the exception of 5 locations in Areas 18 and 25 locations at a depth greater than 15 feet. One soil sampling location in Area 10 contained an elevated TNT concentration. This location was remediated during 1999, 2000, and 2001 ISRs.

ISR for DNT-impacted soil and verification soil sampling in these areas are discussed in Hart Crowser (1994a).

Elevated concentrations of lead remained in these areas after ISR. These locations were remediated during 1999, 2000, and 2001 ISRs. Any remaining impacted soils will be evaluated in greater detail in the RA and FS.

2.20.15 Lead and Arsenic Hot Spots

Areas with high arsenic and lead concentrations (referred to as "hot spots") were identified during site characterization. Most of the high arsenic locations were along the NGRR track (refer to Sections 2.16 and 2.18), while most of the high lead concentrations were near specific building foundations (refer to Section 2.16).

The two tasks of the hot spot removal program were as follows:

- Remove hot spots in site areas south of Sequalitchew Creek that exceed placement area remediation levels.
- Remove hot spots and other affected soils in the industrial area north of Sequalitchew Creek in order to achieve industrial cleanup levels.

Active Construction (ACTIVE) removed approximately 18,500 cubic yards of soil between September 10, 1999, and July 24, 2000, as part of this interim action. The lead and arsenic hot spot soils were excavated and stockpiled for future treatment and disposal, which was completed in 2001. Soils containing TNT were stockpiled separately and disposed of off Site.

Following hot spot removal, elevated concentrations of lead and arsenic remained. The majority of these locations were remediated during 2001 ISR. Any remaining impacted soils will be evaluated in greater detail in the RA and FS.

Hot spot removals included Areas 10, 31, NGRR, and RR-546. The hot spot excavation in Area 10 was expanded to remove one elevated TNT sample. Since the hot spot removal in these areas, no further action is required.

No hot spot excavations were conducted in open space areas or in areas within or immediately adjacent to known historical sites. These and any other elevated concentration sampling locations within open space or historical areas will be addressed in the RA and FS.

ISR and verification soil sampling in the hot spot areas are discussed in the Hot Spot Interim Action Report (West Shore et al. 2000a).

2.20.16 Foundation, NGRR, Hot Spot, and Top Soil Laydown Area

This interim action resulted in the following soil excavations:

- 2 to 8 feet deep in a 50- by 50-foot area around selected building foundations
- 1.5 to 2.5 feet deep 25 feet on either side of the narrow-gauge track centerline along the selected lengths of NGRR
- 1.5 to 3 feet deep in areas up to 50 by 50 feet around hot spot areas that may require on-Site screening and/or off-Site disposal

  - Arsenic and lead areas (Sequalitchew Creek NGRR, Area 38, and location R71C85)
  - NAX locations in Areas 10 and 18
- 1.5 to 2.5 feet deep in two topsoil laydown areas

ACTIVE removed a total of 158,160 cubic yards of soil between June 4 and September 21, 2001, as part of this interim action. A total of 699 verification samples were collected and analyzed for arsenic, lead, DNT, and TNT. An additional seven characterization samples were collected from remaining hot spot locations and analyzed for arsenic, lead, DNT, and TNT. Based on the

evaluation of sampling data, no elevated concentrations of lead, arsenic, DNT, or TNT remain except for the following:

- Seven locations for arsenic (all in Sequalitchew Creek NGRR)
- Fourteen locations for lead

Further remediation of these locations will be addressed in the FS.

ISR and verification soil sampling in the miscellaneous areas are discussed in the Interim Corrective Action Report (West Shore et al. 2001).

2.20.17 Sand Laydown Areas

The objective of this interim action was to remove surface soil from six areas on the Site so that sand could be stockpiled in these areas and not moved again until final Site remediation. Between 1.5 and 3 feet were removed from each of the six areas in 2000. Verification soil samples were collected within each SLA excavation and analyzed for arsenic and lead.

The results indicated the following:

- In general, postexcavation sample concentrations were near or below background levels for both lead and arsenic. Exceptions were samples with elevated lead concentrations associated with visible debris or foundations.
- No sand was stockpiled in SLA areas where there were visible debris (SLA 1) or foundations (SLA 1, SLA 6).
- With the exception of the debris- and foundation-associated samples, all six SLA areas require no further action.

ISR and verification soil sampling in the miscellaneous areas are discussed in the Sand Laydown Area Interim Action (West Shore et al. 2000b). Figure 2.20-8 shows the sampling locations.

This section presents the findings of the RI groundwater characterization efforts at the Site. Sections 3.1 and 3.2 present specific information on the physical groundwater system and groundwater quality. Appendices A and C present field procedures and tables on groundwater quality, respectively.

3.1 HYDROGEOLOGIC CHARACTERIZATION

3.1.1 Site Geology

The interpretation of the Site geologic and hydrogeologic conditions has been developed from Hart Crowser's work on the Site and from explorations conducted north of the Site by others. The locations of monitoring wells, staff gauges, and geophysical surveys completed by Hart Crowser and used for interpretation of Site hydrogeologic conditions are shown in Figure 3.1-1.

Three major stratigraphic units were encountered during explorations at the Site, the Vashon Drift (which includes the Steilacoom Gravel), the Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift sequence (hereafter referred to as the DBD-OB sequence), and the Salmon Springs Glaciation. Locations of monitoring wells and cross sections are shown in Figure 3.1-1. Generalized subsurface cross sections are shown in Figures 3.1-2 and 3.1-3.

Vashon Drift

The Vashon Drift is composed of the following units, from the surface down (youngest to oldest):

- Steilacoom Gravel
- Vashon Till (observed at only a few locations on the Site)
- Vashon Advance Outwash (comprising Advance Gravel overlying Advance Sand)

Steilacoom Gravel

The Steilacoom Gravel unit of the Vashon Drift was encountered in all of the borings completed at the Site. The Steilacoom Gravel was deposited by high-energy meltwater rivers that flowed generally toward the west from a dammed proglacial lake located in the Puyallup River valley during retreat of the final (Vashon) glaciation (Walters and Kimmel 1968). The Steilacoom Gravel was deposited within the extensive outwash channels carved by the meltwater rivers that covered much of the Tacoma uplands west of the Puyallup River. The rivers discharged their vast quantities of bedload into a pro-glacial lake in the approximate location of Puget Sound, forming the ancestral Sequalitchew and Steilacoom Deltas. The Site is situated on the southern margin of the ancestral Sequalitchew Delta. The ancestral Steilacoom Delta occurs in the Steilacoom/Chambers Creek area several miles to the north.

The thickness of the Steilacoom Gravel unit typically ranges between 20 and 40 feet over much of the eastern portion of the Site. In this portion of the Site, additional gravelly soils (Vashon Advance Outwash Gravels) exist beneath the Steilacoom Gravel, as discussed below. In the western portion of the Site, the Sequalitchew Delta deposits are present. In these deposits, the Steilacoom Gravel has been encountered during explorations to a depth of approximately 220 feet in on-site monitoring well borings (e.g., MW-1). Regional information from a deep

test/production well completed north of the Site indicates that the deltaic Steilacoom Gravel deposits are approximately 330 feet thick, extending to an approximate elevation –120 feet msl.

The Steilacoom Gravel is described as medium dense to very dense, well-graded, light brown and gray, stratified sands and gravels. Generally, the deposits are exceptionally coarse-grained, with localized zones of silty to slightly silty sand. What has been described as Steilacoom Gravel across the Site may also include the Vashon Recessional Gravel unit; similar gravelly materials were deposited during retreat of the Vashon glaciation but prior to the deposition of the Steilacoom Gravel, which is associated specifically with the break of the glacial ice dam to the east. However, it is likely that most of the Recessional Gravel was eroded during deposition of the Steilacoom Gravel, as discussed below.

Vashon Till

Material interpreted to be Vashon Till was encountered in the borings for MW-27 and MW-22 located in the west-central portion of the Site (Figure 3.1-1). The till was described as very dense, gray-brown, silty-gravelly sand, which occurred between depths of approximately 37 and 48 feet in the two monitoring well borings. The till has been tentatively identified in at least one other soil boring on the Site (11-B-501), located approximately 1,200 feet southwest of wells MW-22 and MW-27. The high density and higher silt content of the till makes it a weak aquitard upon which perched water has been observed. The discontinuity of the Vashon Till across the Site suggests that it was eroded during the high-energy scouring and deposition of the Steilacoom Gravel, leaving only isolated deposits. If the Vashon Till was eroded during the deposition of the Steilacoom Gravel, the overlying Vashon Recessional Gravel would have been eroded also.

Vashon Advance Outwash

The Advance Outwash was deposited by glacial rivers or streams during advance of the Vashon glaciation. The Advance Outwash can be divided into Advance Gravel and the underlying Esperance Sand (formerly known as Advance Sand). This sequence of soil types (becoming finer-grained with depth) is typical of advance outwash deposition.

The Advance Gravel unit of the Vashon Drift occurs beneath the Steilacoom Gravel and is difficult to differentiate from the overlying Steilacoom Gravel. The deposits are described as light brown to gray, slightly silty to non-silty, stratified sands and gravels; however, the Advance Gravels are generally not as coarse-grained as the overlying Steilacoom Gravel.

The Esperance Sand unit was observed beneath the Advance Gravel in some borings and consists of dense, slightly gravelly to gravelly, non-silty to silty, coarse to fine sand. Silty, fine sand encountered in MW-20 and MW-21 appears to represent the lower portion of the Esperance Sand, and the bottom of the Advance Outwash sequence; however, this material may also represent a sandier facies within the DBD-OB sequence (Borden and Troost, 2001).

Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift Sequence

Generally, the DBD-OB sequence is a fine-grained, regionally extensive, interglacial deposit, which separates the glacial deposits of the Vashon Drift and Salmon Springs Glaciation. Five on-site borings were drilled to the top of the DBD-OB sequence, and one of these (MW-18) was

drilled through the formation to the underlying Sea Level Aquifer within the Salmon Springs Glaciation. The DBD-OB sequence has a variable composition of interbedded sand and silts, typical of interglacial deposits. Materials observed in the DBD-OB sequence include stiff to hard, brown, gray, and black silt, sandy silt, and peat, interbedded with silty sand.

Drilling information from Fort Lewis (located north of the Site) confirms that the DBD-OB sequence is a thick (ranging from approximately 70 to 100 feet), very heterogeneous formation generally consisting of a thick organic silt and peat unit with abundant interbedded sand and gravel layers (Woodward-Clyde 1990). Other regional data, including drilling of the Bell Hill water supply wells east of the Site (Hart Crowser 1988b; Hart Crowser 1990), confirm the general character and thickness of the DBD-OB sequence and indicate that the unit is regionally continuous.

Data from the RI drilling program support the general electromagnetic (EM) geophysical interpretation that the top of the DBD-OB sequence has significant structural relief (Hart Crowser 1992c). The topographic relief of the upper surface of the DBD-OB sequence (defined as the first occurrence—upper contact—of stiff silt) may be the result of differences in the deposition of the interglacial sediments comprising the DBD-OB sequence, and/or subsequent scouring of the surface during glacial deposition of the overlying Vashon Outwash.

The geophysical data suggest that the DBD-OB sequence occurs at higher elevations, forming a structural bench in the west-central part of the Site beneath part of Area 18. The drilling data generally confirm this interpretation. The top of the DBD-OB sequence was encountered at an elevation of approximately 130 feet in MW-18, located within Area 18 (Figure 3.1-1), which is higher than in any other boring on the Site. The DBD-OB sequence was observed at elevations ranging from approximately 70 to 110 feet in the four other borings in which it was encountered on the Site (MW-11, MW-17, MW-20, and MW-22). MW-18, which was advanced through the DBD-OB sequence, defined the bottom of the formation at an elevation of 55 feet (formation thickness of approximately 75 feet).

Olympia Beds/Possession Drift/Whidbey Formation/Double Bluff Drift Sequence "Cutoff"

The DBD-OB sequence is not present west of a line located up to 2,500 feet inland from Puget Sound and oriented roughly parallel to the shoreline in this region. The line representing the western extent of the formation has been informally termed the "Cutoff" (formerly known as the Kitsap Cutoff) for this study. Data from numerous soil borings and several EM geophysical survey lines were compiled to infer the location of the "Cutoff" across the Site, as shown in Figure 3.1-1. The thickness of the DBD-OB sequence appears to decrease at its western margin due to erosion during the deposition of the Vashon Outwash and/or Steilacoom Gravel (Figure 3.1-2).

A potential paleochannel within the DBD-OB sequence may have been encountered during the drilling of MW-21 in the central portion of the Site (Figure 3.1-1). The boring was advanced through silty sand to an elevation of 50 feet msl without encountering a competent silt unit, which is generally indicative of the DBD-OB sequence . A thin silt layer was indicated based on drill action at a depth of 125 feet, but no sample was retrieved due to the heaving conditions (borehole collapsing). Although this apparent silt lens occurred at an elevation of approximately 90 feet msl and is in the range of DBD-OB sequence elevations observed elsewhere on the Site, it does not appear to be a remnant of the DBD-OB sequence because the silty sands above and

below it were essentially identical. The sand became finer-grained and more silty with depth, which is typical of Advance Outwash deposition.

These drilling observations also support the general interpretation of the geophysical survey data, which suggest that such a paleochannel may have been eroded into the DBD-OB sequence in this general vicinity (see Figure 4 in Hart Crowser 1992c). As a result of these observations, the inferred trace of the "Cutoff" has been extended to the east of MW-21 (as shown in Figure 3.1-1). The potential paleochannel is discussed below in relation to the Water Table Aquifer.

Salmon Springs Glaciation

The Salmon Springs Glaciation (formerly known as the Salmon Springs Formation) was deposited in the glacial period preceding the DBD-OB sequence interglacial. The formation is relatively heterogeneous and consists of dense, brown, fine sand, and dense, brown, gravelly sand with gravel interbeds. The top of the formation was encountered at a depth of 163 feet (elevation 55 feet msl) in MW-18. Regional information indicates that the formation is on the order of 70 to 120 feet thick and contains zones of organic silt and till in some locations, possibly suggesting deposition in two glacial periods separated by a minor interglacial event (Noble 1990). The Sea Level Aquifer, a regionally extensive aquifer, occurs within the Salmon Springs Glaciation. Some authors refer to this aquifer as the Flett Creek Unit (Noble 1990).

3.1.2 Site Hydrogeology

The hydrogeologic system beneath the Site includes two aquifers: the shallow unconfined aquifer (Water Table Aquifer) in the Vashon Drift sediments, and the deeper Sea Level Aquifer in the Salmon Springs and (west of the "Cutoff") Steilacoom Gravel sediments. In addition, seasonally perched groundwater was encountered at the Site, as discussed below.

The Sea Level Aquifer occurs locally in the immediate Site area under both semiconfined and unconfined conditions (as discussed below). Regionally, however, this aquifer occurs under confined conditions to the east of the Site. The DBD-OB sequence acts as an aquitard (Aquitard) separating the aquifers. Along the western portion of the Site, to the west of the "Cutoff", a single aquifer (unconfined portion of the Sea Level Aquifer) is present.

Perched Groundwater

A zone of perched groundwater was encountered at a depth of approximately 40 feet during February 1992 drilling of monitoring wells MW-22 and MW-27. These wells are located within 50 feet of each other in the western portion of the Site (Figure 3.1-1). Well MW-27 was installed for monitoring and sampling of the perched groundwater.

The groundwater appears to be perched on an 8- to 10-foot-thick lens of till-like material, which may be Vashon Till. The till-like material was also observed during drilling soil boring 11-B-501, located approximately 1,200 feet southwest of the two wells. Monitoring suggests that this perched water is transient, disappearing during the dry summer and autumn months. Approximately 6 inches of water remained in MW-27 during the June 1992 water sampling round. The well then remained dry until the December 1992 sampling round, when it again contained less than 1 foot of water. Continued monitoring through 1993 confirmed the

disappearance of the perched water in late summer and autumn. During sampling, the well always bailed dry and recovered exceedingly slowly, indicating that the silty till material is of relatively low permeability and that the zone of saturation is limited.

Possible perched groundwater was encountered between depths of approximately 20 and 35 feet in the deep RI soil boring (7-B-503) completed within the bottom of the Area 7 kettle. No competent silt unit was encountered in this boring to act as a significant perching unit. A well (7-B-503) was completed within the zone of saturation. Similar to well MW-27, this well bailed dry during sampling and subsequent water level recovery was extremely slow, suggesting that the perched water may be discontinuous. However, unlike at MW-27, the 7-B-503 monitoring well has been dry since its initial sampling in July 1992. Other borings completed within the bottoms of the kettles encountered some zones of saturation (discussed in Sections 2.5, 2,9, and 2.12), but they were discontinuous within borings (vertically) and laterally between borings within each kettle. These observed zones may have been infiltrating wetting fronts rather than perched zones of groundwater. Monitoring well 7-B-503 and the (dry) monitoring wells installed in the Area 16 and 26 kettles (16-B-501 and 26-B-503, respectively) are shown in Figure 3.1-1.

Water Table Aquifer

The Water Table Aquifer occurs within the saturated portion of the Vashon Glacial Drift (both Steilacoom Gravel and Advance Outwash) and receives recharge from infiltration of precipitation through permeable overlying soils. The water table in this aquifer is encountered at depths ranging from approximately 20 to 30 feet below ground (elevations of 190 to 200 feet msl) in the eastern portion of the Site up to approximately 110 to 120 feet below ground (elevations of 90 to 110 feet) near its western extent at the "Cutoff".

Groundwater in the Water Table Aquifer generally flows to the west-northwest, toward Puget Sound. At the "Cutoff", the Water Table Aquifer discharges into the Steilacoom Gravel. As shown schematically in Figure 3.1-2, groundwater from the Water Table Aquifer flows over the edge of the Aquitard and mixes with groundwater flowing in the unconfined portion of the Sea Level Aquifer. Figures 3.1-4, 3.1-5, and 3.1-6 are elevation contour maps (April, August, and December 1992, respectively) for the water table surface in both the Water Table Aquifer and the Sea Level Aquifer west of the "Cutoff" (i.e., a map of the continuous water table surface across the two aquifers). These monitoring rounds include the most comprehensive set of water level measurements. The figures demonstrate the very steep water table gradient present along the "Cutoff". This hydrogeologic situation has also been documented to the north of the Site (Woodward-Clyde 1990).

In the vicinity of Sequalitchew Creek on the Site, the Water Table Aquifer discharges into the creek (Figures 3.1-4, 3.1-5, and 3.1-6) and reaches Puget Sound as surface water. The water table elevation contour maps suggest a subtle groundwater divide, or area in which groundwater flows horizontally in more than one direction, from Old Fort Lake west to the "Cutoff". The higher groundwater elevation near Old Fort Lake (the lake level is an expression of the water table) may indicate recharge to the aquifer from the lake. The divide appears to extend west of the lake, with resulting groundwater flow to the northwest and to the west-southwest (Figures 3.1-4, 3.1-5, and 3.1-6). The presence of the groundwater divide may also suggest a possible

structural high on the Aquitard surface in this area, as discussed in Section 3.1.1 (higher groundwater elevation because of a higher underlying aquitard surface).

Water table elevation data from monitoring wells near Area 31 north of Sequalitchew Creek (MW-7, MW-8, MW-9, and MW-24) and creek elevation data from adjacent staff gauge SG-4 indicate a groundwater divide in this area. From the center of the divide, the water table slopes steeply toward the creek (south), resulting in groundwater flow toward Sequalitchew Creek.

Further to the north, groundwater flows almost parallel to the creek (Figures 3.1-4, 3.1-5, and 3.1-6). Regional information indicates groundwater flows toward the west-northwest in the Water Table Aquifer north of the Site (Woodward-Clyde 1990).

Seasonally, there is little change in the groundwater flow directions in the Water Table Aquifer, as indicated by the groundwater flow direction maps presented in Figure 3.1-4 (April 1992), Figure 3.1-5 (August 1992), and Figure 3.1-6 (December 1992). The water table generally responds uniformly to seasonal precipitation changes, resulting in little change in the directional flow of groundwater. The data do indicate a slightly higher gradient in the Water Table Aquifer beneath Area 31 (immediately north of Sequalitchew Creek) toward the creek during the wetter spring months. The creek elevation at staff gauge SG-4 remained essentially constant while the water table elevations around it fell from the wet (April) to dry (August through December) seasons, resulting in a lower gradient toward the creek in the dry season (Figures 3.1-4, 3.1-5, and 3.1-6). Seasonal changes in surface water elevations are discussed in Section 3.1.3.

Figure 3.1-7 presents hydrographs for selected Water Table Aquifer monitoring wells over a 4-year period of monitoring (1988 through 1992). The hydrographs indicate that the aquifer responds fairly uniformly to seasonal changes, with fluctuations on the order of 3 to 8 feet. No long-term trends are apparent from the data (e.g., long-term decline due to drought).

The thick silt unit typically associated with the Aquitard was not encountered to an elevation of approximately 50 feet msl during drilling of MW-21. Very silty to silty, fine sand was encountered in the elevation range (approximately 50 to 100 feet msl) where hard silt and some peat was encountered in other on-site borings (e.g., MW-18, MW-20, and MW-22). This finding suggests a possible paleochannel incised within the DBD-OB sequence in this general location, as discussed above. Figure 3.1-3 presents the interpretation of subsurface conditions from south to north across this potential paleochannel. The profile location is shown in Figure 3.1-1.

The silty, fine sand is interpreted to represent the lower portion of the Vashon Advance Outwash rather than a sandy facies within the DBD-OB sequence. Although the depositional origin of these materials may vary, the water table elevation in MW-21 is consistent with measured elevations in other wells in the vicinity, indicating that the silty sand supports the Water Table Aquifer above it. Because a thick competent silt unit does not appear to be present within this potential paleochannel, downward flow of groundwater from the Water Table Aquifer may be greater in this area than elsewhere across the Site where the silt is present. However, the water level data do not indicate preferential flow toward the paleochannel; that is, the data do not indicate that the area is a significant groundwater sink (Figures 3.1-4, 3.1-5, and 3.1-6).

Aquitard

Across most of the Site, a low-permeability unit within the DBD-OB sequence(Aquitard) hydraulically separates the Water Table Aquifer from the underlying Sea Level Aquifer. The

"Cutoff", as discussed above, represents the western extent of the Aquitard. This line is also the western extent of the Water Table Aquifer and is where the Sea Level Aquifer changes from semiconfined conditions (beneath the Aquitard to the east) to unconfined conditions (to the west).

As discussed in Section 3.1.1, site-specific and regional information indicate that the Aquitard acts as a regionally extensive low permeability unit within the DBD-OB sequence between the Water Table and Sea Level Aquifers. A difference in hydraulic head (water table elevation) of greater than 100 feet is observed in on-Site wells completed above and below the aquitard unit (e.g., MW-22 and MW-18, respectively).

Sea Level Aquifer

The Sea Level Aquifer is divided into two distinct portions: the portion occurring east of the "Cutoff" and the portion west of it.

East (upgradient) of the "Cutoff", the Sea Level Aquifer occurs within permeable deposits of the Salmon Springs Glaciation, which are encountered immediately below the Aquitard at depths of 150 to 170 feet below ground. Regionally confined conditions exist within this portion of the aquifer (Hart Crowser 1988b; Hart Crowser 1990; Woodward-Clyde 1990). Near the "Cutoff", the artesian pressure dissipates and the Sea Level Aquifer becomes unconfined (water table conditions exist [e.g. MW-18]). Therefore, the Sea Level Aquifer east of the "Cutoff" is referred to as a semiconfined aquifer.

West (downgradient) of the "Cutoff", the unconfined Sea Level Aquifer occurs within the saturated portion of the thick deltaic sequence of the Steilacoom Gravel. Although the Steilacoom Gravel is the youngest unit within the Vashon Drift, it is differentiated hydrostratigraphically because of its unique (coarse-grained and highly permeable) lithology and its hydrogeologic significance within the Site. The water table within the unconfined Sea Level Aquifer is encountered at depths of 160 to 200 or more feet below ground (elevations from approximately 40 feet to less than 5 feet msl).

The Steilacoom Gravel is in direct contact with Vashon Drift, the Aquitard, and the Salmon Springs Glaciation (as shown in Figure 3.1-2). Therefore, the unconfined Sea Level Aquifer receives discharge from both the Water Table Aquifer and the semiconfined Sea Level Aquifer east of the "Cutoff". Water from the two aquifers mixes within the unconfined Sea Level Aquifer (Steilacoom Gravel) and discharges toward the west. The unconfined Sea Level Aquifer discharges to Puget Sound as seeps observed along the shore (such as SEEP 1 and SEEP 2 in Figure 3.1-1) and presumably beneath sea level, where the deltaic deposits terminate in Puget Sound.

Groundwater and surface water elevation data collected during the RI suggest that the lower reach of Sequalitchew Creek loses water to the unconfined Sea Level Aquifer. This is consistent with the high infiltration capacity of the gravels observed at the base of the drainage. As shown in Figure 3.1-4, the April 1992 creek elevation at SG-1 is at least 4 feet higher than water table elevations in either of the nearest wells completed in the unconfined Sea Level Aquifer (MW-1 and MW-15), indicating flow from the creek to the aquifer. No springs have been observed along the creek anywhere within this relatively flat stretch of creek valley. The creek was dry at SG-1 from August 1992 through January 1993, indicating that, at low summer/autumn creek

flows, all creek flow discharges to the unconfined Sea Level Aquifer. In the vicinity of SG-2 farther up the creek, the groundwater and surface water elevation data are less conclusive, but it appears that the creek is also losing to the aquifer in this area. The water level data indicate that, in general, the creek is gaining (receiving recharge) from the Water Table Aquifer east of the 'Cutoff" (upper portion of the drainage).

The Sea Level Aquifer east of the "Cutoff" receives recharge principally from infiltration of precipitation in areas east of the Site. The Sea Level Aquifer west of the "Cutoff" receives additional recharge from groundwater flowing from the Water Table Aquifer and semiconfined portion of the Sea Level Aquifer, as well as from infiltration of precipitation through the overlying unsaturated Steilacoom Gravel.

Figure 3.1-8 presents hydrographs for selected Sea Level Aquifer monitoring wells for the period 1988 through 1992. As with the Water Table Aquifer, the hydrographs indicate that the water table in the Sea Level Aquifer responds fairly uniformly to seasonal changes, particularly near Puget Sound. Nearer the "Cutoff", there is greater difference in the responses between wells (e.g., MW-4 and MW-6), which is not unexpected considering the nature of the water table surface as it crosses the "Cutoff". Water table elevation fluctuations in the Sea Level Aquifer are only 2 to 3 feet less than the 3- to 8-foot fluctuations observed in the Water Table Aquifer. No long-term water level trends are apparent for the Sea Level Aquifer.

Because the Sea Level Aquifer is in hydraulic connection with Puget Sound, a natural saltwater/freshwater mixing zone is present along the western margin of the aquifer. Over the period of monitoring, total dissolved solids (TDS) ranged from approximately 10,000 to 16,000 mg/L in SEEP 1 and SEEP 2, which discharge from the Sea Level Aquifer (Figure 3.1-1). These elevated TDS values are indicative of discharge from the saline mixing zone. The TDS values for Sea Level Aquifer monitoring wells MW-16 and MW-19, located within approximately 400 feet of Puget Sound, are generally less than 200 mg/L, which is similar to values from the other on-Site monitoring wells located farther inland. These data indicate that the mixing zone is not extensive, extending inland less than 400 feet.

Hydraulic Conductivity Testing of Aquifers

Data from two in situ testing methods (variable-head tests [i.e., slug tests] and short-term pumping tests) and laboratory grain size analyses of aquifer materials were evaluated to provide estimates of saturated hydraulic conductivity for the Water Table and Sea Level Aquifers. The short-term pumping tests were conducted in on-Site monitoring wells using a 2-inch submersible pump. In addition, hydraulic conductivity estimates from regional hydrologic reports were used to further refine a reasonable range of hydraulic conductivity values for the aquifers. Hydraulic conductivity estimates from Site-specific and regional data for the three aquifers (Water Table, unconfined Sea Level, and semiconfined Sea Level Aquifers) are summarized in Table 3.1-1.

Table 3.1-2 provides the hydraulic conductivity values estimated by application of the Kozeny-Carmen equation (Freeze and Cherry 1979) to grain size data for samples of aquifer materials. The analyses assumed a range of porosity values of 0.20 to 0.35, which is reasonable for the range of aquifer materials at the Site.

Water Table Aquifer

Site-specific hydraulic conductivity (K) estimates for the Water Table Aquifer ranged from 2 x 10^{-3} to 7 x 10^{-2} cm/sec and were derived from five slug tests and two short-term pumping tests conducted in on Site monitoring wells as part of the RI (Table 3.1-1). The geometric means of six estimates from the Kozeny-Carmen equation (Freeze and Cherry 1979) were 5 x 10^{-1} and 4 cm/sec, corresponding to assumed porosities of 0.20 and 0.35, respectively (Table 3.1-2).

Regional estimates of Water Table Aquifer hydraulic conductivities range from 4 x 10^{-3} to 2 x 10^{-2} cm/sec, based on pumping test results from City of DuPont Well No. 1 (Associated Earth Sciences 1984) and test well PW-1A at Fort Lewis (Woodward-Clyde 1990).

The range of hydraulic conductivity values is reasonable considering the different lithologies comprising the Water Table Aquifer—highly permeable Steilacoom Gravels to fine sand in the lower horizons of the Advance Outwash. Because of the slope of the water table and the general fining-downward (decrease in grain size with depth) sequence of the aquifer materials, the average hydraulic conductivity of the Water Table Aquifer may decrease somewhat from the east (saturated Steilacoom Gravel) to the west (saturated Advance Outwash deposits) across the Site. Although the data are variable, the hydraulic conductivity estimate from MW-22 near the "Cutoff" are somewhat lower than estimates from wells to the east (e.g., MW-7 and MW-12), lending some support to this hypothesis. However, different testing methods (e.g., short-term pumping tests versus slug tests) may also contribute to the differences in the estimates.

The available data presented in Table 3.1-1 suggest that a reasonable range of hydraulic conductivities for the Water Table Aquifer is 5 x 10^{-3} to 5 x 10^{-2} cm/sec. This range is referred to in Table 3.1-1 as the Best Estimate Range.

Semiconfined Sea Level Aquifer (East of Kitsap Cutoff)

Reported values of hydraulic conductivity (K) for the Sea Level Aquifer east of the "Cutoff" are in the range of 6 x 10^{-3} to 5 x 10^{-2} cm/sec, based on results from two pumping tests performed in Bell Hill Well No. 1 (Hart Crowser 1988b; Hart Crowser 1990), and pumping tests conducted in Weyerhaeuser Well No. 3 and Fort Lewis Well No. 18 (Associated Earth Sciences 1984). A slug test performed in monitoring well MW-18 produced an estimated K of 4 x 10^{-3} cm/sec, which is lower than the values from the pumping tests.

These results suggest that a reasonable range of hydraulic conductivities for the semiconfined Sea Level Aquifer is from 1 x 10^{-2} to 5 x 10^{-2} cm/sec (Table 3.1-1).

Unconfined Sea Level Aquifer (West of "Cutoff")

Slug tests conducted in monitoring wells completed in the unconfined Sea Level Aquifer produce K estimates ranging between 2 x 10^{-3} to 2 x 10^{-2} cm/sec. The slug test results may be biased low due to the influence of the wellbore sandpack materials, which may actually have lower in situ permeability than the native (undisturbed) aquifer materials. Hydraulic conductivity estimates from grain size data of the Steilacoom Gravel aquifer materials range from 2 x 10^{-2} to 1 cm/sec (Table 3.1-2). Woodward-Clyde (1990) reported a range of hydraulic conductivities for the unconfined Sea Level Aquifer of 4 x 10^{-1} to 4 cm/sec, based on literature values.

It should be noted that based on available information, pumping tests have not been conducted within the unconfined Sea Level Aquifer (west of "Cutoff") in the region. As a result, hydraulic conductivity estimates for this aquifer are developed from the slug tests and grain size data, and from regional studies also evaluating grain size characteristics. On the basis of these data and the uncertainty associated with them, a reasonable hydraulic conductivity range for the unconfined Sea Level Aquifer is 1×10^{-2} to 1 cm/sec (Table 3.1-1).

Groundwater Flow Rates in the Aquifers

A range of horizontal groundwater flow rates within the Water Table and Sea Level Aquifers is estimated using the Best Estimate Range of hydraulic conductivity values (Table 3.1-1), horizontal hydraulic gradient estimates developed from the April 1992 water table elevation contour map (Figure 3.1-4), and an assumed effective porosity of 0.25. The groundwater flow rates for each aquifer are estimated by applying Darcy's Law of the form:

$$v = K I / n$$

where:

v = average linear groundwater velocity in feet/day
K = horizontal hydraulic conductivity in feet/day
I = horizontal hydraulic gradient in feet/foot
n = effective porosity (dimensionless)

Because of differences in hydraulic gradient across the Site, Darcy's Law is applied between two points. The flow rates reported below apply between these points.

Water Table Aquifer

Using the April 1992 data (Figure 3.1-4), the hydraulic gradient between the 190-foot water table elevation contour and MW-23 north of Sequalitchew Creek (measured perpendicular to the contours) is approximately 0.05 foot/foot. For a range of hydraulic conductivity of 14 to 140 feet/day (5×10^{-3} to 5×10^{-2} cm/sec), the estimated groundwater flow rate between these two points is approximately 3 to 28 feet/day (approximately 1,000 to 10,000 feet/year).

South of the creek, the April 1992 hydraulic gradient is calculated to be approximately 0.02 foot/foot between three pairs of points: (1) between the 200-foot water table elevation contour and MW-21, (2) between Old Fort Lake and MW-17, and (3) between Old Fort Lake and MW-22 (Figure 3.1-4). Therefore, the estimated groundwater flow rate determined between these sets of points ranges from approximately 1 to 22 feet/day (approximately 400 to 8,200 feet/year) using the range of Water Table Aquifer K estimates.

As discussed above, water table elevations gradually dropped during the summer and autumn months, generally resulting in a flatter water table and slightly lower hydraulic gradients toward discharge points. The lower gradients (5 to 20 percent lower in December than April 1992) result in correspondingly lower groundwater velocities.

Unconfined Sea Level Aquifer

Because the gradient flattens abruptly west of the "Cutoff", gradients and resulting groundwater flow rates were calculated between MW-3 and Puget Sound (assumed aquifer discharge at elevation 0 msl), and between MW-6 and Puget Sound. The hydraulic conductivity range of 1 x 10^{-2} to 1 cm/sec (28 to 2,800 feet/day) was used for the groundwater flow rate estimates (Table 3.1-1).

Using April 1992 data, a gradient of 0.005 foot/foot is calculated between MW-3 and Puget Sound, resulting in estimated groundwater flow rates ranging from approximately 0.6 to 60 feet/day (approximately 200 to 20,000 feet/year). For a gradient of 0.02 foot/foot calculated between MW-6 and Puget Sound, flow rates range from approximately 2 to 200 feet/day (approximately 800 to 80,000 feet/year). Consistent with the Water Table Aquifer, estimated groundwater velocities in the Unconfined Sea Level Aquifer were typically 5 to 20 percent lower in December 1992 than in April 1992, due to lower gradients.

Semiconfined Sea Level Aquifer

The groundwater flow rate in the semiconfined Sea Level Aquifer is estimated between MW-18 and Puget Sound. The water table elevation in MW-18 was 5.07 feet msl in the April 1992 round of measurements, resulting in a gradient toward Puget Sound of 0.003 foot/foot. Therefore, a range of groundwater flow rates of approximately 0.3 to 2 feet/day (approximately 120 to 600 feet/year) are estimated using the range of K estimates for the Sea Level Aquifer presented in Table 3.1-1. Estimated groundwater velocities in the semiconfined Sea Level Aquifer were approximately 10 percent lower in December 1992 than in April 1992 because of lower gradients.

However, because groundwater discharges from the semiconfined Sea Level Aquifer into the unconfined Sea Level Aquifer across most of the Site (except along the southwest corner in the vicinity of MW-17), groundwater flow rates calculated between MW-18 and Puget Sound may not be representative of gradients encountered east (upgradient) of the "Cutoff".

A second range of flow rates for the Sea Level Aquifer is estimated on a more regional scale by applying Darcy's Law between Bell Hill No. 1 and MW-18, a distance of approximately 10,000 feet. This estimate accounts for the change from confined to unconfined conditions within the aquifer. The water level elevation in Bell Hill No. 1 is approximately 75 feet msl, resulting in an average regional gradient of approximately 0.007 foot/foot between it and MW-18. Applying the K range above results in groundwater flow rates ranging from approximately 0.8 to 4 feet/day (approximately 300 to 1,400 feet/year).

Estimate of Vertical Flow Through the Aquitard

Hydraulic Conductivity Testing of the Aquitard. Two undisturbed samples of the Kitsap Aquitard were collected and tested in Hart Crowser's geotechnical laboratory using flexible-wall permeameter methods. A vertical hydraulic conductivity value of 8 x 10^{-7} cm/sec was obtained from laboratory testing of a sample of the aquitard material (MW-20, S-24). The first attempt to collect an undisturbed sample of the aquitard material (from MW-22) using a Shelby tube was unsuccessful. After the Shelby tube was driven into the very stiff silt (too stiff for the tube to be pushed), the pins attaching it to the drill rods snapped during the retrieval attempt. The Shelby

tube remained in the bottom of the borehole, preventing further sampling efforts. No cohesive soils suitable for laboratory K testing were encountered during drilling of MW-21.

Vertical Gradients

Stratigraphic and water level data from MW-18 in the Sea Level Aquifer beneath the Aquitard indicate that the aquifer is unconfined, with the water table more than 50 feet below the aquitard bottom. The vertical gradient across the aquitard is estimated by dividing the combined thickness of the Water Table Aquifer and Aquitard (assumed saturated) by the thickness of the aquitard. To be conservative, the thickness of the Water Table Aquifer observed at MW-20 (45 feet) is used rather than the thickness measured at MW-22 (less than 15 feet), closer to the "Cutoff". Using this 45-foot aquifer thickness and the aquitard thickness observed in MW-18 (75 feet), a downward gradient of approximately 1.6 feet/foot across the aquitard is calculated.

Where the Sea Level Aquifer becomes confined farther to the east, the vertical gradient would be smaller. Therefore, the vertical gradient calculated from the existing data produces a "worst-case" (i.e., maximum) estimate of downward flow through the aquitard.

Rate of Downward Flow

The rate of downward flow across the Aquitard is estimated by applying Darcy's Law, as defined above, vertically across the aquitard. Using the estimated downward gradient of 1.6 feet/foot, the geometric mean of the laboratory vertical K values (3×10^{-7} cm/sec = 0.3 feet/year), and an assumed porosity of 0.4 (rounded from 0.37 for stiff glacial clay from Terzaghi and Peck 1948), results in an estimated advective flow rate through the aquitard of approximately 1 foot/year.

3.1.3 Surface Water Features

Three surface water bodies (Puget Sound, Sequalitchew Creek, and Old Fort Lake) occur within or near the Site (Figure 3.1-1).

Puget Sound

Puget Sound borders the west boundary of the Burlington Northern Railroad property, which is below the bluff at the Site. Puget Sound directly or indirectly receives groundwater and surface water discharge from the Site vicinity.

Sequalitchew Creek

Sequalitchew Creek, which flows through the northern portion of Parcel 1 at the Site, originates in Sequalitchew Lake, approximately 1.4 miles to the east of the property. The creek flows westward through Hamer Marsh and Edmonds Marsh east of the Site before flowing within a steep-sided ravine that descends to Puget Sound. The Water Table Aquifer locally discharges into the creek via springs. The creek appears to provide some recharge to the unconfined Sea Level Aquifer in its lower reaches, as discussed above.

The upper and lower reaches of the stream are intermittent, becoming dry in the summer months. Visual observations indicate that during the dry season, when there is little freshwater flow in the lower reaches of Sequalitchew Creek, Puget Sound backs up into the creek valley at high tide.

The creek was also dry along the eastern margin of the Site (at staff gauge SG-5) between August 1992 and January 1993, indicating that the water table elevation was below the creek bottom. Water was typically observed in the creek 150 to 200 feet downstream of SG-5 during these dry months. Between staff gauges SG-4 and SG-2, the creek bed is below the water table elevation throughout the year; therefore, the creek maintains water in this stretch year round.

Old Fort Lake

Old Fort Lake is a small glacial kettle lake, which has no inlet or outlet. The shallow lake is fed by groundwater from the Water Table Aquifer, and the lake level is an expression of the water table. Data collected between April 1992 and July 1993 indicate that the lake level fluctuates seasonally approximately 8 feet.

3.2 GROUNDWATER QUALITY CHARACTERIZATION

3.2.1 Groundwater Sampling Conducted to Date

Site groundwater quality assessment began at the Site during the pre-RI site characterization with sampling of the three spring locations and seven surface water locations in December 1986. As part of the initial hydrologic and water quality assessment in late 1987 and early 1988, 17 monitoring wells were installed in the Water Table Aquifer (MW-7 through MW-14, and MW-17) and the Sea Level Aquifer (MW-1 through MW-6, MW-15, and MW-16). Groundwater quality was evaluated in March 1988 by sampling and analysis of 15 monitoring wells, 3 springs, and 3 on-Site fire protection wells. During this first round of sampling, constituents identified in groundwater samples were detected at low concentrations, and a quarterly monitoring program was recommended to provide a basis to assess possible temporal or seasonal changes in groundwater quality. Three quarterly sampling rounds were conducted in June 1988, October 1988, and January 1989; results from these sampling rounds are summarized in Hart Crowser 1988c, 1988d, and 1989a, respectively.

Following installation of two additional monitoring wells (MW-18 and MW-19) in November 1989, interim sampling rounds were conducted in November 1989 (Hart Crowser 1990) and August 1990 (Hart Crowser 1991c).

Four additional monitoring wells (MW-20, MW-21, MW-24, and MW-27) were installed, followed by four quarterly groundwater and surface water sampling rounds in March, June, September, and December 1992. Twenty-seven monitoring wells, one spring discharging to Sequalitchew Creek, two sea-level seeps discharging to Puget Sound, and five surface water locations were sampled during the RI (35 combined groundwater and surface water locations). In addition, six off-Site wells were sampled to provide background groundwater quality data.

A supplementary sampling round was conducted in January 1993 to collect four sets of water quality data ("four usable data points" criterion discussed below). During this round, attempts were made to sample all groundwater and surface water sampling locations where four complete sets of water quality data had not been collected due to seasonally dry conditions.

In addition to groundwater sampling outlined in the Management Plan, quarterly groundwater sampling for DNT was continued from April 1993 through October 1997 at seven selected monitoring wells (MW-3, MW-6, MW-8, MW-15, MW-19, MW-22, and MW-27) and SEEP-1. In January 1996, two fireline wells (W-1 and W-2) were added to the quarterly sampling program. One additional fireline well (W-3) was sampled during two rounds.

After October 1997 and authorization from Ecology, the groundwater monitoring locations and frequency of sampling were reduced. Since then, three additional rounds of annual DNT groundwater sampling have occurred at four selected monitoring wells (MW-3, MW-6, MW-19, and MW-22) and fireline well W-2. The annual DNT groundwater sampling will be continued as required in the final CAP.

Table 3.2-1 summarizes groundwater sampling (by location) conducted to date.

Four Usable Data Points Criterion

As discussed in the Management Plan, the goal of the RI groundwater and surface water sampling program was to obtain four usable data points (adequate detection limits and sufficient data quality) for each target constituent identified in the RI/FS Management Plan at each of the 38 groundwater and surface water sampling locations. Both the pre-RI data and data collected during the RI were considered in determining the number of usable data points. During the first two rounds of RI water sampling, all locations were sampled for all target constituents. At the end of the two rounds, the existing pre-RI and RI data were evaluated to determine which locations required additional sampling for specific constituents.

As stated in the Management Plan, if seasonally dry conditions prevent the collection of an adequate number of samples (over five rounds of RI sampling) to achieve four usable points at each location, the available data would be evaluated to determine the necessity of additional sampling.

In general, four usable water quality data points for each target constituent were achieved at each sampling location, with the exception of some of the springs in the Sequalitchew Creek valley, and monitoring wells completed in zones of seasonally (transient) perched water.

Although four usable data points were achieved after only two RI sampling rounds for some constituents (e.g., DNT and nitrate) at several locations, NAX and nitrate analyses were continued through the January 1993 sampling rounds to provide additional data for evaluating potential concentration trends over time. The subsequent quarterly sampling rounds beginning in April 1993 were also conducted for this purpose (NAX only). Table 3.2-2 presents the number of usable data points (analyses) for each constituent at each location collected over 32 rounds of combined pre-RI and RI water sampling covering 12 years (1988 through 2000).

RI Groundwater Quality Sampling Locations

Thirty locations were sampled during the pre-RI and RI for Parcel 1 inside the CDB (Figure 3.1-1):

- Twelve Water Table Aquifer monitoring wells (MW-7, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-17, MW-20, MW-21, MW-22, and MW-24)

- Ten Sea Level Aquifer monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-15, MW-16, MW-18, and MW-19)
- Two monitoring wells completed in zones of seasonal perched groundwater (MW-27 and 7-B-503)
- One spring discharging from the Water Table Aquifer to Sequalitchew Creek (SPR-4)
- Two seeps discharging from the Sea Level Aquifer to Puget Sound (SEEP 1 and SEEP 2)
- Three fire protection wells (W-1, W-2, and W-3)

Background Water Quality Sampling Locations

Two rounds of groundwater samples were collected from six locations outside the CDB to provide data for evaluation of natural background (upgradient) water quality for the Water Table Aquifer and Sea Level Aquifer. The background wells included City of DuPont Well No. 1, Bell Hill No. 1, Fort Lewis production wells FL-9 and FL-18, and two monitoring wells upgradient of Fort Lewis Landfill No. 5 (88-2-VD and 88-1-SS). City of DuPont Well No. 1, FL-9, and 88-2-VD are completed in the Water Table Aquifer; Bell Hill Well No. 1, FL-18, and 88-1-SS are completed in the Sea Level Aquifer. Available regional data indicate that the Water Table Aquifer and (semiconfined) Sea Level Aquifer at the background (upgradient) well locations are contiguous with these aquifers on the Site. As stated in Management Plan, the unconfined portion of the Sea Level Aquifer does not exist upgradient of the Site; background water quality in this aquifer is represented by both upgradient aquifers (Water Table and semiconfined Sea Level Aquifers). Background samples were collected in June and December 1992.

Constituent Analyses of Groundwater Samples

During the first two rounds of RI sampling, all on-Site groundwater samples were analyzed for the following constituents:

- Nitrate plus nitrite as nitrogen
- TPH (WTPH-418.1)
- Total priority pollutant metals plus aluminum (14 total metals)
- Dissolved priority pollutant metals plus aluminum (14 dissolved metals)
- PAHs
- NAX (TNT, 2,4-DNT, and 2,6-DNT and selected breakdown products including nitrobenzene [NB], 1,3-dinitrobenzene [DNB], and 1,3,5-trinitrobenzene [TNB])
- NG
- MMAN
- Total organic carbon (TOC)
- TDS
- Total suspended solids (TSS)

Selected monitoring wells were sampled and analyzed for OP and OC pesticides, PCBs, VOCs, and SVOCs.

Background water quality samples were analyzed for the following analytes: NAX, nitrate plus nitrite, total and dissolved metals, PAHs, TPH, TSS, TDS, and TOC.

3.2.2 Background Groundwater Quality Results

The following constituents were detected in one or more of the background water quality samples:

- Total and dissolved aluminum
- Dissolved antimony
- Total and dissolved cadmium
- Total and dissolved copper
- Total lead
- Total and dissolved zinc
- Nitrate
- Phenanthrene, a noncarcinogenic PAH (ncPAH)

As stated in the discussion of metals data for groundwater in Section 3.2.3, total metals concentrations are generally higher than dissolved metals concentrations in the same sample due to turbidity present in the unfiltered groundwater samples. The total metals concentrations in samples with elevated TSS do not appear to be representative of groundwater quality.

Background total aluminum detections occurred in samples with nondetectable or low concentrations of TSS. Dissolved aluminum was detected in 5 of the 12 background samples (filtered samples without turbidity). These data indicate that dissolved aluminum is a naturally occurring constituent of groundwater in the area. Aluminum-bearing minerals (such as feldspars and clay minerals) are common rock-forming minerals in the crust of the earth, and aluminum is naturally present at percent levels (greater than 10,000 mg/kg) in the glacial soils of Puget Sound (refer to Section 2.2 for area background soil quality results). As a result, aluminum is also naturally present in regional groundwaters.

During sample filtration, the filter contributed antimony to the dissolved metals samples; therefore, the antimony concentrations in the samples are not representative of groundwater quality, as discussed below.

3.2.3 Constituents in Groundwater

A discussion of the DNT and nitrate data for groundwater, and additional discussions of the metals and PAH data, are provided below. Groundwater quality data tables are provided in Appendix C.

DNT Data for Groundwater

The range of total DNT (2,4-DNT plus 2,6-DNT) concentrations detected since monitoring started in 1986 are as follows:

- MW-3 downgradient of Area 5 (0.07 to 0.56 µg/L)

- MW-6 downgradient of Area 26 (0.02 U to 0.44 µg/L)
- MW-8 downgradient of Area 31 (0.02 U to 0.21 µg/L)
- MW-15 downgradient of Area 5 (0.02 U to 0.16 µg/L)
- MW-19 downgradient of Area 18 (0.07 to 0.63 µg/L)
- MW-22 downgradient of Area 18 (0.05 to 0.87 µg/L)
- MW-27 completed in a zone of seasonally perched water beneath Area 18 (0.11 to 3.8 µg/L)

DNT has been detected only in monitoring wells located downgradient of areas where DNT has been detected in soils (Areas 5, 18, 26, and 31). DNT has not been detected in any other wells.

DNT has been detected in MW-15, but this concentration has not been confirmed in any of the six subsequent sampling rounds.

DNT site data collected since 1986 are summarized in Appendix C.

Evaluation of DNT Concentrations Related to Sample Turbidity

To evaluate potential differences in DNT concentrations between unfiltered samples and filtered samples, additional groundwater samples from two monitoring wells (MW-19 and MW-22) were collected in October 1992. Unfiltered and filtered (through a glass fiber filter) samples were submitted for NAX analyses. In addition, suspended particulate matter collected on the filter was submitted for NAX analysis.

The results of this evaluation indicate no significant difference between DNT concentrations in unfiltered and filtered samples (Appendix C). The measured differences in concentration can be attributed to sampling and analytical variability. Furthermore, no NAX compounds were detected in the filtrate (particulate matter trapped on the filter). These data indicate that DNT is present in the dissolved phase and that sample turbidity does not significantly affect detected DNT concentrations.

Area 18 Seasonally Perched Water

DNT has been detected in MW-27, a monitoring well located next to MW-22 (in Area 18) and completed in a localized zone of perched water that is present only during the wet season. When water was present in this monitoring well (to a maximum saturated thickness of less than 2 feet), the well bailed dry after removal of approximately one casing volume. The water level also recovered extremely slowly after purging (the perched zone occurs upon and within a relatively low-permeability till unit, as discussed in Section 3.1). Because the perched zone is incapable of yielding 0.5 gallon per minute (gpm) on a sustainable basis, it is not a potential drinking water source, in accordance with MTCA [WAC 173-340-720(2)(b)(i)].

SEEP 1

The SEEP 1 sampling location represents discharge to an intertidal beach area from a freshwater/saltwater mixing zone at the edge of the Sea Level Aquifer. Accordingly, the seep discharge is naturally saline (discussed in Section 3.1.2). During the period of monitoring, TDS measurements ranged from 9,600 to 16,000 mg/L, with an average value of 12,700 mg/L. Because TDS concentrations are greater than 10,000 mg/L, SEEP 1 is not a potential drinking water source, in accordance with MTCA [WAC 173-340-720 (2)(b)(ii)]. Similarly, other seeps

along the beach, which are also submerged daily by Puget Sound high tides, would not be considered potential drinking water sources (SEEP 2 north of Sequalitchew Creek has a similar range of TDS).

Total DNT concentrations from SEEP 1 have ranged from nondetection to 0.27 µg/L in the 25 samples collected over the period of monitoring (Appendix C). All detected DNT concentrations at SEEP 1 (pre-RI and RI) are at least 33 times lower than the protective surface water concentration of 9.1 µg/L. Based on this comparison, DNT discharging from Site groundwater via seeps to Puget Sound poses no concern to human health or the environment.

No Seasonal Trends in DNT Groundwater Concentrations

No seasonal trends are apparent in visual examination of the DNT groundwater quality data (Figures 3.2-1 through 3.2-4). Plots of DNT groundwater concentration as a function of groundwater elevation indicated no apparent correlation for any of the seven wells in which DNT has been detected at elevated concentrations (Figure 3.2-5). Groundwater elevation provides a more direct measure of seasonality than time of sampling (for example, April versus October) because groundwater elevations inherently account for recharge lag times, which will vary across the Site.

Summary of DNT Data for Groundwater

Data from 35 rounds of combined pre-RI and RI groundwater sampling at up to 30 locations (1986 through 2001) indicate consistently low DNT concentrations in 6 of 30 Site groundwater monitoring locations. DNT has been detected in groundwater samples from seven Site monitoring wells at marginally elevated concentrations. DNT has been detected only in monitoring wells located downgradient of areas where DNT has been detected at elevated concentrations in soils (Areas 5, 18, and 31). DNT groundwater concentrations do not show statistically significant increases or decreases at this time. The DNT groundwater concentrations may decline over time as a result of the ISR of DNT-containing soils. Because detected DNT concentrations were consistently low, are not affecting the regional aquifer, are not affecting surface water, and the aquifer is not used as a drinking water source, Ecology determined that "no active remedial action" was needed, and long-term monitoring at selected wells would be sufficient. This issue will also be addressed in the Cleanup Action Plan for the Site.

Nitrate Data for Groundwater

Nitrate (expressed as nitrogen) has been detected in monitoring wells MW-6, MW-13, and MW-22. MW-13 is located along the upgradient (eastern) edge of the Site. Elevated nitrate concentrations (e.g., 9.2 mg/L in October 1988) have also been detected at MW-14, also at the upgradient edge of the Site. These data suggest potential nitrate sources upgradient (east) of the Site, such as animal pasturing, which is known to have occurred east of the Site in the past. The nitrate data collected to date for groundwater are provided in Appendix C.

Elevated nitrate concentrations were detected in samples from wells MW-6 in March and April 1988, and MW-13 in March 1988. No nitrate concentrations from these wells have been elevated in any of eight subsequent rounds of monitoring, as shown in Figure 3.2-6. Regression

analyses on the nitrate data indicate that the downward trends at these two wells are statistically significant (95 percent confidence level; p = 0.05).

The nitrate concentrations detected in samples from MW-22 were at approximately 10 mg/L in the June, September, and December 1992 sampling rounds. These data suggest that the nondetection in the March 1992 sample from this well was erroneous, possibly due to sample mislabeling or analytical reporting error (Appendix C). No analytical problems with this result were indicated by full (Level IV) data validation.

Although elevated nitrate concentrations were detected in groundwater samples collected from two monitoring wells in 1988, concentrations in these wells show statistically significant declines. Because elevated nitrate concentrations have been detected in samples from monitoring wells located along the eastern (upgradient) edge of the Site, off-Site sources of nitrate are possible.

Metals Data for Groundwater

With the exception of aluminum, no concentrations of dissolved metals in any groundwater sample were elevated. Of 126 site groundwater samples from 10 wells analyzed for dissolved metals, 14 samples contained elevated concentrations of aluminum. As discussed above, 2 of the 12 background samples had dissolved aluminum concentrations above 0.05 mg/L, indicating that aluminum may be present at this concentration in regional background groundwater. Only 1 of the 126 groundwater samples had concentrations above 0.2 mg/L (0.98 mg/L at MW-8 in September 1992). This single detection appears to be anomalous since it is more than four times higher than any other detection in this well or any other well sampled during the RI.

Concentrations of some total metals (unfiltered samples) were elevated in groundwater samples from selected wells. For the pre-RI and RI data, dissolved concentrations are defined as being filtered through a 0.45-µm filter in the field. All dissolved and total metals data for groundwater are provided in Appendix C.

The consistent difference between total and dissolved metals concentrations indicates that the metals concentrations are associated with particulate matter within the groundwater samples rather than dissolved in the groundwater; i.e., the total concentrations are an artifact of the well installation, development, and sampling methods (bailer use). The monitoring wells were installed in accordance with Chapter 173-160 WAC; however, they cannot be developed sufficiently to provide low-turbidity samples consistently across the Site. Therefore, in accordance with MTCA [WAC 173-340-720 (9)(b)], dissolved metals concentrations are a more representative measure of groundwater quality at the Site.

The following discussion provides a summary of analyses performed to assess the relationship of sample turbidity to detected total metals concentrations. These analyses support the conclusion that the detected total metals concentrations are biased high due to sample turbidity.

Correlation of Total Metals Concentrations and Suspended Sediment (Sample Turbidity)

There is a strong correlation between sample TSS and total metals concentrations in unfiltered groundwater samples collected during the RI. Figures 3.2-7 through 3.2-9 show plots of total metal concentration versus TSS for each metal with elevated detected total concentrations. Although outlier data points exist, the data plots indicate a strong correlation between metals

concentrations and sample turbidity (TSS). The figures also demonstrate that total metals concentrations generally are detected only in samples with elevated TSS (above 100 mg/L).

Calculations were performed using these data plots to estimate what concentrations (order-of-magnitude) in the particulate phase (TSS) would be necessary to produce the observed total metals concentration in the groundwater samples. These particulate concentrations are then compared to background soil quality data for the Site.

The equation used is as follows:

$$\text{particulate concentration (mg/kg)} = \frac{\text{concentration in water (mg/L)}}{\text{TSS (mg/L)}} \times 10^6 \text{ mg/kg}$$

This analysis assumes that the metals desorb completely from the particulate matter during sample digestion for metals analysis.

Regression analyses were conducted on the total aluminum and total lead data (versus TSS). The regression equations were used to calculate a representative TSS value for a given water concentration of interest. Using these water concentrations and calculated TSS values, corresponding particulate concentrations were estimated using the above equation. Note that the same general range of particulate concentrations can be calculated using an "eye-balled" best-fit line through the data, rather than a regression equation.

These calculations suggest that, at these TSS values in the groundwater samples, aluminum concentrations as high as 100 mg/L in water can be the result of particulate (soil) concentrations on the order of 30,000 mg/kg. This soil concentration is only slightly above the range of aluminum concentrations detected in the area background soil samples for the Site. Similarly for the other metals, this evaluation indicates groundwater concentrations could be the result of respective soil concentrations typical of background soils.

Although the numbers calculated using this simple evaluation are approximate, they demonstrate that high total metals concentrations in the groundwater samples can be caused by a high concentration of particulate matter (high TSS) with low concentrations of metals on the particulate matter.

Decreased Total Metals Concentrations Following Monitoring Well Redevelopment

Between the first and second rounds of RI water sampling, the newly installed Water Table Aquifer monitoring wells (MW-20, MW-21, MW-22, and MW-24) were redeveloped using a more vigorous method (air-lift pump) than that previously used (submersible pump) to remove as much turbidity as possible. As a result, concentrations of total metals in these wells generally decreased between the March and June sampling rounds, further supporting the contention that the observed total metals concentrations are the result of sample turbidity. TSS values were again higher in several wells in the September and December sampling rounds, resulting in corresponding increases in total metals concentrations. Although TSS and total metals concentrations varied over time, dissolved metals were consistently not detected in filtered groundwater samples.

Comparison of Monitoring Well and Production Well Construction/Development

Because they are constructed for different purposes, monitoring wells (as sampled in this RI) and production (water supply) wells are designed, constructed, and developed according to substantially different standards. As a result, the turbidity of groundwater collected from Site monitoring wells is not representative of groundwater that would be pumped from a properly installed production well in these same aquifer materials.

The principal purpose of a production well is to provide maximum yield with minimum turbidity, both to prevent the need for filtration and to protect the pump and piping from corrosion. For aesthetic reasons, drinking water supplies are not cloudy (turbid); in fact, a secondary drinking water standard exists for turbidity. To achieve this minimum turbidity, design of a production well is typically detailed, requiring evaluation of the sizing of the well screen and the filter pack (outside the screen) based on the characteristics of the aquifer materials. Construction of the wells includes large-diameter casings to accommodate pumps and increase yield, and often thick filter packs to prevent finer-grained aquifer materials from reaching the well screen. Development of these wells typically takes several days, often involving surging or other techniques. Development is typically completed during a pumping test in which the well is pumped at the expected rate of yield for an extended period (often 24 hours or more). The combination of the intensive development and high-volume pumping is generally successful at removing suspended sediment from the well and filter pack, resulting in water free of turbidity.

On the other hand, the principal purpose of a monitoring well is to provide a groundwater sample, which requires relatively small yield. As a result, the on-Site monitoring wells were constructed of 2-inch-diameter polyvinyl chloride (PVC) with up to 2 inches of filter pack outside the well screen, which is standard for the environmental industry and in accordance with state well construction regulations (Chapter 173-160 WAC). Because the wells have an inside diameter of less than 2 inches, the methods of development are limited. Submersible and air-lift pumps were used to develop the on-Site monitoring wells. However, these pumps were incapable of creating high enough water velocities at the well screen and filter pack to remove all the sediment. As a result, groundwater samples collected from the monitoring wells had varying levels of turbidity (measured as TSS).

As a result of the differences in design, construction, and development of the two types of wells, a production well would be capable of producing turbid-free water from the aquifers on the Site, whereas the monitoring wells are not.

Dissolved Antimony Related to Sample Filtration

Filters used in the collection of filtered groundwater and surface water samples for dissolved metals analyses contributed antimony to the filtered samples. Antimony was detected consistently in filtered groundwater and surface water samples from the Site, but not in unfiltered samples. This is the opposite of the typical situation discussed above, where total metals concentrations are substantially higher than dissolved concentrations due to sample turbidity. There is strong evidence (presented below) that the filters contributed antimony to the filtered water samples, and that antimony is not present at detectable concentrations in Site groundwater or surface water.

First, dissolved antimony was detected in 85 of 168 (51 percent) of the filtered water samples collected during the RI (including groundwater, surface water, field duplicates, and rinsate blanks consisting of deionized water), whereas total antimony was detected in only 2 of 168 (1 percent) of the unfiltered samples. The range of dissolved antimony concentrations was 0.005 to 0.019 mg/L, with an average of 0.008 mg/L (excluding one very turbid sample [7-B-503] from a zone of perched water, for which the dissolved concentration was 0.08 mg/L higher than the total concentration).

Second, a controlled experiment was conducted to evaluate potential antimony contributions from the materials used during water sample filtration. Because a water sample touched three different sampling materials during filtration in the field, each of the materials was tested individually. Samples of deionized water were passed through a length of polyethylene tubing alone and through a length of silicone tubing alone (both tubing materials are used with a peristaltic pump during sample filtration). A sample was then passed through the combined lengths of tubing and the same brand of 0.45-µm filter used for all RI water sampling. In addition, a sample was filtered by the analytical laboratory (ATI) using a different brand of 0.45-µm filter. One sample that did not touch any of the filtration materials was also analyzed as a control. Consistent with the field sampling, the samples touched no other materials (e.g., stainless steel funnel). The five samples were duplicated to verify the results (10 samples total). Of the 10 samples, antimony was detected only in the 2 duplicate samples (0.0078 and 0.018 mg/L) that passed through the type of filter used during the RI work.

Third, independent data from the filter manufacturer indicate that, in a test of one filter, antimony was detected at a low concentration in the initial water passed through the filter, but not after 1 hour of passing water through it. This information suggests that antimony is present at trace concentrations in the filter membrane or housing material and that the antimony is flushed out of the filter with time. Typically in the field, approximately 0.5 liter of water was passed through the filter prior to sample collection. Differences in the volume of water purged through the filter prior to sampling may account for differences in the detected antimony concentrations in the filtered samples. For the controlled experiment, approximately 0.5 liter was also purged prior to sampling; the sample bottles (original and duplicate) were then filled one-half full and then full, alternating between bottles. The differences in duplicate results from the controlled experiment may also indicate decreases in concentrations as more water was passed through the filter.

These combined findings confirm that the detected concentrations of dissolved antimony in the RI water samples are the result of sample filtration and are not representative of Site groundwater and surface water quality. Consequently, the total antimony concentrations are more representative of the Site groundwater and surface water data.

Seep Data

Dissolved copper was the only metal detected, and it was detected in fewer than half of the samples. Ambient surface water data for Puget Sound indicate that these detections are within the range of background concentrations for copper in saline waters like those encountered at the seeps. In addition, elevated copper concentrations were detected in Site soils at only one small location in Area 18; therefore, the Site does not represent a potential source of copper to the seeps.

Summary of Metals Data in Groundwater

With the exception of aluminum, no dissolved metals concentrations in groundwater samples were elevated. Dissolved aluminum was also detected in background groundwater samples and in background soil samples (greater than 10,000 mg/kg [1 percent]), indicating that aluminum is a natural constituent in regional soil and groundwater. Total metals concentrations detected in unfiltered groundwater samples are a result of sample turbidity and therefore are not representative of groundwater quality.

PAH Data for Groundwater

During the RI, 129 groundwater samples were collected and analyzed for PAHs. During the September 1992 sampling round, one of two samples collected from MW-8 contained a total cPAH concentration of 1.56 µg/L. However, this result was not confirmed by the field duplicate sample collected concurrently from MW-8, which had a detected total cPAH concentration of 0.01 µg/L. Concentrations of cPAHs were not detected in groundwater samples or field duplicates from MW-8 in any of the other RI sampling rounds, either before or after the September 1992 round. Furthermore, detected total cPAH concentrations have not exceeded 0.1 µg/L in other groundwater samples collected during the RI. Therefore, based on the available data, the single unconfirmed elevated detection of total cPAH in MW-8 is not considered representative of groundwater quality at this location or elsewhere at the Site.

The only cPAH compound detected in more than 2 percent of groundwater samples collected during the RI was chrysene. Excluding the anomalous September 1992 groundwater sample from MW-8, frequencies of detection for cPAHs in RI groundwater samples are as follows:

- Benzo(a)anthracene: 0/128 (0 percent)
- Benzo(a)pyrene: 0/128 (0 percent)
- Benzo(b)fluoranthene: 2/128 (<2 percent)
- Benzo(k)fluoranthene: 0/128 (0 percent)
- Chrysene: 15/128 (<12 percent)
- Dibenzo(a,h)anthracene: 1/128 (<1 percent)
- Ideno(1,2,3-c,d)pyrene: 0/128 (0 percent)

Because chrysene is the only cPAH compound confirmed in Site groundwater, one-half the detection limit for chrysene was used in calculating total cPAH concentrations for groundwater samples where chrysene was not detected. One-half detection limits were not added for the other cPAH compounds because the data indicate that they were not present in Site groundwater.

Chrysene has been detected inconsistently in groundwater samples from 11 monitoring wells (excluding the September 1992 sample from MW-8) at marginally elevated levels. The chrysene detections occur infrequently in different monitoring wells, including well MW-14 located along the eastern (hydraulically upgradient) edge of the Site. The detected concentrations are very low, ranging from 0.02 to 0.1 µg/L, with an average of 0.03 µg/L relative to the detection limit of 0.01 µg/L. Furthermore, chrysene is not detected consistently at a given well over time (detected in only 1 of the 11 wells in more than 1 of the 4 sampling rounds). Statistical testing (a Fisher's Exact Test) indicates that the proportion of chrysene detections in on-Site monitoring wells (16/129) is not significantly different (at $p = 0.05$; 95 percent confidence level) than the proportion of detections in background wells (0/12).

Benzo(b)fluoranthene and dibenzo(a,h)anthracene were also each detected in one groundwater sample (other than the September 1992 sample from MW-8) at marginally elevated concentrations.

Pre-RI Data

PAHs were detected in some pre-RI groundwater samples collected from newly installed monitoring wells, and the concentrations generally decreased or were not detected in samples from subsequent rounds. These data may indicate potential hydrocarbon contributions from the air rotary drilling method (e.g., compressed air), which was used for installation of pre-RI and RI monitoring wells.

To evaluate potential hydrocarbon contributions during the drilling of the RI monitoring wells, a sample of particulate matter entrained in the compressed air discharging from the air rotary drill bit was collected on a quartz-fiber filter. Air was discharged onto the filter at normal operational pressures for approximately 10 minutes. Following the air discharge, a second filter was set on the drill rig, which was shut off, for 10 minutes to serve as a blank for evaluating ambient conditions. The samples were analyzed for TPH and PAHs to determine constituent mass added to the filter. Because a volume of air was not measured during this test, the sampling results were reported as mass, not a concentration.

TPH was not detected in either sample. One ncPAH (fluoranthene) was measured at 4.41 µg in the sample of discharged air and at 2.64 µg in the blank sample. These data suggest that the air rotary method did not introduce a significant quantity of hydrocarbons to the borehole. However, the pre-RI wells were drilled (4 years earlier) using an older model drill rig, which may not have had as sophisticated an oil-trap system for the compressed air as the rig used and tested during the RI drilling.

Summary of cPAH Data for Groundwater

Although chrysene has been detected inconsistently in RI groundwater samples, no cPAH concentrations were detected at elevated concentrations (excluding one anomalous, unconfirmed sample concentration).

3.2.4 No Active Remedial Action Required for Groundwater

Based on these data, Ecology provided a "No Active Remedial Action" letter (Ecology 1996a) for cleanup in groundwater at the Site indicating that no constituents detected in Site groundwater required active cleanup or any further action except for the long-term monitoring of DNT in selected groundwater wells (Ecology 1996a). The duration of long-term groundwater monitoring for DNT will be specified in the Parcel 1 CAP.

This section presents the findings of the RI surface water and freshwater sediment characterization efforts within the CDB at the Site. The purpose of the surface water and freshwater sediment characterization was to evaluate constituent concentrations in these media. Surface water and sediment sampling and analysis were conducted in the two freshwater bodies on the Site—Old Fort Lake and Sequalitchew Creek. The physical nature of the lake and creek are discussed in Section 3.1.3. Sections 4.1 through 4.4 present specific information on surface water and freshwater sediment sampling and analysis. Appendix C presents supporting tables on surface water and freshwater sediment quality.

4.1 SURFACE WATER AND FRESHWATER SEDIMENT SAMPLING

In December 1986, five surface water/sediment sampling locations were selected for Parcel 1 within the CDB on the Site (Figure 4.1-1). These sampling locations were generally situated to intercept drainage from Site areas identified during the pre-RI work and to provide data regarding potential constituent migration along these pathways. The sampling locations included two locations along Sequalitchew Creek (SW-3 and SW-4) and three locations in Old Fort Lake (SW-5, SW-6, and SW-7). Note that SW-4 represents an upstream creek sampling location because it lies slightly outside the easternmost edge of the CDB. Therefore, SW-4 represents water quality entering the Site but is not influenced by Site activities.

4.1.1 Surface Water

Eleven rounds of surface water sampling were conducted at the Site between December 1986 and December 1992, concurrent with the groundwater sampling rounds. Sequalitchew Creek is intermittent in both its upper and lower reaches, remaining dry during the summer and autumn. As a result, samples from creek sampling location SW-4 could not be collected during all RI sampling rounds. Attempts to sample SW-4 in mid-January 1993 (RI Round 5) were unsuccessful because the creek remained dry at this location. A discussion of surface water sampling procedures is provided in Appendix A.

Consequently, the number of surface water sampling locations and the constituents analyzed for varied over time. The surface water results from the seven pre-RI sampling rounds are summarized in Hart Crowser (1987, 1988a, 1988c, 1988d, 1989a, 1990, and 1991c). Table 4.1-1 summarizes the number of usable data points for surface water (as defined in Section 3.2.1). The combined pre-RI and RI surface water data are discussed in the following subsections.

4.1.2 Freshwater Sediment

Three rounds of freshwater sediment samples have been collected from the Site. The first round of samples was collected in December 1986 as part of the pre-RI site characterization (Hart Crowser 1987). In this pre-RI round, samples were collected from locations SD-3 and SD-4 and SPR-4 in Sequalitchew Creek, and SD-5 and SD-6 in Old Fort Lake as shown in Figure 4.1-1. The freshwater sediment locations were sampled as part of the RI in March 1992, concurrent with RI Round 1 groundwater and surface water sampling. The RI sampling locations were the same as the pre-RI locations, except that SD-7 was added in Old Fort Lake and SPR-4 was not sampled in Sequalitchew Creek. A discussion of freshwater sediment sampling procedures is provided in Appendix A.

As recommended by Ecology, six additional Old Fort Lake sediment sampling locations (SD-501 through SD-506) were established and sampled in August 1993 (Figure 4.1-1). Sampling locations were defined using randomly selected locations within a 100-foot grid system. All locations are at least 50 feet from the July 1993 low water line. Two surface and subsurface composite samples were collected from each of the six locations at 0 to 2 cm and 2 to 15 cm. The 0- to 2-cm sample is representative of recent sedimentation/deposition material, whereas the 2- to 15-cm sample is representative of historical deposition within the assumed predominant biologically active zone (Ecology 1991c). Samples were analyzed for lead and submitted for grain size analysis. Samples were generally of fine-grained soils and organic material. Gravel was not observed at any sampling location.

4.2 SURFACE WATER QUALITY

Detected concentrations of analytes in surface water are discussed in this section. All RI surface water samples were analyzed for nitrate as nitrogen, TPH, 14 metals (total and dissolved), PAHs, NAX, NG, MMAN, TOC, TDS, and TSS. SVOCs were also analyzed in RI Round 1 (March 1992). Surface water quality data tables are provided in Appendix C.

4.2.1 Old Fort Lake Surface Water Quality

During four rounds of RI surface water sampling in Old Fort Lake, NAX, NG, MMAN, TPH, SVOCs, and VOCs were not detected. No concentrations of nitrate detected in Old Fort Lake samples were elevated. Over the full period of sampling in Old Fort Lake (pre-RI and RI), dissolved lead in 2 of 18 samples and dissolved copper in 6 of 12 samples were the only constituents detected at elevated concentrations. As discussed in Section 3.2.3, antimony was contributed to filtered groundwater and surface water samples during sample filtration; as a result, total antimony data are more representative of surface water quality.

Dissolved Lead Data for Old Fort Lake

Two of the 18 samples from Old Fort Lake that were analyzed for dissolved lead had elevated concentrations (0.006 mg/L at SW-6 in June 1988, and 0.004 mg/L at SW-7 in March 1992). Dissolved lead detections have not been confirmed at either sampling location in subsequent sampling rounds (five subsequent rounds at SW-6 and three rounds at SW-7).

Dissolved Copper Data for Old Fort Lake

Five of the 12 samples from Old Fort Lake that were analyzed for dissolved copper had elevated concentrations. The range of detected dissolved copper concentrations from the lake samples was 0.0052 to 0.010 mg/L. Elevated dissolved copper was detected at each of the three lake sampling locations in one or more of the RI sampling rounds.

4.2.2 Sequalitchew Creek Surface Water Quality

During the RI surface water sampling in Sequalitchew Creek, no NAX, NG, MMAN, TPH, SVOCs (other than common laboratory contaminants), or VOCs were detected. No concentrations of nitrate detected in Sequalitchew Creek samples were elevated. Over the full

period of monitoring (pre-RI and RI), concentrations of dissolved lead, dissolved copper, total arsenic, and PAHs were elevated in one or more samples from the creek, as discussed below.

In the December 1986 sampling of Sequalitchew Creek, one or more of the OC pesticide compounds aldrin, endrin, and endrin ketone were detected at estimated concentrations below detection limits in samples from locations SW-3 and SW-4 (Hart Crowser 1987). Because these compounds were also detected in the laboratory preparation blank associated with these samples, the results are not confirmed as being representative of surface water quality. The only sample for which all three of these compounds were reported was from location SW-4, located upstream of the Site. The results of all soil and groundwater sampling conducted during the RI indicate that pesticides are not an indicator constituent at the Site.

Dissolved Lead Data for Sequalitchew Creek

Dissolved lead was detected at a concentration of 0.004 mg/L in one of three samples from background location SW-4. These data suggest that the detected dissolved lead may be related to off-Site sources to the creek, which extends almost 1.5 miles east of the Site. Dissolved lead has been detected at concentrations of 0.001 to 0.004 mg/L in regional rivers and streams (USGS 1987).

Dissolved Copper Data for Sequalitchew Creek

Five of the 11 samples from Sequalitchew Creek that were analyzed for dissolved copper had elevated concentrations. The range of detected dissolved copper concentrations from creek samples was 0.0077 to 0.14 mg/L. The 0.14 mg/L detection (SW-3 in March 1992) is anomalous because it is more than an order of magnitude higher than any other dissolved copper concentration detected in samples from either the creek or the lake, and because total copper was not detected in that sample.

Dissolved copper was also detected in one of the two samples from SW-4 located upstream of the Site, suggesting possible off-Site sources of dissolved copper to the creek. Dissolved copper is commonly detected in regional streams at concentrations of 0.001 to 0.005 mg/L, with reported detections as high as 0.048 mg/L (USGS 1987).

Dissolved lead and copper were occasionally detected in filtered samples at concentrations above corresponding total concentrations in unfiltered samples; these detections were not frequent. These results were not observed in deionized water rinsate blanks. Dissolved concentrations greater than corresponding total concentrations are attributed to sampling or analytical variability rather than contributions from the filter capsules used for sample filtration, as was the case for antimony (refer to Section 3.2.3).

The dissolved copper concentrations detected in Sequalitchew Creek are within the range of the background concentrations detected at the upstream location (SW-4), and within the range of regional background concentrations.

4.2.3 Summary of Surface Water Quality Data

Of the wide range of compounds for which on-Site surface water samples were analyzed, only dissolved lead and dissolved copper were detected at elevated concentrations in one or more

samples from Old Fort Lake and Sequalitchew Creek. Dissolved copper was the only constituent with confirmed elevated detections. Dissolved lead was detected infrequently at marginally elevated concentrations in both Old Fort Lake and Sequalitchew Creek. None of the lead detections were confirmed in preceding or subsequent sampling rounds. In addition, the concentrations of dissolved copper and lead detected in on-Site surface water are within the range of background concentrations detected in an area background (upstream) sampling location in Sequalitchew Creek (SW-4). Concentrations of dissolved copper and lead detected in on-Site surface water are also within the range of background concentrations detected in other regional rivers and streams in Pierce County.

4.3 FRESHWATER SEDIMENT QUALITY

Analytes for the pre-RI sediment samples included antimony, lead, chromium, nitrates, PCBs, and OC pesticides. Analytes for the RI sampling included NAX, MMAN, NG, nitrate plus nitrite as nitrogen, priority pollutant metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, manganese, nickel, selenium, silver, thallium, and zinc) plus aluminum, PCBs, OC pesticides, OP pesticides, PAHs, SVOCs, TPH, and TOC.

NAX, MMAN, NG, PCB, SVOCs, and TPH were not detected. OP pesticide data were rejected due to poor analytical method performance (see Appendix E). No OP pesticides were detected in soil or groundwater samples collected from the Site, and there is no record of historical use of OP pesticides. Freshwater sediment quality data tables are provided in Appendix C.

4.3.1 Old Fort Lake Freshwater Sediment Quality

PAHs, two OC pesticide, and metals were detected in sediment samples collected from Old Fort Lake. Total ncPAHs were detected in samples SD-5 (1.03 mg/kg) and SD-6 (0.60 mg/kg). Total cPAHs were detected in sample SD-5 (0.46 mg/kg).

Two OC pesticides (endosulfan sulfate and 4,4-DDE) were detected at low concentrations in all three sediment samples from Old Fort Lake. Similar to surface water results, these compounds were detected in laboratory blanks, thereby indicating that these detections are not representative of sediment quality.

Old Fort Lake sediment sampling results indicated no elevated concentrations of metals except cadmium and lead. No data were available for aluminum, antimony, beryllium, silver, mercury, and thallium.

Detected concentrations of lead in RI samples ranged from nondetection to 180 mg/kg (SD-5). August 1993 RI sample concentrations in the 0- to 2-cm samples ranged from 69 to 170 mg/kg. Concentrations in the 2- to 15-cm samples ranged from nondetection at 19 to 43 mg/kg. No freshwater sediment lead concentrations were elevated.

4.3.2 Sequalitchew Creek Freshwater Sediment Quality

Two OC pesticides and metals were detected in sediment samples collected from Sequalitchew Creek. Similar to Sequalitchew Creek surface water results, the pre-RI sediment samples from locations SD-3 and SD-4 contained estimated concentrations (below detection limits) of OC pesticides, including gamma-BHC, dieldrin, endrin, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT (Hart

Crowser 1987). However, like the surface water detections, each of these compounds was also detected in laboratory blanks, thereby indicating that the detections are not representative of sediment quality.

No results from Sequalitchew Creek were elevated for aluminum, antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Beryllium, selenium, and thallium were not detected.

4.3.3 Summary of Freshwater Sediment Quality

Of the wide range of constituents for which freshwater sediment samples were analyzed, no constituents were detected at elevated concentrations. There are no published freshwater sediment criteria/standards for Washington State. The freshwater sediment data were compared to standards developed by the State of Wisconsin and the Ontario Province of Canada. These standards were deemed to be the most relevant for the Site. Lead was detected in Old Fort Lake sediments but at relatively low concentrations. Detected concentrations of metals were comparable to available background sediment data for the Puget Sound region.

4.4 NO FURTHER ACTION FOR SURFACE WATER OR FRESHWATER SEDIMENTS

Based on these data, Ecology provided verbal agreement that No Further Action was required for surface water or freshwater sediment at the Site (pending the submittal of a summary of the data), thereby indicating that no constituents detected in Site surface water or freshwater sediment required cleanup or any further action (Ecology 1996d).

Note that although additional groundwater samples (collected at spring locations), surface water and freshwater sediment samples (Sequalitchew Creek), and marine sediment samples (Puget Sound) were collected for characterization purposes, these data are reported in a separate document because the locations from which they were collected are outside the CDB for the Site.

Anderson, W.W., A.O. Ness, and A.C. Anderson. 1955. Soil Survey of Pierce County, Washington. U.S. Department of Agriculture Soil Survey Report, Series 1939, No. 27.

Associated Earth Sciences. 1984. Geohydrology Study, Pump Tests, DuPont Planning Area, DuPont, Washington.

Borden, R.K. and K.G. Troost. 2001. Late Pleistocene Stratigraphy in the South-Central Puget Lowland, Pierce County, Washington. (Washington Division of Geology and Earth Resources Report of Investigations 33.

Boyce, C.P. and T.C. Michelsen. 1993. Cleanup standards for petroleum hydrocarbons. Part 2. Case study comparisons of site-specific cleanup standards with generic TPH standards. Jour. Soil Contamination, v. 2, p. 265-280.

Ecology, Washington State Department of. 1991. Sediment Cleanup Standards - User Manual. Washington State Department of Ecology, Sediment Management Unit. December.

———. 1993a. Letter from Mike Blum to Vern Moore/Weyerhaeuser Company and Jack Frazier/The DuPont Company Regarding Area 20 USTs. April 12.

———. 1993b. Letter from Mike Blum to Vern Moore/Weyerhaeuser Company and Jack Frazier/The DuPont Company Regarding Area 38 UST. May 6.

———. 1993c. Letter from Mike Blum to Vern Moore/Weyerhaeuser Company and Jack Frazier/The DuPont Company Regarding Area 39 UST. May 6.

———. 1994. Natural Background Soil Metal Concentrations in Washington State. Publication 94-115.

———. 1996a. Letter from Mike Blum to Vern Moore/Weyerhaeuser Company and Jack Frazier/The DuPont Company. January 12.

———. 1996b. Letter from Mike Blum to Vern Moore/Weyerhaeuser Company and Jack Frazier/The DuPont Company. June 12.

———. 1996c. Letter from Mike Blum to Vern Moore/Weyerhaeuser Company and Jack Frazier/The DuPont Company. October 9.

———. 1996d. Personal Communication from Mike Blum to Vern Moore/Weyerhaeuser Company regarding Russ MacMillan's June 14, 1996 Draft Parcel 2 Cleanup Action Plan comments during Parcel 2 CAP Meeting. June 26, 1996.

———. 1998. Interim Groundwater Quality Monitoring for DNT. Memorandum.

———. 2001. Model Toxics Control Act Cleanup Regulation. Chapter 173-340 WAC. Feb. 12, 2001. Ecology Publication 94-06.

Freeze, R.A., and J.A. Cherry. 1979. Groundwater. Prentice-Hall, Inc. 604 p.

Harper-Owes. 1985. Background Water and Soil Quality at the Pilchuck Tree Farm Demonstration Site, 1982-1084. Final Report Submitted to Municipality of Metropolitan Seattle. December 1985.

Hart Crowser, Inc. 1976. Preliminary soils and foundation investigation proposed DuPont marine terminal, DuPont, Washington. Report to Weyerhaeuser Company, Transportation Department, Tacoma, Washington.

———. 1986. Phase I Site Survey and Review Weyerhaeuser/DuPont Property, DuPont, Washington. September 1986.

———. 1987. Site Characterization Report, Phase II Sampling and Analysis, Former DuPont Works Site, DuPont, Washington. August 10, 1987.

———. 1988a. Hydrologic and Water Quality Assessment, Former DuPont Works Site, DuPont, Washington. May 13, 1988.

———. 1988b. Hydrogeologic Report - Bell Hill Well No. 1, Weyerhaeuser Real Estate Company, DuPont, Washington. Prepared for Weyerhaeuser Real Estate Company. October 1988.

———. 1988c. Summary of Results of June 1988 Groundwater Sampling, Former DuPont Works Site, DuPont, Washington. Letter to Weyerhaeuser, Attn: Rudy Thut. September 9, 1988.

———. 1988d. Summary of Results of October 1988 Groundwater Sampling, Former DuPont Works Site, DuPont, Washington. Letter to Weyerhaeuser, Attn: Rudy Thut. November 18, 1988.

———. 1989a. Summary of Results of January 1989 Groundwater Sampling, Former DuPont Works Site, DuPont, Washington. Letter to Weyerhaeuser, Attn: Rudy Thut. February 28, 1989.

———. 1990. Summary of Results of November 1989 Groundwater Sampling, Former DuPont Works Site, DuPont, Washington. Letter to Weyerhaeuser, Attn: Rudy Thut. January 18, 1990.

———. 1991a. Final Remedial Investigation/Feasibility Study Report, Volume I. Site A Naval Submarine Base, Bangor, Washington. Prepared for Engineering Field Activity, Northwest, Silverdale, Washington. August 1, 1991.

———. 1991b. Final Report, Former Black Powder Production Area, Former DuPont Works Site, DuPont, Washington. October 4, 1991.

———. 1991c. Summary of Results of August 1990 Groundwater Sampling, Former DuPont Works Site, DuPont, Washington. April 3, 1991.

———. 1991d. Underground Storage Tank Removal and Verification of Closure, Areas 20A and 20B, Former DuPont Works Site, DuPont, Washington. October 16, 1991.

———. 1991e. Upper Powerhouse Stack Debris Characterization, Demolition, and Disposal Report. Former DuPont Works Site, DuPont, Washington. September 27, 1991.

———. 1992a. Management Plan for Remedial Investigation/Feasibility Study (RI/FS), Former DuPont Works Site, DuPont, Washington. January 17, 1992.

———. 1992b. Addendum to Management Plan for Remedial Investigation/Feasibility Study (RI/FS), Former DuPont Works Site, DuPont, Washington. May 15, 1992.

———. 1992c. Technical Memorandum, Results of EM-34 Survey, Kitsap Cutoff, Former DuPont Works Site, DuPont, Washington. February 21, 1992.

———. 1992d. Remedial Investigation, Phase I Soil Sampling and Analysis, Three Kettle Areas, Former DuPont Works Site, DuPont, Washington, June 5, 1992.

———. 1992e. RI Deliverable I, Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, Washington. October 7, 1992.

———. 1992f. Soil Sampling and Analytical Results, Underground Storage Tank (UST) Removal and Closure Results, Area 38, Former DuPont Works Site, DuPont, Washington. October 8, 1992.

———. 1992g. Soil Sampling and Analytical Results, Underground Storage Tank (UST) Removal and Closure Results, Area 39, Former DuPont Works Site, DuPont, Washington. October 8, 1992.

———. 1992h. Technical Scope of Work: Lead Abatement of Powerhouses. Former DuPont Works Site, DuPont, Washington. March 6, 1992.

———. 1993a. Final Report, Above-Ground Storage Tank Diesel Spill, Area 20B. Former DuPont Works Site, DuPont, Washington. March 18, 1993.

———. 1993b. Interim Status Memorandum, Area 18 (Sympathetic Detonation). Former DuPont Works Site, DuPont, Washington. October 4, 1993.

———. 1993c. Interim Status Memorandum, Area 19A (Paint Shop) and 19B (Oil House). Former DuPont Works Site, DuPont, Washington. October 4, 1993.

———. 1993d. Interim Status Memorandum, Area 30 Railroad Debris Area. Former DuPont Works Site, DuPont, Washington. October 4, 1993.

———. 1993e. Interim Status Memorandum, Area 31 Ravine. Former DuPont Works Site, DuPont, Washington. October 4, 1993.

———. 1993f. Interim Status Memorandum, Area 36 Lead Melt House. Former DuPont Works Site, DuPont, Washington. October 4, 1993.

———. 1993g. Interim Status Memorandum, Area 39 Laboratory. Former DuPont Works Site, DuPont, Washington. October 4, 1993.

———. 1993h. Interim Status Memorandum, Areas 18S, 19C, and 31 Inorganic Solid Debris. Former DuPont Works Site, DuPont, Washington. December 22, 1993.

———. 1994a. Interim Status Memorandum, Areas 10, 18, 25, and 31 DNT Soil Interim Source Removal. Former DuPont Works Site, DuPont, Washington. February 7, 1994.

———. 1994b. Interim Status Memorandum, Area 8 Pipeline and Former Above-Ground Storage Tanks. Former DuPont Works Site, DuPont, Washington. February 7, 1994.

———. 1994c. Interim Source Removal Status. Drum Disposal Areas, Areas 5 and 6. Former DuPont Works Site, DuPont, Washington. March 14, 1994.

———. 1994d. Draft Remedial Investigation (Volumes 1 and 2). Former DuPont Works Site, DuPont, Washington. December 22, 1994.

———. 1994e. Draft Risk Assessment. Former DuPont Works Site, DuPont, Washington. December 16, 1994.

———. 1994f. Draft Feasibility Study. Former DuPont Works Site, DuPont, Washington. December 23, 1994.

METRO. 1985. Summary Statistics for Background Forest Soils, including Pilchuck Tree Farm, Pack Forest, Edmonds Community College, and King County Section 24.

Noble, J.B. 1990. Proposed Revision of Nomenclature for the Pleistocene Stratigraphy of Coastal Pierce County, Washington. Washington State Division of Geology and Earth Resources Open File Report 90-4. February 1990.

Pentec. 1992. Draft Environmental Impact Statement. Pioneer Aggregates Mining Facility and Reclamation Plan. January 2, 1992.

Pioneer Technologies Corporation. 2002. Electronic Database for the Former DuPont Works Site, DuPont, Washington. April 1, 2002.

Shacklette, H.T., and J.G. Boerngen. 1984. Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States. U.S. Geological Survey, U.S.G.S. Professional Paper 1270. United States Printing Office, Washington.

U.S. Geological Survey (USGS). unpublished. Concentrations of Metals in Soils and Streambed Sediments, Soos Creek. 1987.

———. 1987. Water Quality in Lower Puyallup River Valley and Adjacent Uplands, Pierce County, Washington. Water Resources Investigations Report 86-4154. Tacoma, Washington, 1987.

———. unpublished. Summary statistics for concentrations of metals in soils for the State of Washington. Preliminary report for Washington State Department of Ecology.

Walters, K.L., and G.E. Kimmel. 1968. Ground-Water Occurrence and Stratigraphy of Unconsolidated Deposits, Central Pierce County, Washington. Washington State Department of Water Resources/USGS Water Supply Bulletin No. 22.

West Shore Corporation NW and Pioneer Technologies Corporation. 2000a. Hot Spot Interim Action Report, Former DuPont Works Site. October 4, 2000.

———. 2000b. Sand Laydown Area Interim Action Report, Former DuPont Works Site. November 16, 2000.

———. 2001a. Interim Source Removal Actions: On-site Stockpiles Report, at the Former DuPont Works Site. January 4, 2001.

———. 2001b. 2001 Site Characterization Program: Sequalitchew Creek Canyon Narrow Gauge Railroad Bed, Parcel 1- Consent Decree at the Former DuPont Works Site. May 8, 2001.

———. 2001c. 2001 Site Characterization Program: Areas for Additional Sampling, Parcel 1-Consent Decree at the Former DuPont Works Site. June 5, 2001.

———. 2002a. Interim Source Removal Actions: Screening Plant Report, at the Former DuPont Works Site. January 22, 2002.

———. 2002b. Draft Interim Corrective Action Report: Foundations, Narrow Gauge Railroad and Hot Spots, Former DuPont Works Site. February 27, 2002.

Woodward-Clyde Consultants. 1990. Draft Hydrogeology and Water Quality Technical Memorandum, Fort Lewis Landfill No. 5 Remedial Investigation/Feasibility Study. Submitted to the U.S. Army Corps of Engineers Seattle District. September 1990.

Appendix A
Field Procedures and Logs

The material in Appendix A was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

Appendix B
Soil Quality Data

CONTENTS

B.1-1 Area 6—Crystallizer Drum Area Soil Quality
B.2-1 Area 7—Waste Drainage Pit (Old Salt Lake) Soil Metals Results
B.2-2 Area 7—Waste Drainage Pit (Old Salt Lake) Soil Explosives Results
B.2-3 Area 7—Waste Drainage Pit (Old Salt Lake) Soil SVOC Results
B.2-4 Area 7—Waste Drainage Pit (Old Salt Lake) Soil PAH Results
B.2-5 Area 7—Waste Drainage Pit (Old Salt Lake) Soil Pesticide and PCB Results
B.2-6 Area 7—Waste Drainage Pit (Old Salt Lake) Soil TPH Results
B.3-1 Area 10—Aluminum Water Gel Area Soil Metals Results
B.3-2 Area 10—Aluminum Water Gel Area Soil Explosives Results
B.3-3 Area 10—Aluminum Water Gel Area Soil PAH and SVOC Results
B.4-1 Area 11—Water Gel Wash-Up Waste Pit Area Soil Metals Results
B.4-2 Area 11—Water Gel Wash-Up Waste Pit Area Soil Explosives Results
B.4-3 Area 11—Water Gel Wash-Up Waste Pit Area Soil PAH and SVOC Results
B.4-4 Area 11 — Water Gel Wash-Up Waste Pit Area Soil TPH Results
B.5-1 Area 12—Works Magazine Landfill Soil Metals Results
B.5-2 Area 12—Works Magazine Landfill Soil Explosives Results
B.5-3 Area 12—Works Magazine Landfill Soil SVOC Results
B.5-4 Area 12—Works Magazine Landfill Soil PAH Results
B.5-5 Area 12—Works Magazine Landfill Soil Pesticide and PCB Results
B.5-6 Area 12—Works Magazine Landfill Soil TPH Results
B.6-1 Area 16—Kettle Beneath Area 5 Soil Metals Results
B.6-2 Area 16—Kettle Beneath Area 5 Soil TCLP Metals Results
B.6-3 Area 16—Kettle Beneath Area 5 Soil Explosives Results
B.6-4 Area 16—Kettle Beneath Area 5 Soil SVOC Results
B.6-5 Area 16—Kettle Beneath Area 5 Soil PAH Results
B.6-6 Area 16—Kettle Beneath Area 5 Soil Pesticide and PCB Results
B.6-7 Area 16—Kettle Beneath Area 5 Soil TPH Results
B.7-1 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil Metals Results
B.7-2 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil Explosives Results
B.7-3 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil VOCs Results
B.7-4 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil PAH and SVOC Results

B.7-5 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil TPH Results
B.7-6 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil Nitrate Results
B.8-1 Area 25—Acid Production Area Soil Metals Results
B.8-2 Area 25—Acid Production Area Soil Explosives Results
B.9-1 Area 26—Waste Acid Recovery Area and Kettle Soil Metals Results
B.9-2 Area 26—Waste Acid Recovery Area and Kettle Soil Explosives Results
B.9-3 Area 26—Waste Acid Recovery Area and Kettle Soil SVOC Results
B.9-4 Area 26—Waste Acid Recovery Area and Kettle Soil PAH Results
B.9-5 Area 26—Waste Acid Recovery Area and Kettle Soil TPH Results
B.10-1 Area 31—Burning Ground Soil Metals Results
B.10-2 Area 31—Burning Ground Soil Explosives Results
B.10-3 Area 31—Burning Ground Soil SVOC Results
B.10-4 Area 31—Burning Ground Soil PAH Results
B.10-5 Area 31—Burning Ground Soil PCB Results
B.10-6 Area 31—Burning Ground Soil TPH Results
B.11-1 Area 38—Carton Production Area and Drywell Soil Metals Results
B.11-2 Area 38—Carton Production Area and Drywell Soil Explosives Results
B.11-3 Area 38—Carton Production Area and Drywell Soil VOC Results
B.11-4 Area 38—Carton Production Area and Drywell Soil SVOC Results
B.11-5 Area 38—Carton Production Area and Drywell Soil PAH Results
B.11-6 Area 38—Carton Production Area and Drywell Soil Pesticides Results
B.11-7 Area 38—Carton Production Area and Drywell Soil TPH Results
B.12-1 Areas of Potential Concern (APs) Soil Metals Results
B.12-2 Areas of Potential Concern (APs) Soil Explosives Results
B.12-3 Areas of Potential Concern (APs) Soil SVOC Results
B.12-4 Areas of Potential Concern (APs) Soil PAH Results
B.12-5 Areas of Potential Concern (APs) Soil PCB Results
B.12-6 Areas of Potential Concern (APs) Soil TPH Results
B.12-7 Areas of Potential Concern (APs) Soil Nitrate Results
B.13-1 Area 18—REF Soil Metals Results
B.13-2 Area 31—REF Soil Metals Results
B.14-1 Area LR Soil Metals Results
B.14-2 Area LR Soil Explosives Results

B.14-3 Area LR Soil Pesticide, PCB, and TPH Results
B.14-4 Area LR Soil Nitrate Results
B.15-1 Historical Railroad Grade Soil Metals Results
B.15-2 Historical Railroad Grade Soil TPH Results
B.16-1 Creek Area Soil Metals Results
B.16-2 Creek Area Soil Explosives Results
B.16-3 Creek Area Soil SVOC Results
B.16-4 Creek Area Soil PAH Results
B.16-5 Creek Area Soil TPH Results
B.17-1 Candidate Area Characterization Sample Soil Metals Results
B.18-1 Parcel 1 North of Creek Soil Metals Results
B.19-1 Miscellaneous Sample Soil Metals Results
B.20-1 Area 5—DNT Waste Drum Area Soil Metals Results
B.20-2 Area 5D—DNT Waste Drum Area Soil Metals Results
B.20-3 Area 5D—DNT Waste Drum Area Soil Explosives Results
B.20-4 Area 5—DNT Waste Drum Area Soil VOC Results
B.20-5 Area 5—DNT Waste Drum Area Soil SVOC Results
B.20-6 Area 5—DNT Waste Drum Area Soil PAH Results
B.20-7 Area 5—DNT Waste Drum Area Soil Pesticide Results
B.20-8 Area 5D—DNT Waste Drum Area Soil PCB Results
B.20-9 Area 5—DNT Waste Drum Area Soil TPH Results
B.21-1 Area 8—Bunker C Pipeline Soil Metals Results
B.21-2 Area 8—Bunker C Pipeline Soil Explosives Results
B.21-3 Area 8—Bunker C Pipeline Soil VOC Results
B.21-4 Area 8—Bunker C Pipeline Soil SVOC Results
B.21-5 Area 8—Bunker C Pipeline Soil PAH Results
B.22-6 Area 8—Bunker C Pipeline Soil TPH Results
B.22-1 Area 19—Maintenance Areas Soil Metals Results
B.22-2 Area 19—Maintenance Areas Soil TPH Results
B.23-1 Area 24/24A—Upper Power House Soil Metals Results
B.23-2 Area 24/24A—Upper Power House Soil PAH Results
B.23-3 Area 24/24A—Upper Power House Soil TPH Results
B.24-1 Area 30—Railroad Debris Area Soil Metals Results

B.25-1 Area 36—Lead Melt House Area Soil Metals Results
B.26-1 Area 39—Laboratory Area Soil Metals Results
B.26-2 Area 39—Laboratory Area Soil Explosives Results
B.26-3 Area 39—Laboratory Area Soil VOC Results
B.26-4 Area 39—Laboratory Area Soil SVOC Results
B.26-5 Area 39—Laboratory Area Soil PAH Results
B.26-6 Area 39—Laboratory Area Soil TPH Results

Appendix B presents soil quality data representing current Site conditions as of September 2001. The tables are organized and labeled according to area as discussed in Section 2. The tables are in the same order as that in which they are discussed in Section 2—Site Areas (by number), AP Areas, Site Reference Area (REF), and Narrow-Gauge Railroad (NGRR). Refer to Section 2 for a complete description of each Site Area. Specific notes for the tables are as follows:

1. Blanks indicate no analysis for a specific constituent.
2. Soil quality data representing Site conditions as of September 2001 are provided in the tables, including pre-RI, RI, and interim source removal verification sampling results.
3. Data qualifiers include the following:

   U Not detected at associated detection limit
   J Estimated concentration
   UJ Not detected; associated detection limit is an estimate
   R Rejected data, as determined during data validation
   S Sum of individual constituent concentrations (e.g., total cPAHs and total PCBs)
   X Elution pattern does not match typical product

4. Field duplicate samples are designated with sample ID suffixes of D, DUP, or SSE (the different suffixes have identical meanings).
5. As discussed in Section 2 of the report, soil quality data from the following areas have been redesignated as follows:

   - Areas AP-A and AP-G have been included in the Areas of Potential Concern tables.
   - Areas AP-B and AP-D have been included in Area 26.
   - Samples designated AP-H at the time of sampling have been divided into Areas 25 and 26.
   - Sampling locations within 25 feet of a narrow-gauge railroad grade have been included in the Narrow-Gauge Railroad designation.

The redesignated soil quality data have been included in soil quality data tables in this appendix for the appropriate areas as listed above.

The tables were developed on the basis of information provided to URS in an analytical database submitted in final form for this RI on April 1, 2002 (Pioneer 2002).

Appendix C
Groundwater, Surface Water, and Freshwater Sediment Quality Data

Appendix C provides groundwater, surface water, and freshwater sediment quality data for the Site. Specific notes for the tables are as follows:

1. Blanks indicate no analysis for a specific constituent.
2. Data qualifiers include the following:

U	Not detected at associated detection limit
J	Estimated concentration
UJ	Not detected; associated detection limit is an estimate
R	Rejected data, as determined during data validation
S	Sum of individual constituent concentrations (e.g., total cPAH and total PCBs)

3. Surface water sample ID suffixes include the month and year of sample collection (e.g., -3-88 sample ID suffix indicates sample collection in March 1988).
4. Field duplicate samples are designated with sample ID suffixes of D or DUP (these suffixes have identical meanings).

Groundwater Quality Data

Surface Water and Freshwater Sediment Quality Data

The following appendix material was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

Appendix D
Laboratory Physical Soils Testing

This appendix material was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

The Hart Crowser soils laboratory conducted mechanical (sieve) and hydrometer analyses to provide grain size distributions for aquifer and aquitard materials, respectively. In addition, flexible-wall permeability tests were conducted to estimate vertical hydraulic conductivity of the aquitard material.

Mechanical Analyses. The Hart Crowser soils laboratory conducted mechanical grain size analyses using standard sieve sizes in accordance with ASTM D 422. The wet sieve analyses were performed to determine the size distribution greater than the No. 200 mesh sieve. Figure 1 presents the classification system used for the grain size analyses. The results of the tests are presented as curves in Figures 2 through 12, plotting percent finer against grain size.

Hydrometer Analyses. Samples of the Kitsap Aquitard material were analyzed using the hydrometer method, or a combined analysis (mechanical plus hydrometer), to determine the size distribution smaller than the No. 200 mesh sieve (i.e., determine percent silt and percent clay). The hydrometer testing was conducted in accordance with ASTM D 422. The results of the tests are presented as curves in Figures 2 and 4.

Laboratory Vertical Hydraulic Conductivity Testing. Testing of vertical hydraulic conductivity was conducted on two undisturbed samples of the Kitsap Aquitard material.

The tests were performed in a triaxial cell using "flexible wall" permeameter techniques, which allowed application of confining stresses approximately equal to the in situ effective overburden stresses. The sample was oriented in its stratigraphically correct position (up versus down) and flow was directed vertically downward through the sample using falling head techniques. The tests were run until steady state conditions were established. The results of the vertical hydraulic conductivity testing are presented in Table 1.

Table 1
Summary of Laboratory Vertical Hydraulic
Conductivity (K) Results for Kitsap Aquitard Samples

Sample No.	Sample Description	Estimated Vertical K in cm/sec
MW-20, S-24E	Slightly clayey, sandy SILT	8×10^{-7}
MW-23, S-25A	Very sandy SILT with trace peat and sand partings	1×10^{-7}
	Geometric Mean:	3×10^{-7} cm/sec

Appendix E
Data Quality Assessments

Recent Data Quality Assessment

Pre-1994 Data Quality Assessment

This appendix material was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

Appendix A
Field Procedures and Logs

The material in Appendix A was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

APPENDIX A: FIELD PROCEDURES

The Remedial Investigation (RI) field program was initiated in February 1992. The initial phase of soil sampling was conducted between February and May 1992. Following Washington State Department of Ecology (Ecology) review of the initial soil quality results from the kettle Areas 7, 16, and 26 as presented in Hart Crowser (1992d), additional soil sampling was conducted in the three kettle areas and selected other areas in late June and July 1992. Supplementary soil sampling was conducted in selected areas of the Site between October 1992 and January 1994. Quarterly groundwater sampling for the RI has been conducted from March 1992 through April 1994 (Table 3.2-1 in Volume 1 summarizes all pre-RI and RI groundwater sampling conducted to date).

Soil Quality Explorations

The RI soil sampling program included completion of the following explorations:

- 328 test pits;
- 15 observational test pits (from which samples were generally not collected);
- 40 trenching locations around foundations;
- 30 soil borings;
- 41 hand-augered borings; and
- 1,676 surface samples.

In addition, 10 samples of railroad ties (wood) were collected. The number of explorations indicated above does not include additional samples collected during the pre-RI and interim source removal.

The results of the RI subsurface exploration program are presented on the exploration logs, which are grouped by Site RI Area, within this appendix. Surface soil sampling forms are not presented in this appendix. The exploration logs represent our interpretation of data compiled from drilling and excavation, sampling, and field testing information at the time of the exploration (exploration dates are listed on each log). Because these logs describe conditions encountered at the time of exploration, soil sample depths and ground surface elevations on all exploration logs are referenced to the grade at the time of exploration, and have not been adjusted for regrading or removal resulting from interim source removal, as was done in the body of this report. Although interim source removal has removed most of the Area 5 explorations completed during the RI, the exploration logs are included in this appendix. Those samples removed during subsequent interim source removal (and thus not representative of current Site conditions) are denoted with (R) next to the sample number on the exploration logs. Field procedures for each of the exploration types are discussed in more detail below.

Test Pit Excavations

Test pits were excavated using a four-wheel-drive Case 580K backhoe, which was capable of operating to depths of approximately 10 to 12 feet. To minimize the sloughing of the test pit

side walls, the backhoe was generally used to dig as deep as required to collect the shallowest proposed sample. Once the sample had been collected, the pit was deepened to the bottom of the next proposed sampling depth. The soil samples were composited from the determined sample depth interval (e.g., 3 to 6 feet), and generally from the two long walls of the excavation (i.e., parallel to the direction of the scoop), except in cases where a discrete portion of the excavation was sampled based on field observations (e.g., stained soils).

If signs of subsurface alteration (e.g., unnatural staining, deteriorated gravels) were still evident at a depth of 10 feet, every effort was made to excavate and sample deeper. However, sloughing gravelly soils generally prevented excavation beyond a depth of approximately 10 feet. The sample intervals specified in the area-specific soil sampling and analysis plans (RI/FS Management Plan; Hart Crowser, 1992a) were followed to the extent possible; however, sample collection intervals were based on field conditions and best professional judgement.

Soil samples from the test pits were collected either by removing depth-specific sample material from the center of the backhoe bucket with a stainless steel spoon, or by using a stainless steel spoon with 10-foot-long extending handle to sample the test pit walls. Soil samples were mixed in a stainless steel bowl, at which time gravels larger than approximately 1/2 inch in diameter were removed since they would not be analyzed by standard laboratory methods. The samples were placed in laboratory-supplied clean glass jar(s) with teflon-lined screw caps, and immediately placed in a cooled ice chest. Soil samples collected for field headspace vapor measurements and volatile organic analyses were placed directly into appropriate sampling jars without mixing. Prior to placement in the ice chest, all sampling jars collected for nitroaromatic explosive (NAX) analysis were wrapped in aluminum foil to limit photolysis (light-induced breakdown) of the nitroaromatic compounds. Samples selected based on the RI/FS Sampling and Analysis Plan (Section 4 in Hart Crowser, 1992a) and field observations were delivered to the analytical laboratory (ATI-Renton or Hart Crowser Chemistry Laboratory) for chemical analyses. Remaining samples were stored under refrigeration at the Site.

The backhoe bucket was steam cleaned after each test pit excavation. All steam cleaning water was collected in a galvanized trough and pumped into 55-gallon drums. Sampling equipment was decontaminated between collection of each soil sample as discussed in the ***Equipment Decontamination*** section.

Soils and other materials encountered in the test pits were documented on a field test pit log form (Figure 5-4 in Hart Crowser, 1992a). Test pits were photographed to show the excavation in relation to its immediate surroundings. Once sampling was completed and the test pit logged and photographed, the test pit excavations were backfilled with the excavated soil and compacted using the backhoe. The test pit locations were staked for subsequent survey.

Observational test pits were also completed in some locations for the purpose of observing subsurface conditions. Dimensions of these excavations varied depending on the conditions to be observed. Soil samples were collected from some observational test pits based on

conditions encountered. All excavation and sampling protocols were generally consistent with those described above for typical test pits.

In addition, trenches approximately 4 feet deep were excavated around the perimeters of selected foundations in Area 18 to observe the presence of potential buried pipes or other drainage systems. Discrete soil samples were collected from depths of 0 to 1 foot and 3 to 4 feet at locations based on field observation. All excavation and sampling protocols were generally consistent with those described above for typical test pits.

Soil Borings

A hollow-stem auger was used to drill soil borings completed for soil quality sampling during the RI. The borings were advanced using either a Mobile B-61 or a Jefco SD-300 drill rig, using 4-inch inside diameter hollow-stem auger. The Jefco rig was used for completion of the deep Phase II RI borings in the kettles, since it has the capability of switching from hollow-stem auger to air rotary operation if refusal was encountered with auger operation at depth. However, all soil borings for soil sample collection (chemical analyses) were completed using hollow-stem auger operation, even to a depth of 100 feet in 26-B-503 completed in the bottom of the Area 26 kettle.

Standard hollow-stem auger drilling techniques were used in advancing the soil borings. No grease other than vegetable oil was used on the auger section joints or accessory tooling. No water was added to the boreholes. Soil borings were photographed to show the exploration in relation to its immediate surroundings and staked for surveying.

Soil Sampling in the Borings. During hollow-stem auger drilling, soil samples were typically collected at 2.5-foot-depth intervals or continuously, beginning at a depth of 2.5 feet below ground surface. Surficial samples were collected manually from the upper 6 inches of material at each boring location following the removal of vegetation or forest duff, if present. Continuous sampling was often required to collect adequate soil sample volume as a result of poor sample recovery caused by the gravelly soils.

Soil samples obtained during hollow-stem auger drilling were collected using the Standard Penetration Test (SPT) procedure described in ASTM D 1587 modified to include a 3-inch-diameter split-spoon and a 300-pound hammer. The procedure involves driving a standard 3-inch outside diameter split-spoon sampler into the soil a distance of 18 inches beyond the end of the borehole. The sampler is driven by a 300-pound hammer dropping 30 inches onto the end of the drilling rod. The number of blows required to drive the sampler the final 12 inches is the (modified) Penetration Resistance. This resistance provides a measure of the density of granular soils (sands and gravels) and consistency of finer grained cohesive soils (silts and clays). This information, along with soil descriptions and other observations, was recorded on field boring forms (Figure 5-4 in Hart Crowser, 1992a).

Samples to be retained for chemical analysis were placed in laboratory-supplied clean glass jar(s) with teflon-lined screw caps, and immediately placed in a cooled ice chest. Where poor recovery occurred, soil was placed in a clean stainless steel bowl covered with aluminum foil

and composited with the next sample interval (typically immediately below). Gravels larger than approximately 1/2 inch in diameter were removed from the samples since they would not be analyzed by standard laboratory methods. Soil samples collected for field headspace vapor measurements and volatile organic analyses were placed directly into appropriate sampling jars without mixing. Prior to placement in the ice chest, all sampling jars collected for nitroaromatic explosive (NAX) analysis were wrapped in aluminum foil to limit photolysis (light-induced breakdown) of the nitroaromatic compounds. Selected samples based on field observations and soil recovery were delivered to ATI-Renton for chemical analysis. Remaining samples were stored under refrigeration at the Site.

The auger flights and all downhole sampling equipment was steam cleaned after completion of each boring. The split-spoon sampler and all other sampling equipment (e.g., stainless steel spoons or bowls) were decontaminated after each sample using the procedures discussed in the ***Equipment Decontamination*** section.

Hand-Augered Borings

Hand-augered borings were completed throughout the Site where backhoe and drill rig access was limited. Depending on soil conditions, a combination of stainless steel hand-auger, shovel, or post hole digger were used to excavate soils to a depth of three feet.

All samples were collected as the boring was advanced, either from the hand-auger or from the side walls of the (shovel) excavations. Samples were composited in a stainless steel bowl and placed in laboratory-supplied clean glass jar(s) with teflon-lined screw caps, and immediately placed in a cooled ice chest. Gravels larger than approximately 1/2 inch in diameter were removed from the samples since they would not be analyzed by standard laboratory methods. Prior to placement in the ice chest, all sampling jars collected for NAX analysis were wrapped in aluminum foil to limit photolysis (light-induced breakdown) of the nitroaromatic compounds. Soil samples collected for field headspace vapor measurements and volatile organic analyses were placed directly into appropriate sampling jars without mixing.

The hand-augered boring data were recorded on field test pit logs (Figure 5-3 in Hart Crowser, 1992a). Selected samples based on field observations and soil recovery were delivered to the analytical laboratory for chemical analysis. Remaining samples were stored under refrigeration at the Site. All equipment was thoroughly decontaminated between sample locations as discussed in the ***Equipment Decontamination*** section. Hand-augered borings were photographed to show the exploration in relation to its immediate surroundings, and staked for surveying.

Surface Soil Samples

Surface samples were collected from the upper six inches of soil following the removal of vegetation or forest duff, if present. Each sample was collected using a decontaminated shovel and/or stainless steel spoon. The soil was placed in a decontaminated stainless steel bowl. Gravels larger than approximately 1/2 inch in diameter were removed from the

samples since they would not be analyzed by standard laboratory methods. The samples were placed in laboratory-supplied clean glass jar(s) with teflon-lined screw caps, and immediately placed in a cooled ice chest. Prior to placement in the ice chest, all sampling jars collected for explosive analysis were wrapped in aluminum foil to limit photolysis (light-induced breakdown) of the explosive compounds. No surface samples were analyzed for volatile organics or field screened using the HNU photoionization detector (PID).

All surface sample soil descriptions and observations were recorded on Surface Sample Collection forms (Figure 5-5 in Hart Crowser, 1992a). After completion of sampling, each location was staked or flagged for subsequent survey. Surface samples collected on a grid across the Site Reference Area were generally surveyed prior to sample collection. All equipment was thoroughly decontaminated between sample locations as discussed in the ***Equipment Decontamination*** section.

Headspace Vapor Measurements

In areas where volatile organic analyses of soils were performed, a portion of the soil was collected for soil vapor headspace measurements to screen for the presence of volatile organic compounds (VOCs).

For soil samples to be screened for VOCs, a portion of the sample was retained in a clean glass jar, leaving an air "headspace" above the soil. The mouth of the sampling jar was covered with aluminum foil prior to capping with the plastic cover. The aluminum foil helped limit escape of volatile compounds as the measurement was taken. The soil samples were screened using an HNU PID, Model PID 101, with a 10.2 eV lamp. The headspace measurements were recorded on appropriate field logs.

Railroad Tie Sampling

Wood samples were collected from remaining railroad ties along various stretches of historical railways throughout the Site. The wood samples were collected using an electric drill and 5/8-inch ship-type auger drill bit. Samples consisted of wood cuttings generated during drilling through the thickness of the tie. The wood cuttings were mixed in a stainless steel bowl prior to placement in a laboratory-supplied glass jar with teflon-lined cap.

Hydrogeologic Explorations

The RI hydrogeologic field exploration program included installation of the following:

- Seven monitoring wells (MW-20 through MW-26) in the Water Table Aquifer;
- One monitoring well (MW-27) in a zone of perched groundwater above the Water Table Aquifer;
- Three monitoring wells completed to intercept perched water, if present, beneath the three major geologic kettles (7-B-503 in Area 7, 16-B-501 in Area 16, and 26-B-503 in Area

26);

- Four wellpoints at spring locations (SPR-2 through SPR-5) for groundwater sampling or water level measurements; and

- Six staff gages for measuring surface water elevation (SG-1 through SG-5 in Sequalitchew Creek, and SG-6 in Old Fort Lake).

Monitoring Well Drilling

Two methods of drilling, hollow-stem auger and air rotary, were used for drilling and installation of monitoring wells during the RI. Procedural details of drilling and soil sampling are discussed below.

Hollow-Stem Auger Drilling Methods. Hollow-stem auger was used to drill and complete monitoring wells MW-24, MW-25, and MW-26, as well as the three monitoring wells completed to monitor perched water in each of the three kettle areas (7-B-503, 16-B-501, and 26-B-503). Standard hollow-stem auger drilling techniques were used to advance the soil borings. No grease other than vegetable oil was used on the auger section joints or accessory tooling. No water was added to the boreholes.

In general, soil samples were collected at 5-foot-depth intervals to the depth of exploration indicated on the exploration logs (Figures A-MW-1 through A-MW-8). Samples were collected more frequently when changes in soil type were noted or when sample recovery was poor. The soil samples were collected using the Standard Penetration Test (SPT) procedure described in ASTM D 1587, modified to include a 3-inch-diameter split-spoon and a 300-pound hammer. The sampling procedures were similar to those discussed above for soil quality sampling from borings, except that samples from the monitoring well borings were retained in plastic jars since they were not submitted for chemical analysis. Samples collected from the monitoring well borings were retained only for physical testing (e.g., grain size or laboratory permeability testing), and to allow more detailed observation of geologic material types (e.g., between borings).

Air Rotary Drilling Methods. The air rotary method was used to drill and install five monitoring wells (MW-20 through MW-23 and MW-27). Borings were advanced with a TH-60 top-drive air rotary drill rig using an air-driven percussion bit inside 6- and 9-inch-diameter driven casings. Standard air rotary drilling techniques were used. In general, these techniques involve drilling ahead of the temporary driven casing a distance of one to three feet, driving the casing the same distance by means of a rig-mounted air hammer, and returning the drill cuttings to the surface with pressurized air exiting from the drill bit. An in-line oil trap was used on the air compressor discharge line to restrict oils or greases potentially present in the pressurized air from entering the borehole. A sample of particulate matter entrained in the compressed air was collected to evaluate potential contributions of hydrocarbons to the boreholes. This sampling indicated negligible amounts of hydrocarbon were added to the borehole during drilling (refer to Section 3.2.3 in Volume 1).

In drilling the first monitoring well boring, a thin zone of saturation was observed perched on a till unit. Monitoring well MW-27 was completed in this perched water unit, which is present only seasonally. As a result, the drilling method for the remaining borings was altered to include dual casings, such that the perched unit was sealed off prior to drilling through it to the underlying aquifer (in accordance with Chapter 173-160 WAC). In drilling with the dual casings, the borings were advanced to a depth of approximately 50 feet using 9-inch-diameter threaded casing. Once the 9-inch casing was set into the low-permeability till unit, the 6-inch-diameter threaded casing was telescoped down within the outer casing and was advanced through the till to the depth of exploration. As it turned out, the till and perched water were observed only at the MW-27 location (well MW-22 was advanced with the dual casings through the till to the Water Table Aquifer). Regardless, the dual casing method was used in the other air rotary boreholes as a precaution.

In monitoring wells MW- 20 and MW-21, collapsing borehole (heaving) conditions were encountered in fine sand and it was necessary to add water to the borehole to control heave and advance the borehole. The majority of this added water was removed during normal air rotary drilling operations. Regardless, the volume of water added to each boring was recorded on the field log and subsequently removed during well development.

In general, soil samples were collected from the air rotary borings at 5-foot-depth intervals to depths of 100 feet and 10-foot-depth intervals below a depth of 100 feet. Samples were collected more frequently when changes in soil type or conditions were noted in cuttings. Air rotary samples were collected using the Standard Penetration Test (SPT) procedure described in ASTM D 1587 modified to include a 3-inch-diameter split-spoon and a 300-pound hammer. Air rotary samples were used only for descriptive and or physical testing purposes, and were retained in plastic jars.

In accordance with the RI/FS Management Plan (Hart Crowser, 1992a) drill cuttings from monitoring well borings were retained on visqueen-covered, visqueen-lined bermed piles or shallow pits next to the wellheads.

Samples of Kitsap Aquitard Material. Two undisturbed samples of the Kitsap Aquitard were collected during air rotary drilling of the monitoring wells. The samples were collected using a 3-inch outside diameter split-spoon with brass ring inserts. Three 6-inch brass rings were inserted in the sampler, which was lowered down the borehole and driven with a 300-pound hammer. The undisturbed samples collected from MW-20 and MW-23 were submitted for vertical hydraulic conductivity tests using flexible wall permeameter methods at Hart Crowser's geotechnical laboratory. Following extraction from the split-spoon, the samples were capped and sealed with electrical tape and placed in sealable plastic bags with moist paper towels to avoid desiccation.

The first attempt to collect an undisturbed sample of the aquitard material (from MW-22) using a shelby tube was unsuccessful because after the shelby tube was driven into the very stiff silt (too stiff for the tube to be pushed), the pins attaching it to the drill rods snapped during the retrieval attempt. The shelby tube remained in the bottom of the boring preventing further sampling efforts. No cohesive soils suitable for laboratory hydraulic conductivity (K)

testing were encountered during the drilling of MW-21.

Monitoring Well and Wellpoint Installation

Monitoring Well Installation. Groundwater monitoring wells were installed in general accordance with Chapter 173-160 WAC "Minimum Standards for Construction and Maintenance of Wells". The monitoring well construction diagrams for the newly installed wells are presented on Figures A-MW-1 through A-MW-8 at the end of this appendix. The well installation procedures were essentially the same for all monitoring wells, regardless of the drilling method (hollow-stem auger or air rotary), and are discussed below.

The well installation procedure began by pulling back the auger or temporary steel casing to the desired depth. If the well completion depth was above the bottom of the boring, the lower portion of the borehole was backfilled with bentonite. As well installation proceeds, the auger or casing was incrementally withdrawn.

A threaded end cap was attached to the bottom of the 10-foot or 15-foot length of 2-inch-diameter Schedule 40 PVC 0.020-inch slotted well screen. For each well, the well screen was threaded to the PVC riser pipe and lowered into the casing. No glues or solvents were used to couple the PVC casing. In an attempt to keep the PVC straight in the deep monitoring wells, the PVC was generally suspended from a drill rig line throughout installation.

Silica sand (Colorado 10/20) was used as a filter pack around the well screen, and typically extended to a level three to five feet above the top of the screen. Bentonite chips were placed as an annular seal above the sand pack. The annular seal extended up to a depth of approximately 2 to 5 feet below ground. All new wells were completed with concrete surface seals and locking above-ground protective steel monuments. The PVC well cap was vented and marked with the well number.

Installation of Wellpoints for Springs 2, 3, 4, and 5. Four wellpoints were installed for the purpose of monitoring groundwater quality and/or water levels at spring locations along Sequalitchew Creek.

The wellpoints were installed at Springs 2, 4, and 5 using a 12-pound sledge hammer to drive the point to a depth of approximately 3 to 4 feet below ground. The wellpoint at Spring 3 was driven horizontally 2.5 feet into the creek bank directly above a compressed peat layer (Kitsap Aquitard), over which the spring discharge occurs. The 3-foot-long wellpoint screen sections consisted of 1.25-inch inside diameter, PVC-lined, galvanized steel with crescent-shaped openings covered by 0.010-inch mesh screen. All well points were subsequently surveyed for location coordinates and elevations.

Monitoring Well Development

The newly installed monitoring wells were developed using either a Grundfos Ready Flow II submersible pump and/or a Geoguard gas drive pump. The Geoguard pump was driven by an

air compressor fitted with an in-line oil trap.

Monitoring wells MW-20 through MW-24 and MW-27 were initially developed using the submersible pump. During development of these wells, the pump frequently shut down due to accumulations of fine-grained sediment inside of the pump housing, necessitating that the pump be pulled and cleaned several times per well. After each cleaning, the performance of the pump gradually deteriorated as the pump became clogged with silt.

Following the first round of groundwater sampling in March 1992, additional well development was performed in each of the newly installed monitoring wells using the Geoguard gas drive (air-lift) pump in an effort to redevelop the well and decrease the turbidity of the groundwater samples. Because the air lift system was less impeded by suspended sediment in the water, the second round of well development was more successful than the initial effort using the submersible pump. The two Area 40 wells installed in July 1992 (MW-25 and MW-26) were developed using the air lift pump alone.

All downhole development equipment was decontaminated before use and between wells. The decontamination consisted of scrubbing with Alconox solution, followed by a tap water rinse and a thorough spray with deionized water. In addition, the submersible pump was run submersed in an Alconox solution followed by tap water. Following development, each newly installed well was fitted with a new dedicated PVC bailer and new polyethylene rope kept within a plastic bag in the well monument.

All development water from the new monitoring wells was barreled and subsequently transferred to on-site Baker tanks (under the direction of DuPont Environmental Remediation Services [DERS]) for subsequent disposal.

Field Exploration Documentation

A record of drilling and soil sampling operations was maintained on a field exploration log form. Soil samples recovered during drilling were visually classified in the field in general accordance with the system presented on Figure A-1, Key to Exploration Logs. The soil descriptions included the following properties: density of sands and gravel/consistency of silts and clays, moisture, color, minor constituents, and major constituents. The presence of non-soil substances (e.g., debris or wood) was also noted.

Other pertinent data recorded on the field exploration logs included:

- Soil sample interval, type, and recovery;
- Drilling conditions;
- Depth at which groundwater was encountered in boring;
- Soil vapor headspace (PID) readings, if applicable; and

- Soil pH measurements, if applicable, using pH paper in a soil/deionized water slurry.

The logs for monitoring wells, test pits, soil borings, and hand-augered borings completed during the RI are provided at the end of this appendix. Following the RI monitoring wells, all the soil quality exploration logs are arranged according to area (e.g., Area 6, Area 7, etc.). The figure numbers for these logs include the area number (e.g., Figure A-6-1 for Area 6, etc.).

Equipment Decontamination

Before drilling began, the drill rig, auger sections, steel casing sections, and downhole equipment were steam cleaned. Between each boring, the drilling and downhole soil sampling equipment was steam cleaned using tap water from the on-site fire protection system. All steam cleaning water was collected in a galvanized trough and pumped into 55-gallon drums. At the completion of drilling activities all decontamination water was collected and pumped into on-site Baker Tanks (under the direction of DERS) for subsequent disposal.

Between collection of each soil sample for chemical analysis, all soil sampling equipment was decontaminated using the following procedures:

- Scrub with detergent solution (ALCONOX);
- Rinse with tap water; and
- Thoroughly spray with deionized water.

Borehole Abandonment

Boreholes, which were not completed as monitoring wells, were abandoned by pouring bentonite chips down the auger as the auger was withdrawn, in accordance with Chapter 173-160 WAC. The borings were capped with concrete surface plugs and staked for subsequent surveying.

Exploration Survey (Horizontal and Vertical Control)

Horizontal and vertical surveying control was provided for the newly installed monitoring wells. The surveying was completed by ESM, Inc. of Renton, Washington. The top of the PVC well casings were surveyed to a vertical accuracy of 0.01 foot, relative to National Geodetic Vertical Datum (NGVD). The surveyed measuring point was identified on the well casings for reference during depth to water measurements. Horizontal positions of the well casings were electronically surveyed to an accuracy of 0.1 foot, relative to state plane coordinates.

The horizontal and vertical positions of all soil quality explorations, wellpoints, springs, sea level seeps, surface water sampling locations, and staff gages were surveyed by Hart Crowser

using a Pentax PTS-II Series Electronic Total Station Laser Transit. The transit was calibrated at each location using panel marks and survey points established by ESM, Inc., or surveyed monitoring well top of casings.

Soil sampling locations except for selected locations within the Site Reference Area and the area background samples were surveyed by Hart Crowser using the Total Station Laser Transit. At each location, the State Plane coordinates (northing and easting) were recorded. Ground surface elevations were also generally recorded. The grid coordinates for the initial Site Reference Area samples were located on detailed 1 inch = 100 feet base maps (developed from the aerial flyover), and then field located according to these maps using conventional tape and compass techniques and landmarks as guides. Sample locations for Site Reference Area sampling conducted in November 1993 through January 1994 were surveyed prior to sampling based on predetermined grid coordinates. The (off-site) area background samples were measured from landmarks (e.g., dirt roads) using tape and compass techniques.

Groundwater and Surface Water Sampling

The first four rounds of RI groundwater and surface water sampling were conducted at all locations which could be sampled in March, June, September, and December of 1992. A fifth round of sampling was conducted at selected locations in January 1993. Quarterly groundwater sampling at selected locations has subsequently been conducted in April, July, and October 1993, and January and April 1994. Additional discussions of groundwater sampling and surface water sampling conducted to date are provided in Sections 3.2.1 and 4.2.1 of Volume 1, respectively. The following sections discuss the equipment and procedures used for groundwater and surface water sampling.

Groundwater Sampling Equipment

The following equipment was used for groundwater and surface water sampling:

- pH, temperature, and electrical conductivity meters;
- Oxygen meter;
- Electronic well sounder;
- Dedicated polyethylene rope;
- Dedicated PVC bailer;
- Stainless steel funnel;
- Stainless steel bucket;
- 0.45 micron filter and peristaltic pump with silicone and polyethylene tubing;
- Laboratory-supplied sampling containers with appropriate preservatives already added;
- Blue Ice and cooler; and
- Sample Custody Record.

Monitoring Well and Wellpoint Sampling Procedures

Groundwater samples were collected from monitoring wells and wellpoints (at springs) using

the following procedures:

- The water levels in each well were measured and the volume of water within the well casing calculated.

- The sampling site was prepared by laying out visqueen around the base of each monitoring well. The Groundwater Sampling Data Form (Figure 5-7 in Hart Crowser, 1992a) was filled out;

- Three casing volumes of water were purged from the well using a dedicated PVC bailer and rope. A 1-inch-diameter stainless steel bailer was used for the wellpoints (not dedicated). All purge water was barreled. During purging, field parameters (pH, temperature, and specific conductance) were measured following removal of one, two, and three casing volumes. If the pH and conductance measurements were approximately stable between the second and third casing volumes, the dissolved oxygen and temperature were measured and the groundwater sample was collected. If the parameters were not considered stable, purging continued with parameter measurements after each additional half casing volume. All readings were recorded on the Groundwater Sampling Form. Because Spring-3 flowed continually (from the horizontal wellpoint), it was sampled without purging;

- Once purging was completed, the groundwater sample was collected using the dedicated PVC bailer in the monitoring wells, or 1-inch-diameter stainless steel bailer in the wellpoints, and poured through a decontaminated stainless steel funnel into clean, labeled bottles provided by the laboratory;

- For samples collected for priority pollutants, bottles for volatile organics (VOC) analysis were filled first. The VOC sample bottles were slowly filled with water, capped, inverted, and tapped to check for remaining air bubbles. Samples for dissolved metals analysis were filtered directly from the bailer using a peristaltic pump with in-line 0.45 micron filter;

- Once filled, each bottle was capped and placed into coolers with Blue Ice. VOC bottles were placed in plastic sealable bags to minimize possible cross contamination and/or breaking of the bottles. These bottles were also kept away from direct contact with the Blue Ice to prevent freezing of the sample water;

- At the end of each sampling day, the samples were hand delivered to ATI-Renton using standard chain of custody procedures.

Background Groundwater Quality Sampling Procedures

Groundwater samples were also collected twice (July and December 1992) from six off-site wells to evaluate area background groundwater quality. These six wells included four production wells and two monitoring wells. Locations of the background wells are discussed in Section 3.2 of Volume 1.

Samples from the production wells were collected from sampling spigots positioned in-line prior to any treatment systems. Prior to sample collection the pump was run for sufficient time to purge three casing volumes. Samples from these spigots were poured directly into the sample bottles through decontaminated stainless steel funnels. Samples for dissolved metals were filtered from water collected in a decontaminated stainless steel bucket using the same procedures as for on-site monitoring wells. Samples from the monitoring wells were collected from dedicated Hydrostar sampling pumps in the wells. These pumps were driven by an air compressor. The sampling procedures were the same as for the production wells.

Surface Water and Sea Level Seep Sampling Procedures

Surface water samples were collected using a decontaminated stainless steel bucket dipped into the lake or creek. For sampling of Sequalitchew Creek, the samples were collected beginning at the furthest downstream location (SW-1) and moving upstream. For the Sea Level seeps on the beach, the bucket was positioned to intercept the seepage. Because the seeps are submerged at high tides, the Sea Level seeps were sampled at low tide.

Field parameters and dissolved oxygen content were recorded prior to sample collection. Sample bottles were filled through a stainless steel funnel into the sample bottles. Samples for dissolved metals analysis were filtered directly from the bucket using a peristaltic pump with in-line 0.45 micron filter.

As with all water samples collected during the RI, each bottle was capped and placed into coolers with Blue Ice. At the end of each sampling day, the samples were hand-delivered to ATI-Renton using standard chain of custody procedures.

Freshwater Sediment Sampling Procedures

Freshwater sediment samples were collected from each of the 7 surface water sampling locations concurrent with the first round of RI surface water sampling in March 1992. At each sampling location, the surface water sample was collected prior to collection of the sediment sample to avoid creating excessive turbidity (non-representative) in the water sample.

Freshwater sediment samples collected in March 1992 were grab samples collected from the upper 6 inches of sediment substrate using a decontaminated shovel. The sediment sample was mixed in a stainless steel bowl using a stainless steel spoon prior to placing the sample in sample jars. Gravels larger than approximately 1/2 inch in diameter were removed since they would not be analyzed by standard laboratory methods. At two locations in the creek and one location in the lake, an additional portion of sample was retained for grain size analysis (Appendix E).

In July 1993, six Old Fort Lake sediment samples were collected from randomly selected locations within a 100-foot grid system. All samples were located at least 50 feet from the low water line at the time of sampling. Two surface and subsurface composite samples were

collected from each of the six locations at depths of 0 to 2 cm and 2 to 15 cm. A diver collected the samples using a push-core sampler.

The sampling equipment was thoroughly decontaminated between each sampling location by scrubbing with an Alconox solution, followed by successive rinses with tap water and deionized water.

Marine sediment sample collection methods are discussed in Appendix D.

Sample Custody Documentation

This section discusses handling, labeling, and custody of soil, water, and sediment samples.

Sample Handling. Field samples were collected according to the procedures specified in the sections above. Preservation and storage measures for all samples were followed in general accordance with the Quality Assurance Project Plan (Section 5) in the RI/FS Management Plan (Hart Crowser, 1992a).

Sample Labeling. Sample numbers, date and time, sampler's initials, Hart Crowser job number, and other pertinent comments such as preservation were recorded on each sample label. To expedite sample collection, labels were generally filled out prior to sampling with only the time and date needing completion at the time of sampling.

Sample Custody. Custody records were maintained for all soil, water, and sediment samples collected during the RI. Samples were delivered by the Hart Crowser field representative to the laboratory, generally at the end of each sampling day, therefore the chain of custody form was signed only by the Hart Crowser representative and the laboratory representative.

Specifications for chemical analyses were made on the custody record under the Testing header. Other information listed on this form included date of sampling, sample designations, sampler's signature, Hart Crowser project name and job number, sample matrix, laboratory-assigned number, total number of sample containers, method of shipment, and any additional specialized instructions for sample holding, extraction, or analysis with reference to specific laboratory work orders. Copies of all chain of custody records are retained by Hart Crowser.

Hydrogeologic Data Collection

Water level monitoring, *in situ* hydraulic conductivity testing (slug testing), and short-term pumping tests were conducted to provide data on groundwater flow directions and rates. The equipment and field procedures used are discussed below.

Water Level Monitoring

Depth to water measurements in all groundwater and surface water locations were made every two months between April 1992 and December 1992. Water level measurements were

collected using an electric well probe and tape measure graduated in 0.01-foot increments. Depth to water below the top of surveyed measuring point on the top of the PVC well casing was recorded to 0.01 foot. The tip of the well probe was rinsed between each measurement. The water level data are presented in Table A-1.

In Situ Hydraulic Conductivity Testing (Slug Testing)

In situ hydraulic conductivity tests (slug tests) were conducted in 12 monitoring wells during the RI. Slug tests are the typical method for estimating hydraulic conductivity (K) of subsurface soils near a well, by measuring the rate of water level fall or rise in the well after the static water level is suddenly displaced.

In falling head slug tests, a 10-foot-long, 1.5-inch-diameter, solid PVC rod was "instantaneously" lowered into the well, causing a sudden rise in the water level. An automatic data acquisition system with downhole 7 psi pressure transducer recorded the falling water level over time as it re-equilibrated toward the static level. In the rising head tests, the situation was reversed; the slug rod was "instantaneously" withdrawn from the well, causing the water level to drop, followed by a water level rise to equilibrium. The slug rod and pressure transducer were decontaminated between the testing of different monitoring wells.

Because all monitoring wells tested are in aquifers under unconfined conditions, data from all tests were analyzed by the method of Bouwer and Rice (1976) for unconfined (water table) aquifer conditions. The water level response in newly installed monitoring wells MW-20 and MW-21 was too fast to provide any usable data for analysis. The results of the slug tests are provided in Section 3.1.

Short-Term Pumping Tests

In addition to the slug tests, short-term pumping tests were conducted in two selected monitoring wells. The primary reason these pumping tests were conducted instead of additional slug tests was that, by pumping continuously, a larger portion of the aquifer could potentially be stressed, resulting in more representative data.

In conducting the tests, a 2-inch-diameter submersible pump was placed near the bottom of the well casing. The automatic data logger's pressure transducer was placed as deep as possible above the pump. The pump was run at the maximum rate (4 to 5 gpm depending on lift) for approximately 45 minutes, during which time drawdown data were recorded automatically. The discharge rate was monitored frequently during pumping by measuring the time required to fill a 4-gallon bucket. After approximately 45 minutes, the pump was shut off and the water level recovery data were recorded until static conditions were achieved. The pump discharge hose and pressure transducer cable occupied most of the space within the monitoring well casing. Therefore, it was not possible to collect manual (well sounder) depth-to-water measurements as backup to the data logger readings. The 7 psi transducer was manufactured by Instrumentation Northwest (INW) of Redmond, Washington. The transducers are routinely sent back to INW for recalibration using a pressure cell apparatus.

The water produced during the pumping tests was collected in the drums also used for storing groundwater sampling purge water. This water was collected and pumped into on-site Baker Tanks (under the direction of DERS) for subsequent disposal.

All downhole development equipment was decontaminated before use and between wells. The decontamination consisted of scrubbing with Alconox solution, followed by a tap water rinse and a thorough spray with deionized water. In addition, the submersible pump was run submersed in an Alconox solution followed by tap water.

Data from all tests were analyzed by the Cooper-Jacob semi-logarithmic method (Cooper and Jacob, 1946). Because the monitoring wells were not designed to be hydraulically efficient, it is likely that a substantial portion of the drawdown observed during pumping may have been attributable to well loss. As a result, the recovery data (when pump was turned off) were generally considered more representative of aquifer response than the pumping data. The results of the pumping tests are provided in Section 3.1.

References for Appendix A

Bouwer, H. and R.C. Rice, 1976. A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells, Water Resources Research, V. 12, No. 3, pp. 423-428.

Cooper, H.H. and C.E. Jacob, 1946. A Generalized Graphical Method for Evaluating Formation Constants and Summarizing Well Field History, Transactions of the American Geophysical Union, V. 27, pp. 526-534.

MONITORING WELL BORING LOGS AND CONSTRUCTION DATA

Key to Exploration Logs

Sample Description

Classification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification methods of ASTM D 2488 were used as an identification guide.

Soil descriptions consist of the following:
Density/consistency, moisture, color, minor constituents, MAJOR CONSTITUENT, additional remarks.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance.
Soil density/consistency in test pits is estimated based on visual observation and is presented parenthetically on the test pit logs.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot	Approximate Shear Strength in TSF
Very loose	0 – 4	Very soft	0 – 2	<0.125
Loose	4 – 10	Soft	2 – 4	0.125 – 0.25
Medium dense	10 – 30	Medium stiff	4 – 8	0.25 – 0.5
Dense	30 – 50	Stiff	8 – 15	0.5 – 1.0
Very dense	>50	Very stiff	15 – 30	1.0 – 2.0
		Hard	>30	>2.0

Moisture

Dry	Little perceptible moisture
Damp	Some perceptible moisture, probably below optimum
Moist	Probably near optimum moisture content
Wet	Much perceptible moisture, probably above optimum

Minor Constituents

	Estimated Percentage
Not identified in description	0 – 5
Slightly (clayey, silty, etc.)	5 – 12
Clayey, silty, sandy, gravelly	12 – 30
Very (clayey, silty, etc.)	30 – 50

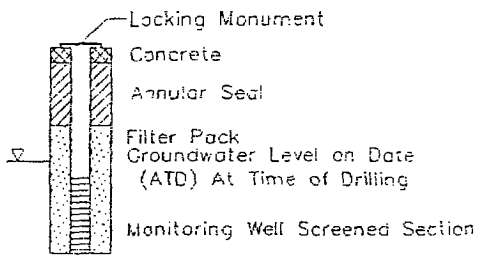
Legends

Sampling Test Symbols

BORING SAMPLES

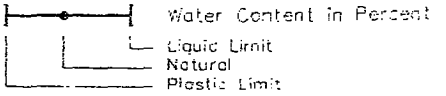
⊠	Split Spoon
⊘	Shelby Tube
▥	Cuttings
▯	Core Run
*	No Sample Recovery
P	Tube Pushed, Not Driven

Groundwater Observations



Test Symbols

GS	Grain Size Classification
CN	Consolidation
TUU	Triaxial Unconsolidated Undrained
TCU	Triaxial Consolidated Undrained
TCD	Triaxial Consolidated Drained
QU	QU
DS	Direct Shear
K	Permeability
PP	Pocket Penetrometer Approximate Compressive Strength in TSF
TV	Torvane Approximate Shear Strength in TSF
CBR	California Bearing Ratio
MD	Moisture Density Relationship
AL	Atterberg Limits



(R)	Sample Removed during Interim Source Removal

Figure A-1

Boring Log and Construction Data for

Monitoring Well MW-20

Geologic Log

Depth in feet

Approx. Ground Surface Elevation in Feet 194.3

0 — Medium dense to dense, damp to moist, brown, sandy to very sandy GRAVEL.

20 — Dense, moist, brown, gravelly, coarse SAND.

Medium dense, damp to moist, brown, sandy to very sandy GRAVEL.

50 — Dense to very dense, moist, brown, gravelly to very gravelly, coarse to medium SAND

70 — Lens of sightly silty GRAVEL.

100

Sample	N
S-1	20
S-2	34
S-3	42
S-4	36
S-5	18
S-6	30
S-7	19
S-8	20
S-9	21
S-10	31
S-11	36
S-12	81
S-13	67
S-14	70
S-15	50/5
S-16	55
S-17	36
*	39
S-19	18

Monitoring Well Design

Casing Stickup in Feet 2.2

Top of PVC in Feet 196.48

Lab Tests

GS

ATD

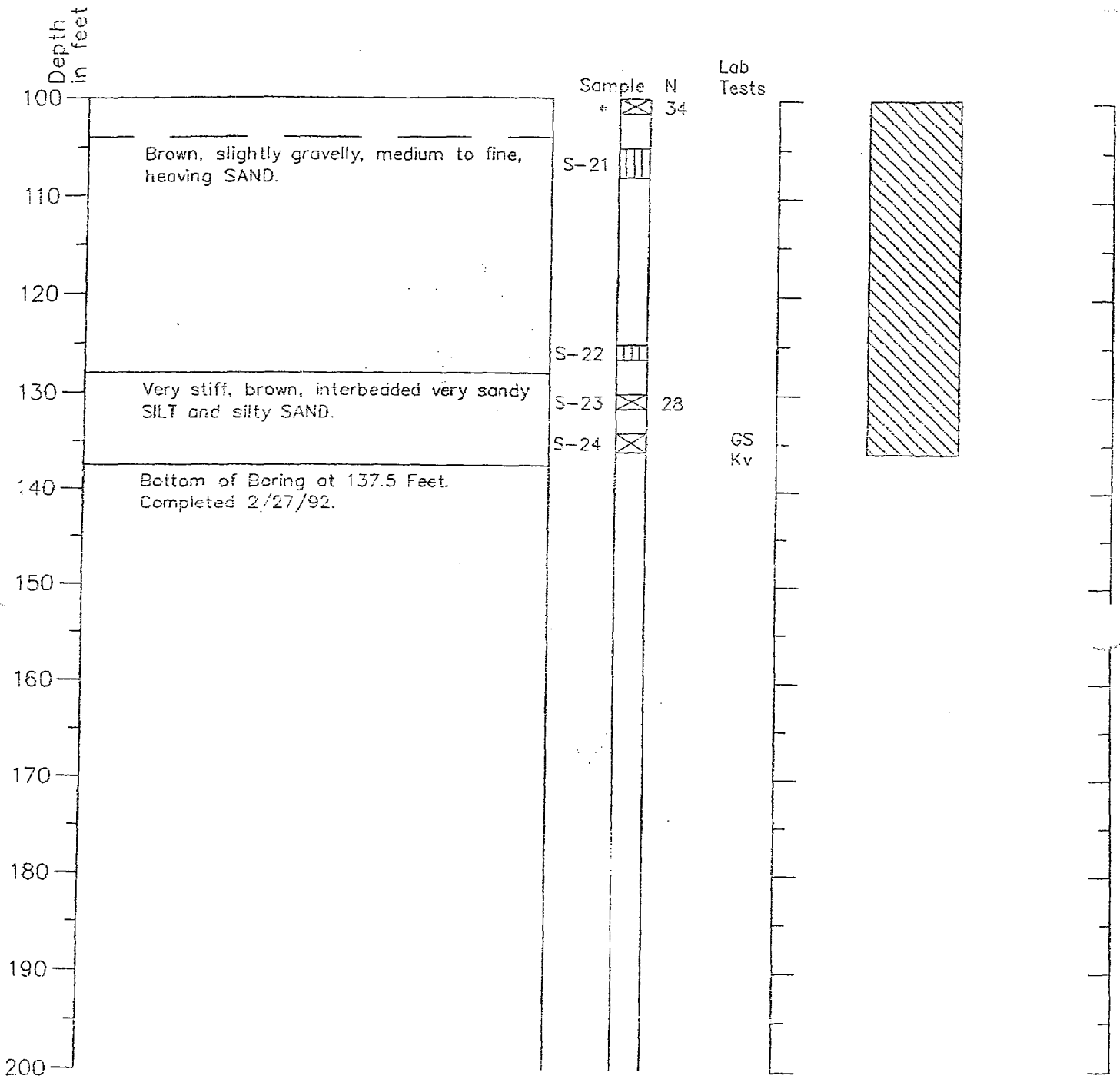
2/9

Figure A-MW-1 1 of

Boring Log and Construction Data for Monitoring Well MW-20

Geologic Log

Monitoring Well Design



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-MW-1 2 of 2

Boring Log and Construction Data for Monitoring Well MW-21

Geologic Log

Depth in feet

Approx. Ground Surface Elevation in Feet 213.3

0 — Very dense, damp, brown, very sandy GRAVEL.

10

20 — Very dense, damp to moist, brown, gravelly SAND.

30

40

50 — Very dense, damp, brown, slightly sandy GRAVEL.

60 — Medium dense to dense, damp, brown, slightly gravelly SAND.

70 — Very dense, damp to wet, brown, gravelly SAND.

Becomes wet.

80

Lens of sandy GRAVEL.

90 — (Very dense), brown, wet, slightly silty, slightly gravelly SAND. (Heaving)

100

Sample	N	Lab Tests
s-1	80/10	
s-2	50/6	
s-3	55	
S-4	50/6	
S-5	62	
S-6	42	
S-7	51	
S-8	67	
S-9	53	
S-10	53	
S-11	58	
S-12	41	
S-13	50/6	
*	50/5	
S-15	50/6	
S-16	50/5	
S-17	55	GS
*	51	
S-19		

Monitoring Well Design

Casing Stickup in Feet 2.6

Top of PVC in Feet 215.86

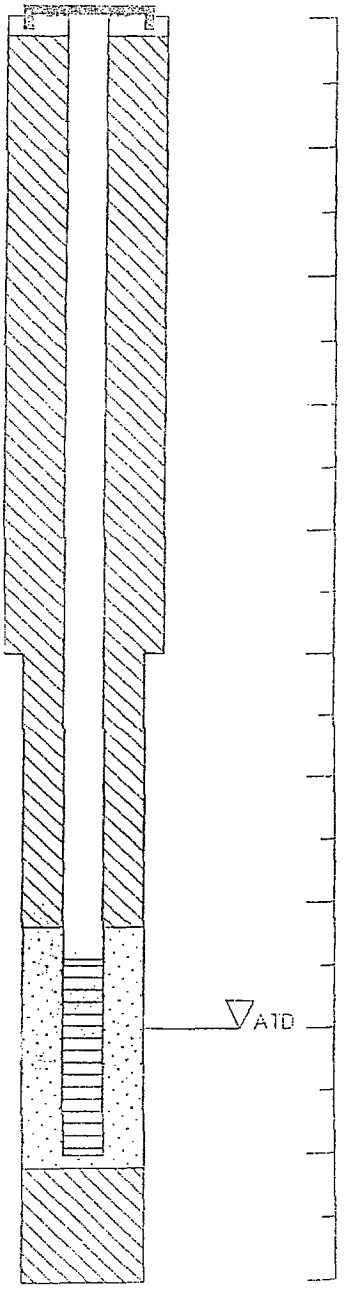
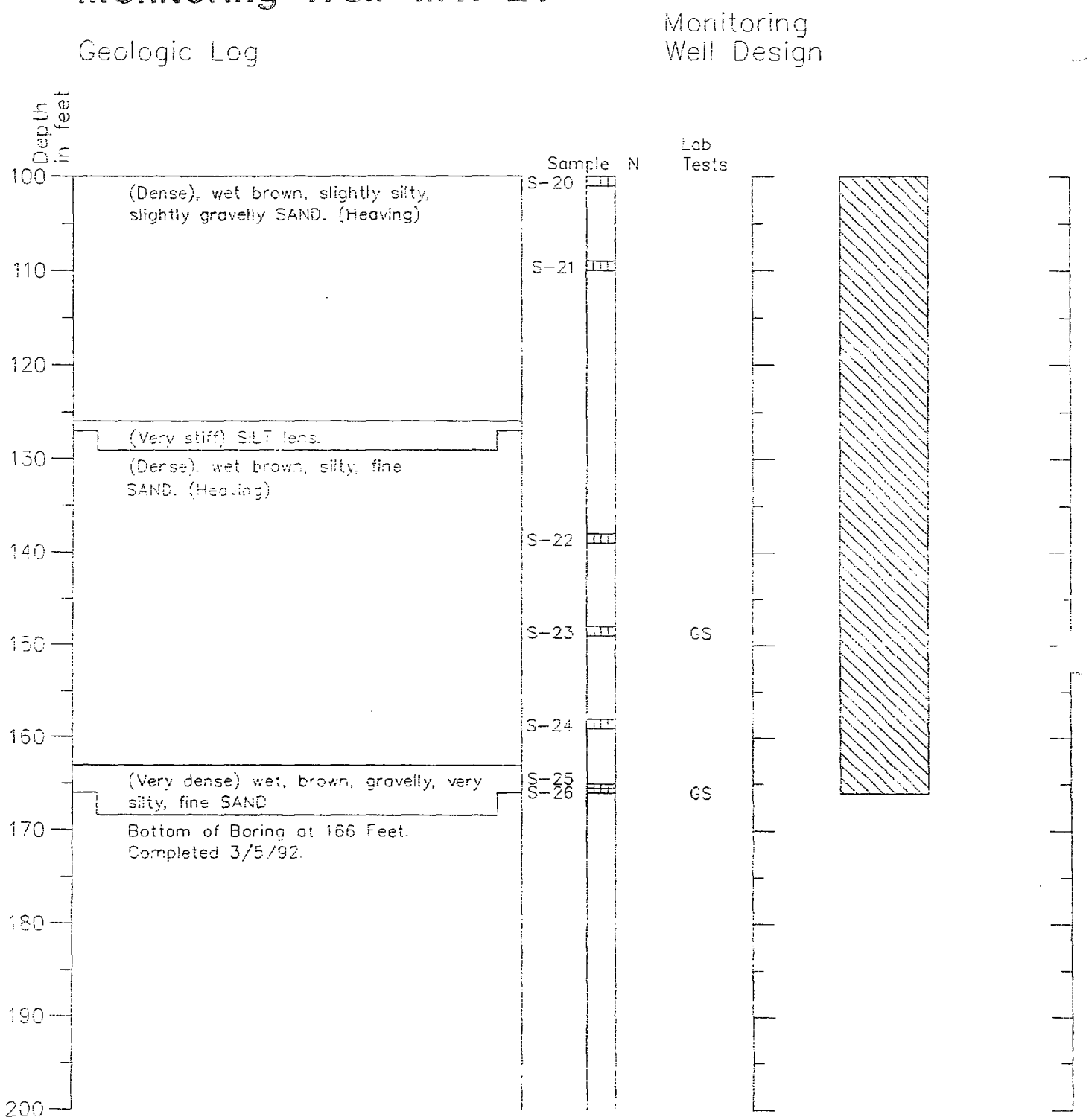


Figure A-MW-2 1 of 2

Boring Log and Construction Data for Monitoring Well MW-21



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-MW-2 2 of 2

Monitoring Well MW-22

Geologic Log

Monitoring Well Design

Casing Stickup in Feet: 2.5
Top of PVC in Feet: 219.17

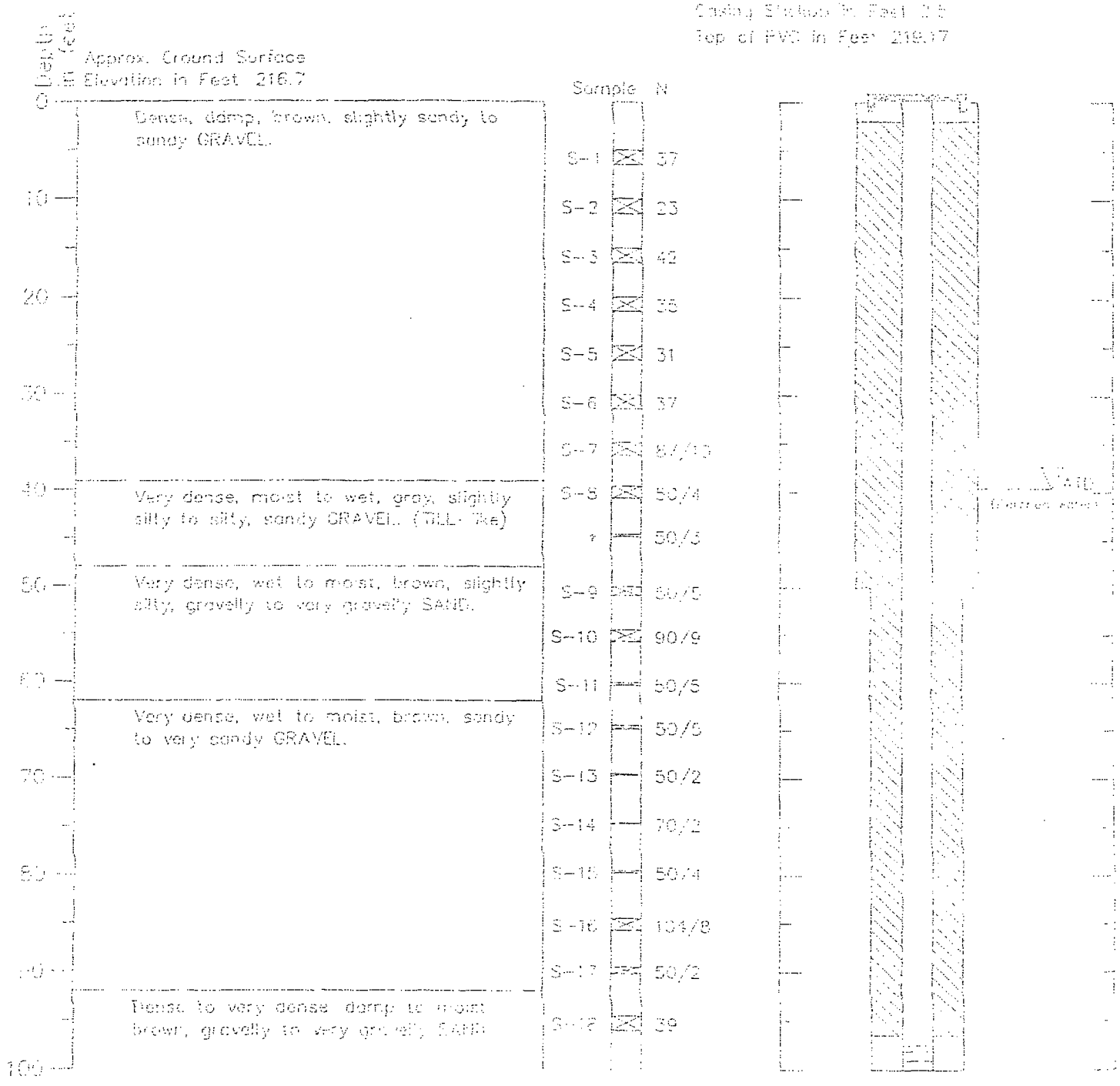
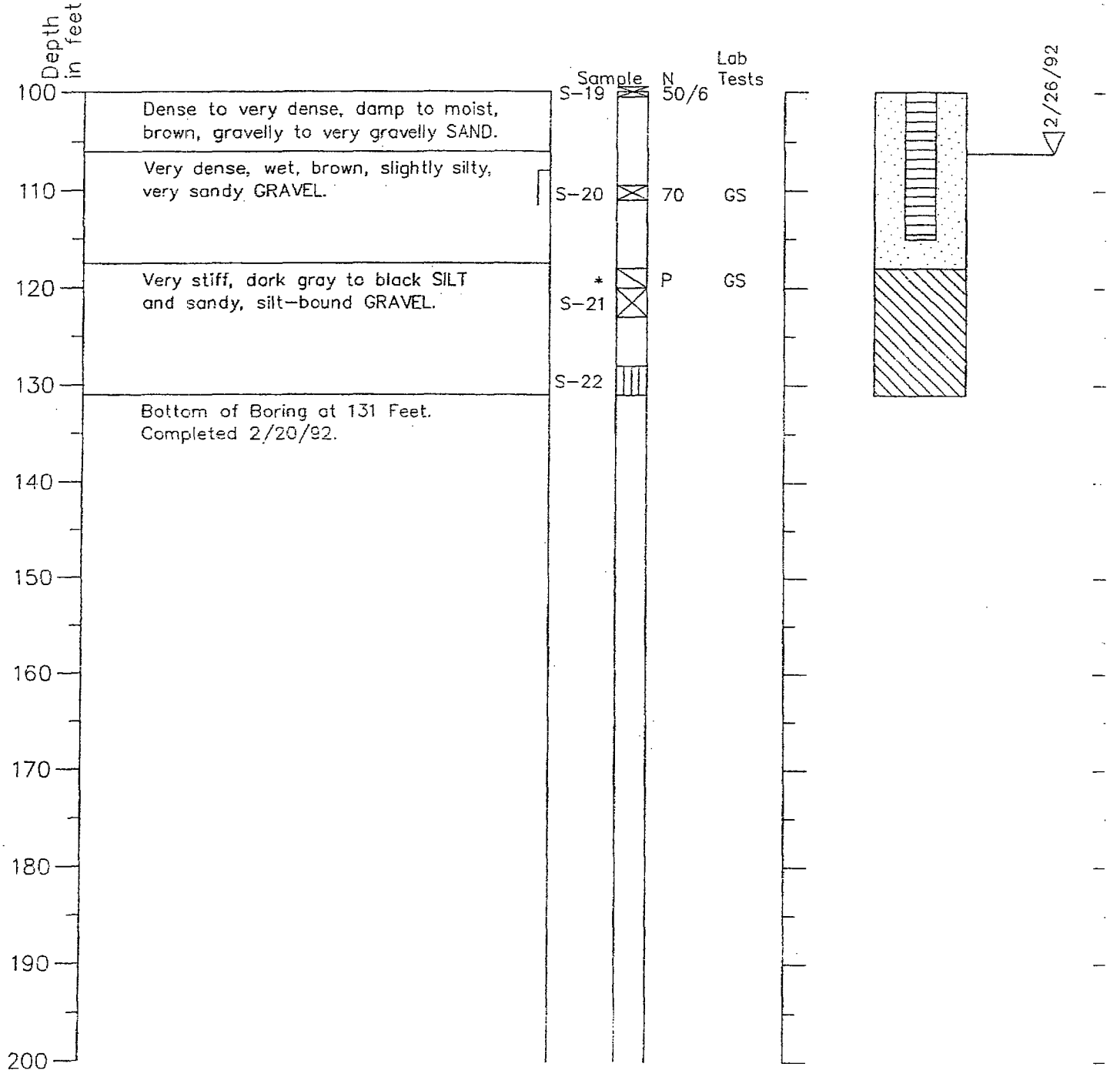


Figure A-MW-3 1 of 2

Boring Log and Construction Data for Monitoring Well MW-22

Geologic Log

Monitoring Well Design



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
4. Sample S-22 was cuttings sample collected after attempted shelby tube broke off of drill rods.

Figure A-MW-3 2 of

Boring Log and Construction Data for Monitoring Well MW-23

Geologic Log

Depth in feet

Approx. Ground Surface Elevation in Feet 207.4

Depth	Description
0	Very dense, damp, yellow-brown, sandy GRAVEL
20	Dense, damp to moist, brown-gray, very gravelly, coarse SAND.
30	Dense to very dense, damp to moist, brown, sandy to very sandy GRAVEL.
60	Dense, moist, brown with rusty-orange mottling, slightly silty, very gravelly coarse SAND.
70	Dense to very dense, damp to moist, brown, sandy to very sandy GRAVEL.

Sample	N	Lab Tests
S-1	52/6	
S-2	90/10	
S-3	53	
S-4	40	
S-4	32	
S-6	43	
S-7	39	
S-8	29	
S-9	52	
S-10	65	
S-11	69	
S-12	58	
S-13	31	
S-14	38	
S-15	45	
S-16	44	
S-17	57	
S-18	28	
S-19	48	
S-20	86/11	

Monitoring Well Design

Casing Stickup in Feet 2.4

Top of PVC in Feet 209.81

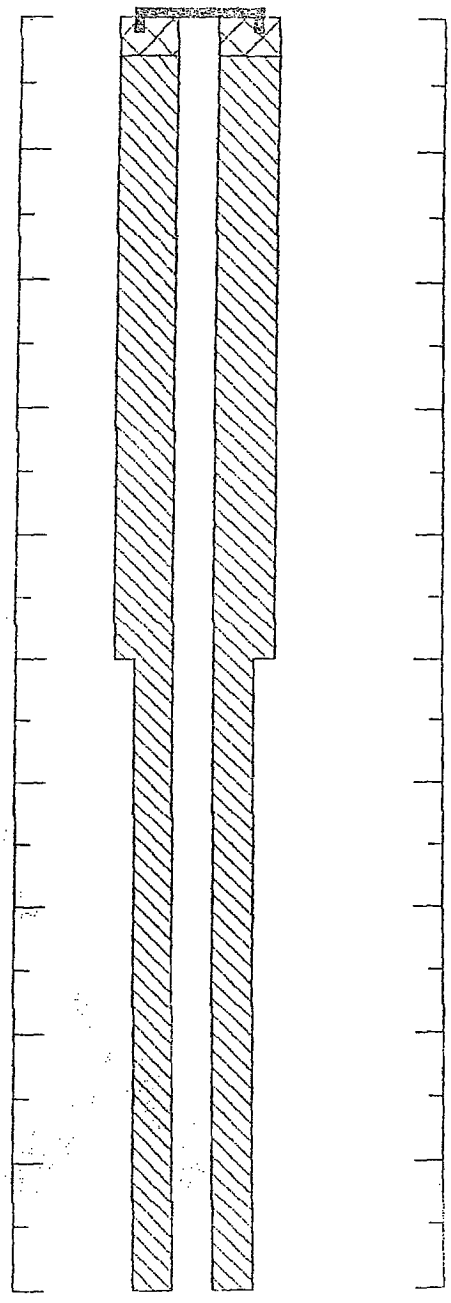
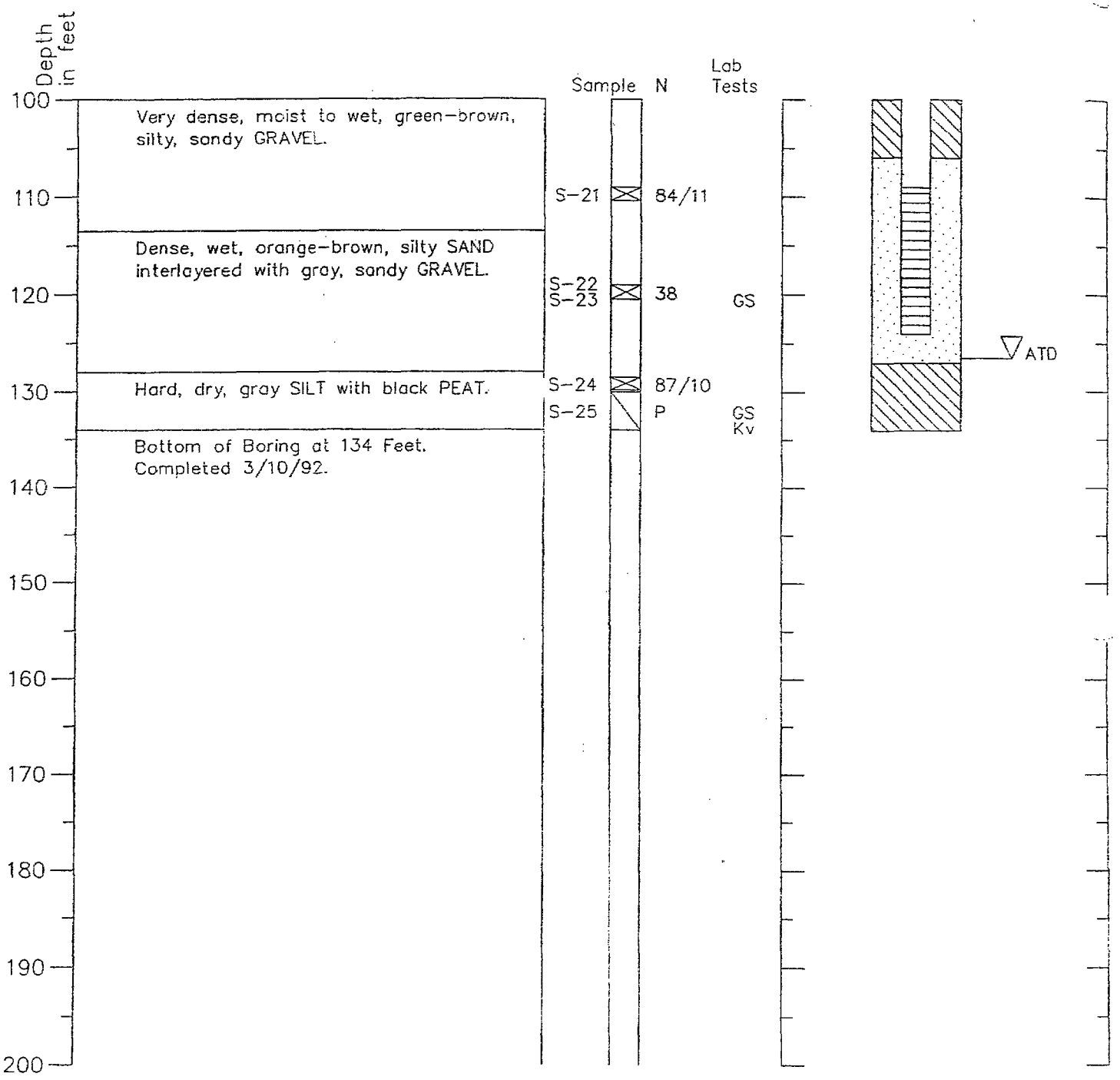


Figure A-MW-4 1 of 2

Boring Log and Construction Data for Monitoring Well MW-23

Geologic Log

Monitoring Well Design

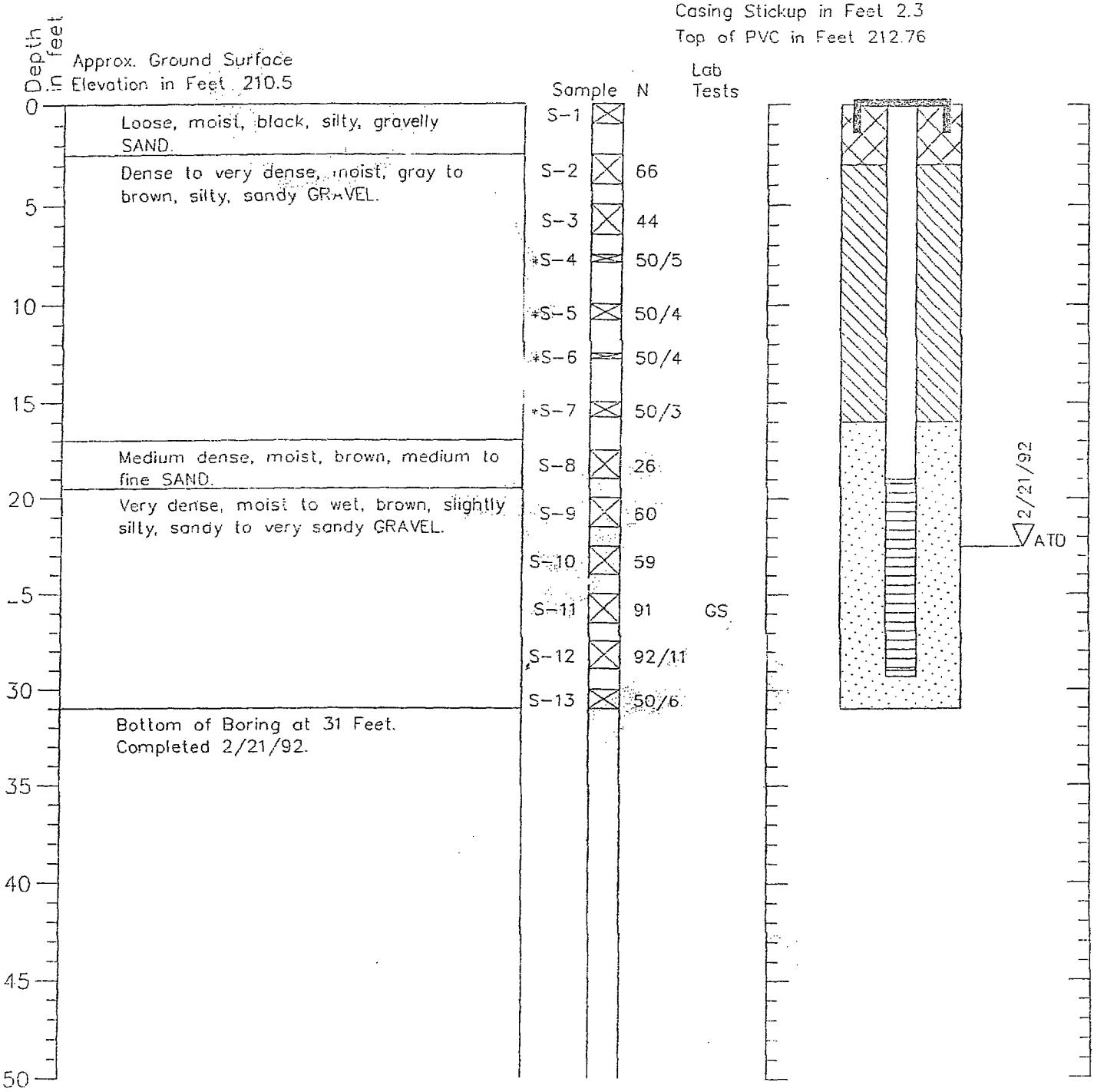


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-MW-4 2 of

Boring Log and Construction Data for Monitoring Well MW-24

Geologic Log



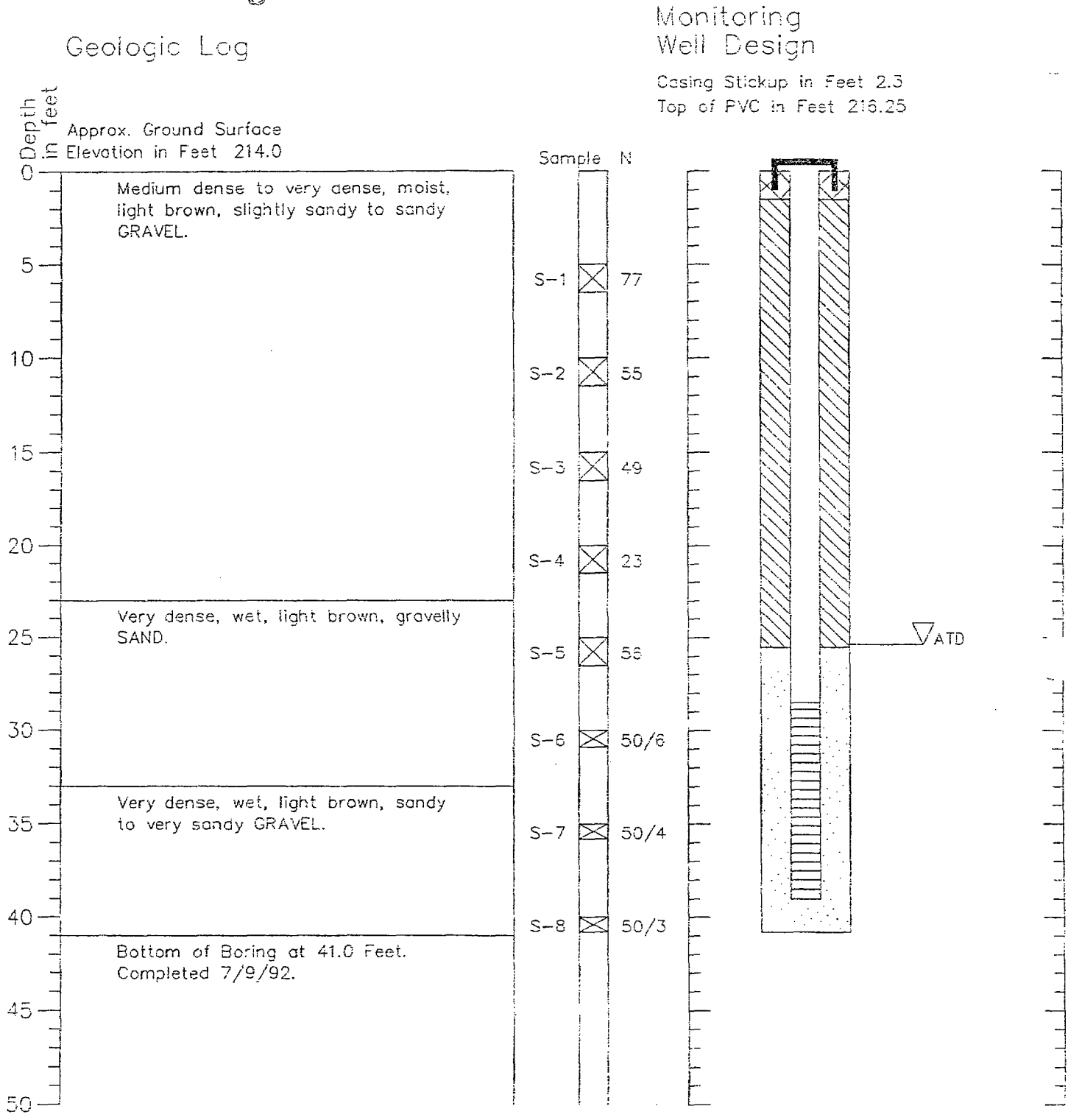
Monitoring Well Design

Casing Stickup in Feet 2.3
Top of PVC in Feet 212.76

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-MW-6

Boring Log and Construction Data for Monitoring Well MW-25



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

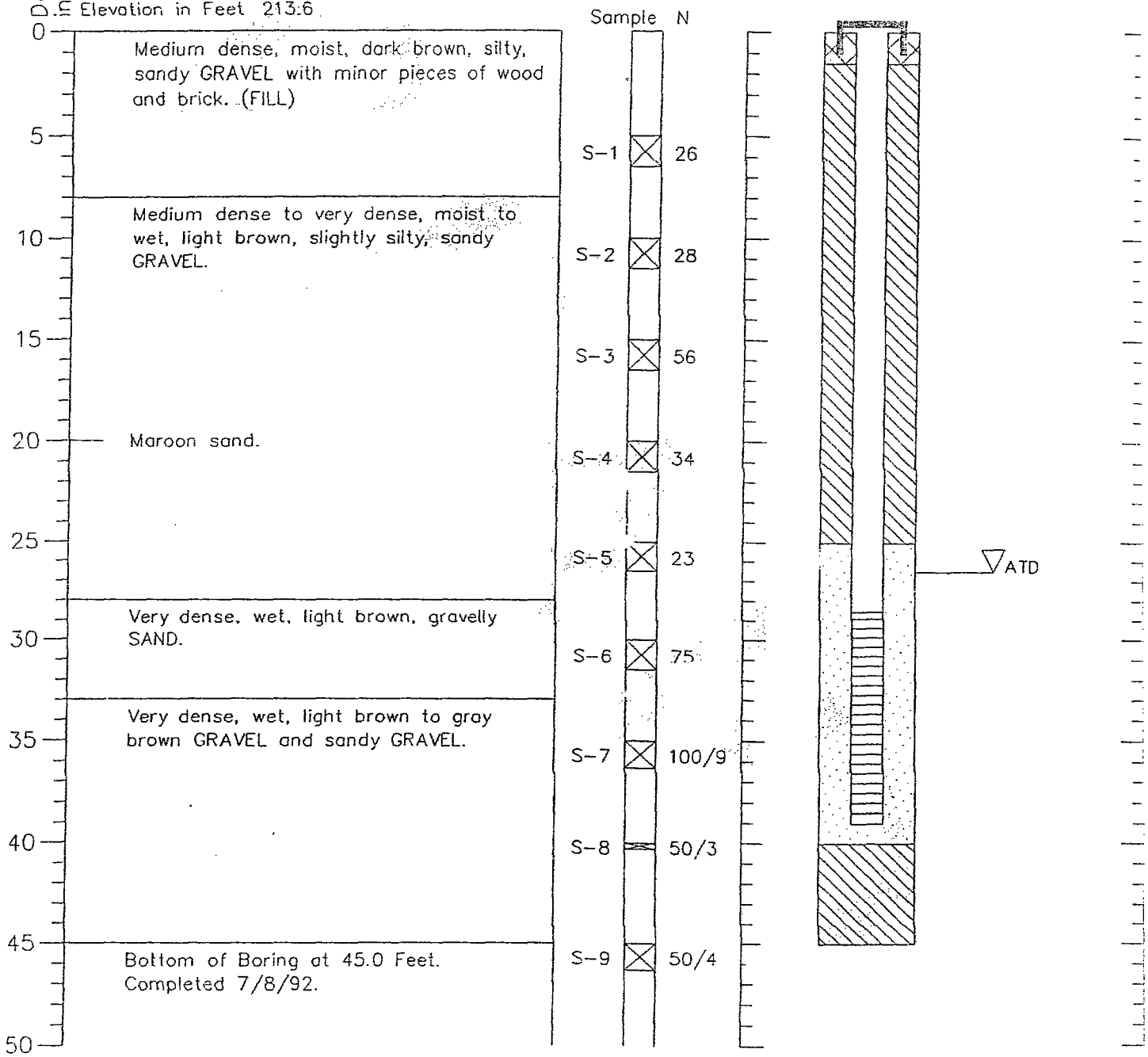
Figure A-MW-6

Monitoring Well MW-26

Geologic Log

Monitoring Well Design

Casing Stickup in Feet 2.3
Top of PVC in Feet 215.88



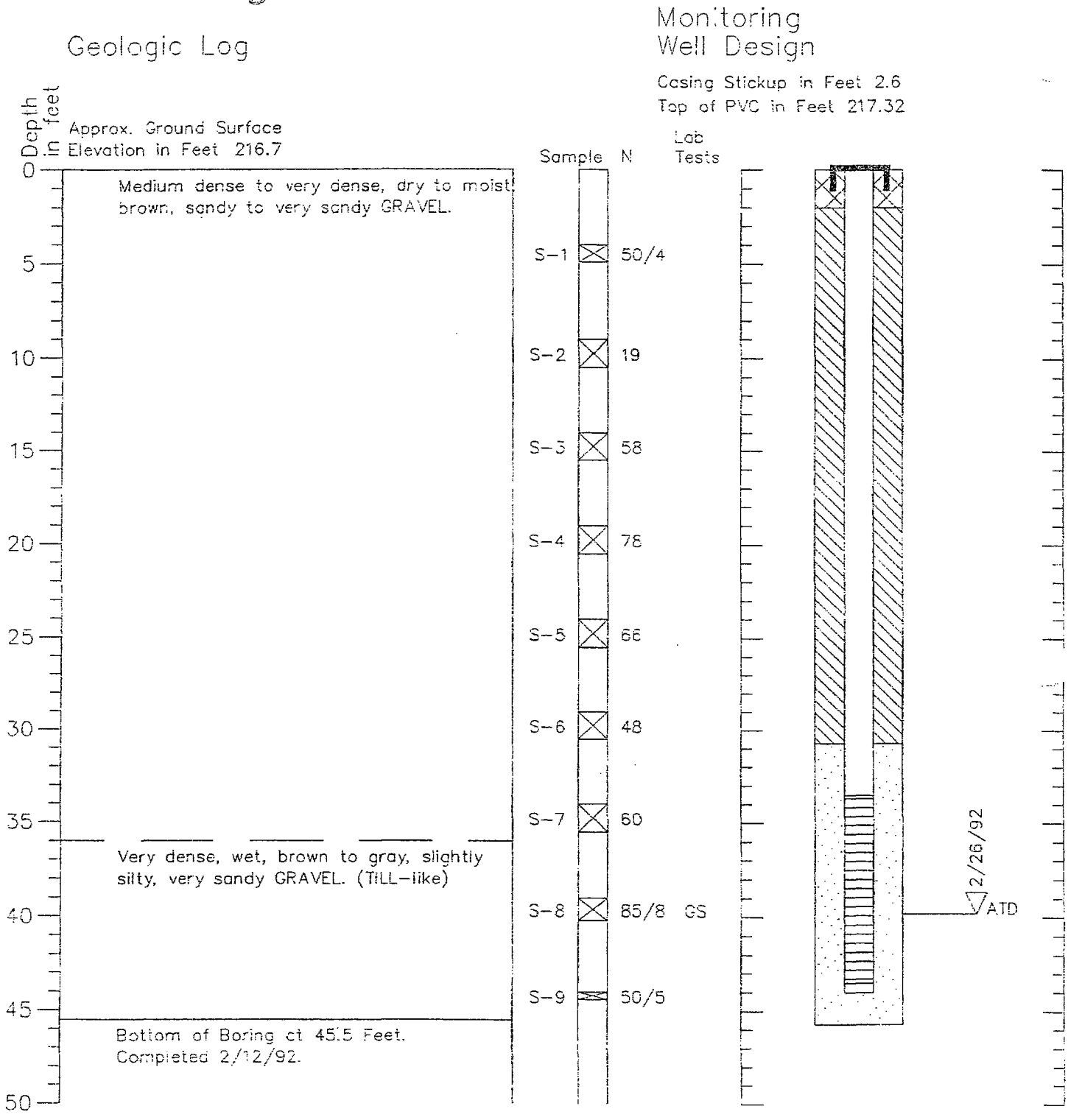
1. Refer to Figure A--1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

HARTCROWSER

J-3534-07 7/9

Figure A-MW-7

Boring Log and Construction Data for Monitoring Well MW-27



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-MW-8

AREA 5
EXPLORATION LOGS

Log of Test Pit 5-TP-501
Ground Surface Elevation Approximately 211.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 1.5	(Medium dense), moist, brown, slightly silty, very gravelly SAND with abundant roots.
S-2(R)	3 to 6	5	1.5 to 10	(Dense), moist, gray, sandy GRAVEL (stratified).
S-3(R)	8 to 10	5		

Bottom of 5-TP-501 at 10 feet, completed 2/25/92.

Log of Test Pit 5-TP-502
Ground Surface Elevation Approximately 211.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2.5	(Medium dense), moist, rusty brown, sandy GRAVEL (stratified).
S-2(R)	3 to 6	5	2.5 to 10	(Dense), moist, rusty brown, sandy to slightly sandy GRAVEL, with lens of silty, sandy gravel from 5.5 to 6 feet.
S-3(R)	8 to 10	5		

Bottom of 5-TP-502 at 10 feet, completed 2/25/92.

Note:
Stratification in upper 2.5 feet dips to the west, away from the kettle. Below 2.5 feet, bedding is horizontal.

Log of Test Pit 5-TP-503
Ground Surface Elevation Approximately 162.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2	(Medium dense), moist, brown, gravelly, silty SAND with abundant roots.
S-2(R)	3 to 6	5	2 to 10	(Medium dense), moist, light brown, slightly gravelly SAND with occasional large roots.
S-3(R)	8 to 10	5		

Bottom of 5-TP-503 at 10 feet, completed 2/25/92.

Note:
1.5-foot-long piece of iron strapping encountered at 1-foot depth.

Log of Test Pit 5-TP-504
Ground Surface Elevation Approximately 158.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	NM	0 to 2.5	(Medium dense), moist, tan and brown, slightly gravelly, silty SAND with abundant debris (bricks, can, metal strapping) and potential asbestos-containing material.

Bottom of 5-TP-504 at 2.5 feet, completed 2/26/92.

Note:
5-TP-504 abandoned because of presence of abundant potential asbestos-containing material in upper 1.5 feet. Surface sample 5-SS-501 collected adjacent to abandoned test pit.

Log of Test Pit 5-TP-505
Ground Surface Elevation Approximately 156.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 0.5	(Loose), moist, purplish red, vitrified material.
S-2(R)	3 to 6	5	0.5 to 3	(Medium dense), moist, tan and brown, sandy GRAVEL with metal debris (strapping) in upper foot.
			3 to 7	(Medium dense), moist, brownish gray, sandy GRAVEL.
S-3(R)	8 to 10	5	7 to 10	(Dense), moist, gray, gravelly, medium SAND.

Bottom of 5-TP-505 at 10 feet, completed 2/26/92.

Log of Test Pit 5-TP-506
Ground Surface Elevation Approximately 160.0 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No samples collected	0 to 3	(Dense), moist, gray, sandy GRAVEL with drum fragments and purplish red, vitrified material.

Bottom of 5-TP-506 at 3 feet, completed 2/25/92.

Note:
5-TP-506 abandoned because of drum fragments encountered in upper 1.5 feet. Test pit replaced by 5-TP-507.

Log of Test Pit 5-TP-507
Ground Surface Elevation Approximately 157.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 1.5	(Medium dense), moist, gray, sandy GRAVEL with abundant purplish red, vitrified material.

Bottom of 5-TP-507 at 1.5 feet, completed 2/25/92.

Note:
5-TP-507 abandoned due to presence of purplish red, vitrified material. Sample S-1 is sample of that material.

Log of Test Pit 5-TP-508
Ground Surface Elevation Approximately 147.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	3.5	0 to 1	(Medium dense), moist, brownish red, slightly silty, gravelly SAND with interlayered red SILT and abundant potential asbestos-containing material.

Bottom of 5-TP-508 at 1 foot, completed 3/12/92.

Notes:
1) 5-TP-508 was replacement for 5-HA-506 since backhoe access was possible at that location.
2) 5-TP-508 was abandoned due to presence of potential asbestos-containing material in upper 1 foot.

Log of Test Pit 5-TP-509
Ground Surface Elevation Approximately 202.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5.5	0 to 0.5	(Medium dense), damp, dark brown, slightly silty, slightly sandy GRAVEL with abundant roots and brick debris.
			0.5 to 3.5	(Dense), damp to moist, brown, sandy GRAVEL with occasional roots.
S-2(R)	3 to 6	5	3.5 to 6	(Loose), moist, gray, gravelly, medium SAND.

Bottom of 5-TP-509 at 6 feet, completed 3/12/92.

Note:
5-TP-509 was replacement for 5-HA-511 since backhoe access was possible at that location.

Log of Test Pit 5-TP-510
Ground Surface Elevation Approximately 211.8 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No samples collected	0 to 1.5	(Medium dense), moist, brownish red, slightly silty, sandy GRAVEL with abundant potential asbestos-containing material.

Bottom of 5-TP-510 at 1.5 feet, completed 3/12/92.

Notes:
1) 5-TP-510 was second attempt in general location of 5-TP-508.
2) 5-TP-510 was abandoned due to presence of potential asbestos-containing material in upper 1 foot.

Log of Hand Auger Boring 5-HA-501
Ground Surface Elevation Approximately 171.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 1	(Loose), moist, dark brown, silty, sandy GRAVEL.
S-2(R)	2 to 3	5	1 to 3	(Loose), moist, light brown-gray, sandy GRAVEL.

Bottom of 5-HA-501 at 3 feet, completed 3/12/92.

Note:
5-HA-501 completed within the ditch below the southern of two former drain lines from the acid production area.

Log of Hand Auger Boring 5-HA-502
Ground Surface Elevation Approximately 173.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 1.5	(Loose), damp, black-brown, slightly silty, gravelly, medium to fine SAND with minor roots; rusted metal flakes in top 2 inches.
S-2(R)	3 to 4	5	1.5 to 4	(Medium dense), damp, light brown, sandy GRAVEL.

Bottom of 5-HA-502 at 4 feet, completed 3/9/92.

Log of Hand Auger Boring 5-HA-503
Ground Surface Elevation Approximately 174.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4.5	0 to 1	(Loose to medium dense), damp, red-brown, silty, gravelly, medium to fine SAND; abundant rusted metal flake in top 4 inches.
S-2(R)	2 to 3	4.5	1 to 3	(Medium dense), damp, brown, slightly silty, sandy GRAVEL.

Bottom of 5-HA-503 at 3 feet, completed 3/9/92.

Log of Hand Auger Boring 5-HA-504
Ground Surface Elevation Approximately 177.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4.5	0 to 3	(Dense), damp, light brown-gray, slightly sandy GRAVEL to 8-inch diameter.
S-2(R)	2 to 3	4.5		

Bottom of 5-HA-504 at 3 feet, completed 3/9/92.

Note:
5-HA-504 completed within the deep ditch below the northern of two former drain lines (with spillway) from the acid production area.

Log of Hand Auger Boring 5-HA-505
Ground Surface Elevation Approximately 193.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4	0 to 0.5	(Loose), damp, black, gravelly SAND mixed with cobbles.
			0.5 to 1.5	(Dense), damp, dark brown, sandy GRAVEL.
S-2(R)	2 to 3	4	1.5 to 3.5	(Dense), damp, light brown, sandy GRAVEL.

Bottom of 5-HA-505 at 3.5 feet, completed 3/10/92.

Log of Hand Auger Boring 5-HA-507
Ground Surface Elevation Approximately 176.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4	0 to 2	(Loose), purplish red, vitrified, granular FILL, with glass fragments and stained cobbles.
S-2(R)	2.5 to 3.5	5	2 to 3.5	(Medium dense), moist, brown, sandy GRAVEL.

Bottom of 5-HA-507 at 3.5 feet, completed 3/10/92.

Log of Hand Auger Boring 5-HA-508
Ground Surface Elevation Approximately 169.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4.5	0 to 3	(Dense), damp, brown, slightly silty, gravelly SAND with minor roots.
S-2(R)	2 to 3	5		

Bottom of 5-HA-508 at 3 feet, completed 3/10/92.

Log of Hand Auger and Boring 5-HA-509
Ground Surface Elevation Approximately 181.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 3	(Dense), damp, brown, slightly silty, gravelly, medium to fine SAND; organics in top 2 inches.
S-2(R)	2 to 3	4.5		

Bottom of 5-HA-509 at 3 feet, completed 3/10/92.

Log of Hand Auger Boring 5-HA-510
Ground Surface Elevation Approximately 182.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4	0 to 1	(Loose), damp, dark brown, slightly silty, gravelly, medium to fine SAND.
S-2(R)	2 to 3	4	1 to 3	(Dense), damp, brown, gravelly, medium to fine SAND.

Bottom of 5-HA-510 at 3 feet, completed 3/12/92.

Log of Hand Auger Boring 5-HA-512
Ground Surface Elevation Approximately 189.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4	0 to 1.5	(Loose), moist, black SAND; petroleum odor at 0 to 1 foot; ½ inch of oil on surface; bricks and rusted metal flakes from depths of 1 to 1.5 feet.
			1.5 to 2	(Medium dense), moist, purplish red, granular FILL with cobbles.
S-2(R)	2 to 3	4	2 to 3	(Medium dense), moist, light brown, gravelly SAND.

Bottom of 5-HA-512 at 3 feet, completed 3/26/92.

Log of Hand Auger Boring 5-HA-513
Ground Surface Elevation Approximately 191.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 0.5	Moist, dark brown, silty SAND with roots; plastic flakes at surface.
			0.5 to 2	Moist, brown, gravelly SAND.
S-2	2 to 3	5	2 to 3	Moist, orange-brown, sandy GRAVEL, oxidized.

Bottom of 5-HA-513 at 3 feet, completed 3/12/92.

Log of Hand Auger Boring 5-HA-514
Ground Surface Elevation Approximately 197.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), moist, brown, slightly sandy to sandy GRAVEL.
S-2	2 to 3	4		

Bottom of 5-HA-514 at 3 feet, completed 3/12/92.

Log of Hand Auger Boring 5-HA-515
Ground Surface Elevation Approximately 172.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 1	(Loose), moist, brown, sandy GRAVEL.
S-2	2 to 3	4	1 to 3	(Loose), moist, light brown, silty, medium to fine SAND.

Bottom of 5-HA-515 at 3 feet, completed 3/12/92.

Log of Hand Auger Boring 5-HA-516
Ground Surface Elevation Approximately 194.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2.5	(Loose), moist, brown, silty, gravelly, medium to fine SAND.
S-2	2 to 3	4	2.5 to 3	(Dense), moist, light brown, sandy GRAVEL.

Bottom of 5-HA-516 at 3 feet, completed 3/12/92.

Log of Hand Auger Boring 5-HA-517
Ground Surface Elevation Approximately 188.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), moist, brown, silty, gravelly, medium to fine SAND.
S-2	2 to 3	5	1 to 3	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 5-HA-517 at 3 feet, completed 3/12/92.

AREA 6
EXPLORATION LOGS

Log of Test Pit 6-TP-501
Ground Surface Elevation Approximately 200.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Medium dense), moist, medium brown, silty, sandy GRAVEL with abundant bricks, mortar, and metal piping (FILL)
S-2	3 to 6	5	2.5 to 6	(Dense), moist, light brown, sandy GRAVEL with abundant bricks and mortar (FILL)
S-3	8 to 10	5	6 to 10	(Dense), moist, light brown, sandy GRAVEL

Bottom of 6-TP-501 at 10 feet, completed 4/20/92.

Notes:
1) 4-foot-long, 3-inch-diameter steel casing exposed in side wall of test pit. Casing full of soil.
2) Test pit excavated along south side of former Ammonia Nitrate Crystallizer foundation. Concrete wall of foundation extended to depth of 6 feet in north wall of excavation.

Log of Test Pit 6-TP-502
Ground Surface Elevation Approximately 198.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), moist, light brown, very sandy GRAVEL
S-2	3 to 6	5	1 to 10	(Dense), moist, light brown, sandy GRAVEL with interbedded layers of GRAVEL (native)
S-3	8 to 10	5		

Bottom of 6-TP-502 at 10 feet, completed 4/20/92.

AREA 7
EXPLORATION LOGS

Boring Log 7-B-501

Soil Descriptions

Ground Surface Elevation in Feet 179.6

(Loose), moist, black, slightly silty, sandy GRAVEL.

Medium dense, moist, greenish gray, slightly sandy GRAVEL.

Faint sulfurous odor.

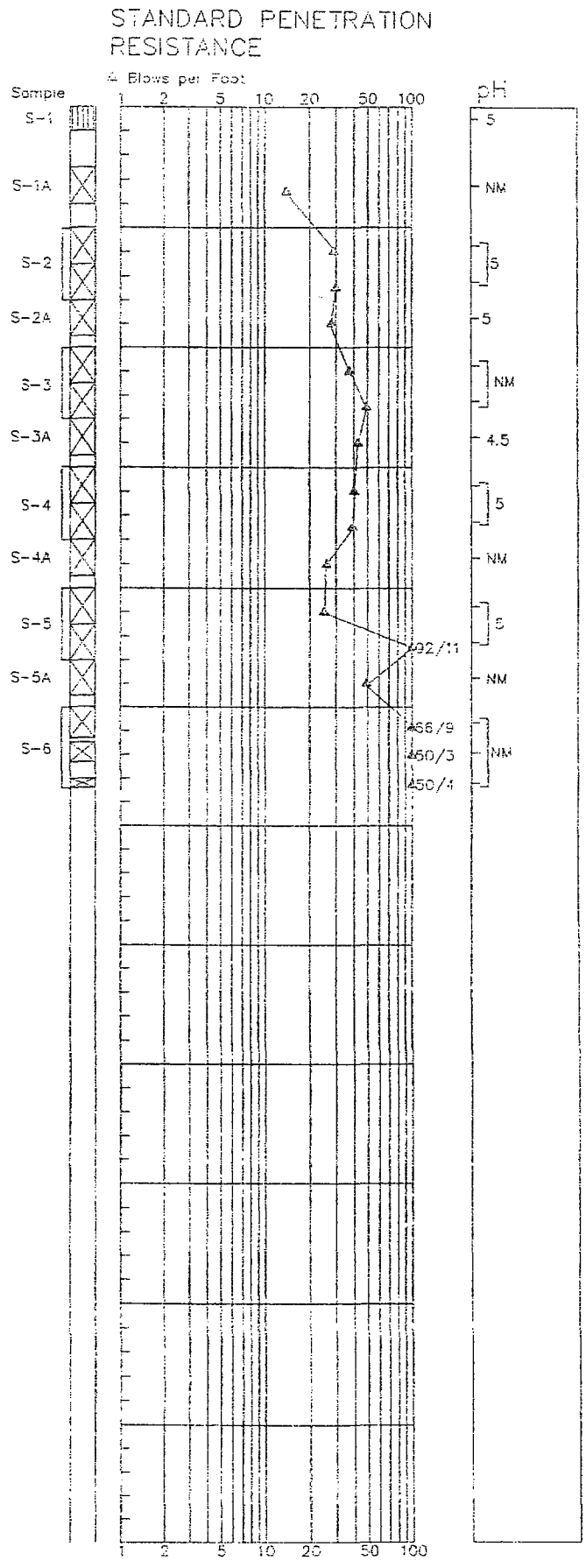
Dense, moist, gray, sandy GRAVEL.

Faint sulfurous odor and greenish staining on gravels.

Medium dense, moist, gray, medium to fine SAND.

Very dense, moist, gray, sandy to slightly sandy GRAVEL with minor yellow and green staining on gravels.

Bottom of Boring at 28.3 Feet. Completed 2/28/92



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-7-1 1/1

Boring Log 7-B-502

Soil Descriptions

Ground Surface Elevation in Feet 172.3

Depth in Feet

6 inches of black, silty SAND with roots over loose, wet to moist, gray, slightly gravelly, very silty to silty SAND.

Medium dense, moist, gray, sandy GRAVEL with faint sulfurous odor and occasional green staining on gravels.

Medium dense, moist, gray, medium to fine SAND.

Dense, to very dense, moist, brownish gray slightly sandy GRAVEL with yellow staining on gravels.

Bottom of Boring at 29.5 Feet.
Completed 2/28/90

0 5 10 15 20 25 30 35 40 45 50 55 60

STANDARD PENETRATION RESISTANCE

Δ Blows per Foot

Sample: S-1, S-1A, S-2, S-2A, S-3, S-3A, S-4, S-4A, S-5, S-5A, S-6, S-6A

1 2 5 10 20 50 100

50/6

50/6

pH

4 5 5 5 NM 5 5 5 NM 5 NM

1 2 5 10 20 50 100

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-7-2 1/1

Boring Log and Construction Data for Monitoring Well 7-B-503

Geologic Log

Monitoring Well Design

Casing Stickup in Feet 2.2
Top of PVC in Feet 175.28

Depth in feet

Approx. Ground Surface Elevation in Feet 173.1

Medium dense, damp, light brown, silty, sandy GRAVEL.

Loose, damp, light brown, slightly silty, very sandy GRAVEL.

Soft, moist, dark brown, slightly gravelly, sandy SILT with organics.

Medium stiff, moist, grayish brown with green and orange mottling, sandy SILT (FILL)

Medium dense to very dense, intermittently moist and wet, gray, sandy GRAVEL with yellow staining on gravels.

Lens of fine to medium SAND. Grades to moist.

Sample	N
S-1	
S-1A	11
S-1B	
S-1C	8
S-2	2
S-2A	3
S-2B	
S-3	10
S-3A	6
S-4	6
S-4A	15
S-4B	
S-4C	
S-5	51
S-5A	21
S-6	26
S-6A	64
S-7	59
S-7A	79
S-8A	43
S-8B	
S-8C	75
S-9	46
S-9A	50/5
"	50/2
"	50/2

ATD

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-7-3 1/2

Boring Log 7-B-504

Soil Descriptions

Ground Surface Elevation in Feet 196.49

Depth in Feet

Medium dense to very dense, moist, light brown and grayish brown, slightly silty, sandy GRAVEL.

Grades to non-silty.

Bottom of Boring at 50.5 Feet.
Completed 7/17/92

STANDARD PENETRATION RESISTANCE

LAB TESTS

Δ Blows per Foot

Sample

S-1
S-1A
S-1B
S-2
S-3A
S-4
S-4A
S-5
S-5A
S-6
S-6A
S-7
S-7A
S-8
S-8A
S-9
S-9A
S-11

56/3
50/6
50/5
50/3

1 2 5 10 20 50 100

1 2 5 10 20 50 100

⊕ Water Content in Percent

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-7-4 1/1

Log of Test Pit 7-TP-501
Ground Surface Elevation Approximately 185.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 0.5	(4 inches of forest duff over medium dense), moist, dark brown, sandy GRAVEL with abundant roots and grass.
S-2	3 to 6	4.5	0.5 to 10	(Medium dense), damp, silvery gray, slightly sandy to sandy GRAVEL with boulders to 1 foot and some green staining on gravels. Discontinuous 3-inch-thick layer of Bunker C oil staining at depth of 0.5 foot. Thin gravel lens at depth of 1.5 feet. Distinct zone of yellowish green staining on gravels between depths of 8 and 9 feet.
S-3	8 to 10	4		

Bottom of 7-TP-501 at 10 feet, completed 3/5/92.

Log of Test Pit 7-TP-502
Ground Surface Elevation Approximately 179.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	Two inches of grass and organic debris over (medium dense), moist, brown, slightly silty, sandy GRAVEL with abundant roots.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, grayish brown, sandy GRAVEL with 6-inch-thick gravel lens at a depth of 5.5 feet.
S-3	8 to 10	5		

Bottom of 7-TP-502 at 10 feet, completed 3/5/92.

Log of Test Pit 7-TP-503
Ground Surface Elevation Approximately 176.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2.5	One inch of grass and organic debris over (medium dense), moist, light brownish gray, sandy GRAVEL with occasional roots. Two-inch-thick lens of moist, black, slightly silty, gravelly SAND at 1.25 feet depth. Four-inch-thick lens of moist, black, silty SAND at 2.5 feet depth.
S-2	3 to 6	4	2.5 to 5	(Medium dense), moist, gray and light brown, very silty, fine SAND.
S-3	8 to 10	4	5 to 10	(Medium dense), moist, gray, sandy GRAVEL with rust and yellow staining between depths of 7 and 9 feet.

Bottom of 7-TP-503 at 10 feet, completed 3/5/92.

Log of Test Pit 7-TP-504
Ground Surface Elevation Approximately 181.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2	Four inches of black, silty, slightly gravelly SAND with abundant roots over (loose), moist, brown, slightly gravelly, silty SAND.
			2 to 3.5	(Medium dense), moist, brownish gray, very sandy SILT.
S-2	3 to 6	5	3.5 to 7.5	(Medium dense), moist, brown, very sandy GRAVEL.
S-3	8 to 10	5	7.5 to 10	(Medium dense), moist, brown, gravelly SAND.

Bottom of 7-TP-504 at 10 feet, completed 3/5/92.

Log of Observation Test Pit 7-OB-TP-501
Ground Surface Elevation Approximately 171.7 Feet

Sample Number	Stratum Depth in Feet*	Soil Description
No samples collected	0 to (1-3)	(Loose), damp, gray, silty, sandy GRAVEL (FILL).
	(1-3) to (2-7)	(Soft), moist, gray SILT (Sludge-like FILL), some burnt wood fragments found in upper section of silt layer.
	(2-7) to (5-8)	(Medium dense), moist, gray-brown, sandy GRAVEL (Native?).

Bottom of 7-OB-TP-501 at 8.0 feet, completed 6/29/92.

Notes:
1) Observational test pit; no samples collected.
2) *: The strata in 7-OB-TP-501 dip in a northerly direction toward middle of kettle. Therefore, stratum top and bottom depths are variable across the excavation, and are indicated with a range of depths in parentheses.
3) Test pit excavation approximately 20 feet in length, oriented from southeast corner of kettle toward kettle center.

Log of Observation Test Pit 7-OB-TP-502
Ground Surface Elevation Approximately 181.1 Feet

Sample Number	Sample Depth in Feet	Soil Description
No samples collected		(Loose), damp, gray and bleached white, sandy GRAVEL with slight sulfur odor and area of green and yellow stained rocks at depth of 2 to 4.5 feet in center of excavation. Brown, sandy GRAVEL (appears native) observed in upper 2 feet along western edge of excavation.

Bottom of 7-OB-TP-502 at 6.0 feet, completed 6/29/92.

Notes:
1) Observational test pit; no samples collected.
2) Observed layer of Bunker C oil staining near surface at southwest end of test pit.
3) Test pit excavation approximately 20 feet in length, oriented east-west.

Log of Hand Auger Boring 7-HA-501
Ground Surface Elevation Approximately 201.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp, light brown, silty, sandy GRAVEL.
S-2	1 to 2		
S-3	2 to 3		

Bottom of 7-HA-501 at 3.0 feet, completed 6/29/92.

Note:
Observed Bunker C oil staining just beneath layer of moss at surface.

Log of Hand Auger Boring 7-HA-502
Ground Surface Elevation Approximately 183.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 0.5	(Medium dense), damp, light brown, sandy GRAVEL with grass roots.
S-2	1 to 2	0.5 to 2.0	(Medium dense), damp, gray, sandy GRAVEL.
S-3	2 to 3	2 to 3	(Loose), damp, gray, gravelly SAND with tree roots.

Bottom of 7-HA-502 at 3.0 feet, completed 7/1/92.

Log of Hand Auger Boring 7-HA-503
Ground Surface Elevation Approximately 201.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp, light brown, silty, sandy GRAVEL
S-2	1 to 2		
S-3	2 to 3		

Bottom of 7-HA-503 at 3.0 feet, completed 6/29/92.

Note:
Observed Bunker C oil staining in upper 3 inches of soil.

Log of Hand Auger Boring 7-HA-504
Ground Surface Elevation Approximately 180.6 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp, brown to tan, silty, sandy GRAVEL.
S-2	1 to 2		
S-3	2 to 3		

Bottom of HA-504 at 3.0 feet, completed 6/29/92.

AREA 10
EXPLORATION LOGS

Log of Test Pit 10-TP-501
Ground Surface Elevation Approximately 210 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 2	(Medium dense), moist, black, slightly silty, sandy GRAVEL with a lid from a 55-gallon drum at surface.
S-2	3 to 6	2 to 7	(Medium dense), moist, tan-brown, sandy GRAVEL
S-3	7 to 9	7 to 9	(Medium dense), moist, tan-brown, slightly gravelly SAND

Bottom of 10-TP-501 at 9 feet, completed 2/24/92.

Log of Test Pit 10-TP-502
Ground Surface Elevation Approximately 210 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 2	(Medium dense), moist, black, slightly gravelly, silty SAND.
S-2	3 to 6	2 to 4.5	(Medium dense), moist, tan, sandy GRAVEL.
S-3	8 to 9	4.5 to 9	(Medium dense), moist, gray, sandy GRAVEL

Bottom of 10-TP-502 at 9 feet, completed 2/24/92.

Log of Test Pit 10-TP-503
Ground Surface Elevation Approximately 209 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	(Medium dense), moist, black, slightly gravelly, silty SAND with water gel bags (see note below).
		1.5 to 3	(Medium dense), moist, tan-brown, slightly silty, gravelly SAND.
S-2	3 to 6	3 to 10	(Medium dense), moist, medium brown, sandy GRAVEL.
S-3	8 to 10		

Bottom of 10-TP-503 at 10 feet, completed 2/24/92.

Note:
12 water gel bags observed in upper 1.5 feet, some containing apparent residual water gel.

AREA 11
EXPLORATION LOGS

Boring Log 11-B-501

Soil Descriptions

Ground Surface Elevation in Feet 205.7

Depth in Feet

(Loose), moist, dark brown, slightly silty, gravelly SAND (FILL)

Medium dense, moist, dark brown, slightly silty, sandy GRAVEL. (FILL?)

Grades to slightly sandy GRAVEL

Dense, moist, brown, slightly sandy GRAVEL. 4-inch layer of black SAND.

Dense, moist to wet, gray-brown, slightly silty, slightly sandy GRAVEL.

ATD

Dense to very dense, moist, gray, slightly gravelly, sandy SILT. (Till-like)

Very dense, moist, gray, slightly gravelly, silty SAND. (Till-like?)

Very dense, moist, red-brown, sandy GRAVEL.

Very dense, moist, light gray, slightly silty, slightly sandy to sandy GRAVEL.

Bottom of Boring at 28.0 Feet. Completed 2/21/92.

0 5 10 15 20 25 30 35 40 45 50 55 60

STANDARD PENETRATION RESISTANCE

△ Blows per Foot

Sample: S-1, S-1A, S-2, S-2A, S-3, S-3A, S-4, S-4A, S-5, S-5A, S-6, S-6A

1 2 5 10 20 50 100

50/5 50/5 50/5 50/3 50/4

pH

5.5 6 5.5 NM 5.5 5.5 5.5 NM 5.5 6 6 6.5 7

1 2 5 10 20 50 100

● Water Content in Percent

1 Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-11-1 1/1

Log of Test Pit 11-TP-501
Ground Surface Elevation Approximately 207 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 1	(Loose), moist, dark brown, silty SAND with abundant roots.
			1 to 2	(Loose), damp, tan-brown, medium SAND.
S-2	3 to 6	6.0	2 to 7	(Medium dense), damp, yellow-brown, slightly silty, sandy GRAVEL.
			7 to 8	(Medium dense), damp, yellow-brown GRAVEL.
S-3	8 to 10	6.0	8 to 10	(Medium dense), damp, yellow-brown, slightly silty, sandy GRAVEL.

Bottom of 11-TP-501 at 10 feet, completed 2/21/92.

Log of Test Pit 11-TP-502
Ground Surface Elevation Approximately 210 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	1 to 4	(Loose), damp, reddish brown, slightly gravelly, silty SAND with abundant roots.
S-2	3 to 6	6.0	4 to 10	(Medium dense), damp, yellow-brown, sandy GRAVEL. Soils grade to moist below depth of 8 feet.
S-3	8 to 10	6		

Bottom of 11-TP-502 at 10 feet, completed 2/21/92.

Log of Test Pit 11-TP-503
Ground Surface Elevation Approximately 208 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 1	(Loose), moist, dark brown, gravelly, silty SAND with roots.
S-2	3 to 6	6.0	1 to 3.5	(Medium dense), damp, yellowish brown, sandy GRAVEL.
S-3	8 to 10	6.0	3.5 to 10	(Dense), moist, yellowish brown, slightly sandy GRAVEL with occasional gravel layers.

Bottom of 11-TP-503 at 10 feet, completed 2/21/92.

Log of Test Pit 11-TP-504
Ground Surface Elevation Approximately 210 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 2.5	(Loose), moist, dark reddish brown, silty SAND with roots and other organics.
S-2	3 to 6	6.0	2.5 to 4	(Medium dense), damp, yellowish brown, sandy GRAVEL with minor roots.
S-3	8 to 10	5.5	4 to 10	(Medium dense), moist to wet, yellowish brown, slightly sandy GRAVEL. Saturated below depth of 8.5 feet.

Bottom of 11-TP-504 at 10 feet, completed 2/21/92.

AREA 12
EXPLORATION LOGS

Boring Log 12-1-B-501

Soil Descriptions

Ground Surface Elevation in Feet 215.3

(Medium dense), moist, dark brown, slightly silty, gravelly to very gravelly SAND.

Loose, moist, brown, very gravelly SAND.

Begin observing abundant plastic water gel bags and scattered sawdust.

Bottom of Boring at 5.5 Feet.
Completed 3/23/92.

Note: Abandoned boring due to presence of water gel bags. Boring replaced with Boring 12-1-B-501A located 3 feet west.

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE

▲ Blows per Foot

Sample: S-1, S-1A, S-2

1 2 5 10 20 50 100

pH: 5, 5, 5

1 2 5 10 20 50 100

● Water Content in Percent

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-12-1 1/1

Boring Log 12-1-B-501A

Soil Descriptions

(Medium dense), moist, dark brown, slightly silty, very gravelly SAND.

Grades to sandy GRAVEL.

Medium dense, moist to wet, dark brown to brown, very sandy GRAVEL with plastic water gel bags from 5- to 6-foot depth.

Dense, moist, brown, very sandy GRAVEL.

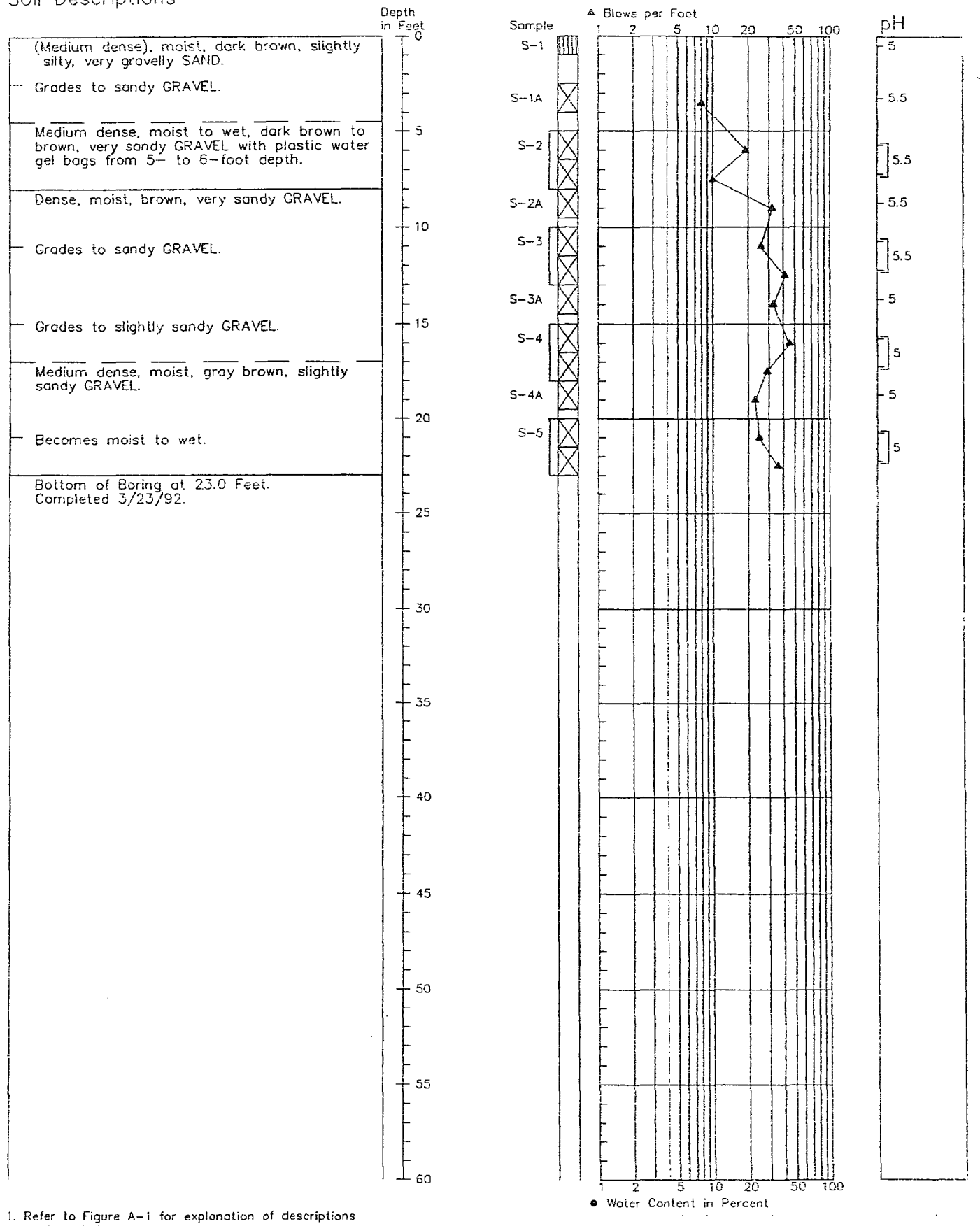
Grades to sandy GRAVEL.

Grades to slightly sandy GRAVEL.

Medium dense, moist, gray brown, slightly sandy GRAVEL.

Becomes moist to wet.

Bottom of Boring at 23.0 Feet.
Completed 3/23/92.



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-12-2 1/1

Boring Log 12-2-B-501

Soil Descriptions

Ground Surface Elevation in Feet 215.6

(Medium dense) to dense, moist, black to dark brown, silty, very sandy GRAVEL to sandy GRAVEL with abundant debris (plastic, water gel bags and nylon netting).

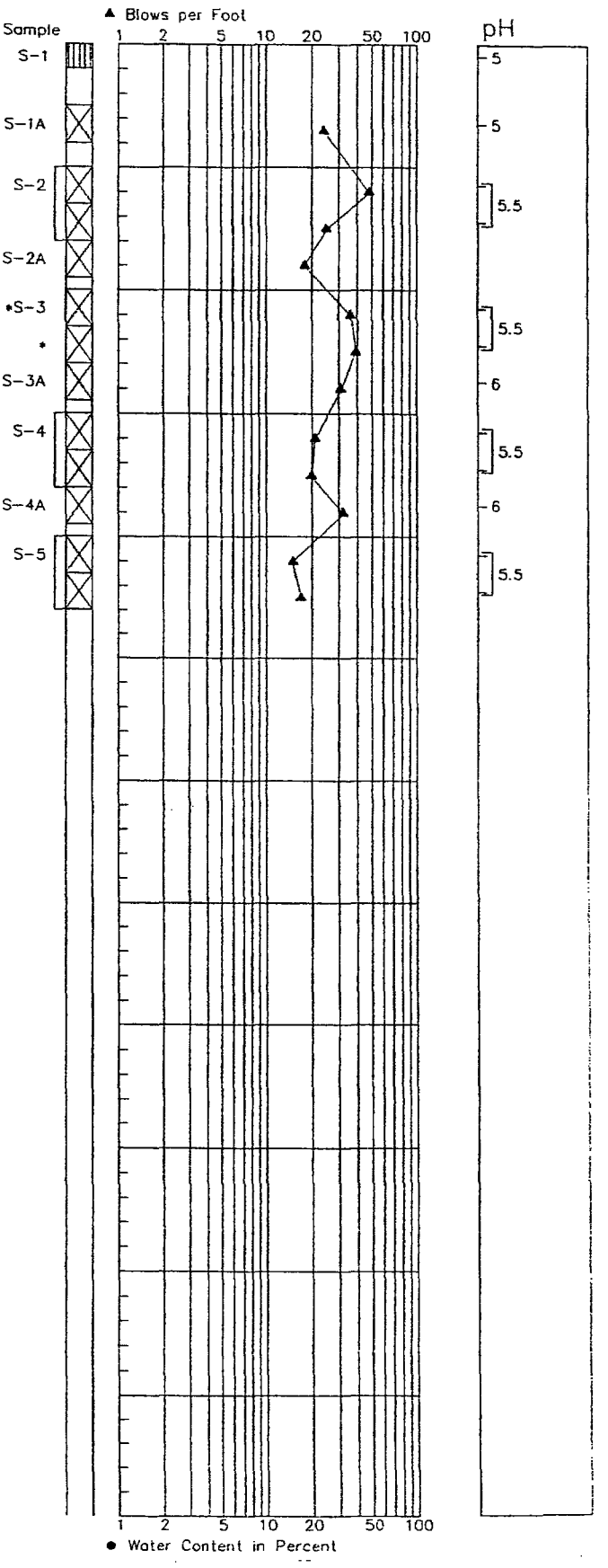
Medium dense to dense, moist, grayish brown, sandy GRAVEL with aluminum cans and plastic.

Medium dense, moist, brown, gravelly SAND.

Dense to medium dense, moist, gray-brown, very sandy to sandy GRAVEL.

Becomes moist to wet.

Bottom of Boring at 23.0 Feet.
Completed 3/24/92.



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-12-3 1/1

Boring Log 12-2-B-502

Soil Descriptions

Ground Surface Elevation in Feet 213.1

(Medium dense) to loose, moist, medium to dark brown, sandy GRAVEL.

Wood fragments and brown paper.

Pieces of old hydraulic lines.

Medium dense, moist, grayish brown, sandy GRAVEL.

Dense to very dense, moist, dark gray, slightly sandy to sandy GRAVEL.

Dense, moist to wet, rust colored, slightly sandy to sandy GRAVEL.

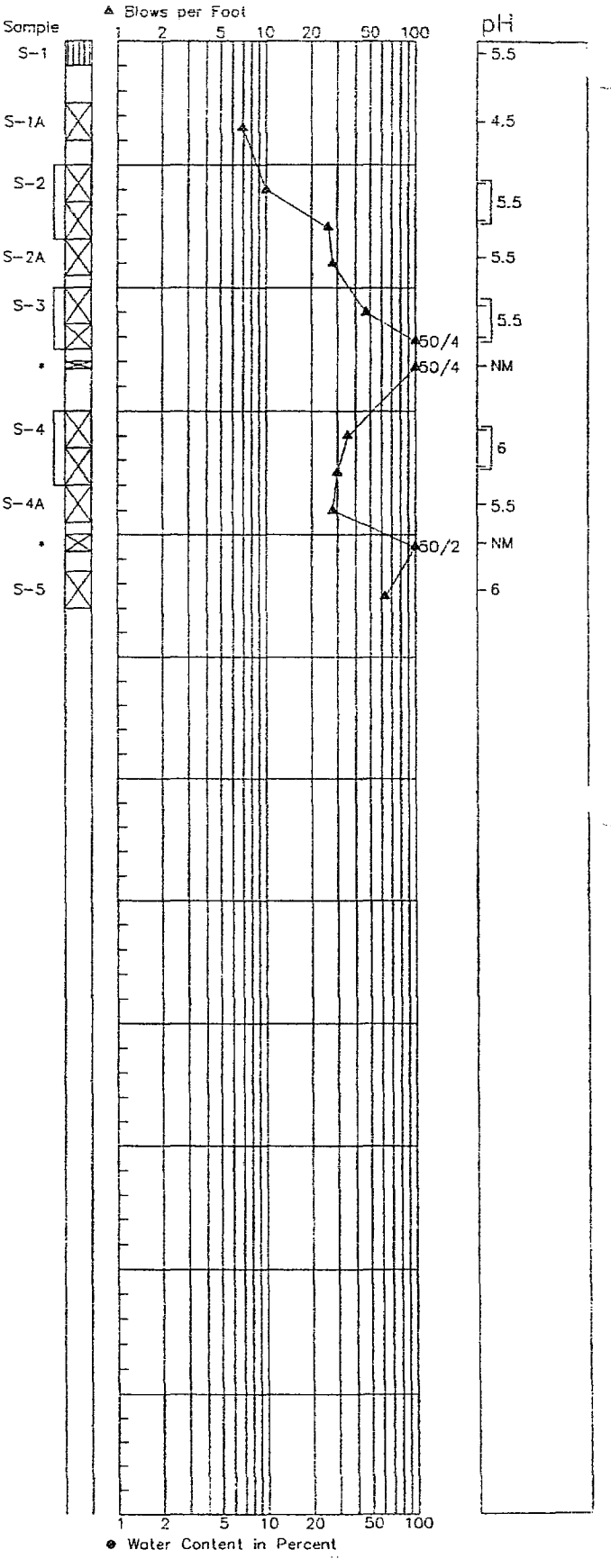
Brown-gray

Very dense, moist, brownish gray, very gravelly SAND.

Bottom of Boring at 23.0 Feet.
Completed 3/24/92.

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-12-4 1/1

Boring Log 12-6-B-501

Soil Descriptions

Ground Surface Elevation in Feet 226.2

Depth in Feet

Grass sod over (medium dense), moist, dark brown, slightly silty, very gravelly SAND.

Small brick fragments.

Dense, moist, brown, sandy GRAVEL.

Medium dense, moist to wet, grayish brown, sandy GRAVEL.

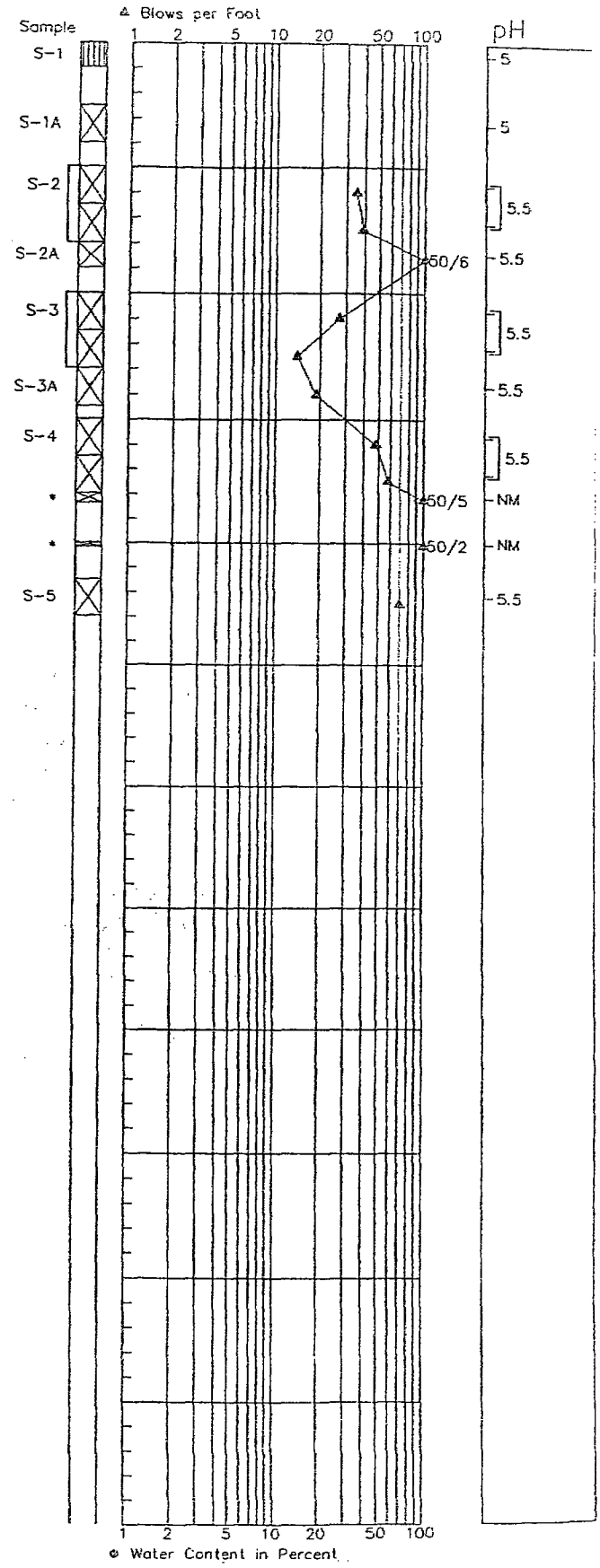
Dense, moist, brown, slightly silty, sandy GRAVEL to sandy GRAVEL.

Very dense, moist to wet, brown, slightly silty, medium to fine SAND.

Bottom of Boring at 23.0 Feet.
Completed 3/25/92.

0 5 10 15 20 25 30 35 40 45 50 55 60

STANDARD PENETRATION RESISTANCE



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-12-5 1/1

Boring Log 12-7-B-501

Soil Descriptions

Ground Surface Elevation in Feet 225.3

Depth in Feet

Sod over (medium dense), moist, dark brown, slightly silty, gravelly SAND.

Dense, moist, brown, gravelly SAND to sandy GRAVEL.

Medium dense to dense, moist, brown, slightly silty, sandy GRAVEL to gravelly SAND

Dense to medium dense, moist to wet, brown, slightly silty, sandy GRAVEL.

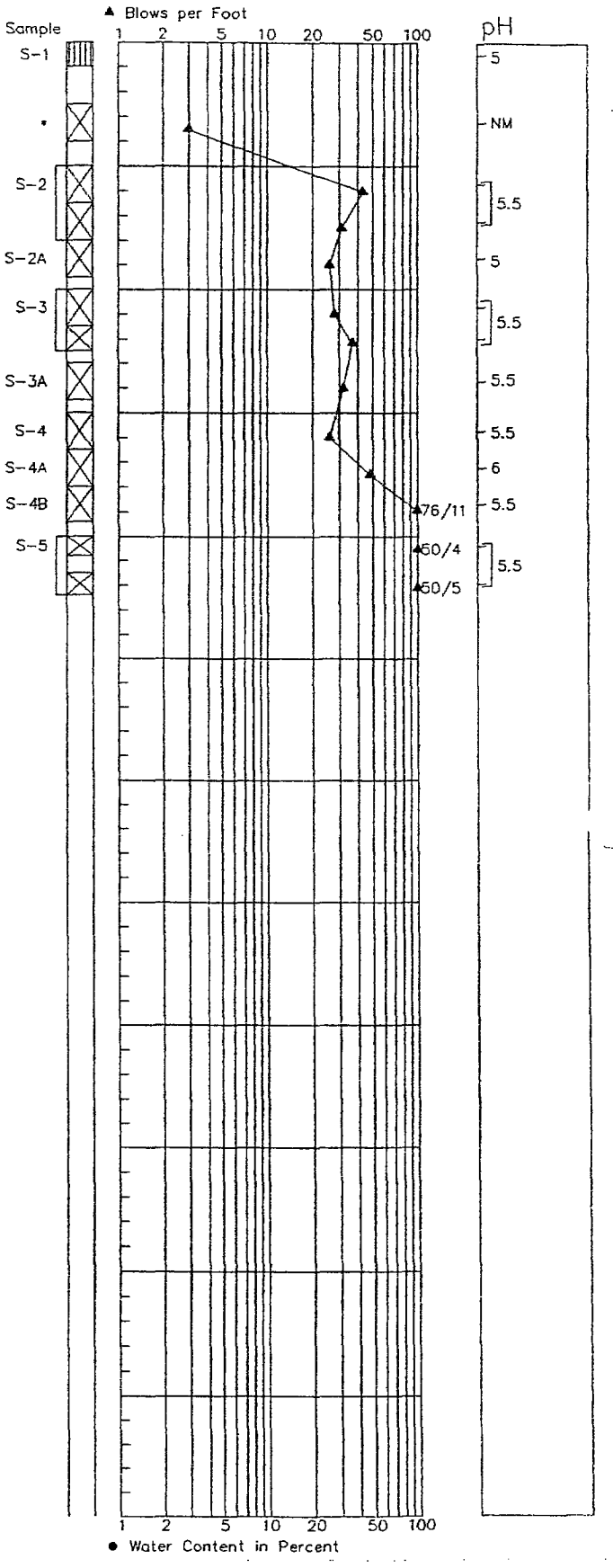
Dense to very dense, moist, brown, sandy GRAVEL.

Very dense, moist to wet, brown, sandy GRAVEL with silt covered gravels.

Bottom of Boring at 23.0 Feet.
Completed 3/25/92.

0 5 10 15 20 25 30 35 40 45 50 55 60

STANDARD PENETRATION RESISTANCE



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-12-6 1/1

Log of Test Pit 12-1-TP-501
Ground Surface Elevation Approximately 215.6 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 0.5	(Loose), moist, dark brown, sandy GRAVEL (FILL).
		0.5 to 2.5	(Loose), moist, brown, sandy GRAVEL with abundant debris (FILL) (see note below).
		2.5 to 3	(Loose), moist, black, silty, sandy GRAVEL (possibly NATIVE).
S-2	3 to 6	3 to 10	(Loose), moist, brown, sandy GRAVEL (NATIVE).
S-3	8 to 10		

Bottom of 12-1-TP-501 at 10 feet, completed 4/13/92.

Notes:

1) Debris observed from 1 to 3 feet: apparently empty, white, water gel, plastic bags.
2) Observed plastic banding (strapping), steel banding, and plastic 55-gallon drum liners.

Log of Test Pit 12-1-TP-502
Ground Surface Elevation Approximately 215.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 0.5	(Loose), moist, dark brown, silty, sandy GRAVEL.
S-2	3 to 6	0.5 to 10	(Loose), moist, brown, slightly sandy GRAVEL with occasional interbedded gravel layers.
S-3	8 to 10		

Bottom of 12-1-TP-502 at 10 feet, completed 4/13/92.

Log of Test Pit 12-1-TP-503
Ground Surface Elevation Approximately 216.3 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	(Loose), moist, dark brown, slightly silty, sandy GRAVEL.
S-2	3 to 6	1 to 10	(Loose), moist, brown, slightly sandy, cross-bedded GRAVEL.
S-3	8 to 10		

Bottom of 12-1-TP-503 at 10 feet, completed 4/13/92.

Log of Test Pit 12-1-TP-504
Ground Surface Elevation Approximately 214.2 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, black, silty, gravelly SAND.
S-2	3 to 6	1.5 to 10	(Loose), moist, medium brown, slightly sandy GRAVEL with cross-bedded gravel layers.
S-3	8 to 10		

Bottom of 12-1-TP-504 at 10 feet, completed 4/13/92.

Log of Observation Test Pit 12-1-OB-TP-501
Ground Surface Elevation Approximately 217.2 Feet

Sample Number	Stratum Depth in Feet	Soil Description
Not Sampled	0 to 1.5	6 inches of grass sod with scattered white plastic over water gel bags (empty) over (medium dense), moist, black, slightly silty, very gravelly SAND with moderate organics (roots, etc.) (NATIVE).
	1.5 to 3	(Dense), moist, brown, sandy to very sandy GRAVEL (NATIVE).

Bottom of 12-1-OB-TP-501 at 3 feet, completed 4/14/92.

Notes:
1) Soils appear native below 0.5 foot.
2) No samples collected (observational test pit).

Log of Observation Test Pit 12-1-OB-TP-502
Ground Surface Elevation Approximately 218.0 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 1.5	Six inches of grass sod with clear plastic bag, old tire, and logging debris over (medium dense), moist, black, slightly silty, gravelly SAND with moderate organics (NATIVE).
	1.5 to 3	(Dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-1-OB-TP-502 at 3 feet, completed 4/14/92.

Notes:
1) Soils below 0.5 foot appear native.
2) No residual water gel noted in empty plastic bag.
3) No samples collected (observational test pit).

Log of Observation Test Pit 12-1-OB-TP-503
Ground Surface Elevation Approximately 221.7 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 1.7	6 inches of sod with one plastic water gel bag, partially exposed, over (medium dense), moist, black, slightly silty, gravelly SAND (NATIVE).
	1.7 to 3.5	(Dense), moist, brown, very sandy GRAVEL (NATIVE).

Bottom of 12-1-OB-TP-503 at 3.5 feet, completed 4/14/92.

Notes:
1) Soils appear native below 0.5 foot.
2) No residual water gel in empty plastic bag.
3) No samples collected (observational test pit).

Log of Test Pit 12-2-TP-501
Ground Surface Elevation Approximately 214.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 7	(Loose), moist, black and brown, stratified, sandy GRAVEL with abundant debris (FILL) (see note below).
S-2	3 to 6		
		7 to 8	(Loose), moist, black, silty, sandy GRAVEL (possibly NATIVE).
S-3	8 to 10	8 to 10	(Loose), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-2-TP-501 at 10 feet, completed 4/13/92.

Note:
Debris observed from 1.5 to 7.3 feet: old truck tire, assorted metal debris, metal banding, potential asbestos-containing material, plastic bags (unmarked), 2-inch-diameter rubber hose, tin and aluminum cans, foam rubber, plastic banding, various rubber and paper debris, wood debris (RR ties), abundant stacks of wax-covered cardboard, and a firehose.

Log of Test Pit 12-2-TP-502
Ground Surface Elevation Approximately 214.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6.5	(Medium dense), moist, dark brown, sandy GRAVEL with roots in top foot and abundant debris (FILL) (see note below).
S-2	3 to 6	4		
S-3	8 to 10	4	6.5 to 10	(Medium dense), moist, light brown, sandy GRAVEL (NATIVE).

Bottom of 12-2-TP-502 at 10 feet, completed 4/14/92.

Note:
Debris observed included abundant plastic strapping and a few clear plastic bags from depth of 1 to 3.5 feet. Plastic bag with scraps of metal, apparently a drum liner with a lid, from depth of 4 to 6 feet. No residual water gel observed in bags.

Log of Test Pit 12-2-TP-503
Ground Surface Elevation Approximately 215.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 1	(Medium dense), moist, brownish gray, sandy GRAVEL, with small scraps of cloth (FILL).
S-2	2 to 4	4	1 to 7	(Medium dense), moist, dark brown-black, sandy GRAVEL, with abundant debris (FILL) (see Note 1 below).
S-3	2.5	4		
S-4	4 to 6	5.5		
S-5	8 to 10	5.5	7 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL (NATIVE).

Bottom of 12-2-TP-503 at 10 feet, completed 4/14/92.

Notes:
1) Debris observed from depth of 1 to 6 feet: few boards (1.5 feet long) with some plastic-coated paper, drum liner, old smashed drum (scraps of metal mesh and strapping) which had no odor or product, abundant clear plastic, some water gel bags (one bag had apparent residual water gel present), lump of grayish clay, pieces of plywood, yellow (resin-like) substance, old tire, rope fibers, empty white water gel bags, and assorted wood debris.
2) Sample S-3 was a discrete sample near apparent residual water gel.

Log of Test Pit 12-2-TP-504
Ground Surface Elevation Approximately 217.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Medium dense), moist, black, slightly silty, very sandy GRAVEL with roots from 0 to 1 foot and debris (FILL) (see note below).
S-2	3 to 6	5	3 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL with interbedded gravel layers (NATIVE).
S-3	8 to 10	4		

Bottom of 12-2-TP-504 at 10 feet, completed 4/14/92.

Note:
Debris observed from depth of 1.5 to 3.0 feet: old log, few pieces of metal strapping, and a knotted ball of black plastic strapping.

Log of Test Pit 12-2-TP-505
Ground Surface Elevation Approximately 213.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 9	(Medium dense), moist, dark brown, sandy GRAVEL with debris and noticeable creosote odor (FILL) (see note below).
S-2	3 to 6	4.5		
S-3	9 to 10	4.5	9 to 10	(Medium dense), moist, medium gray, sandy GRAVEL (NATIVE).

Bottom of 12-2-TP-505 at 10 feet, completed 4/14/92.

Note:
Debris observed from depth of 1 to 3 feet: many wooden posts (strong creosote odor), 6-foot-long rubber hose, metal banding, occasional tin cans and scraps of plastic, sheets of plastic, and thick cardboard.

Log of Test Pit 12-2-TP-506
Ground Surface Elevation Approximately 213.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6	(Medium dense), moist, black, silty, gravelly SAND with debris from 1.3 to 6 feet (FILL) (see note below).
S-2	3 to 6	4.5		
S-3	8 to 10	4.5	6 to 10	(Medium dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-2-TP-506 at 10 feet, completed 4/15/92.

Note:
Debris observed from depth of 1.3 to 6 feet: abundant cardboard, 4-inch-diameter pipe (plastic and steel), concrete, plaster, tin cans, steel garbage can, and aluminum roofing; decomposing cardboard had hydrogen sulfide odor.

Log of Observation Test Pit 12-2-OB-TP-501
Ground Surface Elevation Approximately 210.3 Feet

Sample Number	Stratum Depth in Feet*	Soil Description
No Samples Collected	0 to (0.8- 1.5)	(Medium dense), moist, black, slightly silty, gravelly SAND with black, 3/4-inch rusted steel banding at approximately 0.5 foot (FILL).
	(0.8-1.5) to 2	(Dense), moist, brown, very gravelly SAND (NATIVE).

Bottom of 12-2-OB-TP-501 at 2.0 feet, completed 4/14/92.

Notes:
1) *: Fill/native soil contact dips toward the east (contact depth at 0.8 foot at west end of pit; 1.5 feet at east end). Variable depths across test pit indicated as range in parentheses.
2) No samples collected (observational test pit).

Log of Observation Test Pit 12-2-OB-TP-502
Ground Surface Elevation Approximately 209.3 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 0.5	(Medium dense), moist, black, slightly silty, gravelly SAND (FILL?).
	0.5 to 2.5	(Dense), moist, brown, very sandy, stratified GRAVEL and very gravelly SAND (NATIVE).

Bottom of 12-2-OB-TP-502 at 2.5 feet, completed 4/14/92.

Notes:
1) Soils below 0.5 foot appear native.
2) No residual water gel observed in empty water gel bag located on surface next to excavation.
3) No samples collected (observational test pit).

Log of Observation Test Pit 12-2-OB-TP-503
Ground Surface Elevation Approximately 212.3 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 0.8	(Medium dense), moist, black, slightly silty, gravelly SAND (appears disturbed - FILL?).
	0.8 to 2.5	(Dense), moist, brown, very sandy GRAVEL (appears NATIVE).

Bottom of 12-2-OB-TP-503 at 2.5 feet, completed 4/14/92.

Note:
No samples collected (observational test pit).

Log of Observation Test Pit 12-2-OB-TP-504
Ground Surface Elevation Approximately 214.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	1 to 2	5	0 to 1.5	(Medium dense), moist, brown, sandy GRAVEL with debris from 0.5 to 1.5 feet (FILL) (see Note 1 below).
S-2	2 to 4	5	1.5 to 2.5	(Medium dense), moist, black, slightly silty, gravelly SAND with wood debris (FILL).
			2.5 to 6	(Medium dense), moist, dark brown, sandy to very sandy GRAVEL with minor debris (FILL) (see Note 2 below).
S-3	6 to 7	5	6 to 7	(Dense), moist, brown, very sandy GRAVEL (NATIVE).

Bottom of 12-2-OB-TP-504 at 7 feet, completed 4/15/92.

Notes:
1) Debris found from depth of 0.5 to 1.5 feet: flat waxed cardboard boxes and three unlabeled empty plastic drum liners.
2) Debris found from depth of 2.5 to 6.0 feet: scattered waxed cardboard pieces, plastic banding, and white plastic up to 6 by 6 inches.

Log of Observation Test Pit 12-2-OB-TP-505
Ground Surface Elevation Approximately 215.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	1 to 2	5	0 to 5.5	(Loose), moist, brown and black (interbedded), sandy GRAVEL with debris (FILL) (see note below).
S-2	2 to 4	5		
S-3	5.5 to 6.5	5	5.5 to 6.5	(Medium dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-2-OB-TP-505 at 6.5 feet, completed 4/15/92.

Note:
Debris observed from depth of 0.6 to 5.5 feet: bottles and cans, metal banding, wood debris, one 5-gallon can (crushed), plastic, thick cardboard, and apparently empty water gel bags.

Log of Test Pit 12-3-TP-501
Ground Surface Elevation Approximately 217.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet*	Soil Description
S-1	0 to 1	4.5	0 to (2 - 4)	(Loose), black, moist, silty, gravelly SAND with debris (FILL) (see Note 1 below).
S-2	2 to 4	4.5		
S-3	8 to 10	4.5	(2 - 4) to 10	(Medium dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-3-TP-501 at 10 feet, completed 4/15/92.

Notes:
1) Debris observed from depth of 0.5 to 4 feet: water gel bags containing residual water gel, wood debris (timbers), 55-gallon drum plastic liners, metal and plastic banding, strips of plastic, and white chalk-like material ("possibly nitric emulsion" per former DuPont employee).
2) Debris appeared to be approximately 60% of fill material from depth of 0.5 to 6 feet.
*: Fill/native soil contact depth is variable within excavation from 2 feet near east and west edges of pit to 4 feet in pit center. Depth range across test pit is indicated in parentheses.

Log of Test Pit 12-3-TP-502
Ground Surface Elevation Approximately 217.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6	(Loose), moist, black, silty, sandy GRAVEL mixed with debris (FILL) (see Note 1 below).
S-2	2 to 4	4.5		
S-3	4 to 6	4.5		
S-4	8 to 10	4.5	6 to 10	(Medium dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-3-TP-502 at 10 feet, completed 4/15/92.

Notes:
1) Debris observed from depth of 0.5 to 6 feet: water gel bags with small quantities of residual water gel, minor wood debris, green plastic tubes (4-inch-diameter), cardboard, and metal banding.
2) Small amount of water accumulation at 6 feet due to water retention in the plastic debris.
3) Debris observed to be confined to former trench. Native soil observed on east and west sides of test pit, surrounding the former trench.

Log of Test Pit 12-3-TP-503
Ground Surface Elevation Approximately 216.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 6	(Loose), black, moist, silty, sandy GRAVEL mixed with debris (FILL) (see Note 1 below).
S-2	3 to 6	4.5		
S-3	8 to 10	4.5	6 to 10	(Dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-3-TP-503 at 10 feet, completed 4/15/92.

Notes:
1) Debris observed from depth of 0.5 to 6 feet: white and clear plastic apparently empty water gel bags, minor cardboard, wood debris, 1-inch-diameter plastic tubing, one empty fertilizer paper bag.
2) Debris observed to be confined to former trench. Native soil observed on east and west sides of test pit, surrounding the former trench.

Log of Observation Test Pit 12-3-OB-TP-501
Ground Surface Elevation Approximately 217.1 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 2	(Medium dense), moist, black, slightly silty, very sandy GRAVEL with roots and minor metal and plastic scraps in north end of excavation (FILL).
	2 to 2.7	(Medium dense), moist, tan-brown, sandy GRAVEL (NATIVE).

Bottom of 12-3-OB-TP-501 at 2.7 feet, completed 4/16/92.

Notes:
1) No samples collected (observational test pit).
2) North wall of excavation appears to be the end of landfill trench.

Log of Observation Test Pit 12-3-OB-TP-502
Ground Surface Elevation Approximately 217.7 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 1.8	(Medium dense), moist, black, slightly silty, sandy GRAVEL (FILL?).
	1.8 to 2.7	(Medium dense), moist, tan-brown, sandy GRAVEL (NATIVE).

Bottom of 12-3-OB-TP-502 at 2.7 feet, completed 4/16/92.

Note:
Apparent FILL material (no debris observed) is confined to center of test pit. Native soils (brown, sandy GRAVEL) observed on east and west sides of apparent FILL material.

Log of Test Pit 12-4-TP-501

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1	Approximately 1 foot of organic debris (old logs and branches) over (medium dense), moist, light brown, very sandy GRAVEL.
S-2	3 to 6	4.5	1 to 7.5	(Medium dense to dense), moist, medium gray, slightly sandy GRAVEL with interbedded gravel layers with cobbles up to 10 inches.
S-3	8 to 10	4.5	7.5 to 9	(Very dense), moist, tan-brown, sandy GRAVEL.

Bottom of 12-4-TP-501 at 9 feet, completed 4/16/92.

Log of Test Pit 12-5-TP-501
Ground Surface Elevation Approximately 226.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6	One inch of grass over (medium dense), moist, dark brown, slightly silty, sandy GRAVEL with roots to a depth of 2 feet and minor debris (FILL) (see note below).
S-2	3 to 6	4.5		
			6 to 8	(Medium dense), moist, tan-brown, sandy GRAVEL (NATIVE).
S-3	8 to 10	4.5	8 to 10	(Medium dense), moist, light tan, sandy GRAVEL.

Bottom of 12-5-TP-501 at 10 feet, completed 4/16/92.

Note:
Chunks of compressed paper (cardboard) observed from depth of 5 to 6 feet.

Log of Test Pit 12-5-TP-502
Ground Surface Elevation Approximately 222.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 5.5	One inch of grass over (medium dense), moist, dark brown to black, slightly silty, very sandy GRAVEL with minor debris (FILL) (see note below).
S-2	3 to 5.5	4.5		
			5.5 to 7	(Medium dense), moist, medium gray, sandy GRAVEL (NATIVE).
S-3	8 to 10	4.5	7 to 10	(Medium dense), moist, light brown, slightly sandy GRAVEL (NATIVE).

Bottom of 12-5-TP-502 at 10 feet, completed 4/16/92.

Note:
Debris observed from depth of 2 to 4 feet: layers of compressed cardboard and plastic strapping.

Log of Test Pit 12-5-TP-503
Ground Surface Elevation Approximately 223.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 4	(Medium dense), moist, dark brown, silty, very sandy GRAVEL with debris (FILL) (see note below).
S-2	2 to 4	4.5		
S-3	4 to 6	5.0	4 to 10	(Medium dense), moist, brown, sandy GRAVEL with gravel layers.

Bottom of 12-5-TP-503 at 10 feet, completed 4/17/92.

Note:
Observed abundant decomposed cardboard explosives packaging from depth of 1 to 4 feet.

Log of Test Pit 12-6-TP-501
Ground Surface Elevation Approximately 225.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Medium dense), moist, dark brown, silty, sandy GRAVEL.
S-2	3 to 6	5	1.5 to 6.5	(Loose), moist, brown GRAVEL.
S-3	8 to 10	5	6.5 to 10	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 12-6-TP-501 at 10 feet, completed 4/17/92.

Log of Test Pit 12-6-TP-502
Ground Surface Elevation Approximately 225.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 8	(Medium dense), moist, dark brown, silty, sandy GRAVEL with debris (FILL) (see note below).
S-2	3 to 6	5		
S-3	8 to 10	5	8 to 10	(Medium dense), moist, medium brown, sandy GRAVEL (NATIVE).

Bottom of 12-6-TP-502 at 10 feet, completed 4/17/92.

Note:
Debris observed from depth of 3 to 8 feet: 1-inch-diameter plastic apparently empty white tubing, 1 car radio, assorted plastic debris, scattered bottles, jars and cans, and ceramics.

Log of Test Pit 12-7-TP-501

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.2	(Medium dense), moist, dark brown, silty, sandy GRAVEL.
S-2	3 to 6	5	1.2 to 10	(Loose), moist, brown, slightly sandy GRAVEL with gravel layers.
S-3	8 to 10	5		

Bottom of 12-7-TP-501 at 10 feet, completed 4/17/92.

Log of Test Pit 12-TP-501
Ground Surface Elevation Approximately 213.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 5.5	(Medium dense), moist to wet, black, slightly silty, very sandy GRAVEL with debris (FILL) (see Note 1 below). Zones of saturation (standing water) within fill below depth of 4.5 feet. Hydrogen sulfide odor associated with saturated zones.
S-2	3 to 4.5	4		
			5.5 to 9	(Dense), moist, dark brown, gravelly silty SAND (appears NATIVE). Soils more consolidated between 6 and 7 feet.
S-3	9 to 10	5	9 to 10	

Bottom of 12-TP-501 at 10 feet, completed 4/16/92.

Note:
Debris observed from depth of 0.5 to 6 feet: timbers, logs, plywood, and rolls of red paper (approximately 2 inches wide); pieces of styrofoam, cardboard, and plastic banding; scraps of cotton-like cloth with yellow powder-like substance (pH of 0 on pH paper).

Log of Test Pit 12-TP-502
Ground Surface Elevation Approximately 217.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2	(Medium dense), moist, black, slightly silty, very sandy GRAVEL with roots from 0 to 1 foot.
S-2	3 to 6	4	2 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL with interbedded layers of gray, sandy gravel.
S-3	8 to 10	4		

Bottom of 12-TP-502 at 10 feet, completed 4/16/92.

Log of Test Pit 12-TP-503
Ground Surface Elevation Approximately 217.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), moist, black, slightly silty, very sandy GRAVEL.
S-2	3 to 6	4.5	2 to 4	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-3	4 to 10	4.5	4 to 10	(Medium dense), moist, medium gray, sandy GRAVEL with interbedded gravel layers.

Bottom of 12-TP-503 at 10 feet, completed 4/16/92.

Log of Test Pit 12-TP-504
Ground Surface Elevation Approximately 225.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.3	(Medium dense), moist, dark brown, silty, sandy GRAVEL.
S-2	3 to 6	5	1.3 to 7	(Loose), moist, brown GRAVEL.
S-3	8 to 10	5	7 to 10	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 12-TP-504 at 10 feet, completed 4/17/92.

Log of Test Pit 12-TP-505
Ground Surface Elevation Approximately 222.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 6	(Medium dense), moist, dark brown, silty, sandy GRAVEL with abundant debris (FILL) (see note below).
S-2	3 to 6	5		
S-3	8 to 10	5	6 to 10	(Dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 12-TP-505 at 10 feet, completed 4/17/92.

Note:
Debris observed from depth of 1.5 to 6 feet: abundant water gel bags, minor amounts of plastic banding, metal banding (strapping), 1-inch-diameter plastic pipe, plastic drum liners, and cardboard. Did not observe any residual water gel.

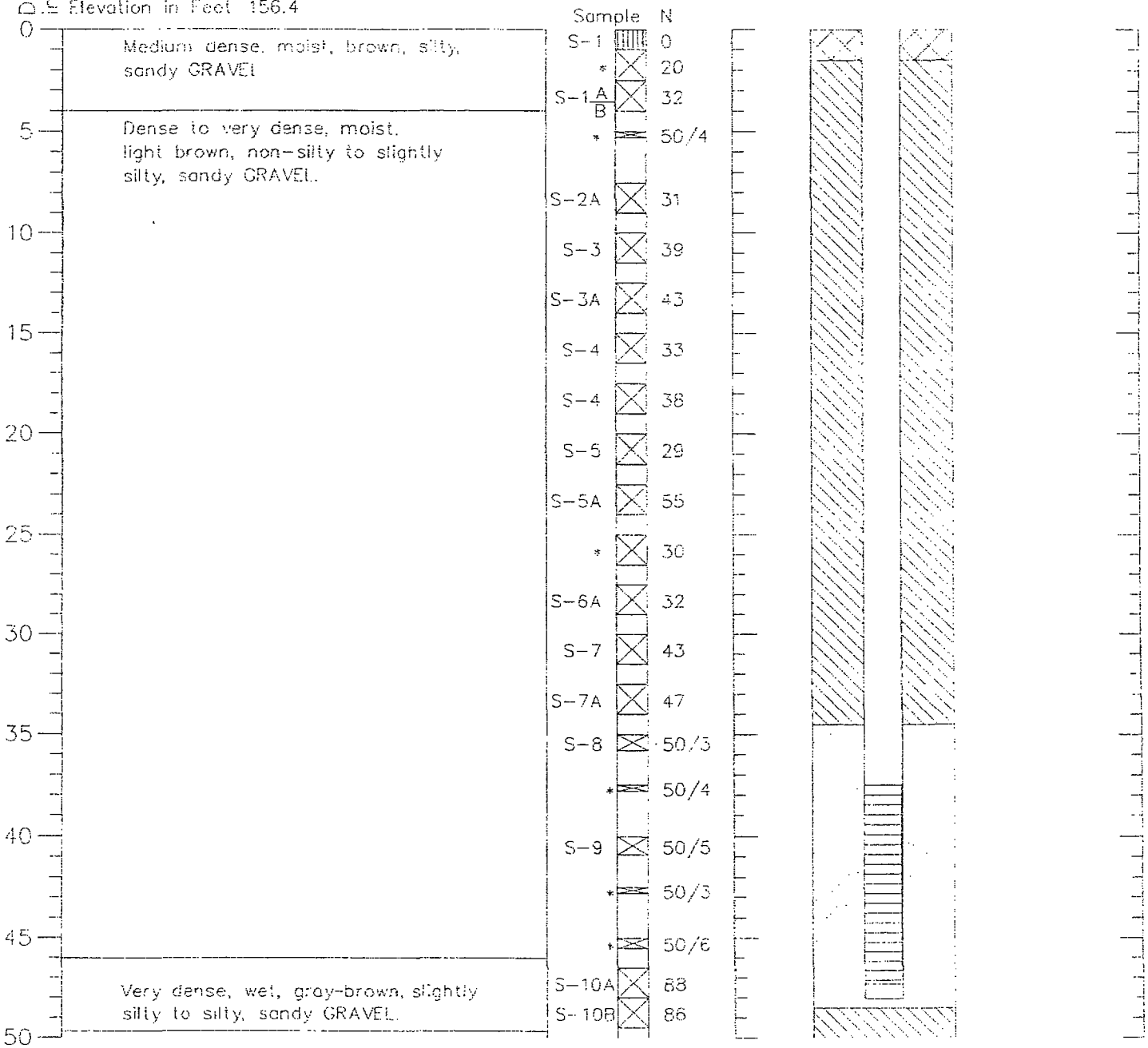
AREA 16
EXPLORATION LOGS

Boring Log and Construction Data for Monitoring Well 16-B-501

Geologic Log

Monitoring Well Design

Casing Stickup in Feet 2.4
Top of PVC in Feet 158.79



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

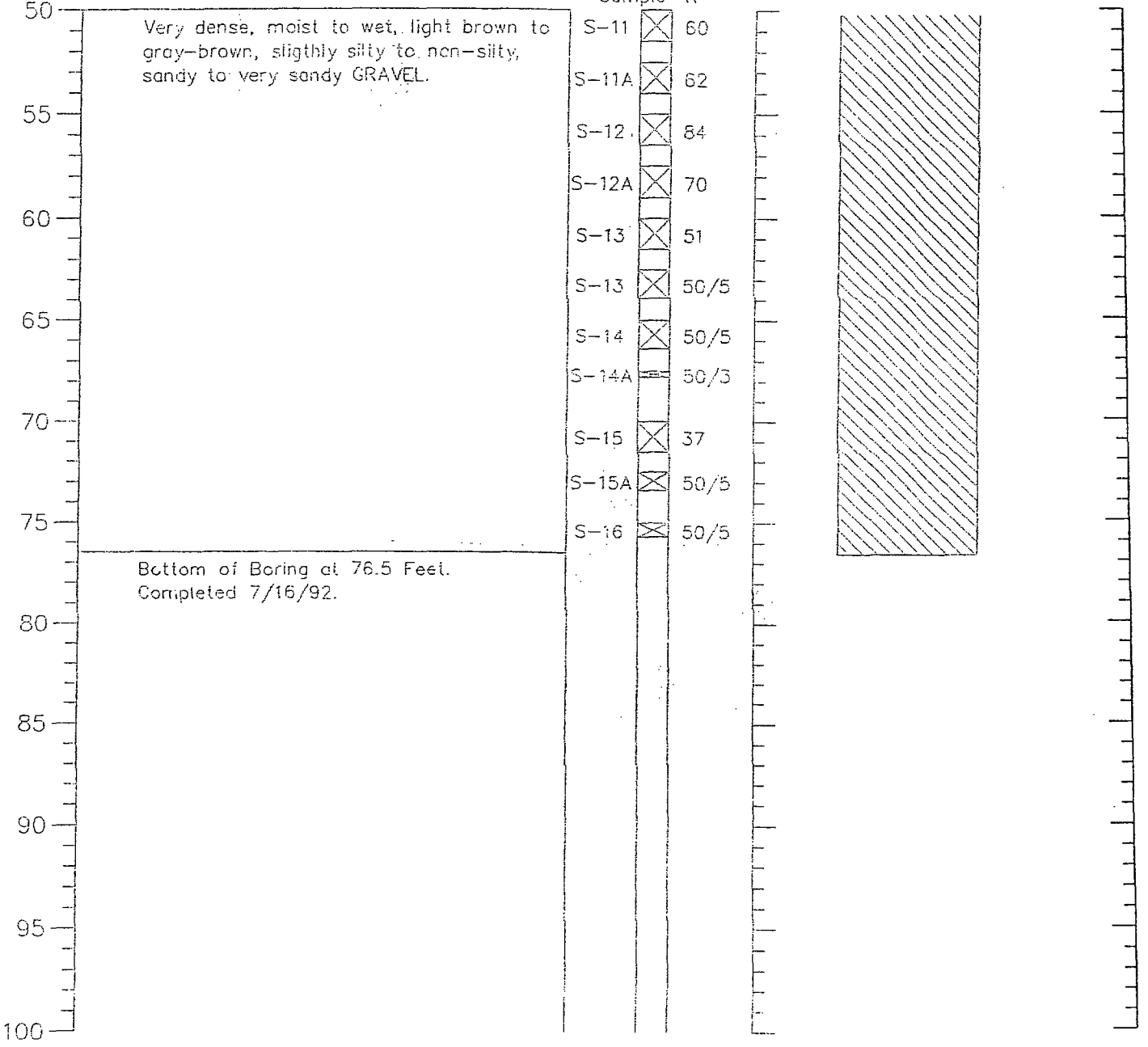
Figure A-16-1

Boring Log and Construction Data for Monitoring Well 16-B-501

Geologic Log

Monitoring Well Design

Casing Stickup in Feet 2.4
Top of PVC in Feet 0.00



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-16-1

Boring Log 16-B-502

Soil Descriptions

Ground Surface Elevation in Feet 144.8

(Loose), moist, light brown, gravelly, fine to medium SAND.

Medium dense, wet, brown, very gravelly, medium to coarse SAND.

Dense, wet, brown, sandy GRAVEL.

Bottom of Boring at 11.5 Feet.
Completed 2/24/92

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE

Sample

S-1(R)

*S-1A

S-2

S-2A

*S-3

Δ Blows per Foot

1 2 5 10 20 50 100

DH

S

NM

S

NM

NM

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-16-2 1/1

Boring B-6

Soil Descriptions

Ground Surface Elevation in Feet 143.0

(Topsoil), moist, light brown, gravelly, fine to medium SAND.

Medium dense, moist, brown and black, sandy GRAVEL.

Very dense, moist to wet, brown and reddish-brown, slightly silty to non-silty, slightly sandy GRAVEL.

Bottom of Boring at 26.5 Feet.
Completed 2/24/92

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE

Sample

S-1(B)
S-1A
S-2
S-2A
S-3
S-4
S-5
S-6
S-7
S-8
S-9

▲ Blows per Foot

1 2 5 10 20 50 100

pcf

5 5 5 5 5 5 5

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-10-6

Boring Log 16-B-504

Soil Descriptions

Ground Surface Elevation in Feet 141.3

Depth in Feet

(Loose), moist, gray, very silty SAND (ash-like).

Medium dense, wet, gray, silty, very sandy GRAVEL.

Dense, wet, brown, slightly silty, slightly sandy GRAVEL.

Loose, wet, brown, slightly gravelly, silty SAND.

Very dense, wet, brown, slightly sandy, GRAVEL.

Water in borehole between depths of 9 and 14 feet.

Very dense, moist, brown, very sandy GRAVEL.

Dense, moist, grayish brown, slightly silty, fine SAND.

Dense, to very dense, moist, brown, sandy GRAVEL.

Dense, damp to moist, grayish brown, slightly gravelly, medium to fine SAND.

Grades to very gravelly SAND.

Grades to gravelly SAND.

Bottom of Boring at 41.5 Feet. Completed 2/25/92.

STANDARD PENETRATION RESISTANCE

▲ Blows per Foot

Sample: S-1(R), S-1A, S-2, S-2A, S-3, S-3A, S-4, S-4A, S-5, S-5A, S-6, S-6A, S-7, S-7A, S-8, S-8A, S-9

1 2 5 10 20 50 100

50/5

50/6

88/10

50/3

pH

NM

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-16-4 1/1

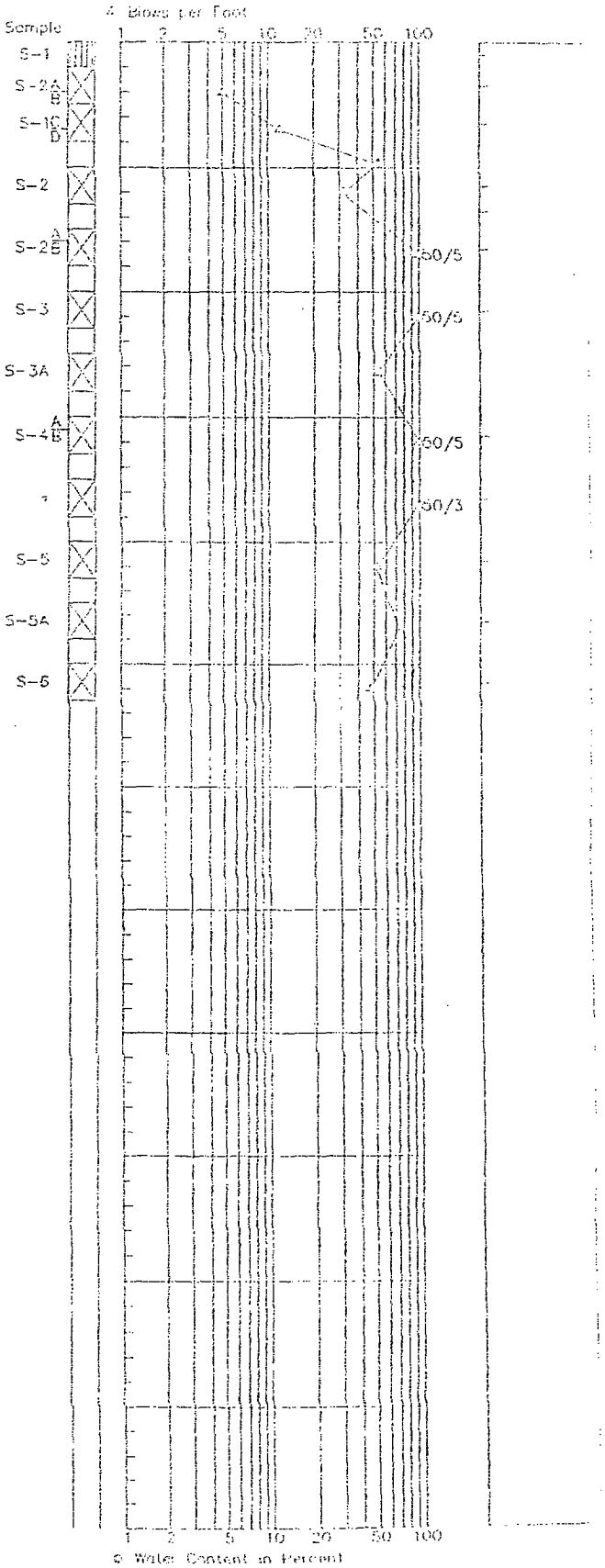
Boring Log 16-B-505

Soil Descriptions

Ground Surface Elevation in Feet 142.6

	Depth in Feet
Loose, moist, light brown, slightly silty SAND.	0
Medium stiff, moist, light brown, gravelly, sandy SILT.	5
Medium dense, moist, light brown, silty sandy GRAVEL and gravelly, very silty SAND.	10
Very dense, moist, light to gray-brown, slightly silty to silty, sandy GRAVEL.	15
	20
	25
Bottom of Boring at 26.5 Feet Completed 7/14/92	30
	35
	40
	45
	50
	55
	60

STANDARD PENETRATION RESISTANCE — LAB TESTS



Blows per Foot

© Water Content in Percent

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-16-5

Log of Test Pit 16-TP-501
Ground Surface Elevation Approximately 145.8 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5/0	0 to 2.5	Four inches of moist, black, silty, gravelly SAND with abundant roots over (medium dense), moist, tan and brown, very sandy GRAVEL.
S-2	3 to 6.5	5/0	2.5 to 6	(Medium dense), moist, grayish brown, very sandy to sandy GRAVEL.
			6 to 8	(Medium stiff), moist, gray and brown, sandy SILT.
S-3	8 to 10	5/0	8 to 10	(Medium dense), moist to wet, gray, sandy GRAVEL.

Bottom of 16-TP-501 at 10 feet, completed 3/10/92.

Log of Test Pit 16-TP-502
Ground Surface Elevation Approximately 143.8 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5/0	0 to 3	Four inches of organic debris over (medium dense), sandy GRAVEL with abundant roots.
S-2	3 to 6	5/0	3 to 8	(Medium dense), moist, brownish gray, sandy GRAVEL with layer of brick-red soil between depths of 7 and 8 feet.
S-3	7.5 to 10	4/0	8 to 10	(Medium dense), moist, brownish gray, very gravelly, medium SAND with zone of brick-red soil between depths of 8.5 and 9.5 feet.

Bottom of 16-TP-502 at 10 feet, completed 3/10/92.

Log of Test Pit 16-TP-503
Ground Surface Elevation Approximately 144.7 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5/0	0 to 0.5	Two inches of hard, residual Bunker C over 2 inches of black, silty SAND with roots over (medium dense), moist, brown, sandy GRAVEL with 1-inch-thick lens of black, very silty SAND at a depth of 0.5 feet.
S-2	3 to 6	5/0	0.5 to 3.5	(Medium dense), moist, brown, sandy GRAVEL.
S-3	8 to 10	5/0	3.5 to 10	(Medium dense), moist, gray, sandy GRAVEL.

Bottom of 16-TP-503 at 10 feet, completed 3/10/92.

Log of Test Pit 16-TP-504
Ground Surface Elevation Approximately 145.5 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4/0	0 to 2.5	Four inches of black, silty SAND with abundant roots over (medium dense), moist, brown, slightly gravelly, silty SAND.
S-2	3 to 6	4/0	2.5 to 7	(Medium dense), moist, gray, very silty, fine to medium SAND with 6-inch-thick non-silty sand lens at a depth of 3.5 feet.
S-3	8 to 10	4.5/0	7 to 10	(Medium dense), moist, brownish gray, sandy GRAVEL.

Bottom of 16-TP-504 at 10 feet, completed 3/10/92.

Log of Test Pit 16-TP-505
Ground Surface Elevation Approximately 142.6 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1.5	3.5/0	0 to 1.25	Four inches of grass over (soft), moist, brown and red, non-sandy to slightly sandy SILT with abundant organic matter.
			1.25 to 2.5	(Loose), moist, gray, slightly gravelly, silty SAND.
S-2	3 to 6	4.5/0	2.5 to 4	(Soft), moist, grayish orange, sandy SILT with minor wood fragments.
S-3	8 to 10	4.5/0	4 to 10	(Medium dense), moist, grayish orange, silty to slightly silty, sandy GRAVEL.

Bottom of 16-TP-505 at 10 feet, completed 3/11/92.

Log of Test Pit 16-TP-506
Ground Surface Elevation Approximately 147.8 Feet

Sample Number	Stratum Depth in Feet	Soil Description
No Samples Collected	0 to 0.5	Three inches of grass over (soft), moist, dark brown, slightly sandy SILT with abundant organics and drum fragments.

Bottom of 16-TP-506 at 0.5 feet, completed 3/11/92.

Note: 16-TP-506 abandoned due to presence of drum fragments in upper ½ foot. Replaced with 16-TP-509.

Log of Test Pit 16-TP-507
Ground Surface Elevation Approximately 141.0 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4/0	0 to 1	(Soft), moist, red, laminated SILT.
S-2	3 to 6	4/0	1 to 4	(Loose), moist, light grayish orange, silty, fine to medium SAND with wood fragments.
S-3	8 to 10	4/0	4 to 10	Medium dense, moist, brownish orange, slightly silty, sandy GRAVEL.

Bottom of 16-TP-507 at 10 feet, completed 3/11/92.

Log of Test Pit 16-TP-508
Ground Surface Elevation Approximately 147.1 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5/0	0 to 1.5	(Medium dense), damp, gray and dark brown, slightly silty, sandy GRAVEL with interbedded 1- to 2-inch-thick dark brown silty lenses and abundant roots and other organic matter.
S-2	3 to 6	5/0	1.5 to 9	(Medium dense), damp, reddish brown to brownish orange, sandy GRAVEL.
S-3	8 to 10	5/0	9 to 10	(Medium dense), moist, light brownish orange, fine to medium SAND.

Bottom of 16-TP-508 at 10 feet, completed 3/11/92.

Log of Test Pit 16-TP-509
Ground Surface Elevation Approximately 145.1 Feet

Sample Number	Sample Depth in Feet	pH/PID	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5/0	0 to 2.75	Two inches of hard, residual Bunker C over (medium dense), damp, gray, slightly silty, sandy GRAVEL with abundant roots and wood fragments.
			2.75 to 4.5	(Loose), damp to moist, dark gray, silty SAND with minor organic matter.
S-2	3 to 6	5/0	4.5 to 5	(Medium dense), moist, light brownish orange, slightly silty, fine SAND.
S-3	8 to 10	5/0	5 to 10	(Medium dense), moist, light brownish orange, slightly silty, sandy GRAVEL.

Bottom of 16-TP-509 at 10 feet, completed 3/11/92.

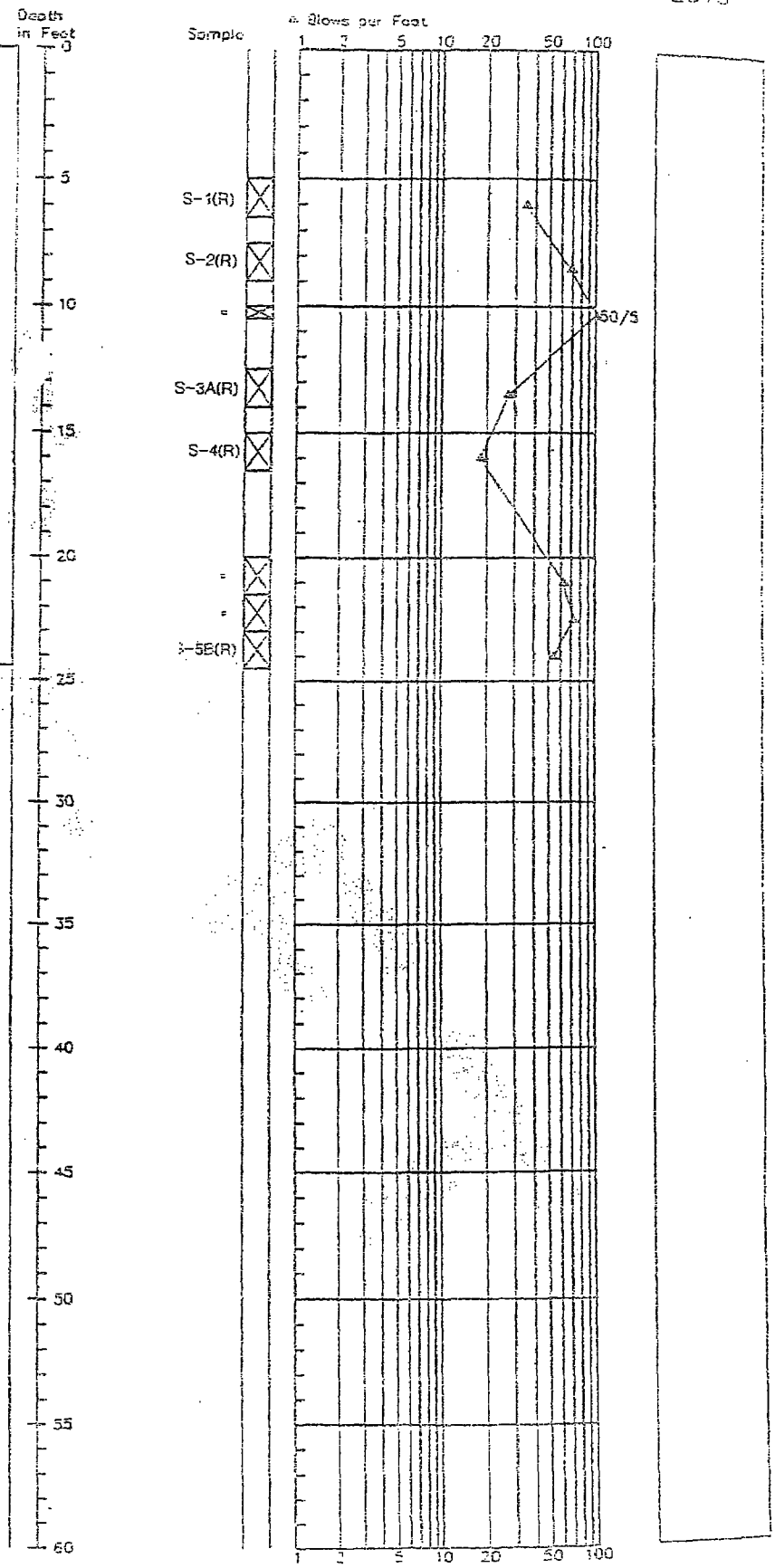
AREA 18
EXPLORATION LOGS

Boring Log 18-B-502

Soil Descriptions

Medium dense to very dense, moist, dark brown to light brown, slightly silty, sandy GRAVEL.

Bottom of Boring at 24.5 Feet.
Completed 11/5/92



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-18-1

Boring Log 18-B-501

Soil Descriptions

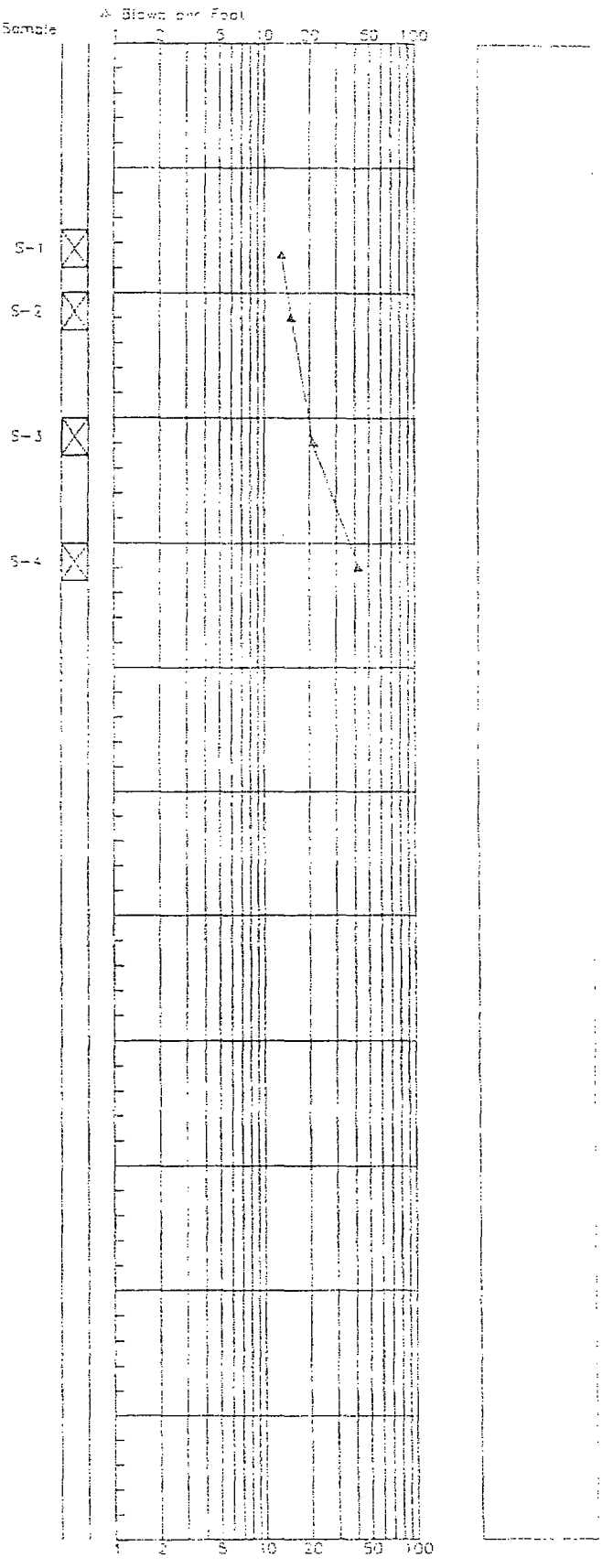
Depth in Feet

Medium dense, moist, light brown, silty to slightly silty GRAVEL.

Bottom of Boring at 11.5 Feet.
Completed 11/5/92

STANDARD PENETRATION RESISTANCE

LAB TESTS



1. Refer to Figure A-1 for explanation of descrip and symbols.
2. Soil descriptions and stratum lines are interpr and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-18-2 1/1

Log of Test Pit 18-TP-501

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), damp, brown, sandy GRAVEL with scattered concrete pieces.
S-1A	2.5 to 3	5	2.5 to 3	(Loose), moist, dark brown, gravelly SAND.
S-2.	3 to 6	5	3 to 9	(Medium dense), moist, brown, sandy GRAVEL.
S-3	8 to 10	5	9 to 10	(Very dense), moist, brown, sandy GRAVEL.

Bottom of 18-TP-501 at 10 feet, completed 5/11/92.

Log of Test Pit 18-TP-502

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 4	(Loose), moist, medium to dark brown, slightly gravelly, silty SAND.
S-2	4 to 6	4	4 to 6	(Loose), moist, light brown, very gravelly SAND.
S-3	8 to 10	4.5	6 to 10	(Loose), moist, medium gray, very gravelly SAND with gravel layers.

Bottom of 18-TP-502 at 10 feet, completed 5/1/92.

Note:
Sample S-1 is a 5-point composite of 0 to 1 foot within the foundation of Nitrator 1.

Log of Test Pit 18-TP-503

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 0.5	(Loose), moist, medium brown, slightly silty, sandy GRAVEL.
S-2	3 to 6	4.5	0.5 to 1	(Medium dense), moist, interbedded tan-brown and gray, sandy GRAVEL with a gray sand layer from depth of 3 to 3.5 feet and gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-503 at 10 feet, completed 5/1/92.

Note:
Sample S-1 is a 5-point composite from 0 to 1 foot within the foundation of Separator No. 1.

Log of Test Pit 18-TP-504

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 4	(Loose), damp, brown, sandy GRAVEL (FILL) with chunks of concrete.
S-2	3 to 6	5	4 to 10	(Medium dense), moist, brown, sandy GRAVEL (NATIVE).
S-3	8 to 10	5		

Bottom of 18-TP-504 at 10 feet, completed 5/1/92.

Note:
Sample S-1 is a 5-point composite from 0 to 1 foot in Neutralizing House No. 3 foundation.

Log of Test Pit 18-TP-505

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, dark brown, very gravelly SAND with concrete and scattered wood (FILL).
S-2	3 to 6	5	1 to 10	(Very dense), moist, brown, slightly sandy to sandy GRAVEL (NATIVE) with gravel layers dipping west.
S-3	8 to 10	5		

Bottom of 18-TP-505 at 10 feet, completed 5/11/92.

Note:
Sample S-1 is a 5-point composite in Neutralizer No. 2 foundation.

Log of Test Pit 18-TP-506

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	Four inches of forest duff over (loose), moist, dark brown, very gravelly SAND with minor organics.
			1.5 to 3	(Dense), moist, gray and brown, sandy GRAVEL.
S-2	3 to 6	5	3 to 5	(Dense), moist, brown, sandy GRAVEL with minor silt which decreases with depth.
S-3	8 to 10	5	5 to 10	(Very dense), moist, brown, sandy to slightly sandy GRAVEL.

Bottom of 18-TP-506 at 10 feet, completed 5/12/92.

Note:
Native soils encountered at depth of 2.5 to 3 feet.

Log of Test Pit 18-TP-507

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	Three inches of forest duff over (loose), moist, dark brown, gravelly SAND with minor organics.
S-2	3 to 6	1.5 to 10	(Dense), moist, brown, gravelly SAND with interbedded gravel layers dipping to west.
S-3	8 to 10		

Bottom of 18-TP-507 at 10 feet, completed 5/12/92.

Log of Test Pit 18-TP-508

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, dark brown, gravelly SAND (Disturbed soils).
		1.5 to 2	(Medium dense), moist, rusty brown, sandy GRAVEL (weathered zone, appears NATIVE).
S-2	3 to 6	2 to 10	(Dense), moist, brown, gravelly SAND with interbedded sandy gravel layers dipping to the west.
S-3	8 to 10		

Bottom of 18-TP-508 at 10 feet, completed 5/12/92.

Note:
Approximately 6 to 8 inches of soil removed during demolition and prior to excavation.

Figure A-18-6

Log of Test Pit 18-TP-509

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, dark brown, gravelly SAND with minor organics.
			1 to 1.5	(Medium dense), moist, rusty brown, sandy GRAVEL (NATIVE).
S-2	3 to 6	5	1.5 to 10	(Dense), moist, brown, gravelly SAND with interbedded sandy gravel layers dipping toward SW (NATIVE).
S-3	8 to 10	5		

Bottom of 18-TP-509 at 10 feet, completed 5/12/92.

Log of Test Pit 18-TP-510

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2	(Loose), moist, dark brown, very gravelly SAND with minor organics.
S-2	3 to 6	5	2 to 3.5	(Medium dense), moist, rusty brown, sandy GRAVEL.
S-3	8 to 10	5	3.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.

Bottom of 18-TP-510 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-511

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 1.5	(Loose), moist, dark brown, gravelly SAND with minor organics.
S-2(R)	3 to 6	5	1.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3(R)	8 to 10	5		

Bottom of 18-TP-511 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-512

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, dark brown, very gravelly SAND with minor roots.
S-2	3 to 6	5	1 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-512 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-513

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, dark brown, gravelly SAND with minor organics.
S-2	3 to 6	5	2.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-513 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-514

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 4	(Loose), moist, dark brown, gravelly SAND with small pieces of concrete, rebar, and steel debris (Disturbed soils).
S-2	4 to 6	5	4 to 10	(Dense), moist, brown, slightly sandy GRAVEL with bedding dipping southwest (NATIVE).
S-3	8 to 10	5		

Bottom of 18-TP-514 at 10 feet, completed 5/11/92.

Notes:

1) Sample S-1 is a 5-point composite from 0 to 1 foot in area of former Dynamite Mix House No. 2 structure.
2) Soil and debris from 0 to 4 feet appear to have been recently mixed from debris removal and sympathetic detonation.

Log of Test Pit 18-TP-515

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2	(Loose), moist, dark brown, very gravelly SAND with scattered organics.
			2 to 3	(Medium dense), moist, tan, sandy GRAVEL.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-515 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-516

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), moist, dark brown, gravelly SAND with minor organics.
			1.5 to 2.5	(Medium dense), moist, tan, sandy GRAVEL with occasional roots.
S-2	3 to 6	5	2.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-516 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-517

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 0.8	5	0 to 3	(Loose), moist, brown, gravelly SAND with thin layer of black material at depth of 1 foot (Sample S-1A).
S-1A	0.8 to 1	NM		
S-2	3 to 6	5	3 to 10	(Medium dense), moist, brown, gravelly SAND with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-517 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-518

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, dark brown, sandy GRAVEL with abundant roots.
S-2	3 to 6	5	2.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-518 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-519

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, dark brown, gravelly SAND with minor organics and concrete debris.
S-2	3 to 6	5	2.5 to 10	(Dense), moist, brown, sandy GRAVEL with bedded gravel layers dipping southwest (NATIVE).
S-3	8 to 10	5		

Bottom of 18-TP-519 at 10 feet, completed 5/11/92.

Note:
Sample S-1 was a 4-point composite around debris (concrete, rebar) in center of Gelatin Mix House No. 3 foundation.

Log of Test Pit 18-TP-520

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), damp, brown, slightly gravelly, silty SAND with a small lens of black burnt wood from 1.3 to 1.5 feet, and bricks with pier block.
S-2	3 to 6	5	1.5 to 10	(Loose), damp, light brown, slightly sandy GRAVEL with gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-520 at 10 feet, completed 4/27/92.

Log of Test Pit 18-TP-521

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 10	(Loose), damp, brown, sandy GRAVEL with interbedded gravel layers.
S-2(R)	3 to 6	5		
S-3	8 to 10	5		

Bottom of 18-TP-521 at 10 feet, completed 5/12/92.

Note:
Sample S-1 is a 5-point composite from 0 to 1 foot in former Gelatin Mix House No. 1 foundation.

Log of Test Pit 18-TP-522

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 1	(Loose), damp, light brown, silty, gravelly SAND.
			1 to 2.5	(Loose), damp, dark brown, silty, gravelly SAND.
S-2(R)	3 to 6	5	2.5 to 10	(Loose), damp, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-522 at 10 feet, completed 5/13/92.

Log of Test Pit 18-TP-523

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 8	(Medium dense), damp, medium and dark brown, silty, gravelly SAND with scattered pieces of burnt wood from 1 to 4 feet.
S-2	3 to 6	5		
S-3	8 to 10	5	8 to 10	(Medium dense), damp, light brown, sandy GRAVEL.

Bottom of 18-TP-523 at 10 feet, completed 5/13/92.

Log of Test Pit 18-TP-524

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, dark brown, very gravelly SAND with roots.
S-2	3 to 6	5	1 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers (NATIVE).
S-3	8 to 10	5		

Bottom of 18-TP-524 at 10 feet, completed 5/12/92.

Log of Test Pit 18-TP-525

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2	(Loose), moist, dark brown, gravelly SAND with roots and other organics.
			2 to 3.5	(Medium dense), moist, reddish brown, sandy GRAVEL with roots.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, brown, sandy GRAVEL with gravel layers (NATIVE).
S-3	8 to 10	5		

Bottom of 18-TP-525 at 10 feet, completed 5/12/92.

Log of Test Pit 18-TP-526

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 3	(Loose), damp, dark brown, silty, sandy GRAVEL (see notes below).
S-2	3 to 6	4.5	3 to 10	(Medium dense), damp, light brown, sandy GRAVEL.
S-3	8 to 10	4.5		

Bottom of 18-TP-526 at 10 feet, completed 4/30/92.

Notes:

1) Sample S-1 is a five-point composite of soil from 0 to 1 foot in Gelatin Mix House No. 2 foundation. Soil had been disturbed by heavy equipment prior to sampling.
2) Observed a piece of wood from 0.5 to 1 foot in depth that appeared to be an old gutter or pipe.

Log of Test Pit 18-TP-527

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, dark brown, silty, gravelly SAND.
S-2	3 to 6	5	2 to 10	(Medium dense), damp, light brown, slightly sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-527 at 10 feet, completed 5/13/92.

Note:
Surface disturbed by heavy equipment prior to excavation.

Log of Test Pit 18-TP-528

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 6	(Loose), damp, dark brown, silty, gravelly SAND (FILL?).
S-2	3 to 6	5		
S-3	8 to 10	5	6 to 10	(Medium dense), damp, light brown, sandy GRAVEL.

Bottom of 18-TP-528 at 10 feet, completed 5/13/92.

Log of Test Pit 18-TP-529

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), damp, dark brown, silty, gravelly SAND.
S-2	3 to 6	5	3 to 10	(Medium dense), damp, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-529 at 10 feet, completed 5/13/92.

Log of Test Pit 18-TP-530

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), damp, black, silty, gravelly SAND with large roots.
S-2	3 to 6	5	2.5 to 10	(Medium dense), damp, light brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-530 at 10 feet, completed 5/13/92.

Log of Test Pit 18-TP-531

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2.5	(Loose), damp, brown, silty, gravelly SAND with organics.
S-2	3 to 6	2.5 to 10	(Dense), damp, brown, sandy GRAVEL.
S-3	8 to 10		

Bottom of 18-TP-531 at 10 feet, completed 5/15/92.

Log of Test Pit 18-TP-532

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6	(Loose), damp, dark brown, silty, gravelly SAND (FILL)
S-2	3 to 6	4.5		
S-3	8 to 10	4.5	6 to 10	(Medium dense), damp, light brown, sandy GRAVEL (NATIVE).

Bottom of 18-TP-532 at 10 feet, completed 4/29/92.

Note:
Test pit excavated between 3 stem walls at Hall Packing House No. 4 foundation.

Log of Test Pit 18-TP-533

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2	(Loose), damp, brown, slightly gravelly, silty SAND.
S-2	2 to 3	5.0	2 to 3	(Dense), damp, gray, slightly gravelly, sandy SILT.
S-3	3 to 6	5	3 to 7.5	(Dense), damp, brown, silty, gravelly SAND with a thin layer of burnt wood (charcoal) at depth of 5 feet.
S-4	8 to 10	5	7.5 to 10	(Medium dense), damp, light brown, sandy GRAVEL.

Bottom of 18-TP-533 at 10 feet, completed 4/28/92.

Log of Test Pit 18-TP-534

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 3	(Loose), damp, dark and light brown, silty, gravelly SAND mixed with debris (FILL) (see note below).
S-2	3 to 6	4.5	3 to 10	(Loose), damp, light brown, sandy GRAVEL with gravel bedding (appears NATIVE).
S-3	8 to 10	4.5		

Bottom of 18-TP-534 at 10 feet, completed 4/30/92.

Note:
Debris observed from depth of 0 to 3 feet: wood debris, bricks, copper lines and potential asbestos-containing material (ACM). TLH Abatement Inc. removed potential ACM from excavation.

Log of Test Pit 18-TP-535

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), damp, light brown, sandy GRAVEL with bricks, metal fragments, and potential asbestos-containing material.
S-2	3 to 6	5	1.5 to 10	(Medium dense), damp, brown, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 18-TP-535 at 10 feet, completed 4/27/92.

Note:
TLM Abatement Inc. removed potential asbestos-containing material from excavation.

Log of Test Pit 18-TP-536

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Medium dense), damp, reddish brown, slightly gravelly, silty SAND with scattered charcoal and bricks.
S-2	3 to 6	5	3 to 10	(Dense), moist, light brown, slightly sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 18-TP-536 at 10 feet, completed 4/27/92.

Log of Test Pit 18-TP-537

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), damp, dark brown, silty, gravelly SAND.
S-2	3 to 6	5.5	2 to 8.5	(Loose), damp, light brown-gray, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	6	8.5 to 10	(Loose), damp, light brown-gray, gravelly SAND.

Bottom of 18-TP-537 at 10 feet, completed 4/24/92.

Log of Test Pit 18-TP-538

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 0.5	(Medium dense), damp, brown, silty SAND with scattered bricks.
S-2	3 to 6	5.5	0.5 to 10	(Loose), damp, light brown-gray, slightly sandy GRAVEL and interbedded gravel layers.
S-3	8 to 10	5.5		

Bottom of 18-TP-538 at 10 feet, completed 4/24/92.

Note:
Brick pier pad observed at depth of 0 to 2.5 feet.

Log of Test Pit 18-TP-539

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), damp, brown, silty, gravelly SAND with scattered bricks.
			1 to 3	(Loose), damp, light brown-gray, sandy GRAVEL.
S-2	3 to 6	5	3 to 6	(Medium dense), damp, dark brown, silty, gravelly SAND.
S-3	8 to 10	5	6 to 10	(Loose), damp, light brown-gray, sandy GRAVEL.

Bottom of 18-TP-539 at 10 feet, completed 4/24/92.

Log of Test Pit 18-TP-540

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), damp, brown, silty, gravelly SAND with scattered bricks.
S-2	3 to 6	5	1 to 10	(Loose), damp, light brown-gray, slightly sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-540 at 10 feet, completed 4/24/92.

Note:
Brick pier pad observed from depth of 0 to 2.5 feet.

Log of Test Pit 18-TP-541

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	6	0 to 1.2	(Loose), damp, medium brown, silty, gravelly SAND with scattered bricks, organics, burnt wood, and metal debris.
S-2	3 to 6	5	1.2 to 10	(Medium dense), damp, light brown-gray, sandy GRAVEL with a discontinuous gravel lens from 6.5 to 9.5 feet.
S-3	8 to 10	5		

Bottom of 18-TP-541 at 10 feet, completed 4/24/92.

Log of Test Pit 18-TP-542

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2	(Loose), damp, dark brown, silty, sandy GRAVEL with scattered nails, charcoal, and other metal debris.
S-2	3 to 6	4.5	2 to 10	(Loose), damp, light brown, slightly sandy GRAVEL with gravel layers.
S-3	8 to 10	4.5		

Bottom of 18-TP-542 at 10 feet, completed 4/28/92.

Note:
Charcoal and metal debris observed on surface.

Log of Test Pit 18-TP-543

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), damp, medium brown, silty, gravelly SAND with scattered charcoal (to 0.7 foot) and nails.
S-2	3 to 6	5	1.5 to 10	(Loose), damp, light brown-gray, slightly sandy GRAVEL with interbedded gravel layers dipping west.
S-3	8 to 10	5		

Bottom of 18-TP-543 at 10 feet, completed 4/28/92.

Log of Test Pit 18-TP-544

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), damp, brown, slightly gravelly SAND.
S-2	3 to 6	5	1 to 6	(Medium dense), damp, medium brown, silty, sandy GRAVEL with debris (see notes below).
S-3	8 to 10	5	6 to 10	(Medium dense), damp, light brown, sandy GRAVEL.

Bottom of 18-TP-544 at 10 feet, completed 5/15/92.

Note:
Debris observed from depth of 1 to 4 feet: 1-inch-diameter steel pipe, steel ducts approximately 3 feet in diameter (crushed), wood fragments, and crystals of copper salts.

Log of Test Pit 18-TP-545

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 3	Three inches of forest duff over (loose), damp, medium brown, slightly gravelly, silty SAND.
S-2	3 to 6	4.5	3 to 6	(Loose), damp, dark brown, silty, sandy GRAVEL (see notes below).
S-3	8 to 10	4.5	6 to 10	(Medium dense), damp, light brown, slightly sandy GRAVEL.

Bottom of 18-TP-545 at 10 feet, completed 4/29/92.

Notes:

1) Found wire wrapped around treated wood, which appears to be part of a former pipeline, from depth of 2.5 to 5 feet.
2) Test pit excavated between two concrete "stem walls". Observed a small void beneath east stem wall.

Log of Test Pit 18-TP-546

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), damp, medium brown, silty, gravelly SAND with a railroad tie and 1-inch-diameter metal pipe line near surface.
S-2	3 to 6	5	2 to 10	(Medium dense), damp, light brown, slightly sandy GRAVEL with gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-546 at 10 feet, completed 4/28/92.

Log of Test Pit 18-TP-547

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 0.5	(Loose), moist, dark brown, slightly silty, sandy GRAVEL (see note below).
S-2	3 to 6	5	0.5 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL increasing in moisture with depth.
S-3	8 to 10	5		

Bottom of 18-TP-547 at 10 feet, completed 5/1/92.

Note:
Sample S-1 is a 5-point composite from depth of 0 to 1 foot.

Log of Test Pit 18-TP-548

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, dark brown, gravelly SAND with minor organics.
S-2	3 to 6	5	2.5 to 4	(Medium dense), moist, reddish brown, gravelly SAND.
S-3	8 to 10	5	4 to 10	(Medium dense), moist, brown, gravelly SAND with interbedded gravel layers.

Bottom of 18-TP-548 at 10 feet, completed 5/14/92.

Log of Test Pit 18-TP-549

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1	(Medium dense), moist, dark brown, slightly silty, sandy GRAVEL.
S-2	3 to 6	5	1 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 18-TP-549 at 10 feet, completed 5/1/92.

Note:
Sample S-1 is a 5-point composite from 0 to 1 foot within Dynamite Mix House No. 1 foundation.

Log of Test Pit 18-TP-550

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2.5	(Loose), damp, intermixed brown SAND; dark brown, sandy GRAVEL; and black, gravelly SAND with debris (FILL) (see note below).
S-2	3 to 6	2.5 to 7	(Dense), damp, medium brown, sandy GRAVEL (NATIVE).
S-3	8 to 10	7 to 10	(Medium dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of 18-TP-550 at 10 feet, completed 5/15/92.

Note:
Debris observed from depth of 0.5 to 2.5 feet: 2 timbers, 1 steel pipe, and pieces of sheet metal.

Log of Test Pit 18-TP-551

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), damp, brown, silty, gravelly SAND with piece of plastic at 0.5 foot.
S-2	3 to 6	1.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with gravel layers.
S-3	8 to 10		

Bottom of 18-TP-551 at 10 feet, completed 5/15/92.

Log of Test Pit 18-TP-552

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2	(Loose), damp, dark brown, silty, sandy GRAVEL with brick and mortar debris.
S-2	3 to 6	4.5	2 to 10	(Loose), damp, light brown, sandy GRAVEL with gravel layers.
S-3	8 to 10	4.5		

Bottom of 18-TP-552 at 10 feet, completed 4/29/92.

Log of Test Pit 18-TP-553

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6	(Loose), damp, dark brown, silty, gravelly SAND with debris and strong creosote odor (see notes below).
S-2	3 to 6	4.5		

Bottom of 18-TP-553 at 6 feet, completed 4/29/92.

Notes:

1) Debris found from depth of 1 to 6 feet: crushed sections of sheet metal ducting which appeared to be approximately 3 feet in diameter, creosote-treated wood debris, and short lengths of iron.
2) Potential asbestos-containing material (ACM) encountered throughout excavation; TLH Abatement Inc removed potential ACM.

Log of Test Pit 18-TP-554

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6	(Loose), damp, dark brown-black, silty, gravelly SAND with 1-inch diameter PVC waterline at 0.5 foot.
S-2	3 to 6	4.5		
			6 to 8	(Loose), damp, light brown, gravelly SAND.
S-3	8 to 10	5	8 to 10	(Medium dense), damp, light brown-gray, sandy GRAVEL.

Bottom of 18-TP-554 at 10 feet, completed 4/29/92

Log of Test Pit 18-TP-555

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 6.5	(Loose), damp, dark brown, silty, sandy GRAVEL mixed with debris (FILL) (see notes below).
S-2	3 to 6	5		
S-3	8 to 10	4.5	6.5 to 10	(Medium dense), moist, light-brown, sandy GRAVEL.

Bottom of 18-TP-555 at 10 feet, completed 4/30/92.

Note:

1) Debris mixed in with soils from 0 to 6.5 feet: moderate amount of bricks, mortar, creosote-treated wood, metal, and ash.
2) Observed thin layer of crystalline copper salts mixed with black SAND, in the side wall between depth of 3 and 4 feet.

Log of Test Pit 18-TP-556

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 10	(Loose), damp, light brown, slightly sandy GRAVEL with interbedded gravel layers.
S-2	3 to 6	5		
S-3	8 to 10	5		

Bottom of 18-TP-556 at 10 feet, completed 5/13/92.

Note:
1 to 2 feet of soil removed during interim source removal prior to test pit excavation.

Log of Test Pit 18-TP-557

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 10	(Loose), damp, medium gray SAND with debris (FILL) (see note below).
S-2	3 to 6	4.5		
S-3	8 to 10	4.5		

Bottom of 18-TP-557 at 10 feet, completed 4/30/92.

Note:
Debris observed from depth of 0 to 10 feet: abundant chunks of wood debris (mostly creosote-treated wood), lengths of iron, and charcoal.

Log of Test Pit 18-TP-558

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.7	(Loose), damp, dark brown, silty, gravelly SAND mixed with wood fragments, lengths of iron, and scrap sheet metal (FILL).
S-2	1 to 2	4.5	1.7 to 2	(Loose), damp, black, silty SAND mixed with crystals of copper salts (FILL).
			2 to 3	(Loose), damp, dark brown, silty, gravelly SAND.
S-3	3 to 6	4.5	3 to 10	(Loose), damp, light brown, sandy GRAVEL.
S-4	8 to 10	4.5		

Bottom of 18-TP-558 at 10 feet, completed 4/30/92

Log of Test Pit 18-TP-559

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, medium brown, sandy GRAVEL.
S-2	3 to 6	5	1 to 9	(Loose), moist, medium gray, sandy GRAVEL with (medium dense), tan-brown GRAVEL lenses at depths of 5 and 6 feet.
S-3	8 to 10	5	9 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL.

Bottom of 18-TP-559 at 10 feet, completed 5/1/92.

Note: S-1 is a 5-point composite from 0 to 1 foot within the Biazzi-Nitrator foundation.

Log of Hand Auger Boring 18-HA-501

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Medium dense), damp, dark brown, silty, sandy GRAVEL with minor organics.
S-2	2 to 3	2 to 3	(Dense), damp, light brown, sandy GRAVEL.

Bottom of 18-HA-501 at 3 feet, completed 5/21/92.

Log of Hand Auger Boring 18-HA-502

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp, brown, silty, gravelly SAND.
S-2	2 to 3		

Bottom of 18-HA-502 at 3 feet, completed 5/21/92.

Log of Hand Auger Boring 18-HA-503

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Dense), damp, dark brown, silty, gravelly SAND with minor organics and charcoal.
S-2	2 to 3		

Bottom of 18-HA-503 at 3 feet, completed 5/21/92.

Log of Test Pit 18-TP-600

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	3-6	0 to 1	(Medium dense), moist, dark brown, slightly silty, sandy GRAVEL.
S-2	8-10	1 to 10	(Medium dense), moist, brown, sandy to slightly sandy GRAVEL.

Bottom of 18-TP-600 at 10 feet, completed 11/5/92

Note: Test pit excavated adjacent to observed surficial residual DNT.

Log of Test Pit 18-TP-601

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 2.5	(Medium dense), moist, dark brown, slightly silty, sandy GRAVEL with abundant organics.
S-2	3 to 6	2.5 to 10	(Medium dense), moist, brown, slightly sandy to sandy GRAVEL.
S-3	8 to 10		

Bottom of 18-TP-601 at 10 feet, completed 11/5/92.

Log of Test Pit 18-TP-602

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1	(Medium dense), moist, dark brown, sandy GRAVEL.
S-2	2 to 3	1 to 10	(Medium dense), moist, slightly sandy to sandy GRAVEL.
S-3	8 to 10		

Bottom of 18-TP-602 at 10 feet, completed 11/5/92.

Log of Test Pit 18-TP-603

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 0.75	(Medium dense), moist, dark brown, sandy GRAVEL (upper 3 to 4 inches have been graded and disturbed).
S-2	3 to 6	0.75 to 10	(Medium dense), moist, brown, slightly sandy to sandy GRAVEL.
S-3	8 to 10		

Bottom of 18-TP-603 at 10 feet, completed 11/5/92.

Note: Test pit excavated adjacent to observed surficial residual DNT.

Log of Test Pit 18-TP-604

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	3-6	0 to 1.5	(Medium dense), moist, dark brown, sandy GRAVEL with abundant organics.
S-2	8-10	1.5 to 10	(Medium dense), moist, brown, slightly sandy to sandy GRAVEL.

Bottom of 18-TP-604 at 10 feet, completed 11/5/92

Note: Test pit excavated adjacent to observed surficial residual DNT.

Figure A-18-36

Log of Test Pit 18-TR-101-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, gray, sandy GRAVEL.

Bottom of 18-TR-101-N at 4 feet, completed 6/28/93.

Log of Test Pit 18-TR-101-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-4	3-4	2-4	(Medium dense), moist, gray, sandy GRAVEL.

Bottom of 18-TR-101-S at 4 feet, completed 6/28/93.

Log of Test Pit 18-TR-102-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, dark brown TOPSOIL (FILL).
S-2	3-4	2-4	(Medium dense), moist, brown to gray, slightly sandy GRAVEL with concrete and copper debris (FILL).

Log of Test Pit 18-TR-102-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0 to 2	(Loose), moist, brown TOPSOIL (FILL).
S-4	3-4	2-4	(Medium dense), moist, brown to gray, slightly sandy GRAVEL with intact concrete foundation.

Bottom of 18-TR-102-E at 4 feet, completed 6/28/93.

Log of Test Pit 18-TR-103-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0 to 2	(Medium dense), moist, brown, slightly sandy GRAVEL.
S-4	3-4	2-4	(Medium dense), moist, brown to gray, slightly sandy GRAVEL (appears NATIVE).

Bottom of 18-TR-103-S at 4 feet, completed 6/28/93.

Log of Test Pit 18-TR-104-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0 to 2	(Loose), moist, brown sandy GRAVEL.
S-2	3-4	2-4	(Medium dense), moist, light gray, sandy GRAVEL.

Bottom of 18-TR-104-W at 4 feet, completed 6/28/93.

Log of Test Pit 18-TR-104-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	1-2	0-2	(Loose), moist, brown, sandy GRAVEL with broken pieces of concrete debris (FILL).
S-4	3-4	2-4	(Medium dense), moist, light gray sandy GRAVEL.

Note:
Bottom of 18-TR-104-E at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-105-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-3	(Loose), moist, brown, sandy GRAVEL with organics and concrete debris (FILL).
S-2	3-4	3-4	(Loose), moist, light brown, sandy GRAVEL.

Note:
Bottom of 18-TR-105-N at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-105-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-3	(Loose), moist, brown, sandy GRAVEL.
S-4	3-4	3-4	(Loose), moist, brown, sandy GRAVEL.

Bottom of 18-TR-105-S at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-106-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, dark brown TOPSOIL with organics, wood and steel debris (FILL).
S-2	3-4	2-4	(Medium dense), moist, brown, sandy GRAVEL.

Note:
Encountered a 6-inch cast iron water main, creosoted timbers, steel pipes, and cables at 1 foot depth. Bottom of 18-TR-106-W at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-106-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, dark brown TOPSOIL with organics, wood and steel debris (FILL).
S-4	3-4	2-4	(Medium dense), moist, brown, sandy GRAVEL.

Bottom of 18-TR-106-E at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-107-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, dark brown TOPSOIL with dark stained burned wood-charcoal (FILL).
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL with intermittent wood fragments (FILL).

Bottom of 18-TR-107-N at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-107-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, dark brown TOPSOIL with steel, copper, concrete, and plastic debris (FILL).
S-4	3-4	2-4	(Loose), moist, light brown to gray, sandy GRAVEL.

Bottom of 18-TR-107-S at 4 feet, completed 6/29/93.

Log of Test Pit 18-TR-108-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown TOPSOIL with concrete debris (FILL).
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL with wood fragments (FILL).

Note:
Bottom of 18-TR-108-E at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-108-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL with burned wood layer (FILL).
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-108-W at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-109-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown TOPSOIL.
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-109-W at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-109-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL with burned wood layer (FILL).
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-109-E at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-110-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown TOPSOIL with abundant organics.
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-110-N at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-110-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL with organics.
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-110-S at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-111-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-1.5	(Loose), moist, brown TOPSOIL with copper material (FILL).
S-2	3-4	1.5-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-111-E at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-111-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-1.5	(Loose), moist, brown TOPSOIL with organic matter.
S-4	3-4	1.5-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-111-W at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-112-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown TOPSOIL with steel debris (FILL).
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-112-S at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-112-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL .
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-112-N at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-113-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-4	(Loose), moist, brown TOPSOIL with mixed debris (FILL).
S-2	3-4	0-4	(Loose), moist, light brown, TOPSOIL with mixed debris (FILL).

Bottom of 18-TR-113-W at 4 feet, completed 6/30/93.

Note: Brick, steel, ceramics, and cable debris along with 6-inch ceramic pipe leading from an adjacent structure was encountered.

Log of Test Pit 18-TR-113-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-4	(Very loose), moist, dark brown TOPSOIL with mixed debris (FILL).
S-4	3-4	0-4	(Loose), moist, dark brown TOPSOIL with mixed debris (FILL).

Note:
Brick, steel, ceramics, and cable debris along with 6-inch ceramic pipe leading from an adjacent structure was encountered. Bottom of 18-TR-113-N at 4 feet, completed 6/30/93.

Log of Test Pit 18-TR-114-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL with abundant organics.
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-114-W at 4 feet, completed 7/1/93.

Log of Test Pit 18-TR-115-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown TOPSOIL.
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-115-N at 4 feet, completed 7/1/93.

Log of Test Pit 18-TR-115-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL.
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-115-S at 4 feet, completed 7/1/93.

Log of Test Pit 18-TR-116-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown TOPSOIL.
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL with patches of gravelly SAND.

Bottom of 18-TR-116-E at 4 feet, completed 7/1/93.

Log of Test Pit 18-TR-116-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL.
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL with patches of gravelly SAND.

Bottom of 18-TR-116-W at 4 feet, completed 7/1/93.

Log of Test Pit 18-TR-Depression

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-1.5	(Medium dense), moist, light brown, sandy GRAVEL.
S-2	3-4	1.5-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-Depression at 4 feet, completed 7/7/93.

Log of Test Pit 18-TR-117-W

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	1-2	0-3	(Loose), wet, brown TOPSOIL mixed with concrete debris (FILL).
S-2	4-5	3-5	(Loose), wet, light brown, sandy GRAVEL.

Bottom of 18-TR-117-W at 5 feet, competed 7/2/93.

Log of Test Pit 18-TR-117-E

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-3	(Loose), wet, brown TOPSOIL.
S-4	3-4	3-5	(Loose), wet, light brown, sandy GRAVEL.

Bottom of 18-TR-117-E at 5 feet, completed 7/2/93.

Log of Test Pit 18-TR-118-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown SAND.
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-118-N at 4 feet, completed 7/2/93.

Log of Test Pit 18-TR-118-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, brown TOPSOIL.
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL with patches of gravelly SAND.

Bottom of 18-TR-118-S at 4 feet, completed 7/2/93.

Log of Test Pit 18-TR-119-N

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, light brown SAND.
S-2	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-119-N at 4 feet, completed 7/2/93.

Log of Test Pit 18-TR-119-S

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-3	0-1	0-2	(Loose), moist, light brown SAND with burned wood layer (FILL).
S-4	3-4	2-4	(Loose), moist, light brown, sandy GRAVEL.

Bottom of 18-TR-119-S at 4 feet, completed 7/2/93.

TEST PITS PERFORMED AT GRID SAMPLE LOCATIONS

Log of Test Pit 18-TP-GS-16

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	1-2	0-2	(Medium dense), dry, light brown, sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), dry, light brown, sandy GRAVEL.

Note:
Undisturbed concrete occupied the 0 to 1 foot interval (transport angel walks). Bottom of 18-TP-GS-16 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-17

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), dry, light brown, sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), dry, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-17 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-22

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), dry, light brown, sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), dry, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-17 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-23

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, silty, sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-23 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-24

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0-1	0-2	(Medium dense), moist, brown, silty, sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-24 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-25

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, silty, sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-25 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-27

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, brown, slightly gravelly SAND with abundant organics. Berm material.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Note: Material encountered during 0-2 foot interval was from berms placed around buildings.
Bottom of 18-TP-GS-27 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-28

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-28 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-32

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-32 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-33

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-33 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-38

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-3	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	3-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-38 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-40

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-40 at 4 feet, completed 7/7/93.

Log of Test Pit 18-TP-GS-41

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-41 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-42

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-42 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-43

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Medium dense), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 18-TP-GS-43 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-47

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-1	(Loose), moist, brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	1-4	(Loose), moist, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-47 at 4 feet, completed 7/12/93.

Log of Test Pit 18-TP-GS-49

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), dry, dark brown, slightly sandy GRAVEL with abundant organics.
S-2	3-4	2-4	(Loose), dry, light brown to light gray, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-49 at 4 feet, completed 7/12/93.

Log of Test Pit 18-TP-GS-53

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), dry, light brown, slightly sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), dry, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-53 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-54

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-1	(Loose), dry, light brown, slightly sandy GRAVEL with organics.
S-2	3-4	1-4	(Medium dense), dry, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-54 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-59

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, black to light brown, slightly sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-59 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-62

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), dry, light brown, slightly sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), dry, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-62 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-70

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-1.5	(Loose), dry, dark to light brown, slightly sandy GRAVEL with organics.
S-2	3-4	1.5-4	(Medium dense), dry, light brown, sandy GRAVEL with cobbles.

Note:
Sand content in gravel layer decreasing with depth.
Bottom of 18-TP-GS-70 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-72

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, dark brown, slightly sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL with cobbles.

Note:
Layer of gravel dipping from south to north.
Bottom of 18-TP-GS-72 at 4 feet, completed 7/6/93.

Log of Test Pit 18-TP-GS-81

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0-1	0-2	(Loose), moist, light brown, slightly sandy GRAVEL with organics.
S-2	3-4	2-4	(Medium dense), moist, light brown, sandy GRAVEL with cobbles.

Bottom of 18-TP-GS-81 at 4 feet, completed 7/6/93.

AREA 1234
EXPLORATION LOGS

Log of Test Pit 1234-TP-501

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.1	(Loose), moist, dark brown, gravelly SAND (abundant organics).
S-2	3 to 6.0	5	1.1 to 8.0	(Medium dense), moist, brown, very sandy GRAVEL (roots observed at a depth of 6 feet).
S-3	8 to 10	5	8 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL.

Bottom of 1234-TP-501 at 10 feet, completed 5/18/92.

Log of Test Pit 1234-TP-502

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 4	(Loose), moist, brown, gravelly SAND.
S-2	3 to 6	5	4 to 6	(Medium dense), moist, gray-brown, gravelly SAND.
S-3	8 to 10	5	6 to 10	(Medium dense), moist, gray-brown, gravelly SAND.

Bottom of 1234-TP-502 at 10 feet, completed 5/18/92.

Log of Test Pit 1234-TP-503

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Medium dense), moist, brown, sandy GRAVEL with some metal debris and roots (see Note 2).
			1.5 to 3	(Loose), moist, yellow-brown and gray SAND.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, gray-brown and rusty-brown, sandy GRAVEL with minor tar-like substance between 3 and 4 feet (see Note 3).
S-3	8 to 10	5		

Bottom of 1234-TP-503 at 10 feet, completed 5/21/92.

Notes:
1) Test pit excavated in area that was graded over during interim source removal.
2) Observed traces of potential asbestos-containing material.
3) Observed tar-like substance, similar to that observed on the bottom of NG gutters.

Figure A-1234-2

Log of Test Pit 1234-TP-504

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, brown, gravelly SAND with minor organics.
S-2	3 to 6	5	1 to 3.5	(Loose), moist, tan, slightly gravelly SAND.
S-3	8 to 10	5	3.5 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL with interbedded gravel layers.

Bottom of 1234-TP-504 at 10 feet, completed 5/19/92.

Note:
Observed "NG wash gutter" in test pit side wall from 1 to 2 feet in depth. 6 inches of gray sand observed directly below the gutter.

Log of Test Pit 1234-TP-505

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), dense, light brown, sandy GRAVEL.
S-2	3 to 6	5	1 to 6	(Medium dense), moist, brown, sandy GRAVEL with large concrete block, bricks, and large roots.
			6 to 8	(Medium dense), moist, brown, gravelly SAND.
S-3	8 to 10	5	8 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL (Native).

Bottom of 1234-TP-505 at 10 feet, completed 5/19/92.

Log of Test Pit 1234-TP-506

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, light brown, sandy GRAVEL.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-506 at 10 feet, completed 5/20/92.

Log of Test Pit 1234-TP-507

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, reddish brown, gravelly SAND.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-507 at 10 feet, completed 5/18/92.

Log of Test Pit 1234-TP-508

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), dense, tan, sandy GRAVEL with occasional roots.
S-2	3 to 6	5	3 to 6	(Medium dense), moist, brown, sandy GRAVEL with minor roots.
S-3	8 to 10	5	6 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL with interbedded gravel layers.

Bottom of 1234-TP-508 at 10 feet, completed 5/18/92.

Log of Test Pit 1234-TP-509

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), moist, brown, very sandy GRAVEL.
			1 to 2	(Medium dense), moist, gray-brown, sandy GRAVEL.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, yellow-brown, slightly sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-509 at 10 feet, completed 5/21/92.

Log of Test Pit 1234-TP-510

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), moist, silty, gravelly SAND with a few bricks and roots.
S-2	3 to 6	5	1 to 10	(Medium dense), moist, yellow-brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-510 at 10 feet, completed 5/21/92.

Log of Test Pit 1234-TP-511

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), moist, dark brown, very sandy GRAVEL with minor organics.
S-2	3 to 6	5	2 to 4	(Medium dense), moist, yellow-brown, sandy GRAVEL.
S-3	8 to 10	5	4 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL with interbedded gravel layers.

Bottom of 1234-TP-511 at 10 feet, completed 5/21/92.

Log of Test Pit 1234-TP-512

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, dark brown, gravelly SAND with roots.
S-2	3 to 6	5	1 to 8	(Medium dense), moist, gray-brown, sandy GRAVEL with interbedded gravel layers and minor iron staining.
S-3	8 to 10	5	8 to 10	(Loose), moist, brown SAND.

Bottom of 1234-TP-512 at 10 feet, completed 5/19/92.

Log of Test Pit 1234-TP-513

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, light brown, gravelly SAND with pieces of ceramic tile (FILL).
S-2	3 to 6	5	2 to 10	(Medium dense), moist, yellow-brown sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-513 at 10 feet, completed 5/19/92.

Log of Test Pit 1234-TP-514

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.2	(Medium dense), damp, dark brown, silty, gravelly SAND.
S-2	3 to 6	5	1.2 to 10	(Loose), moist, light brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-514 at 10 feet, completed 5/19/92.

Log of Test Pit 1234-TP-515

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), damp, dark brown, silty, gravelly SAND.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, light brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-515 at 10 feet, completed 5/19/92.

Log of Test Pit 1234-TP-516

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), moist, dark brown, gravelly SAND with minor organics.
S-2	3 to 6	5	1.5 to 10	(Medium dense), moist, yellow-brown, sandy GRAVEL with alternating layers of yellow-brown and gray-brown sandy GRAVEL to a depth of 6 feet and yellow-brown, sandy GRAVEL below 6 feet.
S-3	8 to 10	5		

Bottom of 1234-TP-516 at 10 feet, completed 5/20/92.

Log of Test Pit 1234-TP-517

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), moist, dark brown, gravelly SAND with abundant roots.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, yellow-brown, sandy GRAVEL with alternating layers of yellow-brown and gray-brown, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 1234-TP-517 at 10 feet, completed 5/20/92.

Log of Test Pit 1234-TP-518

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, dark brown SAND with minor organics.
S-2	3 to 6	5	2.5 to 8.5	(Loose), moist, gray-brown SAND.
S-3	8 to 10	5	8.5 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL.

Bottom of 1234-TP-518 at 10 feet, completed 5/19/92.

Log of Test Pit 1234-TP-519

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, brown, gravelly SAND with large piece of wood from 0.5 to 2 feet.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-519 at 10 feet, completed 5/20/92.

Log of Test Pit 1234-TP-520

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, reddish brown, very gravelly SAND.
			1 to 3	(Medium dense), moist, gray-brown, sandy GRAVEL.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, gray-brown, slightly sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-520 at 10 feet, completed 5/18/92.

Log of Test Pit 1234-TP-521

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, dark brown, gravelly SAND (FILL).
			1 to 2	(Medium dense), moist, light brown, sandy GRAVEL with 4-inch layer of burnt wood at 1 foot depth (FILL).
S-2	3 to 6	5	2 to 8	(Medium dense), moist, gray-brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5	8 to 10	(Dense), moist, gray-brown GRAVEL.

Bottom of 1234-TP-521 at 10 feet, completed 5/18/92.

Log of Test Pit 1234-TP-522

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), moist, dark brown, gravelly SAND with minor organics.
S-2	3 to 6	5	1.5 to 10	(Medium dense), moist, yellow-brown, sandy GRAVEL with alternating layers of yellow-brown and gray-brown, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 1234-TP-522 at 10 feet, completed 5/20/92.

Log of Test Pit 1234-TP-523

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), moist, brown, gravelly SAND with minor organics.
S-2	3 to 6	5	1.5 to 8	(Medium dense), moist, gray-brown, slightly sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5	8 to 10.0	(Medium dense), wet, gray-brown, slightly sandy GRAVEL.

Bottom of 1234-TP-523 at 10 feet, completed 5/20/92.

Log of Test Pit 1234-TP-524

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), damp, brown, gravelly SAND.
S-2	3 to 6	5	1 to 10	(Medium dense), moist, light brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-524 at 10 feet, completed 5/18/92.

Note:
Test pit excavated in the bottom of a previous 4-foot-deep trench.

Log of Test Pit 1234-TP-525

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), moist, brown, sandy GRAVEL with minor organics.
S-2	3 to 6	5	1 to 8	(Medium dense), moist, gray-brown, slightly sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5	8 to 10	(Medium dense), wet, gray-brown, slightly sandy GRAVEL.

Bottom of 1234-TP-525 at 10 feet, completed 5/20/92.

Note:
Test pit excavated in bottom of a previous 4-foot-deep trench.

Log of Test Pit 1234-TP-526

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), dense, dark brown, silty, gravelly SAND.
S-2	3 to 6	5	1 to 10	(Dense), moist, yellow-brown, sandy GRAVEL with interbedded gravel layers.
S-3	8 to 10	5		

Bottom of 1234-TP-526 at 10 feet, completed 5/19/92.

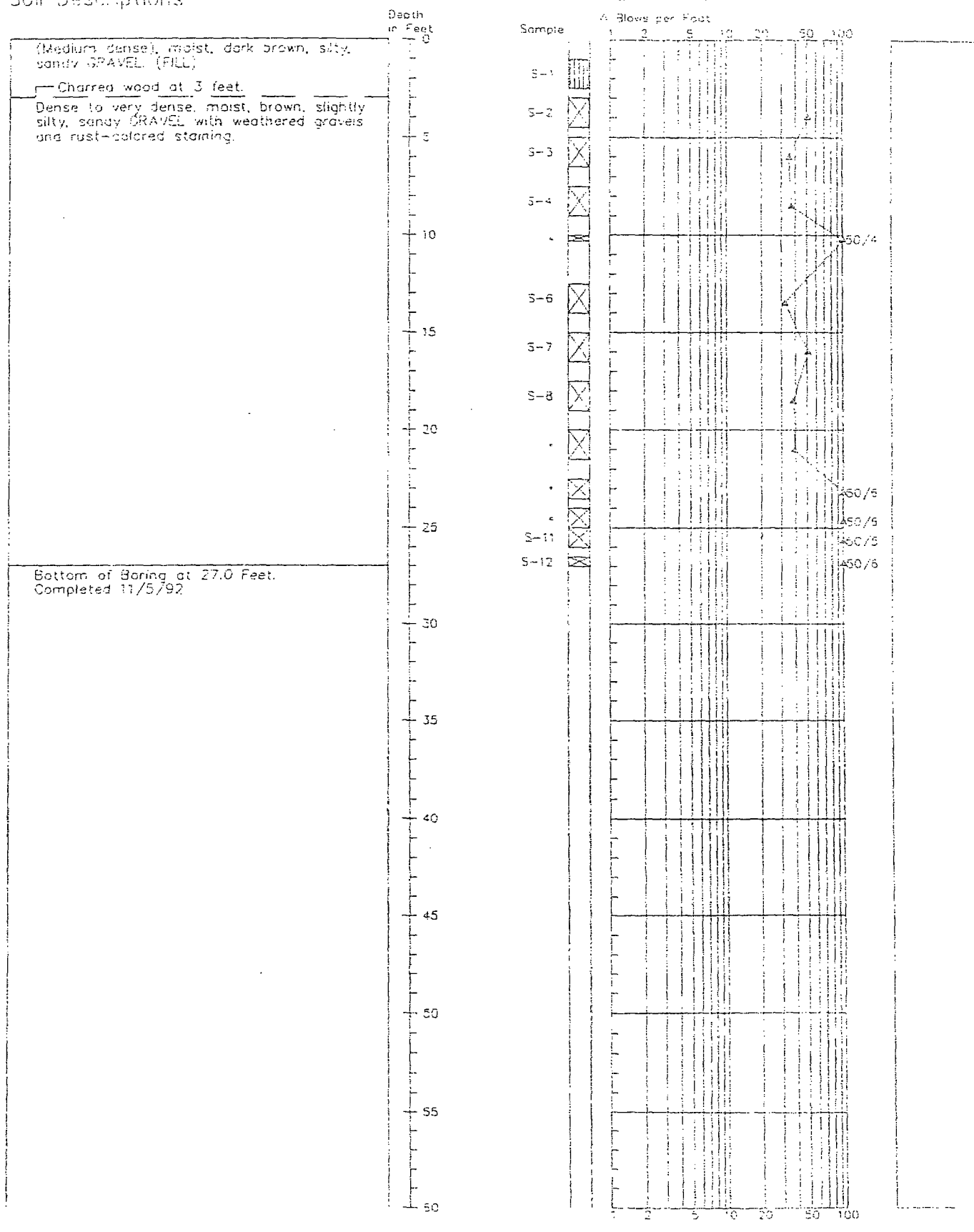
Log of Test Pit 1234-TP-527

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), moist, reddish brown, gravelly SAND with minor organics.
S-2	3 to 6	5	1.5 to 10	(Medium dense), moist, gray-brown, sandy GRAVEL with alternating layers of gray-brown and brown, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 1234-TP-527 at 10 feet, completed 5/18/92.

AREA 25
EXPLORATION LOGS

Boring Log 25-B-501



1. *Refer to Figure A-1 for explanation of descriptions and symbols.*
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-25-1

Log of Test Pit 25-TP-501
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 0.8	(Medium dense), moist, silver-gray, slightly sandy CRUSHED ROCK (FILL).
			0.8 to 3	(Medium dense), moist, medium brown, slightly silty, sandy GRAVEL (NATIVE).
S-2	3 to 6	5	3 to 10	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 25-TP-501 at 10 feet, completed 4/22/92.

Log of Test Pit 25-TP-502
Ground Surface Elevation Approximately 211.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Medium dense), moist, medium brown, slightly silty, sandy GRAVEL with small roots in upper foot and a 2-inch layer of black, slightly silty, sandy gravel at 0.5 foot.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, light brown, sandy GRAVEL with a 4-inch layer of very sandy gravel at 5 feet and abundant non-sandy gravel lenses.
S-3	8 to 10	5		

Bottom of 25-TP-502 at 10 feet, completed 4/22/91.

Log of Test Pit 25-TP-503
Ground Surface Elevation Approximately 209.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4	0 to 1	(Medium dense), moist, grayish black, silty, gravelly SAND with debris (FILL) (see Note 1 below).
S-2(R)	1 to 3	4	1 to 4	(Medium dense), moist, reddish brown, sandy GRAVEL.
			4 to 5	(Medium dense), moist, dark yellowish brown GRAVEL.
S-3	5 to 7	3.5	5 to 10	(Medium dense), moist, dark yellowish brown, sandy GRAVEL with interbedded silver-gray sandy gravel.
S-4	8 to 10	4		

Bottom of 25-TP-503 at 10 feet, completed 4/22/92.

Notes:
1) Debris observed from 0 to 1 foot included 2-inch-diameter lead pipe, 2-foot-long 4-inch-diameter steel pipe, and scattered bricks. 3.5- by 6-foot concrete slab at surface on northeast side of excavation. Bottom of slab was stained yellow.
2) Deteriorated gravels from depth of 1 to 10 feet.

Log of Test Pit 25-TP-504
Ground Surface Elevation Approximately 211.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	7	0 to 3	1-inch layer of silver-gray, sandy GRAVEL over (medium dense), moist, reddish brown, sandy GRAVEL.
S-2	3 to 6	6	3 to 10	(Medium dense), moist, medium gray, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 25-TP-504 at 10 feet, completed 4/22/92.

Log of Test Pit 25-TP-505
Ground Surface Elevation Approximately 209.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 4	(Medium dense), moist, medium brown, slightly silty, sandy GRAVEL with small roots to depth of 1.5 feet (see note below).
S-2	3 to 6	5	4 to 10	(Dense), moist, medium gray, sandy GRAVEL interbedded with light brown, sandy gravel and some cobbles up to 12 inches in size.
S-3	8 to 10	5		

Bottom of 25-TP-505 at 10 feet, completed 4/22/92.

Note:
Observed a brick and cement wall between depths of 1.5 and 4 feet on the southwest wall of the excavation, with orange-brown soil adjacent to it.

Log of Test Pit 25-TP-506
Ground Surface Elevation Approximately 209.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2	2 inches of medium gray, slightly silty SAND over (medium dense), moist, medium brown, slightly silty, sandy GRAVEL with small roots.
S-2	3 to 6	5	2 to 10	(Medium dense), moist, light brown, sandy GRAVEL with interbedded layers of gravel and a 0.5-foot-thick layer of medium gray, very sandy gravel at 5.5 feet.
S-3	8 to 10	5		

Bottom of 25-TP-506 at 10 feet, completed 4/22/92.

Log of Test Pit 25-TP-507
Ground Surface Elevation Approximately 209.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4.5	0 to 3	(Medium dense), moist, medium brown, slightly silty, sandy GRAVEL with abundant small roots.
S-2	3 to 6	4.5	3 to 10	(Medium dense), moist, light brown, sandy GRAVEL with a lens of gravel from 5 to 7 feet.
S-3	8 to 10	4.5		

Bottom of 25-TP-507 at 10 feet, completed 4/23/92.

Log of Test Pit 25-TP-508
Ground Surface Elevation Approximately 208.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 3	(Medium dense), moist, mottled red-brown, medium brown, and medium gray, slightly silty, sandy GRAVEL.
S-2	3 to 6	5	3 to 10	(Medium dense), moist, medium gray, sandy GRAVEL with scattered cobbles and interbedded layers of gravel.
S-3	8 to 10	5		

Bottom of 25-TP-508 at 10 feet, completed 4/23/92.

Log of Test Pit 25-TP-509
Ground Surface Elevation Approximately 205.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 10	Weathered GRAVEL on surface over (medium dense), moist, light grayish brown, sandy GRAVEL with scattered areas of darker yellow staining and interbedded gravel layers.
S-2	3 to 6	4.5		
S-3	8 to 10	4.5		

Bottom of 25-TP-509 at 10 feet, completed 4/23/92.

Log of Test Pit 25-TP-510
Ground Surface Elevation Approximately 212.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Medium dense), moist, black, slightly silty, sandy GRAVEL.
S-2	3 to 6	4.5	1.5 to 4.5	(Medium dense), moist, tan-brown, sandy GRAVEL with a few interbedded gravel layers.
S-3	8 to 10	4.5	4.5 to 10	(Medium dense), moist, medium gray, sandy GRAVEL with interbedded gravel layers.

Bottom of 25-TP-510 at 10 feet, completed 4/23/92.

Log of Test Pit 25-TP-511
Ground Surface Elevation Approximately 201.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2	(Medium dense), moist, grayish black, slightly silty, sandy GRAVEL.
			2 to 3	(Medium dense), moist, reddish brown, slightly silty, sandy GRAVEL.
S-2	3 to 6	4	3 to 8	(Medium dense), moist, orange-brown, gray, tan-brown, and black (interlayered), slightly gravelly, silty SAND.
S-3	8 to 10	4	8 to 10	(Medium dense), moist, reddish brown and tan-brown, sandy GRAVEL.

Bottom of 25-TP-511 at 10 feet, completed 4/23/92.

Log of Test Pit 25-TP-512
Ground Surface Elevation Approximately 210.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 10	(Medium dense), moist, dark gray, sandy GRAVEL.
S-2	3 to 6		
S-3	8 to 10		

Bottom of 25-TP-512 at 10 feet, completed 11/4/92.

Note: Test pit excavated in area previously graded during interim source removal.

Log of Test Pit 25-TP-513
Ground Surface Elevation Approximately 208.3 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	Three inches of grass over (medium dense), moist, dark brownish gray, slightly silty, sandy GRAVEL with weathered/deteriorated gravels.
S-2	3 to 6	1.5 to 4	(Medium dense), moist, to damp, reddish brown, sandy GRAVEL with scattered weathered gravels and minor rusty staining.
S-3	8 to 10	4 to 10	(Dense), damp, brown, slightly sandy to sandy GRAVEL.

Bottom of 25-TP-513 at 10 feet, completed 11/4/92.

Log of Test Pit 25-TP-514
Ground Surface Elevation Approximately 209.3 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.75	Two inches of grass over (medium dense), moist, dark brownish gray, silty, sandy GRAVEL with deteriorated gravels (FILL?).
S-2	3 to 6	1.75 to 8	(Medium dense), damp, gray, silty, sandy GRAVEL with extremely deteriorated gravels.
S-3	8 to 10	8 to 12	(Dense), damp, gray, sandy GRAVEL with extremely deteriorated gravels.
S-4	12 to 14	12 to 14	(Dense), damp, brownish gray, sandy GRAVEL with bleached-looking gravels.

Bottom of 25-TP-514 at 14 feet, completed 11/4/92.

Note:
End of clay pipe visible at approximately 1-foot depth on north test pit wall. There was no evidence that the pipe extended through the test pit location.

Log of Test Pit 25-TP-515
Ground Surface Elevation Approximately 209.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	Three inches of grass over (medium dense), moist, dark brown, sandy GRAVEL.
		1 to 2.5	(Medium dense), moist, brown, slightly sandy GRAVEL.
S-2	3 to 6	2.5 to 6	(Medium dense), moist, brown GRAVEL.

Bottom of 25-TP-515 at 7 feet, completed 11/3/92.

Note: Eight-inch-diameter steel water line encountered at 2.5 feet. Excavation stopped at 7 feet because digging in the collapsing gravels may have compromised the pipe.

Log of Test Pit 25-TP-516
Ground Surface Elevation Approximately 210.2 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	Two inches of grass over (medium dense), moist, brown, sandy GRAVEL (FILL?).
S-2	1.5 to 3.5	1 to 3.5	(Medium dense), moist, dark gray, silty, sandy GRAVEL with deteriorated gravels.
S-3	4 to 6	3.5 to 10	(Dense), moist, brown, slightly sandy to non-sandy GRAVEL.
S-4	8 to 10		

Bottom of 25-TP-516 at 10 feet, completed 11/4/92.

Log of Test Pit 25-TP-517
Ground Surface Elevation Approximately 210.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 0.5	(Medium dense), moist, brown, sandy GRAVEL with minor brick fragments (FILL).
S-2	3 to 6	0.5 to 6	(Medium dense), moist, brown, non-sandy to slightly sandy GRAVEL.

Bottom of 25-TP-517 at 6 feet, completed 11/4/92.

Note: Excavation stopped at 6 feet due to collapsing of the excavation side walls.

Log of Test Pit 25-TP-518
Ground Surface Elevation Approximately 210.1 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 10	(Medium dense), moist, brown, sandy GRAVEL.
S-2	3 to 6		
S-3	8 to 10		

Bottom of 25-TP-518 at 10 feet, completed 11/4/92.

Log of Test Pit 25-TP-519
Ground Surface Elevation Approximately 210.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 0.5	(Medium dense), moist, dark brown, slightly sandy GRAVEL with minor lead debris.
S-2	3 to 6	0.5 to 7	(Medium dense), moist, brown, sandy GRAVEL.
S-3	8 to 10	7 to 10	(Dense), moist, brown, slightly sandy to non-sandy GRAVEL.

Bottom of 25-TP-519 at 10 feet, completed 11/4/92.

Log of Test Pit 25-TP-521
Ground Surface Elevation Approximately 210.6 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	(Medium dense), moist, dark brown, sandy GRAVEL with abundant organics (roots).
		1.5 to 3	(Medium dense), moist, brown, sandy GRAVEL with minor rust-colored staining.
S-2(R)	3 to 6	3 to 4.5	(Medium dense), moist, grayish brown, sandy to slightly sandy GRAVEL with minor sand interbeds.
S-3(R)	8 to 10	4.5 to 10	(Medium dense), moist, brown, sandy to slightly sandy GRAVEL with minor sand interbeds.

Bottom of 25-TP-521 at 10 feet, completed 11/2/92.

Log of Test Pit 25-TP-522
Ground Surface Elevation Approximately 212.1 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 3.5	(Medium dense), moist, dark brown, sandy GRAVEL with abundant organics (roots).
S-2(R)	3 to 6	3.5 to 10	(Medium dense), moist to damp, brown, sandy GRAVEL with abundant sand interbeds.
S-3(R)	8 to 10		

Bottom of 25-TP-522 at 10 feet, completed 11/2/92.

Log of Test Pit 25-TP-523
Ground Surface Elevation Approximately 211.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	(Dense), moist, dark brown, slightly silty, sandy GRAVEL with abundant organics (roots).
		1.5 to 3	(Dense), moist, light brown, sandy GRAVEL with minor rust-colored staining and roots to a depth of 2.5 feet.
S-2(R)	3 to 6	3 to 10	(Very dense), moist, brownish gray, slightly sandy to sandy GRAVEL with sand interbeds.
S-3(R)	8 to 10		

Bottom of 25-TP-523 at 10 feet, completed 11/2/92.

Log of Test Pit 25-TP-524
Ground Surface Elevation Approximately 213.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	Three inches of forest duff over (dense), moist, brown, sandy GRAVEL (FILL?).
		2 to 3	(Dense), moist, dark brown, sandy GRAVEL with abundant roots.
S-2	3 to 6	3 to 10	(Dense), damp, brown, non-sandy to sandy GRAVEL with gravelly sand interbeds.
S-3	8 to 10		

Bottom of 25-TP-524 at 10 feet, completed 11/2/92.

Log of Test Pit 25-TP-525
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	Five inches of grass over (medium dense), moist, brown, sandy GRAVEL with noticeable "sweet" odor and minor organics.
S-2(R)	3 to 6	1.5 to 10	(Medium dense), moist, brown, gravelly SAND and sandy GRAVEL with strong "sweet" odor.
S-3(R)	8 to 10		

Bottom of 25-TP-525 at 10 feet, completed 11/2/92.

AREA 26
EXPLORATION LOGS

Boring Log 26-B-501

Soil Descriptions

Ground Surface Elevation in Feet 170.7

Depth in Feet

Loose, wet to moist, dark gray, slightly gravelly, silty SAND.

Medium dense, wet to moist, brown, slightly gravelly, very silty to silty SAND.

Dense, moist, gray, fine SAND.

Dense to very dense, moist, brown, slightly sandy GRAVEL.

Very dense, moist, grayish brown, slightly sandy, silty GRAVEL.

Dense to very dense, moist, grayish brown, slightly sandy GRAVEL.

Grades to gravelly SAND.

Bottom of Boring at 32.5 Feet. Completed 2/26/92

STANDARD PENETRATION RESISTANCE

Δ Blows per Foot

Sample

S-1, S-1A, S-2, S-2A, S-3, S-3A, *, S-4, S-4A, *, S-5, S-5A, *, S-6, S-6A, S-7, S-7A*

50/6, 50/3, 50/6, 50/4, 50/4

pH

NM, NM, 5.5, NM, NM, 5, NM, 4, NM, 4, NM

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-26-1 1/1

Boring Log 26-B-0026

Soil Descriptions

Ground Surface Elevation in Feet 169.4

(Dense), moist, dark gray, slightly gravelly, silty SAND.

Grades to silty, sandy GRAVEL.

Dense, moist, brown, sandy GRAVEL.

Loose to dense, wet to moist, dark gray GRAVEL.

Grades to silty, sandy GRAVEL.

6-inch zone of wet soils.

Bottom of Boring at 34.5 Feet.
Completed 2/27/92.

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE

Δ Blows per Foot

Sample: S-1, S-1A, S-2, S-2A, S-3, S-3A, S-4, S-4A, S-5, S-5A, S-6, S-6A, S-7, S-7A

1 2 5 10 20 50 100

pH

5, NM, 5, NM, NM, NM, NM, NM, 5, 4.5, NM, 4.5, NM, 4, 5

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-26-2 1/1

Boring Log and Construction Data for Monitoring Well 26-B-503

Geologic Log

Approx. Ground Surface Elevation in Feet 168.2

Loose to medium dense, moist, black to brown, sandy, silty GRAVEL.

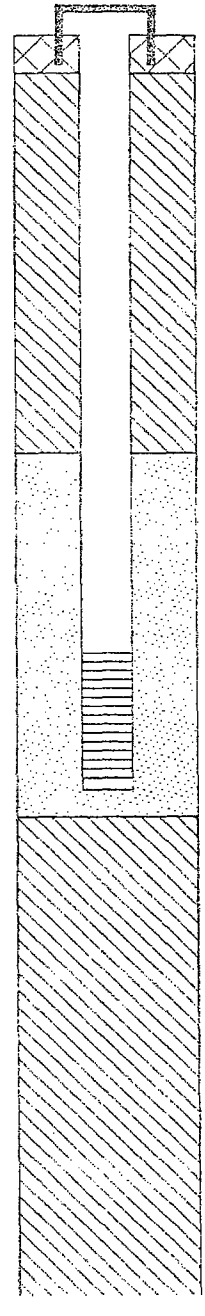
Dense to very dense, moist to wet, light to gray-brown, non-sandy to sandy GRAVEL.

-Iron-staining from 5 to 15 feet.

Sample	N
S-1	
S-1A	5
S-1B	19
S-2 A/B	32
S-2C	71
S-3	56
S-3A	50/6
S-4	75
S-4A	76
S-5	37
S-5A	50/5
S-6	45
S-6A	50/6
*	50/5
*	58
S-8	36
S-8A	55
S-9	49
S-9A	87/10
*	67/9
S-10	65
S-10A	83/11

Monitoring Well Design

Casing Stickup in Feet 2.5
Top of PVC in Feet 170.67



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

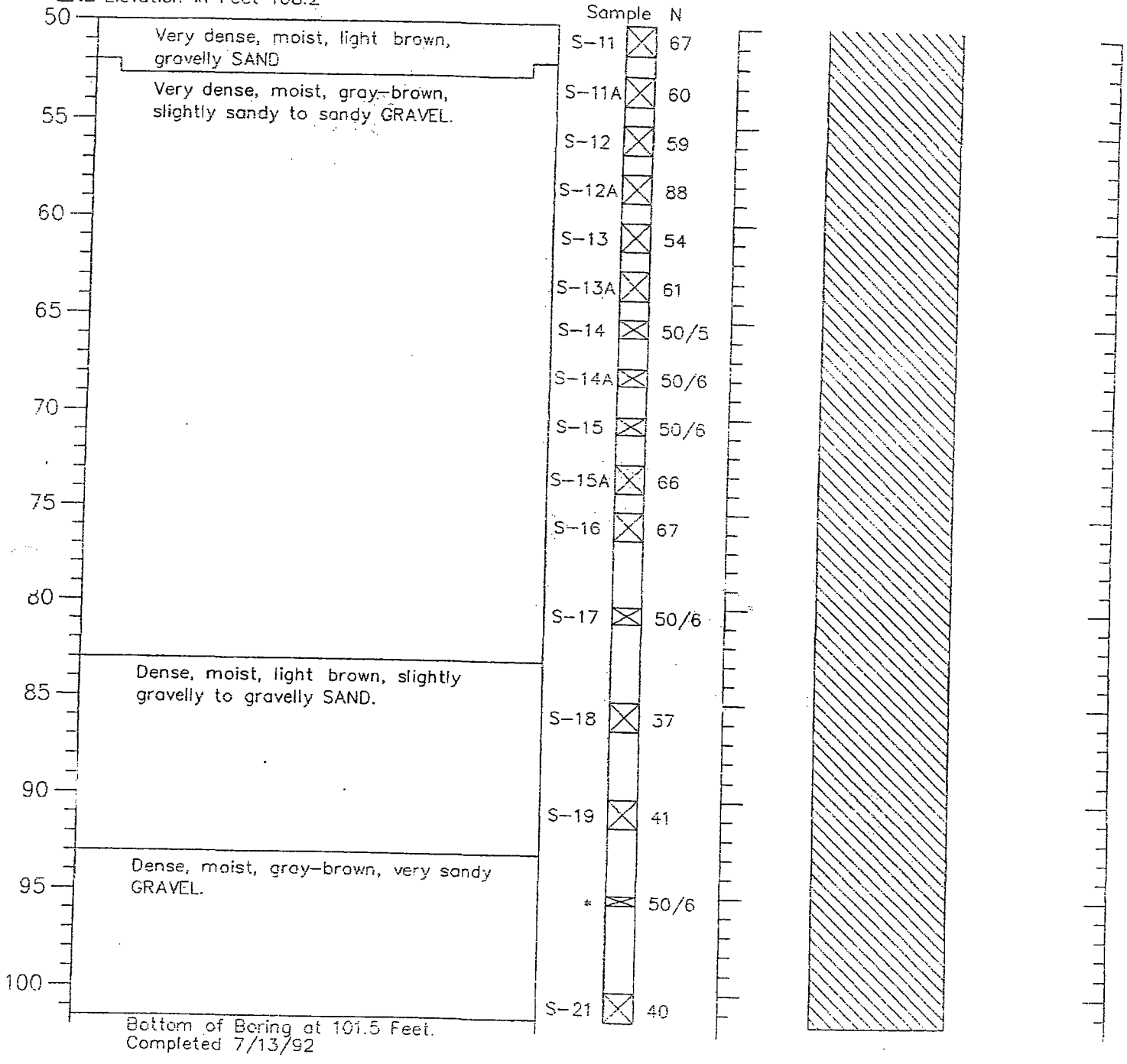
Figure A-26-3 1/2

Boring Log and Construction Data for Monitoring Well 26-B-503

Geologic Log

Monitoring Well Design

Casing Stickup in Feet 2.5
Top of PVC in Feet 170.67



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-26-3 2/2

Log of Test Pit 26-TP-501
Ground Surface Elevation Approximately 170.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), damp, dark gray, silty, gravelly SAND.
S-2	3 to 6	5	3 to 10	(Medium dense), damp to moist, brown, sandy GRAVEL with 6-inch-thick lens of iron-stained gravel at a depth of 3 feet.
S-3	8 to 10	5		

Bottom of 26-TP-501 at 10 feet, completed 3/23/92.

Log of Test Pit 26-TP-502
Ground Surface Elevation Approximately 174.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2.5	(Loose), damp, dark gray, silty, gravelly SAND with minor brick debris at surface.
S-2	3 to 6	4	2.5 to 10	(Medium dense), moist, gray and brown, silty, fine SAND. Sandy GRAVEL observed at a depth of 10 feet.
S-3	8 to 10	4		

Bottom of 26-TP-502 at 10 feet, completed 3/23/92.

Log of Test Pit 26-TP-503
Ground Surface Elevation Approximately 169.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), damp, dark gray, silty, gravelly SAND.
S-2	3 to 6	5	1 to 10	(Medium dense), moist, brown, sandy GRAVEL with abundant thin non-sandy gravel lenses.
S-3	8 to 10	5		

Bottom of 26-TP-503 at 10 feet, completed 3/23/92.

Log of Test Pit 26-TP-504
Ground Surface Elevation Approximately 174.7

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), damp, dark gray, silty, sandy GRAVEL.
			1.5 to 4	(Medium dense), damp, brown, sandy GRAVEL.
S-2	3 to 6	5.5	4 to 5.5	(Loose), moist, brown GRAVEL.
			5.5 to 8	(Dense), moist, brown SAND.
S-3	8 to 10	5	8 to 10	(Medium dense), moist, brown, sandy GRAVEL.

Bottom of 26-TP-504 at 10 feet, completed 3/23/92.

Log of Test Pit 26-TP-505
Ground Surface Elevation Approximately 182.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	6	0 to 2	(Loose), damp, dark gray, silty, gravelly SAND.
S-2	3 to 6	5.5	2 to 4	(Medium dense), moist, brown, silty SAND.
S-3	8 to 10	6	4 to 10	(Medium dense), moist, brown, sandy GRAVEL.

Bottom of 26-TP-505 at 10 feet, completed 3/23/92.

Log of Test Pit 26-TP-506
Ground Surface Elevation Approximately 176.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, dark gray, silty, gravelly SAND.
S-2	3 to 6	5	2 to 2.5	(Medium dense), damp, dark brown, sandy GRAVEL.
S-3	8 to 10	5	2.5 to 10	(Medium dense), moist, brown, sandy GRAVEL with lenses of slightly gravelly sand.

Bottom of 26-TP-506 at 10 feet, completed 3/24/92.

Log of Test Pit 26-TP-507
Ground Surface Elevation Approximately 172.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), damp, dark gray, silty, gravelly SAND with very thin zone of dark brown sand at a depth of 3 feet.
S-2	3 to 6	5.5	3 to 10	(Medium dense), moist, brown, sandy GRAVEL with interbedded non-sandy gravel lenses.
S-3	8 to 10	5		

Bottom of 26-TP-507 at 10 feet, completed 3/24/92.

Log of Test Pit 26-TP-508
Ground Surface Elevation Approximately 196.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 3	(Loose), damp, dark gray, silty, sandy GRAVEL with lead debris at surface and bricks to a depth of 3 feet (FILL).
S-2	3 to 6	5	3 to 4	(Medium dense), damp, brown, sandy GRAVEL, which thickens toward Unit 26-B kettle center (FILL).
			4 to 6	(Medium dense), damp, dark gray, silty, gravelly SAND with bricks (FILL).
S-3	8 to 10	4.5	6 to 10	(Dense), damp, brown, sandy GRAVEL.

Bottom of 26-TP-508 at 10 feet, completed 3/24/92.

Note:
Bricks were typically mortared together and appeared to have been pier blocks or footings for a former building.

Log of Test Pit 26-TP-509
Ground Surface Elevation Approximately 197.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 3.5	(Loose), damp, dark gray, silty, gravelly SAND with abundant roots. Grades to dark brown at a depth of 3 feet.
S-2	3 to 6	4.5	3.5 to 10	(Medium dense), damp, brown, very sandy GRAVEL with discontinuous lenses of gray, gravelly sand between depths of 7 and 7.5 feet.
S-4	7 to 7.5	4.5		
S-3	8 to 10	5		

Bottom of 26-TP-509 at 10 feet, completed 3/24/92.

Log of Test Pit 26-TP-510
Ground Surface Elevation Approximately 208.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), damp, dark gray, silty, sandy GRAVEL with bricks and bleached gravels at surface (FILL). Two lengths of 4-inch-diameter ceramic pipe (filled with soil) encountered between depths of 1 and 2 feet.
S-2	3 to 6	5	3 to 10	(Loose), damp, brown, slightly sandy GRAVEL with minor iron staining.
S-3	8 to 10	5		

Bottom of 26-TP-510 at 10 feet, completed 3/24/92.

Log of Test Pit 26-TP-511
Ground Surface Elevation Approximately 209.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	Blended rocks at surface over (loose), damp, dark gray and brown, silty, sandy GRAVEL with bricks, wood, and ceramic debris (FILL).
S-2	3 to 6	3 to 11	Twelve-inch-diameter ceramic pipeline overlying (dense), damp, gray, slightly sandy GRAVEL with indications of weathering. Distinct zone of yellow and brown staining observed immediately below pipeline extending to bottom of excavation.
S-2A	4 to 6		
S-3	8 to 10		

Bottom of 26-TP-511 at 11 feet, completed 3/25/92.

Notes:
1) S-2 is sample of unstained gray soil; S-2A and S-3 are samples of stained soil.
2) Ceramic pipeline slopes toward the south.

Log of Test Pit 26-TP-512
Ground Surface Elevation Approximately 211.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 3	(Loose), damp, dark gray, silty, sandy GRAVEL with concrete, brick, and wood debris (FILL). Three-inch-diameter lead pipe encountered at a depth of 1 foot.
S-2	3 to 6	5.5	3 to 10	(Medium dense), damp, brown, sandy GRAVEL.
S-3	8 to 10	5		

Bottom of 26-TP-512 at 10 feet, completed 3/25/92.

Note:
First two attempts to excavate within the former nitric acid recovery building foundation hit refusal when brick floor encountered. Location subsequently moved next to southwest corner of foundation.

Log of Test Pit 26-TP-513
Ground Surface Elevation Approximately 210.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), damp, dark gray, silty, sandy GRAVEL with brick debris in upper 1.5 feet (FILL). Four-inch-diameter ceramic pipe observed along south side of excavation at depth of 2 to 3 feet. Small area of yellowish brown staining observed beneath pipe coupling.
S-2	3 to 6	4	2.5 to 10	(Medium dense), damp, brown, slightly sandy GRAVEL. Large area of yellowish brown staining from depths of 4 to 10 feet on west side of excavation away from observed ceramic pipe.
S-3	8 to 10	4		

Bottom of 26-TP-513 at 10 feet, completed 3/25/92.

Notes:
1) S-2 is sample of unstained soil; S-3 is sample of stained soil.
2) Ceramic pipe slopes toward the south.

Log of Test Pit 26-TP-514
Ground Surface Elevation Approximately 211.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet*	Soil Description
S-1	0 to 1	4	0 to (3 - 4)	(Loose), damp, dark gray, silty, sandy GRAVEL interbedded with gray SAND; brown, sandy GRAVEL; and purplish red, silty SAND (ash-like) and containing brick debris and deteriorated gravels. Lens of brownish yellow sandy gravel at depth of 1.5 to 2 feet.
S-3	3 to 6	4	(3 – 4) to 7	(Dense to very dense), damp, yellowish brown, slightly sandy GRAVEL.
S-4	6 to 7	4		

Bottom of 26-TP-514 at 7 feet, completed 3/25/92.

Notes:

1) Refusal at 7 feet due to cemented GRAVEL, which looked like native material but could not be penetrated by the backhoe.
2) Uneven contact between dark gray, silty, sandy GRAVEL and brownish yellow, sandy GRAVEL. Contact at 4 feet in center of pit, sloping up to 3 feet along the south and north sides. Range in depths across test pit indicated in parentheses.

Figure A-26-13

Log of Test Pit 26-TP-515
Ground Surface Elevation Approximately 211.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.25	(Loose), damp, dark brown, silty, gravelly SAND with occasional brick debris.
S-2	3 to 6	5	2.25 to 10	(Medium dense), damp, brown, slightly sandy GRAVEL.
S-3	8 to 10	5		

Bottom 26-TP-515 at 10 feet, completed 3/25/92.

Log of Test Pit 26-TP-516
Ground Surface Elevation Approximately 169.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	(Loose), damp, dark gray, silty, gravelly SAND.
S-2	3 to 4	1 to 4	(Medium dense), moist, dark brown, slightly silty, sandy GRAVEL.
S-2A	4 to 6	4 to 10	(Medium dense), moist, brown, gravelly, silty SAND with organics and wood chips (becomes less silty and more gravelly with depth).
S-3	8 to 10		

Bottom of 26-TP-516 at 10 feet, completed 6/30/92.

Log of Test Pit 26-TP-517
Ground Surface Elevation Approximately 210.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	(Loose), damp, tan, silty, sandy GRAVEL.
S-2	1 to 2	1 to 2	(Medium dense), damp, gray-brown and iron-stained, silty, sandy GRAVEL.
S-3	3 to 5	2 to 5	(Medium dense), moist, whitish gray and iron-stained, sandy GRAVEL.

Bottom of 26-TP-517 at 5.0 feet, completed 5/29/92.

Log of Test Pit 26-TP-518
Ground Surface Elevation Approximately 208.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2.5	(Loose), damp, gray-brown, silty, sandy GRAVEL with wood chunk (creosote odor) at depth of 2.5 feet.
S-2	1 to 2		
S-3	3 to 5	2.5 to 5	(Medium dense), damp, yellow brown and iron-stained, sandy GRAVEL.

Bottom of TP-518 at 5.0 feet, completed 6/29/92.

Log of Test Pit 26-TP-519
Ground Surface Elevation Approximately 210.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 5	(Medium dense), damp, light brown, silty, sandy GRAVEL with roots to depth of 4.5 feet.
S-2	1 to 2		
S-3	3 to 5		

Bottom of TP-519 at 5.0 feet, completed 6/29/92.

Log of Test Pit 26-TP-520
Ground Surface Elevation Approximately 211.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Loose), damp, brown, silty, sandy GRAVEL with minor brick fragments to depth of 1 foot.
S-2	1 to 2		
S-3	3 to 5	2 to 5	(Medium dense), moist, yellow-brown and iron-stained, sandy GRAVEL.

Bottom of TP-520 at 5.0 feet, completed 6/29/92.

Log of Test Pit 26-TP-521
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), damp, medium brown, silty, sandy GRAVEL.
S-2	1 to 2		
S-3	3 to 5	1.5 to 5	(Medium dense), moist, yellow-brown and iron-stained, sandy GRAVEL with cobbles.

Bottom of TP-521 at 5.0 feet, completed 6/29/92.

Log of Test Pit 26-TP-522
Ground Surface Elevation Approximately 212.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Loose), damp, brown, silty, sandy GRAVEL.
S-2	1 to 2		
S-3	3 to 5	2 to 5	(Medium dense), moist, yellow-brown and iron-stained, sandy GRAVEL.

Bottom of TP-522 at 5.0 feet, completed 6/29/92.

Log of Hand Auger Boring 26-HA-501
Ground Surface Elevation Approximately 183.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp, brown, slightly silty, sandy GRAVEL with brick debris and glass.
S-2	1 to 2		
S-3	2 to 3		

Bottom of 26-HA-501 at 3.0 feet, completed 6/29/92.

Log of Hand Auger Boring 26-HA-502
Ground Surface Elevation Approximately 199.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), moist, brown and gray, silty, sandy GRAVEL with weathered green-stained gravels.
S-2	1 to 2		
S-3	2 to 3		

Bottom of 26-HA-502 at 3.0 feet, completed 6/29/92.

Log of Hand Auger Boring 26-HA-503
Ground Surface Elevation Approximately 198.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Medium dense), damp, dark to medium brown, silty, gravelly SAND with weathered gravels.
S-2	1 to 2		
S-3	2 to 3	2 to 3	(Medium dense), damp, gray, slightly gravelly, silty SAND.

Bottom of 26-HA-503 at 3.0 feet, completed 6/29/92.

Log of Hand Auger Boring 26-HA-504
Ground Surface Elevation Approximately 190.3 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), dry to damp, light brown, silty, sandy GRAVEL.
S-2	1 to 2		
S-3	2 to 3		

Bottom of 26-HA-504 at 3.0 feet, completed 6/29/92.

Log of Hand Auger Boring 26-HA-505
Ground Surface Elevation Approximately 201.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp, light and dark brown, silty, sandy GRAVEL with wood fragments.
S-2	1 to 2		
S-3	2 to 3		

Bottom of 26-HA-505 at 3.0 feet, completed 6/29/92.

Note:
Scattered wood debris found at depth of 1 to 3 feet.

AREA 31
EXPLORATION LOGS

Boring Log 31-B-501

Soil Descriptions

Ground Surface Elevation in Feet 212.5

Depth in Feet

Medium dense, wet, dark brown to black, slightly silty, sandy GRAVEL with scattered lead, nails, and brick fragments (FILL)

Very dense, moist, light brown, sandy GRAVEL with brick fragments. (FILL)

No bricks.

Dense, moist, light brown, very gravelly SAND

Very dense, moist, light brown, very sandy GRAVEL.

Dense, moist, light brown, slightly sandy GRAVEL.

Dense to very dense, sandy GRAVEL.

Becomes wet.

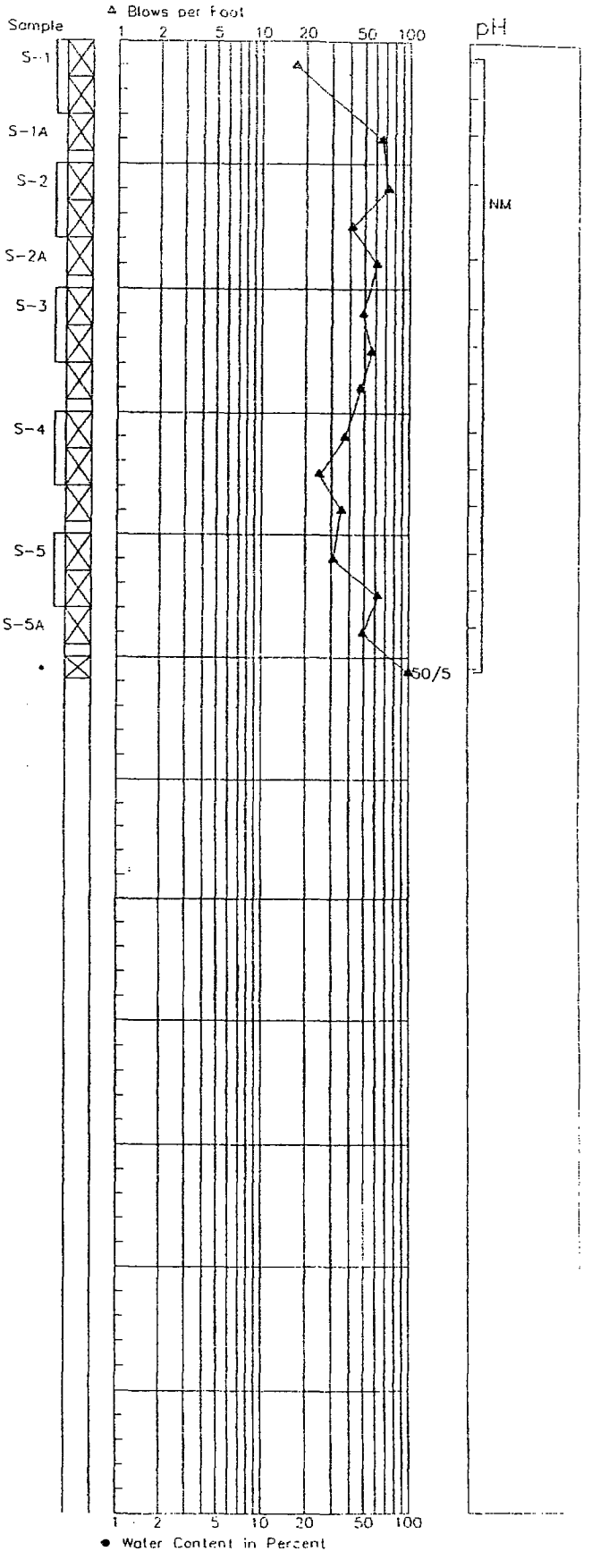
Grades to slightly sandy GRAVEL.

Dense, wet, gray, slightly sandy to sandy GRAVEL.

Very dense, wet, gray brown, slightly sandy GRAVEL.

Bottom of Boring at 26.0 Feet.
Completed 2/18/92

STANDARD PENETRATION RESISTANCE



1 Refer to Figure A-1 for explanation of descriptions and symbols.
2 Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3 Groundwater level, if indicated, is at time of drilling

Figure A-31-1 1/

Boring Log B1-B-92

Soil Descriptions

Ground Surface Elevation in Feet 212.7

Depth in Feet	Soil Description
0	(Loose), wet, black, silty, gravelly, fine to medium SAND.
5	Dense to very dense, moist, light brown, very sandy GRAVEL.
	Dense, moist, light brown, sandy GRAVEL.
10	Medium dense, moist, light brown, sandy GRAVEL.
	Grades to slightly sandy GRAVEL.
15	Medium dense, moist, gray, sandy GRAVEL.
	Becomes wet. ▽ ATD
20	Bottom of Boring at 18.0 Feet Completed 2/29/92.
25	
30	
35	
40	
45	
50	
55	
60	

STANDARD PENETRATION RESISTANCE

▲ Blows per Foot

Sample: S-1(R), S-1A, S-2, S-2A, S-3, S-4, S-4

1 2 5 10 20 50 100

pH: 6.6, 6.5, 7.3, 6.8, 6.5, NM, 6.5

1 2 5 10 20 50 100

● Water Content in Percent

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time

Figure A-31-2

Boring Log 31-B-503

Soil Descriptions

Ground Surface Elevation in Feet 215.1

(Loose), moist, black, silty, gravelly, fine to medium SAND.

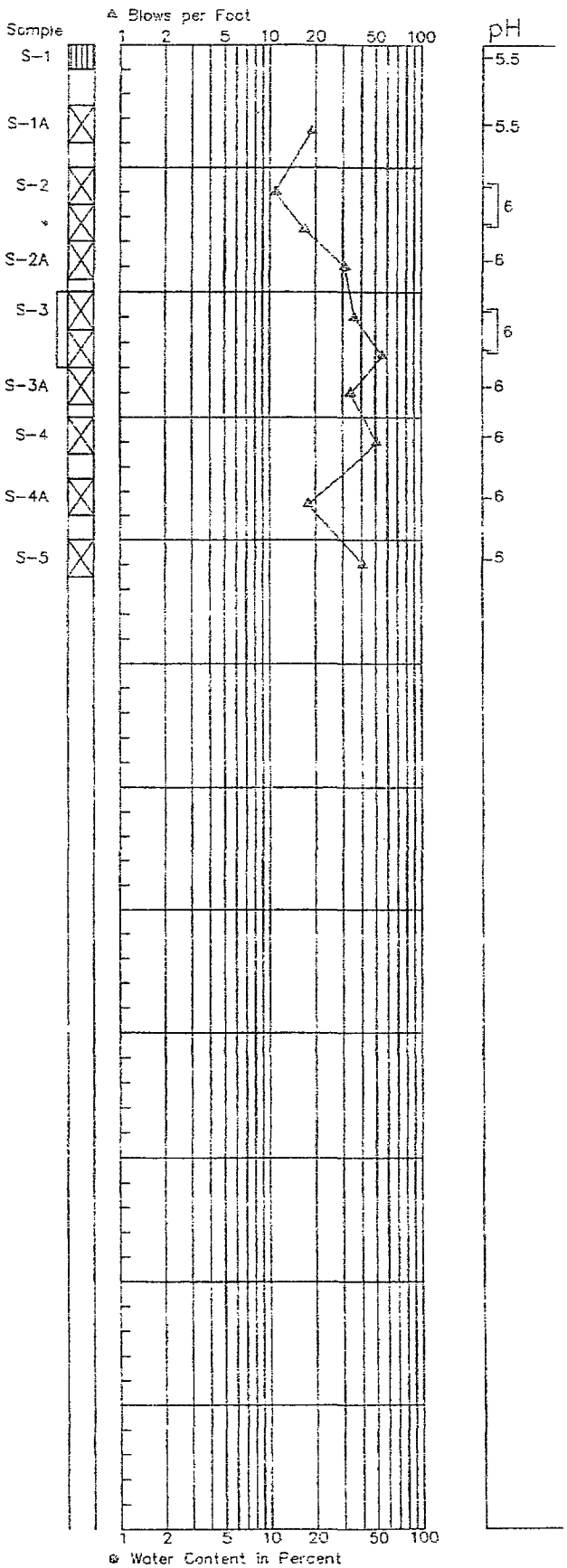
Medium dense to dense, moist, light brown, sandy GRAVEL.

Dense, moist, dark brown, very sandy gravel.

Medium dense to very dense, moist, light brown green, sandy GRAVEL.

Grades to wet, slightly sandy GRAVEL.

Bottom of Boring at 21.5 Feet.
Completed 2/19/92.



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-31-3 1/

Boring Log 31-B-504

Soil Descriptions

Ground Surface Elevation in Feet 211.2

(Loose), black, silty, gravelly, medium to fine SAND.

Medium dense to dense, moist, brown to light brown, very to slightly sandy GRAVEL.

Dense, wet, brown, slightly silty, slightly sandy GRAVEL.

Very dense, wet, gray brown, slightly sandy GRAVEL.

Bottom of Boring at 20.5 Feet.
Completed 2/20/92.

ATD

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE

Blows per Foot: 1, 2, 5, 10, 20, 50, 100

Sample: S-1, S-1A, S-2, S-3, S-3A, S-4, S-4A, S-5

50/6

50/5

50/5

pH: 5, 5.5, 6, NM, 6, NM, 6, 6, 6, 6.5

1 2 5 10 20 50 100

e Water Content in Percent

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

Figure A-31-4 1/1

Log of Test Pit 31-TP-501
Ground Surface Elevation Approximately 212.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	4	0 to 0.8	(Medium dense), damp to moist, dark brown, silty, gravelly SAND with brick fragments, metal debris, burnt wood, and glass.
			0.8 to 2.1	(Dense), damp to moist, black, slightly silty, sandy GRAVEL with abundant roots and other organics.
S-2	3 to 6	6	2.1 to 10	(Dense), damp to moist, brown to tan, sandy GRAVEL.
S-3	8 to 10	6		

Bottom of 31-TP-501 at 10 feet, completed 2/26/92.

Log of Test Pit 31-TP-502
Ground Surface Elevation Approximately 215.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), damp, black, silty, sandy GRAVEL with roots and debris (sardine cans).
S-2	3 to 6	5.5	2 to 4.5	(Dense), damp, tan-brown, slightly gravelly to gravelly SAND.
S-3	8 to 10	6.0	4.5 to 10	(Very dense), moist, tan to brown-gray, sandy GRAVEL with cobbles up to 6 inches in diameter. Soil becomes more moist and less dense, below 6 feet.

Bottom of 31-TP-502 at 10 feet, completed 2/26/92.

Log of Test Pit 31-TP-503
Ground Surface Elevation Approximately 210.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2	(Medium dense), moist, black, slightly gravelly, silty SAND with abundant roots.
S-2	3 to 6	5.5	2 to 4.5	(Medium dense), moist, tan-brown, very sandy GRAVEL.
S-3	8 to 10	5	4.5 to 10	(Dense), moist, tan-brown, sandy GRAVEL with cobbles up to 7 inches in diameter.

Bottom of 31-TP-503 at 10 feet, completed 2/27/92.

Log of Test Pit 31-TP-504
Ground Surface Elevation Approximately 212.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.5	Grass over (medium dense), damp to moist, black, slightly gravelly, silty SAND with roots and other organics.
S-2	3 to 6	5	1.5 to 4	(Medium dense), moist, tan-brown, sandy GRAVEL with a lens of dark brown sand at depth of 2 feet.
S-3	8 to 10	5	4 to 10	(Medium dense), moist, brownish gray, sandy GRAVEL with cobbles up to 8 inches in diameter.

Bottom of 31-TP-504 at 10 feet, completed 2/26/92.

Log of Test Pit 31-TP-505
Ground Surface Elevation Approximately 214.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet*	Soil Description
S-1	0 to 1	4	0 to 2	(Medium dense), moist, black, sandy, silty GRAVEL with roots and an old log from depth of 0.5 to 1.5 feet.
S-2	3 to 6	5.5	2 to 7	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-3	9 to 11	5.5	7 to 10.5	(Medium dense), moist, gray, gravelly SAND.
			10.5 to 11	(Medium dense), moist, orange-brown (iron-stained), slightly silty SAND with occasional roots.

Bottom of 31-TP-505 at 11 feet, completed 2/27/92.

Figure A-31-8

Log of Test Pit 31-TP-506
Ground Surface Elevation Approximately 211.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2	(Medium dense), moist, black, silty, sandy GRAVEL with roots and trace organics.
S-2	3 to 6	5	2 to 4	(Medium dense), moist, tan-brown, sandy GRAVEL.
			4 to 4.8	(Medium dense), moist, tan-brown, gravelly SAND with roots.
S-3	8 to 10	5	4.8 to 10	(Dense), moist, gray, sandy GRAVEL with cobbles up to 6 inches in diameter.

Bottom of 31-TP-506 at 10 feet, completed 2/27/92.

Log of Test Pit 31-TP-507
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2	(Medium dense), moist, black, silty, gravelly SAND with roots and chunks of old logs.
S-2	3 to 6	5.5	2 to 4.5	(Medium dense), moist, tan, sandy GRAVEL with minor root fragments.
S-3	8 to 10	5	4.5 to 10	(Medium dense to dense), moist, gray, sandy GRAVEL with cobbles up to 8 inches in diameter. Becomes more moist and less sandy below a depth of 7 feet.

Bottom of 31-TP-507 at 10 feet, completed 2/27/92.

Log of Test Pit 31-TP-508
Ground Surface Elevation Approximately 209.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 3	(Medium dense), moist, medium brown, slightly gravelly, silty SAND with abundant small roots.
S-2	3 to 6	3 to 8	6 inches of black, silty SAND over (medium dense) moist, gray, slightly sandy GRAVEL with large roots and glass fragments.
S-3	8 to 10	8 to 10	(Medium dense), damp, gray, slightly sandy GRAVEL.

Bottom of 31-TP-508 at 10 feet, completed 2/24/92.

Log of Test Pit 31-TP-509
Ground Surface Elevation Approximately 209.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Medium dense), moist, black, sandy, silty GRAVEL with roots and an old log from depth of 0.5 to 1.5 feet.
S-2	3 to 6	5.5	1.5 to 10	(Medium dense to dense), moist, brownish gray, sandy GRAVEL with cobbles to 7 inches and abundant thin lenses of fine gravel.
S-3	8 to 10	5		

Bottom of 31-TP-509 at 10 feet, completed 2/27/92.

Log of Hand Auger Boring 31-HA-501

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), moist, dark brown to brown, slightly silty, sandy GRAVEL with organics in upper one foot.
S-2	2 to 3		

Bottom of 31-HA-501 at 3 feet, completed 11/3/92.

Log of Hand Auger Boring 31-HA-502

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), moist, dark brown to brown, silty to slightly silty, sandy GRAVEL with minor organics.
S-2	2 to 3		

Bottom of 31-HA-502 at 3 feet, completed 11/3/92.

AREA 38
EXPLORATION LOGS

Boring Log 38-B-501

Soil Descriptions

Ground Surface Elevation in Feet 206.0

Drywell (open hole to 7 feet)

Medium dense, wet to moist, gray, slightly gravelly, very sandy SILT (fill) with sulfur-like odor.

Medium dense, moist to wet, brown, slightly silty, slightly sandy GRAVEL.

Dense, wet to moist, brown, slightly sandy GRAVEL

Medium dense, moist to wet, slightly silty, slightly sandy GRAVEL.

Bottom of Boring at 23.0 Feet.
Completed 3/25/92.

Note: Boring completed within 3-foot square drywell with wood-lined walls.

Depth in Feet: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60

STANDARD PENETRATION RESISTANCE

Δ Blows per Foot

1 2 5 10 20 50 100

Sample

S-1
S-2
S-3
S-4
S-5
S-6
S-7

pH/PID

5.5/50
5/0
5/0
5/0
5/0
5/0
5/0

1 2 5 10 20 50 100

o Water Content in Percent

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time

Figure A-38-1 1/1

*Log of Test Pit 38-TP-501
Ground Surface Elevation Approximately 213.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 0.5	(Loose), damp, black, silty, sandy GRAVEL with red flakes of paint on surface.
S-2	2 to 4	5	0.5 to 6	(Loose), moist, gray and dark brown, silty, gravelly SAND with potential asbestos-containing material and debris (see notes below) inside of old trench (FILL). Adjacent to both sides of trench is (medium dense), moist, brown, sandy GRAVEL (NATIVE).
S-3	4 to 6	4.5		
S-4	6 to 8	5.5	6 to 8	(Medium dense), moist, gray, sandy GRAVEL.
S-5	8 to 10	5.5	8 to 10	(Dense), moist, brown, slightly silty GRAVEL

Bottom of 38-TP-501 at 10 feet, completed 4/21/92.

Notes:
1) Encountered potential asbestos-containing material from depth of 3 to 6 feet, which was removed by TLH Abatement, Inc.
2) An abandoned trench was filled in with soil from depth of 0 to 6 feet. The trench fill contained wood debris (old gutter?), copper wire, and a 3/4-inch-diameter water line.

Log of Hand Auger Boring 38-HA-502

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), moist, dark brown, silty, sandy GRAVEL with organics.
S-2	2 to 3		

Bottom of 38-HA-502 at 3 feet, completed 10/30/92.

Log of Hand Auger Boring 38-HA-503

Sample Number	Sample Depth in Feet	Stratum Depth in Feet*	Soil Description
S-1	0 to 1	0 to 3	(Medium dense), damp to moist, brown to dark brown, silty, sandy GRAVEL with organics.
S-2	2 to 3		

Bottom of 38-HA-503 at 3 feet, completed 10/30/92.

Figure A-38-3

AREA 40
EXPLORATION LOGS

Log of Test Pit 40-CR-TP-501
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.7	(Loose), damp, black, silty, very sandy GRAVEL.
S-2	1 to 1.7	5		
S-3	1.7 to 3	6	1.7 to 3	(Loose), damp, brown, sandy GRAVEL.
S-4	3 to 5	6	3 to 5	(Medium dense), moist, light gray, sandy GRAVEL.

Bottom of 40-CR-TP-501 at 5 feet, completed 4/3/92

Log of Test Pit 40-CR-TP-502
Ground Surface Elevation Approximately 209.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1	(Loose), moist, medium brown, sandy GRAVEL.
S-2	1 to 2	4	1 to 2	(Loose), moist, medium gray, sandy GRAVEL with (medium dense), tan-brown GRAVEL lenses at depths of 5 and 6 feet.
S-3	2 to 3	5	2 to 5	(Loose), damp, light brown, sandy GRAVEL.
S-4	3 to 5	5		

Bottom of 40-CR-TP-502 at 5 feet, completed 4/3/92

Figure A-40-1

Log of Test Pit 40-CR-TP-503
Ground Surface Elevation Approximately 212.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 5.5	3 inches of (dense), damp, dark brown, silty, sandy GRAVEL over (dense), damp, interbedded black and brown, silty, sandy GRAVEL (FILL).
S-2	1 to 2	4		
S-3	2 to 3	4		
S-4	3 to 5	4	5.5 to 6	(Medium dense), damp, brown, sandy GRAVEL (NATIVE).

Bottom of 40-CR-TP-503 at 6 feet, completed 4/3/92.

Note:
Test pit located on abandoned railroad grade.

Log of Test Pit 40-CR-TP-504
Ground Surface Elevation Approximately 211.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Loose), damp, black, silty, sandy GRAVEL.
S-2	1 to 2	5	1 to 2	(Medium dense), damp, brown, silty, sandy GRAVEL.
S-3	2 to 3	5	2 to 5	(Medium dense), damp, light brown, sandy GRAVEL.
S-4	3 to 5	5		

Bottom of 40-CR-TP-504 at 5 feet, completed 4/3/92.

Log of Test Pit 40-CR-TP-505
Ground Surface Elevation Approximately 211.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2	(Loose), damp, black, silty, sandy GRAVEL.
S-2	1 to 2	4		
S-3	2 to 3	4	2 to 3	(Medium dense) damp, brown, silty, sandy GRAVEL.
S-4	3 to 5	5	3 to 5	(Medium dense), damp, light brown, sandy GRAVEL.

Bottom of 40-CR-TP-505 at 5 feet, completed 4/3/92

Log of Test Pit 40-CR-TP-506
Ground Surface Elevation Approximately 210.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Medium dense), damp, black, silty, sandy GRAVEL.
S-2	1 to 2	5		
S-3	2 to 3	5	2 to 3	(Medium dense), damp, dark brown, silty, sandy GRAVEL.
S-4	3 to 5	6	3 to 6.5	(Loose), damp, light brown GRAVEL.
S-5	8 to 10	5	6.5 to 10	(Loose), damp dark gray, slightly sandy GRAVEL with boulders.

Bottom of 40-CR-TP-506 at 10 feet, completed 4/3/92

Note:
Abundant metal debris removed from surface prior to excavation.

Log of Test Pit 40-GM-TP-501

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 5	Six inches of dark brown TOPSOIL over (medium dense), moist, yellow-brown, slightly silty, sandy GRAVEL with gravel content increasing with depth. Standing water encountered at depth of 2.5 feet.
S-2	3 to 5	6		

Bottom of 40-GM-TP-501 at 5 feet, completed 2/18/92.

Note:
Test pit located in depression below site of former Glaze Mill No. 2.

Log of Test Pit 40-GM-TP-502

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	Six inches of dark brown, very organic TOPSOIL over (medium stiff), moist, yellow-brown, sandy SILT with iron staining and roots.
S-2	3 to 5	6	1 to 5	(Medium dense), moist to wet, yellow-brown, slightly silty, sandy GRAVEL with some boulders. Standing water encountered at depth of 3 feet.

Bottom of 40-GM-TP-502 at 5 feet, completed 2/18/92.

Note:
Water encountered at depth of 3 feet, could not bail out with backhoe.

Log of Test Pit 40-GM-TP-503
Ground Surface Elevation Approximately 198.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	6	0 to 1	(Loose), moist, dark brown, gravelly, very silty SAND with abundant roots and other organics.
			2.5 to 3	(Medium stiff), moist, yellow-brown, slightly gravelly, silty CLAY.
S-2	3 to 5	6	3 to 5	(Medium dense), moist to wet, yellow-brown, silty, sandy GRAVEL with gravel content increasing with depth. Water encountered at depth of 4 feet.

Bottom of 40-CR-TP-503 at 5 feet, completed 2/18/92

Note:
Rapid seepage of water encountered at depth of 4 feet.

Figure A-40-5

Log of Test Pit 40-GM-TP-504
Ground Surface Elevation Approximately 202.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	6	0 to 3	(Loose), damp, dark brown, silty, sandy GRAVEL with abundant organics (wood and roots).
S-2	3 to 5	5.5	3 to 7	(Medium dense), damp, yellow-brown, slightly silty, sandy GRAVEL with small roots.
S-3	5.5 to 6.5	6	7 to 10	(Medium dense), moist to wet, yellow-brown GRAVEL.

Bottom of 40-GM-TP-504 at 10 feet, completed 2/19/92.

Notes:
1) No standing water but GRAVEL was wet from depth of 9 to 10 feet.
2) Could not sample at depth of 8 to 10 feet because of sloughing of test pit walls.

Log of Test Pit 40-GM-TP-505
Ground Surface Elevation Approximately 215.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.8	(Loose), damp, dark brown, gravelly, very silty SAND with abundant roots.
S-2	3 to 5	6	1.8 to 5	(Medium dense), damp, yellow-brown, sandy GRAVEL with less sand content with depth and minor roots.

Bottom of 40-GM-TP-505 at 5 feet, completed 2/19/92

Log of Test Pit 40-GM-TP-506
Ground Surface Elevation Approximately 216.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 2.5	(Loose), damp, dark brown, silty SAND with abundant roots (FILL?).
			2.5 to 3	(Medium dense), damp, yellow-brown, sandy GRAVEL (FILL?).
S-2	3 to 5	5.5	3 to 5	(Loose), damp, dark brown, gravelly, very silty SAND with roots.

Bottom of 40-GM-TP-506 at 5 feet, completed 2/19/92

Note:
Root horizons above and below depth of 3 feet suggests more than one fill episode.

Figure A-40-7

Log of Test Pit 40-GM-TP-507
Ground Surface Elevation Approximately 198.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, dark brown, gravelly, very silty SAND with roots.
S-2	2.5 to 4.5	6	3 to 5	(Medium dense), moist to wet, yellow-brown, sandy GRAVEL. Water encountered at depth of 4.5 feet.

Bottom of 40-GM-TP-507 at 5 feet, completed 2/19/92.

Log of Test Pit 40-MH-TP-501
Ground Surface Elevation Approximately 214.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, black, silty, sandy GRAVEL.
S-2	1 to 2	5		
S-3	2 to 3	4.5	2 to 5	(Medium dense), damp, light brown, sandy GRAVEL.
S-4	3 to 5	4.5		

Bottom of 40-MH-TP-501 at 5 feet, completed 4/1/92.

Log of Test Pit 40-MH-TP-502
Ground Surface Elevation Approximately 212.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	1 inch of moss over (medium dense), moist, black, slightly silty, sandy GRAVEL with abundant roots.
S-2	1 to 1.5	5		
S-3	1.5 to 2	5		
S-4	2 to 2.5	6	2 to 2.5	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-5	2.5 to 3	5.5	2.5 to 5	(Medium dense), moist to wet, medium gray, sandy GRAVEL.
S-6	3 to 5	5.5		

Bottom of 40-MH-TP-502 at 5 feet, completed 4/2/92

Log of Test Pit 40-MH-TP-503
Ground Surface Elevation Approximately 208.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, black, slightly silty, sandy GRAVEL with abundant roots.
S-2	1 to 2	5		
S-3	2.5 to 3	6	2.5 to 5	(Loose), moist, tan-brown, slightly sandy, pea-size GRAVEL.
S-4	3 to 5	6		

Bottom of 40-MH-TP-503 at 5 feet, completed 4/2/92

Log of Test Pit 40-MH-TP-504
Ground Surface Elevation Approximately 213.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2	(Medium dense), moist, black, slightly silty, sandy GRAVEL with abundant roots.
S-2	1 to 1.5	5		
S-3	1.5 to 2	5		
S-4	2 to 2.5	6	2 to 2.5	(Medium dense), moist, tan-brown, sandy GRAVEL).
S-5	2.5 to 3	6	2.5 to 6.5	(Medium dense), moist, medium gray, sandy GRAVEL with cobbles. Moisture increases with depth.
S-6	3 to 5	6		
			6.5 to 7.5	(Loose), wet, sandy, pea-size GRAVEL.
S-7	8 to 10	6	7.5 to 10	(Medium dense), wet, medium gray, sandy GRAVEL.

Bottom of 40-MH-TP-504 at 10 feet, completed 4/2/92.

Log of Test Pit 40-MH-TP-505
Ground Surface Elevation Approximately 213.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	Forest Duff, wood, metal debris, and concrete blocks over (medium dense), moist, black, slightly silty, sandy GRAVEL with roots.
S-2	1 to 1.5	5		
S-3	1.5 to 2	5	1.5 to 2	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-4	2 to 2.5	5	2 to 8	(Medium dense) moist, medium gray, sandy GRAVEL.
S-5	2.5 to 3	5		
S-6	3 to 5	5		
S-7	8 to 10	4.5	8 to 10	(Loose), moist, gray, slightly gravelly SAND.

Bottom of 40-MH-TP-505 at 10 feet, completed 4/2/92

Figure A-40-11

Log of Test Pit 40-MH-TP-506
Ground Surface Elevation Approximately 213.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Loose), damp, black, silty, sandy GRAVEL.
S-2	1 to 1.5	5		
S-3	1.5 to 2	5	1.5 to 5	(Loose), damp, light brown, sandy GRAVEL.
S-4	2 to 2.5	5		
S-5	2.5 to 3	5		
S-6	3 to 5	5		

Bottom of 40-MH-TP-506 at 5 feet, completed 4/2/92.

Log of Test Pit 40-MH-TP-507
Ground Surface Elevation Approximately 214.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, black, silty, very sandy GRAVEL.
S-2	1 to 2	4.5		
S-3	2 to 3	4.5	2 to 3	(Medium dense), damp, gray, sandy GRAVEL.
S-4	3 to 5	5	3 to 5	(Medium dense), damp, brown, sandy GRAVEL.

Bottom of 40-MH-TP-507 at 5 feet, completed 4/2/92.

Log of Test Pit 40-MH-TP-508
Ground Surface Elevation Approximately 214.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, dark brown, silty, very sandy GRAVEL.
S-2	1 to 2	5		
S-3	2 to 3	5	2 to 5	(Medium dense), damp, light brown, sandy GRAVEL.
S-4	3 to 5	5		

Bottom of 40-MH-TP-508 at 5 feet, completed 4/2/92

Log of Test Pit 40-PH-TP-501
Ground Surface Elevation Approximately 205.6 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Loose), moist, dark brown, silty, gravelly SAND.
		2 to 3	(Medium dense), damp, greenish gray, sandy GRAVEL. Sand is primarily coarse-grained with little silt.
S-2	3 to 5	3 to 5	(Medium dense), damp, yellow-brown, slightly silty, sandy GRAVEL with minor roots.
		5 to 6	(Medium dense), damp, yellow-brown, gravelly SAND.
S-3	8 to 10	6 to 10	(Medium dense), moist to wet, yellow-brown, very sandy GRAVEL.

Bottom of 40 PH-TP-501 at 10 feet, completed 2/20/92

Log of Test Pit 40-PH-TP-502
Ground Surface Elevation Approximately 209.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Loose), moist, dark brown, gravelly, silty SAND and organics.
S-2	3 to 5	2 to 5	(Medium dense), damp, yellow-brown, sandy GRAVEL with abundant rounded cobbles.

Bottom of 40-PH-TP-502 at 5 feet, completed 2/20/92.

Log of Test Pit 40-PH-TP-503
Ground Surface Elevation Approximately 210.9 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	(Loose), moist, dark brown, gravelly, silty SAND with organics (roots).
S-2	3 to 5	1.5 to 5	(Medium dense), damp, yellow-brown, sandy GRAVEL with a few small roots.

Bottom of 40-PH-TP-503 at 5 feet, completed 2/20/92.

Log of Test Pit 40-PH-TP-504
Ground Surface Elevation Approximately 211.2 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	0 to 1.5	(Loose), moist, dark brown, gravelly, silty SAND with organics (roots).
S-2	3 to 5	1.5 to 5	(Medium dense), damp, yellow-brown, sandy GRAVEL with small roots.

Bottom of 40 PH-TP-504 at 5 feet, completed 2/20/92

Log of Test Pit 40-PH-TP-505
Ground Surface Elevation Approximately 211.6 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, dark brown, gravelly, silty SAND with organics (roots).
		1.5 to 3	(Medium dense), damp, yellow-brown, sandy GRAVEL with a 4-inch-thick lens of pea-size gravel at depth of 2.5 feet.
S-2	3 to 5	3 to 5	(Medium dense), damp, greenish gray, sandy GRAVEL.

Bottom of 40 PH-TP-505 at 5 feet, completed 2/20/92

Log of Test Pit 40-PR-TP-501
Ground Surface Elevation Approximately 211.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, black, silty, very sandy GRAVEL with sand lenses and roots.
S-2	1 to 2	5	2 to 5	(Medium dense), damp, light brown, sandy GRAVEL.
S-3	2 to 3	5.5		
S-4	3 to 5	5.5		

Bottom of 40-PR-TP-501 at 5 feet, completed 4/1/92.

Log of Test Pit 40-PR-TP-502
Ground Surface Elevation Approximately 210.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 2	(Loose), damp, black, slightly gravelly, silty, fine SAND.
S-2	1 to 2	4		
S-3	2 to 3	4	2 to 3	(Loose), damp, brown, silty, fine SAND.
S-4	3 to 5	4.5	3 to 5	(Medium dense), damp, light brown, gravelly, medium to fine SAND.

Bottom of 40-PR-TP-502 at 5 feet, completed 4/1/92.

Log of Test Pit 40-PR-TP-503
Ground Surface Elevation Approximately 209.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	5	0 to 2	(Loose), damp, black, silty, sandy GRAVEL with roots.
S-2	1 to 2	5		
S-3	2 to 3	5.5	2 to 3	(Medium dense), damp, Dark brown, silty, sandy GRAVEL.
S-4	3 to 5	4.5	3 to 10	(Medium dense), damp, light brown, sandy GRAVEL.
S-5	8 to 10	4		

Bottom of 40-PR-TP-503 at 10 feet, completed 4/1/92

Log of Test Pit 40-PR-TP-504
Ground Surface Elevation Approximately 212.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), damp, silty, very sandy GRAVEL with roots.
S-2	1 to 2	5		
S-3	2 to 3	5	2 to 5	(Medium dense), damp, light brown, sandy GRAVEL.
S-4	3 to 5	5		

Bottom of 40-PR-TP-504 at 5 feet, completed 4/1/92

Log of Test Pit 40-PR-TP-505
Ground Surface Elevation Approximately 214.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 0.3	(Loose), damp, black, silty, sandy GRAVEL.
S-2	1 to 2	4	0.3 to 3.5	(Loose), damp, brown, sandy GRAVEL intermixed with black, silty, sandy GRAVEL.
S-3	2 to 3	4		
S-4	4 to 5	4	3.5 to 5	(Loose), damp, dark brown, silty, gravelly SAND (NATIVE).

Bottom of 40-PR-TP-505 at 5 feet, completed 4/1/92.

Note:
Test pit located on old railroad grade. The fill/native soil contacts were difficult to locate because of native soils used as fill in building the grade.

Log of Hand Auger Boring 40-PR-HA-501
Ground Surface Elevation Approximately 209.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
--	--	--	0 to 3.5	Empty, wood-lined drywell 3.5 feet deep by 4 feet wide.
S-1(R)	3.5 to 4	5	3.5 to 7.5	(Loose), moist, black, slightly gravelly, silty SAND with twigs and small pieces of wood. Numerous wood chunks, fir needles, and twigs from depth of 5 to 7 feet. A few weathered rocks at depth of 7 feet.
S-2(R)	4 to 4.5	4.5		
S-3(R)	4.5 to 5	4.5		
S-4(R)	5 to 5.5	4.5		
S-5(R)	5.5 to 6	4		
S-6(R)	6 to 6.5	4		
S-7(R)	6.5 to 7	4.5		
S-8(R)	7 to 7.5	3.5		
S-9(R)	7.5 to 8	3	7.5 to 8.3	(Loose), wet, black, slightly gravelly, silty SAND with residual petroleum, slight petroleum odor.
S-10(R)	8 to 8.3	3		
S-11(R)	8.3 to 9	1	8.3 to 9	(Loose), moist, silver-gray SAND.
S-12(R)	9 to 9.5	1	9 to 10.5	(Loose), moist, gold-yellow SAND.
S-13 (R)	9.5 to 10	1		
S-14(R)	10 to 10.5	1		

Bottom of 40-PR-HA-501 at 10.5 feet, completed 4/9/92

Note:
Hand Auger drilled in bottom of drywell.

Figure A-40-19

Log of Test Pit 40-PU-TP-501
Ground Surface Elevation Approximately 199.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1(R)	0 to 1	7	0 to 1	(Medium dense), moist, black, slightly silty, sandy GRAVEL with metal debris, old lumber, and apparent dried white paint.
S-2	1 to 1.5	6	1 to 2	(Medium dense), moist, orange-brown, sandy GRAVEL.
S-3	1.5 to 2	6		
S-4	2 to 2.5	6	2 to 3	(Medium dense), moist, tan-brown, medium sandy GRAVEL.
S-5	2.5 to 3	6		
S-6	3 to 5	6	3 to 4.5	(Medium dense), moist to wet, medium gray, coarse sandy GRAVEL.
S-7	8 to 10	6	4.5 to 10	(Medium dense), moist to wet, tan-brown, medium sandy GRAVEL with a few small gravel layers.

Bottom of 40-PU-TP-501 at 10 feet, completed 4/6/92.

Log of Test Pit 40-PU-TP-502
Ground Surface Elevation Approximately 195 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, medium brown, slightly silty, very gravelly SAND with abundant roots.
S-2	1 to 2	5		
S-3	2 to 3	5.5	2 to 3	.(Loose), moist, light brown, slightly silty, very gravely SAND with minor roots.
S-4	3 to 5	6	3 to 5	(Loose), moist, tan-brown, sandy GRAVEL.

Bottom of 40-PU-TP-502 at 5 feet, completed 4/6/92

Log of Test Pit 40-PU-TP-503
Ground Surface Elevation Approximately 205.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 5	(Loose), moist, dark brown, slightly silty, sandy GRAVEL with roots to a depth of 2.5 feet.
S-2	1 to 1.5	5		
S-3	1.5 to 2	5		
S-4	2 to 2.5	5		
S-5	2.5 to 3	5		
S-6	3 to 5	5		

Bottom of 40-PU-TP-503 at 5 feet, completed 4/6/92

Log of Test Pit 40-PU-TP-504
Ground Surface Elevation Approximately 208.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, dark brown, slightly silty, sandy GRAVEL with abundant roots.
S-2	1 to 2	5		
S-3	2 to 2.7	5	2 to 2.7	(Loose), moist, medium brown, sandy GRAVEL with occasional roots.
S-4	3 to 5	6	2.7 to 5	(Loose), moist, medium gray, sandy GRAVEL with areas of brown staining.

Bottom of 40-PU-TP-504 at 5 feet, completed 4/6/92.

Log of Test Pit 40-PU-TP-505
Ground Surface Elevation Approximately 209.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, dark brown to black, slightly silty, sandy GRAVEL with abundant roots.
S-2	1 to 2	5		
S-3	2 to 3	6	2 to 5	(Loose), moist, tan-brown, sandy GRAVEL.
S-4	3 to 5	6		

Bottom of 40-PU-TP-505 at 5 feet, completed 4/6/92.

Log of Test Pit 40-PU-TP-506
Ground Surface Elevation Approximately 197.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 2	(Loose), moist, dark brown, slightly silty, sandy GRAVEL with broken glass from depth of 0 to 0.5 foot.
S-2	1 to 2	6		
S-3	2 to 3	6	2 to 4	(Loose), moist, light brown, sandy GRAVEL.
S-4	3 to 5	6	4 to 5	(Loose), moist, light gray-tan, very sandy GRAVEL.

Bottom of 40-PU-TP-506 at 5 feet, completed 4/6/92

Figure A-40-23

Log of Test Pit 40-WM1-TP-501
Ground Surface Elevation Approximately 207.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 0.5	(Medium dense), moist, black, silty, sandy GRAVEL with roots.
			0.5 to 2	(Medium dense), moist, tan-brown, sandy GRAVEL with roots.
S-2	3 to 5	5	2 to 6	(Medium dense to dense), moist, brownish gray, very sandy GRAVEL with 2 blocks of cement (1 foot square) at depth of 2 feet.
S-3	8 to 10	5	6 to 10	(Medium dense), moist, gray, gravelly SAND.
			10 to 10.5	(Medium dense to dense), moist, gray, sandy GRAVEL.

Bottom of 40-WM1-TP-501 at 10.5 feet, completed 2/28/92.

Notes:
1) Test pit excavated adjacent to foundation.
2) Bottom of foundation observed at depth of 7.5 feet.
3) Apparent fill material observed within approximately 2 feet away from foundation.

Log of Test Pit 40-WM1-TP-502
Ground Surface Elevation Approximately 208.3 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), moist, black, silty, sandy GRAVEL with roots and other organics.
			1 to 3	(Medium dense), moist, orange-brown, sandy GRAVEL with roots and gravel to 4 inches in diameter.
S-2	3 to 5	4.5	3 to 5	(Medium dense), moist, brownish gray, sandy GRAVEL.

Bottom of 40-WM1-TP-502 at 5 feet, completed 2/28/92

Log of Test Pit 40-WM1-TP-503
Ground Surface Elevation Approximately 206.8 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.5	(Loose), damp, silty, very sandy GRAVEL with roots.
S-2	3 to 5	5	1.5 to 5	(Medium dense), moist, tan-gray, sandy GRAVEL.

Bottom of 40-WM1-TP-503 at 5 feet, completed 2/28/92

Log of Test Pit 40-WM1-TP-504
Ground Surface Elevation Approximately 205.6 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 2.5	(Medium dense), moist, black, silty, very sandy GRAVEL with roots and organic debris.
			2.5 to 3.5	(Medium dense to dense), moist, tan-brown, slightly sandy GRAVEL.
S-2	3 to 5	5.5	3.5 to 5	(Medium dense), moist, brownish gray, sandy GRAVEL.

Bottom of 40-WM1-TP-504 at 5 feet, completed 2/28/92.

Log of Test Pit 40-WM1-TP-505
Ground Surface Elevation Approximately 207.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.5	(Medium dense), moist, dark brown to black, silty, sandy GRAVEL with abundant roots.
S-2	3 to 5	5.5	1.5 to 5	(Medium dense), moist, brownish gray, sandy GRAVEL with occasional roots.

Bottom of 40-WM1-TP-505 at 5 feet, completed 2/28/92.

Log of Hand Auger Boring 40-WM1-HA-501
Ground Surface Elevation Approximately 198.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5.5	0 to 0.5 (outside drywell)	(Loose),moist, black, slightly gravelly, silty SAND with roots.
			0 to 4	Empty, wood-lined drywell 4 feet deep by 1.5 feet wide by 3 feet long.
S-2	4 to 4.5	5	4 to 4.5	Forest Duff over (medium dense), moist, medium brown, sandy GRAVEL with layer of wood at depth of 4.3 feet (old wood floor?).
S-3(R)	4.5 to 5	5.5	4.5 to 5	(Medium soft), moist to wet, black, gravelly, very sandy SILT.
S-4(R)	5 to 5.5	5	5 to 5.5	(Medium dense), moist, medium brown, sandy GRAVEL.

Bottom of 40-WM1-HA-501 at 5.5 feet, completed 3/31/92

Notes:

1) Hand auger dug in abandoned drywell.
2) Sample S-1 collected from soil around edge of drywell opening. Samples S-2 through S-4 collected beneath bottom of drywell bottom (4 feet below grade).
3) Observed hollow steel pipe coming from Wheel Mill foundation and going into drywell.

Figure A-40-27

Log of Test Pit 40-WM2-TP-501
Ground Surface Elevation Approximately 206.5 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1(R)	5	0 to 1.2	(Loose), moist, black, gravelly, silty SAND with rusted scrap metal and wood (old roof?).
S-2	3 to 6	5	1.2 to 10	(Medium dense), moist, light brown, sandy GRAVEL with cobbles up to 4 inches in diameter.
S-3	8 to 9.5	5		

Bottom of 40-WM2-TP-501 at 9.5 feet, completed 3/2/92.

Log of Test Pit 40-WM2-TP-502
Ground Surface Elevation Approximately 205.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, black, silty, gravelly SAND with roots.
			2 to 3.5	(Medium dense), moist, dark brown, sandy GRAVEL.
S-3	3 to 5	5	3.5 to 5	(Medium dense), moist, light brown, sandy GRAVEL.

Bottom of 40-WM2-TP-502 at 5 feet, completed 3/2/92.

Log of Test Pit 40-WM2-TP-503
Ground Surface Elevation Approximately 210.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, black, silty, gravelly SAND with roots.
			2 to 3	(Medium dense), moist, dark brown, sandy GRAVEL.
S-2	3 to 5	5	3 to 5	(Dense), moist, light brown, sandy GRAVEL.

Bottom of 40-WM2-TP-503 at 5 feet, completed 3/2/92

Log of Test Pit 40-WM2-TP-504
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.7	(Loose), moist, black, silty, gravelly SAND with tree roots and iron staining.
S-2	3 to 5	5.5	1.7 to 5	(Dense), moist, light brown, sandy GRAVEL with cobbles up to 6 inches in diameter.

Bottom of 40-WM2-TP-504 at 5 feet, completed 3/2/92

Log of Test Pit 40-WM2-TP-505
Ground Surface Elevation Approximately 211.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, black, silty, gravelly SAND with roots.
			2 to 2.5	(Medium dense), moist, dark brown, sandy GRAVEL.
S-2	3 to 5	5	2.5 to 5	(Dense), moist, light brown, sandy GRAVEL.

Bottom of 40-WM2-TP-505 at 5 feet, completed 3/2/92.

Log of Test Pit 40-WM2-TP-506
Ground Surface Elevation Approximately 210.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, black, silty, gravelly SAND with tree roots.
			2 to 3.5	(Medium dense), moist, dark brown, sandy GRAVEL.
S-2	3 to 5	5	3.5 to 5	(Dense), moist, light brown, sandy GRAVEL.

Bottom of 40-WM2-TP-506 at 5 feet, completed 3/2/92.

Log of Test Pit 40-WM2-TP-507
Ground Surface Elevation Approximately 205.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2	(Loose), moist, black, silty, gravelly SAND.
			2 to 2.5	(Medium dense), moist, dark brown, sandy GRAVEL.
S-3	3 to 5	5.5	2.5 to 5	(Dense), moist, light brown, sandy GRAVEL.

Bottom of 40-WM2-TP-507 at 5 feet, completed 3/2/92.

Note:
Test pit excavated next to old post. The black SAND (surficial soil) occurred as fill immediately surrounding the post to the depth of exploration.

Figure A-40-31

Log of Test Pit 40-WM3-TP-501
Ground Surface Elevation Approximately 208.0 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 4	(Loose), moist, black, silty, sandy GRAVEL (see notes below).
S-2	3 to 6	5	4 to 4.5	(Medium dense), moist, dark brown, sandy GRAVEL.
S-3	8 to 10	5	4.5 to 10	(Dense), moist, light brown, sandy GRAVEL with scattered debris (see notes below).

Bottom of 40-WM3-TP-501 at 10 feet, completed 3/3/92.

Notes:
1) Test pit excavated next to the foundation in what appeared to be an abandoned drywell.
2) Observed a small "void" by corner of test pit location (loose soils).
3) Debris from depth of 2.5 to 7 feet included 4-foot steel (brass) ground red; rusted, galvanized sheet metal; scattered wood chunks; vertical 2- by 6-inch planking from depths of 4 to 7 feet.
4) Encountered a 4-inch-diameter, hollow pipe, along side of foundation, which possibly lead to drywell.

Log of Test Pit 40-WM3-TP-501A

Sample Number	Stratum Depth in Feet	Soil Description
Not sampled	0 to 3	(Medium dense), moist, medium to dark brown, sandy GRAVEL with abundant roots (0 to 1 foot depth) with numerous chunks of cement debris up to 2 feet in length) (FILL).

Bottom of 40-WM3-TP-501A at 3 feet, completed 3/3/92

Notes:

1) Test pit abandoned due to cement slab at depth of 3 feet.
2) Moved test pit to new location (see 40-WM3-TP-501)

Figure A-40-33

Log of Test Pit 40-WM3-TP-502
Ground Surface Elevation Approximately 206.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.5	2 inches of Forest Duff and branches over (medium dense to dense), moist, black, slightly sandy GRAVEL.
			1.5 to 4	A thin (<1 inch) layer of light orange-tan, gravelly SAND over (medium dense to dense), moist, medium brown, sandy GRAVEL.
S-2	3 to 5	5	4.0 to 5	(Medium dense), moist, light brown, very sandy GRAVEL.

Bottom of 40-WM3-TP-502 at 5 feet, completed 3/4/92.

Note:
Observed piece of rotten wood (post) from depth of 2.5 to 3 feet.

Log of Test Pit 40-WM3-TP-503
Ground Surface Elevation Approximately 209.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1	(Medium dense), moist, medium brown, sandy GRAVEL with roots.
			1 to 3.5	(Medium dense), moist, black, sandy GRAVEL.
S-2	3 to 5	5	3.5 to 5	(Medium dense), moist, light tan-brown, sandy GRAVEL.

Bottom of 40-WM3-TP-503 at 5 feet, completed 3/4/92

Log of Test Pit 40-WM3-TP-504
Ground Surface Elevation Approximately 209.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 2.5	(Loose), moist, black, silty, sandy GRAVEL.
S-2	3 to 5	5	2.5 to 5	(Dense), moist, light brown, sandy GRAVEL.

Bottom of 40-WM3-TP-504 at 5 feet, completed 3/3/92

Note:
Test pit excavated near abandoned railroad grade.

Log of Test Pit 40-WM3-TP-505
Ground Surface Elevation Approximately 213.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4	0 to 0.5	(Medium dense), moist, black, silty, very sandy GRAVEL.
			0.5 to 1.5	(Medium dense to dense), moist, tan- brown, sandy GRAVEL with 2 pieces of old wood.
S-2	3 to 5	4	1.5 to 5	(Medium dense to dense), moist, medium brown, sandy GRAVEL with occasional roots and cobbles.

Bottom of 40-WM3-TP-505 at 5 feet, completed 3/4/92.

Note:
Test pit excavated on former railroad grade.

Log of Test Pit 40-WM4-TP-501
Ground Surface Elevation Approximately 212.4 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 7	(Medium dense), moist, black, silty, sandy GRAVEL over (medium dense), moist, tan-brown, sandy GRAVEL.
S-2	3 to 6	5.5	7 to 7.5	(Loose), moist, medium gray, gravelly, medium to coarse SAND.
S-3	8 to 10	5.5	7.5 to 10	(Loose), moist, light yellowish-brown, coarse, sandy GRAVEL.

Bottom of 40-WM4-TP-501 at 10 feet, completed 3/16/92.

Log of Test Pit 40-WM4-TP-502
Ground Surface Elevation Approximately 213.2 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.5	(Medium dense), moist, black, slightly silty, sandy GRAVEL with roots.
			1.5 to 3	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-2	3 to 5	5.5	3 to 3.5	(Loose), moist, tan to gray, slightly gravelly, medium SAND.
			3.5 to 5	(Medium dense), moist, tan-brown, sandy GRAVEL.

Bottom of 40-WM4-TP-502 at 5 feet, completed 3/16/92

Log of Test Pit 40-WM4-TP-503
Ground Surface Elevation Approximately 214.1 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	4.5	0 to 1.5	(Medium dense), moist, black, slightly silty, sandy GRAVEL with roots.
			1.5 to 3	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-2	3 to 5	5.5	3.5 to 4	(Medium dense), moist medium gray, gravelly, medium to coarse SAND.
			4 to 5	(Medium dense), moist, brownish gray, very sandy GRAVEL.

Bottom of 40-WM4-TP-503 at 5 feet, completed 3/16/92

Log of Test Pit 40-WM4-TP-504
Ground Surface Elevation Approximately 215.7 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 0.5	(Medium dense), moist, dark brown, slightly silty, sandy GRAVEL with minor roots.
			0.5 to 2.5	(Medium dense), moist, light tan-brown to dark brown, sandy GRAVEL.
S-2	3 to 5	4.5	2.5 to 4	(Medium dense), moist, dark brown-black, slightly silty, sandy GRAVEL.
			4 to 5	(Medium dense), moist, medium brown, sandy GRAVEL with area of iron staining at depth of 4 feet.

Bottom of 40-WM4-TP-504 at 5 feet, completed 3/16/92.

Log of Test Pit 40-WM4-TP-505
Ground Surface Elevation Approximately 212.9 Feet

Sample Number	Sample Depth in Feet	pH	Stratum Depth in Feet	Soil Description
S-1	0 to 1	5	0 to 1.5	(Medium dense), moist, black, slightly silty, sandy GRAVEL with abundant roots.
			1.5 to 2.5	(Medium dense), moist, tan-brown, sandy GRAVEL.
S-2	3 to 5	5.5	2.5 to 3.4	(Medium dense), moist, medium gray, gravelly, medium to coarse SAND.
			3.4 to 3.8	(Medium dense), moist, tan-brown, sandy GRAVEL.
			3.8 to 5	(Medium dense), moist, grayish brown, sandy GRAVEL with an 8-inch diameter cement drain pipe at depth of 4 feet.

Bottom of 40-WM4-TP-505 at 5 feet, completed 3/16/92

Figure A-40-39

Log of Observation Test Pit 40-OB-TP-501

Sample Number	Stratum Depth in Feet	Soil Description
Not Sampled	0 to 1	(Medium dense), moist, black, slightly silty, sandy GRAVEL with roots.
	1 to 3.5	(Medium dense), moist, tan-brown, sandy GRAVEL.

Bottom of 40-WM4-OB-TP-501 at 3.5 feet, completed 3/16/92.

Log of Test Pit 40-TP-600

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3.5	(Medium dense), moist, brownish gray, medium to fine SAND with scattered gravels and remnants of blasting wire (FILL).
S-2	4 to 6	3.5 to 10	(Medium dense), moist, dark brown to brown, sandy GRAVEL with occasional cobbles to 1 foot.
S-3	8 to 10		

Bottom of 40-TP-600 at 10 feet, completed 11/6/92.

AREAS OF POTENTIAL CONCERN
EXPLORATION LOGS

Log of Test Pit APA-TP-501
Ground Surface Elevation Approximately 204.5 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, brown, silty, sandy GRAVEL with minor organics.
		1.5 to 2.5	(Loose), moist, gray, pea-size GRAVEL.
S-2	3 to 5	2.5 to 5	(Medium dense), moist, yellowish brown, sandy GRAVEL.

Bottom of APA-TP-501 at 5 feet, completed 5/27/92.

Log of Test Pit APB-TP-501
Ground Surface Elevation Approximately 209.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 0.6	(Loose), damp, brown, silty, gravelly SAND with some roots
S-2	3 to 5	0.6 to 5	(Loose), damp, light brown, slightly sandy GRAVEL with interbedded gravelly, coarse sand lenses.

Bottom of APB-TP-501 at 5 feet, completed 5/27/92.

Log of Test Pit APB-TP-502
Ground Surface Elevation Approximately 202.7 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.4	(Loose), damp, brown, silty, sandy GRAVEL.
S-2	3 to 5	1.4 to 5	(Loose), damp, medium brown, sandy GRAVEL with interbedded gravel layers.

Bottom of APB-TP-502 at 5 feet, completed 5/27/92.

Log of Test Pit APC-TP-501
Ground Surface Elevation Approximately 209.8 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	(Medium dense), moist, light brown, silty, sandy GRAVEL.
		1 to 2	(Loose), damp, gray, pea-size GRAVEL.
S-2	3 to 5	2 to 5	(Medium dense), moist, brown, sandy GRAVEL.

Bottom of APC-TP-501 at 5 feet, completed 5/26/92.

Log of Test Pit APC-TP-502

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.25	Two inches of Forest Duff over 2 inches of charred soil over (medium dense), moist, dark brown, slightly silty, sandy GRAVEL.
S-2	1 to 2	1.25 to 10	(Medium dense), moist, brown, slightly sandy to sandy GRAVEL with 6-inch layer of medium to fine SAND at 4 feet. Bleached-looking soils observed between depths of 1 to 7 feet along southeast wall of pit.
S-3	3 to 6		
S-4	8 to 10		

Bottom of APC-TP-502 at 10 feet, completed 11/3/92.

Log of Test Pit APC-TP-503

Stratum Depth in Feet	Soil Description
0 to 4	(Medium dense), damp, dark brown to brown, sandy GRAVEL.

Bottom of APC-TP-503 at 4 feet, completed 11/5/92.

Note: Approximately 30 x 18-foot observational test pit excavation. No samples collected because no evidence of potential "sump well" (as indicated from historical drawings) observed.

Log of Test Pit APD-TP-501
Ground Surface Elevation Approximately 210.1 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 3	(Loose), moist, dark brown, silty, sandy GRAVEL with abundant brick debris, quartz, and glazed tile chunks.
S-2	3 to 5	3 to 5	(Medium dense), moist, yellowish brown, sandy GRAVEL.

Bottom of APD-TP-501 at 5 feet, completed 5/27/92.

Notes:

1) APD-TP-501 excavated along a length of approximately 20 feet in attempt to locate remnants of the former Asphalt Paint Building (in an area of graded surficial soils). Although construction debris (e.g., bricks) was encountered, no foundations, pilings, or other evidence of a former building was observed.
2) Observed a few pieces of a tar-like substance (up to 4 inches long) and lead debris on surface.

Log of Test Pit APE-TP-501
Ground Surface Elevation Approximately 217.1 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	Bricks and mortar over 2 inches of black, silty SAND over (medium dense), damp, brown, silty, gravelly SAND.
S-2	3 to 5	2 to 5	(Dense), moist, brown, sandy GRAVEL (NATIVE).

Bottom of APE-TP-501 at 5 feet, completed 5/26/92.

Log of Test Pit APE-TP-502

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	Two inches of sod over (medium dense), moist, brown, sandy GRAVEL with minor organics (FILL?).
S-2	1 to 2	1.5 to 5	(Medium dense), moist, brown, gravelly SAND.
S-3	3 to 5		

Bottom of APE-TP-502 at 5 feet, completed 11/3/92.

Note: Test pit excavated along edge of 6-inch-thick concrete slab (Main Transformer House foundation).

Log of Test Pit APF-TP-501

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2.5	(Loose), moist, dark brown, silty, gravelly SAND with minor organics.
S-2	3 to 5	2.5 to 5	(Medium dense), moist, yellowish brown, sandy GRAVEL.

Bottom of APF-TP-501 at 5 feet, completed 5/27/92.

Log of Hand Auger Boring APF-HA-501

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 2	(Medium dense), moist, dark brown, silty, sandy GRAVEL with abundant organics.
S-2	1 to 2		
S-3	2 to 3	2 to 3	(Medium dense), damp, brown, slightly silty, sandy GRAVEL.

Bottom of APF-HA-501 at 3 feet, completed 10/30/92.

Log of Test Pit APG-TP-501
Ground Surface Elevation Approximately 208.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, dark brown, silty, sandy GRAVEL with abundant roots and an old water line.
		1.5 to 3	(Loose), moist, gray, pea-size GRAVEL.
S-2	3 to 5	3 to 5	(Medium dense), moist, yellowish brown, sandy GRAVEL.

Bottom of APG-TP-501 at 5 feet, completed 5/26/92.

Log of Test Pit APG-TP-502
Ground Surface Elevation Approximately 209.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1	(Loose), moist, dark brown, silty, sandy GRAVEL with minor organics.
S-2	3 to 5	1 to 5	(Medium dense), moist, yellowish brown, sandy GRAVEL.

Bottom of APG-TP-502 at 5 feet, completed 5/26/92.

Log of Test Pit APG-TP-503
Ground Surface Elevation Approximately 211.0 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, brown, silty, sandy GRAVEL with minor organics.
		1.5 to 3	(Medium dense), moist, yellowish brown, sandy GRAVEL.
S-2	3 to 5	3 to 5	(Loose), moist, gray, pea-size GRAVEL.

Bottom of APG-TP-503 at 5 feet, completed 5/26/92.

Log of Test Pit APG-TP-504
Ground Surface Elevation Approximately 210.4 Feet

Sample Number	Sample Depth in Feet	Stratum Depth in Feet	Soil Description
S-1	0 to 1	0 to 1.5	(Loose), moist, brown, silty, sandy GRAVEL with minor organics and pieces of wire and rebar.
		1.5 to 3	(Loose), moist, gray, pea-size GRAVEL.
S-2	3 to 5	3 to 5	(Medium dense), moist, yellowish brown, sandy GRAVEL.

Bottom of APG-TP-504 at 5 feet, completed 5/27/92.

Appendix B
Soil Quality Data

CONTENTS

B.1-1 Area 6—Crystallizer Drum Area Soil Quality
B.2-1 Area 7—Waste Drainage Pit (Old Salt Lake) Soil Metals Results
B.2-2 Area 7—Waste Drainage Pit (Old Salt Lake) Soil Explosives Results
B.2-3 Area 7—Waste Drainage Pit (Old Salt Lake) Soil SVOC Results
B.2-4 Area 7—Waste Drainage Pit (Old Salt Lake) Soil PAH Results
B.2-5 Area 7—Waste Drainage Pit (Old Salt Lake) Soil Pesticide and PCB Results
B.2-6 Area 7—Waste Drainage Pit (Old Salt Lake) Soil TPH Results
B.3-1 Area 10—Aluminum Water Gel Area Soil Metals Results
B.3-2 Area 10—Aluminum Water Gel Area Soil Explosives Results
B.3-3 Area 10—Aluminum Water Gel Area Soil PAH and SVOC Results
B.4-1 Area 11—Water Gel Wash-Up Waste Pit Area Soil Metals Results
B.4-2 Area 11—Water Gel Wash-Up Waste Pit Area Soil Explosives Results
B.4-3 Area 11—Water Gel Wash-Up Waste Pit Area Soil PAH and SVOC Results
B.4-4 Area 11 — Water Gel Wash-Up Waste Pit Area Soil TPH Results
B.5-1 Area 12—Works Magazine Landfill Soil Metals Results
B.5-2 Area 12—Works Magazine Landfill Soil Explosives Results
B.5-3 Area 12—Works Magazine Landfill Soil SVOC Results
B.5-4 Area 12—Works Magazine Landfill Soil PAH Results
B.5-5 Area 12—Works Magazine Landfill Soil Pesticide and PCB Results
B.5-6 Area 12—Works Magazine Landfill Soil TPH Results
B.6-1 Area 16—Kettle Beneath Area 5 Soil Metals Results
B.6-2 Area 16—Kettle Beneath Area 5 Soil TCLP Metals Results
B.6-3 Area 16—Kettle Beneath Area 5 Soil Explosives Results
B.6-4 Area 16—Kettle Beneath Area 5 Soil SVOC Results
B.6-5 Area 16—Kettle Beneath Area 5 Soil PAH Results
B.6-6 Area 16—Kettle Beneath Area 5 Soil Pesticide and PCB Results
B.6-7 Area 16—Kettle Beneath Area 5 Soil TPH Results
B.7-1 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil Metals Results
B.7-2 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil Explosives Results
B.7-3 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil VOCs Results
B.7-4 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil PAH and SVOC Results

B.7-5 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil TPH Results
B.7-6 Area 18/1/2/3/4—Nitroglycerin Production and Powderline Soil Nitrate Results
B.8-1 Area 25—Acid Production Area Soil Metals Results
B.8-2 Area 25—Acid Production Area Soil Explosives Results
B.9-1 Area 26—Waste Acid Recovery Area and Kettle Soil Metals Results
B.9-2 Area 26—Waste Acid Recovery Area and Kettle Soil Explosives Results
B.9-3 Area 26—Waste Acid Recovery Area and Kettle Soil SVOC Results
B.9-4 Area 26—Waste Acid Recovery Area and Kettle Soil PAH Results
B.9-5 Area 26—Waste Acid Recovery Area and Kettle Soil TPH Results
B.10-1 Area 31—Burning Ground Soil Metals Results
B.10-2 Area 31—Burning Ground Soil Explosives Results
B.10-3 Area 31—Burning Ground Soil SVOC Results
B.10-4 Area 31—Burning Ground Soil PAH Results
B.10-5 Area 31—Burning Ground Soil PCB Results
B.10-6 Area 31—Burning Ground Soil TPH Results
B.11-1 Area 38—Carton Production Area and Drywell Soil Metals Results
B.11-2 Area 38—Carton Production Area and Drywell Soil Explosives Results
B.11-3 Area 38—Carton Production Area and Drywell Soil VOC Results
B.11-4 Area 38—Carton Production Area and Drywell Soil SVOC Results
B.11-5 Area 38—Carton Production Area and Drywell Soil PAH Results
B.11-6 Area 38—Carton Production Area and Drywell Soil Pesticides Results
B.11-7 Area 38—Carton Production Area and Drywell Soil TPH Results
B.12-1 Areas of Potential Concern (APs) Soil Metals Results
B.12-2 Areas of Potential Concern (APs) Soil Explosives Results
B.12-3 Areas of Potential Concern (APs) Soil SVOC Results
B.12-4 Areas of Potential Concern (APs) Soil PAH Results
B.12-5 Areas of Potential Concern (APs) Soil PCB Results
B.12-6 Areas of Potential Concern (APs) Soil TPH Results
B.12-7 Areas of Potential Concern (APs) Soil Nitrate Results
B.13-1 Area 18—REF Soil Metals Results
B.13-2 Area 31—REF Soil Metals Results
B.14-1 Area LR Soil Metals Results
B.14-2 Area LR Soil Explosives Results

B.14-3 Area LR Soil Pesticide, PCB, and TPH Results
B.14-4 Area LR Soil Nitrate Results
B.15-1 Historical Railroad Grade Soil Metals Results
B.15-2 Historical Railroad Grade Soil TPH Results
B.16-1 Creek Area Soil Metals Results
B.16-2 Creek Area Soil Explosives Results
B.16-3 Creek Area Soil SVOC Results
B.16-4 Creek Area Soil PAH Results
B.16-5 Creek Area Soil TPH Results
B.17-1 Candidate Area Characterization Sample Soil Metals Results
B.18-1 Parcel 1 North of Creek Soil Metals Results
B.19-1 Miscellaneous Sample Soil Metals Results
B.20-1 Area 5—DNT Waste Drum Area Soil Metals Results
B.20-2 Area 5D—DNT Waste Drum Area Soil Metals Results
B.20-3 Area 5D—DNT Waste Drum Area Soil Explosives Results
B.20-4 Area 5—DNT Waste Drum Area Soil VOC Results
B.20-5 Area 5—DNT Waste Drum Area Soil SVOC Results
B.20-6 Area 5—DNT Waste Drum Area Soil PAH Results
B.20-7 Area 5—DNT Waste Drum Area Soil Pesticide Results
B.20-8 Area 5D—DNT Waste Drum Area Soil PCB Results
B.20-9 Area 5—DNT Waste Drum Area Soil TPH Results
B.21-1 Area 8—Bunker C Pipeline Soil Metals Results
B.21-2 Area 8—Bunker C Pipeline Soil Explosives Results
B.21-3 Area 8—Bunker C Pipeline Soil VOC Results
B.21-4 Area 8—Bunker C Pipeline Soil SVOC Results
B.21-5 Area 8—Bunker C Pipeline Soil PAH Results
B.22-6 Area 8—Bunker C Pipeline Soil TPH Results
B.22-1 Area 19—Maintenance Areas Soil Metals Results
B.22-2 Area 19—Maintenance Areas Soil TPH Results
B.23-1 Area 24/24A—Upper Power House Soil Metals Results
B.23-2 Area 24/24A—Upper Power House Soil PAH Results
B.23-3 Area 24/24A—Upper Power House Soil TPH Results
B.24-1 Area 30—Railroad Debris Area Soil Metals Results

B.25-1 Area 36—Lead Melt House Area Soil Metals Results
B.26-1 Area 39—Laboratory Area Soil Metals Results
B.26-2 Area 39—Laboratory Area Soil Explosives Results
B.26-3 Area 39—Laboratory Area Soil VOC Results
B.26-4 Area 39—Laboratory Area Soil SVOC Results
B.26-5 Area 39—Laboratory Area Soil PAH Results
B.26-6 Area 39—Laboratory Area Soil TPH Results

Appendix B presents soil quality data representing current Site conditions as of September 2001. The tables are organized and labeled according to area as discussed in Section 2. The tables are in the same order as that in which they are discussed in Section 2—Site Areas (by number), AP Areas, Site Reference Area (REF), and Narrow-Gauge Railroad (NGRR). Refer to Section 2 for a complete description of each Site Area. Specific notes for the tables are as follows:

1. Blanks indicate no analysis for a specific constituent.
2. Soil quality data representing Site conditions as of September 2001 are provided in the tables, including pre-RI, RI, and interim source removal verification sampling results.
3. Data qualifiers include the following:

U	Not detected at associated detection limit
J	Estimated concentration
UJ	Not detected; associated detection limit is an estimate
R	Rejected data, as determined during data validation
S	Sum of individual constituent concentrations (e.g., total cPAHs and total PCBs)
X	Elution pattern does not match typical product

4. Field duplicate samples are designated with sample ID suffixes of D, DUP, or SSE (the different suffixes have identical meanings).
5. As discussed in Section 2 of the report, soil quality data from the following areas have been redesignated as follows:
   - Areas AP-A and AP-G have been included in the Areas of Potential Concern tables.
   - Areas AP-B and AP-D have been included in Area 26.
   - Samples designated AP-H at the time of sampling have been divided into Areas 25 and 26.
   - Sampling locations within 25 feet of a narrow-gauge railroad grade have been included in the Narrow-Gauge Railroad designation.

The redesignated soil quality data have been included in soil quality data tables in this appendix for the appropriate areas as listed above.

The tables were developed on the basis of information provided to URS in an analytical database submitted in final form for this RI on April 1, 2002 (Pioneer 2002).

Table B.1-1
Area 6 - Crystallizer Drum Area Soil Quality

Area	6	6	6	6	6
Sample ID	01-F16-SS[F-211]C2-005	01-F16-SS[F-212]C2-005	01-F16-SS[F-213]C2-005	01-F16-SS[F-214]C2-005	01-F16-SS[F-215]C2-005
Date Sampled	8/6/01	8/6/01	8/6/01	8/6/01	8/6/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Conventionals (mg/kg dry)					
Nitrate as Nitrogen					
Total Metals (mg/kg dry)					
Arsenic	3.8	5	4.7	3.5	4.2
Cadmium					
Chromium					
Copper					
Lead	20	40	35	20	45
Mercury					
Nickel					
Zinc					
TPH (mg/kg dry)					
TPH (418.1)					

Area	6	6	6	6	6
Sample ID	01-F16-SS[F-216]C2-005	01-F16-SS[F-217]C2-005	01-F16-SS[F-218]C2-005	01-N01-SS[NGRR-178]C2-005	01-N01-SS[NGRR-180]C2-005
Date Sampled	8/6/01	8/6/01	8/6/01	8/6/01	8/6/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	1.5 to 2	1.5 to 2
Conventionals (mg/kg dry)					
Nitrate as Nitrogen					
Total Metals (mg/kg dry)					
Arsenic	25	33	7.9	3.5	18
Cadmium					
Chromium					
Copper					
Lead	69	60	49	37	9.9
Mercury					
Nickel					
Zinc					
TPH (mg/kg dry)					
TPH (418.1)					

Table B.1-1
Area 6 - Crystallizer Drum Area Soil Quality

Area	6	6	6	6	6
Sample ID	01-N01-SS[NGRR-181]C2-005	03-N01-SS-[NGRR-179-3]-C2-050	6-SS-402	6-SS-501	6-SS-502
Date Sampled	8/6/01	9/13/01	11/4/93	4/21/92	4/21/92
Depth	1.5 to 2	3.5 to 4	0 to 0.5	0 to 0.5	0 to 0.5
Conventionals (mg/kg dry)					
Nitrate as Nitrogen				3	79.5
Total Metals (mg/kg dry)					
Arsenic	10	4.8	21	5.8	9.1
Cadmium				0.51	0.46
Chromium				24	120
Copper				50	100
Lead	7.6	87		180	410
Mercury				0.34	0.68
Nickel				17	18
Zinc				290	300
TPH (mg/kg dry)					
TPH (418.1)				230	1700

Area	6	6	6	6	6
Sample ID	6-SS-503	6-TP-501-S-2	6-TP-501-S-3	6-TP-502-S-1	6-TP-502-S-2
Date Sampled	4/21/92	4/20/92	4/20/92	4/20/92	4/20/92
Depth	0 to 0.5	3 to 6	8 to 10	0 to 1	3 to 6
Conventionals (mg/kg dry)					
Nitrate as Nitrogen	38.1	0.7	0.8	2.5 UJ	0.7
Total Metals (mg/kg dry)					
Arsenic	10	3.6	1.8	1.6	1.2
Cadmium	0.67	0.079	0.058	0.071	0.046
Chromium	59	14	12	10	12
Copper	93	18	13	14	13
Lead	400	39	16	12	5.3 U
Mercury	1.2	0.076 U	0.09	0.081 U	0.089 U
Nickel	26	17	18	15	15
Zinc	630	49	40	34	30
TPH (mg/kg dry)					
TPH (418.1)	1900	39	22 U	21 U	22 U

Table B.1-1
Area 6 - Crystallizer Drum Area Soil Quality

Area	**6**
Sample ID	**6-TP-502-S-3**
Date Sampled	**4/20/92**
Depth	**8 to 10**
Conventionals (mg/kg dry)	
Nitrate as Nitrogen	2.5 UJ
Total Metals (mg/kg dry)	
Arsenic	1.5
Cadmium	0.08
Chromium	13
Copper	15
Lead	20
Mercury	0.096 U
Nickel	16
Zinc	30
TPH (mg/kg dry)	
TPH (418.1)	140

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	**7-B-1,S-1**	**7-B-3,S-1**	**7-B-3,S-3**	**7-B-3,S-5**	**7-B-3,S-6**	**7-B-4,S-1-DAVG**	**7-B-4,S-11**	**7-B-4,S-3**
Date Sampled	**12/1/86**	**4/28/87**	**4/28/87**	**4/28/87**	**4/28/87**	**4/29/87**	**4/29/87**	**4/29/87**
Depth	**2.5 to 4**	**3.5 to 5**	**8.5 to 10**	**13.5 to 15**	**16.5 to 18**	**3.5 to 5**	**28.5 to 30**	**8.5 to 10**
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony	4							
Arsenic								
Cadmium								
Chromium	6 U							
Copper								
Lead	94	110	31	32	30	52	66	52
Mercury								
Nickel								
Zinc								

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-4,S-5	7-B-4,S-6	7-B-4,S-9	7-B-5,S-1-DAVG	7-B-5,S-3	7-B-5,S-5	7-B-5,S-7	7-B-501-S-1
Date Sampled	4/29/87	4/29/87	4/29/87	4/28/87	4/28/87	4/28/87	4/28/87	2/27/92
Depth	13.5 to 15	16 to 17.5	23.5 to 25	3 to 4.5	8 to 9.5	13 to 14.5	18 to 19.5	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic								4.1
Cadmium								0.024
Chromium								1.6
Copper								5.7
Lead	30	26	51	320	41	54	170	230
Mercury								3.2
Nickel								1.9
Zinc								2.4

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-501-S-1A	7-B-501-S-2-DAVG	7-B-501-S-3-DAVG	7-B-501-S-4-DAVG	7-B-501-S-5	7-B-501-S-6	7-B-502-S-1	7-B-502-S-1A
Date Sampled	6/26/92	2/27/92	2/27/92	2/28/92	2/28/92	2/28/92	2/28/92	6/26/92
Depth	2.5 to 4	5 to 8	10 to 13	15 to 18	20 to 23	25 to 28.5	0 to 1	2.5 to 4
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic	18		6.9				4.4	1.5
Cadmium	0.076 J		0.2				0.044	
Chromium	1		2.9				3.1	0.69
Copper	9.7		47				29	3
Lead	350	280	54 J	27	16	150	720	82
Mercury	0.93 J		0.15				3	0.13 J
Nickel	1.3 U		1.5				4.6	0.65 U
Zinc	5.1		9				4.2	2.4

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-502-S-2	7-B-502-S-3	7-B-502-S-4	7-B-502-S-5	7-B-502-S-6	7-B-503-S-1	7-B-503-S-12	7-B-503-S-13
Date Sampled	2/28/92	2/28/92	2/28/92	2/28/92	2/28/92	7/20/92	7/21/92	7/21/92
Depth	5 to 8	10 to 13	15 to 18	20 to 23	25 to 28	0 to 1	55 to 56.5	60 to 61.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic		3.5 J			17	2.3		
Cadmium		0.33			0.084	0.022		
Chromium		1.6			5	1.2		
Copper		3.5			18	6.2		
Lead	54	39 J	120	130	120 J	130	85	96
Mercury		0.076 U			0.078 U	2.7		
Nickel		0.52 U			2.5	2.3		
Zinc		1.4			11	3.2		

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-503-S-14	7-B-503-S-15	7-B-503-S-15A	7-B-503-S-1C-DAVG	7-B-503-S-3	7-B-503-S-4	7-B-503-S-5	7-B-503-S-6
Date Sampled	7/21/92	7/21/92	7/21/92	7/20/92	7/20/92	7/20/92	7/20/92	7/20/92
Depth	65 to 66.5	70 to 71.5	72.5 to 74	2.5 to 4	10 to 11.5	15 to 16.5	20 to 21.5	25 to 26.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	74	110	66	530	6.1 U	6.6 U	30	58
Mercury								
Nickel								
Zinc								

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-503-S-7	7-B-503-S-8	7-B-503-S-9	7-B-504-S-1-DAVG	7-B-504-S-11	7-B-504-S-2	7-B-504-S-3A	7-B-504-S-4A
Date Sampled	7/20/92	7/20/92	7/21/92	7/17/92	7/17/92	7/17/92	7/17/92	7/17/92
Depth	30 to 31.5	35 to 35.5	40 to 41.5	0 to 1	49 to 50.4	5 to 6.5	12.5 to 14	17.5 to 19
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic				16				
Cadmium				0.14				
Chromium				8.5				
Copper				11				
Lead	120	25	130	15	5.2 U	4.2 U	5.4 U	5.1 U
Mercury				0.097 U				
Nickel				12				
Zinc				23				

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-504-S-5	7-B-504-S-6	7-B-504-S-7	7-B-504-S-9	7-B-6,S-1	7-B-6,S-3	7-B-6,S-5	7-B-6,S-6
Date Sampled	7/17/92	7/17/92	7/17/92	7/17/92	4/28/87	4/28/87	4/28/87	4/28/87
Depth	20 to 21.5	25 to 26.5	32.5 to 34	40 to 41.5	3.5 to 5	8.5 to 10	13.5 to 15	16 to 17.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	5.5 U	5.3 U	5.2 U	5.4 U	140	28	71	130
Mercury								
Nickel								
Zinc								

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-7,S-4-DAVG	7-HA-501-S-1-DAVG	7-HA-501-S-2-DAVG	7-HA-502-S-2-DAVG	7-HA-502-S-3	7-HA-503-S-1	7-HA-503-S-2	7-HA-504-S-1
Date Sampled	4/29/87	6/29/92	6/29/92	7/1/92	7/1/92	6/29/92	6/29/92	6/29/92
Depth	11 to 12.5	0 to 1	1 to 2	1 to 2	2 to 3	0 to 1	1 to 2	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Antimony								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	230	1800	650	48	32	39	5.8	130
Mercury								
Nickel								
Zinc								

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-HA-504-S-2	7-TP-501-S-1	7-TP-501-S-2	7-TP-501-S-3	7-TP-502-S-1	7-TP-502-S-2	7-TP-502-S-3	7-TP-503-S-1
Date Sampled	6/29/92	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92
Depth	1 to 2	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
TCLP Metals (mg/L)								
Lead		0.52						
Total Metals (mg/kg dry)								
Antimony								
Arsenic		3.3		2.8 J	11			
Cadmium		0.017		0.011 U	0.22			
Chromium		1		0.88	16			
Copper		2.2		0.96	21			
Lead	36	3300	73	39	320	18	16	25
Mercury		0.62		0.09 U	0.077 U			
Nickel		0.55 U		0.58 U	18			
Zinc		1.3		0.97	49			

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7
Sample ID	**7-TP-503-S-2**	**7-TP-503-S-3**	**7-TP-504-S-1**	**7-TP-504-S-2**	**7-TP-504-S-3**	**7-SS-401**	**7-SS-402**	**7-SS-501**
Date Sampled	**3/5/92**	**3/5/92**	**3/5/92**	**3/5/92**	**3/5/92**	**11/1/93**	**11/1/93**	**2/13/92**
Depth	**3 to 6**	**8 to 10**	**0 to 1**	**3 to 6**	**8 to 10**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**
TCLP Metals (mg/L)								
Lead								0.13
Total Metals (mg/kg dry)								
Antimony								
Arsenic						1.7	7.2	
Cadmium								
Chromium								
Copper								
Lead	66	41	65	12	6.5			840
Mercury								
Nickel								
Zinc								

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7	7	7	7	7
Sample ID	7-SS-502	7-SS-503	7-SS-504	7-SS-505	7-SS-506	7-VS-1	7-VS-2	7-VS-3	7-VS-4
Date Sampled	2/13/92	2/13/92	2/13/92	2/13/92	2/13/92	9/16/99	9/16/99	9/16/99	9/16/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)									
Lead									
Total Metals (mg/kg dry)									
Antimony									
Arsenic			22	12		7.6	2.5	3.6	3.3
Cadmium			0.19	0.16					
Chromium			14	6.8					
Copper			29	37					
Lead	92	100	490	590	14	88	110	61	66
Mercury			0.099	2.1					
Nickel			14	9.7					
Zinc			37	29					

Table B.2-1
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Metals Results

Area	7	7	7	7	7
Sample ID	7-VS-5	7-VS-6	7-VS-7	7-VS-8	7-VS-20
Date Sampled	9/16/99	9/16/99	9/16/99	9/16/99	1/25/00
Depth	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	9.5 to 17.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Antimony					
Arsenic	2.6	2 U	2.1 U	2.1 U	3.2
Cadmium					
Chromium					
Copper					
Lead	120	30	36	48	510
Mercury					
Nickel					
Zinc					

Table B.2-2
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Explosives Results

Area	7	7	7	7	7	7	7	7
Sample ID	**7-B-501-S-2-DAVG**	**7-B-501-S-3-DAVG**	**7-B-501-S-4-DAVG**	**7-B-501-S-5**	**7-B-501-S-6**	**7-B-502-S-3**	**7-B-502-S-5**	**7-B-503-S-11**
Date Sampled	**2/27/92**	**2/27/92**	**2/28/92**	**2/28/92**	**2/28/92**	**2/28/92**	**2/28/92**	**7/21/92**
Depth	**5 to 8**	**10 to 13**	**15 to 18**	**20 to 23**	**25 to 28.5**	**10 to 13**	**20 to 23**	**50 to 51.5**
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.033 U		0.033 U		0.033 U			0.033 U
1,3-Dinitrobenzene	0.044 U		0.044 U		0.044 U			0.044 U
2,4,6-Trinitrotoluene	0.0033 U		0.0033 U		0.0033 U			0.0033 U
2,4-Dinitrotoluene	0.0066 U	0.18 U	0.0067 U	0.19 U	0.0066 U	0.19 U	0.18 U	0.0066 U
2,6-Dinitrotoluene	0.0066 U	0.18 U	0.0067 U	0.19 U	0.0066 U	0.19 U	0.18 U	0.0066 U
Monomethylamine Nitrate	5.5 U		5.6 U		5.5 U			
Nitrobenzene	0.066 U	0.18 U	0.066 U	0.19 U	0.065 U	0.19 U	0.18 U	0.066 U
Total DNT	0.0132 U	0.36 U	0.0134 U	0.38 U	0.0132 U	0.38 U	0.36 U	0.0132 U

Table B.2-2
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Explosives Results

Area	7	7	7	7	7	7	7	7
Sample ID	**7-B-503-S-11B**	**7-B-503-S-15A**	**7-B-503-S-16**	**7-B-503-S-1C-DAVG**	**7-B-503-S-2-DAVG**	**7-B-503-S-2A**	**7-B-503-S-5A**	**7-B-503-S-6**
Date Sampled	**7/21/92**	**7/21/92**	**7/21/92**	**7/20/92**	**7/20/92**	**7/20/92**	**7/20/92**	**7/20/92**
Depth	**53 to 54.5**	**72.5 to 74**	**75 to 76.5**	**2.5 to 4**	**5 to 6.5**	**7.5 to 8**	**22.5 to 24**	**25 to 26.5**
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene		0.033 U				0.055 U	0.034 U	
1,3-Dinitrobenzene		0.043 U				0.074 U	0.045 U	
2,4,6-Trinitrotoluene		0.0033 U				0.0055 U	0.0034 U	
2,4-Dinitrotoluene		0.0065 U		0.37 U		0.011 U	0.0067 U	
2,6-Dinitrotoluene		0.0065 U		0.37 U		0.011 U	0.0067 U	
Monomethylamine Nitrate	5.5 U		5.6 U		5.6 U			5.6 U
Nitrobenzene		0.065 U		0.37 U		0.11 U	0.067 U	
Total DNT		0.013 U		0.74 U		0.022 U	0.0134 U	

Table B.2-2
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Explosives Results

Area	7	7	7	7
Sample ID	**7-TP-501-S-2-DAVG**	**7-TP-502-S-2**	**7-TP-503-S-2**	**7-TP-504-S-2**
Date Sampled	**3/5/92**	**3/5/92**	**3/5/92**	**3/5/92**
Depth	**3 to 6**	**3 to 6**	**3 to 6**	**3 to 6**
Explosives (mg/kg dry)				
1,3,5-Trinitrobenzene	0.034 U	0.032 U	0.035 U	0.033 U
1,3-Dinitrobenzene	0.045 U	0.042 U	0.047 U	0.044 U
2,4,6-Trinitrotoluene	0.0034 U	0.0032 U	0.0035 U	0.0033 U
2,4-Dinitrotoluene	0.0068 U	0.0063 U	0.0071 U	0.0065 U
2,6-Dinitrotoluene	0.0068 U	0.0063 U	0.0071 U	0.0065 U
Monomethylamine Nitrate	5.6 U	5.3 U	5.9 U	5.5 U
Nitrobenzene	0.067 U	0.063 U	0.07 U	0.065 U
Total DNT	0.0136 U	0.0126 U	0.0142 U	0.013 U

Table B.2-3
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil SVOC Results

Area	7	7	7	7	7
Sample ID	7-B-501-S-3-DAVG	7-B-501-S-5	7-B-502-S-3	7-B-502-S-5	7-B-503-S-1C-DAVG
Date Sampled	2/27/92	2/28/92	2/28/92	2/28/92	7/20/92
Depth	10 to 13	20 to 23	10 to 13	20 to 23	2.5 to 4
Semivolatiles (mg/kg dry)					
1,2,4-Trichlorobenzene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
1,2-Dichlorobenzene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
1,3-Dichlorobenzene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
1,4-Dichlorobenzene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2,4,5-Trichlorophenol	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
2,4,6-Trichlorophenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2,4-Dichlorophenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2,4-Dimethylphenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2,4-Dinitrophenol	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
2-Chloronaphthalene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2-Chlorophenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2-Methylphenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
2-Nitroaniline	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
2-Nitrophenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
3,3'-Dichlorobenzidine	0.37 U	0.39 U	0.38 U	0.37 U	0.74 U
3-Nitroaniline	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
4,6-Dinitro-2-Methylphenol	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
4-Bromophenyl Phenyl Ether	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
4-Chloroaniline	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
4-Chlorophenyl-Phenylether	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
4-Methylphenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
4-Nitroaniline	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
4-Nitrophenol	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
Aniline	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Benzidine	1.8 U	1.9 U	1.9 U	1.8 U	3.7 U
Benzoic Acid	0.93 U	0.97 U	0.96 U	0.92 U	1.8 U
Benzyl Alcohol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Bis(2-Chloroethoxy) Methane	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Bis(2-Chloroethyl) Ether	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Bis(2-Chloroisopropyl) Ether	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Bis(2-Ethylhexyl)Phthalate	0.037 J	0.19 U	0.19 U	0.18 U	0.37 U
Butylbenzylphthalate	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Di-N-Butylphthalate	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Di-N-Octylphthalate	0.063 J	0.11 J	0.091 J	0.14 J	0.37 U
Dibenzofuran	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Diethylphthalate	0.18 U	0.19 U	0.19 U	0.18 U	2.7
Dimethylphthalate	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Hexachlorobenzene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Hexachlorobutadiene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Hexachlorocyclopentadiene	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Hexachloroethane	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Isophorone	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
N-Nitroso-Di-Phenylamine	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
N-Nitroso-Di-Propylamine	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
N-Nitroso-Dimethylamine	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Pentachlorophenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U
Phenol	0.18 U	0.19 U	0.19 U	0.18 U	0.37 U

Table B.2-4
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil PAH Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-501-S-2-DAVG	7-B-501-S-3-DAVG	7-B-501-S-4-DAVG	7-B-501-S-5	7-B-501-S-6	7-B-502-S-2	7-B-502-S-3	7-B-502-S-4
Date Sampled	2/27/92	2/27/92	2/28/92	2/28/92	2/28/92	2/28/92	2/28/92	2/28/92
Depth	5 to 8	10 to 13	15 to 18	20 to 23	25 to 28.5	5 to 8	10 to 13	15 to 18
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Benzo(a)Pyrene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Benzo(b)Fluoranthene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Benzo(k)Fluoranthene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Chrysene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Dibenzo(a,h)Anthracene	0.038 U	0.18 U	0.038 U	0.19 U	0.037 U	0.042 U	0.19 U	0.04 U
Indeno(1,2,3-c,d)Pyrene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
2-Methylnaphthalene		0.18 U		0.19 U			0.19 U	
Acenaphthene	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.21 U	0.19 U	0.19 U
Acenaphthylene	0.18 U	0.18 U	0.19 U	0.19 U	0.18 U	0.21 U	0.19 U	0.19 U
Anthracene	0.0092 U	0.18 U	0.0093 U	0.19 U	0.0091 U	0.01 U	0.19 U	0.0097 U
Benzo(g,h,i)Perylene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Fluoranthene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Fluorene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
Naphthalene	0.092 U	0.18 U	0.093 U	0.19 U	0.091 U	0.1 U	0.19 U	0.097 U
Phenanthrene	0.0092 U	0.18 U	0.0093 U	0.19 U	0.0091 U	0.01 U	0.19 U	0.0097 U
Pyrene	0.018 U	0.18 U	0.019 U	0.19 U	0.018 U	0.021 U	0.19 U	0.019 U
PAH (Non-Carc) - Total	0.5424 U	1.8 U	0.5676 U	1.9 U	0.5412 U	0.624 U	1.9 U	0.5724 U
Total Carcinogenic PAHS (BaP TEQs)	0.061598 U	0.41598 U	0.062909 U	0.4391 U	0.0606 U	0.0695 U	0.4391 U	0.0649 U

Table B.2-4
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil PAH Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-502-S-5	7-B-502-S-6	7-B-503-S-1	7-B-503-S-1C-DAVG	7-B-503-S-6	7-B-504-S-1-DAVG	7-B-504-S-2	7-B-504-S-4A
Date Sampled	2/28/92	2/28/92	7/20/92	7/20/92	7/20/92	7/17/92	7/17/92	7/17/92
Depth	20 to 23	25 to 28	0 to 1	2.5 to 4	25 to 26.5	0 to 1	5 to 6.5	17.5 to 19
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.018 U	0.017 U	0.018 U
Benzo(a)Pyrene	0.18 U	0.018 U	0.71	0.37 U	0.019 U	0.074	0.017 U	0.018 U
Benzo(b)Fluoranthene	0.18 U	0.018 U	0.56	0.37 U	0.019 U	0.064	0.017 U	0.018 U
Benzo(k)Fluoranthene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.027	0.017 U	0.018 U
Chrysene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.13	0.023	0.018 U
Dibenzo(a,h)Anthracene	0.18 U	0.038 U	0.37 U	0.37 U	0.038 U	0.037 U	0.036 U	0.037 U
Indeno(1,2,3-c,d)Pyrene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.018 U	0.017 U	0.018 U
2-Methylnaphthalene	0.18 U			0.37 U				
Acenaphthene	0.18 U	0.18 U	1.8 U	0.37 U	0.19 U	0.18 U	0.17 U	0.18 U
Acenaphthylene	0.18 U	0.18 U	1.8 U	0.37 U	0.19 U	0.18 U	0.17 U	0.18 U
Anthracene	0.18 U	0.0092 U	0.091 U	0.37 U	0.0093 U	0.0089	0.0087 U	0.009 U
Benzo(g,h,i)Perylene	0.18 U	0.018 U	4.1	0.37 U	0.019 U	0.15	0.017 U	0.018 U
Fluoranthene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.087	0.017 U	0.018 U
Fluorene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.018 U	0.017 U	0.018 U
Naphthalene	0.18 U	0.092 U	0.91 U	0.37 U	0.093 U	0.089 U	0.087 U	0.09 U
Phenanthrene	0.18 U	0.0092 U	0.091 U	0.37 U	0.0093 U	0.032	0.0087 U	0.009 U
Pyrene	0.18 U	0.018 U	0.18 U	0.37 U	0.019 U	0.071	0.017 U	0.018 U
PAH (Non-Carc) - Total	1.8 U	0.5424 U	6.716	3.7 U	0.5676 U	0.5824	0.5124 U	0.54 U
Total Carcinogenic PAHS (BaP	0.416 U	0.0616 U	0.97	0.85507 U	0.0629 U	0.1011	0.0292	0.0606 U

Table B.2-4
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil PAH Results

Area	7	7	7
Sample ID	7-B-504-S-6	7-HA-501-S-1-DAVG	7-HA-504-S-1
Date Sampled	7/17/92	6/29/92	6/29/92
Depth	25 to 26.5	0 to 1	0 to 1
PAHs (mg/kg dry)			
Benzo(a)Anthracene	0.018 U	0.37 U	0.021 U
Benzo(a)Pyrene	0.018 U	1.1	0.021 U
Benzo(b)Fluoranthene	0.018 U	0.79	0.021 U
Benzo(k)Fluoranthene	0.018 U	0.37 U	0.021 U
Chrysene	0.018 U	0.7	0.098
Dibenzo(a,h)Anthracene	0.036 U	0.77 U	0.043 U
Indeno(1,2,3-c,d)Pyrene	0.018 U	0.37 U	0.021 U
2-Methylnaphthalene			
Acenaphthene	0.18 U	3.7 U	0.21 U
Acenaphthylene	0.18 U	3.7 U	0.21 U
Anthracene	0.0089 U	0.19 U	0.01 U
Benzo(g,h,i)Perylene	0.018 U	4.9	0.081
Fluoranthene	0.018 U	0.37 U	0.021 U
Fluorene	0.018 U	0.37 U	0.021 U
Naphthalene	0.089 U	1.9 U	0.1 U
Phenanthrene	0.0089 U	0.19 U	0.01 U
Pyrene	0.018 U	0.37 U	0.021 U
PAH (Non-Carc) - Total	0.5388 U	10.295	0.3825
Total Carcinogenic PAHS (BaP TEQs)	0.0596 U	1.60355	0.0354

Table B.2-5
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil Pesticide and PCB Results

Area	**7**
Sample ID	**7-B-1,S-1**
Date Sampled	**12/1/86**
Depth	**2.5 to 4**
Pesticides (mg/kg dry)	
4,4'-DDD	4.78 U
4,4'-DDE	4.78 U
4,4'-DDT	4.78 U
Aldrin	2.39 U
Alpha-BHC	2.39 U
Beta-BHC	239 U
Chlordane	23.9 U
Delta-BHC	2.39 U
Dieldrin	4.78 U
Endosulfan I	2.39 U
Endosulfan II	4.78 U
Endosulfan Sulfate	4.78 U
Endrin	0.848 J
Endrin Ketone	4.78 U
Gamma-BHC	2.39 U
Heptachlor	2.39 U
Heptachlor Epoxide	2.39 U
Methoxychlor	23.9 U
Toxaphene	47.8 U
PCBs (mg/kg dry)	
PCB-1016	0.0239 U
PCB-1221	0.0239 U
PCB-1232	0.0239 U
PCB-1242	0.0239 U
PCB-1248	0.0239 U
PCB-1254	0.0478 U
PCB-1260	0.0478 U

Table B.2-6
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil TPH Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-1,S-1	7-B-3,S-1	7-B-3,S-3	7-B-3,S-5	7-B-3,S-6	7-B-4,S-1-DAVG	7-B-4,S-11	7-B-4,S-3
Date Sampled	12/1/86	4/28/87	4/28/87	4/28/87	4/28/87	4/29/87	4/29/87	4/29/87
Depth	2.5 to 4	3.5 to 5	8.5 to 10	13.5 to 15	16.5 to 18	3.5 to 5	28.5 to 30	8.5 to 10
TPH (mg/kg dry)								
TPH Scan								
Oil And Grease	27 U	20 UX	20 UX	20 UX	20 UX	20 UX	39 X	140 X

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-4,S-5	7-B-4,S-6	7-B-4,S-9	7-B-5,S-1-DAVG	7-B-5,S-3	7-B-5,S-5	7-B-5,S-7	7-B-6,S-1
Date Sampled	4/29/87	4/29/87	4/29/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87
Depth	13.5 to 15	16 to 17.5	23.5 to 25	3 to 4.5	8 to 9.5	13 to 14.5	18 to 19.5	3.5 to 5
TPH (mg/kg dry)								
TPH Scan								
Oil And Grease	26 X	37 X	32 X	560 X	20 UX	20 UX	44 X	630 X

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-6,S-3	7-B-6,S-5	7-B-6,S-6	7-B-7,S-4-DAVG	7-B-501-S-2-DAVG	7-B-501-S-4-DAVG	7-B-501-S-6	7-B-502-S-2
Date Sampled	4/28/87	4/28/87	4/28/87	4/29/87	2/27/92	2/28/92	2/28/92	2/28/92
Depth	8.5 to 10	13.5 to 15	16 to 17.5	11 to 12.5	5 to 8	15 to 18	25 to 28.5	5 to 8
TPH (mg/kg dry)								
TPH Scan					34 J	20 U	20 U	240 J
Oil And Grease	20 UX	20 UX	20 UX	45 X				

Table B.2-6
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil TPH Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-B-502-S-4	7-B-502-S-6	7-B-503-S-1	7-B-503-S-6	7-B-504-S-1-DAVG	7-B-504-S-2	7-B-504-S-4A	7-B-504-S-6
Date Sampled	2/28/92	2/28/92	7/20/92	7/20/92	7/17/92	7/17/92	7/17/92	7/17/92
Depth	15 to 18	25 to 28	0 to 1	25 to 26.5	0 to 1	5 to 6.5	17.5 to 19	25 to 26.5
TPH (mg/kg dry)								
TPH Scan	20 U	20 U	4400	22 U	100	21 U	21 U	21 U
Oil And Grease								

Area	7	7	7	7	7	7	7	7
Sample ID	7-HA-501-S-1-DAVG	7-HA-501-S-2	7-HA-502-S-2-DAVG	7-HA-502-S-3	7-HA-504-S-1	7-HA-504-S-2	7-TP-501-S-1	7-TP-501-S-2 -DAVG
Date Sampled	6/29/92	6/29/92	7/1/92	7/1/92	6/29/92	6/29/92	3/5/92	3/5/92
Depth	0 to 1	1 to 2	1 to 2	2 to 3	0 to 1	1 to 2	0 to 1	3 to 6
TPH (mg/kg dry)								
TPH Scan	7600	1800	73	34	100	22 U	880	63
Oil And Grease								

Area	7	7	7	7	7	7	7	7
Sample ID	7-TP-501-S-3	7-TP-502-S-1	7-TP-502-S-2	7-TP-502-S-3	7-TP-503-S-1	7-TP-503-S-2	7-TP-503-S-3	7-TP-504-S-1
Date Sampled	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92	3/5/92
Depth	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
TPH (mg/kg dry)								
TPH Scan	20 U	20 U	20 U	20 U	24	30	20 U	20 U
Oil And Grease								

Table B.2-6
Area 7 - Waste Drainage Pit (Old Salt Lake) Soil TPH Results

Area	7	7	7	7	7	7	7	7
Sample ID	7-TP-504-S-2	7-TP-504-S-3	7-SS-501	7-SS-502	7-SS-503	7-SS-504	7-SS-505	7-SS-506
Date Sampled	3/5/92	3/5/92	2/13/92	2/13/92	2/13/92	2/13/92	2/13/92	2/13/92
Depth	3 to 6	8 to 10	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)								
TPH Scan Oil And Grease	20 U	20 U	2400	20 U	20 U	20 U	10000	20 U

Table B.3-1
Area 10 - Aluminum Water Gel Area Soil Metals Results

Area	10	10	10	10
Sample ID	10-TP-501-S-3	10-TP-503-S-2	10-TP-503-S-3	10-SS-401
Date Sampled	2/24/92	2/24/92	2/24/92	11/8/93
Depth	4 to 6	0 to 3	5 to 7	0 to 0.5
Total Metals (mg/kg dry)				
Aluminum	14000	11000	7500	
Antimony	0.26 UJ	0.27 UJ	0.26 UJ	
Arsenic	3	2.1	1.7	48 J
Beryllium	0.21	0.16	0.13	
Cadmium	0.066	0.044	0.044	
Chromium	17	12	8.7	
Copper	17	13	9.9	
Lead	5.4 U	5.1 U	5.4 U	
Mercury	0.085 U	0.086 U	0.072 U	
Nickel	21	18	14	
Selenium	0.26 U	0.27 U	0.27 U	
Silver	0.02 UJ	0.016 UJ	0.013 UJ	
Thallium	0.26 U	0.27 U	0.27 U	
Zinc	26	22	21	

Table B.3-2
Area 10 - Aluminum Water Gel Area Soil Explosives Results

Area	10	10	10	10
Sample ID	10-TP-501-S-3	10-TP-503-S-2	10-TP-503-S-3	10-VS-1-DAVG
Date Sampled	2/24/92	2/24/92	2/24/92	3/8/93
Depth	4 to 6	0 to 3	5 to 7	3 to 3.5
Explosives (mg/kg dry)				
1,3,5-Trinitrobenzene	0.033 U	0.032 U	0.033 U	0.031 U
1,3-Dinitrobenzene	0.044 U	0.042 U	0.044 U	0.041 U
2,4,6-Trinitrotoluene	0.004	0.013	0.21	0.027
2,4-Dinitrotoluene	0.0065 U	0.0063 U	0.0066 U	0.0062 U
2,6-Dinitrotoluene	0.0065 U	0.0063 U	0.0066 U	0.0062 U
Monomethylamine Nitrate	5.5 U	5.3 U	5.6 U	
Nitrobenzene	0.065 U	0.063 U	0.066 U	0.062 U
Nitroglycerine	0.22 U	0.21 U	0.22 U	

Area	10	10	10	10
Sample ID	10-VS-2	10-VS-2a	10-VS-4	02-IN01-SS[10-VS-6]D2-5.0
Date Sampled	3/8/93	1/25/00	3/8/93	8/1/01
Depth	3 to 3.5	0 to 0.5	0 to 0.5	2 to 2.5
Explosives (mg/kg dry)				
1,3,5-Trinitrobenzene	0.034 U		0.082 U	
1,3-Dinitrobenzene	0.045 U		0.11 U	
2,4,6-Trinitrotoluene	0.031	0.059 U	0.13	1
2,4-Dinitrotoluene	0.0067 U		0.016 U	0.046 U
2,6-Dinitrotoluene	0.0067 U		0.016 U	0.046 U
Monomethylamine Nitrate				
Nitrobenzene	0.067 U		0.16 U	
Nitroglycerine				

Area	10	10	10	10
Sample ID	02-IN01-SS[10-VS-8]D2-5.0	02-IN01-SS[10-VS-9]D2-5.0	03-IN01-SS[10-VS-11]-C2-100	03-IN01-SS[10-VS-12]-C2-050
Date Sampled	8/1/01	8/1/01	9/4/01	9/4/01
Depth	2 to 2.5	2 to 2.5	6 to 6.5	3 to 6
Explosives (mg/kg dry)				
1,3,5-Trinitrobenzene				
1,3-Dinitrobenzene				
2,4,6-Trinitrotoluene	0.073 J	0.13	0.2	0.048 U
2,4-Dinitrotoluene	0.044 U	0.044 U	0.047 U	0.048 U
2,6-Dinitrotoluene	0.044 U	0.044 U	0.047 U	0.048 U
Monomethylamine Nitrate				
Nitrobenzene				
Nitroglycerine				

Table B.3-3
Area 10 - Aluminum Water Gel Area Soil PAH and SVOC Results

Area	10	10	10	10
Sample ID	10-TP-501-S-2	10-TP-501-S-3	10-TP-503-S-2	10-TP-503-S-3
Date Sampled	2/24/92	2/24/92	2/24/92	2/24/92
Depth	0 to 3	4 to 6	0 to 3	5 to 7
PAHs (mg/kg dry)				
Benzo(a)Anthracene		0.18 U	0.18 U	0.17 U
Benzo(a)Pyrene		0.18 U	0.18 U	0.17 U
Benzo(b)Fluoranthene		0.18 U	0.18 U	0.17 U
Benzo(k)Fluoranthene		0.18 U	0.18 U	0.17 U
Chrysene	0.17 U	0.18 U	0.18 U	0.17 U
Dibenzo(a,h)Anthracene	0.17 U	0.18 U	0.18 U	0.17 U
Indeno(1,2,3-c,d)Pyrene	0.17 U	0.18 U	0.18 U	0.17 U
2-Methylnaphthalene	0.17 U	0.18 U	0.18 U	0.17 U
Acenaphthene	0.17 U	0.18 U	0.18 U	0.17 U
Acenaphthylene	0.17 U	0.18 U	0.18 U	0.17 U
Anthracene	0.17 U	0.18 U	0.18 U	0.17 U
Benzo(g,h,i)Perylene	0.17 U	0.18 U	0.18 U	0.17 U
Fluoranthene	0.17 U	0.18 U	0.18 U	0.17 U
Fluorene	0.17 U	0.18 U	0.18 U	0.17 U
Naphthalene	0.17 U	0.18 U	0.18 U	0.17 U
Phenanthrene	0.17 U	0.18 U	0.18 U	0.17 U
Pyrene	0.17 U	0.18 U	0.18 U	0.17 U
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	0.17 U	0.18 U	0.18 U	0.17 U
1,2-Dichlorobenzene	0.17 U	0.18 U	0.18 U	0.17 U
1,3-Dichlorobenzene	0.17 U	0.18 U	0.18 U	0.17 U
1,4-Dichlorobenzene	0.17 U	0.18 U	0.18 U	0.17 U
2,4,5-Trichlorophenol	0.89 U	0.92 U	0.9 U	0.88 U
2,4,6-Trichlorophenol	0.17 U	0.18 U	0.18 U	0.17 U
2,4-Dichlorophenol	0.17 U	0.18 U	0.18 U	0.17 U
2,4-Dimethylphenol	0.17 U	0.18 U	0.18 U	0.17 U
2,4-Dinitrophenol	0.89 U	0.92 U	0.9 U	0.88 U
2-Chloronaphthalene	0.17 U	0.18 U	0.18 U	0.17 U
2-Chlorophenol	0.17 U	0.18 U	0.18 U	0.17 U
2-Methylphenol	0.17 U	0.18 U	0.18 U	0.17 U
2-Nitroaniline	0.89 U	0.92 U	0.9 U	0.88 U
2-Nitrophenol	0.17 U	0.18 U	0.18 U	0.17 U
3,3'-Dichlorobenzidine	0.35 U	0.37 U	0.36 U	0.35 U
3-Nitroaniline	0.89 U	0.92 U	0.9 U	0.88 U
4,6-Dinitro-o-Cresol	0.89 U	0.92 U	0.9 U	0.88 U
4-Bromophenyl Phenyl Ether	0.17 U	0.18 U	0.18 U	0.17 U
4-Chloroaniline	0.17 U	0.18 U	0.18 U	0.17 U
4-Chlorophenyl-Phenylether	0.17 U	0.18 U	0.18 U	0.17 U
4-Methylphenol	0.17 U	0.18 U	0.18 U	0.17 U
4-Nitroaniline	0.89 U	0.92 U	0.9 U	0.88 U
4-Nitrophenol	0.89 U	0.92 U	0.9 U	0.88 U
Aniline	0.17 U	0.18 U	0.18 U	0.17 U
Benzidine	1.7 U	1.8 U	1.8 U	1.7 U
Benzoic Acid	0.89 U	0.92 U	0.9 U	0.88 U
Benzyl Alcohol	0.17 U	0.18 U	0.18 U	0.17 U
Bis(2-Chloroethoxy) Methane	0.17 U	0.18 U	0.18 U	0.17 U
Bis(2-Chloroethyl) Ether	0.17 U	0.18 U	0.18 U	0.17 U
Bis(2-Chloroisopropyl) Ether	0.17 U	0.18 U	0.18 U	0.17 U
Bis(2-Ethylhexyl)Phthalate	0.17 U	0.18 U	0.18 U	0.17 U

Table B.3-3
Area 10 - Aluminum Water Gel Area Soil PAH and SVOC Results

Area	10	10	10	10
Sample ID	10-TP-501-S-2	10-TP-501-S-3	10-TP-503-S-2	10-TP-503-S-3
Date Sampled	2/24/92	2/24/92	2/24/92	2/24/92
Depth	0 to 3	4 to 6	0 to 3	5 to 7
N-Butyl-Benzyl-Phthalate	0.17 U	0.18 U	0.18 U	0.17 U
Di-N-Butylphthalate	0.17 U	0.18 U	0.18 U	0.17 U
Di-N-Octylphthalate	0.17 U	0.18 U	0.18 U	0.17 U
Dibenzofuran	0.17 U	0.18 U	0.18 U	0.17 U
Diethylphthalate	0.17 U	0.18 U	0.18 U	0.17 U
Dimethylphthalate	0.17 U	0.18 U	0.18 U	0.17 U
Hexachlorobenzene	0.17 U	0.18 U	0.18 U	0.17 U
Hexachlorobutadiene	0.17 U	0.18 U	0.18 U	0.17 U
Hexachlorocyclopentadiene	0.17 U	0.18 U	0.18 U	0.17 U
Hexachloroethane	0.17 U	0.18 U	0.18 U	0.17 U
Isophorone	0.17 U	0.18 U	0.18 U	0.17 U
N-Nitroso-Di-Phenylamine	0.17 U	0.18 U	0.18 U	0.17 U
N-Nitroso-Di-Propylamine	0.17 U	0.18 U	0.18 U	0.17 U
N-Nitroso-Dimethylamine	0.17 U	0.18 U	0.18 U	0.17 U
Pentachlorophenol	0.17 U	0.18 U	0.18 U	0.17 U
Phenol	0.17 U	0.18 U	0.18 U	0.17 U

Table B.4-1
Area 11 - Water Gel Wash-Up Waste Pit Area Soil Metals Results

Area	11	11	11	11	11	11
Sample ID	11-B-501-S-1	11-B-501-S-3	11-TP-5,S-1	11-TP-5,S-2-DAVG	11-TP-6,S-1	11-TP-6,S-2
Date Sampled	2/21/92	2/21/92	4/28/87	4/28/87	4/28/87	4/28/87
Depth	0 to 1	10 to 11.5	0 to 3	3 to 6	0 to 3	3 to 6
Total Metals (mg/kg dry)						
Aluminum	16000	12000				
Antimony	0.3 U	0.27 U				
Arsenic	9.4	2.3				
Beryllium	0.24	0.16				
Cadmium	0.37	0.26				
Chromium	17	13				
Copper	21	17				
Lead	20	5.5 U	28	27	15	13
Mercury	0.088 U	0.084 U				
Nickel	20	15				
Selenium	0.3 U	0.27 U				
Silver	0.031	0.016				
Thallium	0.3 U	0.27 U				
Zinc	71	77				

Table B.4-1
Area 11 - Water Gel Wash-Up Waste Pit Area Soil Metals Results

Area	11	11	11	11	11
Sample ID	11-TP-501-S-2	11-TP-502-S-2	11-TP-503-S-2	11-TP-504-S-2	11-TP-504-S-3
Date Sampled	2/21/92	2/21/92	2/21/92	2/21/92	2/21/92
Depth	3 to 6	3 to 6	3 to 6	3 to 6	8 to 10
Total Metals (mg/kg dry)					
Aluminum	11000	16000	14000	13000	7000
Antimony	0.27 U	0.28 U	0.27 U	0.26 U	0.26 U
Arsenic	1.6	2.8	1.7	3.3	1.4
Beryllium	0.14	0.24	0.23	0.2	0.12
Cadmium	0.034	0.05	0.04	0.046	0.03
Chromium	12	18	14	12	8.1
Copper	14	14	15	17	8.6
Lead	5.3 U	5.5 U	5.3 U	5.3 U	5.2 U
Mercury	0.094 U	0.092 U	0.09 U	0.079 U	0.091 U
Nickel	16	21	16	15	12
Selenium	0.27 U	0.28 U	0.27 U	0.26 U	0.26 U
Silver	0.021	0.028	0.019	0.012	0.01 U
Thallium	0.27 U	0.28 U	0.27 U	0.26 U	0.26 U
Zinc	25	27	26	27	13

Table B.4-2
Area 11 - Water Gel Wash-Up Waste Pit Area Soil Explosives Results

Area	11	11	11	11	11	11	11	11
Sample ID	11-B-501-S-1	11-B-501-S-2	11-B-501-S-3	11-B-501-S-4	11-B-501-S-5	11-B-501-S-6	11-TP-1,S-2	11-TP-5,S-1
Date Sampled	2/21/92	2/21/92	2/21/92	2/21/92	2/21/92	2/21/92	11/17/86	4/28/87
Depth	0 to 1	5 to 8	10 to 11.5	15 to 16.5	20 to 22.5	25 to 26.5	3 to 4	0 to 3
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.036 U	0.067 U	0.033 U	0.033 U	0.034 U	0.034 U		
1,3-Dinitrobenzene	0.048 U	0.089 U	0.043 U	0.044 U	0.046 U	0.045 U		
2,4,6-Trinitrotoluene	0.21	0.237	0.048	0.056	0.013	0.0034 U		0.08 U
2,4-Dinitrotoluene	0.0073 U	0.012	0.0065 U	0.0065 U	0.0068 U	0.0067 U		0.08 J
2,6-Dinitrotoluene	0.0073 U	0.01	0.0065 U	0.0065 U	0.0068 U	0.0067 U		0.08 U
Monomethylamine Nitrate	6.1 U	5.6 U	5.4 U	5.4 U	5.7 U	5.6 U		0.03 U
Nitrobenzene	0.072 U	0.132 U	0.065 U	0.065 U	0.068 U	0.067 U		
Nitroglycerine	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.35	0.2 U
Total DNT	*0.015 U*	*0.022*	*0.013 U*	*0.013 U*	*0.014 U*	*0.013 U*		*0.12*

Table B.4-2
Area 11 - Water Gel Wash-Up Waste Pit Area Soil Explosives Results

Area	11	11	11	11	11	11	11	11
Sample ID	**11-TP-5,S-2-DAVG**	**11-TP-501-S-1**	**11-TP-501-S-2**	**11-TP-501-S-3**	**11-TP-502-S-1**	**11-TP-502-S-2**	**11-TP-502-S-3**	**11-TP-503-S-1-DAVG**
Date Sampled	**4/28/87**	**2/21/92**	**2/21/92**	**2/21/92**	**2/21/92**	**2/21/92**	**2/21/92**	**2/21/92**
Depth	**3 to 6**	**0 to 1**	**3 to 6**	**8 to 10**	**0 to 1**	**3 to 6**	**8 to 10**	**0 to 1**
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene		0.046 U	0.032 U	0.034 U	0.035 U	0.034 U	0.033 U	0.034 U
1,3-Dinitrobenzene		0.062 U	0.043 U	0.046 U	0.047 U	0.046 U	0.044 U	0.046 U
2,4,6-Trinitrotoluene	15	0.0046 U	0.0032 U	0.0034 U	0.0035 U	0.0034 U	0.011	0.18
2,4-Dinitrotoluene	0.07 J	0.0092 U	0.0065 U	0.0068 U	0.007 U	0.0068 U	0.0065 U	0.019
2,6-Dinitrotoluene	0.23 U	0.0092 U	0.0065 U	0.0068 U	0.007 U	0.0068 U	0.0065 U	0.0069 U
Monomethylamine Nitrate	2.9	7.7 UJ	5.4 UJ	5.7 U	5.9 UJ	5.7 U	5.5 UJ	5.8 UJ
Nitrobenzene		0.092 U	0.12	0.068 U	0.078	0.17	0.15	0.068 U
Nitroglycerine	0.57 U	0.31 U	0.22 U	0.23 U	0.23 U	0.23 U	0.22 U	0.23 U
Total DNT	*0.185*	*0.018 U*	*0.013 U*	*0.014 U*	*0.014 U*	*0.014 U*	*0.013 U*	*0.02245*

Table B.4-2
Area 11 - Water Gel Wash-Up Waste Pit Area Soil Explosives Results

Area	11	11	11	11	11	11	11
Sample ID	11-TP-503-S-2	11-TP-503-S-3	11-TP-504-S-1	11-TP-504-S-2	11-TP-504-S-3	11-TP-6,S-1	11-TP-6,S-2
Date Sampled	2/21/92	2/21/92	2/21/92	2/21/92	2/21/92	4/28/87	4/28/87
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 3	3 to 6
Explosives (mg/kg dry)							
1,3,5-Trinitrobenzene	0.033 U	0.032 U	0.037 U	0.032 U	0.032 U		
1,3-Dinitrobenzene	0.043 U	0.043 U	0.049 U	0.043 U	0.043 U		
2,4,6-Trinitrotoluene	0.21	0.026	0.0037 U	0.0032 U	0.0032 U	0.08	42
2,4-Dinitrotoluene	0.0065 U	0.0064 U	0.0074 U	0.0065 U	0.0064 U	0.08 U	0.09 J
2,6-Dinitrotoluene	0.0065 U	0.0064 U	0.0074 U	0.0065 U	0.0064 U	0.08 U	0.09
Monomethylamine Nitrate	5.4 U	5.4 U	6.2 U	5.4 U	5.4 U	0.03 U	1.4
Nitrobenzene	0.065 U	0.064 U	0.073 U	0.064 U	0.064 U		
Nitroglycerine	0.22 U	0.21 U	0.25 U	0.22 U	0.21 U	0.19 U	0.23 U
Total DNT	*0.013 U*	*0.0128 U*	*0.015 U*	*0.013 U*	*0.013 U*	*0.16 U*	*0.18*

Table B.4-3
Area 11 - Water Gel Wash-Up Waste Pit Area Soil PAH and SVOC Results

Area	11	11	11
Sample ID	11-B-501-S-1	11-B-501-S-3	11-B-501-S-4
Date Sampled	2/21/92	2/21/92	2/21/92
Depth	0 to 1	10 to 11.5	15 to 16.5
PAHs (mg/kg dry)			
Benzo(a)Anthracene	0.2 U	0.18 U	0.18 U
Benzo(a)Pyrene	0.2 U	0.18 U	0.18 U
Benzo(b)Fluoranthene	0.2 U	0.18 U	0.18 U
Benzo(k)Fluoranthene	0.2 U	0.18 U	0.18 U
Chrysene	0.2 U	0.18 U	0.18 U
Dibenzo(a,h)Anthracene	0.2 U	0.18 U	0.18 U
Indeno(1,2,3-c,d)Pyrene	0.2 U	0.18 U	0.18 U
2-Methylnaphthalene	0.2 U	0.18 U	0.18 U
Acenaphthene	0.2 U	0.18 U	0.18 U
Acenaphthylene	0.2 U	0.18 U	0.18 U
Anthracene	0.2 U	0.18 U	0.18 U
Benzo(g,h,i)Perylene	0.2 U	0.18 U	0.18 U
Fluoranthene	0.2 U	0.18 U	0.18 U
Fluorene	0.2 U	0.18 U	0.18 U
Naphthalene	0.2 U	0.18 U	0.18 U
Phenanthrene	0.2 U	0.18 U	0.18 U
Pyrene	0.2 U	0.18 U	0.18 U
Total Carcinogenic PAHs (BAP TEQs)	*0.4622 U*	*0.41598 U*	*0.41598 U*
Total Non-carcinogenic PAHs	*2 U*	*1.8 U*	*1.8 U*
Semivolatiles (mg/kg dry)			
1,2,4-Trichlorobenzene	0.2 U	0.18 U	0.18 U
1,2-Dichlorobenzene	0.2 U	0.18 U	0.18 U
1,3-Dichlorobenzene	0.2 U	0.18 U	0.18 U
1,4-Dichlorobenzene	0.2 U	0.18 U	0.18 U
2,4,5-Trichlorophenol	1 U	0.91 U	0.93 U
2,4,6-Trichlorophenol	0.2 U	0.18 U	0.18 U
2,4-Dichlorophenol	0.2 U	0.18 U	0.18 U
2,4-Dimethylphenol	0.2 U	0.18 U	0.18 U
2,4-Dinitrophenol	1 U	0.91 U	0.93 U
2-Chloronaphthalene	0.2 U	0.18 U	0.18 U
2-Chlorophenol	0.2 U	0.18 U	0.18 U
2-Methylphenol	0.2 U	0.18 U	0.18 U
2-Nitroaniline	1 U	0.91 U	0.93 U
2-Nitrophenol	0.2 U	0.18 U	0.18 U
3,3'-Dichlorobenzidine	0.41 U	0.37 U	0.37 U
3-Nitroaniline	1 U	0.91 U	0.93 U
4,6-Dinitro-2-Methylphenol	1 U	0.91 U	0.93 U
4-Bromophenyl Phenyl Ether	0.2 U	0.18 U	0.18 U
4-Chloroaniline	0.2 U	0.18 U	0.18 U
4-Chlorophenyl-Phenylether	0.2 U	0.18 U	0.18 U
4-Methylphenol	0.2 U	0.18 U	0.18 U
4-Nitroaniline	1 U	0.91 U	0.93 U
4-Nitrophenol	1 U	0.91 U	0.93 U
Aniline	0.2 U	0.18 U	0.18 U
Benzidine	2 U	1.8 U	1.8 U
Benzoic Acid	1 U	0.91 U	0.93 U
Benzyl Alcohol	0.2 U	0.18 U	0.18 U

Table B.4-3
Area 11 - Water Gel Wash-Up Waste Pit Area Soil PAH and SVOC Results

Area	11	11	11
Sample ID	11-B-501-S-1	11-B-501-S-3	11-B-501-S-4
Date Sampled	2/21/92	2/21/92	2/21/92
Depth	0 to 1	10 to 11.5	15 to 16.5
Bis(2-Chloroethoxy) Methane	0.2 U	0.18 U	0.18 U
Bis(2-Chloroethyl) Ether	0.2 U	0.18 U	0.18 U
Bis(2-Chloroisopropyl) Ether	0.2 U	0.18 U	0.18 U
Bis(2-Ethylhexyl)Phthalate	0.2 U	0.18 U	0.18 U
Butylbenzylphthalate	0.2 U	0.18 U	0.18 U
Di-N-Butylphthalate	0.2 U	0.18 U	0.18 U
Di-N-Octylphthalate	0.2 U	0.18 U	0.19 U
Dibenzofuran	0.2 U	0.18 U	0.18 U
Diethylphthalate	0.2 U	0.18 U	0.18 U
Dimethylphthalate	0.2 U	0.18 U	0.18 U
Hexachlorobenzene	0.2 U	0.18 U	0.18 U
Hexachlorobutadiene	0.2 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	0.2 U	0.18 U	0.18 U
Hexachloroethane	0.2 U	0.18 U	0.18 U
Isophorone	0.2 U	0.18 U	0.18 U
N-Nitroso-Di-Phenylamine	0.2 U	0.18 U	0.18 U
N-Nitroso-Di-Propylamine	0.2 U	0.18 U	0.18 U
N-Nitroso-Dimethylamine	0.2 U	0.18 U	0.18 U
Pentachlorophenol	0.2 U	0.18 U	0.18 U
Phenol	0.2 U	0.18 U	0.18 U

Table B.4-4
Area 11 - Water Gel Wash-Up Waste Pit Area Soil TPH Results

Area	11	11	11	11
Sample ID	11-TP-5,S-1	11-TP-5,S-2	11-TP-6,S-1-DAVG	11-TP-6,S-2
Date Sampled	4/28/87	4/28/87	4/28/87	4/28/87
Depth	0 to 3	3 to 6	0 to 3	3 to 6
TPH (mg/kg dry)				
Oil And Grease	30 X	93 X	20 UX	51 X

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-1-TP-501-S-2	12-1-TP-503-S-2-DAVG	12-1-TP-6,S-1	12-1-TP-6,S-2	12-2-B-501-S-1	12-2-B-501-S-3A	12-2-B-502-S-1-DAVG	12-2-B-502-S-2-DAVG
Date Sampled	4/15/92	4/16/92	4/24/87	4/24/87	3/24/92	3/24/92	3/24/92	3/24/92
Depth	3 to 6	3 to 6	0 to 3	3 to 6	0 to 1	13 to 14.5	0 to 1	5 to 8
Total Metals (mg/kg dry)								
Aluminum	12000	9900			12000	9600	9400	6200
Antimony	2.8 U	2.6 U						
Arsenic	2	1.3 J			3.6 J	1.4	2	1.9
Beryllium	0.22	0.19			0.31	0.16	0.18	0.12
Cadmium	0.04	0.055			0.12 J	0.18 J	0.086 J	0.095 J
Chromium	12	8.3			10	10 J	7.8	6.9
Copper	13 J	15			21	15	14	12
Lead	5.4 U	5.3 U	15	23	18	9.4	12	11
Mercury	0.082 U	0.086 U			0.094 UJ	0.17 J	0.1 UJ	0.083 UJ
Nickel	16	14			14	15	12	9.2
Selenium	0.28 U	0.26 U			0.49 J	0.26 UJ	0.26 UJ	0.27 UJ
Silver	0.4	0.51			0.042	0.035	0.034 J	0.029 UJ
Thallium	0.27 U	0.26 U			0.29 UJ	0.26 UJ	0.26 UJ	0.27 UJ
Zinc	24	24			26	21	18	16

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-B-502-S-3	12-2-TP-10,S-1	12-2-TP-10,S-2	12-2-TP-501-S-2	12-2-TP-502-S-2	12-2-TP-503-S-2	12-2-TP-504-S-2-DAVG	12-2-TP-505-S-2-DAVG
Date Sampled	3/24/92	4/23/87	4/23/87	4/15/92	4/14/92	4/15/92	4/15/92	4/15/92
Depth	10 to 12.3	0 to 3	3 to 6	3 to 6	3 to 6	2 to 4	3 to 6	3 to 6
Total Metals (mg/kg dry)								
Aluminum	9400			13000	10000	14000	7900	14000
Antimony				2.9 U	2.7 U	2.8 U	2.6 U	2.8 U
Arsenic	1.3			2.8	2.2	1.8	0.99	3
Beryllium	0.17			0.26	0.2	0.26	0.15	0.28
Cadmium	0.15 J			0.13	0.082	0.055	0.036	0.089
Chromium	11 J			11	15	55	7.5	14
Copper	17			18 J	12 J	12 J	11 J	15 J
Lead	7	36	48	5.8 U	23	6.2	5 U	5.7 U
Mercury	0.1 UJ			0.092 U	0.084 U	0.079 U	0.092 U	0.099 U
Nickel	15			15	13	19	12	19
Selenium	0.28 UJ			0.29 U	0.28 U	0.26 U	0.26 U	0.28 U
Silver	0.052 J			0.46	0.46	0.46	0.35	0.49
Thallium	0.28 UJ			0.29 U	0.28 U	0.26 U	0.26 U	0.28 U
Zinc	20			29	23	22	16	30

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-TP-9,S-1	12-2-TP-9,S-2	12-3-TP-3,S-1	12-3-TP-3,S-2	12-3-TP-501-S-2-DAVG	12-4-TP-2,S-1	12-5-TP-3,S-1	12-5-TP-3,S-2
Date Sampled	4/24/87	4/24/87	4/27/87	4/27/87	4/16/92	11/11/86	4/27/87	4/27/87
Depth	0 to 3	3 to 6	0 to 3	3 to 6	2 to 4	0 to 3	0 to 3	3 to 6
Total Metals (mg/kg dry)								
Aluminum					15000			
Antimony					3.3 U	3 U		
Arsenic					15.3 J			
Beryllium					0.29			
Cadmium					0.52			
Chromium					14	24		
Copper					24			
Lead	35	39	28	29	39	10	24	21
Mercury					0.12			
Nickel					17			
Selenium					0.31 U			
Silver					0.58			
Thallium					0.31 U			
Zinc	69	79			37			

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-6-B-501-S-2	12-6-TP-3,S-1	12-6-TP-3,S-2-DAVG	12-6-TP-502-S-2	12-7-B-501-S-2	12-SS-401	12-SS-402	12-SS-403
Date Sampled	3/25/92	4/27/87	4/27/87	4/17/92	3/25/92	11/17/93	11/18/93	11/17/93
Depth	5 to 8	0 to 3	3 to 6	3 to 6	5 to 8	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum	8900			12000	9900			
Antimony				3 U				
Arsenic	2.7			23 J	3.2	22	23	6
Beryllium	0.17			0.24	0.17			
Cadmium	0.089 J			0.46	0.15 J			
Chromium	13			9.3	13 J			
Copper	27			15	29			
Lead	9.4	18	35	15	12			
Mercury	0.1 UJ			0.11 U	0.099 UJ			
Nickel	11			11	15			
Selenium	0.26 UJ			0.3 U	0.25 UJ			
Silver	0.043 J			0.41	0.034 J			
Thallium	0.26 UJ			0.3 U	0.25 UJ			
Zinc	17			23	41			

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-SS-405	12-SS-406	12-SS-407	12-SS-408	12-SS-409	12-TP-501-S-1-DAVG	12-TP-501-S-2-DAVG	12-TP-502-S-1-DAVG
Date Sampled	11/17/93	11/18/93	11/18/93	11/18/93	11/18/93	4/16/92	4/16/92	4/16/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 1	3 to 4.5	0 to 1
Total Metals (mg/kg dry)								
Aluminum						20000	18000	18000
Antimony						2.8 U	3.2 U	3.1 U
Arsenic	6.5	30	25	19	9.3	3.2 J	18 J	3.2
Beryllium						0.39	0.34	0.4
Cadmium						0.087	0.48	0.19
Chromium						14	15	12
Copper						13	17	14
Lead						5.8 U	15	6.1 U
Mercury						0.089 U	0.1 U	0.11 U
Nickel						19	17	16
Selenium						0.28 U	0.32 U	0.31 U
Silver						0.48	0.77	0.44
Thallium						0.28 U	0.32 U	0.31 U
Zinc						30	47	32

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-TP-502-S-2-DAVG	12-TP-503-S-1	12-TP-503-S-2	12-TP-504-S-1-DAVG	12-TP-504-S-2-DAVG	12-TP-505-S-1-DAVG	12-TP-505-S-2-DAVG	SA4-114-95
Date Sampled	4/17/92	4/16/92	4/16/92	4/17/92	4/17/92	4/17/92	4/17/92	10/13/99
Depth	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6	1.5 to 3.5
Total Metals (mg/kg dry)								
Aluminum	10000	22000	12000	24000	8000	17000	16000	
Antimony	2.7 U	3.2 U	2.6 U	3.4 U	2.6 U	7.3 U	2.9 U	
Arsenic	1.3	2.8 J	1.4 J	4.5 J	1.7 J	15 J	17 J	4.2
Beryllium	0.23	0.42	0.2	0.52	0.18	0.35	0.32	
Cadmium	0.039	0.079	0.04	0.082	0.044	0.3	0.18	
Chromium	9.7	13	11	11	8.9	11	13	
Copper	15	11	13	16	11	19	13	
Lead	5.2 U	6.5 U	5.5 U	6.6 U	5 U	17	22	8.3
Mercury	0.089 U	0.012	0.094 U	0.12 U	0.09 U	0.11 U	0.11 U	
Nickel	14	17	15	14	14	15	13	
Selenium	0.27 U	0.32 U	0.26 U	0.34 U	0.26 U	0.3	0.28 U	
Silver	0.31	0.58	0.4	0.51	0.35	1.2	0.4	
Thallium	0.27 U	0.32 U	0.26 U	0.34 U	0.26 U	0.3 U	0.28 U	
Zinc	21	31	23	29	19	34	24	

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	SA4-114-96	SA4-114-97	SA4-115-94	SA4-115-95	SA4-115-96	SA4-115-97	SA4-115-98	SA4-116-94
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	2.4	3.1	4.3	2.5 U	2.4 U	5.7	2.4 U	2.3 U
Beryllium								
Cadmium								
Chromium								
Copper								
Lead	4.7	5.4	8.2	5.2	5.1	6.2	5.7	5.1
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12	12
Sample ID	SA4-116-95	SA4-116-96	SA4-116-97	SA4-116-98	SA4-117-94	SA4-117-95	SA4-117-96	SA4-117-97
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	2.2 U	3	3 5	3 3	2 2 U	2.5 U	2.2 U	2.3 U
Beryllium								
Cadmium								
Chromium								
Copper								
Lead	5.1	5.3	5 5	7 3	4.7	5.3	4.4	4.9
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Table B.5-1
Area 12 - Works Magazine Landfill Soil Metals Results

Area	12	12	12	12	12	12	12
Sample ID	SA4-118-94	SA4-118-95	SA4-118-96	SA4-118-97	SA4-119-94	SA4-119-95	SA4-119-96
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)							
Aluminum							
Antimony							
Arsenic	2.4	2.3 U	2.4 U	2 U	2 U	2.2 U	2.6
Beryllium							
Cadmium							
Chromium							
Copper							
Lead	5.6	4.7	5	4.6	4.1	4.7	4.9
Mercury							
Nickel							
Selenium							
Silver							
Thallium							
Zinc							

Table B.5-2
Area 12 - Works Magazine Landfill Soil Explosives Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-1-B-501A-S-1	12-1-B-501A-S-2	12-1-B-501A-S-3	12-1-B-501A-S-4	12-1-B-501A-S-5	12-1-TP-501-S-2	12-1-TP-502-S-2-DAVG	12-1-TP-503-S-2-DAVG
Date Sampled	3/23/92	3/23/92	3/23/92	3/23/92	3/23/92	4/15/92	4/16/92	4/16/92
Depth	0 to 1	5 to 8	10 to 13	15 to 18	20 to 23	3 to 6	3 to 5	3 to 6
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene		0.033 U	0.032 U		0.032 U	0.033 U	0.032 U	0.032 U
1,3-Dinitrobenzene		0.044 U	0.043 U		0.043 U	0.044 U	0.042 U	0.042 U
2,4,6-Trinitrotoluene		0.0033 U	0.0032 U		0.0032 U	0.0033 U	0.0032 U	0.0032 U
2,4-Dinitrotoluene		0.0066 U	0.0064 U		0.0064 U	0.0066 U	0.0064 U	0.0063 U
2,6-Dinitrotoluene		0.0066 U	0.0064 U		0.0064 U	0.0066 UJ	0.0064 U	0.0063 U
Monomethylamine Nitrate	6 U	5.5 U	5.4 U	5.4 U	5.4 U	5.5 U	5.3 U	5.2 U
Nitrobenzene		0.065 U	0.064 U		0.064 U	0.065 UJ	0.063 U	0.063 U
Nitroglycerine		0.22 U	0.21 U		0.21 U		0.21 U	
DNT - Total		*0.0132 U*	*0.0128 U*		*0.0128 U*	*0.0132 U*	*0.0128 U*	*0.0126 U*

Area	12	12	12	12	12	12	12	12
Sample ID	12-1-TP-504-S-2	12-1-TP-6,S-1	12-1-TP-6,S-2	12-2-B-501-S-1	12-2-B-501-S-2A	12-2-B-501-S-2-DAVG	12-2-B-501-S-3A	12-2-B-501-S-4-DAVG
Date Sampled	4/15/92	4/24/87	4/24/87	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92
Depth	3 to 6	0 to 3	3 to 6	0 to 1	8 to 9.5	5 to 8	13 to 14.5	15 to 18
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U					0.035 U	0.032 U	
1,3-Dinitrobenzene	0.042 U					0.047 U	0.043 U	
2,4,6-Trinitrotoluene	0.0032 U					0.0035 U	0.0032 U	
2,4-Dinitrotoluene	0.0064 U				0.18 U	0.007 U	0.0065 U	
2,6-Dinitrotoluene	0.0064 UJ				0.18 U	0.007 U	0.0065 U	
Monomethylamine Nitrate	5.3 U	0.072	2900	5.8 U		66 J	5.4 U	5.4 U
Nitrobenzene	0.063 UJ				0.18 U	0.069 U	0.064 U	
Nitroglycerine	0.21 U					0.23 U	0.22 U	
DNT - Total	*0.0128 U*				*0.36 U*	*0.014 U*	*0.013 U*	

Table B.5-2
Area 12 - Works Magazine Landfill Soil Explosives Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-B-501-S-5	12-2-B-502-S-1-DAVG	12-2-B-502-S-2-DAVG	12-2-B-502-S-3	12-2-B-502-S-4	12-2-B-502-S-5-DAVG	12-2-OBTP-504-S-2	12-2-OBTP-505-S-2
Date Sampled	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92	4/16/92	4/16/92
Depth	20 to 23	0 to 1	5 to 8	10 to 12.3	15 to 18	20 to 23	2 to 4	2 to 4
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U		0.032 U	0.032 U		0.032 U	0.46 U	0.17 U
1,3-Dinitrobenzene	0.042 U		0.043 U	0.043 U		0.042 U	0.61 U	0.22 U
2,4,6-Trinitrotoluene	0.0032 U		0.0032 U	0.0032 U		0.0032 U	0.046 U	0.017 U
2,4-Dinitrotoluene	0.0064 U		0.0064 U	0.0064 U		0.0063 U	0.092 U	0.034 U
2,6-Dinitrotoluene	0.0064 U		0.0064 U	0.0064 U		0.0063 U	0.092 U	0.034 U
Monomethylamine Nitrate	5.3 U	5.3 U	5.4 U	5.4 U	5.3 U	5.3 U	7.6 U	5.6 U
Nitrobenzene	0.063 U		0.064 U	0.064 U		0.063 U	0.91 U	0.33 U
Nitroglycerine	0.21 U		0.21 U	0.21 U		0.21 U		
DNT - Total	*0.0128 U*		*0.0128 U*	*0.0128 U*		*0.0126 U*	*0.184 U*	*0.068 U*

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-OBTP-505-S-3	12-2-TP-10,S-1	12-2-TP-10,S-2	12-2-TP-501-S-2	12-2-TP-501-S-3	12-2-TP-502-S-2	12-2-TP-503-S-3-DAVG	12-2-TP-503-S-4
Date Sampled	4/16/92	4/23/87	4/23/87	4/15/92	4/16/92	4/14/92	4/14/92	4/13/92
Depth	5.5 to 6.5	0 to 3	3 to 6	3 to 6	8 to 10	3 to 6	8 to 10	4 to 6
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U			0.17 U	0.031 U	0.66 U	0.044 U	
1,3-Dinitrobenzene	0.042 U			0.23 U	0.042 U	0.89 U	0.058 U	
2,4,6-Trinitrotoluene	0.0032 U			0.017 U	0.0031 U	0.066 U	0.0044 U	
2,4-Dinitrotoluene	0.0063 U			0.035 U	0.0062 U	0.13 U	0.0088 U	0.19 U
2,6-Dinitrotoluene	0.0063 U			0.035 UJ	0.0062 U	0.13 UJ	0.0088 UJ	0.19 U
Monomethylamine Nitrate	5.3 U	0.054	0.84	5.7 U	5.1 U	5.4 U	8.8 U	5.8 U
Nitrobenzene	0.063 U			0.35 UJ	0.062 U	1.3 UJ	0.087 UJ	0.19 U
Nitroglycerine						0.22 U		
DNT - Total	*0.0126 U*			*0.07 U*	*0.0124 U*	*0.26 U*	*0.0176 U*	*0.38 U*

Table B.5-2
Area 12 - Works Magazine Landfill Soil Explosives Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-TP-504-S-2-DAVG	12-2-TP-505-S-1	12-2-TP-505-S-2-DAV(	12-2-TP-505-S-3	12-2-TP-506-S-2	12-2-TP-9,S-1	12-2-TP-9,S-2	12-3-TP-3,S-1
Date Sampled	4/15/92	4/13/92	4/15/92	4/15/92	4/16/92	4/24/87	4/24/87	4/27/87
Depth	3 to 6	0 to 1	3 to 6	9 to 10	3 to 6	0 to 3	3 to 6	0 to 3
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.031 U		0.034 U		0.036 U			
1,3-Dinitrobenzene	0.042 U		0.045 U		0.048 U			
2,4,6-Trinitrotoluene	0.0031 U		0.0034 U		0.0036 U			
2,4-Dinitrotoluene	0.0063 U	0.18 U	0.0068 U	0.18 U	0.0073 U			
2,6-Dinitrotoluene	0.0063 UJ	0.18 U	0.0068 UJ	0.18 U	0.0073 U			
Monomethylamine Nitrate	5.2 U		5.7 U		6.1 U	1000	390	1.7
Nitrobenzene	0.062 UJ	0.18 U	0.067 UJ	0.18 U	0.072 U			
Nitroglycerine	0.21 U							
DNT - Total	*0.0126 U*	*0.36 U*	*0.0136 U*	*0.36 U*	*0.0146 U*			

Area	12	12	12	12	12	12	12	12
Sample ID	12-3-TP-3,S-2	12-3-TP-501-S-2-DAVG	12-3-TP-501-S-3	12-3-TP-502-S-2	12-3-TP-502-S-3	12-3-TP-503-S-2	12-3-TP-503-S-3	12-4-TP-2,S-1
Date Sampled	4/27/87	4/16/92	4/16/92	4/16/92	4/16/92	4/16/92	4/16/92	11/11/86
Depth	3 to 6	2 to 4	8 to 10	2 to 4	4 to 6	3 to 6	8 to 10	0 to 3
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene		0.19 U	0.032 U	0.035 U	0.036 U	0.036 U	0.032 U	
1,3-Dinitrobenzene		0.25 U	0.042 U	0.046 U	0.048 U	0.048 U	0.043 U	
2,4,6-Trinitrotoluene		0.019 U	0.0032 U	0.0035 U	0.0036 U	0.0036 U	0.0032 U	0.18 U
2,4-Dinitrotoluene		0.038 U	0.0064 U	0.0069 U	0.0072 U	0.0072 U	0.0065 U	0.18 U
2,6-Dinitrotoluene		0.038 U	0.0064 U	0.0069 U	0.0072 U	0.0072 U	0.0065 U	0.18 U
Monomethylamine Nitrate	210	*160 J*	*5.2 U*	*5.8 U*	*6 U*	*6 U*	*5.4 U*	
Nitrobenzene		0.38 U	0.063 U	0.069 U	0.072 U	0.071 U	0.064 U	
Nitroglycerine								0.36 U
DNT - Total		*0.076 U*	*0.0128 U*	*0.0138 U*	*0.0144 U*	*0.0144 U*	*0.013 U*	*0.36 U*

Table B.5-2
Area 12 - Works Magazine Landfill Soil Explosives Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-4-TP-501-S-2	12-5-TP-3,S-1	12-5-TP-3,S-2	12-5-TP-501-S-2	12-5-TP-501-S-3	12-5-TP-502-S-2-DAV	12-5-TP-502-S-3-DAVG	12-5-TP-503-S-2
Date Sampled	4/16/92	4/27/87	4/27/87	4/17/92	4/17/92	4/17/92	4/17/92	4/17/92
Depth	3 to 6	0 to 3	3 to 6	3 to 6	3 to 6	3 to 5.5	8 to 10	2 to 4
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.031 U			0.035 U	0.032 U	0.18 U	0.032 U	0.041 U
1,3-Dinitrobenzene	0.042 U			0.046 U	0.043 U	0.25 U	0.042 U	0.055 U
2,4,6-Trinitrotoluene	0.0031 U			0.0035 U	0.0032 U	0.018 U	0.0032 U	0.0041 U
2,4-Dinitrotoluene	0.0063 U			0.0069 U	0.0064 U	0.037 U	0.0064 U	0.0082 U
2,6-Dinitrotoluene	0.0063 U			0.0069 U	0.0064 U	0.037 U	0.0064 U	0.0082 U
Monomethylamine Nitrate	5.2 U	0.042	0.051 J	5.8 U	5.4 U	6.1 U	5.3 U	6.9 U
Nitrobenzene	0.062 U			0.069 U	0.064 U	0.37 U	0.063 U	0.081 U
Nitroglycerine				0.23 U		0.25 U		
DNT - Total	*0.0126 U*			*0.0138 U*	*0.0128 U*	*0.074 U*	*0.0128 U*	*0.0164 U*

Area	12	12	12	12	12	12	12	12
Sample ID	12-5-TP-503-S-3	12-5-TP-503-S-4	12-6-B-501-S-1	12-6-B-501-S-2	12-6-B-501-S-3	12-6-B-501-S-5	12-6-TP-3,S-1	12-6-TP-3,S-2-DAVG
Date Sampled	4/17/92	4/17/92	3/25/92	3/25/92	3/25/92	3/25/92	4/27/87	4/27/87
Depth	4 to 6	8 to 10	0 to 1	5 to 8	10 to 13	20 to 23	0 to 3	3 to 6
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U	0.032 U		0.032 U	0.032 U	0.035 U		
1,3-Dinitrobenzene	0.043 U	0.042 U		0.042 U	0.042 U	0.047 U		
2,4,6-Trinitrotoluene	0.0032 U	0.0032 U		0.0032 U	0.0032 U	0.0035 U		
2,4-Dinitrotoluene	0.0064 U	0.0063 U		0.0063 U	0.0063 U	0.0071 U		
2,6-Dinitrotoluene	0.0064 U	0.0063 U		0.0063 U	0.0063 U	0.0071 U		
Monomethylamine Nitrate	5.4 U	5.3 U	6.8 U	5.3 U	5.3 U	5.9 U	3600	30000
Nitrobenzene	0.063 U	0.063 U		0.063 U	0.063 U	0.07 U		
Nitroglycerine				0.21 U	0.21 U	0.24 U		
DNT - Total	*0.0128 U*	*0.0126 U*		*0.0126 U*	*0.0126 U*	*0.0142 U*		

Table B.5-2
Area 12 - Works Magazine Landfill Soil Explosives Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-6-TP-501-S-1	12-6-TP-501-S-2	12-6-TP-501-S-3	12-6-TP-502-S-1	12-6-TP-502-S-2	12-6-TP-502-S-3	12-7-B-501-S-1	12-7-B-501-S-2
Date Sampled	4/17/92	4/17/92	4/17/92	4/17/92	4/17/92	4/17/92	3/25/92	3/25/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	5 to 8
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene		0.032 U	0.032 U		0.037 U	0.032 U		0.032 U
1,3-Dinitrobenzene		0.042 U	0.042 U		0.05 U	0.043 U		0.043 U
2,4,6-Trinitrotoluene		0.0032 U	0.0032 U		0.0037 U	0.0032 U		0.0032 U
2,4-Dinitrotoluene		0.0063 U	0.0063 U		0.0075 U	0.0065 U		0.0064 U
2,6-Dinitrotoluene		0.0063 U	0.0063 U		0.0075 U	0.0065 U		0.0064 U
Monomethylamine Nitrate	7.1 U	5.3 U	5.3 U	5.7 U	77	5.4 U	5.9 U	5.4 U
Nitrobenzene		0.063 U	0.063 U		0.074 U	0.064 U		0.064 U
Nitroglycerine		0.21 U			0.25 U	0.21 U		0.21 U
DNT - Total		*0.0126 U*	*0.0126 U*		*0.015 U*	*0.013 U*		*0.0128 U*

Area	12	12	12	12	12	12	12	12
Sample ID	12-7-B-501-S-3	12-7-B-501-S-4	12-7-B-501-S-5	12-7-TP-501-S-1-DAVG	12-7-TP-501-S-2	12-7-TP-501-S-3	12-TP-501-S-1-DAVG	12-TP-501-S-2-DAVG
Date Sampled	3/25/92	3/25/92	3/25/92	4/16/92	4/17/92	4/17/92	4/16/92	4/16/92
Depth	10 to 13	15 to 18	20 to 22.4	0 to 1	3 to 6	8 to 10	0 to 1	3 to 4.5
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U	0.034 U	0.032 U		0.031 U	0.032 U	0.036 U	0.039 U
1,3-Dinitrobenzene	0.043 U	0.045 U	0.043 U		0.041 U	0.042 U	0.048 U	0.052 U
2,4,6-Trinitrotoluene	0.0032 U	0.0034 U	0.0032 U		0.0031 U	0.0032 U	0.0036 U	0.0039 U
2,4-Dinitrotoluene	0.0064 U	0.0068 U	0.0064 U		0.0061 U	0.0063 U	0.0071 U	0.0078 U
2,6-Dinitrotoluene	0.0064 U	0.0068 U	0.0064 U		0.0061 U	0.0063 U	0.0071 U	0.0078 U
Monomethylamine Nitrate	5.3 U		5.4 U	6.8 U	5.1 U	5.1 U	6 U	6.4 U
Nitrobenzene	0.064 U	0.067 U	0.064 U		0.061 U	0.062 U	0.071 U	0.077 U
Nitroglycerine	0.21 U	0.23 U	0.21 U		0.21 U	0.21 U		0.26 U
DNT - Total	*0.0128 U*	*0.0136 U*	*0.0128 U*		*0.0122 U*	*0.0126 U*	*0.0142 U*	*0.0156 U*

Table B.5-2
Area 12 - Works Magazine Landfill Soil Explosives Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-TP-501-S-3	12-TP-502-S-1-DAVG	12-TP-502-S-2-DAVG	12-TP-502-S-3	12-TP-503-S-1	12-TP-503-S-2	12-TP-503-S-3	12-TP-504-S-1-DAVG
Date Sampled	4/16/92	4/16/92	4/17/92	4/16/92	4/16/92	4/16/92	4/16/92	4/17/92
Depth	9 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene		0.037 U	0.031 U		0.039 U	0.031 U		0.041 U
1,3-Dinitrobenzene		0.049 U	0.042 U		0.052 U	0.042 U		0.055 U
2,4,6-Trinitrotoluene		0.0037 U	0.0031 U		0.0039 U	0.0031 U		0.0041 U
2,4-Dinitrotoluene		0.0073 U	0.0063 U		0.0077 U	0.0063 U		0.0082 U
2,6-Dinitrotoluene		0.0073 U	0.0063 U		0.0077 U	0.0063 U		0.0082 U
Monomethylamine Nitrate	5.3 U	6.1 U	5.3 U	5.3 U	6.4 U	5.3 U	5.4 U	6.1 U
Nitrobenzene		0.073 U	0.062 U		0.077 U	0.062 U		0.082 U
Nitroglycerine			0.21 U		0.26 U			
DNT - Total		*0.0146 U*	*0.0126 U*		*0.0154 U*	*0.0126 U*		*0.0164 U*

Area	12	12	12	12	12
Sample ID	12-TP-504-S-2-DAVG	12-TP-504-S-3	12-TP-505-S-1-DAVG	12-TP-505-S-2-DAVG	12-TP-505-S-3
Date Sampled	4/17/92	4/17/92	4/17/92	4/17/92	4/17/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
Explosives (mg/kg dry)					
1,3,5-Trinitrobenzene	0.031 U		0.038 U	0.039 U	
1,3-Dinitrobenzene	0.042 U		0.051 U	0.052 U	
2,4,6-Trinitrotoluene	0.0031 U		0.0038 U	0.0039 U	
2,4-Dinitrotoluene	0.0062 U		0.0076 U	0.0077 U	
2,6-Dinitrotoluene	0.0062 U		0.0076 U	0.0077 U	
Monomethylamine Nitrate	5.2 U	5.2 U	6.4 U	6.5 U	5.6 U
Nitrobenzene	0.062 U		0.075 U	0.077 U	
Nitroglycerine	0.21 U			0.26 U	
DNT - Total	*0.0124 U*		*0.0152 U*	*0.0154 U*	

Table B.5-3
Area 12 - Works Magazine Landfill Soil SVOC Results

Area	12	12	12	12
Sample ID	12-1-B-501A-S-2	12-1-TP-502-S-2-DAVG	12-2-B-501-S-2A	12-2-B-502-S-2-DAVG
Date Sampled	3/23/92	4/16/92	3/24/92	3/24/92
Depth	5 to 8	3 to 5	8 to 9.5	5 to 8
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	0.19 U	0.18 U	0.18 U	3.7 U
1,2-Dichlorobenzene	0.19 U	0.18 U	0.18 U	3.7 U
1,3-Dichlorobenzene	0.19 U	0.18 U	0.18 U	3.7 U
1,4-Dichlorobenzene	0.19 U	0.18 U	0.18 U	3.7 U
2,4,5-Trichlorophenol	0.94 U	0.88 U	0.9 U	19 U
2,4,6-Trichlorophenol	0.19 U	0.18 U	0.18 U	3.7 U
2,4-Dichlorophenol	0.19 U	0.18 U	0.18 U	3.7 U
2,4-Dimethylphenol	0.19 U	0.18 U	0.18 U	3.7 U
2,4-Dinitrophenol	0.94 U	0.88 U	0.9 U	19 U
2-Chloronaphthalene	0.19 U	0.18 U	0.18 U	3.7 U
2-Chlorophenol	0.19 U	0.18 U	0.18 U	3.7 U
2-Methylphenol	0.19 U	0.18 U	0.18 U	3.7 U
2-Nitroaniline	0.94 U	0.88 U	0.9 U	19 U
2-Nitrophenol	0.19 U	0.18 U	0.18 U	3.7 U
3,3'-Dichlorobenzidine	0.37 U	0.35 U	0.36 U	7.5 U
3-Nitroaniline	0.94 U	0.88 U	0.9 U	19 U
4,6-Dinitro-2-Methylphenol	0.94 U	0.88 U	0.9 U	19 U
4-Bromophenyl Phenyl Ether	0.19 U	0.18 U	0.18 U	3.7 U
4-Chloroaniline	0.19 U	0.18 U	0.18 U	3.7 U
4-Chlorophenyl-Phenylether	0.19 U	0.18 U	0.18 U	3.7 U
4-Methylphenol	0.19 U	0.18 U	0.18 U	3.7 U
4-Nitroaniline	0.94 U	0.88 U	0.9 U	19 U
4-Nitrophenol	0.94 U	0.88 U	0.9 U	19 U
Aniline	0.19 U	0.18 U	0.18 U	3.7 U
Benzidine		1.8 U		37 U
Benzoic Acid	0.94 U	0.88 U	0.9 U	19 U
Benzyl Alcohol	0.19 U	0.18 U	0.18 U	3.7 U
Bis(2-Chloroethoxy) Methane	0.19 U	0.18 U	0.18 U	3.7 U
Bis(2-Chloroethyl) Ether	0.19 U	0.18 U	0.18 U	3.7 U
Bis(2-Chloroisopropyl) Ether	0.19 U	0.18 U	0.18 U	3.7 U
Bis(2-Ethylhexyl)Phthalate	0.044 J	0.05 J	0.18 U	3.7 U
Butylbenzylphthalate	0.19 U	0.18 U	0.18 U	3.7 U
Di-N-Butylphthalate	0.19 U	1 U	0.18 U	3.7 U
Di-N-Octylphthalate	0.18 J	0.18 U	0.16 J	3.7 U
Dibenzofuran	0.19 U	0.18 U	0.18 U	3.7 U
Diethylphthalate	0.19 U	0.18 U	0.18 U	3.7 U
Dimethylphthalate	0.19 U	0.18 U	0.18 U	3.7 U
Hexachlorobenzene	0.19 U	0.18 U	0.18 U	3.7 U
Hexachlorobutadiene	0.19 U	0.18 U	0.18 U	3.7 U
Hexachlorocyclopentadiene	0.19 U	0.18 U	0.18 U	3.7 U
Hexachloroethane	0.19 U	0.18 U	0.18 U	3.7 U
Isophorone	0.19 U	0.18 U	0.18 U	3.7 U
N-Nitroso-Di-Phenylamine	0.19 U	0.18 U	0.18 U	3.7 U
N-Nitroso-Di-Propylamine	0.19 U	0.18 U	0.18 U	3.7 U
N-Nitroso-Dimethylamine	0.19 U	0.18 U	0.18 U	3.7 U
Pentachlorophenol	0.19 U	0.18 U	0.18 U	3.7 U
Phenol	0.19 U	0.18 U	0.18 U	3.7 U

Table B.5-3
Area 12 - Works Magazine Landfill Soil SVOC Results

Area	12	12	12	12
Sample ID	12-2-TP-501-S-3	12-2-TP-503-S-4	12-2-TP-505-S-1	12-2-TP-505-S-2-DAVG
Date Sampled	4/16/92	4/13/92	4/13/92	4/15/92
Depth	8 to 10	4 to 6	0 to 1	3 to 6
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	0.17 U	0.19 U	0.18 U	0.18 U
1,2-Dichlorobenzene	0.17 U	0.19 U	0.18 U	0.18 U
1,3-Dichlorobenzene	0.17 U	0.19 U	0.18 U	0.18 U
1,4-Dichlorobenzene	0.17 U	0.19 U	0.18 U	0.18 U
2,4,5-Trichlorophenol	0.86 U	0.97 U	0.92 U	0.92 U
2,4,6-Trichlorophenol	0.17 U	0.19 U	0.18 U	0.18 U
2,4-Dichlorophenol	0.17 U	0.19 U	0.18 U	0.18 U
2,4-Dimethylphenol	0.17 U	0.19 U	0.18 U	0.18 U
2,4-Dinitrophenol	0.86 U	0.97 U	0.92 U	0.92 U
2-Chloronaphthalene	0.17 U	0.19 U	0.18 U	0.18 U
2-Chlorophenol	0.17 U	0.19 U	0.18 U	0.18 U
2-Methylphenol	0.17 U	0.19 U	0.18 U	0.18 U
2-Nitroaniline	0.86 U	0.97 U	0.92 U	0.92 U
2-Nitrophenol	0.17 U	0.19 U	0.18 U	0.18 U
3,3'-Dichlorobenzidine	0.34 U	0.39 U	0.37 U	0.37 U
3-Nitroaniline	0.86 U	0.97 U	0.92 U	0.92 U
4,6-Dinitro-2-Methylphenol	0.86 U	0.97 U	0.92 U	0.92 U
4-Bromophenyl Phenyl Ether	0.17 U	0.19 U	0.18 U	0.18 U
4-Chloroaniline	0.17 U	0.19 U	0.18 U	0.18 U
4-Chlorophenyl-Phenylether	0.17 U	0.19 U	0.18 U	0.18 U
4-Methylphenol	0.17 U	0.19 U	0.18 U	0.18 U
4-Nitroaniline	0.86 U	0.97 U	0.92 U	0.92 U
4-Nitrophenol	0.86 U	0.97 U	0.92 U	0.92 U
Aniline	0.17 U	0.19 U	0.18 U	0.18 U
Benzidine	1.7 U	1.9 U	1.8 U	1.8 U
Benzoic Acid	0.86 U	0.97 U	0.92 U	0.92 U
Benzyl Alcohol	0.17 U	0.19 U	0.18 U	0.18 U
Bis(2-Chloroethoxy) Methane	0.17 U	0.19 U	0.18 U	0.18 U
Bis(2-Chloroethyl) Ether	0.17 U	0.19 U	0.18 U	0.18 U
Bis(2-Chloroisopropyl) Ether	0.17 U	0.19 U	0.18 U	0.18 U
Bis(2-Ethylhexyl)Phthalate	0.17 U	0.093 J	0.18 U	0.18 U
Butylbenzylphthalate	0.17 U	0.19 U	0.18 U	0.18 U
Di-N-Butylphthalate	1.3 U	0.4 U	0.44 U	1.3 U
Di-N-Octylphthalate	0.17 U	0.19 U	0.18 U	0.18 U
Dibenzofuran	0.17 U	0.19 U	0.18 U	0.18 U
Diethylphthalate	0.17 U	0.19 U	0.18 U	0.18 U
Dimethylphthalate	0.17 U	0.19 U	0.18 U	0.18 U
Hexachlorobenzene	0.17 U	0.19 U	0.18 U	0.18 U
Hexachlorobutadiene	0.17 U	0.19 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	0.17 U	0.19 U	0.18 U	0.18 U
Hexachloroethane	0.17 U	0.19 U	0.18 U	0.18 U
Isophorone	0.17 U	0.19 U	0.18 U	0.18 U
N-Nitroso-Di-Phenylamine	0.17 U	0.19 U	0.18 U	0.18 U
N-Nitroso-Di-Propylamine	0.17 U	0.19 U	0.18 U	0.18 U
N-Nitroso-Dimethylamine	0.17 U	0.19 U	0.18 U	0.18 U
Pentachlorophenol	0.17 U	0.19 U	0.18 U	0.18 U
Phenol	0.17 U	0.19 U	0.18 U	0.18 U

Table B.5-3
Area 12 - Works Magazine Landfill Soil SVOC Results

Area	12	12	12	12
Sample ID	12-2-TP-505-S-3	12-3-TP-501-S-2-DAVG	12-5-TP-502-S-2-DAVG	12-6-TP-502-S-2
Date Sampled	4/15/92	4/16/92	4/17/92	4/17/92
Depth	9 to 10	2 to 4	3 to 5.5	3 to 6
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	0.18 U	0.21 U	33 U	0.2 U
1,2-Dichlorobenzene	0.18 U	0.21 U	33 U	0.2 U
1,3-Dichlorobenzene	0.18 U	0.21 U	33 U	0.2 U
1,4-Dichlorobenzene	0.18 U	0.21 U	33 U	0.2 U
2,4,5-Trichlorophenol	0.88 U	1.1 U	160 U	1 U
2,4,6-Trichlorophenol	0.18 U	0.21 U	33 U	0.2 U
2,4-Dichlorophenol	0.18 U	0.21 U	33 U	0.2 U
2,4-Dimethylphenol	0.18 U	0.21 U	33 U	0.2 U
2,4-Dinitrophenol	0.88 U	1.1 U	160 U	1 U
2-Chloronaphthalene	0.18 U	0.21 U	33 U	0.2 U
2-Chlorophenol	0.18 U	0.21 U	33 U	0.2 U
2-Methylphenol	0.18 U	0.21 U	33 U	0.2 U
2-Nitroaniline	0.88 U	1.1 U	160 U	1 U
2-Nitrophenol	0.18 U	0.21 U	33 U	0.2 U
3,3'-Dichlorobenzidine	0.35 U	0.43 U	66 U	0.4 U
3-Nitroaniline	0.88 U	1.1 U	160 U	1 U
4,6-Dinitro-2-Methylphenol	0.88 U	1.1 U	160 U	1 U
4-Bromophenyl Phenyl Ether	0.18 U	0.21 U	33 U	0.2 U
4-Chloroaniline	0.18 U	0.21 U	33 U	0.2 U
4-Chlorophenyl-Phenylether	0.18 U	0.21 U	33 U	0.2 U
4-Methylphenol	0.18 U	0.21 U	33 U	0.2 U
4-Nitroaniline	0.88 U	1.1 U	160 U	1 U
4-Nitrophenol	0.88 U	1.1 U	160 U	1 U
Aniline	0.18 U	0.21 U	33 U	0.2 U
Benzidine	1.8 U	2.1 U	330 U	2 U
Benzoic Acid	0.88 U	0.078 J	160 U	1 U
Benzyl Alcohol	0.18 U	0.21 U	33 U	0.2 U
Bis(2-Chloroethoxy) Methane	0.18 U	0.21 U	33 U	0.2 U
Bis(2-Chloroethyl) Ether	0.18 U	0.21 U	33 U	0.2 U
Bis(2-Chloroisopropyl) Ether	0.18 U	0.21 U	33 U	0.2 U
Bis(2-Ethylhexyl)Phthalate	0.18 U	0.21 U	33 U	0.2 U
Butylbenzylphthalate	0.18 U	0.26	33 U	0.2 U
Di-N-Butylphthalate	0.74 U	2.3 U	33 U	1.3 U
Di-N-Octylphthalate	0.18 U	0.21 U	33 U	0.2 U
Dibenzofuran	0.18 U	0.21 U	33 U	0.2 U
Diethylphthalate	0.18 U	0.21 U	33 U	0.2 U
Dimethylphthalate	0.18 U	0.21 U	33 U	0.2 U
Hexachlorobenzene	0.18 U	0.21 U	33 U	0.2 U
Hexachlorobutadiene	0.18 U	0.21 U	33 U	0.2 U
Hexachlorocyclopentadiene	0.18 U	0.21 U	33 U	0.2 U
Hexachloroethane	0.18 U	0.21 U	33 U	0.2 U
Isophorone	0.18 U	0.21 U	33 U	0.2 U
N-Nitroso-Di-Phenylamine	0.18 U	0.21 U	33 U	0.2 U
N-Nitroso-Di-Propylamine	0.18 U	0.21 U	33 U	0.2 U
N-Nitroso-Dimethylamine	0.18 U	0.21 U	33 U	0.2 U
Pentachlorophenol	0.18 U	0.21 U	33 U	0.2 U
Phenol	0.18 U	0.21 U	33 U	0.2 U

Table B.5-3
Area 12 - Works Magazine Landfill Soil SVOC Results

Area	12	12	12	12
Sample ID	12-7-B-501-S-2	12-TP-501-S-2-DAVG	12-TP-502-S-2-DAVG	12-TP-503-S-2
Date Sampled	3/25/92	4/16/92	4/17/92	4/16/92
Depth	5 to 8	3 to 4.5	3 to 6	3 to 6
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	0.71 U	0.21 U	0.17 U	0.18 U
1,2-Dichlorobenzene	0.71 U	0.21 U	0.17 U	0.18 U
1,3-Dichlorobenzene	0.71 U	0.21 U	0.17 U	0.18 U
1,4-Dichlorobenzene	0.71 U	0.21 U	0.17 U	0.18 U
2,4,5-Trichlorophenol	3.5 U	1 U	0.87 U	0.89 U
2,4,6-Trichlorophenol	0.71 U	0.21 U	0.17 U	0.18 U
2,4-Dichlorophenol	0.71 U	0.21 U	0.17 U	0.18 U
2,4-Dimethylphenol	0.71 U	0.21 U	0.17 U	0.18 U
2,4-Dinitrophenol	3.5 U	1 U	0.87 U	0.89 U
2-Chloronaphthalene	0.71 U	0.21 U	0.17 U	0.18 U
2-Chlorophenol	0.71 U	0.21 U	0.17 U	0.18 U
2-Methylphenol	0.71 U	0.21 U	0.17 U	0.18 U
2-Nitroaniline	3.5 U	1 U	0.87 U	0.89 U
2-Nitrophenol	0.71 U	0.21 U	0.17 U	0.18 U
3,3'-Dichlorobenzidine	1.4 U	0.42 U	0.35 U	0.36 U
3-Nitroaniline	3.5 U	1 U	0.87 U	0.89 U
4,6-Dinitro-2-Methylphenol	3.5 U	1 U	0.87 U	0.89 U
4-Bromophenyl Phenyl Ether	0.71 U	0.21 U	0.17 U	0.18 U
4-Chloroaniline	0.71 U	0.21 U	0.17 U	0.18 U
4-Chlorophenyl-Phenylether	0.71 U	0.21 U	0.17 U	0.18 U
4-Methylphenol	0.71 U	0.21 U	0.17 U	0.18 U
4-Nitroaniline	3.5 U	1 U	0.87 U	0.89 U
4-Nitrophenol	3.5 U	1 U	0.87 U	0.89 U
Aniline	0.71 U	0.21 U	0.17 U	0.18 U
Benzidine	7.1 U	2.1 U	1.7 U	1.8 U
Benzoic Acid	3.5 U	1 U	0.87 U	0.89 U
Benzyl Alcohol	0.71 U	0.21 U	0.17 U	0.18 U
Bis(2-Chloroethoxy) Methane	0.71 U	0.21 U	0.17 U	0.18 U
Bis(2-Chloroethyl) Ether	0.71 U	0.21 U	0.17 U	0.18 U
Bis(2-Chloroisopropyl) Ether	0.71 U	0.21 U	0.17 U	0.18 U
Bis(2-Ethylhexyl)Phthalate	0.71 U	0.077 J	0.17 U	0.18 U
Butylbenzylphthalate	0.71 U	0.21 U	0.048 J	0.081 J
Di-N-Butylphthalate	0.71 U	2.1 U	1.4 U	2.1 U
Di-N-Octylphthalate	0.71 U	0.21 U	0.17 U	0.18 U
Dibenzofuran	0.71 U	0.21 U	0.17 U	0.18 U
Diethylphthalate	0.71 U	0.21 U	0.17 U	0.18 U
Dimethylphthalate	0.71 U	0.21 U	0.17 U	0.18 U
Hexachlorobenzene	0.71 U	0.21 U	0.17 U	0.18 U
Hexachlorobutadiene	0.71 U	0.21 U	0.17 U	0.18 U
Hexachlorocyclopentadiene	0.71 U	0.21 U	0.17 U	0.18 U
Hexachloroethane	0.71 U	0.21 U	0.17 U	0.18 U
Isophorone	0.71 U	0.21 U	0.17 U	0.18 U
N-Nitroso-Di-Phenylamine	0.71 U	0.21 U	0.17 U	0.18 U
N-Nitroso-Di-Propylamine	0.71 U	0.21 U	0.17 U	0.18 U
N-Nitroso-Dimethylamine	0.71 U	0.21 U	0.17 U	0.18 U
Pentachlorophenol	0.71 U	0.21 U	0.17 U	0.18 U
Phenol	0.71 U	0.21 U	0.17 U	0.18 U

Table B.5-3
Area 12 - Works Magazine Landfill Soil SVOC Results

Area	12	12
Sample ID	12-TP-504-S-2-DAVG	12-TP-505-S-2-DAVG
Date Sampled	4/17/92	4/17/92
Depth	3 to 6	3 to 6
Semivolatiles (mg/kg dry)		
1,2,4-Trichlorobenzene	0.18 U	0.21 U
1,2-Dichlorobenzene	0.18 U	0.21 U
1,3-Dichlorobenzene	0.18 U	0.21 U
1,4-Dichlorobenzene	0.18 U	0.21 U
2,4,5-Trichlorophenol	0.88 U	1 U
2,4,6-Trichlorophenol	0.18 U	0.21 U
2,4-Dichlorophenol	0.18 U	0.21 U
2,4-Dimethylphenol	0.18 U	0.21 U
2,4-Dinitrophenol	0.88 U	1 U
2-Chloronaphthalene	0.18 U	0.21 U
2-Chlorophenol	0.18 U	0.21 U
2-Methylphenol	0.18 U	0.21 U
2-Nitroaniline	0.88 U	1 U
2-Nitrophenol	0.18 U	0.21 U
3,3'-Dichlorobenzidine	0.35 U	0.41 U
3-Nitroaniline	0.88 U	1 U
4,6-Dinitro-2-Methylphenol	0.88 U	1 U
4-Bromophenyl Phenyl Ether	0.18 U	0.21 U
4-Chloroaniline	0.18 U	0.21 U
4-Chlorophenyl-Phenylether	0.18 U	0.21 U
4-Methylphenol	0.18 U	0.21 U
4-Nitroaniline	0.88 U	1 U
4-Nitrophenol	0.88 U	1 U
Aniline	0.18 U	0.21 U
Benzidine	1.8 U	2.1 U
Benzoic Acid	0.88 U	1 U
Benzyl Alcohol	0.18 U	0.21 U
Bis(2-Chloroethoxy) Methane	0.18 U	0.21 U
Bis(2-Chloroethyl) Ether	0.18 U	0.21 U
Bis(2-Chloroisopropyl) Ether	0.18 U	0.21 U
Bis(2-Ethylhexyl)Phthalate	0.18 U	0.07 J
Butylbenzylphthalate	0.18 U	0.21 U
Di-N-Butylphthalate	1.7 U	2.1 U
Di-N-Octylphthalate	0.18 U	0.21 U
Dibenzofuran	0.18 U	0.21 U
Diethylphthalate	0.18 U	0.21 U
Dimethylphthalate	0.18 U	0.21 U
Hexachlorobenzene	0.18 U	0.21 U
Hexachlorobutadiene	0.18 U	0.21 U
Hexachlorocyclopentadiene	0.18 U	0.21 U
Hexachloroethane	0.18 U	0.21 U
Isophorone	0.18 U	0.21 U
N-Nitroso-Di-Phenylamine	0.18 U	0.21 U
N-Nitroso-Di-Propylamine	0.18 U	0.21 U
N-Nitroso-Dimethylamine	0.18 U	0.21 U
Pentachlorophenol	0.18 U	0.21 U
Phenol	0.18 U	0.21 U

Table B.5-4
Area 12 - Works Magazine Landfill Soil PAH Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-1-B-501A-S-2	12-1-B-501A-S-5	12-1-TP-502-S-2-DAVG	12-2-B-501-S-2A	12-2-B-501-S-2-DAVG	12-2-B-501-S-5	12-2-B-502-S-2-DAVG	12-2-B-502-S-5-DAVG
Date Sampled	3/23/92	3/23/92	4/16/92	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92
Depth	5 to 8	20 to 23	3 to 5	8 to 9.5	5 to 8	20 to 23	5 to 8	20 to 23
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Benzo(a)Pyrene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Benzo(b)Fluoranthene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Benzo(k)Fluoranthene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Chrysene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Dibenz(a,h)anthracene	0.037 U	0.037 U	0.036 U	0.18 U	0.04 U	0.036 U	0.044 U	0.036 U
Indeno(1,2,3-cd)pyrene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Total Carcinogenic PAHs (BaP TEQs)	*0.060598 U*	*0.060598 U*	*0.059598 U*	*0.41598 U*	*0.064909 U*	*0.059598 U*	*0.071531 U*	*0.059598 U*
2-Methylnaphthalene	0.19 U		0.18 U	0.18 U			3.7 U	
Acenaphthene	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.21 U	0.18 U
Acenaphthylene	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.21 U	0.18 U
Anthracene	0.0091 U	0.0089 U	0.0088 U	0.18 U	0.0097 U	0.0088 U	0.0107 U	0.0088 U
Benzo(g,h,i)Perylene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Fluoranthene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Fluorene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Naphthalene	0.091 U	0.089 U	0.088 U	0.18 U	0.097 U	0.088 U	0.107 U	0.088 U
Phenanthrene	0.0091 U	0.0089 U	0.0088 U	0.18 U	0.0097 U	0.0088 U	0.0107 U	0.0088 U
Pyrene	0.018 U	0.018 U	0.018 U	0.18 U	0.019 U	0.018 U	0.021 U	0.018 U
Total Non-carcinogenic PAHs	*0.7312 U*	*0.5388 U*	*0.7176 U*	*1.8 U*	*0.5724 U*	*0.5376 U*	*4.3324 U*	*0.5376 U*

Table B.5-4
Area 12 - Works Magazine Landfill Soil PAH Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-TP-501-S-3	12-2-TP-503-S-4	12-2-TP-505-S-1	12-2-TP-505-S-2-DAVG	12-2-TP-505-S-3	12-3-TP-501-S-2-DAVG	12-5-TP-502-S-2-DAVG	12-5-TP-502-S-3-DAVG
Date Sampled	4/16/92	4/13/92	4/13/92	4/15/92	4/15/92	4/16/92	4/17/92	4/17/92
Depth	8 to 10	4 to 6	0 to 1	3 to 6	9 to 10	2 to 4	3 to 5.5	8 to 10
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Benzo(a)Pyrene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Benzo(b)Fluoranthene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Benzo(k)Fluoranthene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Chrysene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Dibenz(a,h)anthracene	0.17 U	0.04 U	0.038 U	0.039 U	0.037 U	0.21 U	0.16 U	0.036 U
Indeno(1,2,3-cd)pyrene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Total Carcinogenic PAHs (BaP TEQs)	*0.39287 U*	*0.06622 U*	*0.062909 U*	*0.063909 U*	*0.060598 U*	*0.48531 U*	*0.260947 U*	*0.059598 U*
2-Methylnaphthalene	0.17 U	0.19 U	0.18 U	0.18 U	0.18 U	0.21 U	33 U	
Acenaphthene	0.17 U	0.2 U	0.19 U	0.19 U	0.18 U	0.21 U	0.77 U	0.18 U
Acenaphthylene	0.17 U	0.2 U	0.19 U	0.19 U	0.18 U	0.21 U	0.77 U	0.18 U
Anthracene	0.17 U	0.0098 U	0.0094 U	0.0095 U	0.0089 U	0.21 U	0.038 U	0.0088 U
Benzo(g,h,i)Perylene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Fluoranthene	0.17 U	0.039 J	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Fluorene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Naphthalene	0.17 U	0.098 U	0.094 U	0.095 U	0.089 U	0.21 U	0.4	0.088 U
Phenanthrene	0.17 U	0.0098 U	0.0094 U	0.0095 U	0.0089 U	0.078 J	0.038 U	0.0088 U
Pyrene	0.17 U	0.02 U	0.019 U	0.019 U	0.018 U	0.21 U	0.077 U	0.018 U
Total Non-carcinogenic PAHs	*1.7 U*	*0.4228*	*0.7488 U*	*0.75 U*	*0.7188 U*	*1.023*	*17.862*	*0.5376 U*

Table B.5-4
Area 12 - Works Magazine Landfill Soil PAH Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-6-B-501-S-3	12-6-TP-502-S-2	12-6-TP-502-S-3	12-7-B-501-S-2	12-7-B-501-S-3	12-7-TP-501-S-3	12-TP-501-S-2-DAVG	12-TP-502-S-2-DAVG
Date Sampled	3/25/92	4/17/92	4/17/92	3/25/92	3/25/92	4/17/92	4/16/92	4/17/92
Depth	10 to 13	3 to 6	8 to 10	5 to 8	10 to 13	8 to 10	3 to 4.5	3 to 6
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Benzo(a)Pyrene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Benzo(b)Fluoranthene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Benzo(k)Fluoranthene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Chrysene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Dibenz(a,h)anthracene	0.036 U	0.2 U	0.037 U	0.71 U	0.036 U	0.036 U	0.045 U	0.036 U
Indeno(1,2,3-cd)pyrene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Total Carcinogenic PAHs (BaP TEQs)	*0.059598 U*	*0.4622 U*	*0.060598 U*	*1.64081 U*	*0.059598 U*	*0.058287 U*	*0.073842 U*	*0.058287 U*
2-Methylnaphthalene		0.2 U		0.71 U			0.21 U	0.17 U
Acenaphthene	0.18 U	0.2 U	0.18 U	0.71 U	0.18 U	0.17 U	0.22 U	0.17 U
Acenaphthylene	0.18 U	0.2 U	0.18 U	0.71 U	0.18 U	0.17 U	0.22 U	0.17 U
Anthracene	0.0088 U	0.2 U	0.0089 U	0.71 U	0.0089 U	0.0087 U	0.011 U	0.0087 U
Benzo(g,h,i)Perylene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Fluoranthene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Fluorene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Naphthalene	0.088 U	0.2 U	0.089 U	0.71 U	0.089 U	0.087 U	0.11 U	0.087 U
Phenanthrene	0.0088 U	0.2 U	0.0089 U	0.71 U	0.0089 U	0.0087 U	0.011 U	0.0087 U
Pyrene	0.018 U	0.2 U	0.018 U	0.71 U	0.018 U	0.017 U	0.022 U	0.017 U
Total Non-carcinogenic PAHs	*0.5376 U*	*2 U*	*0.5388 U*	*7.1 U*	*0.5388 U*	*0.5124 U*	*0.87 U*	*0.6824 U*

Table B.5-4
Area 12 - Works Magazine Landfill Soil PAH Results

Area	12	12	12
Sample ID	12-TP-503-S-2	12-TP-504-S-2-DAVG	12-TP-505-S-2-DAVG
Date Sampled	4/16/92	4/17/92	4/17/92
Depth	3 to 6	3 to 6	3 to 6
PAHs (mg/kg dry)			
Benzo(a)Anthracene	0.018 U	0.017 U	0.022 U
Benzo(a)Pyrene	0.018 U	0.017 U	0.022 U
Benzo(b)Fluoranthene	0.018 U	0.017 U	0.022 U
Benzo(k)Fluoranthene	0.018 U	0.017 U	0.022 U
Chrysene	0.018 U	0.017 U	0.022 U
Dibenz(a,h)anthracene	0.036 U	0.036 U	0.044 U
Indeno(1,2,3-cd)pyrene	0.018 U	0.017 U	0.022 U
Total Carcinogenic PAHs (BaP TEQs)	*0.059598 U*	*0.058287 U*	*0.072842 U*
2-Methylnaphthalene	0.18 U	0.18 U	0.21 U
Acenaphthene	0.18 U	0.17 U	0.22 U
Acenaphthylene	0.18 U	0.17 U	0.22 U
Anthracene	0.0088 U	0.0087 U	0.011 U
Benzo(g,h,i)Perylene	0.018 U	0.017 U	0.022 U
Fluoranthene	0.018 U	0.017 U	0.022 U
Fluorene	0.018 U	0.017 U	0.022 U
Naphthalene	0.088 U	0.087 U	0.11 U
Phenanthrene	0.0088 U	0.0087 U	0.081 J
Pyrene	0.018 U	0.017 U	0.022 U
Total Non-carcinogenic PAHs	*0.7176 U*	*0.6924 U*	*0.5105*

Table B.5-5
Area 12 - Works Magazine Landfill Soil Pesticide and PCB Results

Area	12	12	12	12
Sample ID	12-1-B-501A-S-2	12-2-B-501-S-2A	12-2-B-502-S-2-DAVG	12-2-TP-501-S-2
Date Sampled	3/23/92	3/24/92	3/24/92	4/15/92
Depth	5 to 8	8 to 9.5	5 to 8	3 to 6
Pesticides (mg/kg dry)				
4,4'-DDD	0.011 U	0.011 U	0.011 U	0.011 U
4,4'-DDE	0.011 U	0.011 U	0.011 U	0.011 U
4,4'-DDT	0.011 U	0.011 U	0.011 U	0.011 U
Aldrin	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Alpha-BHC	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Beta-BHC	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Chlordane	0.056 U	0.054 U	0.056 U	0.057 U
Delta-BHC	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Dieldrin	0.011 U	0.011 U	0.011 U	0.011 U
Endosulfan I	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Endosulfan II	0.011 U	0.011 U	0.011 U	0.011 U
Endosulfan Sulfate	0.011 U	0.011 U	0.011 U	0.011 U
Endrin	0.011 U	0.011 U	0.011 U	0.011 U
Endrin Ketone	0.011 U	0.011 U	0.011 U	0.011 U
Gamma-BHC	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Heptachlor	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Heptachlor Epoxide	0.0056 U	0.0054 U	0.0056 U	0.0057 U
Methoxychlor	0.056 U	0.054 U	0.056 U	0.057 U
Toxaphene				0.11 U
Azinphos Methyl (Guthion)	0.15 U	0.14 U	0.15 U	
Demeton (Total)	0.075 U	0.072 U	0.075 U	
Diazinon	0.037 U	0.036 U	0.037 U	
Disulfoton	0.037 U	0.036 U	0.037 U	
Malathion	0.037 U	0.036 U	0.037 U	
Methyl Parathion	0.037 U	0.036 U	0.037 U	
Parathion	0.037 U	0.036 U	0.037 U	
PCBs (mg/kg dry)				
PCB-1016	0.11 U	0.11 U	0.11 U	0.11 U
PCB-1221	0.11 U	0.11 U	0.11 U	0.11 U
PCB-1232	0.11 U	0.11 U	0.11 U	0.11 U
PCB-1242	0.11 U	0.11 U	0.11 U	0.11 U
PCB-1248	0.11 U	0.11 U	0.11 U	0.11 U
PCB-1254	0.11 U	0.11 U	0.11 U	0.11 U
PCB-1260	0.11 U	0.11 U	0.11 U	0.11 U

Table B.5-5
Area 12 - Works Magazine Landfill Soil Pesticide and PCB Results

Area	12	12	12	12
Sample ID	12-3-TP-501-S-2-DAVG	12-3-TP-503-S-2	12-7-B-501-S-2	12-7-B-501-S-3
Date Sampled	4/16/92	4/16/92	3/25/92	3/25/92
Depth	2 to 4	3 to 6	5 to 8	10 to 13
Pesticides (mg/kg dry)				
4,4'-DDD	0.013 U	0.011 U	0.011 U	0.011 U
4,4'-DDE	0.013 U	0.011 U	0.011 U	0.011 U
4,4'-DDT	0.013 U	0.011 U	0.011 U	0.011 U
Aldrin	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Alpha-BHC	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Beta-BHC	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Chlordane	0.064 U	0.057 U	0.053 U	0.053 U
Delta-BHC	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Dieldrin	0.013 U	0.011 U	0.011 U	0.011 U
Endosulfan I	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Endosulfan II	0.013 U	0.011 U	0.011 U	0.011 U
Endosulfan Sulfate	0.013 U	0.011 U	0.011 U	0.011 U
Endrin	0.013 U	0.011 U	0.011 U	0.011 U
Endrin Ketone	0.013 U	0.011 U	0.011 U	0.011 U
Gamma-BHC	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Heptachlor	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Heptachlor Epoxide	0.0064 U	0.0057 U	0.0053 U	0.0053 U
Methoxychlor	0.064 U	0.057 U	0.053 U	0.053 U
Toxaphene	0.13 U	0.11 U		
Azinphos Methyl (Guthion)		0.15 U	0.14 U	0.14 U
Demeton (Total)		0.076 U	0.071 U	0.071 U
Diazinon		0.038 U	0.035 U	0.035 U
Disulfoton		0.038 U	0.035 U	0.035 U
Malathion		0.038 U	0.035 U	0.035 U
Methyl Parathion		0.038 U	0.035 U	0.035 U
Parathion		0.038 U	0.035 U	0.035 U
PCBs (mg/kg dry)				
PCB-1016		0.11 U	0.11 U	0.11 U
PCB-1221		0.11 U	0.11 U	0.11 U
PCB-1232		0.11 U	0.11 U	0.11 U
PCB-1242		0.11 U	0.11 U	0.11 U
PCB-1248		0.11 U	0.11 U	0.11 U
PCB-1254		0.11 U	0.11 U	0.11 U
PCB-1260		0.11 U	0.11 U	0.11 U

Table B.5-5
Area 12 - Works Magazine Landfill Soil Pesticide and PCB Results

Area	12	12	12
Sample ID	12-TP-501-S-2-DAVG	12-TP-502-S-2-DAVG	12-TP-505-S-2-DAVG
Date Sampled	4/16/92	4/17/92	4/17/92
Depth	3 to 4.5	3 to 6	3 to 6
Pesticides (mg/kg dry)			
4,4'-DDD	0.013 U	0.01 U	0.012 U
4,4'-DDE	0.013 U	0.01 U	0.012 U
4,4'-DDT	0.013 U	0.01 U	0.012 U
Aldrin	0.0063 U	0.0052 U	0.0059 U
Alpha-BHC	0.0063 U	0.0052 U	0.0059 U
Beta-BHC	0.0063 U	0.0052 U	0.0059 U
Chlordane	0.063 U	0.052 U	0.059 U
Delta-BHC	0.0063 U	0.0052 U	0.0059 U
Dieldrin	0.013 U	0.01 U	0.012 U
Endosulfan I	0.0063 U	0.0052 U	0.0059 U
Endosulfan II	0.013 U	0.01 U	0.012 U
Endosulfan Sulfate	0.013 U	0.01 U	0.012 U
Endrin	0.013 U	0.01 U	0.012 U
Endrin Ketone	0.013 U	0.01 U	0.012 U
Gamma-BHC	0.0063 U	0.0052 U	0.0059 U
Heptachlor	0.0063 U	0.0052 U	0.0059 U
Heptachlor Epoxide	0.0063 U	0.0052 U	0.0059 U
Methoxychlor	0.063 U	0.052 U	0.059 U
Toxaphene	0.13 U	0.1 U	0.12 U
Azinphos Methyl (Guthion)			
Demeton (Total)			
Diazinon			
Disulfoton			
Malathion			
Methyl Parathion			
Parathion			
PCBs (mg/kg dry)			
PCB-1016	0.13 U	0.1 U	0.12 U
PCB-1221	0.13 U	0.1 U	0.12 U
PCB-1232	0.13 U	0.1 U	0.12 U
PCB-1242	0.13 U	0.1 U	0.12 U
PCB-1248	0.13 U	0.1 U	0.12 U
PCB-1254	0.13 U	0.1 U	0.12 U
PCB-1260	0.13 U	0.1 U	0.12 U

Table B.5-6
Area 12 - Works Magazine Landfill Soil TPH Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-1-B-501A-S-1	12-1-B-501A-S-2	12-1-B-501A-S-3	12-1-B-501A-S-4	12-1-B-501A-S-5	12-1-TP-501-S-2	12-1-TP-502-S-2-DAVG	12-1-TP-503-S-2-DAVG
Date Sampled	3/23/92	3/23/92	3/23/92	3/23/92	3/23/92	4/15/92	4/16/92	4/16/92
Depth	0 to 1	5 to 8	10 to 13	15 to 18	20 to 23	3 to 6	3 to 5	3 to 6
TPH (mg/kg dry)								
TPH Scan								
Oil And Grease	20 U	120	26	20 U	20 U	22 U	21 U	21 U

Area	12	12	12	12	12	12	12	12
Sample ID	12-1-TP-6,S-1	12-1-TP-6,S-2	12-2-B-501-S-1	12-2-B-501-S-3A	12-2-B-501-S-4-DAVG	12-2-B-501-S-5	12-2-B-502-S-1-DAVG	12-2-B-502-S-2-DAVG
Date Sampled	4/24/87	4/24/87	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92
Depth	0 to 3	3 to 6	0 to 1	13 to 14.5	15 to 18	20 to 23	0 to 1	5 to 8
TPH (mg/kg dry)								
TPH Scan	230 X	500 X						
Oil And Grease			20 U	20 U	20 U	20 U	20 U	10000

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-B-502-S-3	12-2-B-502-S-4	12-2-B-502-S-5-DAVG	12-2-TP-10,S-1	12-2-TP-10,S-2	12-2-TP-501-S-2	12-2-TP-501-S-3	12-2-TP-502-S-2
Date Sampled	3/24/92	3/24/92	3/24/92	4/23/87	4/23/87	4/15/92	4/16/92	4/14/92
Depth	10 to 12.3	15 to 18	20 to 23	0 to 3	3 to 6	3 to 6	8 to 10	3 to 6
TPH (mg/kg dry)								
TPH Scan				19000 X	1200 X			
Oil And Grease	1600	20 U	20 U			10000	21 U	160

Table B.5-6
Area 12 - Works Magazine Landfill Soil TPH Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-2-TP-503-S-2	12-2-TP-504-S-2-DAVG	12-2-TP-505-S-2-DAVG	12-2-TP-9,S-1	12-2-TP-9,S-2	12-3-TP-3,S-1	12-3-TP-3,S-2	12-4-TP-2,S-1
Date Sampled	4/15/92	4/15/92	4/15/92	4/24/87	4/24/87	4/27/87	4/27/87	11/11/86
Depth	2 to 4	3 to 6	3 to 6	0 to 3	3 to 6	0 to 3	3 to 6	0 to 3
TPH (mg/kg dry)								
TPH Scan				73 X	910 X	36 X	110 X	22 U
Oil And Grease	23 U	21 U	22 U					

Area	12	12	12	12	12	12	12	12
Sample ID	12-5-TP-3,S-1	12-5-TP-3,S-2	12-5-TP-501-S-2	12-5-TP-502-S-2-DAVG	12-5-TP-502-S-3-DAVG	12-5-TP-503-S-3	12-6-B-501-S-2	12-6-B-501-S-5
Date Sampled	4/27/87	4/27/87	4/17/92	4/17/92	4/17/92	4/17/92	3/25/92	3/25/92
Depth	0 to 3	3 to 6	3 to 6	3 to 5.5	8 to 10	4 to 6	5 to 8	20 to 23
TPH (mg/kg dry)								
TPH Scan	20000 X	4700 X						
Oil And Grease			3600	36000	1800	21 U	20 U	20 U

Area	12	12	12	12	12	12	12	12
Sample ID	12-6-TP-3,S-1	12-6-TP-3,S-2-DAVG	12-6-TP-502-S-2	12-6-TP-502-S-3	12-7-B-501-S-2	12-7-B-501-S-3	12-7-B-501-S-5	12-7-TP-501-S-2
Date Sampled	4/27/87	4/27/87	4/17/92	4/17/92	3/25/92	3/25/92	3/25/92	4/17/92
Depth	0 to 3	3 to 6	3 to 6	8 to 10	5 to 8	10 to 13	20 to 22.4	3 to 6
TPH (mg/kg dry)								
TPH Scan	39 X	1400 X						
Oil And Grease			55	22 U	1600	870	20 U	21 U

Table B.5-6
Area 12 - Works Magazine Landfill Soil TPH Results

Area	12	12	12	12	12	12	12	12
Sample ID	12-7-TP-501-S-3	12-TP-501-S-1-DAVG	12-TP-501-S-2-DAVG	12-TP-501-S-3	12-TP-502-S-1-DAVG	12-TP-502-S-2-DAVG	12-TP-502-S-3	12-TP-503-S-1
Date Sampled	4/17/92	4/16/92	4/16/92	4/16/92	4/16/92	4/17/92	4/16/92	4/16/92
Depth	8 to 10	0 to 1	3 to 4.5	9 to 10	0 to 1	3 to 6	8 to 10	0 to 1
TPH (mg/kg dry)								
TPH Scan								
Oil And Grease	21 U	24 U	20 U	21 U	25 U	21 U	21 U	26 U

Area	12	12	12	12	12	12	12	12
Sample ID	12-TP-503-S-2	12-TP-503-S-3	12-TP-504-S-1-DAVG	12-TP-504-S-2-DAVG	12-TP-504-S-3	12-TP-505-S-1-DAVG	12-TP-505-S-2-DAVG	12-TP-505-S-3
Date Sampled	4/16/92	4/16/92	4/17/92	4/17/92	4/17/92	4/17/92	4/17/92	4/17/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TPH (mg/kg dry)								
TPH Scan								
Oil And Grease	21 U	21 U	26 U	21 U	21 U	39	290	22 U

Table B.6-1
Area 16 - Kettle Beneath Area 5 Soil Metals Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-3,S-5-DAVG	16-B-4,S-1	16-B-4,S-3	16-B-4,S-4-DAVG	16-B-4,S-5	16-B-5,S-3	16-B-5,S-7-DAVG	16-B-501-S-10A
Date Sampled	4/27/87	4/27/87	4/28/87	4/28/87	4/27/87	4/27/87	4/27/87	7/16/92
Depth	12.5 to 14	2.5 to 4	7.5 to 9	10 to 11.5	11.5 to 14	6.5 to 8	16.5 to 18	46.5 to 48
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	46	80	180	64	91	34	30	5.6 U
Mercury								
Nickel								
Zinc								

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-12	16-B-501-S-13A	16-B-501-S-15	16-B-501-S-1B	16-B-501-S-1-DAVG	16-B-501-S-3	16-B-501-S-4	16-B-501-S-5
Date Sampled	7/16/92	7/16/92	7/16/92	7/14/92	7/14/92	7/14/92	7/14/92	7/14/92
Depth	55 to 56.5	62.5 to 64	70 to 71.5	2.5 to 3.5	0 to 1	7.5 to 9	15 to 16.5	20 to 21.5
Total Metals (mg/kg dry)								
Arsenic				21	120	8.7	5.8	
Cadmium				0.085 J	0.36 J	0.072 J	0.12 J	
Chromium				11	12	7.3	8.2	
Copper				3.6	53	5.6	7	
Lead	14	13	5.5 U	400	1400	75	58	51
Mercury				4.3	100	0.56	0.087 U	
Nickel				10	11	8.5	18	
Zinc				45	210	17	16	

Table B.6-1
Area 16 - Kettle Beneath Area 5 Soil Metals Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-7-DAVG	16-B-502-S-2	16-B-503-S-2	16-B-503-S-3	16-B-503-S-5	16-B-503-S-7	16-B-503-S-8	16-B-504-S-2
Date Sampled	7/14/92	2/24/92	2/24/92	2/24/92	2/24/92	2/24/92	2/24/92	2/25/92
Depth	30 to 31.5	4 to 7	4 to 7	9 to 10.5	14 to 15.5	19 to 20.5	21.5 to 23	5.5 to 7
Total Metals (mg/kg dry)								
Arsenic			2.3					220
Cadmium			0.042					0.084
Chromium			8.7					19
Copper			13					13
Lead	22	35	300	220	6.4	20	21	480
Mercury			0.077 U					1.5
Nickel			14					10
Zinc			25					21

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-504-S-2A	16-B-504-S-3	16-B-504-S-4A	16-B-504-S-5	16-B-504-S-5A	16-B-504-S-6A	16-B-505-S-1-DAVG	16-B-505-S-2
Date Sampled	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	7/14/92	7/14/92
Depth	7 to 8.5	9 to 10.5	17 to 16.5	19 to 22	22 to 23.5	17 to 28.5	0 to 1	5 to 6.5
Total Metals (mg/kg dry)								
Arsenic	41	330	18 J	9.4 J	2.5 J		49	44
Cadmium	0.024	0.049					0.048 J	0.055 J
Chromium	17	17					15	15
Copper	10	15					12	11
Lead	430	38		5.7 U		6.8	190	110
Mercury	0.47	0.59 J					3 J	3 J
Nickel	12	14					11	10
Zinc	15	17					19	21

Table B.6-1
Area 16 - Kettle Beneath Area 5 Soil Metals Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-505-S-3	16-B-505-S-4A	16-B-505-S-5	16-B-505-S-5A	16-B-505-S-6	16-SS-401	16-SS-402	16-SS-504
Date Sampled	7/14/92	7/14/92	7/14/92	7/14/92	7/14/92	11/2/93	11/2/93	10/20/93
Depth	10 to 11.5	15.5 to 16.5	20 to 21.5	22.5 to 24	25 to 26.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	233			4.5 J		14	29	24
Cadmium	0.11 J							
Chromium	9.9							
Copper	19.4							
Lead	170	130	150		55			25 J
Mercury	0.075 U							
Nickel	10							
Zinc	15							

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-505	16-SS-506	16-SS-507	16-SS-508	16-SS-509	16-SS-510	16-SS-511	16-SS-512
Date Sampled	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	15	12	30	12	24	9.5	30	120
Cadmium								
Chromium								
Copper								
Lead	31 J	14 J	45 J	200 J	120 J	8 J	30 J	1100 J
Mercury				10		0.16		
Nickel								
Zinc								

Table B.6-1
Area 16 - Kettle Beneath Area 5 Soil Metals Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-513	16-SS-514	16-SS-515	16-SS-517	16-SS-518	16-SS-519	16-SS-520	16-SS-521
Date Sampled	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	9.5	18	30	28	29	33	7.1	8.2
Cadmium								
Chromium								
Copper								
Lead	210 J	33 J	21 J	46 J	6.2 UJ	34 J	8.8 J	9.9 J
Mercury	42		0.19					
Nickel								
Zinc								

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-522	16-SS-523	16-SS-524-DAVG	16-TP-10,S-2	16-TP-11,S-2	16-TP-12,S-2	16-TP-14,S-2	16-TP-16,S-2
Date Sampled	10/20/93	10/20/93	10/20/93	4/27/87	4/27/87	4/27/87	4/27/87	4/27/87
Depth	0 to 0.5	0 to 0.5	0 to 0.5	2 to 5	2 to 5	2 to 5	2 to 5	2 to 5
Total Metals (mg/kg dry)								
Arsenic	3	7.8	170					
Cadmium								
Chromium								
Copper								
Lead	5.8 UJ	5.8 J	1500	96	480	160	130	660
Mercury			59					
Nickel								
Zinc								

Table B.6-1
Area 16 - Kettle Beneath Area 5 Soil Metals Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-TP-3,S-2	16-TP-501-S-1	16-TP-501-S-2	16-TP-501-S-3	16-TP-502-S-2	16-TP-502-S-3	16-TP-503-S-2	16-TP-503-S-3
Date Sampled	4/27/87	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92
Depth	3 to 6	0 to 1	2 to 5.5	7 to 9	2 to 5	6.5 to 9	2 to 5	7 to 9
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	11	50	6.1	5 U	12	130	6.3	5.2 U
Mercury								
Nickel								
Zinc								

Area	16	16	16	16	16	16	16	16
Sample ID	16-TP-504-S-2	16-TP-504-S-3	16-TP-505-S-2	16-TP-505-S-3	16-TP-507-S-2	16-TP-507-S-3	16-TP-508-S-2	16-TP-508-S-3
Date Sampled	2/25/92	2/25/92	2/25/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
Depth	2 to 5	7 to 9	2 to 5	7 to 9	2 to 5	7 to 9	2 to 5	7 to 9
Total Metals (mg/kg dry)								
Arsenic			436		171	244 J		
Cadmium			0.012		0.021			
Chromium			25		14			
Copper			16		8.9 U			
Lead	5.6 U	5.7 U	720	770	580	450	23	34
Mercury			1.6 J		0.4 J			
Nickel			8.5		5.3			
Zinc			13		8.5			

Table B.6-1
Area 16 - Kettle Beneath Area 5 Soil Metals Results

Area	16	16	16	16	16	16
Sample ID	16-TP-509-S-2	16-TP-509-S-3	16-TP-6,S-2	16-TP-7,S-2	16-TP-8,S-2	16-TP-9,S-2
Date Sampled	3/11/92	3/11/92	4/27/87	4/27/87	4/27/87	4/27/87
Depth	2 to 5	7 to 9	2 to 5	2 to 5	2 to 5	2 to 5
Total Metals (mg/kg dry)						
Arsenic	110	147				
Cadmium	0.063 J	0.033				
Chromium	24	17				
Copper	15	24				
Lead	390	710	100	920	160	140
Mercury	9.8	1.6 J				
Nickel	19	11				
Zinc	29	13				

Table B.6-2
Area 16 - Kettle Beneath Area 5 Soil TCLP Metals Results

Area	16	16
Sample ID	16-B-504-S-2	16-TP-509-S-2
Date Sampled	2/25/92	3/11/92
Depth	5.5 to 7	2 to 5
TCLP Metals (mg/L)		
Arsenic	0.05 U	0.05 U
Barium	0.32	0.12
Cadmium	0.005 U	0.005 U
Chromium	0.011	0.01 U
Lead	0.11	1
Mercury	0.0002 U	0.0002 U
Selenium	0.05 U	0.05 U
Silver	0.005 U	0.005 U

Table B.6-3
Area 16 - Kettle Beneath Area 5 Soil Explosives Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-3,S-3	16-B-3,S-5-DAVG	16-B-3,S-7	16-B-4,S-1	16-B-4,S-3	16-B-4,S-4-DAVG	16-B-501-S-10A	16-B-501-S-12
Date Sampled	4/24/87	4/27/87	4/24/87	4/27/87	4/28/87	4/28/87	7/16/92	7/16/92
Depth	8.5 to 10	12.5 to 14	18.5 to 20	2.5 to 4	7.5 to 9	10 to 11.5	46.5 to 48	55 to 56.5
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene							0.032 U	0.032 U
1,3-Dinitrobenzene							0.043 U	0.043 U
2,4,6-Trinitrotoluene							0.0032 U	0.0032 U
2,4-Dinitrotoluene							0.0065 U	0.0064 U
2,6-Dinitrotoluene							0.0065 U	0.0064 U
Total DNT							*0.013 U*	*0.0128 U*
Monomethylamine Nitrate	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.042		
Nitrobenzene							0.064 U	0.064 U
Nitroglycerine								

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-13A	16-B-501-S-15	16-B-501-S-16	16-B-501-S-1-DAVG	16-B-501-S-2A	16-B-501-S-3	16-B-501-S-3A	16-B-501-S-4
Date Sampled	7/16/92	7/16/92	7/16/92	7/14/92	7/14/92	7/14/92	7/14/92	7/14/92
Depth	62.5 to 64	70 to 71.5	75 to 76.5	0 to 1	7.5 to 9	7.5 to 9	12.5 to 14	15 to 16.5
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.033 U		0.032 U	1.8 U	0.16 U	0.031 U		0.031 U
1,3-Dinitrobenzene	0.044 U		0.042 U	2.3 U	0.21 U	0.042 U		0.042 U
2,4,6-Trinitrotoluene	0.0033 U		0.0032 U	0.18 U	0.016 U	0.0031 U		0.0031 U
2,4-Dinitrotoluene	0.0065 U	0.18 U	0.0063 U	0.35 U	0.031 U	0.0063 U	0.18 U	0.0063 U
2,6-Dinitrotoluene	0.0065 U	0.18 U	0.0063 U	0.35 U	0.031 U	0.0063 U	0.18 U	0.0063 U
Total DNT	*0.013 U*	*0.36 U*	*0.0126 U*	*0.7 U*	*0.062 U*	*0.0126 U*	*0.36 U*	*0.0126 U*
Monomethylamine Nitrate								5.2 U
Nitrobenzene	0.065 U	0.18 U	0.063 U	3.5 U	0.31 U	0.062 U	0.18 U	0.062 U
Nitroglycerine				0.24 U	0.21 U			

Table B.6-3
Area 16 - Kettle Beneath Area 5 Soil Explosives Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-4A	16-B-501-S-5A	16-B-501-S-6A	16-B-501-S-7A	16-B-501-S-9	16-B-502-S-2	16-B-503-S-2	16-B-503-S-3
Date Sampled	7/14/92	7/14/92	7/14/92	7/14/92	7/16/92	2/24/92	2/24/92	2/24/92
Depth	17.5 to 19	22.5 to 24	27.5 to 29	32.5 to 34	40 to 41.5	4 to 7	4 to 7	9 to 10.5
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U		0.032 U		0.032 U	0.034 U	0.037 UJ	0.037 UJ
1,3-Dinitrobenzene	0.042 U		0.043 U		0.042 U	0.046 U	0.049 U	0.049 U
2,4,6-Trinitrotoluene	0.0032 U		0.0032 U		0.0032 U	0.061 J	0.0037 U	0.0037 U
2,4-Dinitrotoluene	0.0064 U	0.18 U	0.0064 U	0.18 U	0.0063 U	0.0069 U	0.0073 U	0.0073 U
2,6-Dinitrotoluene	0.0064 U	0.18 U	0.0064 U	0.18 U	0.0063 U	0.0069 U	0.0073 U	0.0073 U
Total DNT	*0.0128 U*	*0.36 U*	*0.0128 U*	*0.36 U*	*0.0126 U*	*0.0138 U*	*0.0146 U*	*0.0146 U*
Monomethylamine Nitrate						5.7 U		
Nitrobenzene	0.063 U	0.18 U	0.064 U	0.18 U	0.063 U	0.068 U	0.073 U	0.072 U
Nitroglycerine						0.23 U		

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-503-S-5	16-B-503-S-7	16-B-503-S-9	16-B-504-S-2	16-B-504-S-2A	16-B-504-S-3	16-B-504-S-4-DAVG	16-B-504-S-5
Date Sampled	2/24/92	2/24/92	2/24/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92
Depth	14 to 15.5	19 to 20.5	24 to 25.5	5.5 to 7	7 to 8.5	9 to 10.5	14 to 15.5	19 to 22
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.034 UJ	0.032 UJ	0.032 UJ		0.036 UJ	0.034 UJ	0.034 UJ	0.034 UJ
1,3-Dinitrobenzene	0.045 U	0.043 U	0.043 U		0.048 U	0.045 U	0.045 U	0.045 U
2,4,6-Trinitrotoluene	0.0034 U	0.0032 U	0.0032 U		0.0036 U	0.0034 U	0.0034 U	0.0034 U
2,4-Dinitrotoluene	0.0067 U	0.0065 U	0.0065 U		0.0072 U	0.0068 U	0.0067 U	0.0068 U
2,6-Dinitrotoluene	0.0067 U	0.0065 U	0.0065 U		0.0072 U	0.0068 U	0.0067 U	0.0068 U
Total DNT	*0.013 U*	*0.013 U*	*0.013 U*		*0.0144 U*	*0.0136 U*	*0.0134 U*	*0.0136 U*
Monomethylamine Nitrate				5.6 U			5.6 U	
Nitrobenzene	0.067 U	0.064 U	0.064 U		0.072 U	0.067 U	0.067 U	0.067 U
Nitroglycerine					0.24 U		0.22 U	

Table B.6-3
Area 16 - Kettle Beneath Area 5 Soil Explosives Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-504-S-6	16-B-504-S-7	16-B-504-S-8	16-B-504-S-9	16-B-505-S-1-DAVG	16-B-505-S-2	16-B-505-S-3	16-B-505-S-4
Date Sampled	2/25/92	2/25/92	2/25/92	2/25/92	7/14/92	7/14/92	7/14/92	7/14/92
Depth	25 to 25.5	29 to 32	34 to 37	39 to 40.5	0 to 1	5 to 6.5	10 to 11.5	15 to 15.5
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.033 UJ	0.031 UJ	0.031 UJ	0.031 UJ	0.32 U	0.35 U	0.033 U	0.17 U
1,3-Dinitrobenzene	0.044 U	0.041 U	0.041 U	0.042 U	0.43 U	0.46 U	0.044 U	0.23 U
2,4,6-Trinitrotoluene	0.0033 U	0.0031 U	0.0031 U	0.0031 U	0.032 U	0.035 U	0.0033 U	0.017 U
2,4-Dinitrotoluene	0.0066 U	0.0062 U	0.0062 U	0.0063 U	0.065 U	0.07 U	0.0066 U	0.034 U
2,6-Dinitrotoluene	0.0066 U	0.0062 U	0.0062 U	0.0063 U	0.065 U	0.07 U	0.0066 U	0.034 U
Total DNT	*0.0132 U*	*0.124 U*	*0.124 U*	*0.0126 U*	*0.13 U*	*0.14 U*	*0.0132 U*	*0.068 U*
Monomethylamine Nitrate	5.5 U							
Nitrobenzene	0.065 U	0.062 U	0.061 U	0.062 U	0.64 U	0.69 U	0.065 U	0.34 U
Nitroglycerine								

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-505-S-5	16-B-505-S-6	16-TP-11,S-2	16-TP-16,S-2	16-TP-507-S-2	16-TP-507-S-3	16-TP-508-S-2	16-TP-508-S-3
Date Sampled	7/14/92	7/14/92	4/27/87	4/27/87	3/11/92	3/11/92	3/11/92	3/11/92
Depth	20 to 21.5	25 to 26.5	2 to 5	2 to 5	2 to 5	7 to 9	2 to 5	7 to 9
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.034 U	0.035 U			0.035 U	0.033 U	0.032 U	0.032 U
1,3-Dinitrobenzene	0.045 U	0.046 U			0.047 U	0.044 U	0.042 U	0.042 U
2,4,6-Trinitrotoluene	0.0034 U	0.0035 U			0.0035 U	0.0033 U	0.0032 U	0.0032 U
2,4-Dinitrotoluene	0.0068 U	0.007 U			0.007 U	0.0067 U	0.0064 U	0.0063 U
2,6-Dinitrotoluene	0.0068 U	0.007 U			0.007 U	0.0067 U	0.0064 U	0.0063 U
Total DNT	*0.0136 U*	*0.014 U*			*0.014 U*	*0.134 U*	*0.0128 U*	*0.0126 U*
Monomethylamine Nitrate			0.03 U	0.03 U		5.6 U		5.3 U
Nitrobenzene	0.067 U	0.069 U			0.069 U	0.066 U	0.063 U	0.063 U
Nitroglycerine					0.23 U	0.22 U	0.21 U	0.21 U

Table B.6-4
Area 16 - Kettle Beneath Area 5 Soil SVOC Results

Area	16	16	16	16	16	16
Sample ID	16-B-501-S-1	16-B-501-S-10A	16-B-501-S-15	16-B-501-S-3A	16-B-501-S-5A	16-B-501-S-7A
Date Sampled	7/14/92	7/16/92	7/16/92	7/14/92	7/14/92	7/14/92
Depth	0 to 1	46.5 to 48	70 to 71.5	12.5 to 14	22.5 to 24	32.5 to 34
Semivolatiles (mg/kg dry)						
1,2,4-Trichlorobenzene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
1,2-Dichlorobenzene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
1,4-Dichlorobenzene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2,4,5-Trichlorophenol	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
2,4,6-Trichlorophenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2,4-Dichlorophenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2,4-Dimethylphenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2,4-Dinitrophenol	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
2-Chloronaphthalene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Chlorophenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Methylphenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Nitroaniline	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
2-Nitrophenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
3,3'-Dichlorobenzidine	1.6 U	0.37 U	0.35 U	0.35 U	0.35 U	0.36 U
3-Nitroaniline	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
4,6-Dinitro-2-Methylphenol	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
4-Bromophenyl Phenyl Ether	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Chloroaniline	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Chlorophenyl-Phenylether	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Methylphenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Nitroaniline	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
4-Nitrophenol	4 U	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
Aniline	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Benzidine	7.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzoic Acid	0.27 J	0.93 U	0.88 U	0.88 U	0.88 U	0.9 U
Benzyl Alcohol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-Chloroethoxy) Methane	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-Chloroethyl) Ether	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-Chloroisopropyl) Ether	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-Ethylhexyl)Phthalate	0.79 U	0.19 U	0.04 J	0.18 U	0.18 U	0.18 U
Butylbenzylphthalate	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Di-N-Butylphthalate	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Di-N-Octylphthalate	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Dibenzofuran	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Diethylphthalate	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Dimethylphthalate	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachlorobenzene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachlorobutadiene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachloroethane	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Isophorone	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
N-Nitroso-Di-Phenylamine	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
N-Nitroso-Di-Propylamine	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
N-Nitroso-Dimethylamine	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Pentachlorophenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U
Phenol	0.79 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U

Table B.6-5
Area 16 - Kettle Beneath Area 5 Soil PAH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-10A	16-B-501-S-15	16-B-501-S-1-DAVG	16-B-501-S-2A	16-B-501-S-3A	16-B-501-S-5A	16-B-501-S-7A	16-B-502-S-2
Date Sampled	7/16/92	7/16/92	7/14/92	7/14/92	7/14/92	7/14/92	7/14/92	2/24/92
Depth	46.5 to 48	70 to 71.5	0 to 1	7.5 to 9	12.5 to 14	22.5 to 24	32.5 to 34	4 to 7
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.19 U	0.18 U	0 64	0 018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Benzo(a)Pyrene	0.19 U	0.18 U	0 76	0 018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Benzo(b)Fluoranthene	0.19 U	0.18 U	0 77	0 018	0.18 U	0.18 U	0.18 U	0.019 UJ
Benzo(k)Fluoranthene	0.19 U	0.18 U	0 32	0.018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Chrysene	0.19 U	0.18 U	1.2	0.026	0.18 U	0.18 U	0.18 U	0.019 UJ
Dibenzo(a,h)Anthracene	0.19 U	0.18 U	0.44 J	0.036 U	0.18 U	0.18 U	0.18 U	0.039 UJ
Indeno(1,2,3-c,d)Pyrene	0.19 U	0.18 U	0.56	0.018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Total Carcinogenic PAHs (BAP TEQs)	*0.4391 U*	*0.416 U*	*1.4014*	*0.031*	*0.416 U*	*0.416 U*	*0.416 U*	*0.064 U*
2-Methylnaphthalene	0.19 U	0.18 U	0.79 U		0.18 U	0.18 U	0.18 U	
Acenaphthene	0.19 U	0.18 U	0.2 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 UJ
Acenaphthylene	0.19 U	0.18 U	0.2 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 UJ
Anthracene	0.19 U	0.18 U	0.065	0.0088 U	0.18 U	0.18 U	0.18 U	0.0095 UJ
Benzo(g,h,i)Perylene	0.19 U	0.18 U	0.51	0.018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Fluoranthene	0.19 U	0.18 U	1.2	0.033	0.18 U	0.18 U	0.18 U	0.019 UJ
Fluorene	0.19 U	0.18 U	0.02 U	0.018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Naphthalene	0.19 U	0.18 U	0.098 U	0.088 U	0.18 U	0.18 U	0.18 U	0.095 UJ
Phenanthrene	0.19 U	0.18 U	0.2	0.0088 U	0.18 U	0.18 U	0.18 U	0.0095 UJ
Pyrene	0.19 U	0.18 U	0.79	0.018 U	0.18 U	0.18 U	0.18 U	0.019 UJ
Total Non-carcinogenic PAHs	*1.9 U*	*1.8 U*	*3.419*	*0.293*	*1.8 U*	*1.8 U*	*1.8 U*	*0.57 U*

Table B.6-5
Area 16 - Kettle Beneath Area 5 Soil PAH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-503-S-2	16-B-504-S-1A	16-B-505-S-1C	16-B-505-S-1-DAVG	16-SS-504	16-SS-505	16-SS-506	16-SS-507
Date Sampled	2/24/92	2/25/92	7/14/92	7/14/92	10/20/93	10/20/93	10/20/93	10/20/93
Depth	4 to 7	1.5 to 3	2.5 to 3.5	0 to 1	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
PAHs (mg/kg dry)								
Benzo(a)Anthracene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Benzo(a)Pyrene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Benzo(b)Fluoranthene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Benzo(k)Fluoranthene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Chrysene	0.02 UJ	0.019 UJ	0.02 U	0.018	0.019 U	0.022	0.019 U	0.019 U
Dibenzo(a,h)Anthracene	0.041 UJ	0.04 UJ	0.04 U	0.037 U	0.038 U	0.037 U	0.038 U	0.04 U
Indeno(1,2,3-c,d)Pyrene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Total Carcinogenic PAHs (BAP TEQs)	*0.067 U*	*0.065 U*	*0.066 U*	*0.03031*	*0.063 U*	*0.0303*	*0.063 U*	*0.065 U*
2-Methylnaphthalene								
Acenaphthene	0.2 UJ	0.19 UJ	0.2 U	0.18 U	0.19 U	0.18 U	0.19 U	0.19 U
Acenaphthylene	0.2 UJ	0.19 UJ	0.2 U	0.18 U	0.19 U	0.18 U	0.19 U	0.19 U
Anthracene	0.01 UJ	0.01 UJ	0.0098 U	0.009 U	0.0094 U	0.0091 U	0.0094 U	0.0097 U
Benzo(g,h,i)Perylene	0.02 UJ	0.019 UJ	0.023	0.02	0.019 U	0.018 U	0.019 U	0.019 U
Fluoranthene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Fluorene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Naphthalene	0.1 UJ	0.1 UJ	0.098 U	0.09 U	0.094 U	0.091 U	0.094 U	0.097 U
Phenanthrene	0.01 UJ	0.01 UJ	0.0098 U	0.009 U	0.0094 U	0.0091 U	0.0094 U	0.0097 U
Pyrene	0.02 UJ	0.019 UJ	0.02 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U
Total Non-carcinogenic PAHs	*0.6 U*	*0.576 U*	*0.312*	*0.281*	*0.569 U*	*0.541 U*	*0.569 U*	*0.572 U*

Table B.6-5
Area 16 - Kettle Beneath Area 5 Soil PAH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-508	16-SS-510	16-SS-512	16-SS-514	16-SS-519	16-SS-521	16-SS-524-DAVG	16-TP-501-S-1
Date Sampled	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	2/25/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 1
PAHs (mg/kg dry)								
Benzo(a)Anthracene	3.4	0.018 U	0.1	0.018 U	0.019 U	0.02 U	0.69	0.02 UJ
Benzo(a)Pyrene	2.8	0.018 U	0.097	0.018 U	0.019 U	0.02 U	0.93	0.02 UJ
Benzo(b)Fluoranthene	3.7	0.018 U	0.019 U	0.018 U	0.019 U	0.02 U	0.77	0.02 UJ
Benzo(k)Fluoranthene	1.7	0.018 U	0.019 U	0.018 U	0.019 U	0.02 U	0.3	0.02 UJ
Chrysene	4.5	0.018 U	0.19	0.018 U	0.019 U	0.02 U	0.67	0.026 J
Dibenzo(a,h)Anthracene	0.37 U	0.037 U	0.039 U	0.038 U	0.038 U	0.04 U	0.51	0.041 UJ
Indeno(1,2,3-c,d)Pyrene	1.6	0.018 U	0.039	0.018 U	0.019 U	0.02 U	0.21	0.02 UJ
Total Carcinogenic PAHs (BAP TEQs)	*3.877*	*0.061 U*	*0.132*	*0.062 U*	*0.063 U*	*0.066 U*	*1.61067*	*0.034*
2-Methylnaphthalene								
Acenaphthene	1.8 U	0.18 U	0.19 U	0.18 U	0.19 U	0.2 U	1.8 U	0.2 UJ
Acenaphthylene	1.8 U	0.18 U	0.19 U	0.18 U	0.19 U	0.2 U	1.8 U	0.2 UJ
Anthracene	0.4	0.0091 U	0.0096 U	0.0092 U	0.0093 U	0.0098 U	0.088 U	0.01 UJ
Benzo(g,h,i)Perylene	1.6	0.018 U	0.1	0.018 U	0.019 U	0.02 U	0.61	0.07 J
Fluoranthene	5.9	0.018 U	0.086	0.018 U	0.019 U	0.02 U	0.58	0.02 UJ
Fluorene	0.18 U	0.018 U	0.019 U	0.018 U	0.019 U	0.02 U	0.18 U	0.02 UJ
Naphthalene	0.89 U	0.091 U	0.096 U	0.092 U	0.093 U	0.098 U	0.88 U	0.1 UJ
Phenanthrene	1.1	0.0091 U	0.061	0.0092 U	0.0093 U	0.0098 U	0.088 U	0.01 UJ
Pyrene	3	0.018 U	0.051	0.018 U	0.019 U	0.02 U	0.32	0.02 UJ
Total Non-carcinogenic PAHs	*14.34*	*0.541 U*	*0.55*	*0.542 U*	*0.568 U*	*0.598 U*	*3.928*	*0.36*

Table B.6-6
Area 16 - Kettle Beneath Area 5 Soil Pesticide and PCB Results

Area	16	16	16	16	16	16
Sample ID	16-B-3,S-1	16-B-3,S-3	16-B-3,S-5-DAVG	16-B-3,S-7	16-B-501-S-1C	16-B-501-S-1-DAVG
Date Sampled	4/24/87	4/24/87	4/27/87	4/24/87	7/14/92	7/14/92
Depth	3.5 to 5	8.5 to 10	12.5 to 14	18.5 to 20	3.5 to 4	0 to 1
Pesticides (mg/kg dry)						
4,4'-DDD					0.01 U	0.012 UJ
4,4'-DDE					0.01 U	0.012 UJ
4,4'-DDT					0.01 U	0.012 UJ
Aldrin					0.0052 U	0.006 U
Alpha-BHC					0.0052 U	0.006 U
Beta-BHC					0.0052 U	0.006 U
Chlordane					0.052 U	0.06 U
Delta-BHC					0.0052 U	0.006 U
Dieldrin					0.01 U	0.012 UJ
Endosulfan I					0.0052 U	0.006 U
Endosulfan II					0.01 U	0.012 UJ
Endosulfan Sulfate					0.01 U	0.012 UJ
Endrin					0.01 U	0.015
Endrin Ketone					0.01 U	0.012 UJ
Gamma-BHC					0.0052 U	0.006 U
Heptachlor					0.0052 U	0.006 U
Heptachlor Epoxide					0.0052 U	0.006 U
Methoxychlor					0.052 U	0.06 U
Toxaphene					0.1 U	0.12 UJ
PCBs (mg/kg dry)						
PCB-1016	0.094 U	0.078 U	0.076 U	0.074 U	0.1 U	0.12 UJ
PCB-1221	0.094 U	0.078 U	0.076 U	0.074 U	0.1 U	0.12 UJ
PCB-1232	0.094 U	0.078 U	0.076 U	0.074 U	0.1 U	0.12 UJ
PCB-1242	0.094 U	0.078 U	0.076 U	0.074 U	0.1 U	0.12 UJ
PCB-1248	0.094 U	0.078 U	0.076 U	0.074 U	0.1 U	0.12 UJ
PCB-1254	0.58	0.16 U	0.15 U	0.15 U	0.1 U	0.12 UJ
PCB-1260	0.19 U	0.16 U	0.15 U	0.15 U	0.1 U	0.12 UJ

Table B.6-6
Area 16 - Kettle Beneath Area 5 Soil Pesticide and PCB Results

Area	16	16	16	16	16
Sample ID	16-B-501-S-3A	16-B-501-S-4A	16-B-505-S-1-DAVG	16-TP-3,S-2	16-TP-14,S-2
Date Sampled	7/14/92	7/14/92	7/14/92	4/27/87	4/27/87
Depth	12.5 to 14	17.5 to 19	0 to 1	3 to 6	2 to 5
Pesticides (mg/kg dry)					
4,4'-DDD	0.011 U	0.011 U	0.011 U		
4,4'-DDE	0.011 U	0.011 U	0.011 U		
4,4'-DDT	0.011 U	0.011 U	0.011 U		
Aldrin	0.0053 U	0.0053 U	0.0054 U		
Alpha-BHC	0.0053 U	0.0053 U	0.0054 U		
Beta-BHC	0.0053 U	0.0053 U	0.0054 U		
Chlordane	0.053 U	0.053 U	0.054 U		
Delta-BHC	0.0053 U	0.0053 U	0.0054 U		
Dieldrin	0.011 U	0.011 U	0.011 U		
Endosulfan I	0.0053 U	0.0053 U	0.0054 U		
Endosulfan II	0.011 U	0.011 U	0.011 U		
Endosulfan Sulfate	0.011 U	0.011 U	0.011 U		
Endrin	0.011 U	0.011 U	0.011 U		
Endrin Ketone	0.011 U	0.011 U	0.011 U		
Gamma-BHC	0.0053 U	0.0053 U	0.0054 U		
Heptachlor	0.0053 U	0.0053 U	0.0054 U		
Heptachlor Epoxide	0.0053 U	0.0053 U	0.0054 U		
Methoxychlor	0.053 U	0.053 U	0.054 U		
Toxaphene	0.11 U	0.11 U	0.11 U		
PCBs (mg/kg dry)					
PCB-1016	0.11 U	0.11 U	0.11 U	0.042 U	0.04 U
PCB-1221	0.11 U	0.11 U	0.11 U	0.042 U	0.04 U
PCB-1232	0.11 U	0.11 U	0.11 U	0.042 U	0.04 U
PCB-1242	0.11 U	0.11 U	0.11 U	0.042 U	0.04 U
PCB-1248	0.11 U	0.11 U	0.11 U	0.042 U	0.04 U
PCB-1254	0.11 U	0.11 U	0.11 U	0.084 U	0.08 U
PCB-1260	0.11 U	0.11 U	0.11 U	0.084 U	0.08 U

Table B.6-7
Area 16 - Kettle Beneath Area 5 Soil TPH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-3,S-5-DAVG	16-B-4,S-1	16-B-4,S-3	16-B-4,S-4-DAVG	16-B-4,S-5	16-B-5,S-3	16-B-5,S-7-DAVG	16-B-501-S-10A
Date Sampled	4/27/87	4/27/87	4/28/87	4/28/87	4/27/87	4/27/87	4/27/87	7/16/92
Depth	12.5 to 14	2.5 to 4	7.5 to 9	10 to 11.5	11.5 to 14	6.5 to 8	16.5 to 18	46.5 to 48
TPH (mg/kg dry)								
TPH Scan								22 U
Oil And Grease	87 X	1200 X	20 UX	20 UX	20 UX	2200 X	48 X	

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-12	16-B-501-S-14	16-B-501-S-16	16-B-501-S-1-DAVG	16-B-501-S-2A	16-B-501-S-3	16-B-501-S-4	16-B-501-S-5
Date Sampled	7/16/92	7/16/92	7/16/92	7/14/92	7/14/92	7/14/92	7/14/92	7/14/92
Depth	55 to 56.5	65 to 66.5	75 to 76.5	0 to 1	7.5 to 9	7.5 to 9	15 to 16.5	20 to 21.5
TPH (mg/kg dry)								
TPH Scan	21 U	21 U	21 U	1600 J	73 J	21 UJ	21 UJ	22 UJ
Oil And Grease								

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-501-S-6A	16-B-501-S-8	16-B-502-S-2	16-B-503-S-2	16-B-503-S-3	16-B-503-S-4	16-B-503-S-6	16-B-503-S-9
Date Sampled	7/14/92	7/14/92	2/24/92	2/24/92	2/24/92	2/24/92	2/24/92	2/24/92
Depth	27.5 to 29	35 to 36.5	4 to 7	4 to 7	9 to 10.5	11.5 to 13	16.5 to 18	24 to 25.5
TPH (mg/kg dry)								
TPH Scan	22 UJ	22 UJ	120 J	130	27	20 U	20 U	20 U
Oil And Grease								

Table B.6-7
Area 16 - Kettle Beneath Area 5 Soil TPH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-504-S-1A	16-B-504-S-2A	16-B-504-S-4-DAVG	16-B-504-S-5	16-B-504-S-6A	16-B-504-S-8	16-B-504-S-9	16-B-505-S-1C
Date Sampled	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	7/14/92
Depth	1.5 to 3	7 to 8.5	14 to 15.5	19 to 22	27 to 28.5	34 to 37	39 to 40.5	2.5 to 3.5
TPH (mg/kg dry)								
TPH Scan	35 J	20 U	20 U	20 U	20 U	20 U	20 U	74
Oil And Grease								

Area	16	16	16	16	16	16	16	16
Sample ID	16-B-505-S-1-DAVG	16-B-505-S-2A	16-B-505-S-3	16-B-505-S-5	16-B-505-S-6	16-SS-504	16-SS-505	16-SS-506
Date Sampled	7/14/92	7/14/92	7/14/92	7/14/92	7/14/92	10/20/93	10/20/93	10/20/93
Depth	0 to 1	7.5 to 8	10 to 11.5	20 to 21.5	25 to 26.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)								
TPH Scan	420	210	360	28	23 U	35	1100	38
Oil And Grease								

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-507	16-SS-508	16-SS-509	16-SS-510	16-SS-511	16-SS-512	16-SS-513	16-SS-514
Date Sampled	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)								
TPH Scan	55	2500	2200	22 U	39	320	2200	22 U
Oil And Grease								

Table B.6-7
Area 16 - Kettle Beneath Area 5 Soil TPH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-515	16-SS-517	16-SS-518	16-SS-519	16-SS-520	16-SS-521	16-SS-522	16-SS-523
Date Sampled	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93	10/20/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)								
TPH Scan	25 U	73	24 U	22 U	24 U	24 U	23 U	22 U
Oil And Grease								

Area	16	16	16	16	16	16	16	16
Sample ID	16-SS-524-DAVG	16-TP-10,S-2	16-TP-11,S-2	16-TP-12,S-2	16-TP-14,S-2	16-TP-16,S-2	16-TP-3,S-2	16-TP-501-S-1
Date Sampled	10/20/93	4/27/87	4/27/87	4/27/87	4/27/87	4/27/87	4/27/87	2/25/92
Depth	0 to 0.5	2 to 5	2 to 5	2 to 5	2 to 5	2 to 5	3 to 6	0 to 1
TPH (mg/kg dry)								
TPH Scan	2800							1200
Oil And Grease		52 X	20 UX	330 X	22 X	23 X	30 X	

Area	16	16	16	16	16	16	16	16
Sample ID	16-TP-501-S-2	16-TP-501-S-3	16-TP-502-S-2	16-TP-502-S-3	16-TP-503-S-2	16-TP-503-S-3	16-TP-504-S-2	16-TP-504-S-3
Date Sampled	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92	2/25/92
Depth	2 to 5.5	7 to 9	2 to 5	6.5 to 9	2 to 5	7 to 9	2 to 5	7 to 9
TPH (mg/kg dry)								
TPH Scan	63	20 U	20 U	20 U	20 U	20 U	25	20 U
Oil And Grease								

Table B.6-7
Area 16 - Kettle Beneath Area 5 Soil TPH Results

Area	16	16	16	16	16	16	16	16
Sample ID	16-TP-505-S-2	16-TP-505-S-3	16-TP-507-S-2	16-TP-507-S-3	16-TP-508-S-2	16-TP-508-S-3	16-TP-509-S-2	16-TP-509-S-3
Date Sampled	2/25/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92	3/11/92
Depth	2 to 5	7 to 9	2 to 5	7 to 9	2 to 5	7 to 9	2 to 5	7 to 9
TPH (mg/kg dry)								
TPH Scan	67	100	20 U	20 U	120	72	200	20 U
Oil And Grease								

Area	16	16	16	16
Sample ID	16-TP-6,S-2	16-TP-7,S-2	16-TP-8,S-2	16-TP-9,S-2
Date Sampled	4/27/87	4/27/87	4/27/87	4/27/87
Depth	2 to 5	2 to 5	2 to 5	2 to 5
TPH (mg/kg dry)				
TPH Scan				
Oil And Grease	20 UX	30 X	1200 X	59 X

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-C-SS[PW-1]C2-005	01-F29-SS[F-199]C2-005	01-F29-SS[F-200]C2-005	01-F29-SS[F-201]C2-005
Date Sampled	7/11/01	8/2/01	8/2/01	8/2/01
Depth	1 to 1.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	6.4	6	9.2	4.3
Lead	8.6	10	20	74

Area	18	18	18	18
Sample ID	01-F29-SS[F-202]C2-005	01-F29-SS[F-203]C2-005	01-F29-SS[F-204]C2-005	01-F29-SS[F-206]C2-005
Date Sampled	8/2/01	8/2/01	8/2/01	8/2/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	3.9	4.1	4.7	3.8
Lead	12	11	25	6.7

Area	18	18	18	18
Sample ID	01-F29-SS[F-207]C2-005	01-F29-SS[F-208]C2-005	01-F29-SS[F-209]C2-005	01-F29-SS[F-210]C2-005
Date Sampled	8/2/01	8/2/01	8/2/01	8/2/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	17	5.2	8.1	9.5
Lead	53	24	33	51

Area	18	18	18	18
Sample ID	01-F30-SS[F-220]C2-005	01-F30-SS[F-221]C2-005	01-F30-SS[F-222]C2-005	01-F30-SS[F-223]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	7.2	8.7	8.7	6.9
Lead	7.8	23	12	15

Area	18	18	18	18
Sample ID	01-F30-SS[F-224]C2-005	01-F30-SS[F-225]C2-005	01-F30-SS[F-226]C2-005	01-F30-SS[F-228]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	6	4.6	5	4.8
Lead	7.9	5.7	11	12

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-F30-SS[F-229]C2-005	01-F31-SS[F-231]C2-005	01-F31-SS[F-232]C2-005	01-F31-SS[F-234]C2-005
Date Sampled	8/8/01	8/9/01	8/9/01	8/9/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	7.4	8.4	5.4	5.1
Lead	9.3	7	6	4.5

Area	18	18	18	18
Sample ID	01-F31-SS[F-235]C2-005	01-F31-SS[F-236]C2-005	01-F31-SS[F-237]C2-005	01-F31-SS[F-238]C2-005
Date Sampled	8/9/01	8/9/01	8/9/01	8/9/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	6.1	6.9	3.6	5.2
Lead	14	16	14	29

Area	18	18	18	18
Sample ID	01-F31-SS[F-239]C2-005	01-F31-SS[F-240]C2-005	01-F32-SS[F-268]C2-005	01-F32-SS[F-269]C2-005
Date Sampled	8/9/01	8/9/01	8/22/01	8/22/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	4.9	6.5	3.6	26
Lead	5.1	6.1	3.9	32

Area	18	18	18	18
Sample ID	01-F32-SS[F-270]C2-005	01-F32-SS[F-271]C2-005	01-F32-SS[F-272]C2-005	01-F37-SS[F-183]C2-005
Date Sampled	8/22/01	8/22/01	8/22/01	7/30/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	4.5	2.8	4.4	8.6
Lead	4.3	2.5	5.6	9

Area	18	18	18	18
Sample ID	01-F37-SS[F-184]C2-005	01-F37-SS[F-185]C2-005	01-F37-SS[F-186]C2-005	01-F37-SS[F-187]C2-005
Date Sampled	7/30/01	7/30/01	7/30/01	7/30/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	13	26	8.6	3.6
Lead	10	9.9	14	3.9

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-F37-SS[F-188]C2-005	01-F37-SS[F-189]C2-005-DAVG	01-F37-SS[F-191]C2-005	01-F37-SS[F-192]C2-005
Date Sampled	7/30/01	7/30/01	7/30/01	7/30/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg)				
Arsenic	13	4.5	4.7	6.9
Lead	62	2.95	5.5	5.2

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-139]C2-005	01-N01-SS[NGRR-140]C2-005	01-N01-SS[NGRR-141]C2-005	01-N01-SS[NGRR-142]C2-005
Date Sampled	7/30/01	7/30/01	7/30/01	7/30/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	5.4	18	24	13
Lead	5.3	16	28	15

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-144]C2-005	01-N01-SS[NGRR-146]C2-005	01-N01-SS[NGRR-148]C2-005	01-N01-SS[NGRR-149]C2-005
Date Sampled	7/30/01	7/30/01	7/31/01	7/31/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	11	28	13	7.3
Lead	8.8	12	8.2	4.6

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-150]C2-005	01-N01-SS[NGRR-151]C2-005	01-N01-SS[NGRR-152]C2-005	01-N01-SS[NGRR-153]C2-005-DAVG
Date Sampled	7/31/01	7/31/01	7/31/01	7/31/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	5.8	5.1	3.6	3.5
Lead	3.4	2.8	2.1 U	2.25

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-157]C2-005	01-N01-SS[NGRR-158]C2-005	01-N01-SS[NGRR-159]C2-005	01-N01-SS[NGRR-160]C2-005
Date Sampled	7/31/01	7/31/01	7/31/01	7/31/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	6.4	16	10	4.3
Lead	6.8	17	3.9	5

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-161]C2-005	01-N01-SS[NGRR-162]C2-005	01-N01-SS[NGRR-163]C2-005	01-N01-SS[NGRR-164]C2-005-DAVG
Date Sampled	7/31/01	7/31/01	7/31/01	8/2/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	4.7	4.3	10	10.5
Lead	5.5	4.1	9	54.5

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-166]C2-005	01-N01-SS[NGRR-167]C2-005	01-N01-SS[NGRR-168]C2-005	01-N01-SS[NGRR-169]C2-005
Date Sampled	8/2/01	8/2/01	8/2/01	8/2/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	5.7	17	7.7	4.5
Lead	8.5	17	13	6.1

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-170]C2-005	01-N01-SS[NGRR-171]C2-005	01-N01-SS[NGRR-172]C2-005	01-N01-SS[NGRR-173]C2-005
Date Sampled	8/2/01	8/2/01	8/2/01	8/2/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	5	21	6.4	5.6
Lead	6.1	6.1	7.6	3.1

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-174]C2-005	01-N01-SS[NGRR-175]C2-005	01-N01-SS[NGRR-176]C2-005	01-N01-SS[NGRR-209]C2-005
Date Sampled	8/2/01	8/2/01	8/2/01	8/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	3.5	15	4.6	8
Lead	2.2 U	3.2	2.7	7.5

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-210]C2-005	01-N01-SS[NGRR-211]C2-005	01-N01-SS[NGRR-212]C2-005	01-N01-SS[NGRR-213]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	11	7.7	5	4.9
Lead	9.4	4.1	3.6	3.3

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-214]C2-005	01-N01-SS[NGRR-215]C2-005	01-N01-SS[NGRR-216]C2-005	01-N01-SS[NGRR-217]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	38	55	7.2	5.2
Lead	11	4.2	4.8	4.8

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-218]C2-005	01-N01-SS[NGRR-219]C2-005	01-N01-SS[NGRR-220]C2-005	01-N01-SS[NGRR-221]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	50	7.4	9.8	9.1
Lead	66	6.2	6.7	5.4

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-222]C2-005	01-N01-SS[NGRR-223]C2-005-DAVG	01-N01-SS[NGRR-225]C2-005	01-N01-SS[NGRR-226]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	14	6.3	5.6	18
Lead	5.3	5.8	5.5	25

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-227]C2-005	01-N01-SS[NGRR-228]C2-005	01-N01-SS[NGRR-229]C2-005	01-N01-SS[NGRR-230]C2-005
Date Sampled	8/8/01	8/8/01	8/8/01	8/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	4.9	5	4.9	16
Lead	6.2	4.2	4.4	9.4

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-231]C2-005	01-N01-SS[NGRR-232]C2-005	01-N01-SS[NGRR-233]C2-005	01-N01-SS[NGRR-234]C2-005
Date Sampled	8/9/01	8/9/01	8/9/01	8/9/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	6.5	6	6.4	5.1
Lead	25	4.9	6	4.8

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-235]C2-005-DAVG	01-N01-SS[NGRR-237]C2-005	01-N01-SS[NGRR-238]C2-005	01-N01-SS[NGRR-239]C2-005
Date Sampled	8/9/01	8/9/01	8/9/01	8/9/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	6.5	4.8	6	4.6
Lead	7	6.1	7.8	5.4

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-240]C2-005	01-N01-SS[NGRR-241]C2-005	01-N01-SS[NGRR-242]C2-005	01-N01-SS[NGRR-243]C2-005
Date Sampled	8/9/01	8/9/01	8/9/01	8/9/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	11	13	3.9	5.9
Lead	13	8.3	5.2	4.8

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-297]C2-005	01-N01-SS[NGRR-298]C2-005	01-N01-SS[NGRR-299]C2-005	01-N01-SS[NGRR-300]C2-005
Date Sampled	8/15/01	8/15/01	8/15/01	8/15/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	8.4	7.8	18	5.9
Lead	7.7	9.6	26	55

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-319]C2-005	01-N01-SS[NGRR-321]C2-005-DAVG	01-N01-SS[NGRR-323]C2-005	01-N01-SS[NGRR-324]C2-005
Date Sampled	8/16/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	8.9	42 U	40 U	37 U
Lead	76	21 U	41	18 U

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-325]C2-005	01-N01-SS[NGRR-326]C2-005	01-N01-SS[NGRR-327]C2-005	01-N01-SS[NGRR-328]C2-005
Date Sampled	8/20/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	36 U	37 U	36 U	39 U
Lead	18 U	18 U	18 U	19 U

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-329]C2-005	01-N01-SS[NGRR-330]C2-005	01-N01-SS[NGRR-331]C2-005	01-N01-SS[NGRR-333]C2-005
Date Sampled	8/20/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	37 U	39 U	35 U	46 U
Lead	19 U	19 U	18 U	23 U

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-334]C2-005	01-N01-SS[NGRR-335]C2-005	01-N01-SS[NGRR-336]C2-005	01-N01-SS[NGRR-337]C2-005
Date Sampled	8/20/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	42 U	43 U	38 U	39 U
Lead	21 U	22	19 U	19 U

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-338]C2-005	01-N01-SS[NGRR-339]C2-005	01-N01-SS[NGRR-340]C2-005	01-N01-SS[NGRR-341]C2-005
Date Sampled	8/20/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	41 U	38 U	39 U	41 U
Lead	20 U	19 U	19 U	21 U

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-342]C2-005-DAVG	01-N01-SS[NGRR-344]C2-005	01-N01-SS[NGRR-345]C2-005	01-N01-SS[NGRR-346]C2-005
Date Sampled	8/20/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	42 U	43 U	39 U	41 U
Lead	46 J	21 UJ	20 UJ	21 UJ

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-347]C2-005	01-N01-SS[NGRR-348]C2-005	01-N01-SS[NGRR-349]C2-005	01-N01-SS[NGRR-350]C2-005
Date Sampled	8/20/01	8/20/01	8/20/01	8/20/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	38 U	41 U	38 U	40 U
Lead	19 UJ	20 UJ	19 UJ	20 UJ

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-362]C2-005	01-N01-SS[NGRR-363]C2-005	01-N01-SS[NGRR-364]C2-005	01-N01-SS[NGRR-365]C2-005
Date Sampled	8/21/01	8/21/01	8/21/01	8/21/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	5.5	6.7	6	3.6
Lead	13	8.3	5.3	3.4

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-383]C2-005-DAVG	01-N01-SS[NGRR-385]C2-005	01-N01-SS[NGRR-386]C2-005	01-N01-SS[NGRR-387]C2-005
Date Sampled	8/23/01	8/23/01	8/23/01	8/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	5.05	5.7	6	3.5
Lead	5.35	6.8	3.8	2.2 U

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-388]C2-005	01-N01-SS[NGRR-389]C2-005	01-N01-SS[NGRR-390]C2-005	01-N01-SS[NGRR-391]C2-005
Date Sampled	8/23/01	8/23/01	8/23/01	8/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	6.6	8.6	5.9	7.1
Lead	6.2	7	3.7	3.4

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-392]C2-005	01-N01-SS[NGRR-393]C2-005	01-N01-SS[NGRR-395]C2-005	01-N01-SS[NGRR-396]C2-005
Date Sampled	8/23/01	8/23/01	8/23/01	8/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	7.9	3.6	4	3.4
Lead	4.3	62	4	3.6

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-397]C2-005	01-N01-SS[NGRR-398]C2-005	01-N01-SS[NGRR-399]C2-005	01-N01-SS[NGRR-400]C2-005
Date Sampled	8/23/01	8/23/01	8/23/01	8/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	7.8	3.3	13	3.3
Lead	17	3.1	15	4.5

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-401]C2-005	01-N01-SS[NGRR-402]C2-005	01-N01-SS[NGRR-403]C2-005	01-N01-SS[NGRR-404]C2-005
Date Sampled	8/23/01	8/23/01	8/23/01	8/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	4.5	10	8.4	8.7
Lead	2.7	8.3	9.3	6.8

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-405]C2-005	01-N01-SS[NGRR-406]C2-005	01-N01-SS[NGRR-407]C2-005	01-N01-SS[NGRR-408]C2-005
Date Sampled	8/23/01	8/23/01	8/23/01	8/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	7	6.5	9.8	13
Lead	6.1	9	16	15

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-409]C2-005	01-N01-SS[NGRR-410]C2-005	01-N01-SS[NGRR-411]C2-005-DAVG	01-N01-SS[NGRR-413]C2-005
Date Sampled	8/23/01	8/23/01	8/27/01	8/27/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	10	14	9.3	3
Lead	11	18	8.1	2 U

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-414]C2-005	01-N01-SS[NGRR-415]C2-005	01-N01-SS[NGRR-416]C2-005	01-N01-SS[NGRR-417]C2-005
Date Sampled	8/27/01	8/27/01	8/27/01	8/27/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	10	6.6	7.7	11
Lead	8.2	3.9	7.7	11

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18
Sample ID	01-N01-SS[NGRR-418]C2-005	01-N01-SS[NGRR-419]C2-005	01-N01-SS[NGRR-420]C2-005	01-N01-SS[NGRR-421]C2-005
Date Sampled	8/27/01	8/27/01	8/27/01	8/27/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	8.3	11	6.3	6.4
Lead	5.4	8.6	4	5

Area	18	18	18	18
Sample ID	01-TS03-SS-[R23C09]-D1-015	01-TS03-SS-[R24C08]-D1-015	01-TS03-SS-[R24C09]-D1-015	01-TS03-SS-[R24C10]-D1-015
Date Sampled	9/4/01	9/4/01	9/4/01	9/4/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	7	5.8	10	10
Lead	17	8.8	9.2	28

Area	18	18	18	18
Sample ID	01-TS03-SS-[R25C08]-D1-015	01-TS03-SS-[R25C09]-D1-015	01-TS03-SS-[R25C10]-D1-015	01-TS04-SS[R35C14]-D1-015
Date Sampled	9/4/01	9/4/01	9/4/01	9/4/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	9.5	8.9	4.8	33
Lead	21	96	12	19

Area	18	18	18	18
Sample ID	01-TS04-SS[R35C15]-D1-015	01-TS04-SS[R35C16]-D1-015	01-TS04-SS[R36C16]-D1-015	01-TS04-SS[R37C17]-D1-015
Date Sampled	9/4/01	9/4/01	9/4/01	9/4/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg)				
Arsenic	10	8.1	19	16
Lead	9.5	15	31	22

Area	18	18	18	18
Sample ID	02-F29-SS[F-205-2]C2-030	02-F30-SS[F-227-2]C2-030	02-F31-SS[F-233-2]C2-030	02-N01-SS[NGRR-156-2]C2-025
Date Sampled	8/30/01	8/30/01	8/30/01	8/30/01
Depth	3 to 3.5	3 to 3.5	3 to 3.5	2.5 to 3
Total Metals (mg/kg)				
Arsenic	3.9	5.6	5.7	5.3
Lead	13	35 J	54 J	2

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	**18**
Sample ID	**02-TS04-SS-[R34C15-2]-D2-030**
Date Sampled	**9/19/01**
Depth	**2 to 2.5**
Total Metals (mg/kg)	
Arsenic	8.2
Lead	5.8

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-501-DAVG	18-SS-502	18-SS-503	18-SS-504	18-SS-505	18-SS-507	18-SS-508	18-SS-509
Date Sampled	5/7/92	5/7/92	5/7/92	5/7/92	5/7/92	3/4/92	5/7/92	3/4/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	36	55	28	57	31	120	190	270
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-510	18-SS-511	18-SS-514	18-SS-515	18-SS-516	18-SS-517	18-SS-518	18-SS-519
Date Sampled	3/4/92	5/7/92	3/4/92	5/4/92	5/4/92	5/4/92	5/4/92	5/4/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	59	5 U	87	31	25	190	28	33
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-520	18-SS-521-DAVG	18-SS-522	18-SS-523	18-SS-524	18-SS-525	18-SS-527	18-SS-528
Date Sampled	3/4/92	3/4/92	5/4/92	3/4/92	5/4/92	5/4/92	5/4/92	5/4/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead	1.1			2.3				
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	1300	340	110	1800	76	15	390	190
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18 North	18 North	18 North	18	18	18 North	18 North
Sample ID	18-SS-529	18-SS-530	18-SS-531	18-SS-532	18-SS-533	18-SS-534	18-SS-536	18-SS-537
Date Sampled	5/5/92	3/4/92	5/5/92	3/4/92	5/5/92	5/5/92	5/5/92	5/5/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	25	570	15	46	7	62	520	210
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18	18
Sample ID	18-SS-538	18-SS-539	18-SS-540-DAVG	18-SS-541	18-SS-542	18-SS-543	18-SS-546	18-SS-547
Date Sampled	5/5/92	3/4/92	5/5/92	3/4/92	3/4/92	3/4/92	5/7/92	4/27/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	5 U	5.8 U	250	25	26	27	16	110
Mercury								
Nickel								
Zinc								

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-548	18-SS-550	18-SS-551	18-SS-560-DAVG	18-SS-561	18-SS-562	18-SS-563	18-SS-564
Date Sampled	4/27/92	4/27/92	5/5/92	5/5/92	5/6/92	3/4/92	3/4/92	5/6/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	110	62	8	31	25	56	26	25
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-565	18-SS-566	18-SS-568	18-SS-569	18-SS-570	18-SS-571	18-SS-575	18-SS-576
Date Sampled	5/6/92	3/4/92	5/6/92	5/6/92	5/6/92	5/6/92	5/6/92	5/6/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	89	44	290	37	40	82	5 U	55
Mercury								
Nickel								
Zinc								

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-577	18-SS-578	18-SS-580	18-SS-581	18-SS-583-DAVG	18-SS-584-2	18-SS-585	18-SS-586
Date Sampled	5/7/92	5/6/92	5/6/92	5/6/92	5/7/92	7/1/93	5/6/92	5/6/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic					21.4	150		
Cadmium					0.32 J			
Chromium					14.1			
Copper					26			
Lead	180	120	58	38	28	75	19	26
Mercury					0.09			
Nickel					20			
Zinc					71.8			

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-587	18-SS-588	18-SS-590	18-SS-591	18-SS-592	18-SS-593	18-SS-594-DAVG	18-SS-595
Date Sampled	5/6/92	5/6/92	5/6/92	5/7/92	5/6/92	3/4/92	5/6/92	3/4/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic			6.4 J					
Cadmium			0.18					
Chromium			13.5					
Copper			18.4					
Lead	21	43	6.6 U	37	150	140	84	160
Mercury			0.13 U					
Nickel			16.7					
Zinc			112					

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18	18	18 North	18	18	18	18
Sample ID	18-SS-666	18-SS-667	18-SS-668	18-SS-670	18-SS-671	18-SS-672	18-SS-673	18-SS-674
Date Sampled	11/2/92	11/2/92	11/2/92	11/3/92	11/2/92	11/2/92	11/2/92	11/2/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	99	6.6 U	8.5	16	190	140	87	26
Mercury								
Nickel								
Zinc								

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-675	18-SS-676	18-SS-677	18-SS-678	18-SS-679	18-SS-680	18-SS-681	18-SS-682
Date Sampled	11/2/92	11/2/92	11/2/92	11/2/92	11/2/92	11/2/92	11/2/92	11/2/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	47	77	45	16	86	59	33	62
Mercury								
Nickel								
Zinc								

Area	18	18	18	18 North	18 North	18	18 North	18
Sample ID	18-SS-683	18-SS-685	18-SS-686-DAVG	18-SS-687	18-SS-688	18-SS-689	18-SS-690	18-SS-691
Date Sampled	11/2/92	11/2/92	11/2/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	51	76	59	620	86	240	170	38
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18 North	18 North	18 North	18 North
Sample ID	18-SS-692-DAVG	18-SS-693	18-SS-694	18-SS-695	18-SS-696	18-SS-697	18-SS-[illegible]	18-SS-699
Date Sampled	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	8.3	130	86	81	570	110	110	38
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-701	18-SS-702-DAVG	18-SS-703	18-SS-705	18-SS-706	18-SS-707	18-SS-708	18-SS-709
Date Sampled	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92	11/3/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	140	120	42	94	34	1000	930	330
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18	18	18	18	18 North	18
Sample ID	18-SS-711	18-SS-713	18-SS-730	18-SS-731	18-SS-732	18-SS-733-DAVG	18-SS-802	18-SS-803
Date Sampled	11/3/92	11/3/92	12/18/92	12/18/92	12/18/92	12/18/92	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	130	150	8.8	72	28	14	24	34
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-804	18-SS-806	18-SS-807	18-SS-808	18-SS-809	18-SS-810	18-SS-811	18-SS-812
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	57	31	76	130	20	150	27	71
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18	18	18	18	18	18 North
Sample ID	18-SS-813	18-SS-814	18-SS-815-DAVG	18-SS-816	18-SS-817	18-SS-819	18-SS-820	18-SS-821
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	14	20	9.3	110	270	5.8	63	36
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18
Sample ID	18-SS-822	18-SS-823	18-SS-824	18-SS-825	18-SS-826	18-SS-827	18-SS-828	18-SS-829
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	97	81	120	56	48	5 U	33	67
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-831	18-SS-832	18-SS-833	18-SS-834	18-SS-835	18-SS-836	18-SS-839	18-SS-840
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	76	200	5.7	39	75	1600	280	200 J
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-841	18-SS-842	18-SS-843-DAVG	18-SS-844	18-SS-845	18-SS-846	18-SS-847	18-SS-852
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	180	21	69 J	390	200	190	420	290
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18	18 North	18 North	18 North	18	18
Sample ID	18-SS-853	18-SS-854	18-SS-856	18-SS-857	18-SS-858	18-SS-859	18-SS-860-DAVG	18-SS-861
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	590	11	34	63	165	61	44	25
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18 North	18 North	18	18	18	18 North	18 North
Sample ID	18-SS-862	18-SS-863	18-SS-864	18-SS-865	18-SS-866	18-SS-867	18-SS-868	18-SS-869
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	5 U	379	204	17	106	59	37	21
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18	18	18	18	18
Sample ID	18-SS-870	18-SS-871	18-SS-874	18-SS-875-DAVG	18-SS-876	18-SS-877	18-SS-878	18-SS-879
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	72	54	18	19	79	42	98	73
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-880	18-SS-881	18-SS-882	18-SS-883	18-SS-884	18-SS-885	18-SS-887	18-SS-888
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	120	160	140	220 J	44	38	140	33
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18 North	18 North	18 North	18 North	18 North	18	18 North
Sample ID	18-SS-889	18-SS-891	18-SS-892	18-SS-893	18-SS-894	18-SS-896	18-SS-897	18-SS-898
Date Sampled	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93	4/5/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	28	65	170	130	92	360	220	1000
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-SS-899	18-SS-900	18-SS-901	18-SS-902	18-SS-903	18-SS-904	18-SS-905	18-SS-906
Date Sampled	4/5/93							
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	10	2200	810	230	1000	450	360	140
Mercury								
Nickel								
Zinc								

Area	18-SS-909	18-SS-910	18-SS-915	18-SS-917	18-SS-918	18-SS-919	18-SS-920	18-SS-921
Sample ID								
Date Sampled								
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	7.6 J	7.6	130	15	25	120	250	150
Mercury								
Nickel								
Zinc								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18-SS-922	18-SS-924	18-SS-925	18-SS-926	18-SS-927	18-SS-932	18-SS-933	18-SS-934
Sample ID								
Date Sampled								
Depth	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	5 U	93	31	270	160	160	130	110
Mercury								
Nickel								
Zinc								

Area	18-SS-935
Sample ID	
Date Sampled	
Depth	**0 to 0.5**
TCLP Metals (mg/L)	
Lead	
Total Metals (mg/kg)	
Arsenic	
Cadmium	
Chromium	
Copper	
Lead	110
Mercury	
Nickel	
Zinc	

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18S-PS-VS-01-01	18S-PS-VS-01-02	18S-PS-VS-01-03	18S-PS-VS-01-04	18S-PS-VS-01-06	18S-PS-VS-01-07	18S-PS-VS-01-08	18S-PS-VS-01-11-DAVG
Date Sampled	12/11/98	12/11/98	12/11/98	12/11/98	12/11/98	12/11/98	12/11/98	12/11/98
Depth	1.7 to 3.65	1 to 2.5	1.3 to 2.85	1 to 2.5	1.2 to 2.65	1 to 2.5	1.2 to 2.65	1.3 to 2.85
Total Metals (mg/kg)								
Arsenic	3.1	3.6	5.3	3.6	3.9	3.3	4.3	4.65
Cadmium								
Lead	6.2	5.6	5.8	5.6	6	4.9	5.3	4.95
Mercury								

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-104	18-VS-123	18-VS-13A	18-VS-144	18-VS-14A	18-VS-150-DAVG	18-VS-155	18-VS-165
Date Sampled	8/26/93	8/26/93	12/9/92	8/26/93	12/9/92	8/26/93	8/26/93	8/26/93
Depth	2 to 2.5	0 to 1	0 to 1	1 to 1.5	0 to 1	1 to 2	4 to 5	1 to 1.5
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Lead	7.4	5.9	340	55	63	5.5 U	5.4 U	6 U
Mercury								

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-175-ST	18-VS-176-ST	18-VS-19-DAVG	18-VS-216	18-VS-217	18-VS-218	18-VS-220	18-VS-221
Date Sampled	8/31/93	8/31/93	4/12/93	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99
Depth	1 to 2	1 to 2	2 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg)								
Arsenic	20	22		63	15	25	2.8	5.3
Cadmium	1.5	2.9						
Lead	520	300	5.6 U	44	11	25	2.7	5.2
Mercury	0.44	0.23						

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-222	18-VS-223	18-VS-224-DAVG	18-VS-225	18-VS-226	18-VS-227	18-VS-230	18-VS-231
Date Sampled	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99
Depth	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg)								
Arsenic	36	4.9	9.35	67	350	40	4.9	2.3 U
Cadmium								
Lead	22	3.9	6.85	95	25	50	2.9	3.3
Mercury								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-232	18-VS-233	18-VS-234	18-VS-235	18-VS-236	18-VS-237	18-VS-238	18-VS-239
Date Sampled	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99
Depth	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg)								
Arsenic	6.9	56	150	36	8	2.4	6.7	2.3 U
Cadmium								
Lead	12	52	99	33	52	5.7	11	2.7
Mercury								

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-240	18-VS-240A	18-VS-241	18-VS-241A	18-VS-242	18-VS-243	18-VS-244	18-VS-245
Date Sampled	9/22/99	10/18/99	9/22/99	10/18/99	9/22/99	9/22/99	9/22/99	9/22/99
Depth	1 to 2.5	1 to 2.5	0 to 0.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg)								
Arsenic	4.8	5	27	50	3.3	30	180	36
Cadmium								
Lead	11	4.9	11	5.9	3.1	13	110	21
Mercury								

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-246	18-VS-247	18-VS-248	18-VS-249	18-VS-250	18-VS-251	18-VS-252	18-VS-253
Date Sampled	9/22/99	9/22/99	9/22/99	9/23/99	9/23/99	9/23/99	9/23/99	9/23/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg)								
Arsenic	1.9 U	1.9	9.7	27	3.8	3.8	4.8	8.5
Cadmium								
Lead	2	1.9	14	15	38	12	14	110
Mercury								

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-254	18-VS-255	18-VS-256	18-VS-257	18-VS-258	18-VS-259	18-VS-260	18-VS-261
Date Sampled	9/23/99	9/23/99	9/23/99	9/23/99	9/23/99	9/23/99	9/23/99	9/23/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg)								
Arsenic	6.4	2.7	4.4	120	34	240	35	60
Cadmium								
Lead	92	15	49	52	39	80	16	37
Mercury								

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-262	18-VS-263	18-VS-264	18-VS-29	18-VS-300	18-VS-32	18-VS-3A	18-VS-4A
Date Sampled	9/23/99	9/23/99	9/23/99	4/12/93	1/25/00	4/12/93	12/8/92	12/8/92
Depth	1 to 2.5	1 to 2.5	1 to 2.5	3 to 3.5	6.5 to 11.5	15 to 15.5	0 to 1	0 to 1
Total Metals (mg/kg)								
Arsenic	29	16	6.7		2.3 U			
Cadmium								
Lead	12	9.1	4.8	5.1 U	11	5.6 U	33	24
Mercury								

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-54	18-VS-59	18-VS-69	18-VS-6A	18-VS-73	18-VS-76	18-VS-8A	18-VS-90
Date Sampled	4/12/93	8/26/93	8/26/93	12/8/92	8/26/93	8/26/93	12/8/92	8/26/93
Depth	0 to 1	2 to 2.5	2 to 2.5	0 to 1	0 to 0.5	0 to 0.5	0 to 1	1 to 1.5
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Lead	5.8 U	5.1 U	5.3 U	58	5.4 U	240	8.1	120
Mercury								

Area	18	18
Sample ID	18-VS-92	18-VS-9A
Date Sampled	8/26/93	12/8/92
Depth	2 to 2.5	0 to 1
Total Metals (mg/kg)		
Arsenic		
Cadmium		
Lead	240	240
Mercury		

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18 North	18 North
Sample ID	18-TP-21,S-1	18-TP-25,S-1	18-TP-26,S-1	18-TP-27,S-1	18-TP-28,S-1	18-TP-29,S-1	18-TP-30,S-1	18-TP-31,S-1
Date Sampled	4/16/87	4/29/87	4/29/87	4/29/87	4/29/87	4/29/87	4/29/87	4/29/87
Depth	0 to 4	0 to 4	0 to 4	0 to 5	0 to 5	0 to 5	0 to 5	0 to 5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	16	2400	520	120	26	390	730	300
Mercury								
Nickel								
Zinc								

Area	18	18	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-TP-33,S-1-DAVG	18-TP-34,S-1	18-TP-501-S-1-DAVG	18-TP-501-S-2-DAVG	18-TP-501-S-3	18-TP-502-S-1	18-TP-502-S-2	18-TP-502-S-3
Date Sampled	4/30/87	4/30/87	5/11/92	5/11/92	5/11/92	5/1/92	5/1/92	5/1/92
Depth	0 to 4	0 to 3	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic				3.6 J			2.3	
Cadmium				0.03 J			0.057	
Chromium				15.9			11	
Copper				15			11	
Lead	2900	250	55	5.2 U	5 U	520	5.5 U	5 U
Mercury				0.11 U			0.092 U	
Nickel				19.9			16	
Zinc				27.6			19	

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-TP-503-S-1	18-TP-503-S-2	18-TP-503-S-3	18-TP-504-S-1	18-TP-504-S-2	18-TP-504-S-3	18-TP-505-S-1	18-TP-505-S-2
Date Sampled	5/1/92	5/1/92	5/1/92	5/11/92	5/11/92	5/11/92	5/11/92	5/11/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic		2.4			3			3.3 J
Cadmium		0.076			0.09 J			0.07 J
Chromium		16			11.3			15.6
Copper		14			14.4			21.6
Lead	160	5.3 U	5 U	330	5.5	5 U	68	5.4 U
Mercury		0.079 U			0.11 U			0.11 U
Nickel		19			14.8			21.6
Zinc		24			21.6			29.8

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-TP-505-S-3	18-TP-506-S-1	18-TP-506-S-2	18-TP-506-S-3	18-TP-507-S-1	18-TP-507-S-2	18-TP-507-S-3	18-TP-508-S-1
Date Sampled	5/11/92	5/12/92	5/12/92	5/12/92	5/12/92	5/12/92	5/12/92	5/12/92
Depth	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	4 J	56	32	5 U	700	16	5 U	5 U
Mercury								
Nickel								
Zinc								

Area	18 North	18 North	18	18	18	18	18	18
Sample ID	18-TP-508-S-2	18-TP-508-S-3	18-TP-509-S-1	18-TP-509-S-2	18-TP-509-S-3	18-TP-510-S-2-DAVG	18-TP-510-S-3	18-TP-512-S-1
Date Sampled	5/12/92	5/12/92	5/12/92	5/12/92	5/12/92	5/14/92	5/14/92	5/14/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic						3.12		
Cadmium						0.1		
Chromium						13.7		
Copper						16.5		
Lead	5 U	5 U	56	5 U	5 U	5.3	5 U	60
Mercury						0.11 U		
Nickel						19.6		
Zinc						23		

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-512-S-2	18-TP-512-S-3	18-TP-513-S-1	18-TP-513-S-2	18-TP-513-S-3	18-TP-514-S-1-DAVG	18-TP-514-S-2	18-TP-514-S-3
Date Sampled	5/14/92	5/14/92	5/14/92	5/14/92	5/14/92	5/11/92	5/11/92	5/11/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic	2.54			3.15			4.5 J	
Cadmium	0.06			0.06			0.08 J	
Chromium	14.6			17.4			14.8	
Copper	19.3			18.6			16.5	
Lead	5.5 U	5 U	19	5.4 U	5 U	220	5.3 U	5 U
Mercury	0.11 U			0.11 U			0.11 U	
Nickel	20.2			20.9			17.9	
Zinc	24.3			25			25.8	

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-515-S-2	18-TP-515-S-3	18-TP-516-S-1	18-TP-516-S-2	18-TP-516-S-3	18-TP-517-S-1	18-TP-517-S-2	18-TP-517-S-3
Date Sampled	5/14/92	5/14/92	5/14/92	5/14/92	5/14/92	5/14/92	5/14/92	5/14/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	5 U	5 U	19	5 U	5 U	92	5 U	5 U
Mercury								
Nickel								
Zinc								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-518-S-1	18-TP-518-S-2	18-TP-518-S-3	18-TP-519-S-2-DAVG	18-TP-519-S-3	18-TP-520-S-1	18-TP-520-S-2-DAVG	18-TP-520-S-3
Date Sampled	5/14/92	5/14/92	5/14/92	5/11/92	5/11/92	4/27/92	4/27/92	4/27/92
Depth	0 to 1	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic				3.5			1.4	
Cadmium				0.07 J			0.62	
Chromium				17.5			8.3	
Copper				18.7			20	
Lead	21	5 U	5 U	5.3 U	18	5.7 U	5.2 U	5.4 U
Mercury				0.11 U			0.085 U	
Nickel				18.6			12	
Zinc				26.1			53	

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-521-S-3	18-TP-522-S-3	18-TP-523-S-2	18-TP-523-S-3	18-TP-524-S-1	18-TP-524-S-2	18-TP-524-S-3	18-TP-525-S-2
Date Sampled	5/12/92	5/13/92	5/13/92	5/13/92	5/12/92	5/12/92	5/12/92	5/12/92
Depth	8 to 10	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	3 to 6
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								4.57 J
Cadmium								0.05 J
Chromium								15.7
Copper								18.6
Lead	5 U	5 U	5 U	5 U	68	5 U	5 U	5.4 U
Mercury								0.11 U
Nickel								20.6
Zinc								29.5

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-525-S-3	18-TP-526-S-1	18-TP-526-S-2	18-TP-526-S-3	18-TP-527-S-1-DAVG	18-TP-527-S-2-DAVG	18-TP-527-S-3	18-TP-528-S-1
Date Sampled	5/12/92	4/30/92	4/30/92	4/30/92	5/13/92	5/13/92	5/13/92	5/13/92
Depth	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic			4.36					
Cadmium			0.09					
Chromium			23.2					
Copper			28.5					
Lead	5 U	140	5.2 U	5 U	5 U	5 U	5 U	13
Mercury			0.11 U					
Nickel			24.4					
Zinc			41.6					

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-528-S-2	18-TP-528-S-3	18-TP-529-S-1	18-TP-529-S-2	18-TP-529-S-3	18-TP-530-S-1	18-TP-530-S-2	18-TP-530-S-3
Date Sampled	5/13/92	5/13/92	5/13/92	5/13/92	5/13/92	5/13/92	5/13/92	5/13/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	6	6	5 U	7	5 U	5 U	5 U	5
Mercury								
Nickel								
Zinc								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-531-S-1-DAVG	18-TP-531-S-2	18-TP-531-S-3	18-TP-532-S-1	18-TP-532-S-2	18-TP-532-S-3	18-TP-533-S-1-DAVG	18-TP-533-S-2-DAVG
Date Sampled	5/15/92	5/15/92	5/15/92	4/29/92	4/29/92	4/29/92	4/28/92	4/28/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	2 to 3
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic		3.33			7.05			2.6
Cadmium		0.08			0.1			0.9
Chromium		12.2			19.7			22
Copper		16.4			29.6			12
Lead	12	5.4 U	5 U	97	67	5 U	21	5.9 U
Mercury		0.11 U			0.12 U			0.09 U
Nickel		19.4			23.4			21
Zinc		29.8			49.3			25

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18 North	18 North	18 North	18 North	18 North
Sample ID	18-TP-533-S-4	18-TP-534-S-2	18-TP-534-S-3	18-TP-535-S-1-DAVG	18-TP-535-S-2	18-TP-535-S-3	18-TP-536-S-1	18-TP-536-S-2
Date Sampled	4/28/92	4/30/92	4/30/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92
Depth	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic		3.43			2.4			2.8
Cadmium		0.07			1			0.41
Chromium		14.5			13			12
Copper		14.5			24000			19
Lead	5.3 U	5.2 U	5 U	90	60	26	59	5.5 U
Mercury		0.11 U			0.1 U			0.094 U
Nickel		18.5			18			16
Zinc		53.3			1100			22

Area	18 North	18	18	18	18	18	18	18
Sample ID	18-TP-536-S-3	18-TP-537-S-2	18-TP-537-S-3	18-TP-538-S-1	18-TP-538-S-2	18-TP-538-S-3	18-TP-539-S-1	18-TP-539-S-2
Date Sampled	4/27/92	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92
Depth	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)				0.45				
Lead								
Total Metals (mg/kg)								
Arsenic		1.9			1			2.2
Cadmium		0.048			0.03			0.09
Chromium		11			6			11
Copper		16			14			13
Lead	5.2 U	5.4 U	4.9 U	960	5.3 U	37	36	5.5 U
Mercury		0.086 U			0.095 U			0.091 U
Nickel		17			10			15
Zinc		23			23			21

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-539-S-3	8-TP-540-S-2-DAV	18-TP-540-S-3	18-TP-541-S-1	18-TP-541-S-2	18-TP-541-S-3	18-TP-542-S-2-DAVG	18-TP-542-S-3
Date Sampled	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92	4/28/92	4/28/92
Depth	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic		1.7			1.6		1.4 J	
Cadmium		0.062			0.032		0.031	
Chromium		10			8.1		7.9	
Copper		14			15		7 J	
Lead	4.9 U	5.4 U	7.1	18	5.2 U	5 U	5.2 U	5.5 U
Mercury		0.092 U			0.098 U		0.08 U	
Nickel		15			13		8.7	
Zinc		32			20		23	

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-543-S-1	18-TP-543-S-2	18-TP-543-S-3	18-TP-544-S-1	18-TP-544-S-2	18-TP-544-S-3	18-TP-545-S-1	18-TP-545-S-2
Date Sampled	4/28/92	4/28/92	4/28/92	5/15/92	5/15/92	5/15/92	4/29/92	4/29/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)								
Lead	6.7							
Total Metals (mg/kg)								
Arsenic		1.8			4.36			9.06
Cadmium		0.29			0.22			0.4
Chromium		8.3			13.4			21.2
Copper		13			61.8			17.3
Lead	1900	5.1 U	5 U	28	290	35	15	9.6
Mercury		0.077 U			0.11 U			0.12 U
Nickel		13			16.8			21.1
Zinc		21			147			269

Area	18	18	18	18 North	18 North	18 North	18	18
Sample ID	18-TP-545-S-3	18-TP-546-S-2	18-TP-546-S-3	18-TP-547-S-1-DAVG	18-TP-547-S-2-DAVG	18-TP-547-S-3	18-TP-548-S-1	18-TP-548-S-2
Date Sampled	4/29/92	4/28/92	4/28/92	5/1/92	5/1/92	5/1/92	5/14/92	5/14/92
Depth	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic		5.8			2			2.61
Cadmium		0.076			0.062			0.08
Chromium		11			12			16.6
Copper		8.4 J			14			15.1
Lead	5 U	5.4 U	5.2 U	140	5.3 U	5 U	19	5.5 U
Mercury		0.082 U			0.082 U			0.11 U
Nickel		15			15			20.3
Zinc		41			22			30.8

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-548-S-3	18-TP-549-S-1	18-TP-549-S-2	18-TP-549-S-3	18-TP-550-S-1	18-TP-550-S-2	18-TP-550-S-3	18-TP-551-S-1
Date Sampled	5/14/92	5/1/92	5/1/92	5/1/92	5/15/92	5/15/92	5/15/92	5/15/92
Depth	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic			1.8			3.23		
Cadmium			0.062			0.17		
Chromium			8.5			14.9		
Copper			11			18		
Lead	5	85	5.4 U	5 U	8.6	60	5 U	33
Mercury			0.08 U			0.11 U		
Nickel			12			18.5		
Zinc			19			59.4		

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-551-S-2	18-TP-551-S-3	18-TP-552-S-1	18-TP-552-S-2	18-TP-552-S-3	18-TP-553-S-1	18-TP-553-S-2	18-TP-554-S-1
Date Sampled	5/15/92	5/15/92	4/29/92	4/29/92	4/29/92	4/29/92	4/29/92	4/29/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	0 to 1
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic	4.38			3.45			4.23	
Cadmium	0.06			0.08			0.71	
Chromium	16.7			15			20.7	
Copper	20			17			66.3	
Lead	5.7 U	5 U	11	5.2 U	5 U	11	46	40
Mercury	0.12 U			0.11 U			0.12 U	
Nickel	19			19.4			24.4	
Zinc	29.6			33.2			364	

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-554-S-2	18-TP-554-S-3	18-TP-555-S-1-DAVG	18-TP-555-S-2-DAVG	18-TP-555-S-3	18-TP-556-S-1	18-TP-556-S-2	18-TP-556-S-3
Date Sampled	4/29/92	4/29/92	4/30/92	4/30/92	4/30/92	5/13/92	5/13/92	5/13/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic	4.39			19.8			2.25	
Cadmium	0.07			0.24			0.1	
Chromium	17.2			23.4			10	
Copper	14.8			23.7			17	
Lead	5.6 U	5 U	31	160	5 U	7	5.2 U	6
Mercury	0.12 U			0.11 U			0.1 U	
Nickel	20.1			22.3			15.6	
Zinc	30.4			89.9			27.9	

Area	18	18	18	18	18	18	18 North	18 North
Sample ID	18-TP-557-S-1	18-TP-557-S-2	18-TP-557-S-3	18-TP-558-S-1	18-TP-558-S-3	18-TP-558-S-4	18-TP-559-S-1-DAVG	18-TP-559-S-2-DAVG
Date Sampled	4/30/92	4/30/92	4/30/92	4/30/92	4/30/92	4/30/92	5/1/92	5/1/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg)								
Arsenic		3.08			3.21			2.4
Cadmium		0.06			0.06			0.038
Chromium		19.1			17.1			4.3
Copper		16.3			20.8			3.1
Lead	5 U	9.4	260	26	5.1 U	5 U	76	23
Mercury		0.11 U			0.11 U			0.083 U
Nickel		21.5			22.5			2.9
Zinc		67.4			31.1			8.6

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18 North
Sample ID	18-TP-559-S-3
Date Sampled	5/1/92
Depth	8 to 10
TCLP Metals (mg/L)	
Lead	
Total Metals (mg/kg)	
Arsenic	
Cadmium	
Chromium	
Copper	
Lead	100
Mercury	
Nickel	
Zinc	

Area	18	18	18	18	18	18
Sample ID	18-HA-501-S-1-DAVG	18-HA-501-S-2	18-HA-502-S-1	18-HA-502-S-2	18-HA-503-S-1	18-HA-503-S-2
Date Sampled	5/21/92	5/21/92	5/21/92	5/21/92	5/21/92	5/21/92
Depth	0 to 1	2 to 3	0 to 1	2 to 3	0 to 1	2 to 3
TCLP Metals (mg/L)						
Arsenic						
Total Metals (mg/kg)						
Arsenic						
Lead	46	5.8	5	5	74	22

Area	18	18	18	18	18	18
Sample ID	18-MH-1	18-MH-2	18-MH-3	18-MH-4	18-MH-6	18-MH-7
Date Sampled	7/1/93	7/1/93	7/1/93	7/1/93	7/1/93	7/7/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)						
Arsenic	0.05 U					
Total Metals (mg/kg)						
Arsenic	460	20	52	140	43	38
Lead						

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	SA5-86-41	SA5-86-42	SA5-86-43	SA5-86-44	SA5-87-41a	SA5-87-42	SA5-87-43	SA5-87-44
Date Sampled	10/12/99	10/12/99	10/12/99	10/12/99	10/13/99	10/12/99	10/12/99	10/12/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	52	9.6	13	8.2	7	19	5.3	5.7
Lead	40	15	15	9.2	9.9	21	9.4	7.6

Area	18	18	18	18	18	18	18	18
Sample ID	SA5-87-45a	SA5-88-41a	SA5-88-42	SA5-88-43	SA5-88-44a	SA5-88-45a	SA5-89-40-DAVG	SA5-89-41a
Date Sampled	10/13/99	10/13/99	10/12/99	10/12/99	10/18/99	10/13/99	10/12/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	4 to 5.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	50	11	12	20	3.2	10	11.5	44
Lead	16	13	18	13	4.3	12	15.5	53

Area	18	18	18	18	18	18	18	18
Sample ID	SA5-89-42	SA5-89-43	SA5-89-45a	SA5-91-41	SA5-91-42	SA5-92-41	SA5-92-42a	SA5-92-43a
Date Sampled	10/12/99	10/12/99	10/13/99	10/12/99	10/12/99	10/12/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	9.5	10	2.9	7.3	58	4	5	24
Lead	10	15	5.8	9.7	52	5.8	6.9	22

Area	18	18	18	18	18	18	18	18
Sample ID	SA5-93-41	SA5-93-42	SA5-93-43	SA5-93-44a	SA5-94-41	SA5-94-42	SA5-94-43	SA5-94-44a
Date Sampled	10/12/99	10/12/99	10/12/99	10/13/99	10/12/99	10/12/99	10/12/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	4.2	7.7	3.4	2.8	6.9	5.7	4.6	2.6
Lead	5.2	8.4	5.1	4.9	8.8	6	5.6	4.6

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	SA5-95-41	SA5-95-42	SA5-95-43	SA5-96-42a	SA6-67-26	SA6-67-27	SA6-67-28	SA6-67-29
Date Sampled	10/12/99	10/12/99	10/12/99	10/13/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	4.9	4.7	4	2.8	20	16	2.7	7.2
Lead	6.4	5.3	5	4.7	37	43	8.8	24

Area	18	18	18	18	18	18	18	18
Sample ID	SA6-67-30	SA6-67-31	SA6-67-32	SA6-67-33	SA6-67-34	SA6-67-35	SA6-68-26	SA6-68-27
Date Sampled	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	3.3	3.8	10	3.5	3	2.8	5.5	14
Lead	5.4	4.8	53	4.8	4.4	4.7	4.3 U	120

Area	18	18	18	18	18	18	18	18
Sample ID	SA6-68-28	SA6-68-29	SA6-68-30	SA6-68-31	SA6-68-32	SA6-68-33	SA6-68-34	SA6-68-35
Date Sampled	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	9.4	16	5.2	6.2	4.3	18	4.4	4.9
Lead	15	39	12	7.1	6.3	16	7	8.3

Area	18	18	18	18	18	18	18	18
Sample ID	SA6-68-36	SA6-69-27	SA6-69-28	SA6-69-29	SA6-69-30	SA6-69-31	SA6-69-32	SA6-69-33
Date Sampled	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	6.3	3.5	2.3	2.5	5.9	5.6	3.7	5.1
Lead	11	6.2	4.2 U	4.7 U	5.1	12	7.2	18

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	18	18	18	18	18	18	18	18
Sample ID	SA6-69-34	SA6-69-35	SA6-69-36	SA6-70-27	SA6-70-28	SA6-70-29	SA6-70-30	SA6-70-31
Date Sampled	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	4	3.4	6.1	19	3.1	2.1 U	2.4	37
Lead	5.9	4.8	6.9	44	6.8	4.1 U	4.5 U	58

Area	18	18	18	18	18	18	18	18
Sample ID	SA6-70-32	SA6-70-33	SA6-70-34	SA6-70-35	SA6-70-36	SA6-71-28	SA6-71-29	SA6-71-30
Date Sampled	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)								
Arsenic	12	6.2	3.7	7.8	3.6	39	2.9	4
Lead	27	11	6.4	15	5.7	110	3.8 U	5.4

Area	18	18	18	18	18
Sample ID	SA6-71-31	SA6-71-32	SA6-71-33	SA6-71-34	SA6-71-35
Date Sampled	10/15/99	10/15/99	10/15/99	10/15/99	10/15/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg)					
Arsenic	22	8.6	19	5.5	3.8
Lead	77	17	1600	8	6.9

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	1234	1234	1234	1234	1234	1234
Sample ID	01-F10-SS[F-177]C2-005	01-F10-SS[F-178]C2-005	01-F10-SS[F-179]C2-005	01-F10-SS[F-180]C2-005	01-F10-SS[F-181]C2-005	01-F10-SS[F-182]C2-005
Date Sampled	7/19/01	7/19/01	7/19/01	7/19/01	7/19/01	7/19/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic	2.4	11	5.5	10	12	4.6
Cadmium						
Chromium						
Copper						
Lead	4.5	98	89	60	16	18
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	01-N01-SS[NGRR-101]C2-005	01-N01-SS[NGRR-102]C2-005	01-N01-SS[NGRR-120]C2-005	01-N01-SS[NGRR-121]C2-005	01-N01-SS[NGRR-122]C2-005	1234-SS-501
Date Sampled	7/19/01	7/19/01	7/23/01	7/23/01	7/23/01	5/7/92
Depth	1 to 2	1 to 2	1 to 2	1 to 2	1 to 2	0 to 0.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic	6.5	3.1	13	4.3	5.7	
Cadmium						
Chromium						
Copper						
Lead	5.8	76	19	3.9	8.1	23
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-SS-502	1234-SS-503	1234-SS-504	1234-SS-505	1234-SS-506	1234-SS-507
Date Sampled	5/7/92	5/7/92	5/7/92	5/7/92	5/7/92	5/7/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	63	100	19	14	46	200
Mercury						
Nickel						
Zinc						

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-SS-508	1234-SS-509	1234-SS-510	1234-SS-511	1234-SS-512	1234-SS-513-DAVG
Date Sampled	5/7/92	5/8/92	5/8/92	3/4/92	3/4/92	5/8/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	17	19	430	59	6.1 U	170
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-SS-514-DAVG	1234-SS-515	1234-TP-501-S-1	1234-TP-501-S-2	1234-TP-502-S-1	1234-TP-502-S-2
Date Sampled	3/4/92	5/8/92	5/18/92	5/18/92	5/18/92	5/18/92
Depth	0 to 0.5	0 to 0.5	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	51	48	270	79	7.8	5 U
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-502-S-3	1234-TP-503-S-1	1234-TP-503-S-2	1234-TP-503-S-3	1234-TP-504-S-1-DAVG	1234-TP-504-S-2
Date Sampled	5/18/92	5/21/92	5/21/92	5/21/92	5/19/92	5/19/92
Depth	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	5 U	100	5 U	5 U	300	42
Mercury						
Nickel						
Zinc						

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-505-S-1	1234-TP-505-S-2	1234-TP-505-S-3	1234-TP-506-S-1	1234-TP-506-S-2	1234-TP-506-S-3
Date Sampled	5/19/92	5/19/92	5/19/92	5/20/92	5/20/92	5/20/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic					3.73	
Cadmium					0.16	
Chromium					12.3	
Copper					29.1	
Lead	50	68	5 U	54	65	7
Mercury					0.11 U	
Nickel					35	
Zinc					53.9	

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-507-S-1	1234-TP-507-S-2	1234-TP-507-S-3	1234-TP-508-S-1	1234-TP-508-S-2	1234-TP-508-S-3
Date Sampled	5/18/92	5/18/92	5/18/92	5/18/92	5/18/92	5/18/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	34	5 U	5 U	81	11	5 U
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-509-S-1	1234-TP-509-S-2	1234-TP-509-S-3	1234-TP-510-S-2-DAVG	1234-TP-511-S-1	1234-TP-511-S-2
Date Sampled	5/21/92	5/21/92	5/21/92	5/21/92	5/21/92	5/21/92
Depth	0 to 1	3 to 6	8 to 10	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	26	5 U	5 U	5 U	6	5 U
Mercury						
Nickel						
Zinc						

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-512-S-1	1234-TP-512-S-2	1234-TP-513-S-1	1234-TP-513-S-2	1234-TP-514-S-1	1234-TP-514-S-2
Date Sampled	5/19/92	5/19/92	5/19/92	5/19/92	5/19/92	5/19/92
Depth	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead	28					
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	2500	19	560	15	470	36
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-515-S-1	1234-TP-515-S-2	1234-TP-516-S-1-DAVG	1234-TP-516-S-2	1234-TP-517-S-1	1234-TP-517-S-2
Date Sampled	5/19/92	5/19/92	5/20/92	5/20/92	5/20/92	5/20/92
Depth	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	19	5 U	52	20	200	5 U
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-518-S-1	1234-TP-518-S-2	1234-TP-519-S-1	1234-TP-519-S-2	1234-TP-520-S-1	1234-TP-520-S-2
Date Sampled	5/19/92	5/19/92	5/20/92	5/20/92	5/18/92	5/18/92
Depth	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	5 U	5 U	9	5 U	410	5 U
Mercury						
Nickel						
Zinc						

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-521-S-1	1234-TP-521-S-2	1234-TP-522-S-1-DAVG	1234-TP-522-S-2-DAVG	1234-TP-523-S-1	1234-TP-523-S-2
Date Sampled	5/18/92	5/18/92	5/20/92	5/20/92	5/20/92	5/20/92
Depth	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	11	5 U	330	5 U	77	5 U
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-524-S-1	1234-TP-524-S-2	1234-TP-525-S-1	1234-TP-525-S-2	1234-TP-526-S-1-DAVG	1234-TP-526-S-2-DAVG
Date Sampled	5/18/92	5/18/92	5/20/92	5/20/92	5/19/92	5/19/92
Depth	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)						
Lead			14			
Total Metals (mg/kg dry)						
Arsenic						
Cadmium						
Chromium						
Copper						
Lead	310	32	1900	330	5 U	5 U
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-527-S-1	1234-TP-527-S-2	18-VS-195	18-VS-196	18-VS-197	18-VS-198
Date Sampled	5/18/92	5/18/92	9/20/99	9/20/99	9/20/99	9/20/99
Depth	0 to 1	3 to 6	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic			45	50	17	35
Cadmium						
Chromium						
Copper						
Lead	30	5 U	450	40	150	280
Mercury						
Nickel						
Zinc						

Table B.7-1
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Metals Results

Area	1234	1234	1234	1234	1234	1234
Sample ID	18-VS-199	18-VS-200	18-VS-201	18-VS-202	18-VS-203	18-VS-204
Date Sampled	9/20/99	9/20/99	9/20/99	9/20/99	9/21/99	9/21/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic	23	32	110	24	13	1.9
Cadmium						
Chromium						
Copper						
Lead	380	200	500	580	760	310
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234	1234
Sample ID	18-VS-205	18-VS-206	18-VS-207	18-VS-208	18-VS-209	18-VS-210
Date Sampled	9/21/99	9/21/99	9/21/99	9/21/99	9/21/99	9/21/99
Depth	0 to 0.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)						
Lead						
Total Metals (mg/kg dry)						
Arsenic	10	8.8	12	24	26	12
Cadmium						
Chromium						
Copper						
Lead	300	560	1600	800	410	2700
Mercury						
Nickel						
Zinc						

Area	1234	1234	1234	1234	1234
Sample ID	18-VS-211	18-VS-212	18-VS-213	18-VS-214	18-VS-215
Date Sampled	9/21/99	9/21/99	9/21/99	9/21/99	9/21/99
Depth	0 to 0.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	12	2 U	5.8	2.2	2 U
Cadmium					
Chromium					
Copper					
Lead	15	16	61	62	42
Mercury					
Nickel					
Zinc					

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	02-C-SS-[18-TR-18N,S-1]-C2-010	18-B-501-S-1	18-B-501-S-2	18-B-501-S-3	18-B-501-S-4	18-HA-501-S-1-DAVG	18-HA-501-S-2	18-HA-502-S-1
Date Sampled	8/15/01	11/5/92	11/5/92	11/5/92	11/5/92	5/[illegible]/92	5/21/92	5/21/92
Depth	3 to 3.5	7.5 to 9	10 to 11.5	15 to 16.5	20 to 21.5	0 to 1	2 to 3	0 to 1
Explosive (mg/kg dry)								
1,3-Dinitrobenzene		0.043 U	0.043 U	0.042 U	0.042 UJ	0.26 U	0.23 U	0.091 U
2,4-Dinitrotoluene	0.023 J	0.009	0.005 J	0.0063 U	0.008 J	0.04 U	0.035 U	0.014 U
2,6-Dinitrotoluene	0.045 U	0.0064 U	0.0064 U	0.0063 U	0.0058 J	0.04 U	0.035 U	0.014 U
DNT - Total	*0.0455*	*0.0122*	*0.0082*	*0.0126 U*	*0.0138*	*0.08 U*	*0.07 U*	*0.028 U*
Monomethylamine Nitrate								
Nitrobenzene		0.063 U	0.064 U	0.063 U	0.062 UJ	0.39 U	0.34 U	0.14 U
Nitroglycerine						0.26 U	0.23 U	0.23 U
1,3,5-Trinitrobenzene		0.032 U	0.032 U	0.032 U	0.031 UJ	0.2 U	0.17 U	0.069 U
2,4,6-Trinitrotoluene	0.045 U	0.0032 U	0.0032 U	0.0032 U	0.0031 UJ	0.02 U	0.017 U	0.0069 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-HA-502-S-2	18-HA-503-S-1	18-HA-503-S-2	18-SS-590	18-SS-614	18-SS-624	18-SS-625	18-SS-627
Date Sampled	5/21/92	5/21/92	5/21/92	5/6/92	10/27/92	10/27/92	10/27/92	10/27/92
Depth	*2 to 3*	*0 to 1*	*2 to 3*	*0 to 0.5*	*0 to 0.5*	*0 to 0.5*	*0 to 0.5*	*0 to 0.5*
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.046 U	0.54 U	0.26 U	0.098 U				
2,4-Dinitrotoluene	0.0069 U	0.082 U	0.039 U	0.015 U	0.06 J	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.0069 U	0.082 U	0.039 U	0.015 U	0.13	0.05 U	0.05 U	0.05 U
DNT - Total	*0.0138 U*	*0.164 U*	*0.078 U*	*0.03 U*	*0.19*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene	0.068 U	0.81 U	0.39 U	0.15 U				
Nitroglycerine	0.23 U	0.27 UJ	0.26 UJ					
1,3,5-Trinitrobenzene	0.034 U	0.41 U	0.19 U	0.074 U				
2,4,6-Trinitrotoluene	0.0034 U	0.041 U	0.019 U	0.0074 U				

Area	18	18	18	18 North	18	18	18	18
Sample ID	18-SS-628	18-SS-629	18-SS-630	18-SS-636	18-SS-639	18-SS-640	18-SS-644	18-SS-645
Date Sampled	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene							0.049 U	
2,4-Dinitrotoluene	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 UJ	0.1 U	0.051	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 UJ	0.05 U	0.0073 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.05465*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene							0.072 U	
Nitroglycerine								
1,3,5-Trinitrobenzene							0.037 U	
2,4,6-Trinitrotoluene							0.086	

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-646	18-SS-647	18-SS-648	18-SS-649	18-SS-650	18-SS-652	18-SS-653	18-SS-654
Date Sampled	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92	10/27/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene					0.049 U	0.26 U		
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 UJ	0.038	0.51	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 UJ	0.0073 U	0.084 J	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.04165*	*0.594*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene					0.073 U	0.39 U		
Nitroglycerine								
1,3,5-Trinitrobenzene					0.037 U	0.2 U		
2,4,6-Trinitrotoluene					0.005	0.64 J		

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-656	18-SS-657	18-SS-658	18-SS-659	18-SS-660	18-SS-661	18-SS-662	18-SS-663-DAVG
Date Sampled	10/28/92	10/28/92	10/28/92	10/28/92	10/28/92	10/28/92	10/28/92	10/28/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.05 U							
2,4-Dinitrotoluene	0.066	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,6-Dinitrotoluene	0.0072 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
DNT - Total	*0.0696*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene	0.07 U							
Nitroglycerine								
1,3,5-Trinitrobenzene	0.04 U							
2,4,6-Trinitrotoluene	0.033							

Area	18 North	18 North	18 North	18	18	18	18	18
Sample ID	18-SS-664-DAVG	18-SS-665	18-SS-666	18-SS-667	18-SS-668	18-SS-715	18-SS-716	18-SS-725
Date Sampled	11/2/92	11/2/92	11/2/92	11/2/92	11/2/92	11/5/92	11/5/92	11/30/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.093 U	0.57 U	0.1 U	0.1 U	0.47 U	0.27 UJ	0.1 U	
2,4-Dinitrotoluene	0.014 U	0.086 U	0.015 U	0.015	0.07 U	0.046 J	0.26	0.05 U
2,6-Dinitrotoluene	0.014 U	0.086 U	0.015 U	0.015 U	0.07 U	0.023 J	0.011 J	0.1 U
DNT - Total	*0.028 U*	*0.172 U*	*0.03 U*	*0.0225*	*0.14 U*	*0.069*	*0.271*	*0.15 U*
Monomethylamine Nitrate	5.8 U	7.1 U						
Nitrobenzene	0.14 U	0.85 U	0.15 U	0.15 U	0.69 U	0.4 UJ	0.15 U	
Nitroglycerine	0.23 U	0.29 UJ	0.25 U	0.25 U	0.23 U			
1,3,5-Trinitrobenzene	0.07 U	0.43 U	0.075 U	0.074 U	0.35 U	0.2 UJ	0.077 U	
2,4,6-Trinitrotoluene	0.007 U	0.043 U	0.0075 U	0.0074 U	0.035 U	0.023 J	0.0085	

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-726	18-SS-727	18-SS-729	18-SS-GS-05	18-SS-GS-06	18-SS-GS-11	18-SS-GS-12	18-SS-GS-13
Date Sampled	11/30/92	11/30/92	11/5/92					
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.05 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-GS-14	18-SS-GS-18	18-SS-GS-20	18-SS-GS-21	18-SS-GS-26	18-SS-GS-29	18-SS-GS-30	18-SS-GS-31
Date Sampled								7/6/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								0.089 U
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.013 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.013 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.026 U*
Monomethylamine Nitrate								
Nitrobenzene								0.13 U
Nitroglycerine								
1,3,5-Trinitrobenzene								0.067 U
2,4,6-Trinitrotoluene								0.0067 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-GS-34	18-SS-GS-35	18-SS-GS-36	18-SS-GS-37	18-SS-GS-39	18-SS-GS-44	18-SS-GS-45	18-SS-GS-46
Date Sampled								
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-GS-48	18-SS-GS-50	18-SS-GS-51	18-SS-GS-52	18-SS-GS-55	18-SS-GS-56	18-SS-GS-57	18-SS-GS-58
Date Sampled								
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-GS-60	18-SS-GS-61	18-SS-GS-63	18-SS-GS-64	18-SS-GS-65	18-SS-GS-66	18-SS-GS-67	18-SS-GS-68
Date Sampled							7/7/93	
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene							0.26 U	
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.038 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.038 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.076 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene							0.38 U	
Nitroglycerine								
1,3,5-Trinitrobenzene							0.19 U	
2,4,6-Trinitrotoluene							0.019 U	

Area	18	18	18	18	18	18	18	18
Sample ID	18-SS-GS-69	18-SS-GS-71	18-SS-GS-73	18-SS-GS-74	18-SS-GS-75	18-SS-GS-76	18-SS-GS-77	18-SS-GS-78
Date Sampled								
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18 North	18 North	18 North	18 North
Sample ID	18-SS-GS-79	18-SS-GS-80	18-TP-21,S-1	18-TP-41-S-1	18-TP-501-S-1-DAVG	18-TP-501-S-2-DAVG	18-TP-501-S-3	18-TP-502-S-1
Date Sampled			4/16/87	7/6/93	5/11/92	5/11/92	5/11/92	5/1/92
Depth	0 to 0.5	0 to 0.5	0 to 4	0 to 1	0 to 1	3 to 6	8 to 10	0 to 1
Explosive (mg/kg dry)								
1,3-Dinitrobenzene				0.095 U	0.083 U	0.043 U	0.043 U	0.5 UJ
2,4-Dinitrotoluene	0.1 U	0.1 U	0.09 U	0.014 U	0.076	0.0064 U	0.023	0.65 J
2,6-Dinitrotoluene	0.05 U	0.05 U	0.09 U	0.014 U	0.043	0.0064 U	0.024	0.49 J
DNT - Total	*0.15 U*	*0.15 U*	*0.18 U*	*0.028 U*	*0.119*	*0.0128 U*	*0.047*	*1.14*
Monomethylamine Nitrate								
Nitrobenzene				0.14 U	0.12 U	0.063 U	0.065 U	0.74 UJ
Nitroglycerine			0.22 U		0.21 U	0.21 U	0.22 U	8.5 UF
1,3,5-Trinitrobenzene				0.071 U	0.062 U	0.032 U	0.033 U	0.37 UJ
2,4,6-Trinitrotoluene				0.0071 U	0.0062 U	0.0032 U	0.0033 U	0.037 UJ

Area	18 North	18 North	18 North	18 North	18 North	18 North	18 North	18 North
Sample ID	18-TP-502-S-2	18-TP-502-S-3	18-TP-503-S-1	18-TP-503-S-2	18-TP-503-S-3	18-TP-504-S-1	18-TP-504-S-2	18-TP-504-S-3
Date Sampled	5/1/92	5/1/92	5/1/92	5/1/92	5/1/92	5/11/92	5/11/92	5/11/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.043 UJ	0.042 UJ	0.5 UJ	0.042 UJ	0.045 UJ	0.43 U	0.086 U	0.042 U
2,4-Dinitrotoluene	0.0065 UJ	0.0063 UJ	0.12 J	0.0063 UJ	0.0067 UJ	0.064 U	0.033	0.0064 U
2,6-Dinitrotoluene	0.0065 UJ	0.0063 UJ	0.16 J	0.0063 UJ	0.0067 UJ	0.064 U	0.034	0.0064 U
DNT - Total	*0.013 U*	*0.0126 U*	*0.28*	*0.0126 U*	*0.0134 U*	*0.128 U*	*0.067*	*0.0128 U*
Monomethylamine Nitrate								
Nitrobenzene	0.064 UJ	0.063 UJ	0.74 UJ	0.063 UJ	0.066 UJ	0.64 U	0.13 U	0.063 U
Nitroglycerine	0.21 U	0.21 U	0.25 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U
1,3,5-Trinitrobenzene	0.032 UJ	0.032 UJ	0.37 UJ	0.032 UJ	0.033 UJ	0.32 U	0.065 U	0.032 U
2,4,6-Trinitrotoluene	0.0032 UJ	0.0032 UJ	0.037 UJ	0.0032 UJ	0.0033 UJ	0.032 U	0.006 U	0.0032 U

Area	18 North	18 North	18 North	18 North	18 North	18 North	18	18
Sample ID	18-TP-505-S-1	18-TP-505-S-2	18-TP-505-S-3	18-TP-506-S-1	18-TP-507-S-2	18-TP-508-S-1	18-TP-509-S-2	18-TP-510-S-2-DAVG
Date Sampled	5/11/92	5/11/92	5/11/92	5/12/92	5/12/92	5/12/92	5/12/92	5/14/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	0 to 1	3 to 6	3 to 6
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.92 U	0.043 U	0.042 U	0.24 U	0.044 U	0.25 U	0.042 U	0.042 U
2,4-Dinitrotoluene	0.25	0.0064 U	0.0063 U	0.09	0.0066 U	0.089	0.0064 U	0.013 J
2,6-Dinitrotoluene	0.26	0.0064 U	0.0063 U	0.087	0.0066 U	0.086	0.0064 U	0.0062 U
DNT - Total	*0.51*	*0.0128 U*	*0.0126 U*	*0.177*	*0.0132 U*	*0.175*	*0.0128 U*	*0.0161*
Monomethylamine Nitrate								
Nitrobenzene	1.4 U	0.064 U	0.063 U	0.36 U	0.065 U	0.37 U	0.063 U	0.062 U
Nitroglycerine	0.23 U	0.21 U	0.21 U					
1,3,5-Trinitrobenzene	0.69 U	0.032 U	0.032 U	0.18 U	0.033 U	0.19 U	0.032 U	0.031 U
2,4,6-Trinitrotoluene	0.069 U	0.0032 U	0.0032 U	0.018 U	0.0033 U	0.019 U	0.0032 U	0.0031 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-510-S-3	18-TP-512-S-2	18-TP-512-S-3	18-TP-513-S-2	18-TP-513-S-3	18-TP-514-S-1-DAVG	18-TP-514-S-2	18-TP-514-S-3
Date Sampled	5/14/92	5/14/92	5/14/92	5/14/92	5/14/92	5/11/92	5/11/92	5/11/92
Depth	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.043 U	0.22 U	0.043 U	0.086 U	2.2 U	0.87 U	0.043 U	0.042 U
2,4-Dinitrotoluene	0.0064 U	0.21 J	0.048 J	0.013 U	0.32 U	0.56	0.0065 U	0.0063 U
2,6-Dinitrotoluene	0.0064 U	0.028 J	0.013 J	0.013 U	0.32 U	0.52	0.0065 U	0.0063 U
DNT - Total	*0.0128 U*	*0.238*	*0.061*	*0.026 U*	*0.64 U*	*1.08*	*0.013 U*	*0.0126 U*
Monomethylamine Nitrate								
Nitrobenzene	0.064 U	0.32 U	0.064 U	0.13 U	3.2 U	1.3 U	0.065 U	0.062 U
Nitroglycerine						0.22 U	0.22 U	0.21 U
1,3,5-Trinitrobenzene	0.032 U	0.16 U	0.032 U	0.065 U	1.6 U	0.65 U	0.033 U	0.031 U
2,4,6-Trinitrotoluene	0.0032 U	0.42 J	0.025 J	0.0065 U	0.16 U	0.15	0.0033 U	0.0031 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-515-S-2	18-TP-516-S-1	18-TP-517-S-2	18-TP-518-S-1	18-TP-519-S-2-DAVG	18-TP-519-S-3	18-TP-520-S-2-DAVG	18-TP-521-S-3
Date Sampled	5/14/92	5/14/92	5/14/92	5/14/92	5/11/92	5/11/92	4/27/92	5/12/92
Depth	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6	8 to 10	3 to 6	8 to 10
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	4.4 U	0.52 U	0.05 U	0.25 U	0.043 U	0.43 UJ	0.042 U	0.042 U
2,4-Dinitrotoluene	1 J	0.078 U	0.0074 U	0.037 U	0.0065 U	0.15 J	0.0063 U	0.0064 U
2,6-Dinitrotoluene	0.66 U	0.078 U	0.0074 U	0.037 U	0.0065 U	0.14 J	0.0063 U	0.0064 U
DNT - Total	*1.33*	*0.156 U*	*0.0148 U*	*0.074 U*	*0.013 U*	*0.29*	*0.0126 U*	*0.0128 U*
Monomethylamine Nitrate					5.4 U			
Nitrobenzene	6.6 U	0.78 U	0.074 U	0.37 U	0.064 U	0.64 UJ	0.062 U	0.063 U
Nitroglycerine					0.21 U	0.21 U		0.21 U
1,3,5-Trinitrobenzene	3.3 U	0.39 U	0.037 U	0.18 U	0.032 U	0.32 UJ	0.031 U	0.032 U
2,4,6-Trinitrotoluene	0.33 U	0.039 U	0.0037 U	0.018 U	0.0032 U	0.032 UJ	0.0031 U	0.0032 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-523-S-2	18-TP-524-S-1	18-TP-525-S-2	18-TP-525-S-3	18-TP-526-S-1	18-TP-526-S-2	18-TP-526-S-3	18-TP-527-S-2-DAVG
Date Sampled	5/13/92	5/12/92	5/12/92	5/12/92	4/30/92	4/30/92	4/30/92	5/13/92
Depth	3 to 6	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	3 to 6
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.096 U	0.46 U	0.88 U	0.043 U	0.49 U	0.044 U	0.043 U	0.043 U
2,4-Dinitrotoluene	0.014 U	0.14	0.53	0.009	0.46	0.02	0.027	0.0064 U
2,6-Dinitrotoluene	0.014 U	0.15	0.35	0.0081	0.13	0.0049	0.032	0.0064 U
DNT - Total	*0.028 U*	*0.29*	*0.88*	*0.0171*	*0.59*	*0.0249*	*0.059*	*0.0128 U*
Monomethylamine Nitrate						5.5 U		
Nitrobenzene	0.14 U	0.68 U	1.3 U	0.065 U	0.72 U	0.065 U	0.064 U	0.064 U
Nitroglycerine					0.24 U	0.22 U	0.22 U	
1,3,5-Trinitrobenzene	0.072 U	0.34 U	0.66 U	0.033 U	0.36 U	0.033 U	0.032 U	0.032 U
2,4,6-Trinitrotoluene	0.0072 U	0.034 U	0.066 U	0.025	0.036 U	0.0033 U	0.011	0.0032 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18 North	18
Sample ID	18-TP-528-S-1	18-TP-529-S-2	18-TP-530-S-1	18-TP-531-S-1-DAVG	18-TP-532-S-1	18-TP-533-S-1-DAVG	18-TP-535-S-1-DAVG	18-TP-53-S-1
Date Sampled	5/13/92	5/13/92	5/13/92	5/15/92	4/29/92	4/28/92	4/27/92	7/6/93
Depth	0 to 1	3 to 6	0 to 1	0 to 1	0 to 1	0 to 1	0 to 1	0 to 1
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.47 U	0.043 U	0.1 U	0.097 U	0.24 U	0.048 U	0.043 U	0.087 U
2,4-Dinitrotoluene	0.071 U	0.0065 U	0.015 U	0.015 U	0.036 U	0.0072 U	0.0065 U	0.013 U
2,6-Dinitrotoluene	0.071 U	0.0065 U	0.015 U	0.015 U	0.036 U	0.0072 U	0.0065 U	0.013 U
DNT - Total	*0.142 U*	*0.013 U*	*0.03 U*	*0.03 U*	*0.072 U*	*0.0144 U*	*0.013 U*	*0.026 U*
Monomethylamine Nitrate				6.1 U		6 U		
Nitrobenzene	0.7 U	0.065 U	0.15 U	0.14 U	0.36 U	0.071 U	0.064 U	0.13 UJ
Nitroglycerine				0.24 U	0.24 U	0.24 U		
1,3,5-Trinitrobenzene	0.35 U	0.033 U	0.077 U	0.073 U	0.18 U	0.036 U	0.032 U	0.065 U
2,4,6-Trinitrotoluene	0.035 U	0.0033 U	0.0077 U	0.0073 U	0.018 U	0.0036 U	0.0032 U	0.0065 U

Area	18	18	18	18	18	18	18 North	18 North
Sample ID	18-TP-541-S-2	18-TP-542-S-2-DAVG	18-TP-543-S-2	18-TP-544-S-2	18-TP-545-S-1	18-TP-546-S-2	18-TP-547-S-1-DAVG	18-TP-547-S-2-DAVG
Date Sampled	4/24/92	4/28/92	4/28/92	5/15/92	4/29/92	4/28/92	5/1/92	5/1/92
Depth	3 to 6	3 to 6	3 to 6	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.042 U	0.043 U	0.23 U	0.045 U	0.043 U	0.46 UJ	0.043 UJ
2,4-Dinitrotoluene	0.0064 U	0.0062 U	0.0064 U	0.035 U	0.0067 U	0.0064 U	0.077 J	0.0064 UJ
2,6-Dinitrotoluene	0.0064 U	0.0062 U	0.0064 U	0.035 U	0.0067 U	0.0064 U	0.1 J	0.0064 UJ
DNT - Total	*0.0128 U*	*0.0124 U*	*0.0128 U*	*0.07 U*	*0.0134 U*	*0.0128 U*	*0.177*	*0.0128 U*
Monomethylamine Nitrate		5.2 U	5.4 U					
Nitrobenzene	0.063 U	0.062 U	0.064 U	0.34 U	0.066 U	0.064 U	0.69 UJ	0.063 UJ
Nitroglycerine		0.21 U	0.21 U	0.23 U	0.22 U	0.21 U	0.23 U	0.21 U
1,3,5-Trinitrobenzene	0.032 U	0.031 U	0.032 U	0.17 U	0.033 U	0.032 U	0.35 UJ	0.032 UJ
2,4,6-Trinitrotoluene	0.0032 U	0.0031 U	0.0032 U	0.017 U	0.0033 U	0.0032 U	0.035 UJ	0.0032 UJ

Area	18 North	18	18	18	18	18	18	18
Sample ID	18-TP-547-S-3	18-TP-548-S-1	18-TP-548-S-2	18-TP-548-S-3	18-TP-549-S-1	18-TP-549-S-2	18-TP-549-S-3	18-TP-550-S-1
Date Sampled	5/1/92	5/14/92	5/14/92	5/14/92	5/1/92	5/1/92	5/1/92	5/15/92
Depth	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 UJ	0.25 U	0.046 U	0.044 U	0.89 UJ	0.042 UJ	0.042 UJ	0.22 U
2,4-Dinitrotoluene	0.0063 UJ	0.037 U	0.0069 U	0.0066 U	0.026 J	0.0063 UJ	0.0064 UJ	0.032 U
2,6-Dinitrotoluene	0.0063 UJ	0.037 U	0.0069 U	0.0066 U	0.13 UJ	0.0063 UJ	0.0064 UJ	0.032 U
DNT - Total	*0.0126 U*	*0.074 U*	*0.0138 U*	*0.0132 U*	*0.091*	*0.0126 U*	*0.0128 U*	*0.064 U*
Monomethylamine Nitrate								
Nitrobenzene	0.063 UJ	0.37 U	0.068 U	0.066 U	1.3 UJ	0.063 UJ	0.063 UJ	0.32 U
Nitroglycerine	0.21 U				0.24	0.21 U	0.21 U	0.22 U
1,3,5-Trinitrobenzene	0.032 UJ	0.19 U	0.035 U	0.033 U	0.67 UJ	0.032 UJ	0.032 UJ	0.16 U
2,4,6-Trinitrotoluene	0.0032 UJ	0.019 U	0.0035 U	0.0033 U	0.4 J	0.0032 UJ	0.0032 UJ	0.016 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-551-S-2	18-TP-552-S-1	18-TP-553-S-2	18-TP-554-S-1	18-TP-555-S-2-DAVG	18-TP-556-S-1	18-TP-557-S-2	18-TP-558-S-3
Date Sampled	5/15/92	4/29/92	4/29/92	4/29/92	4/30/92	5/13/92	4/30/92	4/30/92
Depth	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6	0 to 1	3 to 6	3 to 6
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.046 U	0.11 U	0.25 U	0.099 U	0.45 U	0.043 U	0.42 U	0.043 U
2,4-Dinitrotoluene	0.0068 U	0.017 U	0.037 U	0.22	0.068 U	0.0064 U	0.064 U	0.011
2,6-Dinitrotoluene	0.0068 U	0.017 U	0.037 U	0.092	0.068 U	0.0064 U	0.064 U	0.0064 U
DNT - Total	*0.0136 U*	*0.034 U*	*0.074 U*	*0.312*	*0.136 U*	*0.0128 U*	*0.128 U*	*0.0142*
Monomethylamine Nitrate					5.8 U	5.3 U	5.3 U	
Nitrobenzene	0.068 U	0.17 U	0.37 U	0.15 U	0.67 U	0.063 U	0.63 U	0.063 U
Nitroglycerine	0.23 U	0.29 U	0.24 U	0.25 U	0.23 U	0.21 U	0.21 U	0.21 U
1,3,5-Trinitrobenzene	0.034 U	0.086 U	0.18 U	0.074 U	0.34 U	0.032 U	0.32 U	0.032 U
2,4,6-Trinitrotoluene	0.0034 U	0.0086 U	0.018 U	0.022	0.034 U	0.0032 U	0.032 U	0.0032 U

Area	18 North	18 North	18 North	18	18	18	18	18
Sample ID	18-TP-559-S-1-DAVG	18-TP-559-S-2-DAVG	18-TP-559-S-3	18-TP-600-S-1	18-TP-600-S-2	18-TP-601-S-2	18-TP-601-S-3	18-TP-602-S-2
Date Sampled	5/1/92	5/1/92	5/1/92	11/5/92	11/5/92	11/5/92	11/5/92	11/5/92
Depth	0 to 1	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	5 to 6
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.91 UJ	0.044 UJ	0.044 UJ	0.044 U	0.043 U	0.042 U	0.044 U	0.043 U
2,4-Dinitrotoluene	0.14 UJ	0.0065 UJ	0.0066 UJ	0.092	0.09	0.0062 J	0.0064 J	0.009
2,6-Dinitrotoluene	0.14 UJ	0.0065 UJ	0.0066 UJ	0.035	0.006 J	0.0064 U	0.0066 U	0.0065 U
DNT - Total	*0.28 U*	*0.013 U*	*0.0132 U*	*0.127*	*0.096*	*0.0094*	*0.0097*	*0.01225*
Monomethylamine Nitrate								
Nitrobenzene	1.4 UJ	0.065 UJ	0.065 UJ	0.066 U	0.065 U	0.063 U	0.065 U	0.064 U
Nitroglycerine	0.23 U	0.22 U	0.22 U					
1,3,5-Trinitrobenzene	0.68 UJ	0.033 UJ	0.033 UJ	0.033 U	0.033 U	0.032 U	0.033 U	0.032 U
2,4,6-Trinitrotoluene	0.068 UJ	0.0033 UJ	0.0033 UJ	2.4	0.79	0.0032 U	0.0033 U	0.0032 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-602-S-3	18-TP-603-S-2-DAVG	18-TP-603-S-3	18-TP-604-S-1	18-TP-604-S-2	18-TP-DEP,S-1	18-TP-DEP,S-2	18-TP-GS-16-S-2
Date Sampled	11/5/92	11/5/92	11/5/92	11/5/92	11/5/92			
Depth	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1	3 to 4	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.043 U	0.044 U	0.044 U	0.044 U	0.043 U			
2,4-Dinitrotoluene	0.0084	0.036	0.014	0.0076	0.01	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.0064 U	0.0065 U	0.0066 U	0.0067 U	0.0065 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.0116*	*0.03925*	*0.0173*	*0.01095*	*0.01325*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene	0.064 U	0.065 U	0.065 U	0.066 U	0.064 U			
Nitroglycerine								
1,3,5-Trinitrobenzene	0.032 U	0.033 U	0.033 U	0.033 U	0.032 U			
2,4,6-Trinitrotoluene	0.0032 U	0.066 J	0.0044	0.0054	0.031			

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-GS-17-S-1	18-TP-GS-17-S-2	18-TP-GS-22-S-2	18-TP-GS-23-S-1	18-TP-GS-23-S-2	18-TP-GS-24-S-2	18-TP-GS-25-S-1	18-TP-GS-25-S-2
Date Sampled								
Depth	0 to 1	3 to 4	3 to 4	0 to 1	3 to 4	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-GS-27-S-1	18-TP-GS-27-S-2	18-TP-GS-28-S-1	18-TP-GS-28-S-2	18-TP-GS-32-S-1	18-TP-GS-32-S-2	18-TP-GS-33-S-1	18-TP-GS-33-S-2
Date Sampled	7/6/93							
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.094 U							
2,4-Dinitrotoluene	0.014 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.014 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.028 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene	0.14 U							
Nitroglycerine								
1,3,5-Trinitrobenzene	0.071 U							
2,4,6-Trinitrotoluene	0.0071 U							

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-GS-38-S-1	18-TP-GS-38-S-2	18-TP-GS-40-S-1	18-TP-GS-40-S-2	18-TP-GS-41-S-1	18-TP-GS-41-S-2	18-TP-GS-42-S-1	18-TP-GS-42-S-2
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-GS-43-S-1	18-TP-GS-43-S-2	18-TP-GS-47-S-1	18-TP-GS-47-S-2	18-TP-GS-49-S-1	18-TP-GS-49-S-2	18-TP-GS-53-S-1	18-TP-GS-53-S-2
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-GS-54-S-1	18-TP-GS-54-S-2	18-TP-GS-59-S-1	18-TP-GS-59-S-2	18-TP-GS-62-S-1	18-TP-GS-62-S-2	18-TP-GS-70-S-1	18-TP-GS-70-S-2
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TP-GS-72-S-1	18-TP-GS-72-S-2	18-TP-GS-81-S-1	18-TP-GS-81-S-2	18-TR-101N,S-3	18-TR-101N,S-4	18-TR-101S,S-1	18-TR-101S,S-2
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-102E,S-1	18-TR-102E,S-2	18-TR-102W,S-3	18-TR-102W,S-4	18-TR-103S,S-1	18-TR-103S,S-2	18-TR-104E,S-3	18-TR-104E,S-4
Date Sampled		6/28/93			6/28/93			
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	1 to 2	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene		0.09 U			0.23 U			
2,4-Dinitrotoluene	0.1 U	0.014 U	0.1 U	0.1 U	0.069	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.014 U	0.05 U	0.05 U	0.057	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.028 U*	*0.15 U*	*0.15 U*	*0.126*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene		0.14 U			0.34 U			
Nitroglycerine								
1,3,5-Trinitrobenzene		0.069 U			0.17 U			
2,4,6-Trinitrotoluene		0.007 U			0.027			

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-104W,S-1	18-TR-104W,S-2	18-TR-105N,S-1	18-TR-105N,S-2	18-TR-105S,S-3	18-TR-105S,S-4	18-TR-106E,S-3	18-TR-106E,S-4
Date Sampled	6/29/93						6/29/93	6/29/93
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.24 U						0.1 U	0.23 U
2,4-Dinitrotoluene	0.12	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.15	0.034 U
2,6-Dinitrotoluene	0.075	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.072	0.034 U
DNT - Total	*0.195*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.222*	*0.068 U*
Monomethylamine Nitrate								
Nitrobenzene	0.35 U						0.15 U	0.33 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.18 U						0.074 U	0.17 U
2,4,6-Trinitrotoluene	0.014						0.007 U	0.017 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-106W,S-1	18-TR-106W,S-2	18-TR-107N,S-1	18-TR-107N,S-2	18-TR-107S,S-3	18-TR-107S,S-4	18-TR-109E,S-3	18-TR-109E,S-4
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-109W,S-1	18-TR-109W,S-2	18-TR-110N,S-1	18-TR-110N,S-2	18-TR-110S,S-3	18-TR-110S,S-4	18-TR-111E,S-1	18-TR-111E,S-2
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-111W,S-3	18-TR-111W,S-4	18-TR-112N,S-3	18-TR-112N,S-4	18-TR-112S,S-1	18-TR-112S,S-2	18-TR-113N,S-3	18-TR-113N,S-4
Date Sampled								
Depth	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-113S,S-1	18-TR-113S,S-2	18-TR-114-S-2	18-TR-114W,S-3	18-TR-114W,S-4	18-TR-115N,S-1	18-TR-115N,S-2	18-TR-115S,S-3
Date Sampled	7/1/93		7/1/93					
Depth	1.5 to 2.5	3 to 4	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.46 U		4.4 UJ					
2,4-Dinitrotoluene	0.069 U	0.1 U	0.66 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.008 J	0.05 U	0.66 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.0425*	*0.15 U*	*1.32 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene	0.68 U		6.5 UJ					
Nitroglycerine								
1,3,5-Trinitrobenzene	0.35 U		3.3 UJ					
2,4,6-Trinitrotoluene	0.035 U		0.33 UJ					

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-115S,S-4	18-TR-116E,S-1	18-TR-116E,S-2	18-TR-116W,S-3	18-TR-116W,S-4	18-TR-117E,S-3	18-TR-117E,S-4	18-TR-117W,S-1
Date Sampled								
Depth	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	0 to 1	3 to 4	1 to 2
Explosive (mg/kg dry)								
1,3-Dinitrobenzene								
2,4-Dinitrotoluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene								
Nitroglycerine								
1,3,5-Trinitrobenzene								
2,4,6-Trinitrotoluene								

Area	18	18	18	18	18	18	18	18
Sample ID	18-TR-117W,S-2	18-TR-119S,S-4	18-VS-101	18-VS-102	18-VS-103	18-VS-104	18-VS-105	18-VS-106
Date Sampled			8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	4 to 5	3 to 4	1 to 1.5	2 to 2.5	6 to 6.5	2 to 2.5	15 to 15.5	15 to 15.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene			0.49 U	0.046 U	0.047 U	0.048 U	2.1 U	0.9 U
2,4-Dinitrotoluene	0.1 U	0.1 U	0.074	0.007 U	0.007 U	0.007 U	0.31 U	0.24
2,6-Dinitrotoluene	0.05 U	0.05 U	0.07 U	0.007 U	0.007 U	0.007 U	0.31 U	0.1 U
DNT - Total	*0.15 U*	*0.15 U*	*0.109*	*0.014 U*	*0.014 U*	*0.014 U*	*0.62 U*	*0.29*
Monomethylamine Nitrate								
Nitrobenzene			0.74 U	0.068 U	0.069 U	0.071 U	3.1 U	1.3 U
Nitroglycerine								
1,3,5-Trinitrobenzene			0.37 U	0.034 U	0.035 U	0.036 U	1.5 U	0.7 U
2,4,6-Trinitrotoluene			0.04 U	0.0034 U	0.0035 U	0.0036 U	1	3.1

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-107	18-VS-108	18-VS-109	18-VS-110	18-VS-111	18-VS-112	18-VS-113	18-VS-114
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	1 to 2	3 to 4	4 to 6	2 to 4	0 to 0.5	1 to 3	4 to 5	0 to 1
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.044 U	0.043 U	0.084 U	0.047 U	0.041 U	0.042 U	0.044 U
2,4-Dinitrotoluene	0.006 U	0.007 U	0.006 U	0.16	0.007	0.006 U	0.008	0.01
2,6-Dinitrotoluene	0.006 U	0.007 U	0.006 U	0.013 U	0.007 U	0.006 U	0.006 U	0.007 U
DNT - Total	*0.012 U*	*0.014 U*	*0.012 U*	*0.1665*	*0.0105*	*0.012 U*	*0.011*	*0.0135*
Monomethylamine Nitrate								
Nitrobenzene	0.062 U	0.065 U	0.063 U	0.13 U	0.069 U	0.061 U	0.063 U	0.066 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.031 U	0.033 U	0.032 U	0.063 U	0.035 U	0.031 U	0.032 U	0.033 U
2,4,6-Trinitrotoluene	0.0031 U	0.0033 U	0.0032 U	0.18	0.0035 U	0.0031 U	0.0032 U	0.007

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-115	18-VS-116	18-VS-117	18-VS-118	18-VS-119	18-VS-120-DAVG	18-VS-121	18-VS-122
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	0 to 0.5	2 to 4	1 to 3	4 to 7	1 to 2	0 to 1	0 to 0.5	0 to 2
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.25 U	0.047 U	0.828 U	0.044 U	0.046 U	0.049 U	0.049 U	0.042 U
2,4-Dinitrotoluene	0.079	0.22	0.29	0.016	0.028	0.008	0.02	0.006 U
2,6-Dinitrotoluene	0.037 U	0.036	0.124 U	0.025 U	0.007 U	0.007 U	0.007 U	0.006 U
DNT - Total	*0.0975*	*0.256*	*0.352*	*0.0285*	*0.0315*	*0.0115*	*0.0235*	*0.012 U*
Monomethylamine Nitrate								
Nitrobenzene	0.37 U	0.069 U	1.232 U	0.066 U	0.068 U	0.073 U	0.073 U	0.063 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.19 U	0.035 U	0.621 U	0.033 U	0.034 U	0.037 U	0.037 U	0.032 U
2,4,6-Trinitrotoluene	0.047	0.11	1.98	0.003	0.12	0.0037 U	0.0037 U	0.0032 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-123	18-VS-124	18-VS-125	18-VS-126	18-VS-127	18-VS-128	18-VS-129	18-VS-130-DAVG
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	0 to 1	1 to 2	1 to 2	3 to 4	1 to 2	4 to 5	0 to 1	0 to 2
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.042 U	0.041 U	0.042 U	0.041 U	0.044 U	0.049 U	0.044 U
2,4-Dinitrotoluene	0.006 U	0.012	0.099	0.015	0.006 U	0.007 U	0.03	0.028
2,6-Dinitrotoluene	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.007 U	0.007 U	0.007 U
DNT - Total	*0.012 U*	*0.015*	*0.102*	*0.018*	*0.012 U*	*0.014 U*	*0.0335*	*0.0315*
Monomethylamine Nitrate								
Nitrobenzene	0.062 U	0.063 U	0.062 U	0.062 U	0.062 U	0.065 U	0.073 U	0.066 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.031 U	0.032 U	0.031 U	0.031 U	0.031 U	0.033 U	0.037 U	0.033 U
2,4,6-Trinitrotoluene	0.003	0.0032 U	0.012	0.053	0.0031 U	0.0033 U	0.0037 U	0.0033 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-131	18-VS-132	18-VS-133	18-VS-134	18-VS-135	18-VS-136	18-VS-137	18-VS-138
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	0 to 0.5	1 to 2	0 to 1	0 to 1	0 to 0.5	7 to 9	10 to 12	11 to 14
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.053 U	0.046 U	0.045 U	0.044 U	0.46 U	0.042 U	0.045 U	0.042 U
2,4-Dinitrotoluene	0.033	0.007 U	0.014	0.007 U	0.068 U	0.006 U	0.075	0.006 U
2,6-Dinitrotoluene	0.018	0.007 U	0.007 U	0.007 U	0.068 U	0.006 U	0.007 U	0.006 U
DNT - Total	*0.051*	*0.014 U*	*0.0175*	*0.014 U*	*0.136 U*	*0.012 U*	*0.0785*	*0.012 U*
Monomethylamine Nitrate								
Nitrobenzene	0.078 U	0.068 U	0.067 U	0.066 U	0.68 U	0.063 U	0.067 U	0.062 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.039 U	0.034 U	0.034 U	0.033 U	0.34 U	0.032 U	0.034 U	0.031 U
2,4,6-Trinitrotoluene	0.0039 U	0.0034 U	0.0034 U	0.0033 U	0.034 U	0.0032 U	0.006	0.0031 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-139	18-VS-13A	18-VS-1[illegible]	[illegible]3-VS-140	18-VS-141	18-VS-142	18-VS-143	18-VS-144
Date Sampled	8/26/93	12/9/92	12/9/[illegible]	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	*5 to 7*	*0 to 1*	*3 to [illegible]*	*3 to 6*	*3 to 3.5*	*2 to 2.5*	*4 to 4.5*	*1 to 1.5*
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U			0.042 U	0.045 U	0.043 U	0.043 U	0.043 U
2,4-Dinitrotoluene	0.006 U	0.05 U	0.05 U	0.006 U	0.034	0.006	0.016	0.074
2,6-Dinitrotoluene	0.006 U	0.1 U	0.1 U	0.006 U	0.007 U	0.006 U	0.006 U	0.022
DNT - Total	*0.012 U*	*0.15 U*	*0.15 U*	*0.012 U*	*0.0375*	*0.009*	*0.019*	*0.096*
Monomethylamine Nitrate								
Nitrobenzene	0.063 U			0.063 U	0.068 U	0.064 U	0.063 U	0.065 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.032 U			0.032 U	0.034 U	0.032 U	0.032 U	0.033 U
2,4,6-Trinitrotoluene	0.0032 U			0.0032 U	0.006	0.0032 U	0.0032 U	0.008

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-145	18-VS-146	18-VS-147	18-VS-148	18-VS-149	18-VS-14A	18-VS-14B	18-VS-150-DAVG
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	12/9/92	12/9/92	8/26/93
Depth	*4 to 4.5*	*15 to 15.5*	*6 to 6.5*	*7 to 7.5*	*0 to 1*	*0 to 1*	*3 to 6*	*1 to 2*
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.052 U	0.215 U	0.042 U	0.043 U	0.041 U			0.043 U
2,4-Dinitrotoluene	0.015	0.445	0.013	0.072	0.006 U	0.05 U	0.05 U	0.007
2,6-Dinitrotoluene	0.008 U	0.222	0.006 U	0.011	0.006 U	0.1 U	0.1 U	0.006 U
DNT - Total	*0.019*	*0.667*	*0.016*	*0.083*	*0.012 U*	*0.15 U*	*0.15 U*	*0.01*
Monomethylamine Nitrate								
Nitrobenzene	0.077 U	0.32 U	0.063 U	0.064 U	0.061 U			0.064 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.039 U	0.161 U	0.032 U	0.032 U	0.031 U			0.032 U
2,4,6-Trinitrotoluene	0.0039 U	0.411	0.02	0.014	0.0031 U			0.009

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-151	18-VS-152	18-VS-153	18-VS-154	18-VS-155	18-VS-156	18-VS-157	18-VS-158
Date Sampled	8/26/93	9/23/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	*2 to 3*	*4 to 4.5*	*0 to 0.5*	*3 to 4*	*4 to 5*	*10 to 13*	*7 to 9*	*4 to 6*
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.042 U	0.053 U	0.049 U	0.048 U	0.048 U	0.047 U	0.048 UJ
2,4-Dinitrotoluene	0.017	0.006 U	0.035	0.011	0.008	0.007 U	0.098	0.007 UJ
2,6-Dinitrotoluene	0.006 U	0.006 U	0.067	0.008	0.007 U	0.007 U	0.028	0.007 UJ
DNT - Total	*0.02*	*0.012 U*	*0.102*	*0.019*	*0.0115*	*0.014 U*	*0.126*	*0.014 U*
Monomethylamine Nitrate								
Nitrobenzene	0.063 U	0.063 U	0.079 U	0.073 U	0.072 U	0.072 U	0.07 U	0.072 UJ
Nitroglycerine								
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.04 U	0.037 U	0.036 U	0.036 U	0.035 U	0.036 UJ
2,4,6-Trinitrotoluene	0.0032 U	0.0032 U	0.004 U	0.0037 U	0.0036 U	0.0036 U	0.18	0.0036 UJ

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-159	18-VS-15-DAVG	18-VS-160	18-VS-162	18-VS-163	18-VS-164	18-VS-165	18-VS-166
Date Sampled	8/26/93	4/12/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	2 to 3	7 to 7.5	0 to 1	0 to 1	2 to 2.5	15 to 15.5	1 to 1.5	0 to 0.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.046 U	0.044 U	0.054 U	0.048 U	0.048 U	0.24 U	0.052 U	0.049 U
2,4-Dinitrotoluene	0.007 U	0.091	0.074	0.007 U	0.007 U	0.27	0.008 U	0.007 U
2,6-Dinitrotoluene	0.007 U	0.047	0.019	0.007 U	0.007 U	0.088	0.008 U	0.007 U
DNT - Total	*0.014 U*	*0.138*	*0.093*	*0.014 U*	*0.014 U*	*0.358*	*0.016 U*	*0.014 U*
Monomethylamine Nitrate								
Nitrobenzene	0.068 U	0.066 U	0.08 U	0.071 U	0.071 U	0.36 U	0.077 U	0.073 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.034 U	0.033 U	0.041 U	0.036 U	0.036 U	0.13	0.039 U	0.037 U
2,4,6-Trinitrotoluene	0.0034 U	0.0015 J	0.0041 U	0.027	0.0036 U	0.61	0.0039 U	0.0037 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-167	18-VS-168	18-VS-17	18-VS-170-DAVG	18-VS-171	18-VS-172	18-VS-173	18-VS-174
Date Sampled	8/26/93	8/26/93	4/12/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	0 to 1	1 to 2	3 to 3.5	0 to 1	2 to 4	12 to 14	5 to 7	8 to 10
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.049 U	0.051 U	0.042 U	0.051 U	0.041 U	0.047 U	0.046 U	0.049 U
2,4-Dinitrotoluene	0.038	0.008	0.026	0.008 U	0.006 U	0.033	0.007 U	0.007 U
2,6-Dinitrotoluene	0.007 U	0.008 U	0.035	0.008 U	0.006 U	0.007 U	0.007 U	0.007 U
DNT - Total	*0.0415*	*0.012*	*0.061*	*0.016 U*	*0.012 U*	*0.0365*	*0.014 U*	*0.014 U*
Monomethylamine Nitrate								
Nitrobenzene	0.073 U	0.076 U	0.063 U	0.075 U	0.061 U	0.069 U	0.068 U	0.073 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.037 U	0.038 U	0.032 U	0.038 U	0.031 U	0.24	0.034 U	0.037 U
2,4,6-Trinitrotoluene	0.0037 U	0.0038 U	0.0074	0.0038 U	0.0031 U	0.116	0.0034 U	0.0037 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-175	18-VS-176	18-VS-177	18-VS-18	18-VS-184	18-VS-186	18-VS-188	18-VS-191
Date Sampled	10/7/93	10/7/93	10/7/93	4/12/93	3/18/94	3/18/94	4/4/94	4/14/94
Depth	1 to 2	1 to 2	5 to 5.5	3 to 3.5	21 to 23	17 to 17.5	21 to 23	27 to 27.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.041 U	0.043 U	0.043 U	0.46 U	0.041 U	0.041 U	0.042 U	0.85 U
2,4-Dinitrotoluene	0.006 U	0.035 J	0.0064 U	0.19	0.095	0.18	0.3	0.33
2,6-Dinitrotoluene	0.006 U	0.0065 U	0.0064 U	0.36	0.025	0.31	1.3	1
DNT - Total	*0.012 U*	*0.03825*	*0.0128 U*	*0.55*	*0.12*	*0.49*	*1.6*	*1.33*
Monomethylamine Nitrate								
Nitrobenzene	0.061 U	0.064 U	0.064 U	0.68 U	0.06 U	0.061 U	0.063 U	1.3 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.031 U	0.058	0.032 U	0.34 U	0.03 U	0.037	0.17	0.64 U
2,4,6-Trinitrotoluene	0.0031 U	0.012	0.0032 U	0.071	0.003 U	0.0031 U	0.028	0.064 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-192	18-VS-194	18-VS-19-DAVG	18-VS-20	18-VS-21	18-VS-22	18-VS-23	18-VS-24-DAVG
Date Sampled	4/14/94	4/28/94	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93
Depth	23 to 25	25 to 27	2 to 2.5	5 to 5.5	5 to 5.5	3 to 3.5	3 to 3.5	3 to 3.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.042 U	0.042 U	0.042 U	0.043 U	0.043 U	0.044 U	0.044 UJ
2,4-Dinitrotoluene	0.095	0.013	0.006 U	0.006 U	0.0051 J	0.0075	0.0091	0.007 UJ
2,6-Dinitrotoluene	0.019	0.016	0.006 U	0.006 U	0.0042 J	0.006 U	0.0072	0.007 UJ
DNT - Total	*0.114*	*0.029*	*0.012 U*	*0.012 U*	*0.0093*	*0.0105*	*0.0163*	*0.014 U*
Monomethylamine Nitrate								
Nitrobenzene	0.063 U	0.063 U	0.062 U	0.063 U	0.065 U	0.064 U	0.066 U	0.065 UJ
Nitroglycerine								
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.031 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 UJ
2,4,6-Trinitrotoluene	0.0068	0.019	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 UJ

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-25	18-VS-26	18-VS-27	18-VS-28	18-VS-29	18-VS-31	18-VS-32	18-VS-33
Date Sampled	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93
Depth	15 to 15.5	3 to 3.5	2 to 2.5	7 to 7.5	3 to 3.5	15 to 15.5	15 to 15.5	15 to 15.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.043 U	0.043 U	0.43 U	0.043 U	0.042 U	2.1 U	0.042 U	0.047 U
2,4-Dinitrotoluene	0.006 U	0.014	0.15	0.0009 J	0.013	0.13 J	0.019	0.007 U
2,6-Dinitrotoluene	0.006 U	0.0054 J	0.3	0.0018 J	0.004 J	0.089 J	0.0019 J	0.007 U
DNT - Total	*0.012 U*	*0.0194*	*0.45*	*0.0027*	*0.017*	*0.219*	*0.0209*	*0.014 U*
Monomethylamine Nitrate								
Nitrobenzene	0.064 U	0.064 U	0.64 U	0.064 U	0.062 U	3.2 U	0.063 U	0.069 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.32 U	0.032 U	0.031 U	1.6 U	0.032 U	0.035 U
2,4,6-Trinitrotoluene	0.003 U	0.003 U	0.0036 J	0.003 U	0.003 U	0.027 J	0.003 U	0.0072

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-34	18-VS-37	18-VS-38	18-VS-39	18-VS-3A	18-VS-3B	18-VS-40	18-VS-41
Date Sampled	4/12/93	4/12/93	4/12/93	4/12/93	12/8/92	12/8/92	4/12/93	4/12/93
Depth	1 to 3	8 to 10	6 to 8	12 to 14	0 to 1	3 to 6	4 to 6	8 to 10
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.044 U	0.043 U	0.043 U	0.043 U			0.043 U	0.044 U
2,4-Dinitrotoluene	0.015	0.0014 J	0.007 U	0.007 U	0.1 U	0.1 U	0.002 J	0.0067 U
2,6-Dinitrotoluene	0.0026 J	0.004 J	0.0027 J	0.007 U	0.05 U	0.05 U	0.0018 J	0.0067 U
DNT - Total	*0.0176*	*0.0054*	*0.0062*	*0.014 U*	*0.15 U*	*0.15 U*	*0.0038*	*0.0134 U*
Monomethylamine Nitrate								
Nitrobenzene	0.066 U	0.064 U	0.064 U	0.064 U			0.064 U	0.066 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.033 U	0.032 U	0.033 U	0.033 U			0.032 U	0.033 U
2,4,6-Trinitrotoluene	0.003 U	0.003 U	0.003 U	0.003 U			0.003 U	0.0033 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-42-DAVG	18-VS-43	18-VS-44	18-VS-45	18-VS-46	18-VS-47	18-VS-48	18-VS-49
Date Sampled	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93
Depth	0 to 1	1 to 2	2 to 3	1 to 2	4 to 5	3 to 4	2 to 3	1 to 2
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.054 U	0.049 U	0.045 U	0.043 U	0.061 U	0.048 U	0.044 U	0.051 UJ
2,4-Dinitrotoluene	0.069	0.029	0.008	0.021	0.19	0.24	0.0022 J	0.0076 UJ
2,6-Dinitrotoluene	0.073	0.042	0.0038 J	0.047	0.14	0.3	0.0033 J	0.0057 J
DNT - Total	*0.142*	*0.071*	*0.0118*	*0.068*	*0.33*	*0.54*	*0.0055*	*0.0095*
Monomethylamine Nitrate								
Nitrobenzene	0.08 U	0.073 U	0.068 U	0.063 U	0.09 U	0.071 U	0.065 U	0.075 UJ
Nitroglycerine								
1,3,5-Trinitrobenzene	0.041 U	0.037 U	0.034 U	0.032 U	0.045 U	0.036 U	0.033 U	0.038 UJ
2,4,6-Trinitrotoluene	0.004 U	0.004 U	0.003 U	0.012	0.014	0.12	0.0033 U	0.0038 UJ

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-4A	18-VS-4B	18-VS-50	18-VS-51	18-VS-52	18-VS-53	18-VS-54	18-VS-55
Date Sampled	12/8/92	12/8/92	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93	4/12/93
Depth	0 to 1	3 to 6	1 to 2	0 to 1	4 to 5	1 to 2	0 to 1	1 to 2
Explosive (mg/kg dry)								
1,3-Dinitrobenzene			0.052 U	0.26 U	0.24 U	0.05 U	0.048 U	0.62 U
2,4-Dinitrotoluene	0.1 U	0.1 U	0.008 U	0.42	0.2	0.011	0.01	0.01 J
2,6-Dinitrotoluene	0.05 U	0.05 U	0.0011 J	0.14	0.085	0.0092	0.0093	0.028 J
DNT - Total	*0.15 U*	*0.15 U*	*0.0051*	*0.56*	*0.285*	*0.0202*	*0.0193*	*0.038*
Monomethylamine Nitrate								
Nitrobenzene			0.077 U	0.39 U	0.36 U	0.074 U	0.071 U	0.92 U
Nitroglycerine								
1,3,5-Trinitrobenzene			0.039 U	0.2 U	0.18 U	0.037 U	0.036 U	0.46 U
2,4,6-Trinitrotoluene			0.004 U	0.14	0.015 J	0.0037 U	0.0036 U	0.046 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-56	18-VS-57	18-VS-58	18-VS-59	18-VS-60-DAVG	18-VS-61	18-VS-62	18-VS-63
Date Sampled	4/12/93	4/12/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	2 to 3	1 to 2	1 to 1.5	2 to 2.5	8 to 8.5	6 to 6.5	2 to 2.5	4 to 4.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.65 U	0.64 U	0.041 U	0.042 U	0.042 U	0.042 U	0.043 U	0.85 U
2,4-Dinitrotoluene	0.13	0.1	0.006 U	0.026	0.072	0.062	0.006 U	0.34
2,6-Dinitrotoluene	0.07 J	0.13	0.006 U	0.006 U	0.006 U	0.016	0.006 U	0.13 U
DNT - Total	*0.2*	*0.23*	*0.012 U*	*0.029*	*0.075*	*0.078*	*0.012 U*	*0.405*
Monomethylamine Nitrate								
Nitrobenzene	1 U	0.94 U	0.062 U	0.062 U	0.062 U	0.062 U	0.064 U	1.3 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.48 U	0.48 U	0.031 U	0.031 U	0.031 U	0.031 U	0.032 U	0.64 U
2,4,6-Trinitrotoluene	0.048 U	0.048 U	0.0031 U	0.0031 U	0.053	0.0031 U	0.0032 U	0.5

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-64	18-VS-65	18-VS-66	18-VS-67	18-VS-68	18-VS-69	18-VS-6A	18-VS-6B
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	12/8/92	12/8/92
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	3 to 3.5	2 to 2.5	0 to 1	3 to 6
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.043 U	0.042 U	0.043 U	0.044 U	0.042 U	0.043 U		
2,4-Dinitrotoluene	0.069	0.011	0.007 U	0.008	0.02	0.016	0.1 U	0.1 U
2,6-Dinitrotoluene	0.008	0.006 U	0.007 U	0.007 U	0.008 U	0.007 U	0.05 U	0.05 U
DNT - Total	*0.077*	*0.014*	*0.014 U*	*0.0115*	*0.029*	*0.0195*	*0.15 U*	*0.15 U*
Monomethylamine Nitrate								
Nitrobenzene	0.064 U	0.063 U	0.065 U	0.065 U	0.063 U	0.065 U		
Nitroglycerine								
1,3,5-Trinitrobenzene	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U		
2,4,6-Trinitrotoluene	0.085	0.0032 U	0.0033 U	0.0033 U	0.0032 U	0.0033 U		

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-70	18-VS-71	18-VS-72	18-VS-73	18-VS-74	18-VS-75	18-VS-76	18-VS-77
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	2 to 2.5	0 to 0.5	3 to 4	0 to 0.5	0 to 1	0 to 1	0 to 0.5	1 to 2
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.044 U	0.043 U	0.041 U	0.043 U	0.427 U	0.043 U	0.44 U	0.043 U
2,4-Dinitrotoluene	0.007 U	0.006 U	0.006 U	0.007 U	0.87	0.036	0.72	0.006 U
2,6-Dinitrotoluene	0.007 U	0.006 U	0.006 U	0.007 U	0.064 U	0.006 U	0.068	0.006 U
DNT - Total	*0.014 U*	*0.012 U*	*0.012 U*	*0.014 U*	*0.902*	*0.039*	*0.788*	*0.012 U*
Monomethylamine Nitrate								
Nitrobenzene	0.065 U	0.064 U	0.061 U	0.065 U	0.64 U	0.064 U	0.66 U	0.063 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.033 U	0.032 U	0.031 U	0.033 U	0.32 U	0.032 U	0.33 U	0.032 U
2,4,6-Trinitrotoluene	0.0033 U	0.0032 U	0.0031 U	0.0033 U	0.032 U	0.0032 U	0.033 U	0.0032 U

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-78	18-VS-79	18-VS-80-DAVG	18-VS-81	18-VS-82	18-VS-83	18-VS-84	18-VS-85
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	3 to 4	0 to 1	1 to 2	1 to 2	0 to 1	0 to 1	0 to 0.5	2 to 3
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.044 U	0.046 U	0.045 U	0.042 U	0.041 U	0.045 U	0.042 U
2,4-Dinitrotoluene	0.006 U	0.007 U	0.007 U	0.007 U	0.006 U	0.006 U	0.016	0.006 U
2,6-Dinitrotoluene	0.006 U	0.007 U	0.007 U	0.007 U	0.006 U	0.006 U	0.007 U	0.006 U
DNT - Total	*0.012 U*	*0.014 U*	*0.014 U*	*0.014 U*	*0.012 U*	*0.012 U*	*0.0195*	*0.012 U*
Monomethylamine Nitrate								
Nitrobenzene	0.062 U	0.065 U	0.068 U	0.067 U	0.062 U	0.061 U	0.067 U	0.062 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.031 U	0.033 U	0.034 U	0.034 U	0.031 U	0.031 U	0.034 U	0.031 U
2,4,6-Trinitrotoluene	0.0031 U	0.0033 U	0.008	0.0034 U	0.0031 U	0.0031 U	0.0034 U	0.0031 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-86	18-VS-87	18-VS-88	18-VS-89	18-VS-8A	18-VS-8B	18-VS-90	18-VS-91
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	12/8/92	12/8/92	8/26/93	8/26/93
Depth	10 to 10.5	12 to 14	5 to 7	6 to 6.5	0 to 1	3 to 6	1 to 1.5	7 to 7.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.042 U	0.042 U	0.042 U	0.041 U			0.42 U	0.041 U
2,4-Dinitrotoluene	0.3	0.017	0.006 U	0.006 U	0.1 U	0.1 U	0.67	0.069
2,6-Dinitrotoluene	0.009	0.006 U	0.006 U	0.006 U	0.05 U	0.05 U	0.062 U	0.01
DNT - Total	*0.309*	*0.02*	*0.012 U*	*0.012 U*	*0.15 U*	*0.15 U*	*0.701*	*0.079*
Monomethylamine Nitrate								
Nitrobenzene	0.062 U	0.062 U	0.062 U	0.061 U			0.62 U	0.062 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.031 U	0.031 U	0.031 U	0.031 U			0.31 U	0.19 J
2,4,6-Trinitrotoluene	0.17	0.0031 U	0.0031 U	0.0031 U			0.031 U	0.094

Area	18	18	18	18	18	18	18	18
Sample ID	18-VS-92	18-VS-93	18-VS-94	18-VS-95	18-VS-96	18-VS-97	18-VS-98	18-VS-99
Date Sampled	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Depth	2 to 2.5	7 to 7.5	7 to 7.5	2 to 2.5	1 to 1.5	1 to 1.5	3 to 3.5	3 to 3.5
Explosive (mg/kg dry)								
1,3-Dinitrobenzene	0.44 U	0.41 U	0.041 U	0.42 U	0.42 U	0.044 U	0.042 U	0.043 U
2,4-Dinitrotoluene	0.23	0.061 U	0.006 U	0.087	0.11	0.007 U	0.089	0.006 U
2,6-Dinitrotoluene	0.067 U	0.061 U	0.006 U	0.063 U	0.063 U	0.007 U	0.011	0.006 U
DNT - Total	*0.2635*	*0.122 U*	*0.012 U*	*0.1185*	*0.1415*	*0.014 U*	*0.1*	*0.012 U*
Monomethylamine Nitrate								
Nitrobenzene	0.66 U	0.61 U	0.061 U	0.62 U	0.63 U	0.066 U	0.062 U	0.064 U
Nitroglycerine								
1,3,5-Trinitrobenzene	0.33 U	0.31 U	0.031 U	0.31 U	0.32 U	0.033 U	0.031 U	0.032 U
2,4,6-Trinitrotoluene	0.033 U	0.45	0.0031 U	0.031 U	0.032 U	0.0033 U	0.008	0.0032 U

Area	18	18
Sample ID	18-VS-9A	18-VS-9B
Date Sampled	12/8/92	12/8/92
Depth	0 to 1	3 to 6
Explosive (mg/kg dry)		
1,3-Dinitrobenzene		
2,4-Dinitrotoluene	0.1 U	0.1 U
2,6-Dinitrotoluene	0.05 U	0.05 U
DNT - Total	*0.15 U*	*0.15 U*
Monomethylamine Nitrate		
Nitrobenzene		
Nitroglycerine		
1,3,5-Trinitrobenzene		
2,4,6-Trinitrotoluene		

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-501-S-1	1234-TP-501-S-2	1234-TP-501-S-3	1234-TP-502-S-2	1234-TP-503-S-2	1234-TP-504-S-1-DAVG	1234-TP-504-S-2	1234-TP-504-S-3
Date Sampled	5/18/92	5/18/92	5/18/92	5/18/92	5/21/92	5/19/92	5/19/92	5/19/92
Depth	0 to 1	3 to 6	8 to 10	3 to 6	3 to 6	0 to 1	3 to 6	8 to 10
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	1.8 U	0.16 U	0.032 U	0.032 U	0.033 U	1.6 U	1.6 U	0.16 U
1,3-Dinitrobenzene	2.5 U	0.22 U	0.042 U	0.042 U	0.044 U	2.2 U	2.1 U	0.21 U
2,4,6-Trinitrotoluene	0.18 U	0.016 U	0.0032 U	0.0032 U	0.0033 U	0.16 U	0.16 U	0.016 U
2,4-Dinitrotoluene	0.37 U	0.033 U	0.0064 U	0.0063 U	0.0065 U	0.33 U	0.32 U	0.032 U
2,6-Dinitrotoluene	0.37 U	0.033 U	0.0064 U	0.0063 U	0.0065 U	0.33 U	0.32 U	0.032 U
DNT - Total	0.74 U	0.066 U	0.0128 U	0.0126 U	0.013 U	0.66 U	0.64 U	0.064 U
Nitrobenzene	3.7 U	0.32 U	0.063 U	0.063 U	0.065 U	3.3 U	3.2 U	0.31 U
Nitroglycerine	0.24 U	0.22 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U	0.21 U

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-505-S-2	1234-TP-506-S-2	1234-TP-506-S-3	1234-TP-507-S-2	1234-TP-508-S-2	1234-TP-509-S-2	1234-TP-510-S-2-DAVG	1234-TP-510-S-3
Date Sampled	5/19/92	5/20/92	5/20/92	5/18/92	5/18/92	5/21/92	5/21/92	5/21/92
Depth	3 to 6	3 to 6	8 to 10	3 to 6	3 to 6	3 to 6	3 to 6	8 to 10
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.16 U	0.064 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U	0.033 U
1,3-Dinitrobenzene	0.22 U	0.086 U	0.042 U	0.042 U	0.043 U	0.042 U	0.043 U	0.044 U
2,4,6-Trinitrotoluene	0.016 U	0.0064 U	0.0032 U	0.0032 U	0.0033 U	0.0032 U	0.0032 U	0.0033 U
2,4-Dinitrotoluene	0.033 U	0.013 U	0.0064 U	0.0063 U	0.0065 U	0.0063 U	0.0064 U	0.0065 U
2,6-Dinitrotoluene	0.033 U	0.013 U	0.0064 U	0.0063 U	0.0065 U	0.0063 U	0.0064 U	0.0065 U
DNT - Total	0.066 U	0.026 U	0.0128 U	0.0126 U	0.013 U	0.0126 U	0.0128 U	0.013 U
Nitrobenzene	0.32 U	0.13 U	0.063 U	0.062 U	0.065 U	0.063 U	0.063 U	0.065 U
Nitroglycerine	0.22 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-511-S-2	1234-TP-511-S-3	1234-TP-512-S-2	1234-TP-512-S-3	1234-TP-513-S-1	1234-TP-513-S-2	1234-TP-513-S-3	1234-TP-514-S-2
Date Sampled	5/21/92	5/21/92	5/19/92	5/19/92	5/19/92	5/19/92	5/19/92	5/19/92
Depth	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	3 to 6
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.031 U	0.032 U	0.66 U	0.033 U	0.032 U	0.063 U
1,3-Dinitrobenzene	0.043 U	0.043 U	0.042 U	0.042 U	0.89 U	0.043 U	0.043 U	0.085 U
2,4,6-Trinitrotoluene	0.0032 U	0.0032 U	0.0031 U	0.0032 U	0.066 U	0.0033 U	0.0032 U	0.0063 U
2,4-Dinitrotoluene	0.0064 U	0.0064 U	0.0062 U	0.0064 U	0.13 U	0.0065 U	0.0065 U	0.013 U
2,6-Dinitrotoluene	0.0064 U	0.0064 U	0.0062 U	0.0064 U	0.13 U	0.0065 U	0.0065 U	0.013 U
DNT - Total	0.0128 U	0.0128 U	0.0124 U	0.0128 U	0.26 U	0.013 U	0.013 U	0.026 U
Nitrobenzene	0.063 U	0.063 U	0.062 U	0.063 U	1.3 U	0.065 U	0.064 U	0.13 U
Nitroglycerine	0.21 U	0.21 U	0.21 U	0.21 U	0.22 U	0.22 U	0.21 U	0.21 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-514-S-3	1234-TP-515-S-2	1234-TP-515-S-3	1234-TP-516-S-1-DAVG	1234-TP-516-S-2	1234-TP-516-S-3	1234-TP-517-S-2	1234-TP-517-S-3
Date Sampled	5/19/92	5/19/92	5/19/92	5/20/92	5/20/92	5/20/92	5/20/92	5/20/92
Depth	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	3 to 6	8 to 10
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.033 U	0.033 U	0.032 U	0.71 U	0.032 U	0.031 U	0.031 U	0.031 U
1,3-Dinitrobenzene	0.044 U	0.044 U	0.042 U	0.95 U	0.042 U	0.042 U	0.042 U	0.041 U
2,4,6-Trinitrotoluene	0.0033 U	0.0033 U	0.0032 U	0.071 U	0.0032 U	0.0031 U	0.0031 U	0.0031 U
2,4-Dinitrotoluene	0.0066 U	0.0066 U	0.0064 U	0.14 U	0.0063 U	0.0063 U	0.0063 U	0.0062 U
2,6-Dinitrotoluene	0.0066 U	0.0066 U	0.0064 U	0.14 U	0.0063 U	0.0063 U	0.0063 U	0.0062 U
DNT - Total	0.0132 U	0.0132 U	0.0128 U	0.28 U	0.0126 U	0.0126 U	0.0126 U	0.0124 U
Nitrobenzene	0.066 U	0.066 U	0.063 U	1.4 U	0.063 U	0.062 U	0.062 U	0.061 U
Nitroglycerine	0.22 U	0.22 U	0.21 U	0.24 U	0.21 U	0.21 U	0.21 U	0.21 U

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-518-S-2	1234-TP-518-S-3	1234-TP-519-S-2	1234-TP-519-S-3	1234-TP-520-S-2	1234-TP-520-S-3	1234-TP-521-S-2	1234-TP-521-S-3
Date Sampled	5/19/92	5/19/92	5/20/92	5/20/92	5/18/92	5/18/92	5/18/92	5/18/92
Depth	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.031 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U	0.031 U
1,3-Dinitrobenzene	0.041 U	0.043 U	0.044 U	0.042 U	0.045 U	0.043 U	0.042 U	0.042 U
2,4,6-Trinitrotoluene	0.0031 U	0.0032 U	0.0033 U	0.0032 U	0.0033 U	0.0032 U	0.0032 U	0.0031 U
2,4-Dinitrotoluene	0.0062 U	0.0064 U	0.0066 U	0.0063 U	0.0067 U	0.0064 U	0.0063 U	0.0063 U
2,6-Dinitrotoluene	0.0062 U	0.0064 U	0.0066 U	0.0063 U	0.0067 U	0.0064 U	0.0063 U	0.0063 U
DNT - Total	0.0124 U	0.0128 U	0.0132 U	0.0126 U	0.0134 U	0.0128 U	0.0126 U	0.0126 U
Nitrobenzene	0.061 U	0.063 U	0.065 U	0.063 U	0.066 U	0.063 U	0.063 U	0.062 U
Nitroglycerine	0.2 U	0.21 U	0.22 U	0.21 U	0.22 U	0.21 U	0.21 U	0.21 U

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-522-S-2-DAVG	1234-TP-522-S-3	1234-TP-523-S-2	1234-TP-523-S-3	1234-TP-524-S-2	1234-TP-524-S-3	1234-TP-525-S-2	1234-TP-525-S-3
Date Sampled	5/20/92	5/20/92	5/20/92	5/20/92	5/18/92	5/18/92	5/20/92	5/20/92
Depth	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.031	0.032 U	0.032 U	0.031 U	0.16 U	0.032 U	0.031 U	0.031 U
1,3-Dinitrobenzene	0.042	0.042 U	0.042 U	0.042 U	0.21 U	0.043 U	0.042 U	0.041 U
2,4,6-Trinitrotoluene	0.0031	0.0032 U	0.0032 U	0.0031 U	0.016 U	0.0032 U	0.0031 U	0.0031 U
2,4-Dinitrotoluene	0.0063	0.0064 U	0.0064 U	0.0063 U	0.031 U	0.0064 U	0.0063 U	0.0062 U
2,6-Dinitrotoluene	0.0063	0.0064 U	0.0064 U	0.0063 U	0.031 U	0.0064 U	0.0063 U	0.0062 U
DNT - Total	0.0126	0.0128 U	0.0128 U	0.0126 U	0.062 U	0.0128 U	0.0126 U	0.0124 U
Nitrobenzene	0.062	0.063 U	0.063 U	0.062 U	0.31 U	0.063 U	0.062 U	0.062 U
Nitroglycerine	0.21	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U

Table B.7-2
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Explosives Results

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1234-TP-526-S-2-DAVG	1234-TP-526-S-3	1234-TP-527-S-2	1234-TP-527-S-3	1-TP-14,S-1	1-TP-15,S-1	1-TP-15,S-2	1-TP-2,S-1
Date Sampled	5/19/92	5/19/92	5/18/92	5/18/92	11/21/86	4/22/87	4/22/87	11/11/86
Depth	3 to 6	8 to 10	3 to 6	8 to 10	0 to 4	0 to 3	3 to 6	1 to 4
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene	0.032 U	0.033 U	0.031 U	0.032 U				
1,3-Dinitrobenzene	0.043 U	0.044 U	0.041 U	0.043 U				
2,4,6-Trinitrotoluene	0.0032 U	0.0033 U	0.0031 U	0.0032 U		0.08 U	0.08 U	
2,4-Dinitrotoluene	0.0065 U	0.0066 U	0.0062 U	0.0065 U		0.08 U	0.07 U	
2,6-Dinitrotoluene	0.0065 U	0.0066 U	0.0062 U	0.0065 U		0.08 U	0.07 U	
DNT - Total	0.013 U	0.0132 U	0.0124 U	0.013 U		0.16 U	0.14 U	
Nitrobenzene	0.064 U	0.065 U	0.061 U	0.064 U				
Nitroglycerine	0.22 U	0.22 U	0.21 U	0.21 U	0.18 U	0.19 U	0.18 U	3.7

Area	1234	1234	1234	1234	1234	1234	1234	1234
Sample ID	1-TP-4,S-1	1-TP-6,S-1	1-TP-8,S-1	3-TP-1,S-1-DAVG	3-TP-1,S-2	3-TP-2,S-1	3-TP-2,S-2	3-TP-3,S-1
Date Sampled	11/11/86	11/11/86	11/11/86	4/22/87	4/22/87	4/22/87	4/22/87	4/26/87
Depth	1 to 4	0 to 2.5	1 to 5	0 to 3	3 to 6	0 to 3	3 to 6	0 to 3
Explosives (mg/kg dry)								
1,3,5-Trinitrobenzene								
1,3-Dinitrobenzene								
2,4,6-Trinitrotoluene								
2,4-Dinitrotoluene				0.09 U	0.07 U	0.09 U	0.07 U	0.08 U
2,6-Dinitrotoluene				0.09 U	0.07 U	0.09 U	0.07 U	0.08 U
DNT - Total				0.18 U	0.14 U	0.18 U	0.14 U	0.16 U
Nitrobenzene								
Nitroglycerine	0.36 U	0.18 U	0.19 U	0.21 U	0.18 U	0.22 U	0.18 U	0.21 U

Area	1234	1234	1234	1234	1234	1234	1234
Sample ID	3-TP-3,S-2	3-TP-4,S-1-DAVG	3-TP-4,S-2	3-TP-5,S-1	3-TP-5,S-2-DAVG	3-TP-6,S-1	3-TP-6,S-2
Date Sampled	4/26/87	4/21/87	4/21/87	4/21/87	4/21/87	4/21/87	4/21/87
Depth	3 to 6	0 to 3	3 to 6	0 to 3	3 to 6	0 to 3	3 to 6
Explosives (mg/kg dry)							
1,3,5-Trinitrobenzene							
1,3-Dinitrobenzene							
2,4,6-Trinitrotoluene							
2,4-Dinitrotoluene	0.08 U	0.09 U	0.08 U	0.08 U	0.07 U	0.08 U	0.07 U
2,6-Dinitrotoluene	0.08 U	0.09 U	0.08 U	0.08 U	0.07 U	0.08 U	0.07 U
DNT - Total	0.16 U	0.18 U	0.16 U	0.16 U	0.14 U	0.16 U	0.14 U
Nitrobenzene							
Nitroglycerine	0.19 U	0.21 U	0.19 U	0.2 U	0.18 U	0.21 U	0.18 U

Table B.7-3
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil VOCs Results

Area	1234	1234
Sample ID	1234-TP-510-S-2-DAVG	1234-TP-514-S-2
Date Sampled	5/21/92	5/19/92
Depth	3 to 6	3 to 6
Volatiles (mg/kg dry)		
1,1,1-Trichloroethane	0.053 U	0.052 U
1,1,2,2-Tetrachloroethane	0.053 U	0.052 U
1,1,2-Trichloroethane	0.053 U	0.052 U
1,1-Dichloroethane	0.053 U	0.052 U
1,1-Dichloroethene	0.053 U	0.052 U
1,2-Dichloroethane	0.053 U	0.052 U
1,2-Dichloroethylene	0.053 U	0.052 U
1,2-Dichloropropane	0.053 U	0.052 U
1,3(cis)-Dichloropropene	0.053 U	0.052 U
1,3(trans)-Dichloropropene	0.053 U	0.052 U
2-Hexanone	0.53 U	0.52 U
Acetone	1.1 U	1 U
Benzene	0.053 U	0.052 U
Bromodichloromethane	0.053 U	0.052 U
Bromoform	0.26 U	0.26 U
Bromomethane	0.53 U	0.52 U
Carbon Disulfide	0.053 U	0.052 U
Carbon Tetrachloride	0.053 U	0.052 U
Chlorobenzene	0.053 U	0.052 U
Chloroform	0.053 U	0.052 U
Chloromethane	0.53 U	0.52 U
Dibromochloromethane	0.053 U	0.052 U
Dichloromethane	0.26 U	0.27 U
Ethyl Benzene	0.053 U	0.052 U
Ethyl Chloride	0.053 U	0.052 U
Methyl Ethyl Ketone	0.41 U	0.52 U
Methyl Isobutyl Ketone	0.53 U	0.52 U
Styrene	0.053 U	0.052 U
Tetrachloroethene	0.063	0.052 U
Toluene	0.053 U	0.052 U
Trichloroethylene	0.053 U	0.052 U
Vinyl Acetate	0.53 U	0.52 U
Vinyl Chloride	0.053 U	0.052 U
Xylenes	0.053 U	0.052 U

Table B.7-4
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil PAH and SVOC Results

Area	18	18	18	18	18
Sample ID	18-SS-577	18-SS-583-DAVG	18-SS-591	18-SS-592	18-TP-553-S-2
Date Sampled	5/7/92	5/7/92	5/7/92	5/6/92	4/29/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	3 to 6
PAHs (mg/kg dry)					
Benzo(a)Anthracene	0.026	0.018 U	0.048	0.029	0.088
Benzo(a)Pyrene	0.026	0.018 U	0.042	0.048	0.11
Benzo(b)Fluoranthene	0.02 U	0.018 U	0.027	0.023	0.08
Benzo(k)Fluoranthene	0.02 U	0.018 U	0.019 U	0.021 U	0.051
Chrysene	0.098	0.021	0.09	0.021 U	0.15
Dibenzo(a,h)Anthracene	0.041 U	0.036 U	0.039 U	0.043 U	0.12
Indeno(1,2,3-c,d)Pyrene	0.02 U	0.018 U	0.033	0.021 U	0.02 U
Total Carcinogenic PAHs (BAP TEQs)	0.0513	0.029811	0.0725	0.0759	0.2485
Acenaphthene	0.2 U	0.18 U	0.19 U	0.21 U	0.2 U
Acenaphthylene	0.2 U	0.18 U	0.19 U	0.21 U	0.2 U
Anthracene	0.01 U	0.0089 U	0.01 U	0.01 U	0.029
Benzo(g,h,i)Perylene	0.02 U	0.018 U	0.061	0.021 U	0.02 U
Fluoranthene	0.02 U	0.018 U	0.086	0.021 U	0.36
Fluorene	0.02 U	0.018 U	0.019 U	0.021 U	0.02 U
Naphthalene	0.1 U	0.089 U	0.1 U	0.1 U	0.1 U
Phenanthrene	0.034	0.0089 U	0.038	0.019	0.14 J
Pyrene	0.066	0.018 U	0.063	0.031	0.25 J
Total Non-carcinogenic PAHs	0.385	0.5388 U	0.5025	0.3465	1.049

Table B.7-4
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil PAH and SVOC Results

Area	1234
Sample ID	1234-TP-506-S-2
Date Sampled	5/20/92
Depth	3 to 6
PAHs (mg/kg dry)	
Acenaphthene	0.18 U
Acenaphthylene	0.18 U
Anthracene	0.18 U
Benzo(a)Anthracene	0.18 U
Benzo(a)Pyrene	0.18 U
Benzo(b)Fluoranthene	0.056 J
Benzo(g,h,i)Perylene	0.18 U
Benzo(k)Fluoranthene	0.18 U
Chrysene	0.04 J
Dibenz(a,h)anthracene	0.18 U
Fluoranthene	0.044 J
Fluorene	0.18 U
Indeno(1,2,3-cd)pyrene	0.18 U
2-Methylnaphthalene	0.18 U
Naphthalene	0.18 U
Phenanthrene	0.18 U
Pyrene	0.045 J
PAH (Non-Carc) - Total	0.809
Total Carcinogenic PAHS (BaP TEQs)	0.20454
Semivolatiles (mg/kg dry)	
1,2,4-Trichlorobenzene	0.18 U
1,2-Dichlorobenzene	0.18 U
1,3-Dichlorobenzene	0.18 U
1,4-Dichlorobenzene	0.18 U
2,4,5-Trichlorophenol	0.92 U
2,4,6-Trichlorophenol	0.18 U
2,4-Dichlorophenol	0.18 U
2,4-Dimethylphenol	0.18 U
2,4-Dinitrophenol	0.92 U
2-Chloronaphthalene	0.18 U
2-Chlorophenol	0.18 U
2-Methylphenol	0.18 U
2-Nitroaniline	0.92 U
2-Nitrophenol	0.18 U
3,3'-Dichlorobenzidine	0.37 U
3-Nitroaniline	0.92 U
4,6-Dinitro-o-Cresol	0.92 U
4-Bromodiphenyl ether	0.18 U
4-Chloroaniline	0.18 U
4-Chlorophenyl-phenyl ether	0.18 U
4-Methylphenol	0.18 U
4-Nitroaniline	0.92 U
4-Nitrophenol	0.92 U
Aniline	0.18 U
Benzidine	1.8 U
Benzoic Acid	0.92 U

Table B.7-4
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil PAH and SVOC Results

Area	1234
Sample ID	1234-TP-506-S-2
Date Sampled	5/20/92
Depth	3 to 6
Benzyl Alcohol	0.18 U
Bis(2-Chloroethoxy)methane	0.18 U
Bis(2-Chloroisopropyl)ether	0.18 U
Bis(2-ethylhexyl)Phthalate (DEHP)	0.18 U
Bis(Chloroethyl)ether	0.18 U
Dibenzofuran	0.18 U
Dibutyl Phthalate	0.18 U
Diethyl Phthalate	0.18 U
Dimethyl Phthalate	0.18 U
Di-N-Octylphthalate	0.18 U
Hexachlorobenzene	0.18 U
Hexachlorobutadiene	0.18 U
Hexachlorocyclopentadiene	0.18 U
Hexachloroethane	0.18 U
Isophorone	0.18 U
N-Butyl Benzyl Phthalate	0.18 U
N-Nitrosodimethylamine	0.18 U
N-Nitrosodi-N-propylamine	0.18 U
N-Nitrosodiphenylamine	0.18 U
Pentachlorophenol	0.18 U
Phenol	0.18 U

Table B.7-5
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil TPH Results

Area	18	18	18	18
Sample ID	18-SS-577	18-SS-583-DAVG	18-SS-591	18-SS-592
Date Sampled	5/7/92	5/7/92	5/7/92	5/6/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)				
TPH Scan	52	47	29 U	84

Table B.7-6
Area 18/1/2/3/4 - Nitroglycerin Production and Powderline Soil Nitrate Results

Area	18	18	18N	18N	18N	18N	18N	18
Sample ID	18-TP-520-S-2-DAVG	18-TP-520-S-3	18-TP-535-S-1-DAVG	18-TP-535-S-3	18-TP-536-S-2	18-TP-536-S-3	18-TP-537-S-3	18-TP-538-S-2
Date Sampled	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/24/92
Depth	3 to 6	8 to 10	0 to 1	8 to 10	3 to 6	8 to 10	8 to 10	3 to 6
Conventionals (mg/kg dry)								
Nitrate as Nitrogen	0.6 J	1.1 J	0.7 J	0.7 J	0.5 U	0.9 J	0.5 U	1.1

Area	18	18	18	18	18	18	18
Sample ID	18-TP-538-S-3	18-TP-539-S-2	18-TP-539-S-3	18-TP-540-S-2-DAVG	18-TP-540-S-3	18-TP-541-S-2	18-TP-541-S-3
Date Sampled	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92	4/24/92
Depth	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10
Conventionals (mg/kg dry)							
Nitrate as Nitrogen	0.8	0.5 U	0.5 U	0.7	0.6	0.5 U	0.7

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	25-TP-7,S-1	25-TP-7,S-2	25-TP-8,S-1	25-TP-8,S-2	25-TP-9,S-1
Date Sampled	4/15/87	4/15/87	4/15/87	4/15/87	4/15/87
Depth	0 to 3.5	3.5 to 7	0 to 3.5	3.5 to 7	0 to 3.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic					
Cadmium					
Chromium					
Copper					
Lead	76	8 J	4000	160	120
Mercury					
Nickel					
Zinc					

Area	25	25	25	25	25
Sample ID	25-TP-9,S-2	25-TP-10,S-1	25-TP-10,S-2	25-TP-11,S-1	25-TP-11,S-2
Date Sampled	4/15/87	4/15/87	4/15/87	4/15/87	4/15/87
Depth	3.5 to 7	0 to 3.5	3.5 to 7	0 to 3.5	3.5 to 7
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic					
Cadmium					
Chromium					
Copper					
Lead	71	2100	110	110	13
Mercury					
Nickel					
Zinc					

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	25-TP-501-S-2-DAVG	25-TP-502-S-1	25-TP-502-S-2	25-TP-503-S-3	25-TP-503-S-4
Date Sampled	4/22/92	4/22/92	4/22/92	4/22/92	4/22/92
Depth	3 to 6	0 to 1	3 to 6	2 to 4	5 to 7
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	2.6	5.4	2.4	67	110
Cadmium	0.033	0.1	0.029	0.089	0.025
Chromium	13	15	10	10	2.9
Copper	14	12	12	43	0.27 U
Lead	29	15	5.4 U	23	62
Mercury	0.12	0.14	0.094 U	2.6	0.8 J
Nickel	17	19	14	10	2.2
Zinc	27	37	22	23 J	6.4

Area	25	25	25	25	25
Sample ID	25-TP-505-S-2	25-TP-506-S-1	25-TP-506-S-2	25-TP-509-S-1	25-TP-509-S-2
Date Sampled	4/22/92	4/22/92	4/22/92	4/22/92	4/22/92
Depth	1 to 4	0 to 1	3 to 6	0 to 1	3 to 6
TCLP Metals (mg/L)					
Lead		1.83			
Total Metals (mg/kg dry)					
Arsenic	1.5	16	2.6	15	2.2
Cadmium	0.039	0.39	1.5	0.013	0.034
Chromium	8	16	11	1.4	4.8
Copper	9.3	96	23	5	8.4
Lead	5.5 U	3100	5.6 U	180	12
Mercury	0.087 UJ	0.84 J	0.081 UJ	0.11 UJ	0.084 UJ
Nickel	17	7.7	15	0.73	3.1
Zinc	13	65	34	4.6	9.6

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	25-TP-510-S-1	25-TP-510-S-2	25-TP-511-S-1	25-TP-511-S-2	25-TP-511-S-3
Date Sampled	4/22/92	4/22/92	4/22/92	4/22/92	4/22/92
Depth	0 to 1	3 to 6	0 to 1	3 to 6	8 to 10
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	9.9	1.9	3	3.6	7.1
Cadmium	0.37	0.11	1.2	0.022	0.025
Chromium	11	7.3	5.7	11	12
Copper	12	10	6.6	6.8	8.3
Lead	6.4 U	5.3 U	470	240	31
Mercury	0.1 UJ	0.078 UJ	0.65 J	0.083 UJ	0.083 UJ
Nickel	15	11	3.2	9.2	11
Zinc	32	14	6.3	14	13

Area	25	25	25	25	25
Sample ID	25-TP-514-S-3	25-TP-514-S-4	25-TP-515-S-1	25-TP-515-S-2	25-TP-516-S-1
Date Sampled	11/4/92	11/4/92	11/3/92	11/3/92	11/4/92
Depth	5 to 7	9 to 11	0 to 1	3 to 6	0 to 1
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	0.94	2.5 J	24	3.5	3.1
Cadmium		0.011			
Chromium					
Copper					
Lead	75	150	330	22	7.1 J
Mercury	0.1 UJ	0.11 U	3.1	0.33	0.1 UJ
Nickel					
Zinc					

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	25-TP-516-S-3	25-TP-517-S-1	25-TP-517-S-2	25-TP-518-S-2	25-B-501-S-4-DAVG
Date Sampled	11/4/92	11/4/92	11/4/92	11/4/92	11/5/92
Depth	4 to 6	0 to 1	3 to 6	0 to 3	7.5 to 9
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	34	13	2.8 J	2.4 J	4.5
Cadmium					
Chromium					
Copper					
Lead	380	95	5.8 UJ	26 J	7.3
Mercury	0.14 J	0.19 J	0.1 UJ	0.096 UJ	0.095 U
Nickel					
Zinc					

Area	25	25	25	25	25
Sample ID	25-B-501-S-7	25-SS-503	25-SS-510	25-SS-511	25-SS-514
Date Sampled	11/5/92	10/21/93	10/21/93	10/21/93	10/21/93
Depth	15 to 16.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	3.7 J	18	8.5	21	43
Cadmium					
Chromium					
Copper					
Lead	5.3 U	140	250	120	190
Mercury	0.11 U			0.32	
Nickel					
Zinc					

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	25-SS-516	25-SS-518	25-SS-519	25-SS-520	25-SS-521
Date Sampled	10/21/93	10/21/93	10/21/93	10/21/93	10/21/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	9.5	9.5	5.7	3	6.3
Cadmium					
Chromium					
Copper					
Lead	41	89	8.4	5.7 U	16
Mercury				0.11 U	
Nickel					
Zinc					

Area	25	25	25	25	25
Sample ID	25-SS-522	25-SS-523	25-SS-524	25-SS-525	25-SS-526
Date Sampled	10/21/93	10/21/93	10/21/93	10/21/93	10/21/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	9	23 J	5.6 J	3.7 J	12 J
Cadmium					
Chromium					
Copper					
Lead	29	74	5.4 U	58	1800
Mercury	0.1 U		0.1 U		
Nickel					
Zinc					

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	25-SS-527	25-SS-528-DAVG	25-SS-529	25-SS-530-DAVG	25-VS-1
Date Sampled	10/21/93	10/21/93	10/21/93	10/21/93	6/16/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	3 to 6
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	370 J	28 J	11 J	22	
Cadmium					
Chromium					
Copper					
Lead	41	25	51	210	5.4 U
Mercury		0.19		0.44	
Nickel					
Zinc					

Area	25	25	25	25	25
Sample ID	25-VS-8	25-VS-12	26-VS-1	36-VS-5	36-VS-9
Date Sampled	6/16/93	6/16/93	9/15/99	9/20/99	9/20/99
Depth	3 to 6	15 to 15.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic			7.1	5.9	2.1 U
Cadmium					
Chromium					
Copper					
Lead	5.4 U	5.3 U	2500 J	280	23
Mercury					
Nickel					
Zinc					

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	36-VS-13	36-VS-15	36-VS-16	36-VS-17	36-VS-18
Date Sampled	9/20/99	9/20/99	9/20/99	9/20/99	9/20/99
Depth	0 to 0.5	1 to 2.5	0 to 0.5	0 to 0.5	1 to 2.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	120	47	91	240	330
Cadmium					
Chromium					
Copper					
Lead	93	3800	460	210	14
Mercury					
Nickel					
Zinc					

Area	25	25	25	25	25
Sample ID	36-VS-19	36-VS-20	36-VS-22	APH-SS-506	APH-SS-510
Date Sampled	10/1/99	10/1/99	10/1/99	11/12/92	11/12/92
Depth	0 to 0.5	3 to 4.5	3 to 4.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic	28	6.2	22		
Cadmium					
Chromium					
Copper					
Lead	170	11	700	150	210
Mercury					
Nickel					
Zinc					

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25
Sample ID	APH-SS-512	APH-SS-514	APH-SS-515	APH-SS-516	APH-SS-518
Date Sampled	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)					
Lead					
Total Metals (mg/kg dry)					
Arsenic					
Cadmium					
Chromium					
Copper					
Lead	1100	710	24	6.2 U	480
Mercury					
Nickel					
Zinc					

Area	25
Sample ID	APH-SS-519
Date Sampled	11/12/92
Depth	0 to 0.5
TCLP Metals (mg/L)	
Lead	
Total Metals (mg/kg dry)	
Arsenic	
Cadmium	
Chromium	
Copper	
Lead	120
Mercury	
Nickel	
Zinc	

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	01-F01-SS_F-29_C2-005	01-F01-SS_F-30_C2-005	01-F01-SS_F-31_C2-005	01-F01-SS_F-32_C2-005
Date Sampled	6/12/01	6/12/01	6/12/01	6/12/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	5.6	4.1	12	13
Lead	8.5	28	37	70

Area	25	25	25	25
Sample ID	01-F01-SS_F-33_C2-005	01-F01-SS_F-34_C2-005	01-F01-SS_F-35_C2-005	01-F01-SS_F-36_C2-005
Date Sampled	6/12/01	6/12/01	6/12/01	6/12/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	3.5	4.2	7	5.4
Lead	3.6	15	18	41

Area	25	25	25	25
Sample ID	01-F01-SS_F-37_C2-005	01-F01-SS_F-38_C2-005	01-F01-SS_F-39_C2-005	01-F01-SS_F-40_C2-005
Date Sampled	6/12/01	6/12/01	6/12/01	6/12/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	13	13	12	5.5
Lead	43	93	19	40

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	01-F01-SS_F-43_C2-005	01-F01-SS_F-44_C2-005	01-F01-SS_F-45_C2-005	01-F01-SS_F-46_C2-005
Date Sampled	6/12/01	6/12/01	6/12/01	6/14/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	7.7	7.9	9.1	7.8
Lead	53	41	67	37

Area	25	25	25	25
Sample ID	01-F01-SS_F-48_C2-005-DAVG	01-F01-SS_F-63_C2-005	01-F01-SS_F-66_C2-005	01-F01-SS_F-68_C2-005
Date Sampled	6/14/01	6/14/01	6/18/01	6/18/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	4.75	4.7	6.3	4.1
Lead	18	88	59	10

Area	25	25	25	25
Sample ID	01-F01-SS_F-69_C2-005	01-F01-SS_F-70_C2-005	01-F02-SS_F-73_C2-005	01-F02-SS_F-74_C2-005
Date Sampled	6/18/01	6/18/01	6/18/01	6/18/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	4.5	2.9	3.7	7.6
Lead	4.8	49	10	10

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	01-F02-SS_F-75_C2-005	01-F02-SS_F-82_C2-005	01-F02-SS_F-86_C2-005	01-F02-SS_F-87_C2-005
Date Sampled	6/18/01	6/18/01	6/19/01	6/19/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	3.7	3.5	8.5	5
Lead	5.9	3	100	6.8

Area	25	25	25	25
Sample ID	01-F03-SS_F-100_C2-005	01-F03-SS_F-102_C2-005-DAVG	01-F03-SS_F-104_C2-005	01-F03-SS_F-105_C2-005
Date Sampled	6/19/01	6/20/01	6/20/01	6/20/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	7.8	6.85	5.8	8.5
Lead	23	41.5	30	95

Area	25	25	25	25
Sample ID	01-F03-SS_F-106_C2-005	01-F03-SS_F-107_C2-005	01-F03-SS_F-108_C2-005	01-F03-SS_F-109_C2-005
Date Sampled	6/20/01	6/20/01	6/20/01	6/20/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	2.9	14	9.7	7.3
Lead	38	9.9	18	22

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	01-F03-SS_F-110_C2-005	01-F03-SS_F-111_C2-005	01-F03-SS_F-112_C2-005	01-F03-SS_F-113_C2-005
Date Sampled	6/20/01	6/20/01	6/20/01	6/20/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	7.1	11	8.2	12
Lead	75	4.6	82	26

Area	25	25	25	25
Sample ID	01-F03-SS_F-94_C2-005	01-F03-SS_F-95_C2-005	01-F03-SS_F-96_C2-005	01-F03-SS_F-97_C2-005
Date Sampled	6/19/01	6/19/01	6/19/01	6/19/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	3.9	10	2.8	5.5
Lead	7.7	89	5	83

Area	25	25	25	25
Sample ID	01-F03-SS_F-98_C2-005	01-F03-SS_F-99_C2-005	01-F04-SS_F-115_C2-005	01-F04-SS_F-116_C2-005-DAVG
Date Sampled	6/19/01	6/19/01	6/20/01	6/20/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	5.2	4.9	7.1	7.85
Lead	3.5	3.2	5.2	16

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	01-F04-SS_F-120_C2-005	01-F04-SS_F-122_C2-005	01-F04-SS_F-123_C2-005	01-F04-SS_F-125_C2-005
Date Sampled	6/20/01	6/21/01	6/21/01	6/21/01
Depth (ft bgs)	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg Dry)				
Arsenic	11	7.8	39	6.4
Lead	2.6	3.1	22	43

Area	25	25	25	25
Sample ID	01-N01-SS_NGRR-198_C2-005	01-N01-SS_NGRR-199_C2-005	01-N01-SS_NGRR-200_C2-005	01-N01-SS_NGRR-201_C2-005
Date Sampled	8/7/01	8/7/01	8/7/01	8/7/01
Depth (ft bgs)	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg Dry)				
Arsenic	13	4.6	5.2	5.3
Lead	30	7.3	55	14

Area	25	25	25	25
Sample ID	01-N01-SS_NGRR-202_C2-005	01-N01-SS_NGRR-204_C2-005	01-N01-SS_NGRR-205_C2-005	01-N01-SS_NGRR-206_C2-005
Date Sampled	8/7/01	8/7/01	8/7/01	8/7/01
Depth (ft bgs)	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg Dry)				
Arsenic	6.3	11	5.6	4.6
Lead	24	55	36	9.2

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	01-N01-SS_NGRR-207_C2-005	01-N01-SS_NGRR-90_C2-005	01-N01-SS_NGRR-91_C2-005	01-N01-SS_NGRR-92_C2-005
Date Sampled	8/7/01	7/19/01	7/19/01	7/19/01
Depth (ft bgs)	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg Dry)				
Arsenic	6	7.2	3.1	11
Lead	51	45	3.8	22

Area	25	25	25	25
Sample ID	01-N01-SS_NGRR-93_C2-005	01-N01-SS_NGRR-94_C2-005	02-F01-SS_F-42-2_C2-030	02-F01-SS_F-67-2_C2-030
Date Sampled	7/19/01	7/19/01	8/28/01	8/28/01
Depth (ft bgs)	1.5 to 2	1.5 to 2	3 to 3.5	3 to 3.5
Total Metals (mg/kg Dry)				
Arsenic	11	14	7.4	3.4
Lead	7.5	6.5	22	22

Area	25	25	25	25
Sample ID	02-F02-SS_F-78-2_C2-030	02-F02-SS_F-84-2_C3-030-DAVG	02-F02-SS_F-85-2_C2-030	02-F02-SS_F-91-2_C2-030
Date Sampled	8/28/01	8/28/01	8/28/01	8/28/01
Depth (ft bgs)	3 to 3.5	3 to 3.5	3 to 3.5	3 to 3.5
Total Metals (mg/kg Dry)				
Arsenic	4.5	4.2	6.9	6.2
Lead	100	82.5	80	62

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	02-F02-SS_F-92-2_C2-030	02-F03-SS_F-101-2_C2-030	02-F04-SS_F-118-2_C2-030	02-F04-SS_F-119-2_C2-030
Date Sampled	8/28/01	8/28/01	8/28/01	8/28/01
Depth (ft bgs)	3 to 3.5	3 to 3.5	3 to 3.5	3 to 3.5
Total Metals (mg/kg Dry)				
Arsenic	3.9	3.7	14	31
Lead	49	7.5	3.9	25

Area	25	25	25	25
Sample ID	02-F04-SS_F-121-2_C2-030	02-F04-SS_F-124-2_C2-030	02-N01-SS_NGRR-196-2_C2-025	02-N01-SS_NGRR-197-2_C2-025
Date Sampled	8/28/01	8/28/01	8/28/01	8/28/01
Depth (ft bgs)	3 to 3.5	3 to 3.5	2.5 to 3	2.5 to 3
Total Metals (mg/kg Dry)				
Arsenic	34	12	16	5.1
Lead	21	45	81	10

Area	25	25	25	25
Sample ID	02-N01-SS_NGRR-203-2_C2-025	02-N01-SS_NGRR-276-2_C2-025	02-N01-SS_NGRR-279-2_C2-025-DAV	02-N01-SS_NGRR-281-2_C2-025
Date Sampled	8/28/01	8/28/01	8/30/01	8/30/01
Depth (ft bgs)	2.5 to 3	2.5 to 3	2.5 to 3	2.5 to 3
Total Metals (mg/kg Dry)				
Arsenic	16	7.2	12.5	35
Lead	37	97	26.5	40 J

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25
Sample ID	03-F01-SS-_F-47-3_-C2-050	03-F02-SS-_F-76-3_-C2-050-DAVG	03-F02-SS-_F-88-3_-C2-050	04-F01-SS-_F-64-4_-C2-060
Date Sampled	9/13/01	9/13/01	9/13/01	9/19/01
Depth (ft bgs)	4 to 4.5	4 to 4.5	4 to 4.5	5 to 5.5
Total Metals (mg/kg Dry)				
Arsenic	7.7	6.15	5.6	4.9
Lead	6.1	24.5	62	66

Area	25	25	25	25
Sample ID	04-F02-SS-_F-72-4_-C2-060	04-F02-SS-_F-77-4_-C2-060	04-F02-SS-_F-79-4_-C2-060	04-F02-SS-_F-80-4_-C2-060
Date Sampled	9/19/01	9/19/01	9/19/01	9/19/01
Depth (ft bgs)	5 to 5.5	5 to 5.5	5 to 5.5	5 to 5.5
Total Metals (mg/kg Dry)				
Arsenic	3.3	2.7	9.6	12
Lead	23	40	290	520

Area	25	25	25	25
Sample ID	04-F02-SS-_F-81-4_-C2-060	04-F02-SS-_F-89-4_-C2-060-DAVG	04-F02-SS-_F-90-4_-C2-060-DAVG	RR-510-DAVG
Date Sampled	9/19/01	9/19/01	9/19/01	4/1/93
Depth (ft bgs)	5 to 5.5	5 to 5.5	5 to 5.5	0 to 0.5
Total Metals (mg/kg Dry)				
Arsenic	8	7.05	6.9	15
Lead	65	86.5	355	

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25	25
Sample ID	RR-525	RR-526	SA1-28-50	SA1-28-51	SA1-29-49	SA1-29-50
Date Sampled			10/14/99	10/14/99	10/14/99	10/14/99
Depth (ft bgs)	0 to 0.5	0 to 0.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5
Total Metals (mg/kg Dry)						
Arsenic	22 J	14 J	6.9	18	17	17
Lead			220	120	180	520

Area	25	25	25	25	25	25
Sample ID	SA1-29-51	SA1-30-49	SA1-30-50	SA1-30-51	SA1-31-48	SA1-31-49
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth (ft bgs)	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5
Total Metals (mg/kg Dry)						
Arsenic	13	2.1 U	5.5	37	1.9 U	2.1 U
Lead	640	26	230	61	1.4	17

Area	25	25	25	25	25	25
Sample ID	SA1-31-50	SA1-31-51	SA1-32-48	SA1-32-49	SA1-32-50	SA1-32-51
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth (ft bgs)	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5
Total Metals (mg/kg Dry)						
Arsenic	8	8.6	9.7	3.4	3	3.2
Lead	320	310	76	41	180	100

Table B.8-1
Area 25 - Acid Production Area Soil Metals Results

Area	25	25	25	25	25	25
Sample ID	SA1-33-48	SA1-33-49	SA1-33-50	SA1-33-51	SA1-33-52	SA1-34-47
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth (ft bgs)	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5
Total Metals (mg/kg Dry)						
Arsenic	3.5	2.1 U	17	4.1	6.7	1.9 U
Lead	36	4.8	230	680	120	3.9

Area	25	25	25	25	25	25
Sample ID	SA1-34-48	SA1-34-49	SA1-34-50	SA1-34-51	SA1-34-52	SA1-35-47
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth (ft bgs)	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5
Total Metals (mg/kg Dry)						
Arsenic	4	4.6	3.9	2.4 U	12	4.4
Lead	47	100	1000	58	51	26

Area	25	25	25	25	25
Sample ID	SA1-35-48	SA1-35-49	SA1-36-47	SA1-36-48	SA1-36-49
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth (ft bgs)	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5	3 to 6.5
Total Metals (mg/kg Dry)					
Arsenic	8.2	16	8.2	22	20
Lead	170	310	150	150	330

Table B.8-2
Area 25 - Acid Production Area Soil Explosives Results

Area	25	25	25	25	25
Sample ID	25-TP-501-S-2-DAVG	25-TP-501-S-3	25-TP-502-S-2	25-TP-502-S-3	25-TP-524-S-1
Date Sampled	4/22/92	4/22/92	4/22/92	4/22/92	11/2/92
Depth	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1
Explosive (mg/kg dry)					
1,3,5-Trinitrobenzene					0.064 U
1,3-Dinitrobenzene					0.085 U
2,4,6-Trinitrotoluene					0.0064 U
2,4-Dinitrotoluene					0.013 U
2,6-Dinitrotoluene					0.013 U
DNT - Total					0.026 U
Nitrobenzene					0.13 U
Nitroglycerine	0.22 U	0.21 U	0.22 U	0.21 U	

Area	25	25	25	25	25
Sample ID	25-TP-524-S-2	25-TP-524-S-3	25-VS-1-DAVG	25-VS-2	25-VS-4
Date Sampled	11/2/92	11/2/92	6/16/93	6/16/93	6/16/93
Depth	3 to 6	8 to 10	3 to 6	3 to 6	3 to 6
Explosive (mg/kg dry)					
1,3,5-Trinitrobenzene	0.032 U	0.031 U	0.033 U	0.032 U	0.032 U
1,3-Dinitrobenzene	0.043 U	0.042 U	0.044 U	0.043 U	0.042 U
2,4,6-Trinitrotoluene	0.0032 U	0.0031 U	0.0033 U	0.0032 U	0.0032 U
2,4-Dinitrotoluene	0.0064 U	0.0063 U	0.007 U	0.006 U	0.006 U
2,6-Dinitrotoluene	0.0064 U	0.0063 U	0.007 U	0.006 U	0.006 U
DNT - Total	0.0128 U	0.0126	0.014	0.012 U	0.012 U
Nitrobenzene	0.063 U	0.062 U	0.066 U	0.064 U	0.063 U
Nitroglycerine					

Table B.8-2
Area 25 - Acid Production Area Soil Explosives Results

Area	25	25	25	25	25
Sample ID	25-VS-5	25-VS-6	25-VS-7	25-VS-8	25-VS-9
Date Sampled	6/16/93	6/16/93	6/16/93	6/16/93	6/16/93
Depth	9 to 12	3 to 6	3 to 3.5	3 to 6	9 to 12
Explosive (mg/kg dry)					
1,3,5-Trinitrobenzene	0.032 U	0.031 U	0.032 U	0.033 U	0.032 U
1,3-Dinitrobenzene	0.043 U	0.042 U	0.043 U	0.044 U	0.043 U
2,4,6-Trinitrotoluene	0.0032 U	0.0031 U	0.0032 U	0.0033 U	0.0032 U
2,4-Dinitrotoluene	0.006 U	0.006 U	0.006 J	0.002 J	0.006 U
2,6-Dinitrotoluene	0.006 U	0.006 U	0.017	0.003 J	0.003 J
DNT - Total	0.012 U	0.012 U	0.023	0.005	0.006
Nitrobenzene	0.064 U	0.063 U	0.064 U	0.065 U	0.064 U
Nitroglycerine					

Area	25	25	25	25	25
Sample ID	25-VS-10	25-VS-12-DAVG	25-VS-13	25-VS-14	25-VS-29
Date Sampled	6/16/93	6/16/93	6/16/93	6/16/93	4/13/94
Depth	2 to 2.5	15 to 15.5	15 to 15.5	15 to 15.5	27 to 29
Explosive (mg/kg dry)					
1,3,5-Trinitrobenzene	0.62 U	0.64 U	32 U	0.032 U	0.072
1,3-Dinitrobenzene	0.83 U	0.85 U	43 U	0.043 U	0.042 U
2,4,6-Trinitrotoluene	0.062 U	0.064 U	7.4	0.025	0.0032
2,4-Dinitrotoluene	0.12 U	0.59	6.4 U	0.95	0.21
2,6-Dinitrotoluene	0.12 U	0.52	1.9	0.2	0.089
DNT - Total	0.24 U	1.11	5.1	1.15	0.299
Nitrobenzene	1.2 U	1.3 U	64 U	0.064 U	0.062 U
Nitroglycerine					

Table B.8-2
Area 25 - Acid Production Area Soil Explosives Results

Area	25	25	25	25
Sample ID	25-VS-30	25-VS-25	25-VS-26	25-VS-27
Date Sampled	4/28/94	4/5/94	4/5/94	4/13/94
Depth	37 to 37.5	24 to 26	24 to 26	27 to 29
Explosive (mg/kg dry)				
1,3,5-Trinitrobenzene	0.033 U	0.62	0.05	0.032 U
1,3-Dinitrobenzene	0.044 U	0.24 U	0.042 U	0.042 U
2,4,6-Trinitrotoluene	0.088	0.3	0.025	0.012
2,4-Dinitrotoluene	0.059	0.23	0.028	0.01
2,6-Dinitrotoluene	0.08	0.55	0.043	0.022
DNT - Total	0.139	0.78	0.71	0.32
Nitrobenzene	0.066 U	0.36 U	0.063 U	0.063 U
Nitroglycerine				

Table B.8-3
Area 25 - Acid Production Area Soil VOC, SVOC, and PAH Results

Area	25
Sample ID	25-TP-504-S-2
Date Sampled	4/22/92
Depth	0 to 3
PAHs (mg/kg dry)	
Benzo(a)Anthracene	0.17 U
Benzo(a)Pyrene	0.17 U
Benzo(b)Fluoranthene	0.17 U
Benzo(k)Fluoranthene	0.17 U
Chrysene	0.17 U
Dibenzo(a,h)Anthracene	0.17 U
Indeno(1,2,3-c,d)Pyrene	0.17 U
2-Methylnaphthalene	0.17 U
Acenaphthene	0.17 U
Acenaphthylene	0.17 U
Anthracene	0.17 U
Benzo(g,h,i)Perylene	0.17 U
Fluoranthene	0.17 U
Fluorene	0.17 U
Naphthalene	0.17 U
Phenanthrene	0.17 U
Pyrene	0.17 U
Semivolatiles (mg/kg dry)	
1,2,4-Trichlorobenzene	0.17 U
1,2-Dichlorobenzene	0.17 U
1,3-Dichlorobenzene	0.17 U
1,4-Dichlorobenzene	0.17 U
2,4,5-Trichlorophenol	0.89 U
2,4,6-Trichlorophenol	0.17 U
2,4-Dichlorophenol	0.17 U
2,4-Dimethylphenol	0.17 U
2,4-Dinitrophenol	0.89 U
2-Chloronaphthalene	0.17 U
2-Chlorophenol	0.17 U
2-Methylphenol	0.17 U
2-Nitroaniline	0.89 U
2-Nitrophenol	0.17 U
3,3'-Dichlorobenzidine	0.36 U
3-Nitroaniline	0.89 U
4,6-Dinitro-2-Methylphenol	0.89 U
4-Bromophenyl Phenyl Ether	0.17 U
4-Chloroaniline	0.17 U
4-Chlorophenyl-Phenylether	0.17 U
4-Methylphenol	0.17 U
4-Nitroaniline	0.89 U
4-Nitrophenol	0.89 U
Aniline	0.17 U
Benzidine	1.7 U
Benzoic Acid	0.89 U
Benzyl Alcohol	0.17 U
Bis(2-Chloroethoxy) Methane	0.17 U
Bis(2-Chloroethyl) Ether	0.17 U
Bis(2-Chloroisopropyl) Ether	0.17 U
Bis(2-Ethylhexyl)Phthalate	0.17 U

Table B.8-3
Area 25 - Acid Production Area Soil VOC, SVOC, and PAH Results

Area	25
Sample ID	25-TP-504-S-2
Date Sampled	4/22/92
Depth	0 to 3
Butylbenzylphthalate	0.17 U
Di-N-Butylphthalate	0.17 U
Di-N-Octylphthalate	0.17 U
Dibenzofuran	0.17 U
Diethylphthalate	0.17 U
Dimethylphthalate	0.17 U
Hexachlorobenzene	0.17 U
Hexachlorobutadiene	0.17 U
Hexachlorocyclopentadiene	0.17 U
Hexachloroethane	0.17 U
Isophorone	0.17 U
N-Nitroso-Di-Phenylamine	0.17 U
N-Nitroso-Di-Propylamine	0.17 U
N-Nitroso-Dimethylamine	0.17 U
Pentachlorophenol	0.17 U
Phenol	0.17 U
Volatiles (mg/kg dry)	
1,1,1-Trichloroethane	0.052 U
1,1,2,2-Tetrachloroethane	0.052 U
1,1,2-Trichloroethane	0.052 U
1,1-Dichloroethane	0.052 U
1,1-Dichloroethene	0.052 U
1,2-Dichloroethane	0.052 U
1,2-Dichloroethene(Total)	0.052 U
1,2-Dichloropropane	0.052 U
1,3(cis)-Dichloropropene	0.052 U
1,3(trans)-Dichloropropene	0.052 U
2-Butanone	0.52 U
2-Hexanone	0.52 U
4-Methyl-2-Pentanone	0.52 U
Acetone	1.6 U
Benzene	0.052 U
Bromodichloromethane	0.052 U
Bromoform	0.26 U
Bromomethane	0.52 U
Carbon Disulfide	0.052 U
Carbon Tetrachloride	0.052 U
Chlorobenzene	0.052 U
Chloroethane	0.052 U
Chloroform	0.052 U
Chloromethane	0.52 U
Dibromochloromethane	0.052 U
Ethylbenzene	0.052 U
Methylene Chloride	0.34 U
Styrene	0.052 U
Tetrachloroethene	0.052 U
Toluene	0.052 U
Trichloroethene	0.052 U
Vinyl Acetate	0.52 U
Vinyl Chloride	0.052 U
Xylene(Total)	0.052 U

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	01-F11-SS_F-247_C2-005	01-F35-SS_F-241_C2-005	01-F35-SS_F-242_C2-005
Date Sampled	8/14/01	8/14/01	8/14/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5
Metals			
Antimony			
Arsenic	15	6	8.3
Cadmium			
Chromium			
Copper			
Lead	93	12	25
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	01-F35-SS_F-243_C2-005	01-N01-SS_NGRR-277_C2-005	01-N01-SS_NGRR-278_C2-005
Date Sampled	8/14/01	8/14/01	8/14/01
Depth	2 to 2.5	1.5 to 2	1.5 to 2
Metals			
Antimony			
Arsenic	24	20	34
Cadmium			
Chromium			
Copper			
Lead	68	15	110
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	01-N01-SS_NGRR-87_C2-005	01-N01-SS_NGRR-88_C2-005	01-N01-SS_NGRR-89_C2-005
Date Sampled	7/19/01	7/19/01	7/19/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2
Metals			
Antimony			
Arsenic	3.4	3.9	37
Cadmium			
Chromium			
Copper			
Lead	5.1	7.5	25
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	02-F11-SS_F-246-2_C2-030	02-F11-SS_F-248-2_C2-030	02-F11-SS_F-253-2_C2-030
Date Sampled	8/29/01	8/29/01	8/29/01
Depth	3 to 3.5	3 to 3.5	3 to 3.5
Metals			
Antimony			
Arsenic	6.4 J	4.8 J	24 J
Cadmium			
Chromium			
Copper			
Lead	38	96	65
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	02-F11-SS_F-255-2_C2-030	02-F11-SS_F-256-2_C2-030	02-F11-SS_F-257-2_C2-030
Date Sampled	8/29/01	8/29/01	8/29/01
Depth	3 to 3.5	3 to 3.5	3 to 3.5
Metals			
Antimony			
Arsenic	11 J	4.9	4.3
Cadmium			
Chromium			
Copper			
Lead	47	9.5	60
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	03-F11-SS-_F-244-3_-C2-050	03-F11-SS-_F-245-3_-C2-050	03-F11-SS-_F-249-3_-C2-050
Date Sampled	9/10/01	9/10/01	9/10/01
Depth	4 to 4.5	4 to 4.5	4 to 4.5
Metals			
Antimony			
Arsenic	5.1	5.6	39
Cadmium			
Chromium			
Copper			
Lead	120	8.5	190
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	03-F11-SS-_F-251-3_-C2-050	03-F11-SS-_F-252-3_-C2-050	03-F11-SS-_F-254-3_-C2-050
Date Sampled	9/10/01	9/10/01	9/10/01
Depth	4 to 4.5	4 to 4.5	4 to 4.5
Metals			
Antimony			
Arsenic	3.9	7	19
Cadmium			
Chromium			
Copper			
Lead	51	360	170
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-1,S-2	26-B-2,S-1	26-B-2,S-10
Date Sampled	11/26/86	4/21/87	4/21/87
Depth	5 to 6.5	2.5 to 4	25 to 26.5
Metals			
Antimony	3 U		
Arsenic			
Cadmium			
Chromium	19		
Copper			
Lead	1200	1300	470
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-2,S-3	26-B-2,S-4-DAVG	26-B-2,S-6
Date Sampled	4/21/87	4/21/87	4/21/87
Depth	7.5 to 9	10 to 11.5	5 to 6.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	480	220	570
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-2,S-8	26-B-2,S-9	26-B-3,S-1
Date Sampled	4/21/87	4/21/87	4/23/87
Depth	20 to 21	22.5 to 24	2.5 to 4
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	610	550	2200
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-3,S-2	26-B-3,S-4	26-B-3,S-6-DAVG
Date Sampled	4/23/87	4/24/87	4/24/87
Depth	5 to 6.5	10 to 11.5	15 to 16.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	580	660	1800
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-4,S-1	26-B-4,S-2	26-B-4,S-4
Date Sampled	4/22/87	4/22/87	4/23/87
Depth	2.5 to 4	5 to 7.5	10 to 11
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	130	160	650
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-4,S-5-DAVG	26-B-5,S-1	26-B-5,S-2
Date Sampled	4/23/87	4/22/87	4/22/87
Depth	12.5 to 13.5	2.5 to 4	5 to 6.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	700	220	1000
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-5,S-4	26-B-5,S-6	26-B-501-S-1A
Date Sampled	4/22/87	4/22/87	2/26/92
Depth	10 to 11.5	15 to 15.5	2.5 to 4
Metals			
Antimony			
Arsenic			7.1
Cadmium			0.037 J
Chromium			7.4
Copper			11
Lead	27	33	210
Mercury			0.5 J
Nickel			2.7
Zinc			7.9

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-501-S-1-DAVG	26-B-501-S-2-DAVG	26-B-501-S-3
Date Sampled	2/26/92	2/26/92	2/26/92
Depth	0 to 1	5 to 8	10 to 11.5
Metals			
Antimony			
Arsenic	5.8 J		
Cadmium	0.1 J		
Chromium	10		
Copper	22		
Lead	560	220	20
Mercury	0.94 J		
Nickel	4.8		
Zinc	27		

Area	26	26	26
Sample ID	26-B-501-S-4	26-B-501-S-5A	26-B-501-S-7
Date Sampled	2/26/92	2/26/92	2/26/92
Depth	16.5 to 18	23 to 24.5	30 to 31.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	11	40	5.2 U
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-502-S-1	26-B-502-S-1A	26-B-502-S-2
Date Sampled	2/26/92	2/26/92	2/26/92
Depth	0 to 1	2.5 to 4	5 to 8
Metals			
Antimony			
Arsenic	12.6 J	14	
Cadmium	2.8 J	0.25 J	
Chromium	24	10	
Copper	190	22	
Lead	850	200	60
Mercury	4.6 J	1.8 J	
Nickel	22	10	
Zinc	540	42	

Area	26	26	26
Sample ID	26-B-502-S-3	26-B-502-S-4	26-B-502-S-5A
Date Sampled	2/26/92	2/26/92	2/26/92
Depth	11.5 to 13	15 to 16.5	23 to 24.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	27	46	120
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-502-S-7	26-B-503-S-11	26-B-503-S-13
Date Sampled	2/26/92	7/10/92	7/10/92
Depth	30 to 33	50 to 51.5	60 to 61.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	53	5.3 U	5.3 U
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-503-S-16	26-B-503-S-1A	26-B-503-S-1-DAVG
Date Sampled	7/13/92	7/10/92	7/10/92
Depth	75 to 76.5	1 to 2.5	0 to 1
Metals			
Antimony			
Arsenic		6.3	5.7
Cadmium		0.066	0.27
Chromium		7.9	9
Copper		8.8	56
Lead	11	310	25000
Mercury		6.7	8.8
Nickel		1.2	6
Zinc		3.1	26

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-503-S-2A	26-B-503-S-2C	26-B-503-S-3
Date Sampled	7/10/92	7/10/92	7/10/92
Depth	5 to 5.7	8 to 9.5	10 to 11.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	2500	730	110
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-503-S-5-DAVG	26-B-503-S-6	26-B-503-S-8A
Date Sampled	7/10/92	7/10/92	7/10/92
Depth	20 to 21.5	25 to 26.5	37.5 to 39
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	46	37	7.3
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-B-6,S-1	26-B-6,S-2	26-B-6,S-4
Date Sampled	4/21/87	4/21/87	4/21/87
Depth	2.5 to 4	5 to 6.5	10 to 11
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	210	150	27
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-B-6,S-6	26-B-6,S-7	26-HA-501-S-1
Date Sampled	4/21/87	4/21/87	6/30/92
Depth	15 to 16.5	17.5 to 9	0 to 1
Metals			
Antimony			
Arsenic			4.8
Cadmium			0.097 J
Chromium			12
Copper			16
Lead	12	12	170
Mercury			0.34
Nickel			14
Zinc			23

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-HA-501-S-2	26-HA-503-S-2	26-HA-504-S-1
Date Sampled	6/30/92	6/30/92	6/30/92
Depth	1 to 2	1 to 2	0 to 1
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	220	1400	100
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-HA-504-S-2	26-SS-403	26-SS-404
Date Sampled	6/30/92	11/11/93	11/11/93
Depth	1 to 2	0 to 0.5	0 to 0.5
Metals			
Antimony			
Arsenic		13	16
Cadmium			
Chromium			
Copper			
Lead	350		
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-SS-405-DAVG	26-SS-501	26-SS-502-DAVG
Date Sampled	11/30/93	3/23/92	3/23/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5
Metals			
Antimony			
Arsenic	50		
Cadmium			
Chromium			
Copper			
Lead		5.7 U	120
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-SS-503	26-SS-504	26-TP-501-S-1-DAVG
Date Sampled	3/23/92	3/23/92	3/23/92
Depth	0 to 0.5	0 to 0.5	0 to 1
Metals			
Antimony			
Arsenic			24
Cadmium			0.15
Chromium			22
Copper			32
Lead	37	26	440
Mercury			0.5
Nickel			17
Zinc			42

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-501-S-2-DAVG	26-TP-501-S-3	26-TP-502-S-1
Date Sampled	3/23/92	3/23/92	3/23/92
Depth	3 to 6	8 to 10	0 to 1
Metals			
Antimony			
Arsenic	3.4		0.92
Cadmium	0.069		0.012 U
Chromium	14		7.1
Copper	16		16
Lead	40	5.5 U	840
Mercury	0.09 U		0.088 U
Nickel	19		3.2
Zinc	32		4.5

Area	26	26	26
Sample ID	26-TP-502-S-2-DAVG	26-TP-502-S-3	26-TP-503-S-1
Date Sampled	3/23/92	3/23/92	3/23/92
Depth	3 to 6	8 to 10	0 to 1
Metals			
Antimony			
Arsenic	1.7		
Cadmium	0.012 U		
Chromium	8.6		
Copper	4.1		
Lead	480	160	64
Mercury	0.088 U		
Nickel	4.8		
Zinc	7		

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-503-S-2	26-TP-503-S-3	26-TP-504-S-1
Date Sampled	3/23/92	3/23/92	3/23/92
Depth	3 to 6	8 to 10	0 to 1
Metals			
Antimony			
Arsenic			15
Cadmium			0.39
Chromium			17
Copper			16
Lead	5.3 U	8.3	10
Mercury			0.1 U
Nickel			23
Zinc			42

Area	26	26	26
Sample ID	26-TP-504-S-2	26-TP-504-S-3	26-TP-505-S-1
Date Sampled	3/23/92	3/23/92	3/23/92
Depth	3 to 6	8 to 10	0 to 1
Metals			
Antimony			
Arsenic	1.5		
Cadmium	0.029		
Chromium	24		
Copper	22		
Lead	6 U	6.4	43
Mercury	0.074 U		
Nickel	24		
Zinc	39		

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-505-S-2	26-TP-505-S-3	26-TP-506-S-1
Date Sampled	3/23/92	3/23/92	3/24/92
Depth	3 to 6	8 to 10	0 to 1
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	9	5.1 U	6.5 U
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-TP-506-S-2	26-TP-506-S-3	26-TP-507-S-1
Date Sampled	3/24/92	3/24/92	3/24/92
Depth	3 to 6	8 to 10	0 to 1
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	5.4 U	5.2 U	150
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-507-S-2	26-TP-507-S-3	26-TP-508-S-2
Date Sampled	3/24/92	3/24/92	3/24/92
Depth	3 to 6	8 to 10	3 to 6
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	5.3 U	5.4 U	9.44
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-TP-508-S-3	26-TP-509-S-2	26-TP-509-S-3
Date Sampled	3/24/92	3/24/92	3/24/92
Depth	8 to 10	3 to 6	8 to 10
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	230	5.5 U	22
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-510-S-1-DAVG	26-TP-510-S-2	26-TP-510-S-3
Date Sampled	3/24/92	3/24/92	3/24/92
Depth	0 to 1	3 to 6	8 to 10
Metals			
Antimony			
Arsenic		1.6	
Cadmium		0.03	
Chromium		6.5	
Copper		12	
Lead	240	9.2	54
Mercury		0.075 U	
Nickel		11	
Zinc		16	

Area	26	26	26
Sample ID	26-TP-511-S-2A	26-TP-511-S-3	26-TP-512-S-2
Date Sampled	3/25/92	3/25/92	3/25/92
Depth	4 to 6	8 to 10	3 to 6
Metals			
Antimony			
Arsenic	2.8		
Cadmium	0.068		
Chromium	12		
Copper	9.2		
Lead	830	160	5 U
Mercury	0.078 U		
Nickel	9.1		
Zinc	20		

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-512-S-23	26-TP-513-S-2	26-TP-513-S-3
Date Sampled	3/25/92	3/25/92	3/25/92
Depth	8 to 10	3 to 6	8 to 10
Metals			
Antimony			
Arsenic		3.8	
Cadmium		0.037	
Chromium		4.8	
Copper		6.5	
Lead	10 U	5.1 U	4.7 U
Mercury		0.089 U	
Nickel		6.3	
Zinc		17	

Area	26	26	26
Sample ID	26-TP-519-S-1	26-TP-519-S-2	26-TP-520-S-1
Date Sampled	6/30/92	6/30/92	6/30/92
Depth	0 to 1	1 to 2	0 to 1
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	48	5.5 U	29
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-TP-520-S-2	26-TP-521-S-1	26-TP-521-S-2
Date Sampled	6/30/92	6/30/92	6/30/92
Depth	1 to 2	0 to 1	1 to 2
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	7.2	710	11
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-TP-522-S-1-DAVG	26-TP-522-S-2	26-VS-10
Date Sampled	6/30/92	6/30/92	9/15/99
Depth	0 to 1	1 to 2	0 to 0.5
Metals			
Antimony			
Arsenic			12
Cadmium			
Chromium			
Copper			
Lead	21	5.3 U	1700 J
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-VS-11	26-VS-12	26-VS-13
Date Sampled	9/15/99	9/15/99	9/15/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5
Metals			
Antimony			
Arsenic	13	15	22
Cadmium			
Chromium			
Copper			
Lead	2400 J	430 J	510 J
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-VS-14	26-VS-15	26-VS-16
Date Sampled	9/15/99	9/15/99	9/15/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5
Metals			
Antimony			
Arsenic	8.6	25	12
Cadmium			
Chromium			
Copper			
Lead	78 J	57 J	2400 J
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-VS-17	26-VS-18	26-VS-19
Date Sampled	9/15/99	9/15/99	9/15/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5
Metals			
Antimony			
Arsenic	9.8	4.6	3.6
Cadmium			
Chromium			
Copper			
Lead	3500	1300	3400
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-VS-2	26-VS-20	26-VS-21
Date Sampled	9/15/99	9/15/99	9/15/99
Depth	0 to 0.5	1 to 2.5	1 to 2.5
Metals			
Antimony			
Arsenic	22	11	3.1
Cadmium			
Chromium			
Copper			
Lead	1100 J	2700	160
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-VS-22	26-VS-24	26-VS-25
Date Sampled	9/15/99	9/15/99	9/15/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5
Metals			
Antimony			
Arsenic	2.9	8.5	3.6
Cadmium			
Chromium			
Copper			
Lead	59	380	1200
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-VS-27A	26-VS-28A	26-VS-29A
Date Sampled	9/30/99	9/30/99	9/30/99
Depth	3 to 4.5	3 to 4.5	1 to 2.5
Metals			
Antimony			
Arsenic	4.1	11	24
Cadmium			
Chromium			
Copper			
Lead	15	3300	2000
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-VS-3	26-VS-31A	26-VS-4
Date Sampled	9/15/99	9/30/99	9/15/99
Depth	0 to 0.5	1 to 2.5	0 to 0.5
Metals			
Antimony			
Arsenic	13	4.7	26
Cadmium			
Chromium			
Copper			
Lead	660 J	110	810 J
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-VS-50	26-VS-51	26-VS-54
Date Sampled	4/19/00	4/19/00	4/19/00
Depth	0 to 0.5	0 to 0.5	2 to 4.5
Metals			
Antimony			
Arsenic	22	16	2.5 U
Cadmium			
Chromium			
Copper			
Lead	430	2400	2600
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	26-VS-55	26-VS-56-DAVG	26-VS-58
Date Sampled	4/19/00	4/19/00	5/24/00
Depth	2 to 4.5	2 to 4.5	6 to 8.5
Metals			
Antimony			
Arsenic	18	2.95	6.5
Cadmium			
Chromium			
Copper			
Lead	3800	525	470
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	26-VS-9A	APD-TP-501-S-1	APD-TP-501-S-2
Date Sampled	9/30/99	5/27/92	5/27/92
Depth	3 to 4.5	0 to 1	3 to 5
Metals			
Antimony			
Arsenic	3.8	12.4	3.38
Cadmium		0.18	0.09
Chromium		13	13.8
Copper		16	21.9
Lead	100	900	6.5
Mercury		0.11 U	0.1 U
Nickel		16.9	21.8
Zinc		60.9	52.2

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

Area	26	26	26
Sample ID	APH-SS-501	APH-SS-502	APH-SS-503-DAVG
Date Sampled	11/12/92	11/12/92	11/12/92
Depth	0 to 3.5	0 to 0.5	0 to 0.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	190	37	810
Mercury			
Nickel			
Zinc			

Area	26	26	26
Sample ID	APH-SS-504	APH-SS-507	APH-SS-508
Date Sampled	11/12/92	11/12/92	11/12/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5
Metals			
Antimony			
Arsenic			
Cadmium			
Chromium			
Copper			
Lead	7 U	83	26
Mercury			
Nickel			
Zinc			

Table B.9-1
Area 26 - Waste Acid Recovery Area and Kettle Soil Metals Results

	Area	26
	Sample ID	APH-SS-509
	Date Sampled	11/12/92
	Depth	0 to 0.5
Metals		
	Antimony	
	Arsenic	
	Cadmium	
	Chromium	
	Copper	
	Lead	38
	Mercury	
	Nickel	
	Zinc	

Table B.9-2
Area 26 - Waste Acid Recovery and Kettle Soil Explosives Results

Area	26	26	26	26	26	26
Sample ID	26-B-1,S-2	26-B-2,S-1	26-B-2,S-10	26-B-2,S-4-DAVG	26-B-2,S-8	26-B-3,S-1
Date Sampled	11/26/86	4/21/87	4/21/87	4/21/87	4/21/87	4/23/87
Depth	5 to 6.5	2.5 to 4	25 to 26.5	10 to 11.5	20 to 21	2.5 to 4
Explosives						
Dinitrobenzene, 1,3-						
Dinitrotoluene, 2,4-	0.1233 J	0.19 U	0.39 U	0.07 U	0.08 U	0.22
Dinitrotoluene, 2,6-	0.4253 U	0.19 U	0.39 U	0.07 U	0.08 U	0.14
DNT - Total	0.33595	0.38 U	0.78 U	0.14 U	0.16 U	0.36
Nitrobenzene	0.4253 U					
Nitroglycerine		0.47 U	0.97 U	0.18 U	0.21 U	0.21 U
Trinitrobenzene, 1,3,5-						
Trinitrotoluene, 2,4,6-						

Area	26	26	26	26	26	26
Sample ID	26-B-3,S-4	26-B-4,S-1	26-B-4,S-4	26-B-4,S-5-DAVG	26-B-5,S-1	26-B-5,S-4
Date Sampled	4/24/87	4/22/87	4/23/87	4/23/87	4/22/87	4/22/87
Depth	10 to 11.5	2.5 to 4	10 to 11	12.5 to 13.5	2.5 to 4	10 to 11.5
Explosives						
Dinitrobenzene, 1,3-						
Dinitrotoluene, 2,4-	0.08 U	0.08 U	0.07 U	0.07 U	0.09 U	0.08 U
Dinitrotoluene, 2,6-	0.08 U	0.08 U	0.07 U	0.07 U	0.09 U	0.08 U
DNT - Total	0.16 U	0.16 U	0.14 U	0.14 U	0.18 U	0.16 U
Nitrobenzene						
Nitroglycerine	0.19 U	0.2 U	0.18 U	0.18 U	0.21 U	0.21 U
Trinitrobenzene, 1,3,5-						
Trinitrotoluene, 2,4,6-						

Table B.9-2
Area 26 - Waste Acid Recovery and Kettle Soil Explosives Results

Area	26	26	26	26	26	26
Sample ID	26-B-501-S-2-DAVG	26-B-501-S-4A	26-B-501-S-7	26-B-502-S-2	26-B-502-S-4A	26-B-502-S-7
Date Sampled	2/26/92	2/26/92	2/26/92	2/26/92	2/26/92	2/26/92
Depth	5 to 8	18 to 19.5	30 to 31.5	5 to 8	18 to 19.5	30 to 33
Explosives						
Dinitrobenzene, 1,3-	0.049 U	0.043 U	0.042 U	0.044 U	0.044 U	0.044 U
Dinitrotoluene, 2,4-	0.0073 U	0.0064 U	0.0063 U	0.0066 U	0.0065 U	0.0066 U
Dinitrotoluene, 2,6-	0.0073 U	0.0064 U	0.0063 U	0.0066 U	0.0065 U	0.0066 U
DNT - Total	0.0146 U	0.0128 U	0.0126 U	0.0132 U	0.013 U	0.0132 U
Nitrobenzene	0.072 U	0.063 U	0.062 U	0.065 U	0.065 U	0.065 U
Nitroglycerine	0.24 U	0.21 U	0.21 U	0.22 U	0.22 U	0.22 U
Trinitrobenzene, 1,3,5-	0.037 U	0.032 U	0.032 U	0.033 U	0.033 U	0.033 U
Trinitrotoluene, 2,4,6-	0.0037 U	0.0032 U	0.0032 U	0.0033 U	0.0033 U	0.0033 U

Area	26	26	26	26	26	26
Sample ID	26-B-503-S-11	26-B-503-S-16	26-B-503-S-1-DAVG	26-B-503-S-4	26-B-503-S-6A	26-B-6,S-1
Date Sampled	7/10/92	7/13/92	7/10/92	7/10/92	7/10/92	4/21/87
Depth	50 to 51.5	75 to 76.5	0 to 1	15 to 16.5	27.5 to 29	2.5 to 4
Explosives						
Dinitrobenzene, 1,3-	0.044 U	0.043 U	6.8 U	0.042 U	0.042 U	
Dinitrotoluene, 2,4-	0.0066 U	0.0064 U	1 U	0.016	0.0063 U	0.08 U
Dinitrotoluene, 2,6-	0.0066 U	0.0064 U	1 U	0.0063 U	0.0063 U	0.08 U
DNT - Total	0.0132 U	0.0128 U	2 U	0.01915	0.0126 U	0.16 U
Nitrobenzene	0.065 U	0.064 U	10 U	0.062 U	0.063 U	
Nitroglycerine	0.22 U	0.21 U	0.34 UJ	0.21 U	0.21 U	0.21 U
Trinitrobenzene, 1,3,5-	0.033 U	0.032 U	5.1 U	0.031 U	0.032 U	
Trinitrotoluene, 2,4,6-	0.0033 U	0.0032 U	0.51 U	0.0031 U	0.0032 U	

Table B.9-2
Area 26 - Waste Acid Recovery and Kettle Soil Explosives Results

Area	26	26	26	26	26
Sample ID	26-B-6,S-4	26-B-6,S-7	26-TP-501-S-2-DAVG	26-TP-501-S-3	26-TP-502-S-2-DAVG
Date Sampled	4/21/87	4/21/87	3/23/92	3/23/92	3/23/92
Depth	10 to 11	17.5 to 19	3 to 6	8 to 10	3 to 6
Explosives					
Dinitrobenzene, 1,3-			0.042 U	0.042 U	0.048 U
Dinitrotoluene, 2,4-	0.08 U	0.07 U	0.0063 U	0.0063 U	0.0072 U
Dinitrotoluene, 2,6-	0.08 U	0.07 U	0.0063 U	0.0063 U	0.0072 U
DNT - Total	0.16 U	0.14 U	0.0126 U	0.0126 U	0.0144 U
Nitrobenzene			0.062 U	0.062 U	0.072 U
Nitroglycerine	0.19 U	0.18 U	0.21 U	0.21 U	0.24 U
Trinitrobenzene, 1,3,5-			0.031 U	0.032 U	0.036 U
Trinitrotoluene, 2,4,6-			0.0031 U	0.0032 U	0.0036 U

Area	26	26	26	26	26
Sample ID	26-TP-502-S-3	26-TP-503-S-3	26-TP-504-S-2	26-TP-504-S-3	26-TP-505-S-2
Date Sampled	3/23/92	3/23/92	3/23/92	3/23/92	3/23/92
Depth	8 to 10	8 to 10	3 to 6	8 to 10	3 to 6
Explosives					
Dinitrobenzene, 1,3-	0.053 U	0.042 U	0.042 U	0.043 U	
Dinitrotoluene, 2,4-	0.0079 U	0.0063 U	0.0063 U	0.0065 U	0.18 U
Dinitrotoluene, 2,6-	0.0079 U	0.0063 U	0.0063 U	0.0065 U	0.18 U
DNT - Total	0.0158 U	0.0126 U	0.0126 U	0.013 U	0.36 U
Nitrobenzene	0.078 U	0.063 U	0.063 U	0.064 U	0.18 U
Nitroglycerine	0.26 U	0.21 U	0.21 U	0.22 U	
Trinitrobenzene, 1,3,5-	0.04 U	0.032 U	0.032 U	0.032 U	
Trinitrotoluene, 2,4,6-	0.004 U	0.0032 U	0.0032 U	0.0032 U	

Table B.9-2
Area 26 - Waste Acid Recovery and Kettle Soil Explosives Results

Area	26	26	26	26	26	26
Sample ID	26-TP-505-S-3	26-TP-506-S-2	26-TP-506-S-3	26-TP-507-S-3	26-TP-508-S-2	26-TP-508-S-3
Date Sampled	3/23/92	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92
Depth	8 to 10	3 to 6	8 to 10	8 to 10	3 to 6	8 to 10
Explosives						
Dinitrobenzene, 1,3-	0.042 U	0.042 U	0.042 U	0.042 U	0.045 U	0.043 U
Dinitrotoluene, 2,4-	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0068 U	0.0064 U
Dinitrotoluene, 2,6-	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0068 U	0.0064 U
DNT - Total	0.0126 U	0.0126 U	0.0126 U	0.0126 U	0.0136 U	0.0128 U
Nitrobenzene	0.063 U	0.063 U	0.062 U	0.063 U	0.067 U	0.063 U
Nitroglycerine	0.21 U	0.21 U	0.21 U	0.21 U	0.23 U	0.21 U
Trinitrobenzene, 1,3,5-	0.032 U	0.032 U	0.031 U	0.032 U	0.034 U	0.032 U
Trinitrotoluene, 2,4,6-	0.0032 U	0.0032 U	0.0031 U	0.0032 U	0.0034 U	0.0032 U

Area	26	26	26	26	26	26
Sample ID	26-TP-509-S-2	26-TP-509-S-3	26-TP-510-S-1-DAVG	26-TP-510-S-2	26-TP-510-S-3	26-TP-511-S-2A
Date Sampled	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92	3/25/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	4 to 6
Explosives						
Dinitrobenzene, 1,3-	0.044 U	0.042 U	0.048 U	0.042 U	0.043 U	0.043 U
Dinitrotoluene, 2,4-	0.0067 U	0.0062 U	0.0071 U	0.0063 U	0.0064 U	0.0064 U
Dinitrotoluene, 2,6-	0.0067 U	0.0062 U	0.0071 U	0.0063 U	0.0064 U	0.0064 U
DNT - Total	0.0134 U	0.0124 U	0.0142 U	0.0126 U	0.0128 U	0.0128 U
Nitrobenzene	0.066 U	0.062 U	0.071 U	0.062 U	0.063 U	0.064 U
Nitroglycerine	0.22 U	0.21 U	0.24 U	0.21 U	0.21 U	0.22 U
Trinitrobenzene, 1,3,5-	0.033 U	0.031 U	0.036 U	0.031 U	0.032 U	0.032 U
Trinitrotoluene, 2,4,6-	0.0033 U	0.0031 U	0.0036 U	0.0031 U	0.0032 U	0.0032 U

Table B.9-2
Area 26 - Waste Acid Recovery and Kettle Soil Explosives Results

Area	26	26	26	26	26	26
Sample ID	26-TP-511-S-3	26-TP-512-S-2	26-TP-512-S-3	26-TP-513-S-2	26-TP-513-S-3	26-TP-514-S-2
Date Sampled	3/25/92	3/25/92	3/25/92	3/25/92	3/25/92	3/25/92
Depth	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6
Explosives						
Dinitrobenzene, 1,3-	0.043 U	0.043 U	0.042 U	0.042 U	0.042 U	0.047 U
Dinitrotoluene, 2,4-	0.0065 U	0.0064 U	0.0063 U	0.0063 U	0.0064 U	0.007 U
Dinitrotoluene, 2,6-	0.0065 U	0.0064 U	0.0063 U	0.0063 U	0.0064 U	0.007 U
DNT - Total	0.013 U	0.0128 U	0.0126 U	0.0126 U	0.0128 U	0.014 U
Nitrobenzene	0.064 U	0.064 U	0.062 U	0.063 U	0.063 U	0.069 U
Nitroglycerine	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U	0.23 U
Trinitrobenzene, 1,3,5-	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.035 U
Trinitrotoluene, 2,4,6-	0.0032 U	0.0032 U	0.0031 U	0.0032 U	0.0032 U	0.0035 U

Area	26	26	26	26	26
Sample ID	26-TP-514-S-3	26-TP-515-S-2	26-TP-515-S-3	APD-TP-501-S-1	APD-TP-501-S-2
Date Sampled	3/25/92	3/25/92	3/25/92	5/27/92	5/27/92
Depth	6 to 7	3 to 6	8 to 10	0 to 1	3 to 5
Explosives					
Dinitrobenzene, 1,3-	0.045 U	0.042 U	0.044 U		
Dinitrotoluene, 2,4-	0.0067 U	0.0064 U	0.0065 U	0.18 U	0.17 U
Dinitrotoluene, 2,6-	0.0067 U	0.0064 U	0.0065 U	0.18 U	0.17 U
DNT - Total	0.0134 U	0.0128 U	0.013 U	0.36 U	0.34 U
Nitrobenzene	0.066 U	0.063 U	0.065 U	0.18 U	0.17 U
Nitroglycerine	0.22 U	0.21 U	0.22 U		
Trinitrobenzene, 1,3,5-	0.034 U	0.032 U	0.033 U		
Trinitrotoluene, 2,4,6-	0.0034 U	0.0032 U	0.0033 U		

B.9-3
Area 26 - Waste Acid Recovery Area and Kettle Soil SVOC Results

Area	26	26	26
Sample ID	26-B-1,S-2	26-TP-501-S-2-DAVG	26-TP-505-S-2
Date Sampled	11/26/86	3/23/92	3/23/92
Depth	5 to 6.5	3 to 6	3 to 6
Semivolatiles			
Aniline	0.4253 U	0.18 U	0.18 U
Benzidine	2.126 U		1.8 UJ
Benzoic Acid	0.4253 U	0.88 U	0.9 U
Benzyl Alcohol	0.4253 U	0.18 U	0.18 U
Bis(2-Chloroethoxy)methane	0.4253 U	0.18 U	0.18 U
Bis(2-Chloroisopropyl)ether	0.4253 U	0.18 U	0.18 U
Bis(2-ethylhexyl)Phthalate (DEHP)	6.209	0.18 U	0.18 U
Bis(Chloroethyl)ether		0.18 U	0.18 U
Bromodiphenyl ether, 4-	0.4253 U	0.18 U	0.18 U
Butyl Benzyl Phthalate, N-	0.4253 U	0.18 U	0.18 U
Chloroaniline, 4-	0.4253 U	0.18 U	0.18 U
Chloronaphthalene, 2-	0.4253 U	0.18 U	0.18 U
Chlorophenol, 2-	0.4253 U	0.18 U	0.18 U
Chlorophenyl-phenyl ether, 4-	0.4253 U	0.18 U	0.18 U
Dibenzofuran	0.4253 U	0.18 U	0.18 U
Dibutyl Phthalate	0.4253 U	0.19 U	0.18 U
Dichlorobenzene, 1,2-	0.4253 U	0.18 U	0.18 U
Dichlorobenzene, 1,3-	0.4253 U	0.18 U	0.18 U
Dichlorobenzene, 1,4-	0.4253 U	0.18 U	0.18 U
Dichlorobenzidine, 3,3'	0.8505 U	0.35 U	0.36 U
Dichlorophenol, 2,4-	0.4253 U	0.18 U	0.18 U
Diethyl Phthalate	0.4253 U	0.18 U	0.18 U
Dimethyl Phthalate	0.4253 U	0.18 U	0.18 U
Dimethylphenol, 2,4-	0.4253 U	0.18 U	0.18 U
Dinitro-o-Cresol, 4,6-	2.126 U	0.88 U	0.9 U
Dinitrophenol, 2,4-	2.126 U	0.88 U	0.9 U
Di-N-Octylphthalate	0.6251 U	0.18 U	0.18 U
Hexachlorobenzene	0.4253 U	0.18 U	0.18 U
Hexachlorobutadiene	0.4253 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	0.4253 U	0.18 U	0.18 U
Hexachloroethane	0.4253 U	0.18 U	0.18 U
Isophorone	0.4253 U	0.18 U	0.18 U
Methylphenol, 2-	0.4253 U	0.18 U	0.18 U
Methylphenol, 4-	0.4253 U	0.18 U	0.18 U
Nitroaniline, 2-	0.4253 U	0.88 U	0.9 U
Nitroaniline, 3-	0.4253 U	0.88 U	0.9 U
Nitroaniline, 4-	0.4253 U	0.88 U	0.9 U
Nitrophenol, 2-	0.4253 U	0.18 U	0.18 U
Nitrophenol, 4-	2.126 U	0.88 U	0.9 U
Nitrosodimethylamine, N-	0.4253 U	0.18 U	0.18 U
Nitrosodi-N-propylamine, N-	0.4253 U	0.18 U	0.18 U
Nitrosodiphenylamine, N-	0.4253 U	0.18 U	0.18 U
Pentachlorophenol	2.126 U	0.18 U	0.18 U
Phenol	0.4253 U	0.18 U	0.18 U
Trichlorobenzene, 1,2,4-	0.4253 U	0.18 U	0.18 U
Trichlorophenol, 2,4,5-	0.4253 U	0.88 U	0.9 U
Trichlorophenol, 2,4,6-	0.4253 U	0.18 U	0.18 U

B.9-3
Area 26 - Waste Acid Recovery Area and Kettle Soil SVOC Results

Area	26
Sample ID	APD-TP-501-S-2
Date Sampled	5/27/92
Depth	3 to 5
Semivolatiles	
Aniline	0.17 U
Benzidine	1.7 U
Benzoic Acid	0.87 U
Benzyl Alcohol	0.17 U
Bis(2-Chloroethoxy)methane	0.17 U
Bis(2-Chloroisopropyl)ether	0.17 U
Bis(2-ethylhexyl)Phthalate (DEHP)	0.17 U
Bis(Chloroethyl)ether	0.17 U
Bromodiphenyl ether, 4-	0.17 U
Butyl Benzyl Phthalate, N-	0.17 U
Chloroaniline, 4-	0.17 U
Chloronaphthalene, 2-	0.17 U
Chlorophenol, 2-	0.17 U
Chlorophenyl-phenyl ether, 4-	0.17 U
Dibenzofuran	0.17 U
Dibutyl Phthalate	0.17 U
Dichlorobenzene, 1,2-	0.17 U
Dichlorobenzene, 1,3-	0.17 U
Dichlorobenzene, 1,4-	0.17 U
Dichlorobenzidine, 3,3'	0.35 U
Dichlorophenol, 2,4-	0.17 U
Diethyl Phthalate	0.17 U
Dimethyl Phthalate	0.17 U
Dimethylphenol, 2,4-	0.17 U
Dinitro-o-Cresol, 4,6-	0.87 U
Dinitrophenol, 2,4-	0.87 U
Di-N-Octylphthalate	0.17 U
Hexachlorobenzene	0.17 U
Hexachlorobutadiene	0.17 U
Hexachlorocyclopentadiene	0.17 U
Hexachloroethane	0.17 U
Isophorone	0.17 U
Methylphenol, 2-	0.17 U
Methylphenol, 4-	0.17 U
Nitroaniline, 2-	0.87 U
Nitroaniline, 3-	0.87 U
Nitroaniline, 4-	0.87 U
Nitrophenol, 2-	0.17 U
Nitrophenol, 4-	0.87 U
Nitrosodimethylamine, N-	0.17 U
Nitrosodi-N-propylamine, N-	0.17 U
Nitrosodiphenylamine, N-	0.17 U
Pentachlorophenol	0.17 U
Phenol	0.17 U
Trichlorobenzene, 1,2,4-	0.17 U
Trichlorophenol, 2,4,5-	0.87 U
Trichlorophenol, 2,4,6-	0.17 U

B.9-4

Area 26 - Waste Acid Recovery Area and Kettle Soil PAH Results

Area	26	26	26	26
Sample ID	26-B-1,S-2	26-B-501-S-1-DAVG	26-B-502-S-1	26-B-503-S-1-DAVG
Date Sampled	11/26/86	2/26/92	2/26/92	7/10/92
Depth	5 to 6.5	0 to 1	0 to 1	0 to 1
PAHs				
Acenaphthene	0.4253 U	2 UJ	0.26 UJ	2.7 U
Acenaphthylene	0.4253 U	2 UJ	0.26 UJ	2.7 U
Anthracene	0.4253 U	1.1 J	0.013 J	0.14 U
Benzo(a)Anthracene	0.4253 U	8.6 J	0.032 J	0.27 U
Benzo(a)Pyrene	0.4253 U	5.6 J	0.026 UJ	0.27 U
Benzo(b)Fluoranthene	0.4253 U	7 J	0.15 J	0.33
Benzo(g,h,i)Perylene	0.4253 U	4.4 J	0.6 J	2.6
Benzo(k)Fluoranthene	0.4253 U	2.6 J	0.026 UJ	0.27 U
Chrysene	0.4253 U	14 J	0.14 J	0.66
Dibenz(a,h)anthracene	0.4253 U	0.42 UJ	0.054 UJ	0.56 U
Fluoranthene	0.4253 U	29 J	0.16 J	0.74
Fluorene	0.4253 U	0.2 UJ	0.026 UJ	0.27 U
Indeno(1,2,3-cd)pyrene	0.4253 U	0.2 UJ	0.026 UJ	0.27 U
Methylnaphthalene, 2-	0.4253 U			
Naphthalene	0.4253 U	1 UJ	0.13 UJ	1.4 U
PAH (Non-Carc) - Total	4.253 U	53.3	1.354	7.435
Phenanthrene	0.4253 U	7.1 J	0.053 J	0.16
Pyrene	0.4253 U	9.1 J	0.19 J	0.33
Total Carcinogenic PAHS (BaP TEQs)	0.9828683 U	7.42	0.05977	0.47701

B.9-4

Area 26 - Waste Acid Recovery Area and Kettle Soil PAH Results

Area	26	26	26	26
Sample ID	26-SS-502-DAVG	26-SS-506	26-SS-507	26-SS-509
Date Sampled	3/23/92	10/20/93	10/20/93	10/20/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
PAHs				
Acenaphthene	0.2 UJ	1.8 U	0.2 U	1.8 U
Acenaphthylene	0.2 UJ	1.8 U	0.2 U	1.8 U
Anthracene	0.01 UJ	0.092 U	0.0098 U	0.09 U
Benzo(a)Anthracene	0.02 UJ	0.18 U	0.021	0.89
Benzo(a)Pyrene	0.028 J	0.18 U	0.02 U	0.18 U
Benzo(b)Fluoranthene	0.022 J	0.18 U	0.023	0.64
Benzo(g,h,i)Perylene	0.17 J	0.18 U	0.02 U	0.67
Benzo(k)Fluoranthene	0.02 UJ	0.18 U	0.02 U	0.2
Chrysene	0.02 J	0.18 U	0.056	1.7
Dibenz(a,h)anthracene	0.053 J	0.38 U	0.04 U	0.31
Fluoranthene	0.045 J	0.19	0.042	2.1
Fluorene	0.02 UJ	0.18 U	0.02 U	0.18 U
Indeno(1,2,3-cd)pyrene	0.24 J	0.18 U	0.027	0.38
Methylnaphthalene, 2-				
Naphthalene	0.1 UJ	0.92 U	0.098 U	0.9 U
PAH (Non-Carc) - Total	0.52	2.812	0.3438	6.345
Phenanthrene	0.014 J	0.092 U	0.0098 U	1.1
Pyrene	0.026 J	0.18 U	0.023	0.18 U
Total Carcinogenic PAHS (BaP TEQs)	0.10832	0.61598 U	0.037256	0.5947

B.9-4

Area 26 - Waste Acid Recovery Area and Kettle Soil PAH Results

Area	26	26	26	26
Sample ID	26-SS-510-DAVG	26-TP-501-S-1-DAVG	26-TP-501-S-2-DAVG	26-TP-505-S-1
Date Sampled	10/20/93	3/23/92	3/23/92	3/23/92
Depth	0 to 0.5	0 to 1	3 to 6	0 to 1
PAHs				
Acenaphthene	0.19 U	0.21 UJ	0.18 U	0.22 UJ
Acenaphthylene	0.19 U	0.21 UJ	0.18 U	0.22 UJ
Anthracene	0.0095 U	0.01 UJ	0.18 U	0.011 UJ
Benzo(a)Anthracene	0.019 U	0.021 UJ	0.18 U	0.022 UJ
Benzo(a)Pyrene	0.019 U	0.021 UJ	0.18 U	0.022 UJ
Benzo(b)Fluoranthene	0.019	0.021 UJ	0.18 U	0.022 UJ
Benzo(g,h,i)Perylene	0.019 U	0.021 UJ	0.18 U	0.022 UJ
Benzo(k)Fluoranthene	0.019 U	0.021 UJ	0.18 U	0.022 UJ
Chrysene	0.022	0.09 J	0.18 U	0.022 UJ
Dibenz(a,h)anthracene	0.039 U	0.043 UJ	0.18 U	0.045 UJ
Fluoranthene	0.049	0.021 UJ	0.18 U	0.022 UJ
Fluorene	0.019 U	0.021 UJ	0.18 U	0.022 UJ
Indeno(1,2,3-cd)pyrene	0.019 U	0.021 UJ	0.18 U	0.022 UJ
Methylnaphthalene, 2-			0.18 U	
Naphthalene	0.095 U	0.1 UJ	0.18 U	0.11 UJ
PAH (Non-Carc) - Total	0.34	0.624 U	1.8 U	0.3395
Phenanthrene	0.0095 U	0.01 UJ	0.18 U	0.015 J
Pyrene	0.025	0.021 UJ	0.18 U	0.022 UJ
Total Carcinogenic PAHS (BaP TEQs)	0.032917	0.035345	0.41598 U	0.073842 U

B.9-4

Area 26 - Waste Acid Recovery Area and Kettle Soil PAH Results

Area	26	26	26	26
Sample ID	26-TP-505-S-2	26-TP-516-S-1	APD-TP-501-S-1	APD-TP-501-S-2
Date Sampled	3/23/92	6/30/92	5/27/92	5/27/92
Depth	3 to 6	0 to 1	0 to 1	3 to 5
PAHs				
Acenaphthene	0.18 U	0.2 U	0.18 U	0.17 U
Acenaphthylene	0.18 U	0.2 U	0.18 U	0.17 U
Anthracene	0.18 U	0.018	0.18 U	0.17 U
Benzo(a)Anthracene	0.18 U	0.02 U	0.18 U	0.17 U
Benzo(a)Pyrene	0.18 U	0.14	0.1 J	0.17 U
Benzo(b)Fluoranthene	0.18 U	0.08	0.14 J	0.17 U
Benzo(g,h,i)Perylene	0.18 U	0.47	0.088 J	0.17 U
Benzo(k)Fluoranthene	0.18 U	0.02 U	0.044 J	0.17 U
Chrysene	0.18 U	0.11	0.12 J	0.17 U
Dibenz(a,h)anthracene	0.18 U	0.041 U	0.18 U	0.17 U
Fluoranthene	0.18 U	0.25	0.16 J	0.17 U
Fluorene	0.18 U	0.02 U	0.18 U	0.17 U
Indeno(1,2,3-cd)pyrene	0.18 U	0.02 U	0.069 J	0.17 U
Methylnaphthalene, 2-	0.18 U		0.18 U	0.17 U
Naphthalene	0.18 U	0.1 U	0.18 U	0.17 U
PAH (Non-Carc) - Total	1.8 U	1.37	1.026	1.7 U
Phenanthrene	0.18 U	0.072	0.088 J	0.17 U
Pyrene	0.18 U	0.3	0.15 J	0.17 U
Total Carcinogenic PAHS (BaP TEQs)	0.41598 U	0.17071	0.22046	0.39287 U

B.9-5

Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-B-1,S-2	26-B-2,S-1	26-B-2,S-10	26-B-2,S-4-DAVG	26-B-2,S-8
Date Sampled	11/26/86	4/21/87	4/21/87	4/21/87	4/21/87
Depth	5 to 6.5	2.5 to 4	25 to 26.5	10 to 11.5	20 to 21
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease	63	64 X	2200 X	20 UX	25 X
Stoddard Solvent					
TPH (418.1)					
TPH-8015					

Area	26	26	26	26	26
Sample ID	26-B-3,S-1	26-B-3,S-4	26-B-4,S-1	26-B-4,S-4	26-B-4,S-5-DAVG
Date Sampled	4/23/87	4/24/87	4/22/87	4/23/87	4/23/87
Depth	2.5 to 4	10 to 11.5	2.5 to 4	10 to 11	12.5 to 13.5
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease	94 X	35 X	51 X	20 UX	20 UX
Stoddard Solvent					
TPH (418.1)					
TPH-8015					

B.9-5

Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-B-5,S-1	26-B-5,S-4	26-B-501-S-1-DAVG	26-B-501-S-2-DAVG	26-B-501-S-3
Date Sampled	4/22/87	4/22/87	2/26/92	2/26/92	2/26/92
Depth	2.5 to 4	10 to 11.5	0 to 1	5 to 8	10 to 11.5
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease	20 UX	20 UX			
Stoddard Solvent					
TPH (418.1)			2000 J	20 U	20 U
TPH-8015					

Area	26	26	26	26	26
Sample ID	26-B-501-S-4A	26-B-501-S-6	26-B-501-S-7	26-B-502-S-1	26-B-502-S-2
Date Sampled	2/26/92	2/26/92	2/26/92	2/26/92	2/26/92
Depth	18 to 19.5	26.5 to 28	30 to 31.5	0 to 1	5 to 8
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	20 U	20 U	20 U	2200 J	51 J
TPH-8015					

B.9-5
Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-B-502-S-3	26-B-502-S-4A	26-B-502-S-6	26-B-502-S-7A	26-B-503-S-11
Date Sampled	2/26/92	2/26/92	2/26/92	2/26/92	7/10/92
Depth	11.5 to 13	18 to 19.5	25 to 28	33 to 34.5	50 to 51.5
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	20 U	20 U	20 U	20 U	21 U
TPH-8015					

Area	26	26	26	26	26
Sample ID	26-B-503-S-13	26-B-503-S-16	26-B-503-S-1-DAVG	26-B-503-S-2A	26-B-503-S-3
Date Sampled	7/10/92	7/13/92	7/10/92	7/10/92	7/10/92
Depth	60 to 61.5	75 to 76.5	0 to 1	5 to 5.75	10 to 11.5
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	21 U	21 U	5600	520	22 U
TPH-8015					

B.9-5

Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-B-503-S-4	26-B-503-S-5-DAVG	26-B-503-S-6A	26-B-503-S-9	26-B-6,S-1
Date Sampled	7/10/92	7/10/92	7/10/92	7/10/92	4/21/87
Depth	15 to 16.5	20 to 21.5	27.5 to 29	40 to 41.5	2.5 to 4
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					20 UX
Stoddard Solvent					
TPH (418.1)	36	21 U	21 U	21 U	
TPH-8015					

Area	26	26	26	26	26
Sample ID	26-B-6,S-4	26-B-6,S-7	26-SS-501	26-SS-502-DAVG	26-SS-503
Date Sampled	4/21/87	4/21/87	3/23/92	3/23/92	3/23/92
Depth	10 to 11	17.5 to 19	0 to 0.5	0 to 0.5	0 to 0.5
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease	20 UX	20			
Stoddard Solvent					
TPH (418.1)			20 U	220	20 U
TPH-8015					

B.9-5

Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-SS-504	26-SS-506	26-SS-507	26-SS-509	26-SS-510-DAVG
Date Sampled	3/23/92	10/20/93	10/20/93	10/20/93	10/20/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH					
#2 Diesel		20 U	20 U		
Bunker C		50 U	50 U		
Gasoline		10 U	10 U		
Kensol		10 U	10 U		
Kerosene		10 U	10 U		
Oil And Grease		250	240		
Stoddard Solvent		10 U	10 U		
TPH (418.1)	20 U	590	600	1000	730
TPH-8015		10 U	10 U		

Area	26	26	26	26	26
Sample ID	26-TP-501-S-1-DAVG	26-TP-501-S-2-DAVG	26-TP-501-S-3	26-TP-502-S-1	26-TP-502-S-2-DAVG
Date Sampled	3/23/92	3/23/92	3/23/92	3/23/92	3/23/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	58	20 U	20 U	20 U	20 U
TPH-8015					

B.9-5
Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-TP-502-S-3	26-TP-503-S-1	26-TP-503-S-2	26-TP-503-S-3	26-TP-504-S-1
Date Sampled	3/23/92	3/23/92	3/23/92	3/23/92	3/23/92
Depth	8 to1	0 to 1	3 to 6	8 to 10	0 to 1
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	20 U	20 U	20 U	20 U	20 U
TPH-8015					

Area	26	26	26	26	26
Sample ID	26-TP-504-S-2	26-TP-504-S-3	26-TP-505-S-1	26-TP-505-S-2	26-TP-505-S-3
Date Sampled	3/23/92	3/23/92	3/23/92	3/23/92	3/23/92
Depth	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	20 U	20 U	35	20 U	20 U
TPH-8015					

B.9-5
Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26	26
Sample ID	26-TP-506-S-1	26-TP-506-S-2	26-TP-506-S-3	26-TP-507-S-1	26-TP-507-S-2
Date Sampled	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92
Depth	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	20 U	20 U	20 U	20 U	20 U
TPH-8015					

Area	26	26	26	26	26
Sample ID	26-TP-507-S-3	26-TP-508-S-2	26-TP-508-S-3	26-TP-509-S-2	26-TP-509-S-3
Date Sampled	3/24/92	3/24/92	3/24/92	3/24/92	3/24/92
Depth	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10
TPH					
#2 Diesel					
Bunker C					
Gasoline					
Kensol					
Kerosene					
Oil And Grease					
Stoddard Solvent					
TPH (418.1)	20 U	20 U	20 U	20 U	20 U
TPH-8015					

B.9-5

Area 26 - Waste Acid Recovery Area and Kettle Soil TPH Results

Area	26	26	26	26
Sample ID	26-TP-513-S-2	26-TP-516-S-1	APD-TP-501-S-1	APD-TP-501-S-2
Date Sampled	3/25/92	6/30/92	5/27/92	5/27/92
Depth	3 to 6	0 to 1	0 to 1	3 to 5
TPH				
#2 Diesel				
Bunker C				
Gasoline				
Kensol				
Kerosene				
Oil And Grease				
Stoddard Solvent				
TPH (418.1)	20 U	3500	450	21 U
TPH-8015				

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31
Sample ID	02-OS02-SS_LR-68-1275E-02_C02-1_5	31-VS-18
Date Sampled	8/1/01	7/29/93
Depth	1.5 to 2	2.5 to 3
Total Metals (mg/kg dry)		
Aluminum		2.9
Antimony		24
Arsenic	29	
Cadmium		0.12
Chromium		
Copper		
Lead	22	
Mercury		0.1 U
Nickel		
Zinc		

Area	31	31	31	31	31	31	31	31
Sample ID	31-B-1,S-7	31-B-1,S-9	31-B-501-S-2	31-B-501-S-3	31-B-501-S-5	31-B-501-S-5A	31-B-502-S-2	31-B-502-S-3
Date Sampled	4/20/87	4/20/87	2/18/92	2/18/92	2/18/92	2/18/92	2/19/92	2/19/92
Depth	17.5 to 19	22 to 22.5	5 to 8	10 to 14.5	20 to 23	23 to 24.5	5 to 8	10 to 13
Total Metals (mg/kg dry)								
Aluminum							10000	12000
Antimony							2.7 UJ	2.7 UJ
Arsenic			3.2	3.1			2.4	2.8
Cadmium			0.22	0.17			0.14	0.12
Chromium			12	12			13	15
Copper			15	18			28	19
Lead	160	1600	110	51	68 J	170 J	330	120
Mercury			0.083 U	0.09 U			0.082 U	0.09 U
Nickel			16	13			14	15
Zinc			40	27			63	38

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31	31	31	31	31	31	31
Sample ID	31-SS-600	31-SS-601	31-SS-602	31-SS-603	31-SS-606	31-SS-608	31-SS-609	31-SS-610
Date Sampled	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	26	88	71	87	63	46	52	12
Lead	28	2000	170	36	180	200	250	40

Area	31	31	31	31	31	31	31	31
Sample ID	31-SS-614	31-SS-621	31-SS-624	31-SS-626	31-SS-627	31-SS-628	31-SS-629	31-SS-631
Date Sampled	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	120	96	63	9.4	4.6 U	33	64	120
Lead	250	220	78	77	4.1	1100	1300	240

Area	31	31	31	31	31	31	31	31
Sample ID	31-SS-632	31-SS-635	31-SS-639	31-SS-640	31-SS-644	31-SS-645	31-SS-646	31-SS-649
Date Sampled	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	11/3/99	12/23/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	43	25	15	10	68	66	20	34
Lead	160	97	47	15	200	110	3.1	520

Area	31	31	31
Sample ID	31-SS-650	31-SS-651	31-SS-658
Date Sampled	12/23/99	12/23/99	12/23/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)			
Arsenic	76	96	96
Lead	200	590	230

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31	31	31	31	31	31	31
Sample ID	31-TP-10,S-2	31-TP-11,S-2	31-TP-12,S-2	31-TP-13,S-2	31-TP-14,S-2	31-TP-15,S-2	31-TP-16,S-2	31-TP-501-S-2-DAVG
Date Sampled	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	2/26/92
Depth	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6
Total Metals (mg/kg dry)								
Arsenic								2.9
Cadmium								0.14
Chromium								22
Copper								16
Lead	12	9 J	10	60	8 J	24	88	11
Mercury								0.09
Nickel								20
Zinc								42

Area	31	31	31	31	31	31	31
Sample ID	31-TP-501-S-3	31-TP-502-S-2	31-TP-502-S-3	31-TP-504-S-2	31-TP-504-S-3	31-TP-8,S-2	31-TP-9,S-2
Date Sampled	2/26/92	2/26/92	2/26/92	2/26/92	2/26/92	4/28/87	4/28/87
Depth	8 to 10	3 to 6	8 to 10	3 to 6	8 to 10	3 to 6	3 to 6
Total Metals (mg/kg dry)							
Arsenic	2.5	2	1.7	1.7	1.8		
Cadmium	0.099	0.11	0.12	0.053	0.064		
Chromium	20	25	15	13	17		
Copper	16	19	17	14	14		
Lead	10	5.4 U	5.3 U	5.4 U	5.7	12	23
Mercury	0.08 U	0.085 U	0.081 U	0.16	0.1		
Nickel	24	23	17	16	15		
Zinc	36	29	32	23	29		

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-116	31-VS-117	31-VS-118	31-VS-122	31-VS-123	31-VS-124	31-VS-125	31-VS-127
Date Sampled	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	4.5	4.9	5.7	7.5	6.4	4.8	9	5.9
Lead	100	10	230	640	170	53	300	300

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-129	31-VS-131	31-VS-134	31-VS-136	31-VS-138	31-VS-139	31-VS-140	31-VS-141
Date Sampled	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99
Depth	2 to 4.5	2 to 4.5	2 to 4.5	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	55	5.5	3.8	12	5.1	4.6	8.7	5.3
Lead	400	100	11	49	29	28	200	87

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-142	31-VS-144	31-VS-145	31-VS-147	31-VS-148	31-VS-149	31-VS-150	31-VS-151
Date Sampled	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99
Depth	2 to 4.5	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	0 to 0.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	6.4	23	8.2	15	4.3	8.2	3.7	4.4
Lead	180	230	440	570	54	180	43	41

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-154	31-VS-155	31-VS-158	31-VS-159	31-VS-161	31-VS-163-DAVG	31-VS-164	31-VS-165
Date Sampled	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	0 to 0.5	2 to 4.5	17 to 30.5	4 to 30
Total Metals (mg/kg dry)								
Arsenic	6.5	11	9.4	4.2	33	7.6	5.5	9.2
Lead	69	280	450	190	450	170	9.1	59

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-166	31-VS-167	31-VS-168	31-VS-169	31-VS-170	31-VS-172	31-VS-173	31-VS-174
Date Sampled	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99	9/29/99
Depth	4 to 30	4 to 30	5 to 6.5	5 to 6.5	5 to 6.5	5 to 6.5	5 to 6.5	5 to 6.5
Total Metals (mg/kg dry)								
Arsenic	3.3	4.7	4	3.1	3.9	3.4	5.1	5.2
Lead	15	67	74	31	24	5.2	17	18

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31	31	31	31	31	31
Sample ID	31-VS-175-DAVG	31-VS-177	31-VS-178	31-VS-179	31-VS-180	31-VS-181	31-VS-182
Date Sampled	9/29/99	10/18/99	10/18/99	10/19/99	10/18/99	10/19/99	10/18/99
Depth	5 to 6.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)							
Arsenic	6.5	6.3	1.8 U	3.6	3.1	2.7	3.5
Lead	270	33	1.5	3.6	4.8	6.1 U	6.1

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-183	31-VS-186	31-VS-188	31-VS-190	31-VS-192	31-VS-194	31-VS-195	31-VS-197
Date Sampled	10/18/99	10/18/99	10/19/99	10/19/99	10/19/99	10/19/99	10/19/99	10/19/99
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	2.3	2.5	3.1	2.8	2.1	2.6	3.5	3.1
Lead	3	4.8	5.8 U	5.6 U	5.8 U	6.1 U	240	6.6 U

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-198	31-VS-200	31-VS-201	31-VS-202	31-VS-203	31-VS-205	31-VS-206	31-VS-208
Date Sampled	10/19/99	10/21/99	10/19/99	10/19/99	10/19/99	10/19/99	10/19/99	10/19/99
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	3.1	3.8	4.4	2.6	2.9	2.1	2	1.8 U
Lead	17	77	500	5.8 U	6 U	6.2 U	5.4 U	5.5 U

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-209	31-VS-210	31-VS-211	31-VS-212	31-VS-216-DAVG	31-VS-26	31-VS-27	31-VS-28
Date Sampled	10/19/99	10/19/99	10/19/99	10/19/99	10/19/99	9/10/99	9/10/99	9/10/99
Depth	2 to 4.5	2 to 4.5	0 to 0.5	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	2.3	2.7	9.5	45	2.3	18	14	8.7
Lead	90	5.5 U	93	200	6.1 U	94	140	140

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-29	31-VS-34	31-VS-38	31-VS-39	31-VS-40	31-VS-401	31-VS-402	31-VS-403
Date Sampled	9/10/99	9/10/99	9/13/99	9/13/99	9/13/99	1/25/00	1/25/00	1/25/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	21	17	8.8	5.8	5.8	2.1 U	3.1	2.1 U
Lead	360	230	210	550	730	10	250	8.8

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-404	31-VS-405	31-VS-406	31-VS-407	31-VS-408	31-VS-409	31-VS-41	31-VS-410
Date Sampled	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	9/13/99	1/25/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	2.2 U	2 U	2.3 U	2 U	1.8 U	2.5	4.4	1.8 U
Lead	2.3	42	3.2	2 U	1.8 U	2 U	33	5.9

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-411	31-VS-412	31-VS-413	31-VS-414	31-VS-415	31-VS-416	31-VS-417	31-VS-418
Date Sampled	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	2 U	2.1 U	2.2 U	2 U	2.1 U	2.1 U	2.1 U	2.9
Lead	2 U	2.1 U	9.8	2.1	5.3	2.1 U	2.1 U	4

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-419	31-VS-42	31-VS-420	31-VS-421	31-VS-422	31-VS-424	31-VS-43	31-VS-434
Date Sampled	1/25/00	9/13/99	1/25/00	1/25/00	1/25/00	1/25/00	9/13/99	1/25/00
Depth	0 to 0.5	2 to 4.5	0 to 0.5	2 to 4.5	0 to 0.5	0 to 0.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	23	5.3	52	31	13	46	3.8	2.6 U
Lead	9.6	200	45	25	360	17	220	2.6 U

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-435	31-VS-436	31-VS-437	31-VS-438	31-VS-439	31-VS-440	31-VS-441	31-VS-442
Date Sampled	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00	1/25/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	130	2.1 U	2.7	2.6	5.6	25	30	8.1
Lead	3.7	2.1 U	2.5	2.6	2.8 U	20	12	9.5

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-443	31-VS-444	31-VS-446	31-VS-45	31-VS-46	31-VS-501	31-VS-502	31-VS-503-DAVG
Date Sampled	1/28/00	1/28/00	1/28/00	9/13/99	9/13/99	3/7/00	3/7/00	3/7/00
Depth	2 to 4.5	2 to 4.5	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	4 to 30
Total Metals (mg/kg dry)								
Arsenic	4.4	2.6	17	3.2	4.1	6.3 U	6.2 U	6.1 U
Lead	2.5	3	9.7	940	1000	38	9.4	19

Table B.10-1
Area 31 - Burning Ground Soil Metals Results

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-506	31-VS-509	31-VS-510	31-VS-511	31-VS-512	31-VS-513	31-VS-514	31-VS-515
Date Sampled	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00
Depth	2 to 4.5	0 to 0.5	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	4.2	4.9	6.8	4.2	4	4.1	2	3.8
Lead	3.4	7.3	9.4	4.2	3.5	3.3	2.1	2.4

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-516	31-VS-517	31-VS-518-DAVG	31-VS-520	31-VS-521	31-VS-522	31-VS-523	31-VS-524
Date Sampled	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	3.9	3.4	4.8	3.3	5.4	5	27	33
Lead	2.9	2.8	5.5	3.7	5.7	4	25	5.9

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-57	31-VS-58	31-VS-584	31-VS-585	31-VS-59	31-VS-60	31-VS-606	31-VS-61
Date Sampled	9/13/99	9/13/99	5/9/00	5/9/00	9/13/99	9/13/99	5/24/00	9/13/99
Depth	2 to 4.5	2 to 4.5	0 to 0.5	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	4	9	57	150	5.3	3.3	6.7	5.8
Lead	280	770	79	150	500	30	4.9	670

Area	31	31	31	31	31	31	31	31
Sample ID	31-VS-63	31-VS-64	31-VS-65	31-VS-66	31-VS-69	31-VS-70	31-VS-71	31-VS-72
Date Sampled	9/13/99	9/13/99	9/13/99	9/13/99	9/13/99	9/13/99	9/13/99	9/13/99
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)								
Arsenic	4.8	4.9	6.2	11	14	4.9	2 U	4.9
Lead	83	120	350	640	450	190	7.8	31

Area	31	31	31	31	31	31
Sample ID	31-VS-73	31-VS-76	31-VS-77	31-VS-7-DAVG	31-VS-8	31-VS-83-DAVG
Date Sampled	9/13/99	9/13/99	9/13/99	5/10/93	5/10/93	9/13/99
Depth	2 to 4.5	0 to 0.5	0 to 0.5	5 to 5.5	5 to 5.5	2 to 4.5
Total Metals (mg/kg dry)						
Arsenic	3	14	27			13.5
Lead	33	180	180	5.2 U	7.6	1050

Table B.10-2
Area 31 - Burning Ground Soil Explosives Results

Area	31	31	31	31	31	31
Sample ID	31-B-1,S-7	31-B-1,S-9	31-B-501-S-2	31-B-501-S-3	31-B-501-S-4	31-B-502-S-2
Date Sampled	4/20/87	4/20/87	2/18/92	2/18/92	2/18/92	2/19/92
Depth (ft bgs)	17.5 to 19	22 to 22.5	5 to 8	10 to 14.5	15 to 19.5	5 to 8
Explosive (mg/kg)						
1,3,5-Trinitrobenzene			0.032 U	0.032 U	0.034 U	0.032 U
1,3-Dinitrobenzene			0.043 U	0.043 U	0.045 U	0.043 U
2,4,6-Trinitrotoluene	0.08 U	0.08 U	0.0032 U	0.0032 U	0.0034 U	0.0032 U
2,4-Dinitrotoluene	0.08 U	0.08 U	0.0065 U	0.0065 U	0.0067 U	0.0065 U
2,6-Dinitrotoluene	0.08 U	0.08 U	0.0065 U	0.0065 U	0.0067 U	0.0065 U
DNT (Total)	0.16 U	0.16 U	0.013 U	0.013 U	0.0134 U	0.013 U
Monomethylamine Nitrate			5.4 UJ	5.4 U		5.4 U
Nitrobenzene			0.17	0.064 U	0.067 U	0.064 U
Nitroglycerine	0.19 U	0.21 U	0.22 U	0.22 U		0.22 U

Area	31	31-REF	31-REF	31-REF	31-REF	31
Sample ID	31-B-502-S-3	31-B-503-S-2	31-B-503-S-3	31-B-504-S-2	31-B-504-S-3	31-TP-10,S-2
Date Sampled	2/19/92	2/19/92	2/19/92	2/20/92	2/20/92	4/28/87
Depth (ft bgs)	10 to 13	5 to 6.5	10 to 13	5 to 6.5	10 to 11.9	3 to 6
Explosive (mg/kg)						
1,3,5-Trinitrobenzene	0.032 U	0.033 U	0.037 U	0.032 U	0.032 U	
1,3-Dinitrobenzene	0.043 U	0.043 U	0.049 U	0.043 U	0.043 U	
2,4,6-Trinitrotoluene	0.0032 U	0.0033 U	0.0037 U	0.0032 U	0.0032 U	0.07 U
2,4-Dinitrotoluene	0.0064 U	0.0065 U	0.0074 U	0.0065 U	0.0064 U	0.07 U
2,6-Dinitrotoluene	0.0064 U	0.0065 U	0.0074 U	0.0065 U	0.0064 U	0.07 U
DNT (Total)	0.0128 U	0.013 U	0.0148 U	0.013 U	0.0128 U	0.14 U
Monomethylamine Nitrate	5.4 UJ					
Nitrobenzene	0.064 U	0.14	0.073 U	0.064 U	0.064 U	
Nitroglycerine	0.21 U					0.18 U

Table B.10-2
Area 31 - Burning Ground Soil Explosives Results

Area	31	31	31	31	31	31
Sample ID	31-TP-11,S-2	31-TP-12,S-2	31-TP-13,S-2	31-TP-14,S-2	31-TP-15,S-2	31-TP-16,S-2
Date Sampled	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87
Depth (ft bgs)	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6
Explosive (mg/kg)						
1,3,5-Trinitrobenzene						
1,3-Dinitrobenzene						
2,4,6-Trinitrotoluene	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
2,4-Dinitrotoluene	0.07 U	0.07 U	0.07 U	0.07 U	0.7	0.07 U
2,6-Dinitrotoluene	0.07 U	0.07 U	0.07 U	0.07 U	1.1	0.07 U
DNT (Total)	0.14 U	0.14 U	0.14 U	0.14 U	1.8	0.14 U
Monomethylamine Nitrate						
Nitrobenzene						
Nitroglycerine	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-TP-17,S-2	31-TP-18,S-2	31-TP-19,S-1	31-TP-19,S-2	31-TP-21,S-1-DAVG	31-TP-21,S-2
Date Sampled	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87
Depth (ft bgs)	3 to 6	3 to 6	0 to 3	3 to 6	0 to 3	3 to 6
Explosive (mg/kg)						
1,3,5-Trinitrobenzene						
1,3-Dinitrobenzene						
2,4,6-Trinitrotoluene	0.07 U	0.07 U	0.07 U	0.07 U		
2,4-Dinitrotoluene	0.07 U	0.07 U	0.07 U	0.07 U	0.08 U	0.07 U
2,6-Dinitrotoluene	0.07 U	0.07 U	0.07 U	0.07 U	0.08 U	0.07 U
DNT (Total)	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
Monomethylamine Nitrate						
Nitrobenzene						
Nitroglycerine	0.18 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U

Table B.10-2
Area 31 - Burning Ground Soil Explosives Results

Area	31	31	31	31	31-REF	31-REF
Sample ID	31-TP-501-S-2-DAVG	31-TP-501-S-3	31-TP-502-S-2	31-TP-502-S-3	31-TP-503-S-1	31-TP-503-S-2
Date Sampled	2/26/92	2/26/92	2/26/92	2/26/92	2/27/92	2/27/92
Depth (ft bgs)	3 to 6	8 to 10	3 to 6	8 to 10	0 to 1	3 to 6
Explosive (mg/kg)						
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.032 U	0.032 U	0.038 U	0.032 U
1,3-Dinitrobenzene	0.043 U	0.042 U	0.043 U	0.042 U	0.051 U	0.043 U
2,4,6-Trinitrotoluene	0.0032 U	0.0032 U	0.0032 U	0.0032 U	0.0038 U	0.0032 U
2,4-Dinitrotoluene	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0077 U	0.0064 U
2,6-Dinitrotoluene	0.0064 U	0.0064 U	0.0064 U	0.0064 U	0.0077 U	0.0064 U
DNT (Total)	0.0128 U	0.0128 U	0.0128 U	0.0128 U	0.0154 U	0.0128 U
Monomethylamine Nitrate						
Nitrobenzene	0.064 U	0.063 U	0.064 U	0.063 U	0.076 U	0.064 U
Nitroglycerine	0.21 U	0.21 U	0.22 U	0.21 U		

Area	31	31	31-REF	31-REF	31-REF	31-REF
Sample ID	31-TP-504-S-2	31-TP-504-S-3	31-TP-505-S-1-DAVG	31-TP-505-S-2	31-TP-506-S-1	31-TP-506-S-2
Date Sampled	2/26/92	2/26/92	2/27/92	2/27/92	2/27/92	2/27/92
Depth (ft bgs)	3 to 6	8 to 10	0 to 1	3 to 6	0 to 1	3 to 6
Trinitrobenzene, 1,3,5-	0.032 UJ	0.032 U	0.04 U	0.032 U	0.036 U	0.033 U
Dinitrobenzene, 1,3-	0.043 U	0.042 U	0.054 U	0.042 U	0.048 U	0.044 U
Trinitrotoluene, 2,4,6-	0.0032 U	0.0032 U	0.004 U	0.0032 U	0.0036 U	0.0033 U
Dinitrotoluene, 2,4-	0.0065 U	0.0063 U	0.0081 U	0.0063 U	0.0072 U	0.0066 U
Dinitrotoluene, 2,6-	0.0065 U	0.0063 U	0.0081 U	0.0063 U	0.0072 U	0.0066 U
DNT - Total	0.013 U	0.0126 U	0.0162 U	0.0126 U	0.0144 U	0.0132 U
Nitrobenzene	0.064 U	0.063 U	0.08 U	0.063 U	0.071 U	0.065 U
Nitroglycerine	0.22 U	0.21 U				

Table B.10-2
Area 31 - Burning Ground Soil Explosives Results

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-TP-507-S-1	31-TP-507-S-2	31-TP-507-S-3	31-TP-508-S-2	31-TP-508-S-3	31-TP-7,S-2
Date Sampled	2/27/92	2/27/92	2/27/92	2/27/92	2/27/92	4/28/87
Depth (ft bgs)	0 to 1	3 to 6	8 to 10	1 to 4	6 to 8	3 to 6
Trinitrobenzene, 1,3,5-	0.041 U	0.033 U	0.032 U	0.038 U	0.032 U	
Dinitrobenzene, 1,3-	0.054 U	0.043 U	0.042 U	0.051 U	0.043 U	
Trinitrotoluene, 2,4,6-	0.0041 U	0.0033 U	0.0032 U	0.0038 U	0.0032 U	0.07 U
Dinitrotoluene, 2,4-	0.0081 U	0.0065 U	0.0063 U	0.0076 U	0.0064 U	0.07 U
Dinitrotoluene, 2,6-	0.0081 U	0.0065 U	0.0063 U	0.0076 U	0.0064 U	0.07 U
DNT - Total	0.0162 U	0.013 U	0.0126 U	0.0152 U	0.0128 U	0.14 U
Nitrobenzene	0.08 U	0.065 U	0.063 U	0.076 U	0.064 U	
Nitroglycerine						0.18 U

Area	31	31	31	31	31
Sample ID	31-TP-8,S-2	31-TP-9,S-2	31-VS-18	31-VS-7-DAVG	31-VS-8
Date Sampled	4/28/87	4/28/87	7/29/93	5/10/93	5/10/93
Depth (ft bgs)	3 to 6	3 to 6	2.5 to 3	5 to 5.5	5 to 5.5
Trinitrobenzene, 1,3,5-			0.033 U	0.031 U	0.032 U
Dinitrobenzene, 1,3-			0.043 U	0.042 U	0.042 U
Trinitrotoluene, 2,4,6-	0.07 U	0.07 U	0.0033 U	0.0031 U	0.006
Dinitrotoluene, 2,4-	0.07 U	0.07 U	0.007 U	0.006 U	0.006 U
Dinitrotoluene, 2,6-	0.07 U	0.07 U	0.007 U	0.006 U	0.006 U
DNT - Total	0.14 U	0.14 U	0.014 U	0.012 U	0.012 U
Nitrobenzene			0.065 U	0.062 U	0.063 U
Nitroglycerine	0.18 U	0.18 U			

Table B.10-3
Area 31 - Burning Ground Soil SVOC Results

Area	31-BURN	31-BURN	31-BURN	31-BURN	31-BURN
Sample ID	31-B-501-S-2	31-B-501-S-3	31-B-502-S-2	31-B-502-S-3	31-TP-501-S-2-DAVG
Date Sampled	2/18/92	2/18/92	2/19/92	2/19/92	2/26/92
Depth	5 to 8	10 to 14.5	5 to 8	10 to 13	3 to 6
Semivolatiles (mg/kg dry)					
1,2,4-Trichlorobenzene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
1,2-Dichlorobenzene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
1,3-Dichlorobenzene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
1,4-Dichlorobenzene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2,4,5-Trichlorophenol	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
2,4,6-Trichlorophenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2,4-Dichlorophenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2,4-Dimethylphenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2,4-Dinitrophenol	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
2-Chloronaphthalene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2-Chlorophenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2-Methylphenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
2-Nitroaniline	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
2-Nitrophenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
3,3'-Dichlorobenzidine	0.37 U	0.37 U	0.36 U	0.36 U	0.37 U
3-Nitroaniline	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
4,6-Dinitro-2-Methylphenol	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
4-Bromophenyl Phenyl Ether	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
4-Chloroaniline	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
4-Chlorophenyl-Phenylether	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
4-Methylphenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
4-Nitroaniline	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
4-Nitrophenol	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
Aniline	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Benzidine	1.8 U	1.8 U	1.7 U	1.8 U	1.8 U
Benzoic Acid	0.91 U	0.92 U	0.89 U	0.91 U	0.92 U
Benzyl Alcohol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Bis(2-Chloroethoxy) Methane	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Bis(2-Chloroethyl) Ether	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Bis(2-Chloroisopropyl) Ether	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Bis(2-Ethylhexyl)Phthalate	0.098 J	0.13 J	0.17 U	0.072 J	0.18 U
Butylbenzylphthalate	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Di-N-Butylphthalate	0.18 U	0.18 U	0.17 U	0.41 U	0.18 U
Di-N-Octylphthalate	0.18 U	0.041 U	0.17 U	0.18 U	0.18 U
Dibenzofuran	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Diethylphthalate	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Dimethylphthalate	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Hexachlorobenzene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Hexachlorobutadiene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Hexachloroethane	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Isophorone	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
N-Nitroso-Di-Phenylamine	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
N-Nitroso-Di-Propylamine	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
N-Nitroso-Dimethylamine	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Pentachlorophenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U
Phenol	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U

Table B.10-3
Area 31 - Burning Ground Soil SVOC Results

Area	31-BURN	31-BURN	31-REF	31-REF
Sample ID	31-TP-502-S-2	31-TP-504-S-2	31-TP-508-S-2	31-TP-508-S-3
Date Sampled	2/26/92	2/26/92	2/27/92	2/27/92
Depth	3 to 6	3 to 6	1 to 4	6 to 8
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	0.18 U	0.18 U	0.23 U	0.18 U
1,2-Dichlorobenzene	0.18 U	0.18 U	0.23 U	0.18 U
1,3-Dichlorobenzene	0.18 U	0.18 U	0.23 U	0.18 U
1,4-Dichlorobenzene	0.18 U	0.18 U	0.23 U	0.18 U
2,4,5-Trichlorophenol	0.91 U	0.92 U	1.1 U	0.91 U
2,4,6-Trichlorophenol	0.18 U	0.18 U	0.23 U	0.18 U
2,4-Dichlorophenol	0.18 U	0.18 U	0.23 U	0.18 U
2,4-Dimethylphenol	0.18 U	0.18 U	0.23 U	0.18 U
2,4-Dinitrophenol	0.91 U	0.92 U	1.1 U	0.91 U
2-Chloronaphthalene	0.18 U	0.18 U	0.23 U	0.18 U
2-Chlorophenol	0.18 U	0.18 U	0.23 U	0.18 U
2-Methylphenol	0.18 U	0.18 U	0.23 U	0.18 U
2-Nitroaniline	0.91 U	0.92 U	1.1 U	0.91 U
2-Nitrophenol	0.18 U	0.18 U	0.23 U	0.18 U
3,3'-Dichlorobenzidine	0.36 U	0.37 U	0.46 U	0.36 U
3-Nitroaniline	0.91 U	0.92 U	1.1 U	0.91 U
4,6-Dinitro-2-Methylphenol	0.91 U	0.92 U	1.1 U	0.91 U
4-Bromophenyl Phenyl Ether	0.18 U	0.18 U	0.23 U	0.18 U
4-Chloroaniline	0.18 U	0.18 U	0.23 U	0.18 U
4-Chlorophenyl-Phenylether	0.18 U	0.18 U	0.23 U	0.18 U
4-Methylphenol	0.18 U	0.18 U	0.23 U	0.18 U
4-Nitroaniline	0.91 U	0.92 U	1.1 U	0.91 U
4-Nitrophenol	0.91 U	0.92 U	1.1 U	0.91 U
Aniline	0.18 U	0.18 U	0.23 U	0.18 U
Benzidine	1.8 U	1.8 U	2.3 U	1.8 U
Benzoic Acid	0.91 U	0.92 U	1.1 U	0.91 U
Benzyl Alcohol	0.18 U	0.18 U	0.23 U	0.18 U
Bis(2-Chloroethoxy) Methane	0.18 U	0.18 U	0.23 U	0.18 U
Bis(2-Chloroethyl) Ether	0.18 U	0.18 U	0.23 U	0.18 U
Bis(2-Chloroisopropyl) Ether	0.18 U	0.18 U	0.23 U	0.18 U
Bis(2-Ethylhexyl)Phthalate	0.18 U	0.18 U	0.23 U	0.18 U
Butylbenzylphthalate	0.18 U	0.18 U	0.23 U	0.18 U
Di-N-Butylphthalate	0.18 U	0.18 U	0.23 U	0.18 U
Di-N-Octylphthalate	0.18 U	0.18 U	0.23 U	0.18 U
Dibenzofuran	0.18 U	0.18 U	0.23 U	0.18 U
Diethylphthalate	0.18 U	0.18 U	0.23 U	0.18 U
Dimethylphthalate	0.18 U	0.18 U	0.23 U	0.18 U
Hexachlorobenzene	0.18 U	0.18 U	0.23 U	0.18 U
Hexachlorobutadiene	0.18 U	0.18 U	0.23 U	0.18 U
Hexachlorocyclopentadiene	0.18 U	0.18 U	0.23 U	0.18 U
Hexachloroethane	0.18 U	0.18 U	0.23 U	0.18 U
Isophorone	0.18 U	0.18 U	0.23 U	0.18 U
N-Nitroso-Di-Phenylamine	0.18 U	0.18 U	0.23 U	0.18 U
N-Nitroso-Di-Propylamine	0.18 U	0.18 U	0.23 U	0.18 U
N-Nitroso-Dimethylamine	0.18 U	0.18 U	0.23 U	0.18 U
Pentachlorophenol	0.18 U	0.18 U	0.23 U	0.18 U
Phenol	0.18 U	0.18 U	0.23 U	0.18 U

Table B.10-4
Area 31 - Burning Ground Soil PAH Results

Area	31	31	31	31	31	31
Sample ID	31-B-501-S-2	31-B-501-S-3	31-B-502-S-2	31-B-502-S-3	31-TP-501-S-2-DAVG	31-TP-501-S-3
Date Sampled	2/18/92	2/18/92	2/19/92	2/19/92	2/26/92	2/26/92
Depth	5 to 8	10 to 14.5	5 to 8	10 to 13	3 to 6	8 to 10
PAH (mg/kg dry)						
Benzo(a)Anthracene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Benzo(a)Pyrene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Benzo(b)Fluoranthene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Benzo(k)Fluoranthene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Chrysene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Dibenzo(a,h)Anthracene	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.036 U
Indeno(1,2,3-c,d)Pyrene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Total Carcinogenic PAHs (BaP TEQs)	*0.060598 U*	*0.060598 U*	*0.060598 U*	*0.060598 U*	*0.060598 U*	*0.059598 U*
2-Methylnaphthalene	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U	
Acenaphthene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Acenaphthylene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Anthracene	0.0091 U	0.009 U	0.0089 U	0.036	0.009 U	0.0089 U
Benzo(g,h,i)Perylene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Fluoranthene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Fluorene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Naphthalene	0.091 U	0.09 U	0.089 U	0.089 U	0.09 U	0.089 U
Phenanthrene	0.0091	0.009 U	0.0089 U	0.0089 U	0.009 U	0.0089 U
Pyrene	0.018	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Total Non-carcinogenic PAHs	*0.37415*	*0.72 U*	*0.7088 U*	*0.39095*	*0.72 U*	*0.5388 U*

Area	31	31	31	31	31-REF	31-REF
Sample ID	31-TP-502-S-2	31-TP-502-S-3	31-TP-504-S-2	31-TP-504-S-3	31-TP-508-S-2	31-TP-508-S-3
Date Sampled	2/26/92	2/26/92	2/26/92	2/26/92	2/27/92	2/27/92
Depth	3 to 6	8 to 10	3 to 6	8 to 10	1 to 4	6 to 8
PAH (mg/kg dry)						
Benzo(a)Anthracene	0.018 U	0.018 U	0.018 U	0.018 U	0.23	0.18 U
Benzo(a)Pyrene	0.018 U	0.018 U	0.018 U	0.018 U	0.22	0.17 U
Benzo(b)Fluoranthene	0.018 U	0.018 U	0.018 U	0.018 U	0.15	0.12 U
Benzo(k)Fluoranthene	0.018 U	0.018 U	0.018 U	0.018 U	0.17	0.13 U
Chrysene	0.018 U	0.018 U	0.018 U	0.018 U	0.36	0.28 U
Dibenzo(a,h)Anthracene	0.037 U	0.036 U	0.037 U	0.036 U	0.048	0.038 U
Indeno(1,2,3-c,d)Pyrene	0.018 U	0.018 U	0.018 U	0.018 U	0.14	0.011 U
Total Carcinogenic PAHs (BaP TEQs)	*0.060598 U*	*0.059598 U*	*0.060598 U*	*0.059598 U*	*0.32206*	*0.24068 U*
2-Methylnaphthalene	0.18 U		0.18 U		0.23 U	0.18 U
Acenaphthene	0.18 U	0.18 U	0.18 U	0.18 U	0.23 U	0.18 U
Acenaphthylene	0.18 U	0.18 U	0.18 U	0.18 U	0.23 U	0.18 U
Anthracene	0.0089 U	0.0088 U	0.0089 U	0.0088 U	0.068	0.054 U
Benzo(g,h,i)Perylene	0.018 U	0.018 U	0.018 U	0.018 U	0.1	0.076 U
Fluoranthene	0.018 U	0.018 U	0.018 U	0.018 U	0.054 J	0.018 U
Fluorene	0.018 U	0.018 U	0.018 U	0.018 U	0.023 U	0.018 U
Naphthalene	0.089 U	0.088 U	0.089 U	0.088 U	0.11 U	0.09 U
Phenanthrene	0.0089 U	0.0088 U	0.0089 U	0.0088 U	0.2	0.16 U
Pyrene	0.018 U	0.018 U	0.018 U	0.018 U	0.54	0.42 U
Total Non-carcinogenic PAHs	*0.7188 U*	*0.5376 U*	*0.7188 U*	*0.5376 U*	*1.3735*	*1.376 U*

Table B.10-5
Area 31 - Burning Ground Soil PCB Results

Area	31	31	31	31-REF
Sample ID	31-TP-501-S-2-DAVG	31-TP-502-S-2	31-TP-504-S-2	31-TP-508-S-2
Date Sampled	2/26/92	2/26/92	2/26/92	2/27/92
Depth	3 to 6	3 to 6	3 to 6	1 to 4
PCBs (mg/kg dry)				
PCB-1016	0.036 U	0.036 U		0.045 U
PCB-1221	0.036 U	0.036 U		0.045 U
PCB-1232	0.036 U	0.036 U		0.045 U
PCB-1242	0.036 U	0.036 U	0.036 U	0.045 U
PCB-1248	0.036 U	0.036 U	0.036 U	0.045 U
PCB-1254	0.036 U	0.036 U	0.036 U	0.045 U
PCB-1260	0.036 U	0.036 U	0.036 U	0.045 U

Table B.10-6
Area 31 - Burning Ground Soil TPH Results

Area	31	31	31	31	31	31	31	31
Sampled ID	31-B-1,S-7	31-B-1,S-9	31-B-501-S-2	31-B-501-S-3	31-B-501-S-4	31-B-502-S-2	31-B-502-S-3	31-TP-10,S-2
Date Sampled	4/20/87	4/20/87	2/18/92	2/18/92	2/18/92	2/19/92	2/19/92	4/28/87
Depth	17.5 to 19	22 to 22.5	5 to 8	10 to 14.5	15 to 19.5	5 to 8	10 to 13	3 to 6
TPH (mg/kg dry)								
TPH Scan			20 U	20 U	20 U	20 U	20 U	
Oil And Grease	180 X	20 UX						20 UX

Area	31	31	31	31	31	31	31-REF	31-REF
Sampled ID	31-TP-11,S-2	31-TP-12,S-2	31-TP-13,S-2	31-TP-14,S-2	31-TP-15,S-2	31-TP-16,S-2	31-TP-17,S-2	31-TP-18,S-2
Date Sampled	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87	4/28/87
Depth	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6	3 to 6
TPH (mg/kg dry)								
TPH Scan								
Oil And Grease	20 UX	20 UX	20 UX	20 UX	20 UX	20 UX	20 UX	20 UX

Area	31-REF	31-REF	31-REF	31-REF	31	31	31	31
Sampled ID	31-TP-19,S-1	31-TP-19,S-2	31-TP-21,S-1-DAVG	31-TP-21,S-2	31-TP-501-S-2-DAVG	31-TP-501-S-3	31-TP-502-S-2	31-TP-502-S-3
Date Sampled	4/28/87	4/28/87	4/28/87	4/28/87	2/26/92	2/26/92	2/26/92	2/26/92
Depth	0 to 3	3 to 6	0 to 3	3 to 6	3 to 6	8 to 10	3 to 6	8 to 10
TPH (mg/kg dry)								
TPH Scan					20 U	20 U	20 U	20 U
Oil And Grease	20 UX	20 UX	20 UX	20 UX				

Area	31	31	31-REF	31-REF	31-REF	31	31
Sampled ID	31-TP-504-S-2	31-TP-504-S-3	31-TP-508-S-2	31-TP-508-S-3	31-TP-7,S-2	31-TP-8,S-2	31-TP-9,S-2
Date Sampled	2/26/92	2/26/92	2/27/92	2/27/92	4/28/87	4/28/87	4/28/87
Depth	3 to 6	8 to 10	1 to 4	6 to 8	3 to 6	3 to 6	3 to 6
TPH (mg/kg dry)							
TPH Scan	20 U	20 U	200 J	20 U			
Oil And Grease					20 UX	20 UX	20 UX

Table B.11-1
Area 38 - Carton Production Area and Drywell Soil Metals Results

Area	38	38	38	38	38	38	38	38
Sample ID	01-C004-SS[38-VS-152]C2-2.00	38-B-501-S-3	38-B-501-S-5	38-B-501-S-7	38-HA-502-S-1	38-HA-502-S-2	38-HA-503-S-1	38-HA-503-S-2
Date Sampled	8/1/01	3/25/92	3/25/92	3/25/92	10/30/92	10/30/92	10/30/92	10/30/92
Depth	0 to 0.5	11.5 to 13	15 to 16.5	20 to 23	0 to 1	2 to 3	0 to 1	2 to 3
Total Metals (mg/kg dry)								
Aluminum		6100	9000	6000				
Antimony		0.35 J						
Arsenic	330	2.6	1.6	1.5	32 J	4.1 J	31 J	4.9 J
Beryllium		0.12	0.14	0.1 U				
Cadmium		0.26 J	0.14 J	0.072 J	0.38	0.19	1.1	0.1
Chromium		7	12 J	7.6				
Copper		330	22	14				
Lead	44	31	8.2	6.2	25 J	6.2 UJ	39 J	6.2 UJ
Mercury		0.87 J	0.14 J	0.1 UJ	0.3	0.11 U	0.28	0.11 U
Nickel		9.5	13	9.5				
Selenium		0.27 UJ	0.27 UJ	0.26 UJ				
Silver		0.19 J	0.047 J	0.025 J				
Thallium		0.27 UJ	0.27 UJ	0.26 UJ				
Zinc		54	63	34				

Table B.11-1
Area 38 - Carton Production Area and Drywell Soil Metals Results

Area	38	38	38	38	38	38	38	38
Sample ID	38-SS-401	38-SS-501	38-SS-505	38-SS-507	38-SS-508	38-SS-509	38-SS-510	38-SS-511
Date Sampled	11/10/93	4/20/92	4/20/92	4/20/92	4/20/92	4/20/92	4/20/92	4/21/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum		18000	9200	13000	13000	15000	14000	14000
Antimony		3.2 U	3 U	3.3	3.3	3.2 U	3.1 U	2.7 U
Arsenic	13 J	220	50	60	270	59	110	25
Beryllium		0.42	0.2	0.25	0.28	0.44	0.4	0.32
Cadmium		1.9	0.13	0.32	0.68	1.6	0.79	0.14
Chromium		14	10	12	20	11	10	14
Copper		38	23	19	35	55	51	17
Lead		120	38	84	340	120	200	38
Mercury		0.19	0.21	0.13	0.17	0.23	11	7.2
Nickel		17	15	18	18	17	15	20
Selenium		0.65	0.3 U	0.29 U	0.31 U	0.49	0.3 U	0.29 U
Silver		0.58	0.46	0.28 U	0.46	0.51	0.43	0.28 U
Thallium		0.34 U	0.3 U	0.29 U	0.31 U	0.32 U	0.3 U	0.29 U
Zinc		76	45	69	200	130	120	47

Table B.11-1
Area 38 - Carton Production Area and Drywell Soil Metals Results

Area	38	38	38	38	38	38	38	38
Sample ID	38-SS-512	38-SS-514	38-SS-515	38-SS-516-DAVG	38-SS-517	38-SS-518	38-SS-519	38-SS-520
Date Sampled	4/21/92	10/30/92	10/30/92	10/30/92	10/30/92	10/30/92	10/30/92	10/30/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum	23000							
Antimony	4.2 U							
Arsenic	180	475 J	35 J	135 J	62 J	47 J	59 J	61 J
Beryllium	0.6							
Cadmium	1.9	0.16	0.2	1	2	2.1	0.25	0.38
Chromium	22							
Copper	72							
Lead	420	36 J	32 J	500	120 J	1200 J	110 J	18 J
Mercury	6	0.66	0.19	0.97	0.28	1.2	1.2	0.13 U
Nickel	23							
Selenium	0.76							
Silver	0.77							
Thallium	0.41 U							
Zinc	470							

Table B.11-1
Area 38 - Carton Production Area and Drywell Soil Metals Results

Area	38	38	38	38	38	38	38	38
Sample ID	38-VS-101	38-VS-102	38-VS-57	38-VS-58	38-VS-59	38-VS-60	38-VS-61	38-VS-62
Date Sampled	10/10/95	10/10/95	9/28/99	9/28/99	9/28/99	9/28/99	9/28/99	9/28/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	6.2	3.2	45	19	35	39	84	8.9
Beryllium								
Cadmium	0.55	0.51						
Chromium								
Copper								
Lead	13	15	44	18	19	25	150	11
Mercury	4.2	2.7						
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Table B.11-1
Area 38 - Carton Production Area and Drywell Soil Metals Results

Area	38	38	38	38	38	38	38	38
Sample ID	38-VS-63	38-VS-66	38-VS-67	38-VS-69	38-VS-70	38-VS-71	38-VS-72	38-VS-7-S-1
Date Sampled	9/28/99	9/28/99	9/28/99	9/28/99	9/28/99	9/28/99	9/28/99	7/15/92
Depth	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 1
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	21	280	15	120	13	110	77	35
Beryllium								
Cadmium								0.28
Chromium								11
Copper								31
Lead	12	39	11	100	9.6	15	150	68
Mercury								0.93
Nickel								14
Selenium								
Silver								
Thallium								
Zinc								94

Table B.11-1
Area 38 - Carton Production Area and Drywell Soil Metals Results

Area	38	38
Sample ID	38-VS-7-S-2	RR-557
Date Sampled	7/15/92	12/2/93
Depth	3 to 6	0 to 0.5
Total Metals (mg/kg dry)		
Aluminum		
Antimony		
Arsenic	6.2	55
Beryllium		
Cadmium	0.17	
Chromium	18	
Copper	9.6	
Lead	130	160 J
Mercury	0.15	
Nickel	19	
Selenium		
Silver		
Thallium		
Zinc	68	

Table B.11-2
Area 38 - Carton Production Area and Drywell Soil Explosives Results

Area	38	38	38	38
Sample ID	38-B-501-S-2	38-B-501-S-6	38-B-501-S-7	38-SS-512
Date Sampled	3/25/92	3/25/92	3/25/92	4/21/92
Depth	10 to 11.5	16.5 to 19.5	20 to 23	0 to 0.5
Explosives (mg/kg dry)				
2,4-Dinitrotoluene	1.9 U	0.18 U	0.18 U	0.28 U
2,6-Dinitrotoluene	1.9 U	0.18 U	0.18 U	0.28 U
Nitrobenzene	1.9 U	0.18 U	0.18 U	0.28 U

Table B.11-3
Area 38 - Carton Production Area and Drywell Soil VOC Results

Area	38	38	38
Sample ID	38-B-501-S-3	38-B-501-S-7	38-VS-2
Date Sampled	3/25/92	3/25/92	6/30/92
Depth	11.5 to 13	20 to 23	6 to 6.5
Volatiles (mg/kg dry)			
1,1,1-Trichloroethane	0.055 U	0.054 U	
1,1,2,2-Tetrachloroethane	0.055 U	0.054 U	
1,1,2-Trichloroethane	0.055 U	0.054 U	
1,1-Dichloroethane	0.055 U	0.054 U	
1,1-Dichloroethene	0.055 U	0.054 U	
1,2-Dichloroethane	0.055 U	0.054 U	
1,2-Dichloroethene(Total)	0.055 U	0.054 U	
1,2-Dichloropropane	0.055 U	0.054 U	
1,3(cis)-Dichloropropene	0.055 U	0.054 U	
1,3(trans)-Dichloropropene	0.055 U	0.054 U	
2-Butanone	0.55 U	0.54 U	
2-Hexanone	0.55 U	0.54 U	
4-Methyl-2-Pentanone	0.55 U	0.54 U	
Acetone	1.1 U	1.4 U	
Benzene	0.055 U	0.054 U	0.027 U
Bromodichloromethane	0.055 U	0.054 U	
Bromoform	0.27 U	0.27 U	
Bromomethane	0.55 U	0.54 U	
Carbon Disulfide	0.055 U	0.054 U	
Carbon Tetrachloride	0.055 U	0.054 U	
Chlorobenzene	0.055 U	0.054 U	
Chloroethane	0.055 U	0.054 U	
Chloroform	0.055 U	0.054 U	
Chloromethane	0.55 U	0.54 U	
Dibromochloromethane	0.055 U	0.054 U	
Ethylbenzene	0.055 U	0.054 U	0.027 U
Methylene Chloride	0.27 U	0.27 U	
Styrene	0.055 U	0.054 U	
Tetrachloroethene	0.055 U	0.054 U	
Toluene	0.055 U	0.054 U	0.027 U
Trichloroethene	0.055 U	0.054 U	
Vinyl Acetate	0.55 U	0.54 U	
Vinyl Chloride	0.055 U	0.054 U	
Xylene(Total)	0.055 U	0.054 U	0.027 U

Table B.11-3
Area 38 - Carton Production Area and Drywell Soil VOC Results

Area	38	38	38	38
Sample ID	38-VS-3	38-VS-4	38-VS-5	38-VS-6
Date Sampled	6/30/92	6/30/92	6/30/92	6/30/92
Depth	3 to 3.5	3 to 3.5	3 to 3.5	3 to 3.5
Volatiles (mg/kg dry)				
1,1,1-Trichloroethane				
1,1,2,2-Tetrachloroethane				
1,1,2-Trichloroethane				
1,1-Dichloroethane				
1,1-Dichloroethene				
1,2-Dichloroethane				
1,2-Dichloroethene(Total)				
1,2-Dichloropropane				
1,3(cis)-Dichloropropene				
1,3(trans)-Dichloropropene				
2-Butanone				
2-Hexanone				
4-Methyl-2-Pentanone				
Acetone				
Benzene	0.026 U	0.027 U	0.027 U	0.026 U
Bromodichloromethane				
Bromoform				
Bromomethane				
Carbon Disulfide				
Carbon Tetrachloride				
Chlorobenzene				
Chloroethane				
Chloroform				
Chloromethane				
Dibromochloromethane				
Ethylbenzene	0.026 U	0.027 U	0.027 U	0.026 U
Methylene Chloride				
Styrene				
Tetrachloroethene				
Toluene	0.026 U	0.027 U	0.027 U	0.026 U
Trichloroethene				
Vinyl Acetate				
Vinyl Chloride				
Xylene(Total)	0.026 U	0.027 U	0.027 U	0.026 U

Table B.11-4
Area 38 - Carton Production Area and Drywell Soil SVOC Results

Area	38	38	38	38
Sample ID	38-B-501-S-2	38-B-501-S-6	38-B-501-S-7	38-SS-512
Date Sampled	3/25/92	3/25/92	3/25/92	4/21/92
Depth	10 to 11.5	16.5 to 19.5	20 to 23	0 to 0.5
Semivolatiles (mg/kg dry)				
1,2,4-Trichlorobenzene	1.9 U	0.18 U	0.18 U	0.28 U
1,2-Dichlorobenzene	1.9 U	0.18 U	0.18 U	0.28 U
1,3-Dichlorobenzene	1.9 U	0.18 U	0.18 U	0.28 U
1,4-Dichlorobenzene	1.9 U	0.18 U	0.18 U	0.28 U
2,4,5-Trichlorophenol	9.6 U	0.91 U	0.9 U	1.4 U
2,4,6-Trichlorophenol	1.9 U	0.18 U	0.18 U	0.28 U
2,4-Dichlorophenol	1.9 U	0.18 U	0.18 U	0.28 U
2,4-Dimethylphenol	1.9 U	0.18 U	0.18 U	0.28 U
2,4-Dinitrophenol	9.6 U	0.91 U	0.9 U	1.4 U
2-Chloronaphthalene	1.9 U	0.18 U	0.18 U	0.28 U
2-Chlorophenol	1.9 U	0.18 U	0.18 U	0.28 U
2-Methylphenol	1.9 U	0.18 U	0.18 U	0.28 U
2-Nitroaniline	9.6 U	0.91 U	0.9 U	1.4 U
2-Nitrophenol	1.9 U	0.18 U	0.18 U	0.28 U
3,3'-Dichlorobenzidine	3.8 U	0.36 U	0.36 U	0.56 U
3-Nitroaniline	9.6 U	0.91 U	0.9 U	1.4 U
4,6-Dinitro-2-Methylphenol	9.6 U	0.91 U	0.9 U	1.4 U
4-Bromophenyl Phenyl Ether	1.9 U	0.18 U	0.18 U	0.28 U
4-Chloroaniline	1.9 U	0.18 U	0.18 U	0.28 U
4-Chlorophenyl-Phenylether	1.9 U	0.18 U	0.18 U	0.28 U
4-Methylphenol	1.9 U	0.18 U	0.18 U	0.28 U
4-Nitroaniline	9.6 U	0.91 U	0.9 U	1.4 U
4-Nitrophenol	9.6 U	0.91 U	0.9 U	1.4 U
Aniline	1.9 U	0.18 U	0.18 U	0.28 U
Benzidine	19 UJ			2.8 U
Benzoic Acid	9.6 U	0.91 U	0.9 U	1.4 U
Benzyl Alcohol	1.9 U	0.18 U	0.18 U	0.28 U
Bis(2-Chloroethoxy) Methane	1.9 U	0.18 U	0.18 U	0.28 U
Bis(2-Chloroethyl) Ether	1.9 U	0.18 U	0.18 U	0.28 U
Bis(2-Chloroisopropyl) Ether	1.9 U	0.18 U	0.18 U	0.28 U
Bis(2-Ethylhexyl)Phthalate	1.9 U	0.18 U	0.18 U	0.33 U
Butylbenzylphthalate	1.9 U	0.18 U	0.18 U	0.28 U
Di-N-Butylphthalate	1.9 U	0.18 U	0.18 U	0.47 U
Di-N-Octylphthalate	1.9 U	0.053 J	0.042 J	0.28 U
Dibenzofuran	1.9 U	0.18 U	0.18 U	0.28 U
Diethylphthalate	1.9 U	0.18 U	0.18 U	0.28 U
Dimethylphthalate	1.9 U	0.18 U	0.18 U	0.28 U
Hexachlorobenzene	1.9 U	0.18 U	0.18 U	0.28 U
Hexachlorobutadiene	1.9 U	0.18 U	0.18 U	0.28 U
Hexachlorocyclopentadiene	1.9 U	0.18 U	0.18 U	0.28 U
Hexachloroethane	1.9 U	0.18 U	0.18 U	0.28 U
Isophorone	1.9 U	0.18 U	0.18 U	0.28 U
N-Nitroso-Di-Phenylamine	1.9 U	0.18 U	0.18 U	0.28 U
N-Nitroso-Di-Propylamine	1.9 U	0.18 U	0.18 U	0.28 U
N-Nitroso-Dimethylamine	1.9 U	0.18 U	0.18 U	0.28 U
Pentachlorophenol	1.9 U	0.18 U	0.18 U	0.28 U
Phenol	1.9 U	0.18 U	0.18 U	0.28 U

Table B.11-5
Area 38 - Carton Production Area and Drywell Soil PAH Results

Area	38	38	38	38
Sample ID	38-B-501-S-2	38-B-501-S-6	38-B-501-S-7	38-SS-512
Date Sampled	3/25/92	3/25/92	3/25/92	4/21/92
Depth	10 to 11.5	16.5 to 19.5	20 to 23	0 to 0.5
PAHs (mg/kg dry)				
Benzo(a)Anthracene	1.9 U	0.18 U	0.18 U	0.074 J
Benzo(a)Pyrene	1.9 U	0.18 U	0.18 U	0.092 J
Benzo(b)Fluoranthene	1.9 U	0.18 U	0.18 U	0.13 J
Benzo(k)Fluoranthene	1.9 U	0.18 U	0.18 U	0.083 J
Chrysene	1.9 U	0.18 U	0.18 U	0.14 J
Dibenzo(a,h)Anthracene	1.9 U	0.18 U	0.18 U	0.28 U
Indeno(1,2,3-c,d)Pyrene	1.9 U	0.18 U	0.18 U	0.069 J
Total Carcinogenic PAHS (BaP TEQs)	*4.3909 U*	*0.416 U*	*0.416 U*	*0.2603*
2-Methylnaphthalene	1.9 U	0.18 U	0.18 U	0.28 U
Acenaphthene	1.9 U	0.18 U	0.18 U	0.28 U
Acenaphthylene	1.9 U	0.18 U	0.18 U	0.28 U
Anthracene	1.9 U	0.18 U	0.18 U	0.28 U
Benzo(g,h,i)Perylene	1.9 U	0.18 U	0.18 U	0.079 J
Fluoranthene	1.9 U	0.18 U	0.18 U	0.2 J
Fluorene	1.9 U	0.18 U	0.18 U	0.28 U
Naphthalene	1.9 U	0.18 U	0.18 U	0.28 U
Phenanthrene	1.9 U	0.18 U	0.18 U	0.081 J
Pyrene	1.9 U	0.18 U	0.18 U	0.18 J
Total Non-carcinogenic PAHs	*19 U*	*1.8 U*	*1.8 U*	*1.38*

Table B.11-6
Area 38 - Carton Production Area and Drywell Soil Pesticides Results

Area	38
Sample ID	38-HA-501-DAVG
Date Sampled	4/24/92
Depth	0 to 0.5
Pesticides (mg/kg dry)	
4,4'-DDD	0.13 U
4,4'-DDE	0.13 U
4,4'-DDT	0.13 U
Aldrin	0.067 U
Alpha-BHC	0.067 U
Beta-BHC	0.067 U
Chlordane	0.67 U
Delta-BHC	0.067 U
Dieldrin	0.13 U
Endosulfan I	0.067 U
Endosulfan II	0.13 U
Endosulfan Sulfate	0.13 U
Endrin	0.13 U
Endrin Ketone	0.13 U
Gamma-BHC	0.067 U
Heptachlor	0.067 U
Heptachlor Epoxide	0.067 U
Methoxychlor	0.67 U
Toxaphene	1.3 U

Table B.11-7
Area 38 - Carton Production Area and Drywell Soil TPH Results

Area	38	38	38	38	38	38	38	38
Sample ID	38-B-501-S-2	38-B-501-S-6	38-B-501-S-7	38-SS-501	38-SS-505	38-SS-507	38-SS-508	38-SS-509
Date Sampled	3/25/92	3/25/92	3/25/92	4/20/92	4/20/92	4/20/92	4/20/92	4/20/92
Depth	10 to 11.5	16.5 to 19.5	20 to 23	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)								
TPH (418.1)	44	20 U	20 U	26 U	54	22 U	79	86
Diesel								
Gasoline								

Area	38	38	38	38	38	38	38	38
Sample ID	38-SS-510	38-SS-511	38-SS-512	38-VS-2	38-VS-3	38-VS-4	38-VS-5	38-VS-6
Date Sampled	4/20/92	4/21/92	4/21/92	6/30/92	6/30/92	6/30/92	6/30/92	6/30/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	6 to 6.5	3 to 3.5	3 to 3.5	3 to 3.5	3 to 3.5
TPH (mg/kg dry)								
TPH (418.1)	29	23 U	89					
Diesel				25 U	25 U	25 U	25 U	25 U
Gasoline				5 U	5 U	5 U	5 U	5 U

Table B.12-1
Area of Potential (APs) Concern Soil Metals Results

Area	AP-C	AP-C	AP-C	AP-C
Sample ID	01-F08-SS_F-01_ C2-005-DAVG	01-F08-SS_F-03_ C2-005	01-F08-SS_F-04_ C2-005	01-F08-SS_F-05_ C2-005
Date Sampled	6/6/01	6/6/01	6/6/01	6/6/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic	3.9	3.3	2.5	3.1
Cadmium				
Chromium				
Copper				
Lead	3.5	3.9	2.2	2.7
Mercury				
Nickel				
Zinc				

Area	AP-C	AP-C	AP-C	AP-B
Sample ID	01-F08-SS_F-15_ C2-005	01-F08-SS_F-16_ C2-005	01-N01-SS_NGRR-01_C2-005	01-N01-SS_NGRR-245_C2-005-DAVG
Date Sampled	6/6/01	6/6/01	6/7/01	8/13/01
Depth	2 to 2.5	2 to 2.5	1.5 to 2	1.5 to 2
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic	3.2	3.1	4.1	8.95
Cadmium				
Chromium				
Copper				
Lead	7	3.5	6.4	9.5
Mercury				
Nickel				
Zinc				

Table B.12-1
Areas of Potential (APs) Concern Soil Metals Results

Area	AP-C	AP-C	AP-C	AP-C
Sample ID	01-F08-SS_F-07_ C2-005	01-F08-SS_F-09_ C2-005	01-F08-SS_F-10_ C2-005	01-F08-SS_F-14_ C2-005
Date Sampled	6/6/01	6/6/01	6/6/01	6/6/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic	5	3.5	3.9	3.6
Cadmium				
Chromium				
Copper				
Lead	75	3.3	4.4	13
Mercury				
Nickel				
Zinc				

Area	AP-B	AP-B	AP-B	AP-B
Sample ID	01-N01-SS_NGRR-247_C2-005	01-N01-SS_NGRR-248_C2-005	01-N01-SS_NGRR-249_C2-005	01-N01-SS_NGRR-261_C2-005-DAVG
Date Sampled	8/13/01	8/13/01	8/13/01	8/13/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic	9.8	7.8	12	7.05
Cadmium				
Chromium				
Copper				
Lead	8.2	11	16	5.95
Mercury				
Nickel				
Zinc				

Table B.12-1
Areas of Potential (APs) Concern Soil Metals Results

Area	AP-B	AP-B	AP-B	AP-B
Sample ID	01-N01-SS_NGRR-263_C2-005	01-N01-SS_NGRR-264_C2-005	01-N01-SS_NGRR-283_C2-005-DAVG	01-N01-SS_NGRR-285_C2-005
Date Sampled	8/13/01	8/13/01	8/15/01	8/15/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic	7.5	9 5	11 5	7.3
Cadmium				
Chromium				
Copper				
Lead	4.5	6 2	19	8.8
Mercury				
Nickel				
Zinc				

Area	AP-C	AP-C	AP-C	AP-C
Sample ID	APC-SS-510	APC-SS-511	APC-SS-512	APC-SS-513
Date Sampled	6/30/92	10/30/92	10/30/92	10/30/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic				
Cadmium				
Chromium				
Copper				
Lead	7.4	160	260	180
Mercury				
Nickel				
Zinc				

Table B.12-1
Areas of Potential (APs) Concern Soil Metals Results

Area	AP-B	AP-C	AP-C	AP-C
Sample ID	01-N01-SS_NGRR-286_C2-005	01-N01-SS_NGRR-382_C2-005	02-F08-SS_F-08-2_C2-030	APC-SS-401
Date Sampled	8/15/01	8/22/01	8/30/01	11/12/93
Depth	1.5 to 2	1.5 to 2	3 to 3.5	0 to 0.5
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic	7.1	3.5	2.6	22
Cadmium				
Chromium				
Copper				
Lead	6.7	2.7	90 J	
Mercury				
Nickel				
Zinc				

Area	AP-C	AP-C	APE	APE
Sample ID	APC-SS-514	APC-TP-502-S-3	APE-SS-501-DAVG	APE-SS-502-DAVG
Date Sampled	10/30/92	11/3/92	5/26/92	5/26/92
Depth	0 to 0.5	3 to 6	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)				
Lead				
Total Metals (mg/kg dry)				
Arsenic		3.1 J	278	29.8
Cadmium		0.052 J	1.39	0.12
Chromium			11.2	11.9
Copper			98.3	20
Lead	1100	5.1 UJ	100	10
Mercury		0.097 U	0.3	0.11 U
Nickel			17.3	16.7
Zinc			152	33.8

Table B.12-1
Areas of Potential (APs) Concern Soil Metals Results

Area	APE	APE	APE	APE	APE	APE	APE	APE
Sample ID	APE-SS-503	APE-SS-504-DAVG	APE-SS-505	APE-SS-506	APE-SS-507	APE-SS-509	APE-SS-510	APE-SS-511
Date Sampled	10/30/92	10/30/92	10/30/92	10/30/92	6/28/93	6/28/93	6/28/93	6/28/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Arsenic	197	16	28	26	38	23	14	6
Cadmium	0.56	0.13	0.94	0.31				
Chromium								
Copper								
Lead	79	26	410	43				
Mercury	0.18	0.25	0.24	0.27				
Nickel								
Zinc								

Area	APE	APE	APE	APE	APE	APF	APF	APF
Sample ID	APE-SS-512	APE-TP-501-S-1-DAVG	APE-TP-501-S-2	APE-TP-502-S-1-DAVG	APE-TP-502-S-3	APF-HA-501-S-1	APF-HA-501-S-3	APF-SS-501
Date Sampled	6/28/93	5/26/92	5/26/92	11/3/92	11/3/92	10/30/92	10/30/92	5/27/92
Depth	0 to 0.5	0 to 1	3 to 5	0 to 1	3 to 5	0 to 1	2 to 3	0 to 0.5
TCLP Metals (mg/L)								
Lead								14
Total Metals (mg/kg dry)								
Arsenic	77	490	2.73	490	41	110	44	54
Cadmium		9.13	0.05	0.21 J		5.2	0.58	20
Chromium		14.1	13.7					
Copper		70.3	16					
Lead		160	5.2 U	200	6.2 J	1200	64	3800
Mercury		0.5	0.1 U	0.1 U	0.096 U	0.53 J		13 U
Nickel		17.6	20.1					
Zinc		230	25.4					

Table B.12-1
Areas of Potential (APs) Concern Soil Metals Results

Area	APF	APF	APF	APF	APF	APF	APF	APF
Sample ID	APF-SS-502	APF-SS-503	APF-SS-504	APF-SS-505	APF-SS-506	APF-SS-507	APF-SS-508	APF-SS-509
Date Sampled	5/27/92	5/27/92	10/30/92	10/30/92	10/30/92	10/30/92	10/30/92	10/30/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Arsenic		12 J	76 J	76 J		87 J	69	
Cadmium								
Chromium								
Copper								
Lead	2200	24	23	130	38	99	45	200
Mercury								
Nickel								
Zinc								

Area	APF	APF	APF	APF	APF	APF	APF	APF
Sample ID	APF-SS-510-DAVG	APF-SS-511	APF-SS-512	APF-SS-513	APF-SS-514	APF-SS-515	APF-SS-516	APF-SS-517
Date Sampled	6/28/93	6/28/93	6/28/93	6/28/93	6/28/93	6/28/93	6/28/93	6/28/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Arsenic	19	43	17	300	210	150	150	220
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B 12-1
Areas of Potential (APs) Concern Soil Metals Results

Area	APF	APF	APF	APF	APF	APF	APF	APF
Sample ID	APF-SS-518	APF-SS-520-DAVG	APF-SS-521	APF-SS-522	APF-SS-523	APF-TP-501-S-1	APF-TP-501-S-2	APF-VS-10
Date Sampled	6/28/93					5/27/92	5/27/92	9/22/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 1	3 to 5	0 to 0.5
TCLP Metals (mg/L)								
Lead								
Total Metals (mg/kg dry)								
Arsenic	220	68	46	81	56			180
Cadmium								
Chromium								
Copper								
Lead						56	5 U	24
Mercury								
Nickel								
Zinc								

Table B.12-2
Areas of Potential Concern (APs) Soil Explosives Results

Area	APF	APF	APF
Sample ID	APF-SS-503	APF-TP-501-S-1	APF-TP-501-S-2
Date Sampled	5/27/92	5/27/92	5/27/92
Depth	0 to 0.5	0 to 1	3 to 5
Explosives (mg/kg dry)			
1,3,5-Trinitrobenzene	0.16 U	0.071 U	0.032 U
1,3-Dinitrobenzene	0.22 U	0.094 U	0.043 U
2,4,6-Trinitrotoluene	0.016 U	0.0071 U	0.0032 U
2,4-Dinitrotoluene	0.033 U	0.014 U	0.0064 U
2,6-Dinitrotoluene	0.033 U	0.014 U	0.0064 U
Total DNT	*0.066 U*	*0.028 U*	*0.028 U*
Nitrobenzene	0.32 U	0.14 U	0.064 U
Nitroglycerine	0.22 U	0.24 U	0.21 U

Table B.12-3
Areas of Potential Concern (APs) Soil SVOC Results

Area	26	26
Sample ID	APD-TP-501-S-1	APD-TP-501-S-2
Date Sampled	5/27/92	5/27/92
Depth	0 to 1	3 to 5
Semivolatiles (mg/kg dry)		
1,2,4-Trichlorobenzene	0.18 U	0.17 U
1,2-Dichlorobenzene	0.18 U	0.17 U
1,3-Dichlorobenzene	0.18 U	0.17 U
1,4-Dichlorobenzene	0.18 U	0.17 U
2,4,5-Trichlorophenol	0.92 U	0.87 U
2,4,6-Trichlorophenol	0.18 U	0.17 U
2,4-Dichlorophenol	0.18 U	0.17 U
2,4-Dimethylphenol	0.18 U	0.17 U
2,4-Dinitrophenol	0.92 U	0.87 U
2-Chloronaphthalene	0.18 U	0.17 U
2-Chlorophenol	0.18 U	0.17 U
2-Methylphenol	0.18 U	0.17 U
2-Nitroaniline	0.92 U	0.87 U
2-Nitrophenol	0.18 U	0.17 U
3,3'-Dichlorobenzidine	0.37 U	0.35 U
3-Nitroaniline	0.92 U	0.87 U
4,6-Dinitro-2-Methylphenol	0.92 U	0.87 U
4-Bromophenyl Phenyl Ether	0.18 U	0.17 U
4-Chloroaniline	0.18 U	0.17 U
4-Chlorophenyl-Phenylether	0.18 U	0.17 U
4-Methylphenol	0.18 U	0.17 U
4-Nitroaniline	0.92 U	0.87 U
4-Nitrophenol	0.92 U	0.87 U
Aniline	0.18 U	0.17 U
Benzidine	1.8 U	1.7 U
Benzoic Acid	0.92 U	0.87 U
Benzyl Alcohol	0.18 U	0.17 U
Bis(2-Chloroethoxy) Methane	0.18 U	0.17 U
Bis(2-Chloroethyl) Ether	0.18 U	0.17 U
Bis(2-Chloroisopropyl) Ether	0.18 U	0.17 U
Bis(2-Ethylhexyl)Phthalate	0.18 U	0.17 U
Butylbenzylphthalate	0.18 U	0.17 U
Di-N-Butylphthalate	0.18 U	0.17 U
Di-N-Octylphthalate	0.18 U	0.17 U
Dibenzofuran	0.18 U	0.17 U
Diethylphthalate	0.18 U	0.17 U
Dimethylphthalate	0.18 U	0.17 U
Hexachlorobenzene	0.18 U	0.17 U
Hexachlorobutadiene	0.18 U	0.17 U
Hexachlorocyclopentadiene	0.18 U	0.17 U
Hexachloroethane	0.18 U	0.17 U
Isophorone	0.18 U	0.17 U
N-Nitroso-Di-Phenylamine	0.18 U	0.17 U
N-Nitroso-Di-Propylamine	0.18 U	0.17 U
N-Nitroso-Dimethylamine	0.18 U	0.17 U
Pentachlorophenol	0.18 U	0.17 U
Phenol	0.18 U	0.17 U

Table B.12-4
Areas of Potential Concern (APs) Soil PAH Results

Area	26	26
Sample ID	APD-TP-501-S-1	APD-TP-501-S-2
Date Sampled	5/27/92	5/27/92
Depth	0 to 1	3 to 5
PAHs (mg/kg dry)		
Benzo(a)Anthracene	0.18 U	0.17 U
Benzo(a)Pyrene	0.1 J	0.17 U
Benzo(b)Fluoranthene	0.14 J	0.17 U
Benzo(k)Fluoranthene	0.044 J	0.17 U
Chrysene	0.12 J	0.17 U
Dibenzo(a,h)Anthracene	0.18 U	0.17 U
Indeno(1,2,3-c,d)Pyrene	0.069 J	0.17 U
2-Methylnaphthalene	0.18 U	0.17 U
Acenaphthene	0.18 U	0.17 U
Acenaphthylene	0.18 U	0.17 U
Anthracene	0.18 U	0.17 U
Benzo(g,h,i)Perylene	0.088 J	0.17 U
Fluoranthene	0.16 J	0.17 U
Fluorene	0.18 U	0.17 U
Naphthalene	0.18 U	0.17 U
Phenanthrene	0.088 J	0.17 U
Pyrene	0.15 J	0.17 U

Table B.12-5
Areas of Potential Concern (APs) Soil PCB Results

Area	APE	APE	APE	APE
Sample ID	APE-SS-501-DAVG	APE-SS-502-DAVG	APE-TP-501-S-1-DAVG	APE-TP-501-S-2
Date Sampled	5/26/92	5/26/92	5/26/92	5/26/92
Depth	0 to 0.5	0 to 0.5	0 to 1	3 to 5
PCBs (mg/kg dry)				
PCB-1016	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U
PCB-1221	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U
PCB-1232	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U
PCB-1242	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U
PCB-1248	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U
PCB-1254	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U
PCB-1260	0.036 UJ	0.037 UJ	0.037 UJ	0.035 U

Table B.12-6
Areas of Potential Concern (APs) Soil TPH Results

Area	APE	APE	APE	APE
Sample ID	APE-SS-501-DAVG	APE-SS-502-DAVG	APE-TP-501-S-1-DAVG	APE-TP-501-S-2
Date Sampled	5/26/92	5/26/92	5/26/92	5/26/92
Depth	0 to 0.5	0 to 0.5	0 to 1	3 to 5
TPH (mg/kg dry)				
TPH Scan	67	22 U	22 U	21 U

Table B.12-7
Areas of Potential Concern (APs) Soil Nitrate Results

Area	APC	APF	APF	APF	APF	APF
Sample ID	APC-SS-501	APF-SS-501	APF-SS-502	APF-SS-503	APF-TP-501-S-1	APF-TP-501-S-2
Date Sampled	5/26/92	5/27/92	5/27/92	5/27/92	5/27/92	5/27/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 1	3 to 5
General Chem (mg/kg dry)						
Nitrate as Nitrogen	2.4	4.3	2.4	2.7	2.5	1.9

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-01-DAVG	18R-02	18R-03	18R-04	18R-05	18R-06	18R-07	18R-08
Date Sampled	3/29/93	3/29/93	3/29/93	3/29/93	3/29/93	3/29/93	3/29/93	3/29/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	24 J	3.5 J	6.4 J	12 J	36 J	23	12 J	23 J

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-10	18R-101	18R-102	18R-103	18R-104	18R-105-DAVG	18R-106	18R-107-100S
Date Sampled	3/30/93	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	12/7/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	91	19	35	7.4	67	16	14	38

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-107-100W	18R-107-125W	18R-107-25E	18R-107-25S	18R-107-50E	18R-107-50N-DAVG	18R-107-50S	18R-107-50W
Date Sampled	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	28	14	50	140	66	150	25	140

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-107-75E	18R-107-75S	18R-107-75W	18R-107-S-3	18R-108	18R-109	18R-11	18R-110
Date Sampled	12/7/93	12/7/93	12/7/93	12/14/93	6/30/93	6/30/93	3/30/93	6/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	59	47	37	15 J	81	10	83	81

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-111	18R-112	18R-112-100E	18R-112-100N	18R-112-10E-DAVG	18R-112-10N	18R-112-125N	18R-112-25E
Date Sampled	6/30/93	6/30/93	12/8/93	12/8/93	12/8/93	12/8/93	12/8/93	12/8/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	140	230	18	81	58	290	130	55

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-112-25N	18R-112-50E	18R-112-50N	18R-112-75E	18R-112-75N	18R-112-S-2	18R-112-S-3	18R-113
Date Sampled	12/8/93	12/8/93	12/8/93	12/8/93	12/8/93	12/13/93	12/13/93	6/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	60	46	18	21	18	42 J	10 J	82

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-114	18R-115	18R-119	18R-12	18R-120-DAVG	18R-121	18R-121-100N	18R-121-100W-DAVG
Date Sampled	6/30/93	6/30/93	6/30/93	3/30/93	6/30/93	6/30/93	12/10/93	12/9/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	91	20	89 J	46	5.1 J	130 J	51	15

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-121-10N	18R-121-10W	18R-121-25N	18R-121-25W	18R-121-50N	18R-121-50W	18R-121-75N	18R-121-75W
Date Sampled	12/10/93	12/10/93	12/10/93	12/10/93	12/10/93	12/10/93	12/10/93	12/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	50	22	22	9.4	30	20	20	59

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-122	18R-123	18R-124	18R-125	18R-126	18R-127	18R-13-DAVG	18R-14
Date Sampled	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	3/30/93	3/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	21 J	9.3 J	43 J	66 J	32 J	66 J	34	19

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-15	18R-15 1'-2'-DAVG	18R-15 6"-12"	18R-15-100N-DAVG	18R-15-10N	18R-15-10W	18R-15-25N	18R-15-50N
Date Sampled	3/30/93			12/7/93	12/7/93	12/7/93	12/7/93	12/7/93
Depth (ft bgs)	0 to 0.5	1 to 2	0.5 to 1	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic	0.05 U							
Total Metals (mg/kg)								
Arsenic	210	3.2	4.9	63	45	35	25	16

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-15-75N	18R-16	18R-17	18R-18	18R-19	18R-20	18R-21	18R-22
Date Sampled	12/7/93	3/30/93	3/29/93	3/29/93	3/29/93	3/29/93	3/29/93	3/29/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	3.6	48	34	23	73	16	13	38

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-23	18R-24	18R-401	18R-402	18R-403	18R-404	18R-404A-DAVG	18R-405
Date Sampled	3/29/93	3/29/93	11/15/93	11/30/93	11/30/93	11/30/93	12/6/93	11/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	66 J	22 J	40	4.2	6.7	6.3	30	8.1

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-406	18R-406-S-2	18R-406-S-3	18R-407	18R-408	18R-409	18R-410	18R-411
Date Sampled	11/12/93	12/14/93	12/14/93	11/15/93	11/30/93	11/30/93	11/12/93	11/12/93
Depth (ft bgs)	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	160	21 J	4.5 J	11	12	17	64	16

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-412	18R-413	18R-414	18R-415	18R-416	18R-417	18R-419	18R-420
Date Sampled	11/15/93	11/30/93	11/30/93	11/30/93	11/30/93	11/15/93	11/30/93	11/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	20	15	7.5	7.8	2.5	39	4.7	4.2

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-421	18R-426	18R-428-DAVG	18R-429	18R-430	18R-431	18R-432	18R-433
Date Sampled	11/15/93	11/30/93	11/30/93	11/15/93	11/15/93	11/29/93	11/30/93	11/15/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	57	74	13	88	25	6.1 J	42	9.6

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-434	18R-435	18R-436	18R-437	18R-438	18R-439	18R-440	18R-441
Date Sampled	11/15/93	11/15/93	11/16/93	11/16/93	11/29/93	11/29/93	11/16/93	11/16/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	44	24	30	19	11	58	62	2.6

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-442	18R-443	18R-444-DAVG	18R-445	18R-445-S-2	18R-445-S-3	18R-446	18R-447
Date Sampled	11/29/93	11/29/93	11/16/93	11/16/93	12/14/93	12/14/93	11/16/93	11/16/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	9.5	25	46	100	8.6 J	8.4 J	69	31

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-448	18R-449	18R-451	18R-452	18R-452-S-2	18R-452-S-3	18R-453	18R-454
Date Sampled	11/16/93	11/29/93	11/29/93	11/19/93	12/10/93	12/10/93	11/29/93	11/29/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	68	39	69	100	3	11	37	42

Table B.13-1
Area 18-REF Soil Metals Results

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-455	18R-456	18R-457	18R-458	18R-459	18R-460	18R-461	18R-461-S-2
Date Sampled	11/16/93	11/16/93	11/16/93	11/29/93	11/29/93	11/29/93	11/16/93	12/13/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	17	29	25	15	47	16	100 J	21 J

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-461-S-3	18R-462	18R-463	18R-464	18R-464E	18R-465	18R-466	18R-467
Date Sampled	12/13/93	11/16/93	11/16/93	11/16/93	11/17/93	11/17/93	11/17/93	11/17/93
Depth (ft bgs)	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)								
Arsenic								
Total Metals (mg/kg)								
Arsenic	4.9 J	26	50	120	31 J	18	51 J	14 J

Area	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF	18-REF
Sample ID	18R-468	18R-469	18R-471	18R-472	18R-474-DAVG	18R-474-S-2	18R-474-S-3
Date Sampled	11/17/93	11/29/93	11/17/93	11/17/93	11/17/93	12/16/93	12/16/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2
TCLP Metals (mg/L)							
Arsenic							
Total Metals (mg/kg)							
Arsenic	110 J	22	9.1 J	23	89 J	11	7.1

Table B.13-2
Area 31-REF Soil Metals Results

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-B-503-S-2	31-B-503-S-3	31-B-503-S-4-DAVG	31-B-503-S-5	31-B-504-S-2	31-B-504-S-3	31-B-504-S-4	31-HA-501-S-3
Date Sampled	2/19/92	2/19/92	2/19/92	2/19/92	2/20/92	2/20/92	2/20/92	11/3/92
Depth (ft bgs)	5 to 6.5	10 to 13	15 to 16.5	20 to 21.5	5 to 6.5	10 to 11.9	15 to 16.5	2 to 3
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	8.2 J	9.3 J	9.1 J	9.2 J	7.7	6.6	7	5.5 UJ
Mercury								
Nickel								
Zinc								

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-HA-502-S-3	31-SS-403	31-SS-404	31-SS-501-DAVG	31-SS-503	31-SS-504	31-SS-505	31-SS-506
Date Sampled	11/20/92	11/8/93	11/8/93	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92
Depth (ft bgs)	2 to 3	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic		60	110 J					
Cadmium								
Chromium								
Copper								
Lead	7.9			26	73	130	43	110
Mercury								
Nickel								
Zinc								

Table B.13-2
Area 31-REF Soil Metals Results

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-SS-507	31-SS-509	31-SS-511	31-SS-512	31-SS-513	31-SS-518	31-SS-519	31-SS-520
Date Sampled	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	5 U	38	89	18	9.1	13	26	18
Mercury								
Nickel								
Zinc								

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-SS-521	31-SS-522	31-SS-523	31-SS-524	31-SS-525	31-SS-526	31-SS-527-DAVG	31-SS-528
Date Sampled	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92	2/14/92
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	44	114	51	38	69	22	29	86
Mercury								
Nickel								
Zinc								

Table B.13-2
Area 31-REF Soil Metals Results

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-SS-529	31-SS-530	31-SS-533	31-SS-535-DAVG	31-SS-536	31-TP-17,S-2	31-TP-18,S-2	31-TP-19,S-1
Date Sampled	2/14/92	2/14/92	11/20/92	11/20/92	11/20/92	4/28/87	4/28/87	4/28/87
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	3 to 6	3 to 6	0 to 3
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	59	52	51	90	250	10	9 J	11
Mercury								
Nickel								
Zinc								

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-TP-19,S-2	31-TP-21,S-1-DAVG	31-TP-21,S-2	31-TP-503-S-1	31-TP-503-S-2	31-TP-503-S-3	31-TP-505-S-1-DAVG	31-TP-505-S-2
Date Sampled	4/28/87	4/28/87	4/28/87	2/27/92	2/27/92	2/27/92	2/27/92	2/27/92
Depth (ft bgs)	3 to 6	0 to 3	3 to 6	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6
Total Metals (mg/kg dry)								
Arsenic								
Cadmium								
Chromium								
Copper								
Lead	6.J	9 J	12	160	5.2 U	5.2 U	12	4.9 U
Mercury								
Nickel								
Zinc								

Table B.13-2
Area 31-REF Soil Metals Results

Area	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF	31-REF
Sample ID	31-TP-505-S-3	31-TP-506-S-1	31-TP-506-S-2	31-TP-506-S-3	31-TP-507-S-1	31-TP-507-S-2	31-TP-507-S-3	31-TP-508-S-2
Date Sampled	2/27/92	2/27/92	2/27/92	2/27/92	2/27/92	2/27/92	2/27/92	2/27/92
Depth (ft bgs)	8 to 10	0 to 1	3 to 6	8 to 10	0 to 1	3 to 6	8 to 10	1 to 4
Total Metals (mg/kg dry)								
Arsenic								71
Cadmium								0.72
Chromium								22
Copper								220
Lead	5.8 U	27	5.3 U	5.1 U	6.8 U	5.1 U	5.3 U	1500
Mercury								0.24
Nickel								100
Zinc								400

Area	31-REF	31-REF	31-REF	31-REF
Sample ID	31-TP-508-S-3	31-TP-7,S-2	LR-070S	LR-071S
Date Sampled	2/27/92	4/28/87	3/29/93	3/29/93
Depth (ft bgs)	6 to 8	3 to 6	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	7.1		18 J	55 J
Cadmium	0.21			
Chromium	23			
Copper	30			
Lead	140	19		
Mercury	0.085 U			
Nickel	17			
Zinc	170			

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	APA-SS-401-DAVG	APG-SS-401	BG-SS-4	LR-001	LR-002	LR-003	LR-003W	LR-004
Date Sampled	11/12/93	11/11/93	11/11/93	11/1/93	3/23/93	11/2/93	11/1/93	11/2/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	45 J	23		35	17	8.7	15	8.7
Aluminum			15000					
Antimony			3					
Cadmium								
Chromium			17					
Copper								
Lead			14 U		190			
Mercury								
Nickel								
Zinc			62					

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-005	LR-006	LR-007	LR-008W	LR-009-1	LR-009-2	LR-010-DAVG	LR-011-1
Date Sampled	11/2/93	11/2/93	11/1/93	11/1/93	5/19/92	3/23/93	11/2/93	5/19/92
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	24	37	9.9	11		29	46	
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead					453			246
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-011-2	LR-012	LR-013	LR-014	LR-015	LR-016	LR-017-1	LR-017-2
Date Sampled	3/23/93	11/2/93	11/4/93	11/4/93	11/4/93	11/12/93	5/18/92	3/23/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	31	43	8.4	22	42	46		120
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead							120	
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-017-S-2	LR-017-S-3	LR-018	LR-019	LR-019E	LR-019N	LR-019S	LR-019W
Date Sampled	12/14/93	12/14/93	11/11/93	3/23/93	11/4/92	11/4/92	11/4/92	11/4/92
Depth (ft bgs)	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	18 J	8.8 J	31	28				
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead				620	6.2 UJ	9.4 J	54	51
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-020 1'-2'	LR-020 6"-12"	LR-020-1	LR-020-2	LR-020-S-2	LR-020-S-3	LR-021	LR-022-1
Date Sampled			5/19/92	3/23/93			11/4/93	5/19/92
Depth (ft bgs)	1 to 2	0.5 to 1	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	3	6		160	6	3	29	
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead			345					232
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-022-2	LR-023	LR-024	LR-025	LR-025-S-2	LR-025-S-3	LR-028	LR-029
Date Sampled	3/23/93	11/4/93	11/11/93	11/11/93		12/10/93	11/11/93	11/4/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	28	15	32	95	26	21	59	7.8
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-030	LR-031	LR-032	LR-034	LR-035-1	LR-035-2	LR-036-DAVG	LR-036E
Date Sampled	11/4/93	11/4/93	11/15/93	11/12/93	5/19/92	3/23/93	11/11/93	11/15/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	37	17	84	4.8		30	60	29
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead					345			
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-036E2	LR-037	LR-038-DAVG	LR-038E-DAVG	LR-038S	LR-038W	LR-039-1	LR-039-2
Date Sampled	11/11/93	11/11/93	5/19/92	11/4/92	11/4/92	11/4/92	5/18/92	3/23/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	15	48						33
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead			750	92	630	150	120	
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-040-DAVG	LR-041	LR-042	LR-043	LR-044	LR-045A	LR-046	LR-047
Date Sampled	11/4/93	3/23/93	11/4/93	11/12/93	11/15/93	12/15/93	11/10/93	11/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	18	17	32	42	12	12 J	18	45
Aluminum								
Antimony								
Cadmium		0.42						
Chromium		9.4						
Copper		42						
Lead		120						
Mercury		0.5						
Nickel		13						
Zinc		34						

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-048	LR-049	LR-050	LR-051	LR-053	LR-054	LR-055	LR-056
Date Sampled	11/10/93	11/4/93	11/4/93	11/4/93	11/8/93	11/8/93	11/8/93	11/8/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	30	10	43	23	23 J	14 J	55 J	14 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-057	LR-058	LR-059-1	LR-059-2	LR-059-S-2	LR-059-S-3	LR-060 1'-2'	LR-060-S-3
Date Sampled	11/8/93	11/8/93	5/19/92	3/29/93	12/10/93	12/10/93		
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	1 to 2	1 to 2
Total Metals (mg/kg dry)								
Arsenic	14 J	64 J		120	39	6	3.3	3
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead			402					
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-060-100E	LR-060-100N	LR-060-100W	LR-060-25E	LR-060-50E	LR-060-50N	LR-060-50W	LR-060-75E
Date Sampled	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	60	11	40	48	37	310	100	32
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-060-75N	LR-060-75W	LR-062E	LR-062N	LR-063	LR-064-1	LR-064-2	LR-065
Date Sampled	12/7/93	12/7/93	11/4/92	11/4/92	11/10/93	5/19/92	3/24/93	11/4/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	18	7			43		10	32
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead			180	110		26		
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-066-1	LR-066-2	LR-069	LR-070-1	LR-070-2	LR-071-1	LR-071-2	LR-072
Date Sampled	5/18/92	3/23/93	11/8/93	5/19/92	11/8/93	5/19/92	11/8/93	11/8/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic		6.8	24 J		62 J		34 J	42 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	14			114		217		
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-073-1	LR-073-2	LR-074	LR-075	LR-078	LR-079	LR-081	LR-082
Date Sampled	5/19/92	3/29/93	11/15/93	11/30/93	11/30/93	11/11/93	11/10/93	11/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic		11 J	61	24	7.5	20	23	42 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	56							
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-083-DAVG	LR-086	LR-087	LR-088	LR-089	LR-090	LR-091-1	LR-091-2
Date Sampled	11/10/93	11/8/93	11/8/93	11/8/93	11/8/93	11/30/93	5/19/92	3/24/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	30 J	20 J	51	6.9 J	7.2 J	12		170
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead							160	
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-093-1	LR-093-2	LR-094	LR-095-1	LR-095-2	LR-097-1	LR-097-2	LR-098
Date Sampled	5/18/92	3/24/93	11/30/93	5/19/92	3/24/93	5/19/92	3/24/93	11/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic		9.1	11		31		12	34 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	20			140		55		
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-099-1	LR-099-2	LR-100	LR-102N	LR-102S	LR-102W	LR-104A	LR-105-DAVG
Date Sampled	5/19/92	3/23/93	11/4/93	11/4/92	11/4/92	11/4/92	12/15/93	3/25/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic		16	5.9				100 J	38
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	15			12	59	42		52
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-106	LR-106-S-2	LR-106-S-3	LR-107	LR-108	LR-109	LR-110	LR-111
Date Sampled	11/30/93	12/16/93	12/16/93	11/30/93	11/30/93	11/19/93	11/19/93	11/19/93
Depth (ft bgs)	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	140	22	5.2	24	46 J	64	11	59
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-113	LR-114	LR-115	LR-116A	LR-117	LR-117-S-2	LR-117-S-3	LR-119
Date Sampled	11/10/93	11/10/93	11/10/93	12/14/93	11/8/93	12/16/93	12/16/93	11/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	99 J	8.7 J	44 J	57 J	80 J	4.3 J	3.8 J	15
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-121	LR-122	LR-123	LR-124	LR-125	LR-125E	LR-125E-S-2-DAVG	LR-125E-S-3
Date Sampled	11/9/93	11/9/93	11/9/93	11/30/93	3/24/93	11/19/93	12/13/93	12/13/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2
Total Metals (mg/kg dry)								
Arsenic	54	61	18	6.6	17	110	12 J	3.8 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead					37			
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-126	LR-127	LR-128	LR-129	LR-12W	LR-131	LR-131W	LR-132
Date Sampled	3/24/93	11/19/93	3/24/93	11/10/93	11/2/93	11/10/93	11/10/93	3/25/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	68	51	26	20 J	18	33 J	20 J	43
Aluminum								
Antimony								
Cadmium			1.4					0.23
Chromium			9.1					19
Copper			66					22
Lead	124		100					24
Mercury			0.36					0.12 U
Nickel			12					23
Zinc			79					43

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-133	LR-133-S-2	LR-133-S-3	LR-134	LR-135	LR-136	LR-137	LR-138
Date Sampled	11/8/93	12/10/93	12/10/93	3/25/93	11/9/93	3/25/93	11/9/93	11/29/93
Depth (ft bgs)	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	390	27	28	61	110	50	33	4.2 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead				54		31		
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-139	LR-140	LR-141	LR-142-DAVG	LR-143	LR-144	LR-145	LR-146
Date Sampled	11/29/93	11/29/93	11/29/93	11/29/93	11/29/93	11/10/93	11/10/93	11/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	19	32	10	63	36	54 J	30 J	24 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-147	LR-148-DAVG	LR-149	LR-150	LR-151	LR-152	LR-153	LR-154
Date Sampled	11/10/93	11/9/93	11/9/93	11/9/93	11/9/93	11/9/93	11/9/93	5/18/92
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	2 J	12	33	51 J	39	43	42	55
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								19
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-155	LR-156	LR-157-DAVG	LR-157-S-2	LR-157-S-3	LR-158	LR-159	LR-160
Date Sampled	3/25/93	3/24/93	11/19/93	12/13/93	12/13/93	3/24/93	11/10/93	3/24/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	25	29	120	14 J	6.2 J	56	25 J	6.6
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	84	56				391		120
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-161-DAVG	LR-162-DAVG	LR-163	LR-164	LR-165	LR-166	LR-167	LR-168
Date Sampled	11/10/93	3/24/93	11/9/93	3/25/93	11/9/93	3/25/93	11/9/93	3/25/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	34 J	44	23	16	23	7.6	26	38
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead		51		71		21		70
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-169	LR-170	LR-171	LR-172	LR-173-DAVG	LR-174	LR-175	LR-176
Date Sampled	11/16/93	11/19/93	11/19/93	11/19/93	11/18/93	11/18/93	11/9/93	11/9/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	73	71	19	47	10	16	28	34
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-177	LR-178	LR-179	LR-17N	LR-180	LR-181-S-3	LR-182	LR-183
Date Sampled	11/9/93	11/9/93	11/9/93	11/1/93	11/9/93	12/16/93	3/25/93	11/19/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	20	41	14	26	84	6.3 J	40	24
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead							169	
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-184	LR-185	LR-186	LR-187	LR-188	LR-189	LR-190	LR-191
Date Sampled	3/24/93	11/19/93	3/24/93	11/18/93	3/25/93	11/18/93	3/25/93	11/9/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	14	16	16	22	16	37	17	24
Aluminum								
Antimony								
Cadmium					0.36			
Chromium					14			
Copper					21			
Lead	86		12		20		87	
Mercury					0.14 U			
Nickel					17			
Zinc					32			

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-192	LR-193	LR-194	LR-195	LR-196	LR-197	LR-198	LR-199
Date Sampled	3/25/93	11/9/93	3/25/93	11/16/93	11/16/93	11/19/93	11/19/93	11/19/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	3	18	41	39	63	35	33	18
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	27		280					
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-200	LR-201	LR-202	LR-203	LR-204	LR-205	LR-206	LR-207
Date Sampled	11/18/93	11/18/93	11/18/93	11/18/93	11/18/93	11/18/93	11/18/93	11/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	30	15	19	25	14	46	19	140
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-207-S-2	LR-207-S-3	LR-208	LR-209-DAVG	LR-210	LR-211	LR-212	LR-213
Date Sampled		12/10/93	11/16/93	3/25/93	11/16/93	3/25/93	11/16/93	3/25/93
Depth (ft bgs)	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	22	13	39	17	15	41	43	38
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead				*38*		*85*		*105*
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-214	LR-215	LR-216	LR-217	LR-218	LR-219	LR-220	LR-221
Date Sampled	11/19/93	3/25/93	11/19/93	3/25/93	11/18/93	3/25/93	11/18/93	3/25/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	59	13	23	21	28	24	49	21
Aluminum								
Antimony								
Cadmium		0.32						
Chromium		14						
Copper		20						
Lead		12		163		173		35
Mercury		0.11 U						
Nickel		14						
Zinc		35						

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-222	LR-223	LR-224	LR-225-DAVG	LR-225A	LR-226	LR-227	LR-228
Date Sampled	11/18/93	3/25/93	11/18/93	11/16/93	12/6/93	11/16/93	11/16/93	11/16/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	6.9	70	31	19	8.1	48	38	25
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead		62						
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-229	LR-230	LR-231	LR-232	LR-233	LR-234	LR-235	LR-236
Date Sampled	11/17/93	11/16/93	11/29/93	11/17/93	11/17/93	11/17/93	11/19/93	11/18/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	21	85	32	9.5	61 J	21 J	26	17
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-237-DAVG	LR-238	LR-239	LR-240	LR-241	LR-242	LR-243	LR-244
Date Sampled	11/18/93	11/18/93	11/18/93	11/18/93	11/16/93	3/25/93	11/16/93	3/25/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	36	13	52	44	8.1	4.5	3.6	24
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead						5 U		38
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-245-DAVG	LR-246	LR-247	LR-248	LR-249	LR-250	LR-251	LR-252
Date Sampled	3/25/93	11/17/93	3/25/93	11/17/93	3/25/93	11/18/93	3/25/93	11/18/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	47	22 J	32	17 J	8.5	17	25	36
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	264		101		308		74	
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-253	LR-254	LR-254A	LR-255	LR-256	LR-257	LR-258	LR-259
Date Sampled	3/25/93	11/16/93	12/6/93	11/16/93	11/16/93	11/17/93	11/17/93	11/17/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	39	40	2	69	59	38 J	58 J	15
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead	82							
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-260	LR-261	LR-262	LR-263	LR-264	LR-265	LR-266	LR-267
Date Sampled	11/17/93	11/17/93	11/18/93	11/18/93	3/25/93	11/17/93	3/25/93	11/18/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	38 J	34	32	12	36	34	24	38
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead					287		278	
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-301	LR-302	LR-303	LR-304	LR-305	LR-306	LR-307	LR-308
Date Sampled	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93	6/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	33 J	29 J	6.5 J	26 J	23 J	45 J	23 J	62 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-309	LR-310-DAVG	LR-311	LR-311-100E	LR-311-100N	LR-311-100S	LR-311-100W	LR-311-10S
Date Sampled	6/30/93	6/30/93	6/30/93	12/6/93	12/6/93	12/6/93	12/6/93	12/6/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	14 J	18	360	17	13	77	13	78
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-311-10W	LR-311-25S	LR-311-25W	LR-311-50N	LR-311-50S	LR-311-50W-DAVG	LR-311-75E	LR-311-75N
Date Sampled	12/6/93	12/6/93	12/6/93	12/6/93	12/6/93	12/6/93	12/6/93	12/6/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	110	29	13	85	240	68	16	36
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-311-75S	LR-311-75W	LR-311-S-2	LR-311-S-3	LR-312	LR-313	LR-314	LR-315
Date Sampled	12/6/93	12/6/93	12/10/93	12/10/93	6/30/93	6/30/93	6/30/93	6/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	76	28	55	100	25	34	11	20
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-316	LR-317	LR-318	LR-318-100E	LR-318-100N	LR-318-100S	LR-318-100W	LR-318-10E
Date Sampled	6/30/93	6/30/93	6/30/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	55	16	150	45	69	23	95	15
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-318-10N	LR-318-10S	LR-318-10W	LR-318-25E	LR-318-25N	LR-318-25S	LR-318-25W	LR-318-50E
Date Sampled	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	180	22	90	11	97	330	24	25
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-318-50N	LR-318-50S	LR-318-50W	LR-318-75E-DAVG	LR-318-75N	LR-318-75S	LR-318-75W	LR-318-S-2
Date Sampled	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/7/93	12/10/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1
Total Metals (mg/kg dry)								
Arsenic	25	40	51	47	27	55	62	8.7
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	LR-318-S-3	LR-319	LR-320	LR-321	LR-322	LR-38	RR-134-DAVG	RR-135
Date Sampled	12/10/93	6/30/93	6/30/93	6/30/93	6/30/93	3/24/93	12/20/93	12/20/93
Depth (ft bgs)	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	4.5	60	36	35	59	19	45	41
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-136	RR-140-A1	RR-140-B1	RR-142	RR-144	RR-145	RR-146	RR-147
Date Sampled	12/20/93	12/20/93	12/20/93	12/20/93	12/21/93	12/21/93	12/21/93	12/21/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	19	71	20	26	61	24	28	62
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-148	RR-149	RR-150	RR-151	RR-152	RR-153	RR-502	RR-503
Date Sampled	12/21/93	12/21/93	12/21/93	12/21/93	12/21/93	12/21/93	3/30/93	3/30/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	38	42	40	60	37	18	81	27
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-504	RR-506	RR-507	RR-509	RR-511-DAVG	RR-512	RR-513	RR-516
Date Sampled	3/30/93	3/30/93	3/30/93	3/30/93	3/31/93	4/1/93	4/1/93	
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	24	72	54	62	10	31	35	18 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-517-A2	RR-517-B2	RR-518	RR-520-DAVG	RR-521	RR-521-S-2-DAVG	RR-521-S-3	RR-522
Date Sampled	12/21/93	12/21/93				12/14/93	12/14/93	
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	84	110	28 J	23 J	76 J	7 J	3.3 J	10 J
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-524	RR-530-B	RR-530-C	RR-538-B	RR-538-C	RR-542-A1	RR-542-B1	RR-543-A1
Date Sampled						12/20/93	12/20/93	12/20/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	26 J	5.5	61	37	50	16	13	15
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-543-B1	RR-544-B1	RR-544-B2	RR-545-B1	RR-545-B2	RR-546-C	RR-548-B1	RR-548-B2
Date Sampled	12/20/93	12/17/93	12/17/93	12/17/93	12/17/93		12/17/93	12/17/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	33	27	6.5	13	15	46	13	61
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-555-A1	RR-555-A2	RR-555-B1	RR-555-B2	RR-555-DAVG	RR-556	RR-558	RR-558-A1
Date Sampled	12/21/93	12/21/93	12/[illegible]	12/21/93	12/2/93	12/2/93	12/2/93	12/20/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	46	42	85	15	53	5.3	36	60
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead					34 J			
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	RR-558-B1	RR-567-B1	RR-567-B2	RR-582	RR-591-B1-DAVG	RR-591-B2	RR-593	UC-10
Date Sampled	12/20/93	12/17/93	12/17/93	12/3/93	12/17/93	12/17/93	12/2/93	7/1/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	59	210	21	36	7.8	11	27	61
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead				50 J			46 J	
Mercury								
Nickel								
Zinc								

Area	LR	LR	LR	LR	LR	LR	LR	LR
Sample ID	UC-11	UC-12	UC-13	UC-14	UC-15	UC-16	UC-2	UC-5
Date Sampled	7/1/93	7/1/93					7/1/93	7/1/93
Depth (ft bgs)	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Arsenic	59	80	77	57	44	56	19	57
Aluminum								
Antimony								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Zinc								

Table B.14-1
Area LR Soil Metals Results

Area	LR	LR	LR	LR
Sample ID	**UC-6**	**UC-7**	**UC-8**	**UC-9**
Date Sampled	**7/1/93**	**7/1/93**	**7/1/93**	**7/1/93**
Depth (ft bgs)	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**	**0 to 0.5**
Total Metals (mg/kg dry)				
Arsenic	33	59	40	87
Aluminum				
Antimony				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Nickel				
Zinc				

Table B.14-2
Area LR Soil Explosives Results

Area	LR	LR	LR	LR	LR	LR	LR
Sample ID	APA-SS-502	APA-TP-501-S-1-DAVG	APA-TP-501-S-2	APB-TP-502-S-1	APB-TP-502-S-2	APG-SS-501	APG-SS-502
Date Sampled	5/27/92	5/27/92	5/27/92	5/27/92	5/27/92	5/26/92	5/26/92
Depth (ft bgs)	0 to 0.5	0 to 1	3 to 5	0 to 1	3 to 5	0 to 0.5	0 to 0.5
Explosives (mg/kg)							
1,3,5-Trinitrobenzene	0.18 U	0.067 U	0.031 U	0.034 U	0.031 U	0.16 U	0.17 U
1,3-Dinitrobenzene	0.23 U	0.089 U	0.041 U	0.046 U	0.041 U	0.21 U	0.23 U
2,4,6-Trinitrotoluene	0.018 U	0.0067 U	0.0031 U	0.0034 U	0.0031 U	0.016 U	0.017 U
2,4-Dinitrotoluene	0.035 U	0.013 U	0.0062 U	0.0068 U	0.0062 U	0.032 U	0.034 U
2,6-Dinitrotoluene	0.035 U	0.013 U	0.0062 U	0.0068 U	0.0062 U	0.032 U	0.034 U
DNT - Total	*0.07 U*	*0.026 U*	*0.0124 U*	*0.0136 U*	*0.0124 U*	*0.064 U*	*0.068 U*
Monomethylamine Nitrate	5.9 U	5.6 U	5.2 U				
Nitrobenzene	0.35 U	0.13 U	0.062 U	0.068 U	0.061 U	0.32 U	0.34 U
Nitroglycerine	0.24 U	1.1	0.21 U	0.23 U	0.21 U	0.21 U	0.23 U

Area	LR	LR	LR	LR	LR	LR	LR
Sample ID	APG-SS-503	APG-TP-501-S-1	APG-TP-501-S-2	APG-TP-503-S-1	APG-TP-503-S-2	APG-TP-504-S-1	APG-TP-504-S-2
Date Sampled	5/26/92	5/26/92	5/26/92	5/26/92	5/26/92	5/27/92	5/27/92
Depth (ft bgs)	0 to 0.5	0 to 1	3 to 5	0 to 1	3 to 5	0 to 1	3 to 5
Explosives (mg/kg)							
1,3,5-Trinitrobenzene	0.35 U	0.17 U	0.16 U	0.17 U	0.031 U	0.071 U	0.065 U
1,3-Dinitrobenzene	0.47 U	0.23 U	0.21 U	0.23 U	0.041 U	0.095 U	0.087 U
2,4,6-Trinitrotoluene	0.035 U	0.017 U	0.016 U	0.017 U	0.0031 U	0.0071 U	0.0065 U
2,4-Dinitrotoluene	0.07 U	0.035 U	0.032 U	0.035 U	0.0062 U	0.014 U	0.013 U
2,6-Dinitrotoluene	0.07 U	0.035 U	0.032 U	0.035 U	0.0062 U	0.014 U	0.013 U
DNT - Total	*0.14 U*	*0.07 U*	*0.064 U*	*0.07 U*	*0.0124 U*	*0.028 U*	*0.026 U*
Monomethylamine Nitrate							
Nitrobenzene	0.7 U	0.34 U	0.32 U	0.34 U	0.061 U	0.14 U	0.13 U
Nitroglycerine	0.23 U	0.23 U	0.21 U	0.23 U	0.21 U	0.23 U	0.22 U

Table B.14-3
Area LR Soil Pesticide, PCB, and TPH Results

Area	LR
Sample ID	BG-SS-4
Date Sampled	11/11/86
Depth	0 to 0.5
Pesticides (mg/kg dry)	
4,4'-DDD	20 U
4,4'-DDE	20 U
4,4'-DDT	20 U
Aldrin	0.6 J
Alpha-BHC	10 U
Beta-BHC	10 U
Chlordane	99.9 U
Delta-BHC	10 U
Dieldrin	20 U
Endosulfan I	10 U
Endosulfan II	20 U
Endosulfan Sulfate	20 U
Endrin	20 U
Endrin Ketone	20 U
Gamma-BHC	10 U
Heptachlor	10 U
Heptachlor Epoxide	10 U
Methoxychlor	99.9 U
Toxaphene	200 U
PCBs (mg/kg dry)	
PCB-1016	0.0999 U
PCB-1221	0.0999 U
PCB-1232	0.0999 U
PCB-1242	0.0999 U
PCB-1248	0.0999 U
PCB-1254	0.2 U
PCB-1260	0.2 U
TPH (mg/kg dry)	
Oil And Grease	120

Table B.14-4
Area LR Soil Nitrate Results

Area	LR	LR
Sample ID	APB-TP-502-S-1	APB-TP-502-S-2
Date Sampled	5/27/92	5/27/92
Depth (ft bgs)	0 to 1	3 to 5
General Chem (mg/kg dry)		
Nitrate as Nitrogen	2.7	1.8

Table B.15-1
Historical Railroad Grade Soil Metals Results

Area	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	30-VS-3	30-VS-4	30-VS-5	30-VS-6	30-VS-7	LR-062S	LR-062W	LR-104 1'-2'
Date Sampled	3/30/92	3/30/92	3/30/92	3/30/92	4/7/92	11/4/92	11/4/92	
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2
Total Metals (mg/kg dry)								
Aluminum	18000	17000	14000	13000	3800			
Antimony	0.31 UJ	0.3 UJ	0 79 J	0 32 J	0 86 J			
Arsenic	7.6 J	6 J	12 J	11 J	21			7
Beryllium	0.39	0 4	0 31	0 28	0 14 U			
Cadmium	6.6	11 3	6 5	2	2.9 J			
Chromium	13	11	10	9 3	2.5			
Copper	14	18	19	13	5.1			
Lead	130	130	750	62	130	830	120	
Mercury	0.11 U	0.15	1 4	0.18	0.17			
Nickel	16	15	15	13	2.8			
Selenium	0.3 U	0.34	1.6	0.54	0.43			
Silver	0.037	0.068	0.21	0.037	0.36 U			
Thallium	0.3 U	0.3 U	0.31 U	0.3 U	0.35 U			
Zinc	1700	1400	1300	450	93			

Area	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	LR-116	RR-102	RR-114	RR-115-DAVG	RR-116	RR-117	RR-118	RR-121
Date Sampled	11/10/93	12/17/93	12/17/93	12/17/93	12/17/93	12/17/93	12/17/93	12/17/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	130 J	290	330	340	220	180	230	360
Beryllium								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Table B.15-1
Historical Railroad Grade Soil Metals Results

Area	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	RR-515 1'-2'	RR-528	RR-528-S-2	RR-528-S-3	RR-529	RR-530	RR-530-A	RR-531
Date Sampled			12/13/93	12/13/93				
Depth	1 to 2	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	47	400 J	100 J	40 J	85 J	290 J	68	140 J
Beryllium								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Area	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	RR-533	RR-534	RR-535	RR-537	RR-538-A	RR-539	RR-540-DAVG	RR-544-A2
Date Sampled						7/7/93		12/17/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	50 J	140 J	190	210	50	260 J	88	9.1
Beryllium								
Cadmium								
Chromium								
Copper								
Lead								
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Table B.15-1
Historical Railroad Grade Soil Metals Results

Area	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	RR-545-A2	RR-548-A2	RR-559-S-3	RR-560	RR-561	RR-562	RR-563	RR-564
Date Sampled	12/17/93	12/17/93	12/16/93	12/2/93	12/2/93	12/2/93	12/2/93	12/2/93
Depth	0 to 0.5	0 to 0.5	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	40	21	16	110	190	280	150	150
Beryllium								
Cadmium								
Chromium								
Copper								
Lead					5.9 U		24 J	
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Area	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	RR-566	RR-567	RR-567-A1	RR-567-A2	RR-567-S-2	RR-567-S-3	RR-583	RR-588
Date Sampled	12/1/93	12/1/93	12/17/93	12/17/93	12/15/93	12/15/93	12/3/93	12/2/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)								
Aluminum								
Antimony								
Arsenic	520	400	310	56	16 J	6.7 J	15	280
Beryllium								
Cadmium								
Chromium								
Copper								
Lead	43 J							
Mercury								
Nickel								
Selenium								
Silver								
Thallium								
Zinc								

Table B.15-1
Historical Railroad Grade Soil Metals Results

Area	RR-N	RR-N	RR-N	RR-N
Sample ID	RR-589	RR-594	RR-595-S-3	RR-622
Date Sampled	12/2/93	12/3/93	12/15/93	12/3/93
Depth	0 to 0.5	0 to 0.5	1 to 2	0 to 0.5
Total Metals (mg/kg dry)				
Aluminum				
Antimony				
Arsenic	370	180	23 J	62
Beryllium				
Cadmium				
Chromium				
Copper				
Lead	93 J			
Mercury				
Nickel				
Selenium				
Silver				
Thallium				
Zinc				

Table B.15-2
Historical Railroad Grade Soil TPH Results

Area	RR-N	RR-N	RR-N	RR-N	RR-N
Sample ID	30-VS-3	30-VS-4	30-VS-5	30-VS-6	30-VS-7
Date Sampled	3/30/92	3/30/92	3/30/92	3/30/92	4/7/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg dry)					
TPH Scan	25 U	25 U	24 U	25 U	20 U
Diesel	25 U	25 U	25 U	25 U	25 U
Gasoline	9	5 U	12	7	5 U

Table B.16-1
Creek Area Soil Metals Results

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	01-OS02-SS-[LR-68-1050E]-C1-000	01-OS02-SS-[LR-68-1125E]-C1-000	01-OS02-SS-[LR-68-1200E]-C1-000	01-OS02-SS-[LR-68-1425E]-C1-000	01-OS02-SS-[LR-68-1500E]-C1-000
Date Sampled	1/10/01	1/10/01	1/10/01	1/10/01	1/10/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	230	110	210	410	250
Cadmium					
Chromium					
Copper					
Lead	52	58	94	2400	62
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	01-OS02-SS-[LR-68-150E]-C1-000	01-OS02-SS-[LR-68-150W]-C1-000	01-OS02-SS-[LR-68-1650E]-C1-000	01-OS02-SS-[LR-68-1725E]-C1-000	01-OS02-SS-[LR-68-225E]-C1-000
Date Sampled	1/10/01	1/11/01	1/10/01	1/10/01	1/10/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	370	220	440	120	150
Cadmium					
Chromium					
Copper					
Lead	56	48	220	330	22
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	01-OS02-SS-[LR-68-225W]-C1-000	01-OS02-SS-[LR-68-300E]-C1-000	01-OS02-SS-[LR-68-300W]-C1-000	01-OS02-SS[LR-68-300W-TRANSECT]-C1-000	01-OS02-SS-[LR-68-375E]-C1-000
Date Sampled	1/11/01	1/10/01	1/11/01	8/29/01	1/10/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	95	320	230	20	280
Cadmium					
Chromium					
Copper					
Lead	83	34	26	23	37
Mercury					
Nickel					
Zinc					

Table B.16-1
Creek Area Soil Metals Results

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	01-OS02-SS-[LR-68-375W]-C1-000	01-OS02-SS-[LR-68-450E]-C1-000	01-OS02-SS-[LR-68-450W]-C1-000	01-OS02-SS[LR-68-600E-TRANSECT]-C1-000	01-OS02-SS-[LR-68-675E]-C1-000
Date Sampled	1/11/01	1/10/01	1/11/01	8/29/01	1/10/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	120	30	110	20	140
Cadmium					
Chromium					
Copper					
Lead	22	19	12	1700	21
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	01-OS02-SS-[LR-68-750E]-C1-000	01-OS02-SS-[LR-68-825E]-C1-000	01-OS02-SS-[LR-68-900E]-C1-000	01-OS02-SS-[LR-68-975E]-C1-000	02-OS02-[LR-68-600E-2-TRANSECT]-D1-000
Date Sampled	1/10/01	1/10/01	1/10/01	1/10/01	9/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	320	140	99	27	33
Cadmium					
Chromium					
Copper					
Lead	30	40	62	12	2900
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	02-OS02-[LR-68-600E-3-TRANSECT]-D1-000	02-OS02-[LR-68-600E-4-TRANSECT]-D1-000	02-OS02-[LR-68-600E-5-TRANSECT]-D1-000	02-OS02-[LR-68-600E-6-TRANSECT]-D1-000	02-OS02-SS[LR-68-0-02]C02-1.5
Date Sampled	9/12/01	9/12/01	9/12/01	9/12/01	8/1/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	22	19	16	19	98
Cadmium					
Chromium					
Copper					
Lead	360	260	430	10	210
Mercury					
Nickel					
Zinc					

Table B.16-1
Creek Area Soil Metals Results

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	02-OS02-SS[LR-68-1350E-02]C02-1.5	02-OS02-SS[LR-68-1575E-02]C02-1.5	02-OS02-SS[LR-68-525E-02]C02-1.5	02-OS02-SS[LR-68-600E-02]C02-1.5	02-OS02-SS[LR-68-75-02]C02-1.5
Date Sampled	8/1/01	8/1/01	8/1/01	8/1/01	8/1/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	40	67	85	130	99
Cadmium					
Chromium					
Copper					
Lead	9.1	21	190	20	16
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	31-SS-402	31-SS-502	31-TP-509-S-1	31-TP-509-S-2	31-TP-509-S-3
Date Sampled	11/8/93	2/14/92	2/27/92	2/27/92	2/27/92
Depth	0 to 0.5	0 to 0.5	0 to 1	3 to 6	8 to 10
Total Metals (mg/kg dry)					
Arsenic	14			2.3	2.6
Cadmium				0.053 J	0.047 J
Chromium				12	12
Copper				14	11
Lead		45	5.9 U	5.4 UJ	5.1 UJ
Mercury				0.078 U	0.08 U
Nickel				18	15
Zinc				22	21

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	31-VS-432	31-VS-433	31-VS-528	31-VS-530	31-VS-531
Date Sampled	1/25/00	1/25/00	4/18/00	4/18/00	4/18/00
Depth	2 to 4.5	0 to 0.5	1 to 2.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	2.3	93	5.3	11	16
Cadmium					
Chromium					
Copper					
Lead	6	32	7.1	12	32
Mercury					
Nickel					
Zinc					

Table B.16-1
Creek Area Soil Metals Results

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	LR-052	LR-069W	LR-085	LR-101	LR-102
Date Sampled	11/8/93	12/15/93	11/8/93	3/29/93	3/29/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	6.3 J	18 J	7.9 J	15 J	14 J
Cadmium					
Chromium					
Copper					
Lead				11	521
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	LR-120	LR-68-E125	LR-68-N125-DAVG	LR-68-S125	LR-68-S175
Date Sampled	12/15/93	11/4/92	11/4/92	11/4/92	5/14/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	27 J				12
Cadmium					
Chromium					
Copper					
Lead		10	76	17	11
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	LR-68-S275	LR-68-S375	LR-68-S475-DAVG	LR-68-S575	LR-68-S675
Date Sampled	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic					
Cadmium					
Chromium					
Copper					
Lead	18	11	5 U	12000	11
Mercury					
Nickel					
Zinc					

Table B.16-1
Creek Area Soil Metals Results

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	LR-68-S775	LR-68-S875	LR-68-W25	RR-592	RR-596
Date Sampled	5/14/93	5/14/93	4/6/93	12/2/93	12/3/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic				39	440
Cadmium					
Chromium					
Copper					
Lead	14	1600	150		
Mercury					
Nickel					
Zinc					

Area	Creek	Creek	Creek	Creek	Creek
Sample ID	RR-596-S-2	RR-596-S-3	RR-597	RR-598-DAVG	RR-599
Date Sampled	12/15/93	12/15/93	12/3/93	12/3/93	12/3/93
Depth	0.5 to 1	1 to 2	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	360 J	120 J	320	260	170
Cadmium					
Chromium					
Copper					
Lead	13		720 J		6.3 J
Mercury					
Nickel					
Zinc					

Table B.16-2
Creek Area Soil Explosives Results

Area	Creek	Creek	Creek
Sample ID	31-TP-509-S-1	31-TP-509-S-2	31-TP-509-S-3
Date Sampled	2/27/92	2/27/92	2/27/92
Depth (ft bgs)	0 to 1	3 to 6	8 to 10
Explosives (mg/kg dry)			
1,3-Dinitrobenzene	0.048 U	0.042 U	
2,4-Dinitrotoluene	0.0072 U	0.0064 U	0.18 U
2,6-Dinitrotoluene	0.0072 U	0.0064 U	0.18 U
DNT - Total	0.0144 U	0.0128 U	0.36 U
Nitrobenzene	0.071 U	0.063 U	0.18 U
1,3,5-Trinitrobenzene	0.036 U	0.032 U	
2,4,6-Trinitrotoluene	0.0036 U	0.0032 U	

Table B.16-3
Creek Area Soil SVOC Results

Area	Creek	Creek
Sample ID	31-TP-509-S-2	31-TP-509-S-3
Date Sampled	2/27/92	2/27/92
Depth (ft bgs)	3 to 6	8 to 10
Semivolatiles (mg/kg dry)		
Aniline	0.18 U	0.18 U
Benzidine	1.8 U	1.8 U
Benzoic Acid	0.92 U	0.91 U
Benzyl Alcohol	0.18 U	0.18 U
Bis(2-Chloroethoxy)methane	0.18 U	0.18 U
Bis(2-Chloroisopropyl)ether	0.18 U	0.18 U
Bis(2-ethylhexyl)Phthalate (DEHP)	0.18 U	0.18 U
Bis(Chloroethyl)ether	0.18 U	0.18 U
Bromodiphenyl ether, 4-	0.18 U	0.18 U
Butyl Benzyl Phthalate, N-	0.18 U	0.18 U
Chloroaniline, 4-	0.18 U	0.18 U
Chloronaphthalene, 2-	0.18 U	0.18 U
Chlorophenol, 2-	0.18 U	0.18 U
Chlorophenyl-phenyl ether, 4-	0.18 U	0.18 U
Dibenzofuran	0.18 U	0.18 U
Dibutyl Phthalate	0.18 U	0.18 U
Dichlorobenzene, 1,2-	0.18 U	0.18 U
Dichlorobenzene, 1,3-	0.18 U	0.18 U
Dichlorobenzene, 1,4-	0.18 U	0.18 U
Dichlorobenzidine, 3,3'	0.37 U	0.36 U
Dichlorophenol, 2,4-	0.18 U	0.18 U
Diethyl Phthalate	0.18 U	0.18 U
Dimethyl Phthalate	0.18 U	0.18 U
Dimethylphenol, 2,4-	0.18 U	0.18 U
Dinitro-o-Cresol, 4,6-	0.92 U	0.91 U
Dinitrophenol, 2,4-	0.92 U	0.91 U
Di-N-Octylphthalate	0.18 U	0.18 U
Hexachlorobenzene	0.18 U	0.18 U
Hexachlorobutadiene	0.18 U	0.18 U
Hexachlorocyclopentadiene	0.18 U	0.18 U
Hexachloroethane	0.18 U	0.18 U
Isophorone	0.18 U	0.18 U
Methylphenol, 2-	0.18 U	0.18 U
Methylphenol, 4-	0.18 U	0.18 U
Nitroaniline, 2-	0.92 U	0.91 U
Nitroaniline, 3-	0.92 U	0.91 U
Nitroaniline, 4-	0.92 U	0.91 U
Nitrophenol, 2-	0.18 U	0.18 U
Nitrophenol, 4-	0.92 U	0.91 U
Nitrosodimethylamine, N-	0.18 U	0.18 U
Nitrosodi-N-propylamine, N-	0.18 U	0.18 U
Nitrosodiphenylamine, N-	0.18 U	0.18 U
Pentachlorophenol	0.18 U	0.18 U
Phenol	0.18 U	0.18 U
Trichlorobenzene, 1,2,4-	0.18 U	0.18 U
Trichlorophenol, 2,4,5-	0.92 U	0.91 U
Trichlorophenol, 2,4,6-	0.18 U	0.18 U

Table B.16-4
Creek Area Soil PAH Results

Area	Creek	Creek
Sample ID	31-TP-509-S-2	31-TP-509-S-3
Date Sampled	2/27/92	2/27/92
Depth (ft bgs)	3 to 6	8 to 10
PAHs (mg/kg dry)		
Acenaphthene	0.18 U	0.18 U
Acenaphthylene	0.18 U	0.18 U
Anthracene	0.0088 U	0.0089 U
Benzo(a)Anthracene	0.018 U	0.018 U
Benzo(a)Pyrene	0.018 U	0.018 U
Benzo(b)Fluoranthene	0.018 U	0.018 U
Benzo(g,h,i)Perylene	0.018 U	0.018 U
Benzo(k)Fluoranthene	0.018 U	0.018 U
Chrysene	0.018 U	0.018 U
Dibenz(a,h)anthracene	0.036 U	0.037 U
Fluoranthene	0.018 U	0.018 U
Fluorene	0.018 U	0.018 U
Indeno(1,2,3-cd)pyrene	0.018 U	0.018 U
Methylnaphthalene, 2-	0.18 U	0.18 U
Naphthalene	0.088 U	0.089 U
Phenanthrene	0.0088 U	0.0089 U
Pyrene	0.018 U	0.018 U
PAH (Non-Carc) - Total	0.7176 U	0.7188 U
Total Carcinogenic PAHS (BaP TEQs)	0.059598 U	0.060598 U

Table B.16-5
Creek Area Soil TPH Results

Area	Creek	Creek
Sample ID	31-TP-509-S-2	31-TP-509-S-3
Date Sampled	2/27/92	2/27/92
Depth (ft bgs)	3 to 6	8 to 10
TPH (mg/kg dry)		
TPH (418.1)	20 U	20 U

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R19C55]-D1-000	01-C011-SS-[R20C55]-D1-000	01-C011-SS-[R20C56]-D1-000	01-C011-SS-[R21C55]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	30	17	2.5 U	35
Lead	29	40	10	95

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R21C56]-D1-000	01-C011-SS-[R21C57]-D1-000	01-C011-SS-[R21C58]-D1-000	01-C011-SS-[R22C55]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	4.7	34	40	45
Lead	11	89	98	77

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R22C56]-D1-000-DAVG	01-C011-SS-[R22C57]-D1-000	01-C011-SS-[R22C58]-D1-000	01-C011-SS-[R22C59]-D1-000
Date Sampled	4/3/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	23	39	63	46
Lead	26	210	84	52

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R23C55]-D1-000	01-C011-SS-[R23C56]-D1-000	01-C011-SS-[R23C57]-D1-000	01-C011-SS-[R23C58]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	19	3.5	28	22
Lead	21	7.8	36	43

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R23C59]-D1-000	01-C011-SS-[R24C55]-D1-000	01-C011-SS-[R24C56]-D1-000	01-C011-SS-[R24C57]-D1-000
Date Sampled	2/22/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	31	43	36	15
Lead	30	230	79	14

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R24C58]-D1-000	01-C011-SS-[R24C59]-D1-000	01-C011-SS-[R24C60]-D1-000	01-C011-SS-[R25C55]-D1-000
Date Sampled	2/20/01	2/22/01	2/22/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	12	53	45	51
Lead	15	61	25	67

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R25C56]-D1-000	01-C011-SS-[R25C57]-D1-000	01-C011-SS-[R25C58]-D1-000	01-C011-SS-[R25C59]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	14	31	59	58
Lead	14	28	160	38

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R25C60]-D1-000	01-C011-SS-[R26C55]-D1-000	01-C011-SS-[R26C56]-D1-000	01-C011-SS-[R26C57]-D1-000
Date Sampled	2/22/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	55	43	39	45
Lead	52	150	64	81

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R26C58]-D1-000	01-C011-SS-[R26C59]-D1-000	01-C011-SS-[R26C60]-D1-000	01-C011-SS-[R26C61]-D1-000
Date Sampled	2/20/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	37	20	71	84
Lead	46 J	26	230	100

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R27C55]-D1-000	01-C011-SS-[R27C56]-D1-000	01-C011-SS-[R27C57]-D1-000	01-C011-SS-[R27C58]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	3.5	47	34	26
Lead	8.7	130	80	34 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R27C59]-D1-000	01-C011-SS-[R27C60]-D1-000	01-C011-SS-[R27C61]-D1-000	01-C011-SS-[R28C55]-D1-000
Date Sampled	2/20/01	2/22/01	2/22/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	48	60	91	12
Lead	75 J	27	77	25

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R28C56]-D1-000	01-C011-SS-[R28C57]-D1-000	01-C011-SS-[R28C58]-D1-000	01-C011-SS-[R28C59]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	42	15	61	38
Lead	21	30	43 J	64 J

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R28C60]-D1-000	01-C011-SS-[R28C61]-D1-000	01-C011-SS-[R28C62]-D1-000	01-C011-SS-[R29C55]-D1-000-DAVG
Date Sampled	2/22/01	2/22/01	2/22/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	34	20	85	12
Lead	80	17	21	18

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R29C56]-D1-000	01-C011-SS-[R29C57]-D1-000	01-C011-SS-[R29C59]-D1-000	01-C011-SS-[R29C60]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	16	8.7	37	21
Lead	25	13	49 J	17

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R29C61]-D1-000-DAVG	01-C011-SS-[R29C62]-D1-000	01-C011-SS-[R30C55]-D1-000-DAVG	01-C011-SS-[R30C56]-D1-000
Date Sampled	2/22/01	2/22/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	22.5	24	28	38
Lead	39	24	66	65

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R30C57]-D1-000	01-C011-SS-[R30C58]-D1-000	01-C011-SS-[R30C59]-D1-000	01-C011-SS-[R30C60]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	16	12	45	26
Lead	28	34 J	60 J	64

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R30C61]-D1-000	01-C011-SS-[R30C62]-D1-000	01-C011-SS-[R31C55]-D1-000-DAVG	01-C011-SS-[R31C56]-D1-000
Date Sampled	2/22/01	2/22/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	57	16	16.5	62
Lead	330	17	40.5	45

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R31C57]-D1-000	01-C011-SS-[R31C58]-D1-000	01-C011-SS-[R31C59]-D1-000	01-C011-SS-[R31C60]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	22	2.4 U	49	29
Lead	71	5.4 J	150 J	20

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R31C61]-D1-000	01-C011-SS-[R31C62]-D1-000	01-C011-SS-[R31C63]-D1-000	01-C011-SS-[R32C56]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	24	35	55	19
Lead	21	48	38	20

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R32C57]-D1-000	01-C011-SS-[R32C58]-D1-000	01-C011-SS-[R32C59]-D1-000	01-C011-SS-[R32C60]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	21	8.2	12	37
Lead	26	13 J	42 J	79

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R32C61]-D1-000	01-C011-SS-[R32C62]-D1-000	01-C011-SS-[R32C63]-D1-000	01-C011-SS-[R32C64]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	30	59	54	76
Lead	36	110	97	120

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R33C56]-D1-000	01-C011-SS-[R33C57]-D1-000	01-C011-SS-[R33C58]-D1-000	01-C011-SS-[R33C59]-D1-000
Date Sampled	2/20/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	31	36	18	4
Lead	25	54	23 J	9.1 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R33C60]-D1-000	01-C011-SS-[R33C61]-D1-000	01-C011-SS-[R33C62]-D1-000	01-C011-SS-[R33C63]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	39	48	42	33
Lead	79	44	43	59

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R33C64]-D1-000	01-C011-SS-[R34C57]-D1-000	01-C011-SS-[R34C58]-D1-000	01-C011-SS-[R34C59]-D1-000
Date Sampled	2/22/01	2/20/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	39	27	36	6.4
Lead	65	47	54 J	14 J

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R34C60]-D1-000	01-C011-SS-[R34C61]-D1-000	01-C011-SS-[R34C62]-D1-000	01-C011-SS-[R34C63]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	15	18	28	37
Lead	38	33	32	49

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R34C64]-D1-000	01-C011-SS-[R35C58]-D1-000	01-C011-SS-[R35C59]-D1-000	01-C011-SS-[R35C60]-D1-000
Date Sampled	2/22/01	2/20/01	2/20/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	8.6	8.2	15	65
Lead	4.4	11 J	44 J	92

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R35C61]-D1-000	01-C011-SS-[R35C62]-D1-000	01-C011-SS-[R35C63]-D1-000	01-C011-SS-[R35C64]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	19	35	110	18
Lead	13	56	120	7.7

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R35C65]-D1-000	01-C011-SS-[R36C59]-D1-000	01-C011-SS-[R36C60]-D1-000	01-C011-SS-[R36C61]-D1-000
Date Sampled	2/22/01	2/20/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	62	4.7	8.6	83
Lead	100	9.4 J	12	210

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R36C62]-D1-000	01-C011-SS-[R36C63]-D1-000	01-C011-SS-[R36C64]-D1-000	01-C011-SS-[R36C65]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	16	16	42	92
Lead	15	21	59	120

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R37C60]-D1-000	01-C011-SS-[R37C61]-D1-000	01-C011-SS-[R37C62]-D1-000-DAVG	01-C011-SS-[R37C63]-D1-000-DAVG
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	26	48	39.5	38.5
Lead	97	67	29.5	21

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R37C64]-D1-000	01-C011-SS-[R37C65]-D1-000	01-C011-SS-[R38C62]-D1-000	01-C011-SS-[R38C63]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	21	52	28	31
Lead	28	21	18	29

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R38C64]-D1-000	01-C011-SS-[R38C65]-D1-000	01-C011-SS-[R39C62]-D1-000	01-C011-SS-[R39C63]-D1-000
Date Sampled	2/22/01	2/22/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	32	49	120	43
Lead	37	63	130	29

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R39C64]-D1-000	01-C011-SS-[R39C65]-D1-000	01-C011-SS-[R40C63]-D1-000	01-C011-SS-[R40C64]-D1-000
Date Sampled	2/22/01	2/20/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	35	2 U	39	35
Lead	16	5.1	33	36

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R40C65]-D1-000	01-C011-SS-[R40C66]-D1-000	01-C011-SS-[R41C63]-D1-000	01-C011-SS-[R41C64]-D1-000
Date Sampled	2/20/01	2/20/01	2/22/01	2/22/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	17	18	23	33
Lead	52	44	35	9.9

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R41C65]-D1-000	01-C011-SS-[R41C66]-D1-000	01-C011-SS-[R42C64]-D1-000-DAVG	01-C011-SS-[R42C65]-D1-000
Date Sampled	2/20/01	2/20/01	2/22/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	18	13	8.85	25
Lead	33	22	10.95	110

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R42C66]-D1-000	01-C011-SS-[R43C64]-D1-000	01-C011-SS-[R43C65]-D1-000	01-C011-SS-[R43C66]-D1-000
Date Sampled	2/20/01	2/22/01	2/20/01	2/20/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	19	15	47	15
Lead	51	27	160	27

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R43C67]-D1-000	01-C011-SS-[R44C65]-D1-000	01-C011-SS-[R44C66]-D1-000	01-C011-SS-[R44C67]-D1-000
Date Sampled	2/15/01	2/20/01	2/20/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	18	26	33	30
Lead	59	54	65	60

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R44C68]-D1-000	01-C011-SS-[R45C65]-D1-000	01-C011-SS-[R45C66]-D1-000	01-C011-SS-[R45C67]-D1-000
Date Sampled	2/15/01	2/20/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	12	60	48	30
Lead	35	22	140	26

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R45C68]-D1-000	01-C011-SS-[R45C69]-D1-000	01-C011-SS-[R45C70]-D1-000	01-C011-SS-[R46C66]-D1-000
Date Sampled	2/15/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	68	54	18	110
Lead	270	120	20	83

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R46C67]-D1-000	01-C011-SS-[R46C68]-D1-000	01-C011-SS-[R46C69]-D1-000	01-C011-SS-[R46C70]-D1-000
Date Sampled	2/15/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	49	50	67	16
Lead	97	89	450	15

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R46C71]-D1-000	01-C011-SS-[R47C66]-D1-000-DAVG	01-C011-SS-[R47C67]-D1-000	01-C011-SS-[R47C68]-D1-000
Date Sampled	2/15/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	18	63.5	83	56
Lead	26	88.5	69	320

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R47C69]-D1-000	01-C011-SS-[R47C70]-D1-000	01-C011-SS-[R47C71]-D1-000	01-C011-SS-[R48C66]-D1-000
Date Sampled	2/15/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	62	4.5	89	46
Lead	86	14	24	35

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C011-SS-[R48C69]-D1-000	01-C011-SS-[R48C70]-D1-000	01-C012-SS-[R61C68]-D1-000-DAVG	01-C012-SS-[R61C69]-D1-000
Date Sampled	2/15/01	2/15/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	3.3	39	45	49
Lead	4.7	68	115	81

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R61C70]-D1-000	01-C012-SS-[R61C71]-D1-000	01-C012-SS-[R61C72]-D1-000	01-C012-SS-[R61C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	79	31	80	60
Lead	110	32	190	130

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R61C67]-D1-000	01-C012-SS-[R62C67]-D1-000	01-C012-SS-[R62C68]-D1-000	01-C012-SS-[R62C69]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	33	110	39	20
Lead	37	130	200	22

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R62C70]-D1-000	01-C012-SS-[R62C71]-D1-000	01-C012-SS-[R62C72]-D1-000	01-C012-SS-[R62C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	38	38	65	32
Lead	110	53	86	32

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R62C74]-D1-000	01-C012-SS-[R63C67]-D1-000	01-C012-SS-[R63C68]-D1-000	01-C012-SS-[R63C69]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	110	54	76	47
Lead	98	39	140	88

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R63C70]-D1-000	01-C012-SS-[R63C71]-D1-000	01-C012-SS-[R63C72]-D1-000	01-C012-SS-[R63C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/6/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	91	20	25	76
Lead	170	17	22	46

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R63C74]-D1-000-DAVG	01-C012-SS-[R64C67]-D1-000	01-C012-SS-[R64C68]-D1-000	01-C012-SS-[R64C69]-D1-000
Date Sampled	2/2/01	2/5/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	60	19	13	16
Lead	70.5	31	22	28

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R64C70]-D1-000	01-C012-SS-[R64C71]-D1-000	01-C012-SS-[R64C72]-D1-000	01-C012-SS-[R64C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	18	54	16	48
Lead	21	110	13	57

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R64C74]-D1-000	01-C012-SS-[R65C67]-D1-000	01-C012-SS-[R65C68]-D1-000	01-C012-SS-[R65C69]-D1-000
Date Sampled	2/2/01	2/5/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	28	17	51	87
Lead	28	29	39	110

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R65C70]-D1-000	01-C012-SS-[R65C71]-D1-000	01-C012-SS-[R65C72]-D1-000	01-C012-SS-[R65C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	49	36	34	46
Lead	57	42	52	65

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R65C74]-D1-000	01-C012-SS-[R66C67]-D1-000	01-C012-SS-[R66C68]-D1-000	01-C012-SS-[R66C69]-D1-000
Date Sampled	2/2/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	17	30 J	44 J	60 J
Lead	25	38 J	63 J	110 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R66C70]-D1-000	01-C012-SS-[R66C71]-D1-000	01-C012-SS-[R66C72]-D1-000	01-C012-SS-[R66C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	26	39	45	69
Lead	35	70	140	80

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R66C74]-D1-000	01-C012-SS-[R67C67]-D1-000	01-C012-SS-[R67C68]-D1-000	01-C012-SS-[R67C69]-D1-000
Date Sampled	2/2/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	24	61 J	130 J	23 J
Lead	41	93 J	70 J	46 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R67C70]-D1-000	01-C012-SS-[R67C71]-D1-000	01-C012-SS-[R67C72]-D1-000	01-C012-SS-[R67C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/5/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	27	34	7.6	47
Lead	28	58	10	29

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R67C74]-D1-000	01-C012-SS-[R68C67]-D1-000	01-C012-SS-[R68C68]-D1-000	01-C012-SS-[R68C69]-D1-000
Date Sampled	2/2/01	1/30/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	15	28 J	46	50
Lead	20	62 J	57	75

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R68C70]-D1-000	01-C012-SS-[R68C71]-D1-000	01-C012-SS-[R68C72]-D1-000	01-C012-SS-[R68C73]-D1-000
Date Sampled	1/30/01	2/5/01	2/5/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	28 J	50	25	69
Lead	61 J	180	51	120

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R68C74]-D1-000	01-C012-SS-[R69C67]-D1-000	01-C012-SS-[R69C68]-D1-000	01-C012-SS-[R69C69]-D1-000
Date Sampled	2/2/01	1/30/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	47	35 J	23	53
Lead	110	52 J	39	120

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R69C70]-D1-000	01-C012-SS-[R69C71]-D1-000	01-C012-SS-[R69C72]-D1-000-DAVG	01-C012-SS-[R69C73]-D1-000
Date Sampled	1/30/01	2/5/01	2/5/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	15 J	8.8	59	20
Lead	20 J	9.2	67	20

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R69C74]-D1-000	01-C012-SS-[R70C67]-D1-000	01-C012-SS-[R70C68]-D1-000	01-C012-SS-[R70C69]-D1-000
Date Sampled	2/2/01	1/30/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	27	66 J	58	74
Lead	23	120 J	51	150

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R70C70]-D1-000	01-C012-SS-[R70C71]-D1-000	01-C012-SS-[R70C72]-D1-000	01-C012-SS-[R70C73]-D1-000
Date Sampled	2/5/01	1/30/01	2/2/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	13	50 J	24	68
Lead	15	77 J	55	54

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R70C74]-D1-000	01-C012-SS-[R71C67]-D1-000	01-C012-SS-[R71C68]-D1-000	01-C012-SS-[R71C69]-D1-000
Date Sampled	2/2/01	1/30/01	2/5/01	2/5/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	44	20 J	74	14
Lead	42	39 J	77	20

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R71C70]-D1-000	01-C012-SS-[R71C71]-D1-000	01-C012-SS-[R71C72]-D1-000	01-C012-SS-[R71C73]-D1-000
Date Sampled	2/5/01	2/5/01	2/2/01	2/2/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	23	57	41	44
Lead	26	82	66	81

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R71C74]-D1-000	01-C012-SS-[R72C67]-D1-000	01-C012-SS-[R72C68]-D1-000	01-C012-SS-[R72C69]-D1-000
Date Sampled	2/2/01	1/30/01	2/5/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	43	17 J	22	35
Lead	90	19 J	28	40

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R72C70]-D1-000	01-C012-SS-[R72C71]-D1-000-DAVG	01-C012-SS-[R72C72]-D1-000	01-C012-SS-[R72C73]-D1-000
Date Sampled	2/5/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	54	56.5	120	40
Lead	83	130	170	45

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R72C74]-D1-000-DAVG	01-C012-SS-[R73C67]-D1-000	01-C012-SS-[R73C68]-D1-000	01-C012-SS-[R73C69]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	45	31	55	69
Lead	62.5	80	39	120

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R73C70]-D1-000	01-C012-SS-[R73C71]-D1-000	01-C012-SS-[R73C72]-D1-000	01-C012-SS-[R73C73]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	71	130	33	8.1
Lead	66	83	50	11

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R73C74]-D1-000	01-C012-SS-[R74C67]-D1-000-DAVG	01-C012-SS-[R74C68]-D1-000	01-C012-SS-[R74C69]-D1-000-DAVG
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	30	33.5	15	54.5
Lead	53	88	28 J	125

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R74C70]-D1-000	01-C012-SS-[R74C71]-D1-000	01-C012-SS-[R74C72]-D1-000	01-C012-SS-[R74C73]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	35	26	69	59
Lead	59	33	220	84

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R74C74]-D1-000	01-C012-SS-[R75C67]-D1-000	01-C012-SS-[R75C68]-D1-000	01-C012-SS-[R75C69]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	35	41	23	57
Lead	55	46 J	46 J	110 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R75C70]-D1-000	01-C012-SS-[R75C71]-D1-000	01-C012-SS-[R75C72]-D1-000	01-C012-SS-[R75C73]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	32	45	16	20
Lead	43 J	91	28	27

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R75C74]-D1-000	01-C012-SS-[R76C67]-D1-000	01-C012-SS-[R76C68]-D1-000	01-C012-SS-[R76C69]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	31	38	48	43
Lead	46	53 J	51	57 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R76C70]-D1-000	01-C012-SS-[R76C71]-D1-000	01-C012-SS-[R76C72]-D1-000	01-C012-SS-[R76C73]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	43	38	30	87
Lead	84	55	82	91

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R76C74]-D1-000	01-C012-SS-[R77C67]-D1-000	01-C012-SS-[R77C68]-D1-000	01-C012-SS-[R77C69]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	29	37	39	77
Lead	56	40 J	77 J	69 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R77C70]-D1-000	01-C012-SS-[R77C71]-D1-000	01-C012-SS-[R77C72]-D1-000	01-C012-SS-[R77C73]-D1-000-DAVG
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	50	45	30	28
Lead	48 J	41	55	30

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R77C74]-D1-000	01-C012-SS-[R78C67]-D1-000	01-C012-SS-[R78C68]-D1-000	01-C012-SS-[R78C69]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	37	84	30	21
Lead	67	110 J	24 J	24 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R78C70]-D1-000	01-C012-SS-[R78C71]-D1-000	01-C012-SS-[R78C72]-D1-000	01-C012-SS-[R78C73]-D1-000
Date Sampled	1/30/01	1/30/01	1/30/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	42	12	110	33 J
Lead	51 J	16	150	31 J

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R78C74]-D1-000	01-C012-SS-[R79C67]-D1-000	01-C012-SS-[R79C68]-D1-000	01-C012-SS-[R79C69]-D1-000
Date Sampled	1/30/01	1/30/01	1/29/01	1/29/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	250	42	44	79
Lead	46	50 J	410	71

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R79C70]-D1-000	01-C012-SS-[R79C71]-D1-000	01-C012-SS-[R79C72]-D1-000	01-C012-SS-[R79C73]-D1-000
Date Sampled	1/29/01	1/29/01	1/29/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	36	33	41	370
Lead	67	65	55	59

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R79C74]-D1-000-DAVG	01-C012-SS-[R80C67]-D1-000	01-C012-SS-[R80C68]-D1-000	01-C012-SS-[R80C69]-D1-000
Date Sampled	1/30/01	1/29/01	1/29/01	1/29/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	255	30	15	97
Lead	46.5	30	29	210

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R80C70]-D1-000	01-C012-SS-[R80C71]-D1-000	01-C012-SS-[R80C72]-D1-000	01-C012-SS-[R80C73]-D1-000
Date Sampled	1/29/01	1/29/01	1/29/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	87	58	80	180
Lead	180	110	120	42

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R81C67]-D1-000	01-C012-SS-[R81C68]-D1-000	01-C012-SS-[R81C69]-D1-000	01-C012-SS-[R81C70]-D1-000
Date Sampled	1/29/01	1/29/01	1/29/01	1/29/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	19	63	97	34
Lead	88	48	100	42

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R81C71]-D1-000	01-C012-SS-[R81C72]-D1-000	01-C012-SS-[R82C67]-D1-000	01-C012-SS-[R82C68]-D1-000
Date Sampled	1/29/01	1/29/01	1/29/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	48	120	57	37
Lead	27	230	72	58

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R82C69]-D1-000	01-C012-SS-[R82C70]-D1-000	01-C012-SS-[R83C67]-D1-000	01-C012-SS-[R83C68]-D1-000
Date Sampled	1/29/01	1/29/01	1/29/01	1/30/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	55	48	6.5	48
Lead	270	88	13	52

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C012-SS-[R83C69]-D1-000	01-C012-SS-[R84C67]-D1-000	01-C013-SS-[R61C75]-D1-000	01-C013-SS-[R61C76]-D1-000
Date Sampled	1/29/01	1/29/01	2/7/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	31	75	11	19
Lead	26	130	20	24

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R61C77]-D1-000	01-C013-SS-[R61C79]-D1-000	01-C013-SS-[R61C80]-D1-000	01-C013-SS-[R61C81]-D1-000
Date Sampled	2/8/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	28	10	23
Lead	28	34	17	38

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R61C82]-D1-000	01-C013-SS-[R62C75]-D1-000	01-C013-SS-[R62C76]-D1-000-DAVG	01-C013-SS-[R62C77]-D1-000
Date Sampled	2/12/01	2/7/01	2/7/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	74	24.5	32
Lead	30	150	76	21

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R62C78]-D1-000	01-C013-SS-[R62C79]-D1-000	01-C013-SS-[R62C81]-D1-000	01-C013-SS-[R62C82]-D1-000
Date Sampled	2/8/01	2/8/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	64	26	47	4.9
Lead	98	36	53	12

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R62C83]-D1-000	01-C013-SS-[R62C84]-D1-000	01-C013-SS-[R63C75]-D1-000	01-C013-SS-[R63C76]-D1-000
Date Sampled	2/12/01	2/15/01	2/7/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	43	20	33	63
Lead	52	16	46	120

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R63C77]-D1-000	01-C013-SS-[R63C78]-D1-000	01-C013-SS-[R63C79]-D1-000	01-C013-SS-[R63C80]-D1-000
Date Sampled	2/8/01	2/8/01	2/8/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	46	18	28	21
Lead	80	18	28	20

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R63C81]-D1-000	01-C013-SS-[R63C83]-D1-000	01-C013-SS-[R63C84]-D1-000	01-C013-SS-[R63C85]-D1-000
Date Sampled	2/12/01	2/12/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	66	57	29	44
Lead	86	100	53	62

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R63C86]-D1-000-DAVG	01-C013-SS-[R64C75]-D1-000	01-C013-SS-[R64C76]-D1-000	01-C013-SS-[R64C77]-D1-000
Date Sampled	2/15/01	2/7/01	2/7/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	24	19	16	35
Lead	48	22	31	81

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R64C78]-D1-000	01-C013-SS-[R64C79]-D1-000	01-C013-SS-[R64C80]-D1-000	01-C013-SS-[R64C81]-D1-000
Date Sampled	2/8/01	2/8/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	44	33	9.9
Lead	40	59	42	24

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R64C82]-D1-000	01-C013-SS-[R64C83]-D1-000	01-C013-SS-[R64C84]-D1-000	01-C013-SS-[R64C86]-D1-000
Date Sampled	2/12/01	2/12/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	35	5.7	15	15
Lead	62	11	43	33

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R64C87]-D1-000-DAVG	01-C013-SS-[R64C88]-D1-000	01-C013-SS-[R65C75]-D1-000	01-C013-SS-[R65C76]-D1-000
Date Sampled	2/15/01	2/15/01	2/7/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	11.45	33	62	30
Lead	19.5	59	110	67

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R65C77]-D1-000	01-C013-SS-[R65C78]-D1-000	01-C013-SS-[R65C79]-D1-000	01-C013-SS-[R65C80]-D1-000
Date Sampled	2/8/01	2/8/01	2/8/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	6.5	5.1	24	12
Lead	7.6	9.8	26	14

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R65C81]-D1-000-DAVG	01-C013-SS-[R65C82]-D1-000	01-C013-SS-[R65C83]-D1-000	01-C013-SS-[R65C84]-D1-000
Date Sampled	2/12/01	2/12/01	2/12/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	7	30	15	22
Lead	14.5	53	29	38

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R65C85]-D1-000	01-C013-SS-[R65C86]-D1-000	01-C013-SS-[R65C88]-D1-000	01-C013-SS-[R65C89]-D1-000-DAVG
Date Sampled	2/15/01	2/15/01	2/15/01	4/3/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	7.7	25	24	21
Lead	15	55	55	38.5

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R66C75]-D1-000	01-C013-SS-[R66C76]-D1-000	01-C013-SS-[R66C77]-D1-000	01-C013-SS-[R66C78]-D1-000
Date Sampled	2/7/01	2/7/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	9.1	28	42	14
Lead	14	43	59	29

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R66C79]-D1-000	01-C013-SS-[R66C80]-D1-000	01-C013-SS-[R66C81]-D1-000	01-C013-SS-[R66C82]-D1-000
Date Sampled	2/8/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	12	8.8	12	18
Lead	23	9.8	14	40

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R66C83]-D1-000	01-C013-SS-[R66C84]-D1-000	01-C013-SS-[R66C85]-D1-000	01-C013-SS-[R66C86]-D1-000
Date Sampled	2/12/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	26	20	18	46
Lead	17	43	38	84

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R66C87]-D1-000	01-C013-SS-[R66C88]-D1-000	01-C013-SS-[R66C89]-D1-000-DAVG	01-C013-SS-[R67C75]-D1-000
Date Sampled	2/15/01	2/15/01	4/3/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	15	160	12	55
Lead	38	13	27	84

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R67C76]-D1-000	01-C013-SS-[R67C77]-D1-000	01-C013-SS-[R67C78]-D1-000	01-C013-SS-[R67C79]-D1-000
Date Sampled	2/8/01	2/8/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	35	61	17	17
Lead	59	190	36	29

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R67C80]-D1-000	01-C013-SS-[R67C81]-D1-000	01-C013-SS-[R67C82]-D1-000	01-C013-SS-[R67C83]-D1-000
Date Sampled	2/12/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	6.9	18	18	9.1
Lead	14	39	30	25

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R67C84]-D1-000	01-C013-SS-[R67C85]-D1-000	01-C013-SS-[R67C86]-D1-000	01-C013-SS-[R67C87]-D1-000
Date Sampled	2/15/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	11	15	20	53
Lead	28	31	15	71

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R67C88]-D1-000	01-C013-SS-[R68C75]-D1-000	01-C013-SS-[R68C76]-D1-000	01-C013-SS-[R68C77]-D1-000
Date Sampled	2/15/01	2/7/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	2.4 U	54	35	77
Lead	7.8	80	28	97

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R68C78]-D1-000	01-C013-SS-[R68C79]-D1-000	01-C013-SS-[R68C80]-D1-000	01-C013-SS-[R68C81]-D1-000
Date Sampled	2/8/01	2/8/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	49	11	7.4
Lead	42	88	28	21

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R68C82]-D1-000	01-C013-SS-[R68C83]-D1-000	01-C013-SS-[R68C84]-D1-000	01-C013-SS-[R68C85]-D1-000
Date Sampled	2/12/01	2/12/01	2/12/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	53	37	11	28
Lead	120	80	25	37

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R68C86]-D1-000	01-C013-SS-[R68C87]-D1-000	01-C013-SS-[R68C88]-D1-000-DAVG	01-C013-SS-[R69C75]-D1-000
Date Sampled	2/15/01	2/15/01	2/15/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	35	110	29	14
Lead	66	40	38	21

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R69C76]-D1-000	01-C013-SS-[R69C77]-D1-000	01-C013-SS-[R69C78]-D1-000	01-C013-SS-[R69C79]-D1-000
Date Sampled	2/8/01	2/8/01	2/8/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	61	42	13	13
Lead	110	56	17	29

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R69C80]-D1-000	01-C013-SS-[R69C81]-D1-000	01-C013-SS-[R69C82]-D1-000	01-C013-SS-[R69C83]-D1-000
Date Sampled	2/12/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	19	28	39	17
Lead	39	37	39	31

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R69C84]-D1-000	01-C013-SS-[R69C85]-D1-000	01-C013-SS-[R69C86]-D1-000	01-C013-SS-[R69C87]-D1-000
Date Sampled	2/12/01	2/15/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	26	72	15	29
Lead	42	95	27	53

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R70C75]-D1-000	01-C013-SS-[R70C76]-D1-000	01-C013-SS-[R70C77]-D1-000	01-C013-SS-[R70C78]-D1-000
Date Sampled	2/7/01	2/8/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	30	38	25	11
Lead	75	66	41	15

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R70C79]-D1-000	01-C013-SS-[R70C80]-D1-000	01-C013-SS-[R70C81]-D1-000	01-C013-SS-[R70C82]-D1-000
Date Sampled	2/8/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	11	8.2	26	20
Lead	20	15	54	41

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R70C83]-D1-000	01-C013-SS-[R70C84]-D1-000	01-C013-SS-[R70C85]-D1-000	01-C013-SS-[R70C86]-D1-000
Date Sampled	2/12/01	2/12/01	2/15/01	2/15/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	45	49	8.1
Lead	34	36	44	17

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R71C75]-D1-000	01-C013-SS-[R71C76]-D1-000	01-C013-SS-[R71C77]-D1-000	01-C013-SS-[R71C78]-D1-000
Date Sampled	2/7/01	2/8/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	26	47	15	8.8
Lead	46	85	21	10

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R71C79]-D1-000	01-C013-SS-[R71C80]-D1-000	01-C013-SS-[R71C81]-D1-000	01-C013-SS-[R71C82]-D1-000
Date Sampled	2/8/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	50	29	7.4	33
Lead	28	40	17	38

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R71C83]-D1-000	01-C013-SS-[R71C84]-D1-000	01-C013-SS-[R72C75]-D1-000	01-C013-SS-[R72C76]-D1-000
Date Sampled	2/12/01	2/12/01	2/7/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	53	17	29	96
Lead	69	31	67	69

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R72C77]-D1-000	01-C013-SS-[R72C78]-D1-000	01-C013-SS-[R72C79]-D1-000	01-C013-SS-[R72C80]-D1-000
Date Sampled	2/8/01	2/8/01	2/8/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	17	9.4	13	17
Lead	32	14	16	37

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R72C81]-D1-000	01-C013-SS-[R72C82]-D1-000	01-C013-SS-[R72C83]-D1-000	01-C013-SS-[R72C84]-D1-000-DAVG
Date Sampled	2/12/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	7.7	12	19	4.3
Lead	16	19	31	9.4

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R73C75]-D1-000	01-C013-SS-[R73C76]-D1-000	01-C013-SS-[R73C77]-D1-000	01-C013-SS-[R73C78]-D1-000
Date Sampled	2/7/01	2/7/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	17	25	29	22
Lead	22	39	51	13

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R73C79]-D1-000	01-C013-SS-[R73C80]-D1-000	01-C013-SS-[R73C81]-D1-000	01-C013-SS-[R73C82]-D1-000
Date Sampled	2/8/01	2/12/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	31	27	56
Lead	33	35	38	39

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R73C83]-D1-000-DAVG	01-C013-SS-[R74C75]-D1-000	01-C013-SS-[R74C76]-D1-000	01-C013-SS-[R74C77]-D1-000
Date Sampled	2/12/01	2/7/01	2/7/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	25	27	25	52
Lead	36.5	37	35	49

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R74C78]-D1-000	01-C013-SS-[R74C79]-D1-000	01-C013-SS-[R74C80]-D1-000	01-C013-SS-[R74C81]-D1-000
Date Sampled	2/8/01	2/8/01	2/12/01	2/12/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	31	23	39	23
Lead	24	27	40	41

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R75C75]-D1-000	01-C013-SS-[R75C76]-D1-000	01-C013-SS-[R75C77]-D1-000	01-C013-SS-[R75C78]-D1-000
Date Sampled	2/7/01	2/7/01	2/8/01	2/8/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	20	67	33	21
Lead	38	100	52	29

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R75C79]-D1-000	01-C013-SS-[R75C80]-D1-000	01-C013-SS-[R76C75]-D1-000	01-C013-SS-[R76C76]-D1-000
Date Sampled	2/8/01	2/12/01	2/7/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	74	51	360	52
Lead	140	69	78	75

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R76C77]-D1-000	01-C013-SS-[R76C78]-D1-000	01-C013-SS-[R77C75]-D1-000	01-C013-SS-[R77C76]-D1-000
Date Sampled	2/8/01	2/8/01	2/7/01	2/7/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	8.8	180	21	41
Lead	11	33	30	76

Table B.17-1
Candidate Area Characterization Sample Soil Metals Results

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	01-C013-SS-[R77C77]-D1-000	01-C013-SS-[R78C75]-D1-000	01-C013-SS-[R78C76]-D1-000	02-C013-SS[R71C85-02]C2-1.0
Date Sampled	2/8/01	2/7/01	2/7/01	7/31/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5 to
Total Metals (mg/kg dry)				
Arsenic	24	56	110	19
Lead	49	61	55	4

Area	AFAS	AFAS	AFAS	AFAS
Sample ID	02-C013-SS[R71C85-03]D1-000	02-C013-SS[R71C85-04]D1-000	02-C013-SS[R71C85-05]D1-000	02-C013-SS[R71C85-06]D1-000
Date Sampled	7/31/01	7/31/01	7/31/01	7/31/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)				
Arsenic	46	38	49	55
Lead	90	70	80	99

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-100	31-VS-101	31-VS-102	31-VS-103	31-VS-104	31-VS-107
Date Sampled	9/14/99	9/14/99	9/14/99	9/14/99	9/14/99	9/14/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	20	54	6.9	6.8	27	65
Lead	7.8	35	8.8	7.5	7.4	140

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-110	31-VS-111	31-VS-217	31-VS-423	31-VS-425	31-VS-427
Date Sampled	9/14/99	9/14/99	10/19/99	1/25/00	1/25/00	1/25/00
Depth	1 to 2.5	1 to 2.5	1 to 2.5	2 to 4.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	8.6	16	3.7	8.2	9.6	9.5
Lead	22 J	39 J	6.2 U	5.1	28	6.3

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-428	31-VS-429	31-VS-430	31-VS-431	31-VS-508	31-VS-525
Date Sampled	1/25/00	1/25/00	1/25/00	1/25/00	4/18/00	4/18/00
Depth	0 to 0.5	2 to 4.5	0 to 0.5	0 to 0.5	0 to 0.5	3 to 4.5
Total Metals (mg/kg dry)						
Arsenic	36	44	81	8	15	9
Lead	46	11	27	26	15	7.1

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-526-DAVG	31-VS-529	31-VS-532	31-VS-533	31-VS-534	31-VS-535
Date Sampled	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00	4/18/00
Depth	3 to 4.5	0 to 0.5	1 to 2.5	0 to 0.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)						
Arsenic	15	18	96	38	3.6	5.2
Lead	7.35	320	71	53	3.6	2.9

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-536	31-VS-539	31-VS-540-DAVG	31-VS-542	31-VS-543	31-VS-544
Date Sampled	4/18/00	4/18/00	4/18/00	4/19/00	4/19/00	4/19/00
Depth	0 to 0.5	2 to 4.5	3 to 4.5	3 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)						
Arsenic	19	6.5	3.1	4.4	8.3	49
Lead	140	2.7	2.15 U	6.3	6.7	41

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-545	31-VS-546	31-VS-547	31-VS-548	31-VS-551	31-VS-552
Date Sampled	4/19/00	4/19/00	4/19/00	4/19/00	4/19/00	4/19/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)						
Arsenic	39	100	16	47	6.1	5.2
Lead	45	150	23	110	4.9	4.6

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-553	31-VS-554	31-VS-555	31-VS-557-DAVG	31-VS-566	31-VS-567
Date Sampled	4/19/00	4/19/00	4/19/00	4/19/00	4/19/00	4/19/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	5.7	11	5.9	10.95	37	9.4
Lead	4.1	20	4.3	21.65	49	16

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-573	31-VS-574	31-VS-575	31-VS-576	31-VS-577-DAVG	31-VS-579
Date Sampled	4/19/00	4/19/00	4/19/00	4/19/00	4/19/00	4/19/00
Depth	3 to 4.5	3 to 4.5	3 to 4.5	3 to 4.5	0 to 0.5	3 to 4.5
Total Metals (mg/kg dry)						
Arsenic	8.2	9.3	7.5	4.6	10.6	17
Lead	5.3	9	4.6	4.5	25.5	4.6

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-580	31-VS-581	31-VS-582	31-VS-583	31-VS-591	31-VS-592
Date Sampled	4/19/00	4/19/00	4/19/00	4/19/00	5/9/00	5/9/00
Depth	0 to 0.5	0 to 0.5	0 to 0.5	2 to 4.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	68	62	59	9.8	75	19
Lead	70	42	46	3.6	570	97

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-595	31-VS-596	31-VS-597-DAVG	31-VS-600	31-VS-601	31-VS-607
Date Sampled	5/9/00	5/9/00	5/9/00	5/9/00	5/9/00	5/24/00
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	22	18	14	20	27	110
Lead	43	25	50.5	53	59	46

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-611	31-VS-612	31-VS-613	31-VS-614	31-VS-615-DAVG	31-VS-616
Date Sampled	5/24/00	5/24/00	5/24/00	5/24/00	5/24/00	5/24/00
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	33	9.9	26	17	10.5	11
Lead	11	23	13	7.8	13	20

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-617	31-VS-618	31-VS-619-DAVG	31-VS-621	31-VS-622	31-VS-623
Date Sampled	5/24/00	5/24/00	5/24/00	5/24/00	5/24/00	5/24/00
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	7.9	13	11	19	6.2	7.1
Lead	51	9.4	12	49	4.6	3.7

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-624-DAVG	31-VS-625	31-VS-630	31-VS-631	31-VS-634	31-VS-635
Date Sampled	5/24/00	5/24/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	7	7.1	7.1	11	110	6.8
Lead	5.65	8.3	6	12	16	7.1

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-636	31-VS-637	31-VS-638	31-VS-639-DAVG	31-VS-640	31-VS-641
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	72	18	8.3	31 J	7.8	23
Lead	390	40	7.9	85.5 J	6.2	72

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-642	31-VS-643	31-VS-644	31-VS-650	31-VS-651	31-VS-653
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	58	98	37	63	75	20
Lead	380	160	95	47	27	23

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-654	31-VS-655	31-VS-656	31-VS-657	31-VS-658	31-VS-659-DAVG
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	1.5 to 3.5	1.5 to 3.5	0 to 0.5	1.5 to 3.5	0 to 0.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	8.2	9.8	52	4.8	32	4.4
Lead	5.4	7.6	27	7.6	490	9.3

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-660	31-VS-661	31-VS-662	31-VS-663	31-VS-665	31-VS-666
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	1.5 to 3.5	1.5 to 3.5	0 to 0.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	4	4.1	18	16	14	41
Lead	4.9	4.4	13	23	13	15

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-668	31-VS-669-DAVG	31-VS-670	31-VS-671	31-VS-672	31-VS-674
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	1.5 to 3.5	1.5 to 3.5	0 to 0.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	44	8.45	16	6.8	3.8	37
Lead	22	5.5	7.1	4	4	5.2

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-675	31-VS-677	31-VS-678	31-VS-679-DAVG	31-VS-680	31-VS-681
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00	6/29/00
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	0 to 0.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	8.2	20	6.1	8	26	7
Lead	11	80	19	8.25	47	5.2

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-682	31-VS-683	31-VS-684	31-VS-685	31-VS-700	31-VS-701
Date Sampled	6/29/00	6/29/00	6/29/00	6/29/00	7/19/00	7/19/00
Depth	0 to 0.5	1.5 to 3.5	0 to 0.5	1.5 to 3.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	71	11	49	49	14	46
Lead	23	11	38	26	15	52

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-702	31-VS-703	31-VS-704	31-VS-705	31-VS-706	31-VS-707
Date Sampled	7/19/00	7/19/00	7/19/00	7/19/00	7/19/00	7/19/00
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	34	11	8.8	9.3	5.9	22
Lead	27	14	4.6	160	31	95

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-708	31-VS-709	31-VS-710	31-VS-711	31-VS-712	31-VS-714
Date Sampled	7/19/00	7/19/00	7/19/00	7/19/00	7/19/00	7/24/00
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	26	6.1	15	2 U	3.4	3.1
Lead	830	180	36	7.2	6.7	3.5

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-715	31-VS-716	31-VS-717	31-VS-718	31-VS-719	31-VS-720
Date Sampled	7/24/00	7/24/00	7/24/00	7/24/00	7/24/00	7/24/00
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)						
Arsenic	14	4.1	5.5	2.9	5.7	8
Lead	10	3.5	4.7	2.9	7.6	6.4

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-721	31-VS-722	31-VS-723	31-VS-725-DAVG	31-VS-726-DAVG	31-VS-88
Date Sampled	7/24/00	7/24/00	7/24/00	7/24/00	7/24/00	9/14/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	0 to 0.5
Total Metals (mg/kg dry)						
Arsenic	17	8.5	15	4	13	81
Lead	93	9.2	90	2.45	23	98

Table B.18-1
Parcel 1 North of Creek Soil Metals Results

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-90	31-VS-91	31-VS-92	31-VS-93	31-VS-94	31-VS-94A
Date Sampled	9/14/99	9/14/99	9/14/99	9/14/99	9/14/99	9/30/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)						
Arsenic	5.5	7.6	47	21	59	8.4
Lead	3.5	5.1	13	9.3	56	13

Area	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC	PARC_1_NOC
Sample ID	31-VS-95	31-VS-96	31-VS-96A	31-VS-98	31-VS-99	31-VS-99A
Date Sampled	9/14/99	9/14/99	9/30/99	9/14/99	9/14/99	9/30/99
Depth	0 to 0.5	0 to 0.5	1 to 2.5	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)						
Arsenic	30	89	39	51	47	25
Lead	66	150	12	10	50	12

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-C004-SS[38-VS-150]C2-2.00	01-C004-SS[38-VS-151]C2-2.00	01-C004-SS[38-VS-153]C2-2.00	01-F01-SS[F-50]C2-005	01-F01-SS[F-51]C2-005
Date Sampled	8/1/01	8/1/01	8/1/01	6/14/01	6/14/01
Depth	2 to 2.5	0 to 0.5	0 to 0.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	11	23	8.1	3	6.3
Lead	26	31	13	2.4	9.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F01-SS[F-52]C2-005	01-F01-SS[F-53]C2-005	01-F01-SS[F-54]C2-005	01-F01-SS[F-55]C2-005	01-F01-SS[F-56]C2-005
Date Sampled	6/14/01	6/14/01	6/14/01	6/14/01	6/14/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	9.8	7.4	3.6	4.2	6.5
Lead	23	26	4.9	4.7	29

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F01-SS[F-57]C2-005	01-F01-SS[F-58]C2-005	01-F01-SS[F-59]C2-005	01-F01-SS[F-60]C2-005	01-F01-SS[F-61]C2-005
Date Sampled	6/14/01	6/14/01	6/14/01	6/14/01	6/14/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	6.8	2.6	5.3	4.4	3.9
Lead	6.2	2.7	2.4 U	2.2 U	2.3 U

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F01-SS[F-62]C2-005	01-F06-SS[F-25]C2-005	01-F06-SS[F-26]C2-005	01-F06-SS[F-27]C2-005	01-F06-SS[F-28]C2-005
Date Sampled	6/14/01	6/7/01	6/7/01	6/7/01	6/7/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	3.8	2.5	3.8	4.1	2.4
Lead	2.4	2.3	8.2	3	24

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F07-SS[F-20]C2-005	01-F07-SS[F-21]C2-005	01-F07-SS[F-22]C2-005	01-F07-SS[F-23]C2-005	01-F07-SS[F-24]C2-005
Date Sampled	6/7/01	6/7/01	6/7/01	6/7/01	6/7/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	2.8	2.7	2.5	2 U	3.4
Lead	2.3	2.5	2.3	2.1	2.3

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F08-SS[F-06] C2-005	01-F08-SS[F-11] C2-005	01-F08-SS[F-12] C2-005	01-F08-SS[F-13] C2-005	01-F08-SS[F-17] C2-005-DAVG
Date Sampled	6/6/01	6/6/01	6/6/01	6/6/01	6/6/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	2.6	3.8	2.6	4.6	3.1
Lead	3.9	2.4	4.5	14	2.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F09-SS[F-260]C2-005-DAVG	01-F09-SS[F-262]C2-005	01-F09-SS[F-263]C2-005	01-F09-SS[F-264]C2-005	01-F09-SS[F-265]C2-005
Date Sampled	8/22/01	8/22/01	8/22/01	8/22/01	8/22/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4.55	3.7	5.9	4	4
Lead	4.35	4.4	7.7	3.6	17

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F09-SS[F-266]C2-005	01-F12-SS[F-127]C2-005	01-F15-SS[F-134]C2-005	01-F15-SS[F-135]C2-005	01-F18-FD-[F-328]-C2-030-DAVG
Date Sampled	8/22/01	6/21/01	6/26/01	6/26/01	9/19/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	6	4.4	2.5	1.9 U	4
Lead	5.7	3.9	27	4.7	3.25

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F18-SS-[F-308]-C2-020	01-F18-SS-[F-309]-C2-020	01-F18-SS-[F-310]-C2-020	01-F18-SS-[F-311]-C2-020	01-F18-SS-[F-312]-C2-020
Date Sampled	9/12/01	9/12/01	9/12/01	9/12/01	9/12/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4.8	5.3	5.6	4.7	15
Lead	4.6	3.9	4.3	4.9	2

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F18-SS-[F-313]-C2-020	01-F18-SS-[F-314]-C2-020	01-F18-SS-[F-315]-C2-020	01-F18-SS-[F-316]-C2-020	01-F18-SS-[F-317]-C2-020
Date Sampled	9/12/01	9/12/01	9/12/01	9/12/01	9/12/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4	3.5	5.1	7.5	5.7
Lead	3.5	2.7	4.7	31	17

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F18-SS-[F-318]-C2-020	01-F18-SS-[F-320]-C2-020	01-F18-SS-[F-321]-C2-020	01-F18-SS-[F-322]-C2-020	01-F18-SS-[F-323]-C2-020
Date Sampled	9/12/01	9/12/01	9/12/01	9/12/01	9/12/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4.8	4.7	5.4	53	5.1
Lead	13	32	29	7.1	92

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F18-SS-[F-325]C2-015	01-F19-SS[F-136]C2-005	01-F19-SS[F-137]C2-005	01-F20-SS[F-138]C2-005	01-F20-SS[F-139]C2-005
Date Sampled	9/17/01	6/26/01	6/26/01	6/27/01	6/27/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4.8	3.3	2	5.2	3.6
Lead	2.8	6.1	39	9.3	2.2 U

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F20-SS[F-140]C2-005	01-F20-SS[F-141]C2-005	01-F20-SS[F-142]C2-005	01-F20-SS[F-143]C2-005	01-F20-SS[F-283]-C2-005
Date Sampled	6/27/01	6/27/01	6/27/01	6/27/01	9/4/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	3.5	4.7	3.9	6.6	4.1
Lead	3.7	4.9	4.2	10	5.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F20-SS[F-284]-C2-005-DAVG	01-F20-SS[F-286]-C2-005	01-F20-SS[F-287]-C2-005	01-F20-SS[F-290]-C2-005	01-F20-SS[F-291]-C2-005
Date Sampled	9/4/01	9/4/01	9/4/01	9/4/01	9/4/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	5.7	4.1	3.7	9.6	5.9
Lead	5.8	4.3	4.3	14	18

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F20-SS[F-292]-C2-005	01-F20-SS-[F-295]-C3-005-DAVG	01-F20-SS-[F-297]-C2-005	01-F20-SS-[F-298]-C2-005	01-F20-SS-[F-299]-C2-005
Date Sampled	9/4/01	9/5/01	9/5/01	9/5/01	9/5/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	13	7.15	5	6.9	25
Lead	27	28.5	34	21	29

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F20-SS-[F-300]-C2-005	01-F21-SS-[F-304]-C2-005	01-F21-SS-[F-305]-C2-005	01-F22-SS[F-145]C2-005	01-F22-SS[F-146]C2-005
Date Sampled	9/5/01	9/5/01	9/5/01	7/2/01	7/2/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	15	9.1	5.8	4.8	4.5
Lead	11	70	30	2.7	2.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F22-SS[F-147]C2-005	01-F22-SS[F-148]C2-005	01-F22-SS[F-149]C2-005	01-F22-SS[F-150]C2-005	01-F22-SS[F-151]C2-005
Date Sampled	7/2/01	7/2/01	7/2/01	7/2/01	7/2/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	3.7	4.8	3.9	3.7	3.2
Lead	3.2	3.6	6.2	2	1.8 U

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F22-SS[F-152]C2-005	01-F22-SS[F-153]C2-005	01-F22-SS[F-154]C2-005	01-F22-SS[F-155]C2-005	01-F22-SS[F-156]C2-005
Date Sampled	7/2/01	7/2/01	7/2/01	7/2/01	7/2/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	13	3.4	2.7	5.9	3.7
Lead	6.8	3	2.8	5	7.2

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F22-SS[F-157]C2-005	01-F22-SS[F-158]C2-005	01-F22-SS[F-159]C2-005	01-F23-SS[F-163]C2-005	01-F23-SS[F-164]C2-005
Date Sampled	7/2/01	7/2/01	7/2/01	7/8/01	7/8/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	3.6	26	4.9	5.9	8.6
Lead	2.6	35	2.3	9.1	6.9

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F23-SS[F-165]C2-005	01-F23-SS[F-166]C2-005	01-F23-SS[F-167]C2-005	01-F23-SS[F-168]C2-005	01-F23-SS[F-169]C2-005
Date Sampled	7/8/01	7/8/01	7/8/01	7/8/01	7/8/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	6.7	18	60	5.5	14
Lead	5	15	5.6	4.4	6.6

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F24-SS[F-172]C2-005	01-F24-SS[F-173]C2-005	01-F24-SS[F-174]C2-005	01-F24-SS[F-176]C2-005	01-F33-SS[F-273]C2-005-DAVG
Date Sampled	7/18/01	7/18/01	7/18/01	7/18/01	8/28/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	3.6	3.3	4.4	3.7	14.5
Lead	2	2.5	3.6	4	80

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F33-SS[F-275]C2-005	01-F33-SS[F-276]C2-005	01-F33-SS[F-277]C2-005	01-F33-SS[F-278]C2-005	01-F33-SS[F-279]C2-005
Date Sampled	8/28/01	8/28/01	8/28/01	8/28/01	8/28/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	5.8	20	4.7	6.5	8.6
Lead	7.8	45	3	4	12

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F33-SS[F-280]C2-005	01-F34-SS[F-170]C2-005	01-F34-SS[F-171]C2-005	01-F34-SS-[F-301]-C2-005	01-F34-SS-[F-302]-C2-005
Date Sampled	8/28/01	7/17/01	7/17/01	9/5/01	9/5/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4.9	3.1	3	5.8	6.2
Lead	5.1	5.5 J	29 J	5	14

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F34-SS-[F-303]-C2-005	01-F36-SS[F-193]C2-005	01-F36-SS[F-194]C2-005	01-F36-SS[F-195]C2-005	01-F36-SS[F-196]C2-005
Date Sampled	9/5/01	8/1/01	8/1/01	8/1/01	8/1/01
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5
Total Metals (mg/kg dry)					
Arsenic	6.6	25	5	5.1	4
Lead	14	16	8.5	7.3	5.7

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-F36-SS[F-197]C2-005	01-H404-SS[1]D1-005	01-H404-SS[10]D1-005	01-H404-SS[11]D1-005-DAVG	01-H404-SS[2]D1-005
Date Sampled	8/1/01	7/3/01	7/3/01	7/3/01	7/3/01
Depth	2 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	4.8	14	7.5	6.15	24
Lead	6	37	22	31	450

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-H404-SS[3]D1-005	01-H404-SS[4]D1-005	01-H404-SS[5]D1-005	01-H404-SS[6]D1-005	01-H404-SS[7]D1-005
Date Sampled	7/3/01	7/3/01	7/3/01	7/3/01	7/3/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	17	60	13	21	8.1
Lead	88	46	160	790	18

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-H404-SS[8]D1-005	01-H404-SS[9]D1-005	01-N01-SS[NGRR-02]C2-005	01-N01-SS[NGRR-03]C2-005	01-N01-SS[NGRR-04]C2-005
Date Sampled	7/3/01	7/3/01	6/7/01	6/7/01	6/7/01
Depth	0 to 0.5	0 to 0.5	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	13	150	2.4	3.3	5.4
Lead	170	280	3.1	3.1	5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-05]C2-005	01-N01-SS[NGRR-06]C2-005	01-N01-SS[NGRR-09]C2-005	01-N01-SS[NGRR-103]C2-005-DAVG	01-N01-SS[NGRR-105]C2-005
Date Sampled	6/7/01	6/7/01	6/7/01	7/23/01	7/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	6.1	2.9	33	6.4	4.3
Lead	3.2	2.9	11	8.65	4.4

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-106]C2-005	01-N01-SS[NGRR-107]C2-005	01-N01-SS[NGRR-108]C2-005	01-N01-SS[NGRR-109]C2-005	01-N01-SS[NGRR-110]C2-005
Date Sampled	7/23/01	7/23/01	7/23/01	7/23/01	7/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.3	5	5.3	9.3	10
Lead	3.6	14	6.1	18	24

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-111]C2-005	01-N01-SS[NGRR-112]C2-005	01-N01-SS[NGRR-113]C2-005	01-N01-SS[NGRR-114]C2-005	01-N01-SS[NGRR-115]C2-005
Date Sampled	7/23/01	7/23/01	7/23/01	7/23/01	7/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	5.7	6.9	55	13	12
Lead	3.7	5.8	26	29	5.2

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-116]C2-005	01-N01-SS[NGRR-117]C2-005	01-N01-SS[NGRR-118]C2-005	01-N01-SS[NGRR-123]C2-005	01-N01-SS[NGRR-124]C2-005
Date Sampled	7/23/01	7/23/01	7/23/01	7/23/01	7/23/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	19	7.6	6.9	3.8	10
Lead	9	3.7	4.1	3.4	6.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-127]C2-005	01-N01-SS[NGRR-128]C2-005	01-N01-SS[NGRR-129]C2-005	01-N01-SS[NGRR-130]C2-005	01-N01-SS[NGRR-131]C2-005
Date Sampled	7/24/01	7/24/01	7/24/01	7/24/01	7/24/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	10	12	7.7	7	7.3
Lead	8.3	4.8	3.5	4.3	6.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-133]C2-005	01-N01-SS[NGRR-134]C2-005	01-N01-SS[NGRR-135]C2-005	01-N01-SS[NGRR-136]C2-005	01-N01-SS[NGRR-138]C2-005
Date Sampled	7/24/01	7/24/01	7/24/01	7/24/01	7/30/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.4	21	3.9	24	4.8
Lead	10	19	3.3	14	9.4

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-14]C2-005-DAVG	01-N01-SS[NGRR-143]C2-005	01-N01-SS[NGRR-16]C2-005	01-N01-SS[NGRR-17]C2-005	01-N01-SS[NGRR-182]C2-005
Date Sampled	6/26/01	7/30/01	6/26/01	6/26/01	8/6/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.5	16	3.5	2.9	23
Lead	6.95	5.1	4.9	31	11

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-183]C2-005	01-N01-SS[NGRR-184]C2-005	01-N01-SS[NGRR-185]C2-005	01-N01-SS[NGRR-186]C2-005	01-N01-SS[NGRR-187]C2-005-DAVG
Date Sampled	8/6/01	8/6/01	8/6/01	8/6/01	8/6/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	10	5.2	4.7	6.2	37.5
Lead	13	13	5.7	8	11.5

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-189]C2-005	01-N01-SS[NGRR-19]C2-005-DAVG	01-N01-SS[NGRR-190]C2-005	01-N01-SS[NGRR-191]C2-005	01-N01-SS[NGRR-192]C2-005
Date Sampled	8/6/01	7/2/01	8/6/01	8/6/01	8/6/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	26	5.1	13	15	31
Lead	21	3.05	9.2	8.8	17

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-195]C2-005	01-N01-SS[NGRR-21]C2-005	01-N01-SS[NGRR-22]C2-005	01-N01-SS[NGRR-23]C2-005	01-N01-SS[NGRR-24]C2-005
Date Sampled	8/7/01	7/2/01	7/2/01	7/2/01	7/8/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	18	4.2	6.5	4.1	4.9
Lead	53	3.5	4.3	5.1	7.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-25]C2-005	01-N01-SS[NGRR-250]C2-005	01-N01-SS[NGRR-251]C2-005	01-N01-SS[NGRR-252]C2-005	01-N01-SS[NGRR-253]C2-005
Date Sampled	7/8/01	8/13/01	8/13/01	8/13/01	8/13/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	5.8	7.9	6.8	9	7.8
Lead	10	6.6	4.8	6.1	4.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-254]C2-005	01-N01-SS[NGRR-255]C2-005	01-N01-SS[NGRR-256]C2-005	01-N01-SS[NGRR-258]C2-005	01-N01-SS[NGRR-259]C2-005
Date Sampled	8/13/01	8/13/01	8/13/01	8/13/01	8/13/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	6.3	17	9.6	6.8	10
Lead	5	4.8	4.8	5.7	5.2

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-26]C2-005	01-N01-SS[NGRR-260]C2-005	01-N01-SS[NGRR-265]C2-005	01-N01-SS[NGRR-266]C2-005	01-N01-SS[NGRR-267]C2-005
Date Sampled	7/8/01	8/13/01	8/13/01	8/13/01	8/13/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	19	6.8	4	6.7	8.9
Lead	6.4	6.6	4.1	5.8	8

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-268]C2-005	01-N01-SS[NGRR-269]C2-005	01-N01-SS[NGRR-270]C2-005	01-N01-SS[NGRR-271]C2-005	01-N01-SS[NGRR-272]C2-005
Date Sampled	8/13/01	8/13/01	8/13/01	8/13/01	8/13/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	9.5	6.7	8.2	10	11
Lead	6.8	7	9.1	7.8	6.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-273]C2-005	01-N01-SS[NGRR-274]C2-005	01-N01-SS[NGRR-287]C2-005	01-N01-SS[NGRR-288]C2-005	01-N01-SS[NGRR-289]C2-005
Date Sampled	8/13/01	8/13/01	8/15/01	8/15/01	8/15/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	8.9	8.5	6	7.4	6.2
Lead	7.9	7.9	5.1	5.9	4.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-290]C2-005	01-N01-SS[NGRR-291]C2-005	01-N01-SS[NGRR-292]C2-005	01-N01-SS[NGRR-293]C2-005	01-N01-SS[NGRR-294]C2-005
Date Sampled	8/15/01	8/15/01	8/15/01	8/15/01	8/15/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	8.2	8.4	12	6.6	6.8
Lead	5.1	8.2	12	5.5	7.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-295]C2-005	01-N01-SS[NGRR-303]C2-005	01-N01-SS[NGRR-304]C2-005	01-N01-SS[NGRR-305]C2-005	01-N01-SS[NGRR-306]C2-005
Date Sampled	8/15/01	8/16/01	8/16/01	8/16/01	8/16/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	7.1	46	13	13	4.6
Lead	4.9	20	7.2	10	2.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-307]C2-005	01-N01-SS[NGRR-308]C2-005	01-N01-SS[NGRR-309]C2-005	01-N01-SS[NGRR-31]C2-005	01-N01-SS[NGRR-310]C2-005
Date Sampled	8/16/01	8/16/01	8/16/01	7/8/01	8/16/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	17	19	34	24	34
Lead	5.5	7.1	11	6.7	37

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-312]C2-005	01-N01-SS[NGRR-313]C2-005	01-N01-SS[NGRR-314]C2-005	01-N01-SS[NGRR-315]C2-005	01-N01-SS[NGRR-316]C2-005
Date Sampled	8/16/01	8/16/01	8/16/01	8/16/01	8/16/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	8	12	14	5.5	5.9
Lead	10	13	20	5.7	15

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-317]C2-005	01-N01-SS[NGRR-318]C2-005	01-N01-SS[NGRR-32]C2-005	01-N01-SS[NGRR-320]C2-005	01-N01-SS[NGRR-33]C2-005
Date Sampled	8/16/01	8/16/01	7/6/01	8/16/01	7/6/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.9	24	5.1	6.1	3.4
Lead	8.2	16	4.1	9.5	3.2

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-34]C2-005	01-N01-SS[NGRR-35]C2-005	01-N01-SS[NGRR-351]C2-005	01-N01-SS[NGRR-352]C2-005-DAVG	01-N01-SS[NGRR-354]C2-005
Date Sampled	7/11/01	7/11/01	8/20/01	8/21/01	8/21/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.5	17	42 U	43 U	43 U
Lead	7.9	9.4	21 UJ	21 UJ	21 UJ

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-355]C2-005	01-N01-SS[NGRR-356]C2-005	01-N01-SS[NGRR-357]C2-005	01-N01-SS[NGRR-358]C2-005	01-N01-SS[NGRR-359]C2-005
Date Sampled	8/21/01	8/21/01	8/21/01	8/21/01	8/21/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	45 U	42 U	40 U	37 U	43
Lead	22 UJ	21 UJ	20 UJ	18 UJ	22 UJ

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-36]C2-005-DAVG	01-N01-SS[NGRR-360]C2-005	01-N01-SS[NGRR-361]C2-005	01-N01-SS[NGRR-366]C2-005	01-N01-SS[NGRR-367]C2-005
Date Sampled	7/11/01	8/21/01	8/21/01	8/21/01	8/21/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	6	44 U	40 U	10	6
Lead	24.5	22 UJ	20 UJ	5.9	7.2

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-369]C2-005	01-N01-SS[NGRR-370]C2-005	01-N01-SS[NGRR-371]C2-005	01-N01-SS[NGRR-372]C2-005	01-N01-SS[NGRR-373]C2-005
Date Sampled	8/21/01	8/21/01	8/21/01	8/21/01	8/21/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	11	12	4.5	4.2	6.2
Lead	6.4	15	5.6	4.9	5.1

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-374]C2-005	01-N01-SS[NGRR-375]C2-005	01-N01-SS[NGRR-376]C2-005	01-N01-SS[NGRR-377]C2-005	01-N01-SS[NGRR-378]C2-005
Date Sampled	8/21/01	8/21/01	8/21/01	8/21/01	8/21/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	5.5	4.2	4.2	7.2	5.5
Lead	4	3.6	3.8	7.1	6.4

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-379]C2-005	01-N01-SS[NGRR-38]C2-005	01-N01-SS[NGRR-380]C2-005	01-N01-SS[NGRR-381]C2-005	01-N01-SS[NGRR-39]C2-005
Date Sampled	8/21/01	7/11/01	8/22/01	8/22/01	7/11/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	5.8	3.3	3.1	2.5	4.7
Lead	5.1	4.1	3.4	2.7	5.4

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-40]C2-005	01-N01-SS[NGRR-41]C2-005	01-N01-SS[NGRR-42]C2-005	01-N01-SS[NGRR-422]C2-005	01-N01-SS[NGRR-423]C2-005
Date Sampled	7/11/01	7/11/01	7/11/01	8/27/01	8/27/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	7.3	4.4	5.5	52	19
Lead	6.8	3.9	4	8.6	2.4

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-424]C2-005	01-N01-SS[NGRR-425]C2-005	01-N01-SS[NGRR-426]C2-005	01-N01-SS[NGRR-426]C2-005	01-N01-SS[NGRR-429]C2-005
Date Sampled	8/27/01	8/27/01	8/27/01	8/27/01	8/27/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.8	4.4	6.7	6.8	14
Lead	2.1	3	3.8	2.7	8.2

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-43]C2-005	01-N01-SS[NGRR-430]C2-005	01-N01-SS[NGRR-431]C2-005	01-N01-SS[NGRR-433]C2-005	01-N01-SS[NGRR-434]C2-005
Date Sampled	7/11/01	8/27/01	8/27/01	8/27/01	8/27/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	5.3	35	25	30	21
Lead	4.4	7.4	13	62	9.9

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS-[NGRR-436]-C2-020	01-N01-SS-[NGRR-437]-C2-020	01-N01-SS-[NGRR-439]C2-015	01-N01-SS[NGRR-44]C2-005	01-N01-SS-[NGRR-440]C2-015
Date Sampled	9/12/01	9/12/01	9/17/01	7/11/01	9/17/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	3.5	2.8	5.4	4.2	13
Lead	2.6	2.2	3.7	4.6	5.8

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-45]C2-005	01-N01-SS[NGRR-46]C2-005	01-N01-SS[NGRR-47]C2-005	01-N01-SS[NGRR-48]C2-005	01-N01-SS[NGRR-49]C2-005
Date Sampled	7/11/01	7/11/01	7/11/01	7/11/01	7/11/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	4.5	3.3	5	5	7.7
Lead	4.1	3.2	4.3	3.4	4.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-50]C2-005	01-N01-SS[NGRR-52]C2-005	01-N01-SS[NGRR-53]C2-005	01-N01-SS[NGRR-54]C2-005-DAVG	01-N01-SS[NGRR-56]C2-005
Date Sampled	7/11/01	7/12/01	7/12/01	7/12/01	7/12/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	2.6	13	6.6	5.85	4.3
Lead	2.6	40	7.6	6.65	3.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-57]C2-005	01-N01-SS[NGRR-58]C2-005	01-N01-SS[NGRR-59]C2-005	01-N01-SS[NGRR-60]C2-005	01-N01-SS[NGRR-62]C2-005
Date Sampled	7/12/01	7/12/01	7/12/01	7/12/01	7/17/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	16	2.9	3.6	2.4	21
Lead	3.7	2.6	3.5	2	6 J

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-63]C2-005	01-N01-SS[NGRR-64]C2-005	01-N01-SS[NGRR-65]C2-005	01-N01-SS[NGRR-66]C2-005	01-N01-SS[NGRR-67]C2-005
Date Sampled	7/17/01	7/17/01	7/17/01	7/17/01	7/17/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	7.6	2.8	3.8	12	3.9
Lead	3.1 J	1.8 UJ	2.1 UJ	5.3 J	7.3 J

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-70]C2-005	01-N01-SS[NGRR-71]C2-005	01-N01-SS[NGRR-72]C2-005	01-N01-SS[NGRR-73]C2-005	01-N01-SS[NGRR-74]C2-005-DAVG
Date Sampled	7/17/01	7/17/01	7/17/01	7/17/01	7/18/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	6.5	9.9	11	3.7	6.4
Lead	2.8 J	2 UJ	2.6 J	1.8 UJ	3.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-76]C2-005	01-N01-SS[NGRR-77]C2-005	01-N01-SS[NGRR-78]C2-005	01-N01-SS[NGRR-79]C2-005	01-N01-SS[NGRR-80]C2-005
Date Sampled	7/18/01	7/18/01	7/18/01	7/18/01	7/18/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	3.6	4.3	15	15	27
Lead	3.3	3.1	3.5	3.7	6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-82]C2-005	01-N01-SS[NGRR-83]C2-005	01-N01-SS[NGRR-84]C2-005	01-N01-SS[NGRR-85]C2-005	01-N01-SS[NGRR-95]C2-005-DAVG
Date Sampled	7/18/01	7/18/01	7/18/01	7/18/01	7/19/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2	1.5 to 2
Total Metals (mg/kg dry)					
Arsenic	9.7	3	12	4.2	3.05
Lead	6.5	3.1	4.5	3.2	5.15

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-N01-SS[NGRR-97]C2-005	01-N01-SS[NGRR-98]C2-005	01-N01-SS[NGRR-99]C2-005	01-SM-SS-[R67C2]-D1-005	01-SM-SS-[R67C3]-D1-005
Date Sampled	7/19/01	7/19/01	7/19/01	9/17/01	9/17/01
Depth	1.5 to 2	1.5 to 2	1.5 to 2	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	3.4	5.3	2.9	52	52
Lead	5	36	4.9	22	150

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	01-SM-SS-[R67C4]-D1-005	01-SM-SS-[R68C2]-D1-005	01-SM-SS-[R68C3]-D1-005	01-SM-SS-[R68C4]-D1-005	01-SM-SS-[R69C4]-D1-005
Date Sampled	9/17/01	9/17/01	9/17/01	9/17/01	9/17/01
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	47	73	6	62	28
Lead	35	280	4.7	83	36

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	02-F15-SS[F-133-2]C2-030	02-F20-SS-[F-296-2]C2-030	02-F21-SS-[F-306-2]C2-030	02-F23-SS[F-162-2]C2-030	02-F38-SS[F-259-2]C2-030
Date Sampled	8/30/01	9/17/01	9/17/01	8/29/01	8/30/01
Depth	3 to 3.5	3 to 3.5	3 to 3.5	3 to 3.5	3 to 3.5
Total Metals (mg/kg dry)					
Arsenic	4.1	7.9	5.1	12 J	5.2
Lead	55 J	7.6	2.8	31	57 J

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	02-N01-SS[NGRR-07-2]C2-025-DAVG	02-N01-SS[NGRR-11-2]C2-025	02-N01-SS[NGRR-12-2]C2-025	02-N01-SS[NGRR-125-2]C2-025-DAVG	02-N01-SS[NGRR-13-2]C2-025
Date Sampled	8/30/01	8/28/01	8/28/01	8/30/01	8/28/01
Depth	2 to 3	2 to 3	2 to 3	2.5 to 3	2.5 to 3
Total Metals (mg/kg dry)					
Arsenic	4.55	2.8	5.1	5.3	4.6
Lead	21.5	2.7	3.2	14.5	3.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	02-N01-SS[NGRR-132-2]C2-025	02-N01-SS[NGRR-27-2]C2-025	02-N01-SS[NGRR-282-2]C2-025	02-N01-SS[NGRR-29-2]C2-025	02-N01-SS[NGRR-301-2]C2-025-DAVG
Date Sampled	8/30/01	8/29/01	8/30/01	8/29/01	8/30/01
Depth	2.5 to 3	2.5 to 3	2.5 to 3	2.5 to 3	2.5 to 3
Total Metals (mg/kg dry)					
Arsenic	3.9	31 J	7.3	17 J	5.65
Lead	9.9 J	14	29 J	16	11.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	02-N01-SS[NGRR-30-2]C2-025	02-N01-SS-[NGRR-432-2]-C2-030	02-N01-SS[NGRR-69-2]C2-025	02-N01-SS[NGRR-81-2]C2-025	02-N01-SS[NGRR-81-2]C2-025
Date Sampled	8/29/01	9/13/01	8/30/01	8/30/01	8/30/01
Depth	2.5 to 3	2.5 to 3	2.5 to 3	2.5 to 3	2.5 to 3
Total Metals (mg/kg dry)					
Arsenic	6 J	4.1	14	6.9	6.9
Lead	4.8	29	5.4	3.5	3.5

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	03-F15-SS-[F-128-3]-C2-050	03-F23-SS-[F-161-3]-C2-050	03-N01-SS-[NGRR-145-3]-C2-050	12-VS-1	12-VS-10
Date Sampled	9/13/01	9/10/01	9/13/01	9/23/99	9/23/99
Depth	4 to 4.5	4 to 4.5	3.5 to 4	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	4.4	4	6	12	29
Lead	2.8	10	5.5	14	13

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	12-VS-3	12-VS-4	12-VS-5	12-VS-6	12-VS-7-DAVG
Date Sampled	9/23/99	9/23/99	9/23/99	9/23/99	9/23/99
Depth	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	15	20	4.2	3.8	54.5
Lead	13	36	6.6	6.1	63.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	12-VS-8	19-VS-21	19-VS-25	19-VS-26	19-VS-27
Date Sampled	9/23/99	9/14/99	9/14/99	9/14/99	9/14/99
Depth	1 to 2.5	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5
Total Metals (mg/kg dry)					
Arsenic	2.5	34	7.9	4.8	6.1
Lead	5	1500 J	200 J	11 J	1100 J

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	19-VS-34	19-VS-36	19-VS-38	19-VS-39	19-VS-40
Date Sampled	9/14/99	9/14/99	9/14/99	9/14/99	9/14/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	2 to 4.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	15	21	5.4	20	18
Lead	3600 J	180	13	53	82

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	19-VS-41	19-VS-44-DAVG	19-VS-45-DAVG	19-VS-47	19-VS-48
Date Sampled	9/14/99	9/14/99	9/14/99	9/30/99	9/30/99
Depth	0 to 0.5	2 to 4.5	2 to 4.5	2 to 4.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	170	5.8	3.85	6.5	8.7
Lead	850	24	18.5	240	360

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	19-VS-49	19-VS-53	19-VS-54	19-VS-57	26-VS-27
Date Sampled	9/30/99	9/30/99	9/30/99	10/19/99	9/21/99
Depth	2 to 4.5	2 to 4.5	0 to 0.5	2 to 4.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	6.1	6.5	140	2 U	6.9
Lead	250	310	160	6.1 U	14

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	26-VS-28	26-VS-29	26-VS-30	26-VS-31	26-VS-33
Date Sampled	9/21/99	9/21/99	9/21/99	9/21/99	9/21/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	52	34	45	5.3	28
Lead	43	73	19	5.1	4.9

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	26-VS-34	26-VS-35-DAVG	26-VS-36	26-VS-37	26-VS-38
Date Sampled	9/21/99	9/21/99	9/21/99	9/21/99	9/21/99
Depth	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	15	6	220	3	17
Lead	5.3	3.7	84	6.9	29

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	26-VS-40	26-VS-41	26-VS-42	26-VS-43	26-VS-44-DAVG
Date Sampled	9/21/99	9/21/99	9/21/99	9/21/99	9/21/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	4.8	11	15	6.3	180
Lead	19	8.2	16	4	24

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	26-VS-5	26-VS-6	38-VS-118	38-VS-119	38-VS-12
Date Sampled	9/15/99	9/15/99	10/11/99	10/11/99	9/27/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	3.7	4.1	20	51	29
Lead	37 J	200 J	13	52	38

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-120	38-VS-121	38-VS-126	38-VS-127	38-VS-128
Date Sampled	10/11/99	10/11/99	10/11/99	10/11/99	10/11/99
Depth	1 to 2.5	1 to 2.5	3 to 4.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	76	35	37	21	3.8
Lead	77	87	13	13	4.9

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-129	38-VS-130	38-VS-133	38-VS-134	38-VS-135
Date Sampled	10/11/99	10/11/99	5/24/00	5/24/00	5/24/00
Depth	1 to 2.5	0 to 0.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	6.3	20	8.1	74	15
Lead	6.5	35	26	22	590

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-136	38-VS-16	38-VS-18	38-VS-24	38-VS-26
Date Sampled	5/24/00	9/27/99	9/27/99	9/27/99	9/27/99
Depth	1.5 to 3.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	150	23	13	76	100
Lead	11	35	20	48	8.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-27	38-VS-28	38-VS-31	38-VS-32	38-VS-33
Date Sampled	9/27/99	9/27/99	9/27/99	9/27/99	9/27/99
Depth	0 to 0.5	1 to 2.5	1 to 2.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	50	8	7.2	49	4.3
Lead	100	6.1	4.4	64	5.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-34	38-VS-35	38-VS-36	38-VS-38	38-VS-39
Date Sampled	9/27/99	9/27/99	9/27/99	9/27/99	9/27/99
Depth	1 to 2.5	0 to 0.5	0 to 0.5	1 to 2.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	51	12	210	21	84
Lead	20	39	47	24	20

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-40	38-VS-41	38-VS-42	38-VS-43	38-VS-44
Date Sampled	9/27/99	9/27/99	9/27/99	9/27/99	9/27/99
Depth	0 to 0.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	260	10	14	5.7	20
Lead	110	8	4.9	3.2	4.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-45	38-VS-47-DAVG	38-VS-48-DAVG	38-VS-50	38-VS-51
Date Sampled	9/27/99	9/27/99	9/27/99	9/27/99	9/27/99
Depth	0 to 0.5	1 to 2.5	0 to 0.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	340	70	185	30	25
Lead	56	23.5	35.5	23	12

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-52	38-VS-53	38-VS-54	38-VS-55	38-VS-56
Date Sampled	9/27/99	9/27/99	9/27/99	9/27/99	9/27/99
Depth	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	38	140	37	120	970
Lead	64	170	20	39	100

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-65	38-VS-73	38-VS-8	38-VS-86	38-VS-88
Date Sampled	9/28/99	9/28/99	9/27/99	9/28/99	9/28/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	170	69	8.7	11	16
Lead	63	100	22	35	21

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	38-VS-91	38-VS-94	APC-PS-VS-04-01	APC-PS-VS-04-02	APC-PS-VS-04-03
Date Sampled	9/28/99	9/28/99	12/11/98	12/11/98	12/11/98
Depth	1 to 2.5	1 to 2.5	1 to 1.7	1 to 2.9	1 to 2.6
Total Metals (mg/kg dry)					
Arsenic	26	75	6.6	3.4	4.2
Lead	24	21	18	3.8	7.6

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	APC-PS-VS-04-04	APC-PS-VS-04-05	APC-PS-VS-04-06	APC-PS-VS-04-07	APC-PS-VS-04-08
Date Sampled	12/11/98	12/11/98	12/11/98	12/11/98	12/11/98
Depth	1 to 2.9	1 to 2.1	1 to 2	1 to 2.3	1 to 2.3
Total Metals (mg/kg dry)					
Arsenic	9.2	22	3.1	4.5	5.5
Lead	17	150	8	48	250

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	APC-PS-VS-04-09	APC-PS-VS-04-10	APF-VS-11	APF-VS-12	APF-VS-13
Date Sampled	12/11/98	12/11/98	9/22/99	9/22/99	9/22/99
Depth	1 to 2	1 to 2.2	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	4.2	3.8	26	300	29
Lead	6.2	3.1	25	24	9.1

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	APF-VS-14	APF-VS-15	APF-VS-16	APF-VS-2	APF-VS-4
Date Sampled	9/22/99	9/22/99	9/22/99	9/22/99	9/22/99
Depth	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	6.4	2.2	3.7	30	350
Lead	2.2	2.8	3.6	32	59

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	APF-VS-9	LR181-VS-2	LR181-VS-3	LR181-VS-4	LR181-VS-5
Date Sampled	9/22/99	9/23/99	9/23/99	9/23/99	9/23/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5
Total Metals (mg/kg dry)					
Arsenic	100	67	29	28	10
Lead	66	36	38	42	8.3

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	LR181-VS-6	LR181-VS-7	LR181-VS-8	LR181-VS-9-DAVG	LR-68-W125
Date Sampled	9/23/99	9/23/99	9/23/99	9/23/99	11/4/92
Depth	1 to 2.5	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic	10	5.8	9.8	54	
Lead	6.1	5.8	9.2	65	29

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA2-38-71	SA2-39-70	SA2-39-71	SA2-40-69	SA2-40-70
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5
Total Metals (mg/kg dry)					
Arsenic	2 U	2.1 U	1.8 U	2.6	3.5
Lead	1.5	2.5	1.6	4.5	1.9

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA2-40-71	SA2-40-72	SA2-41-68	SA2-41-69	SA2-41-70
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5
Total Metals (mg/kg dry)					
Arsenic	2 U	2 U	2.4	2.1 U	2.1 U
Lead	1.6	1	5.8	4.9	1.9

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA2-41-71	SA2-41-72	SA2-42-67	SA2-42-68	SA2-42-69
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5
Total Metals (mg/kg dry)					
Arsenic	2 U	1.9 U	21	2.2 U	3.1
Lead	2.2	1.6	160	3.9	5.6

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA2-42-70	SA2-42-71	SA2-42-72	SA2-43-67	SA2-43-68
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5
Total Metals (mg/kg dry)					
Arsenic	2 U	2 U	2.2 U	3.4	2.9
Lead	2.9	2.2	1.2	12	14

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA2-43-69	SA2-43-70	SA2-43-71	SA2-43-72	SA2-44-67
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5	2.5 to 5.5
Total Metals (mg/kg dry)					
Arsenic	3.7	4.2	2.5	2.1 U	3.5
Lead	4	8.7	3.7	1.7	8.8

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA2-44-68	SA2-44-69	SA3-77-120	SA3-77-121	SA3-77-122
Date Sampled	10/14/99	10/14/99	10/13/99	10/13/99	10/13/99
Depth	2.5 to 5.5	2.5 to 5.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	5.7	2.4	3.3	6.3	2 U
Lead	13	0.91 U	5.5	17	8.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA3-77-123	SA3-77-124	SA3-77-125	SA3-77-126	SA3-77-127
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	9.8	54	17	30	9.9
Lead	9.8	47	11	33	15

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA3-78-120	SA3-78-121	SA3-78-122	SA3-78-123	SA3-78-124
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	16	31	2.3	3.3	4.7
Lead	5.6	39	4.8	5.1	5.5

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA3-78-125	SA3-78-126	SA3-78-127	SA3-78-128	SA3-78-129
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	3.6	3.1	7.6	3.1	13
Lead	6.2	5.2	14	6.1	25

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA3-78-130	SA3-78-131	SA3-79-119	SA3-79-120	SA3-79-121
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	7.8	9.2	25	17	50
Lead	6.3	13	41	21	120

Table B.19-1
Miscellaneous Sample Soil Metals Results

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA3-79	SA3-79-123	SA3-79-124	SA3-79-125	SA3-79-126
Date Sampled	10/13/99	10/13/99	10/13/99	10/13/99	10/13/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	11	28	15	3.3	6.8
Lead	17	51	30	4.5	15

Area	MISC	MISC	MISC	MISC	MISC
Sample ID	SA3-79-127	SA3-79-128	SA3-79-129	SA3-79-130	SA3-79-131
Date Sampled	10/14/99	10/14/99	10/14/99	10/14/99	10/14/99
Depth	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)					
Arsenic	8.5	8.9	8.5	19	12
Lead	14	16	7.6	25	5.3

Area	MISC	MISC
Sample ID	SA3-79-132	SA3-79-133
Date Sampled	10/14/99	10/14/99
Depth	1.5 to 3.5	1.5 to 3.5
Total Metals (mg/kg dry)		
Arsenic	4	4.9
Lead	4.9	13

Table B.20-1
Area 5 - DNT Waste Drum Area Soil Metals Results

Area	5	5	5	5	5	5	5
Sample ID	01-N01-SS[NGRR-193]C2-005-DAVG	5D-VS-69	5-HA-513-S-1	5-HA-513-S-2	5-HA-514-S-1	5-HA-514-S-2	5-HA-515-S-1
Date Sampled	8/7/01	8/10/93	3/12/92	3/12/92	3/12/92	3/12/92	3/12/92
Depth	1.5 to 2	0 to 0.5	0 to 1	2 to 3	0 to 1	2 to 3	0 to 1
Total Metals (mg/kg)							
Arsenic	11	2.6					
Cadmium		0.16 J					
Chromium							
Copper							
Lead	59	5.4 U	73	51	51	21	24
Mercury (Inorganic)		0.08 U					
Nickel (soluble salts)							
Zinc and Compounds							

Area	5	5	5	5	5	5	5
Sample ID	5-HA-515-S-2	5-HA-516-S-1	5-HA-516-S-2	5-HA-517-S-1	5-HA-517-S-2	5-SS-401	5-SS-402
Date Sampled	3/12/92	3/12/92	3/12/92	3/12/92	3/12/92	11/2/93	11/2/93
Depth	2 to 3	0 to 1	2 to 3	0 to 1	2 to 3	0 to 0.5	0 to 0.5
Total Metals (mg/kg)							
Arsenic						7.3	37
Cadmium							
Chromium							
Copper							
Lead	13	13	5.5 U	5.4 U	5 U		
Mercury (Inorganic)							
Nickel (soluble salts)							
Zinc and Compounds							

Table B.20-1
Area 5 - DNT Waste Drum Area Soil Metals Results

Area	5	5	5	5	5	5	5	5	5	5	5	5	5
Sample ID	5-SS-403	5-SS-404	5-TP-511-S-3	5-TP-512-S-3	5-TP-513-S-3	5-VS-1	5-VS-100	5-VS-101	5-VS-102	5-VS-103	5-VS-104	5-VS-105	5-VS-106
Date Sampled	11/11/93	11/11/93	8/18/92	8/18/92	8/18/92	2/12/93	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99
Depth	0 to 0.5	0 to 0.5	4 to 4.5	4 to 4.5	4 to 4.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5
Total Metals (mg/kg)													
Arsenic	16	9.6	3.7	9.6	4.6	18	63	1.9	21	230	320	30	140
Cadmium			0.12	0.31	0.31								
Chromium			11 J	16 J	13 J								
Copper			17	69	12								
Lead			78	41	99	110	300	25	280	49	100	230	160
Mercury (inorganic)			0.087 U	0.084 U	0.38	3.3 J							
Nickel (soluble salts)			19 J	23 J	18 J								
Zinc and Compounds			49	74	170								

Area	5	5	5	5	5	5	5	5	5	5	5	5	5
Sample ID	5-VS-107	5-VS-108	5-VS-109	5-VS-11	5-VS-110	5-VS-111	5-VS-112	5-VS-113	5-VS-114	5-VS-115	5-VS-116	5-VS-120	5-VS-122
Date Sampled	9/16/99	9/16/99	9/16/99	2/12/93	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99	9/16/99	9/30/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2.5	1 to 2_5
Total Metals (mg/kg)													
Arsenic	21	90	60	11	130	18	81	370	190	220	94	120	490
Cadmium													
Chromium													
Copper													
Lead	71	170	130	43	1200	23	86	51	18	190	18	120	28
Mercury (inorganic)				0.35 J									
Nickel (soluble salts)													
Zinc and Compounds													

Table B.20-1
Area 5 - DNT Waste Drum Area Soil Metals Results

Area	5	5	5	5	5	5	5	5	5	5	5	5	5
Sample ID	5-VS-125	5-VS-126	5-VS-15	5-VS-17	5-VS-18	5-VS-19	5-VS-20-DAVG	5-VS-21	5-VS-22	5-VS-24	5-VS-25	5-VS-26	5-VS-28
Date Sampled	10/18/99	10/18/99	2/12/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93
Depth	1 to 2.5	1 to 2.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)													
Arsenic	1,500	1,500	28	29	5.1	5.1	5	11	34	190	8.1	4.2	3.3
Cadmium				0.35	0.15	0.14	0.19	0.82	0.49	0.27	0.45	0.15	0.89
Chromium													
Copper													
Lead	4.7	22	210 J	330	19	31	24	36	580	680	110	7	5.3 U
Mercury (inorganic)			1.2 J	3.1 J	0.11 UJ	0.17 J	0.14 J	0.15 J	0.48 J	12 J	1 J	0.11 UJ	0.39 J
Nickel (soluble salts)													
Zinc and Compounds													

Area	5	5	5
Sample ID	5-VS-5	5-VS-9	5-VS-99
Date Sampled	2/12/93	2/12/93	9/16/99
Depth	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)			
Arsenic	10	21	78
Cadmium	0.27 J		
Chromium			
Copper			
Lead	120	41	260
Mercury (inorganic)	0.36 J	0.14 J	
Nickel (soluble salts)			
Zinc and Compounds			

Table B.20-2
Area 5D - DNT Waste Drum Area Soil Metals Results

Area	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-13-S-3	5D-TPS-15-S-2	5D-TPS-16-S-3	5D-TPS-17-S-3	5D-TPS-19-S-2	5D-TPS-19-S-3	5D-TPS-6-S-3
Date Sampled	9/29/92	10/1/92	10/1/92	10/1/92	10/7/92	10/7/92	9/18/92
Depth	2 to 3.5	0 to 1	2 to 4	0 to 1.5	0 to 1	6 to 9	0 to 1
Total Metals (mg/kg)							
Aluminum					7700		
Antimony (metallic)					2.6 U		
Arsenic (inorganic)	1.6	2.2	2	2	5.5	3.7	3.6
Beryllium					0.1 U		
Cadmium	1.5	0.69 J	0.64 J	0.7 J	2.8	1.7	
Chromium					21		
Copper					24		
Lead (inorganic)	5 U	5.7 U	5.3 U	6.6	5.2 U	5.1 U	27
Mercury (inorganic)	0.083 U	0.11 U	0.097 U	0.1 U	0.11 U	0.1 U	0.42
Nickel (soluble salts)					12		
Selenium					0.27 U		
Silver					0.26 U		
Thallium					0.27 U		
Zinc and Compounds					24		

Area	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-7-S-3	5D-TPS-8-S-3	5D-TPS-9-S-3	5D-VS-10	5D-VS-11	5D-VS-15	5D-VS-17
Date Sampled	9/18/92	9/18/92	9/18/92	4/13/93	4/13/93	4/13/93	4/13/93
Depth	0 to 1	0 to 1.5	0 to 1	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)							
Aluminum			18000				
Antimony (metallic)							
Arsenic (inorganic)	2.2	2	4.5	24	5.4	4.4	15
Beryllium							
Cadmium				0.091	0.24	0.14	0.29
Chromium							
Copper							
Lead (inorganic)	5.4 U	5.4 U	5.9 U	5.6 UJ	6.8 UJ	5.8 UJ	140 J
Mercury (inorganic)	0.095 U	0.076 U	0.082 U	0.1 U	0.12 U	0.1 U	0.34 J
Nickel (soluble salts)							
Selenium							
Silver							
Thallium							
Zinc and Compounds							

Table B.20-2
Area 5D - DNT Waste Drum Area Soil Metals Results

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-18	5D-VS-2	5D-VS-21	5D-VS-23	5D-VS-26	5D-VS-27	5D-VS-32	5D-VS-35	5D-VS-36	5D-VS-4
Date Sampled	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	2/17/93	4/13/93	4/13/93	4/13/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)										
Aluminum										
Antimony (metallic)										
Arsenic (inorganic)	3.5	3.2	28	8.8	3.7	5.6 J	18 J	2.9	17 J	3.7
Beryllium										
Cadmium	0.21	0.16	0.64	0.67	1.2	1.2	0.31 J	1.3	1.1	0.15
Chromium										
Copper										
Lead (inorganic)	5.8 UJ	11 J	260 J	89 J	5.6 U	68	52	5.3 U	100	7.7 J
Mercury (inorganic)	0.11 U	0.23 J	0.47 J	0.21 J	0.11 UJ	0.11 UJ	1.3 J	0.11 UJ	1.5 J	0.11 U
Nickel (soluble salts)										
Selenium										
Silver										
Thallium										
Zinc and Compounds										

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-53	5D-VS-55	5D-VS-56	5D-VS-57	5D-VS-59-DAVG	5D-VS-6	5D-VS-60-DAVG	5D-VS-68	5D-VS-70-DAVG	5D-VS-71-DAVG
Date Sampled	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	8/10/93	8/10/93	8/10/93	8/10/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)										
Aluminum										
Antimony (metallic)										
Arsenic (inorganic)	5.8	12	4.2	4.4	15	14	6.3	95	3.4	2.5
Beryllium										
Cadmium	0.078	0.31	0.12	0.089	1.5	0.63	0.24	0.79	0.11	0.095
Chromium										
Copper										
Lead (inorganic)	5.9	200	5.4	5.5 U	450	300 J	5.3 U	170	9.4	5.3 U
Mercury (inorganic)	0.11 U	0.82	0.11 U	0.11 U	0.43	3.6 J	0.11	2.1	0.11 U	0.1 U
Nickel (soluble salts)										
Selenium										
Silver										
Thallium										
Zinc and Compounds										

Table B.20-2
Area 5D - DNT Waste Drum Area Soil Metals Results

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-72	5D-VS-73	5D-VS-74	5D-VS-75	5D-VS-76	5D-VS-77	5D-VS-78	5D-VS-79	5D-VS-80-DAVG
Date Sampled	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)									
Aluminum									
Antimony (metallic)									
Arsenic (inorganic)	3.3	11	6.3	95	1.4	5.5	6.6	2.4	5.6
Beryllium									
Cadmium	0.25	0.21	0.2	1	5.3	2	0.28	0.24	0.39
Chromium									
Copper									
Lead (inorganic)	46	38	9.9	5.3 U	5.8 U	12	5 U	5.4 U	5.2 U
Mercury (inorganic)	1.4	0.49	0.11 U	0.1 U	0.11 U	0.07	0.08 U	0.16	0.25
Nickel (soluble salts)									
Selenium									
Silver									
Thallium									
Zinc and Compounds									

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-81	5D-VS-82	5D-VS-83	5D-VS-84	5D-VS-85	5D-VS-86	5D-VS-87	5D-VS-88	5D-VS-89-DAVG
Date Sampled	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)									
Aluminum									
Antimony (metallic)									
Arsenic (inorganic)	6.3	26	35	9.8	33	17	12	12	17
Beryllium									
Cadmium	0.19	1.4	0.83	1.5	0.16	0.19	0.17	0.25	6.6
Chromium									
Copper									
Lead (inorganic)	5.3 U	110	150	18	120	110	70	290	49
Mercury (inorganic)	0.11 U	0.16	1.7	0.09 U	0.88	3.7	4.4	3.5	0.5
Nickel (soluble salts)									
Selenium									
Silver									
Thallium									
Zinc and Compounds									

Table B.20-2
Area 5D - DNT Waste Drum Area Soil Metals Results

Area	5D	5D	5D	5D	5D
Sample ID	5D-VS-90-DAVG	5D-VS-91	5D-VS-92	5D-VS-93	5D-VS-94
Date Sampled	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)					
Aluminum					
Antimony (metallic)					
Arsenic (inorganic)	12	25	50	5 2	8 6
Beryllium					
Cadmium	1.5	0 8	0 74	0 12 J	0 053 J
Chromium					
Copper					
Lead (inorganic)	60	210	310	54	54
Mercury (inorganic)	2.8 J	3.3 J	4.3 J	0.11 U	1.6 J
Nickel (soluble salts)					
Selenium					
Silver					
Thallium					
Zinc and Compounds					

Area	5D	5D	5D	5D
Sample ID	5D-VS-95	5D-VS-96	5D-VS-97	5D-VS-98
Date Sampled	9/7/93	9/7/93	9/7/93	9/7/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg)				
Aluminum				
Antimony (metallic)				
Arsenic (inorganic)	140	9.4	10	31
Beryllium				
Cadmium	1.2	0.12 J	0.99	0.14 J
Chromium				
Copper				
Lead (inorganic)	2300	140	120	110
Mercury (inorganic)	130 J	1.3 J	2.8 J	3.9 J
Nickel (soluble salts)				
Selenium				
Silver				
Thallium				
Zinc and Compounds				

Table B.20-3
Area 5 / 5D - DNT Waste Drum Area Soil Explosives Results

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-11-S-3	5D-TPS-12-S-3	5D-TPS-13-S-3	5D-TPS-15-S-3	5D-TPS-16-S-3	5D-TPS-17-S-3
Date Sampled	9/29/92	9/29/92	9/29/92	10/1/92	10/1/92	10/1/92
Depth	0 to 1	0 to 1	2 to 3.5	4.5 to 5.5	2 to 4	0 to 1.5
Explosives (mg/kg)						
1,3-Dinitrobenzene	0.043 U	0.043 U	0.042 U	0.042 U	0.042 U	0.042 U
2,4-Dinitrotoluene	0.0064 U	0.0065 U	0.0063 U	0.0063 U	0.0063 U	0.02
2,6-Dinitrotoluene	0.0064 U	0.0065 U	0.0063 U	0.0063 U	0.0063 U	0.081
DNT - Total	0.0128 U	0.013 U	0.0126 U	0.0126 U	0.0126 U	0.101
Monomethylamine Nitrate						
Nitrobenzene	0.064 U	0.064 U	0.062 U	0.062 U	0.062 U	0.063 U
Nitroglycerine						
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U
2,4,6-Trinitrotoluene	0.0032 U	0.0032 U	0.0031 U	0.0031 U	0.0031 U	0.0032 U

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-18-S-4	5D-TPS-19-S-2	5D-TPS-19-S-3	5D-TPS-21-S-2-DAVG	5D-TPS-21-S-3	5D-TPS-6-S-3
Date Sampled	10/7/92	10/7/92	10/7/92	10/7/92	10/7/92	9/18/92
Depth	0 to 1	0 to 1	6 to 9	0.5 to 1.5	3 to 4	0 to 1
Explosives (mg/kg)						
1,3-Dinitrobenzene	0.043 U	0.042 U	0.042 U	0.045 U	0.044 U	0.23 U
2,4-Dinitrotoluene	0.0064 U	0.0063 U	0.019	0.0067 U	0.0066 U	0.3
2,6-Dinitrotoluene	0.0064 U	0.0063 U	0.0063 U	0.0067 U	0.0066 U	0.08
DNT - Total	0.0128 U	0.0126 U	0.02215	0.0134 U	0.0132 U	0.38
Monomethylamine Nitrate						
Nitrobenzene	0.064 U	0.063 U	0.063 U	0.067 U	0.066 U	0.34 U
Nitroglycerine						
1,3,5-Trinitrobenzene	0.032 U	0.032 U	0.032 U	0.034 U	0.033 U	0.17 U
2,4,6-Trinitrotoluene	0.0032 U	0.0032 U	0.0032 U	0.0034 U	0.0033 U	0.017 U

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-7-S-3	5D-VS-14	5D-VS-32	5D-VS-90-DAVG	5D-VS-91	5D-VS-92
Date Sampled	9/18/92	2/17/93	2/17/93	9/7/93	9/7/93	9/7/93
Depth	0 to 1	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosives (mg/kg)						
1,3-Dinitrobenzene	0.089 U	0.43 U	0.082 U	0.044 U	0.087 U	0.043 U
2,4-Dinitrotoluene	0.013 U	0.16	0.03	0.046	0.013 U	0.011
2,6-Dinitrotoluene	0.013 U	0.11	0.0051 J	0.015	0.013 U	0.007 U
DNT - Total	0.026 U	0.27	0.0351	0.061	0.026 U	0.0145
Monomethylamine Nitrate						
Nitrobenzene	0.13 U	0.63 U	0.12 U	0.066 U	0.13 U	0.065 U
Nitroglycerine						
1,3,5-Trinitrobenzene	0.067 U	0.32 U	0.062 U	0.033 U	0.066 U	0.033 U
2,4,6-Trinitrotoluene	0.0067 U	0.082	0.0062 U	0.0033 U	0.0066 U	0.0033 U

Table B.20-3
Area 5 / 5D - DNT Waste Drum Area Soil Explosives Results

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-93	5D-VS-94	5D-VS-95	5D-VS-96	5D-VS-97	5D-VS-98
Date Sampled	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Explosives (mg/kg)						
1,3-Dinitrobenzene	0.042 U	0.083 UJ	0.084 UJ	0.044 UJ	0.44 U	0.042 U
2,4-Dinitrotoluene	0.041	0.012 UJ	0.013 UJ	0.007 UJ	0.066 U	0.006 U
2,6-Dinitrotoluene	0.006 U	0.012 UJ	0.013 UJ	0.007 UJ	0.066 U	0.011
DNT - Total	0.044	0.024 U	0.026 U	0.014 U	0.132 U	0.014
Monomethylamine Nitrate						
Nitrobenzene	0.063 U	0.12 UJ	0.13 UJ	0.066 UJ	0.65 U	0.062 U
Nitroglycerine						
1,3,5-Trinitrobenzene	0.032 U	0.062 UJ	0.063 UJ	0.033 UJ	0.33 U	0.031 U
2,4,6-Trinitrotoluene	0.0032 U	0.0062 UJ	0.0063 UJ	0.0033 UJ	0.033 U	0.0031 U

Area	5	5	5	5	5	5
Sample ID	5-HA-513-S-1	5-HA-513-S-2	5-HA-514-S-1	5-HA-514-S-2	5-HA-515-S-1	5-HA-515-S-2
Date Sampled	3/12/92	3/12/92	3/12/92	3/12/92	3/12/92	3/12/92
Depth	0 to 1	2 to 3	0 to 1	2 to 3	0 to 1	2 to 3
Explosives (mg/kg)						
1,3-Dinitrobenzene						
2,4-Dinitrotoluene						
2,6-Dinitrotoluene						
DNT - Total						
Monomethylamine Nitrate	6.3 U	6 U	5.7 U	5.6 U	5.8 U	5.8 U
Nitrobenzene						
Nitroglycerine						
1,3,5-Trinitrobenzene						
2,4,6-Trinitrotoluene						

Area	5	5	5	5
Sample ID	5-HA-516-S-1	5-HA-516-S-2	5-HA-517-S-1	5-HA-517-S-2
Date Sampled	3/12/92	3/12/92	3/12/92	3/12/92
Depth	0 to 1	2 to 3	0 to 1	2 to 3
Explosives (mg/kg)				
1,3-Dinitrobenzene				
2,4-Dinitrotoluene				
2,6-Dinitrotoluene				
DNT - Total				
Monomethylamine Nitrate	5.9 U	5.6 U	5.4 U	5.2 U
Nitrobenzene				
Nitroglycerine				
1,3,5-Trinitrobenzene				
2,4,6-Trinitrotoluene				

Table B.20-4
Area 5 - DNT Waste Drum Area Soil VOC Results

Area	5D
Sample ID	5D-VS-10
Date Sampled	4/13/93
Depth	0 to 0.5
VOCs (mg/kg)	
Bromodichloromethane	0.011 U
Bromoform	0.011 U
Bromomethane	0.054 U
Carbon Tetrachloride	0.011 U
Chlorobenzene	0.027 U
Chloroform	0.011 U
Chloromethane	0.11 U
Dibromochloromethane	0.011 U
1,1-Dichloroethane	0.011 U
1,2-Dichloroethane	0.011 U
1,1-Dichloroethene	0.011 U
Dichloromethane	0.11 U
1,2-Dichloropropane	0.011 U
Cis-1,3-Dichloropropene	0.011 U
Trans-1,3-Dichloropropene	0.011 U
Ethyl Chloride	0.054 U
1,1,2,2-Tetrachloroethane	0.011 U
Tetrachloroethene	0.011 U
1,1,1-Trichloroethane	0.011 U
1,1,2-Trichloroethane	0.011 U
Trichloroethylene	0.011 U
Vinyl Chloride	0.054 U
Halogenated VOCs (mg/kg)	
1,2 - Dibromoethane	0.027 U
cis-Dichloroethene	0.011 U
trans-Dichloroethene	0.011 U
Trichlorofluoromethane	0.027 U

Table B.20-5
Area 5 /5D- DNT Waste Drum Area Soil SVOC Results

Area	5D	5D
Sample ID	5D-TPS-6-S-3	5D-VS-10
Date Sampled	9/18/92	4/13/93
Depth	0 to 1	0 to 0.5
SVOCs (mg/kg)		
Aniline	0.19 U	
Benzidine	1.9 U	
Benzoic Acid	0.97 U	
Benzyl Alcohol	0.19 U	
Bis(2-Chloroethoxy)methane	0.19 U	
Bis(2-Chloroisopropyl)ether	0.19 U	
Bis(2-ethylhexyl)Phthalate (DEHP)	0.19 U	
Bis(Chloroethyl)ether	0.19 U	
4-Bromodiphenyl ether	0.19 U	
N-Butyl Benzyl Phthalate	0.19 U	
4-Chloroaniline	0.19 U	
2-Chloronaphthalene	0.19 U	
2-Chlorophenol	0.19 U	
4-Chlorophenyl-phenyl ether	0.19 U	
Dibenzofuran	0.19 U	
Dibutyl Phthalate	0.19 U	
1,2-Dichlorobenzene	0.19 U	0.027 U
1,3-Dichlorobenzene,	0.19 U	0.027 U
1,4-Dichlorobenzene	0.19 U	0.027 U
3,3-Dichlorobenzidine	0.39 U	
2,4-Dichlorophenol	0.19 U	
Diethyl Phthalate	0.19 U	
Dimethyl Phthalate	0.19 U	
2,4-Dimethylphenol	0.19 U	
4,6-Dinitro-o-Cresol	0.97 U	
2,4-Dinitrophenol	0.97 U	
Di-N-Octylphthalate	0.19 U	
Hexachlorobenzene	0.19 U	
Hexachlorobutadiene	0.19 U	
Hexachlorocyclopentadiene	0.19 U	
Hexachloroethane	0.19 U	
Isophorone	0.19 U	
2-Methylphenol	0.19 U	
4-Methylphenol	0.19 U	
2-Nitroaniline	0.97 U	
3-Nitroaniline	0.97 U	
4-Nitroaniline	0.97 U	
2-Nitrophenol	0.19 U	
4-Nitrophenol	0.97 U	
N-Nitrosodimethylamine	0.19 U	
N-Nitrosodi-N-propylamine	0.19 U	
N-Nitrosodiphenylamine	0.19 U	
Pentachlorophenol	0.19 U	
Phenol	0.19 U	
1,2,4-Trichlorobenzene	0.19 U	
2,4,5-Trichlorophenol	0.97 U	
2,4,6-Trichlorophenol	0.19 U	

Table B.20-6
Area 5 - DNT Waste Drum Area Soil PAH Results

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-6-S-3	5D-VS-82	5D-VS-83	5D-VS-86	5D-VS-87	5D-VS-88	5D-VS-91	5D-VS-95	5D-VS-96
Date Sampled	9/18/92	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	9/7/93	9/7/93	9/7/93
Depth	0 to 1	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
PAH (mg/kg)									
Benzo(a)Anthracene	0.19 U	0.018 U	0.42	0.39	0.7	0.22	0.056	0.45	0.084
Benzo(a)Pyrene	0.19 U	0.17	0.35	0.43	0.18	0.34	0.096 U	0.018 U	0.076
Benzo(b)Fluoranthene	0.19 U	0.19	0.18 U	0.44	0.28	0.18 U	0.12	0.48	0.099
Benzo(k)Fluoranthene	0.19 U	0.068	0.18 U	0.22	0.21	0.18	0.047	0.2	0.046
Chrysene	0.049 J	0.054	0.18 U	0.44	0.69	0.18 U	0.045	0.42	0.09
Dibenz(a,h)anthracene	0.19 U	0.036 U	0.37 U	0.35 U	0.039	0.36 U	0.029 U	0.036 U	0.009 U
Indeno(1,2,3-cd)pyrene	0.19 U	0.11	0.18 U	0.26	0.17	0.19	0.062	0.28	0.057
Total Carcinogenic PAHS (BaP TEQs)	0.219499	0.219634	0.59599	0.71664	0.33679	0.57189	0.086815	0.15042	0.10505
Methylnaphthalene, 2-	0.19 U								
Acenaphthene	0.19 U	0.18 U	1.8 U	1.7 U	0.17 U	1.8 U	0.18 U	0.18 U	0.19 U
Acenaphthylene	0.19 U	0.18 U	1.8 U	1.7 U	0.17 U	1.8 U	0.18 U	0.18 U	0.19 U
Anthracene	0.19 U	0.056	0.091 U	0.084 U	0.16	0.088 U	0.0034 U	0.047	0.0053 U
Benzo(g,h,i)Perylene	0.04 J	0.12	0.3	0.19	0.26	0.18 U	0.047	0.26	0.025
Fluoranthene	0.19 U	0.39	0.18 U	0.17 U	1.3	0.18 U	0.14	1.1	0.22
Fluorene	0.19 U	0.023	0.18 U	0.17 U	0.017 U	0.18 U	0.018 U	0.018 U	0.019 U
Naphthalene	0.19 U	0.088 U	0.91 U	0.84 U	0.085 U	0.88 U	0.091 U	0.088 U	0.093 U
Phenanthrene	0.067 J	0.29	0.091 U	0.084 U	0.23	0.088 U	0.027	0.38	0.039
Pyrene	0.065 J	0.24	0.18 U	0.17 U	0.34	0.18 U	0.059	0.51	0.094
PAH (Non-Carc) - Total	0.837	1.343	2.916	2.649	2.511	5.376 U	0.5092	2.53	0.62665

Table B.20-7
Area 5 - DNT Waste Drum Area Soil Pesticide Results

Area	5D		5D	
Sample ID	5D-TPS-19-S-2		5D-TPS-6-S-3	
Date Sampled	10/7/92		9/18/92	
Depth	0 to 1		0 to 1	
Pesticides (mg/kg)				
Aldrin	0.0053	U	0.0058	U
Chlordane	0.053	U	0.058	U
DDD (p,p'-Dichlorodiphenyldichloroethane)	0.011	U	0.012	U
DDE (p,p'-Dichlorodiphenyldichloroethyle)	0.011	U	0.012	U
DDT (p,p'-Dichorodiphenyltrichloroethane)	0.011	U	0.012	U
Dieldrin	0.011	U	0.012	U
Endosulfan I	0.0053	U	0.0058	U
Endosulfan II	0.011	U	0.012	U
Endosulfan Sulfate	0.011	U	0.012	U
Endrin	0.011	U	0.012	U
Endrin Ketone	0.011	U	0.012	U
Heptachlor	0.0053	U	0.0058	U
Heptachlor Epoxide	0.0053	U	0.0058	U
alpha-Hexachlorocyclohexane	0.0053	U	0.0058	U
beta-Hexachlorocyclohexane	0.0053	U	0.0058	U
delta-Hexachlorocyclohexane	0.0053	U	0.0058	U
gamma-Hexachlorocyclohexane	0.0053	U	0.0058	U
Methoxychlor	0.053	U	0.058	U
Toxaphene	0.11	U	0.12	U

Table B.20-8
Area 5 - DNT Waste Drum Area Soil PCB Results

Area	5D		5D	
Sample ID	5D-TPS-19-S-2		5D-TPS-6-S-3	
Date Sampled	10/7/92		9/18/92	
Depth	0 to 1		0 to 1	
PCBs (mg/kg)				
Aroclor 1016	0.11	U	0.12	U
Aroclor 1221	0.11	U	0.12	U
Aroclor 1232	0.11	U	0.12	U
Aroclor 1242	0.11	U	0.12	U
Aroclor 1248	0.11	U	0.12	U
Aroclor 1254	0.11	U	0.12	U
Aroclor 1260	0.11	U	0.12	U

Table B.20-9
Area 5 - DNT Waste Drum Area Soil TPH Results

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-12-S-3	5D-TPS-15-S-2	5D-TPS-16-S-3	5D-TPS-17-S-3	5D-TPS-18-S-4	5D-TPS-21-S-2-DAVG
Date Sampled	9/29/92	10/1/92	10/1/92	10/1/92	10/7/92	10/7/92
Depth	0 to 1	0 to 1	2 to 4	0 to 1.5	0 to 1	0.5 to 1.5
TPH (mg/kg)						
TPH	25 U	38	42	14	25 U	25 U

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-TPS-6-S-3	5D-TPS-7-S-3	5D-VS-10	5D-VS-11	5D-VS-15	5D-VS-17
Date Sampled	9/18/92	9/18/92	4/13/93	4/13/93	4/13/93	4/13/93
Depth	0 to 1	0 to 1	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)						
TPH	31	25 U	21 U	24 U	35	140

Area	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-18	5D-VS-2	5D-VS-21	5D-VS-23	5D-VS-26	5D-VS-27
Date Sampled	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)						
TPH	22 U	22 U	160	110	23 U	140

Table B.20-9
Area 5 - DNT Waste Drum Area Soil TPH Results

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-32	5D-VS-35	5D-VS-36	5D-VS-4	5D-VS-53	5D-VS-55	5D-VS-56	5D-VS-57	5D-VS-59-DAVG	5D-VS-6
Date Sampled	2/17/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)										
TPH	36	21 U	90	22 U	27	140	42	22 U	86 J	190

Area	5D	5	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-68	5D-VS-69	5D-VS-70-DAVG	5D-VS-71-DAVG	5D-VS-72	5D-VS-73	5D-VS-74	5D-VS-75	5D-VS-76	5D-VS-77
Date Sampled	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)										
TPH	45	21 U	22 U	20 U	110	21 U	22 U	22 U	22 U	33

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-79	5D-VS-80-DAVG	5D-VS-81	5D-VS-82	5D-VS-83	5D-VS-84	5D-VS-85	5D-VS-86	5D-VS-87	5D-VS-88
Date Sampled	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)										
TPH	21 U	21 U	21 U	380	520	21 U	60	1900	1500	750

Table B.20-9
Area 5 - DNT Waste Drum Area Soil TPH Results

Area	5D	5D	5D	5D	5D	5D	5D	5D	5D	5D
Sample ID	5D-VS-89-DAVG	5D-VS-90-DAVG	5D-VS-91	5D-VS-92	5D-VS-93	5D-VS-94	5D-VS-95	5D-VS-96	5D-VS-97	5D-VS-98
Date Sampled	8/10/93	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93	9/7/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)										
TPH	24 U	190	320	140	22	270	740	630	280	160

Area	5D	5	5	5	5	5	5	5	5	5
Sample ID	5D-VS-78	5-TP-511-S-3	5-TP-512-S-3	5-TP-513-S-3	5-VS-1	5-VS-11	5-VS-15	5-VS-17	5-VS-18	5-VS-19
Date Sampled	8/10/93	8/18/92	8/18/92	8/18/92	2/12/93	2/12/93	2/12/93	8/10/93	8/10/93	8/10/93
Depth	0 to 0.5	4 to 4.5	4 to 4.5	4 to 4.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)										
TPH	21 U	25 U	29	40	57	53	430	21 U	21 U	20 U

Area	5D	5	5	5	5	5	5	5	5	5
Sample ID	5D-VS-60-DAVG	5-VS-20-DAVG	5-VS-21	5-VS-22	5-VS-24	5-VS-25	5-VS-26	5-VS-28	5-VS-5	5-VS-9
Date Sampled	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	2/12/93	2/12/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)										
TPH	21 U	21 U	21 U	38	27	21 U	21 U	21 U	170	93

Table B.21-1
Area 8 - Bunker C Pipeline Soil Metals Results

Area	8	8	8
Sample ID	SA1-29-48	SA1-30-48	01-N01-SS[NGRR-275]C2-005
Date Sampled	10/14/99	10/14/99	8/13/01
Depth	3 to 6.5	3 to 6.5	1.5 to 2
Arsenic (mg/kg)			
Arsenic	2.2	4.2	19
Lead (mg/kg)			
Lead	12	46	22

Table B.21-2
Area 8 - Bunker C Pipeline Soil Explosives Results

Area	**8**
Sample ID	**8-BS-1-S-7**
Date Sampled	**6/9/92**
Depth	**32.5 to 34**
Explosives (mg/kg)	
2,4-Dinitrotoluene	1.7 U
2,6-Dinitrotoluene	1.7 U
DNT - Total	3.4 U
Nitrobenzene	1.7 U

Table B.21-3
Area 8 - Bunker C Pipeline Soil VOC Results

Area	8	8
Sample ID	8-TPS-04-S-1	8-TPS-04-S-2
Date Sampled	1/31/92	1/31/92
Depth	14.5 to 15	16.5 to 17
VOCs (mg/kg)		
Acetone	1 U	1 U
Benzene	0.05 U	0.05 U
Bromodichloromethane	0.05 U	0.05 U
Bromoform	0.25 U	0.25 U
Bromomethane	0.5 U	0.5 U
Carbon Disulfide	0.05 U	0.05 U
Carbon Tetrachloride	0.05 U	0.05 U
Chlorobenzene	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U
Chloromethane	0.5 U	0.5 U
Dibromochloromethane	0.05 U	0.05 U
1,1-Dichloroethane	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U
1,1-Dichloroethene	0.05 U	0.05 U
1,2-Dichloroethylene (Mixed Isomers)	0.05 U	0.05 U
Dichloromethane	0.25 U	0.25 U
1,2-Dichloropropane	0.05 U	0.05 U
Cis-1,3-Dichloropropene	0.05 U	0.05 U
Trans-1,3-Dichloropropene	0.05 U	0.05 U
Ethyl Benzene	0.05 U	0.05 U
Ethyl Chloride	0.05 U	0.05 U
2-Hexanone	0.5 U	0.5 U
Methyl Ethyl Ketone	0.5 U	0.5 U
Methyl Isobutyl Ketone	0.5 U	0.5 U
Styrene	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.05 U	0.05 U
Tetrachloroethene	0.05 U	0.05 U
Toluene	0.05 U	0.05 U
1,1,1-Trichloroethane	0.05 U	0.05 U
1,1,2-Trichloroethane	0.05 U	0.05 U
Trichloroethylene	0.05 U	0.05 U
Vinyl Acetate	0.5 U	0.5 U
Vinyl Chloride	0.05 U	0.05 U
Xylenes	0.05 U	0.05 U

Table B.21-4
Area 8 - Bunker C Pipeline Soil SVOC Results

Area	8
Sample ID	8-BS-1-S-7
Date Sampled	6/9/92
Depth	32.5 to 34
SVOCs (mg/kg)	
Aniline	1.7 U
Benzidine	17 U
Benzoic Acid	8.3 U
Benzyl Alcohol	1.7 U
Bis(2-Chloroethoxy)methane	1.7 U
Bis(2-Chloroisopropyl)ether	1.7 U
Bis(2-ethylhexyl)Phthalate (DEHP)	1.7 U
Bis(Chloroethyl)ether	1.7 U
4-Bromodiphenyl ether	1.7 U
N-Butyl Benzyl Phthalate	1.7 U
4-Chloroaniline	1.7 U
2-Chloronaphthalene	1.7 U
2-Chlorophenol	1.7 U
4-Chlorophenyl-phenyl ether	1.7 U
Dibenzofuran	1.7 U
Dibutyl Phthalate	1.7 U
1,2-Dichlorobenzene	1.7 U
1,3-Dichlorobenzene,	1.7 U
Dichlorobenzene, 1,4-	1.7 U
3,3-Dichlorobenzidine	3.3 U
2,4-Dichlorophenol	1.7 U
Diethyl Phthalate	1.7 U
Dimethyl Phthalate	1.7 U
2,4-Dimethylphenol	1.7 U
4,6-Dinitro-o-Cresol	8.3 U
2,4-Dinitrophenol	8.3 U
Di-N-Octylphthalate	1.7 U
Hexachlorobenzene	1.7 U
Hexachlorobutadiene	1.7 U
Hexachlorocyclopentadiene	1.7 U
Hexachloroethane	1.7 U
Isophorone	1.7 U
2-Methylphenol	1.7 U
4-Methylphenol	1.7 U
2-Nitroaniline	8.3 U
3-Nitroaniline	8.3 U
4-Nitroaniline	8.3 U
2-Nitrophenol	1.7 U
4-Nitrophenol	8.3 U
N-Nitrosodimethylamine	1.7 U
N-Nitrosodi-N-propylamine	1.7 U
N-Nitrosodiphenylamine	1.7 U
Pentachlorophenol	1.7 U
Phenol	1.7 U
1,2,4-Trichlorobenzene	1.7 U
2,4,5-Trichlorophenol	8.3 U
2,4,6-Trichlorophenol	1.7 U

Table B.21-5
Area 8 - Bunker C Pipeline Soil PAH Results

Area	8	8	8	8	8	8	8
Sample ID	8-BS-1-S-4	8-BS-1-S-7	8-TP-7-S-4	8-VS-41	8-VS-42	8-VS-43	8-VS-44
Date Sampled	6/9/92	6/9/92	5/27/92	6/23/93	6/23/93	6/23/93	6/23/93
Depth	17.5 to 19	32.5 to 34	19 to 20	15 to 15.5	15 to 15.5	15 to 15.5	12 to 13
PAH (mg/kg)							
Benzo(a)Anthracene	0.019 U	0.018 U	0.018	0.018 U	0.018 U	0.019 U	0.018 U
Benzo(a)Pyrene	0.019 U	0.018 U	0.018 U	0.018 U	0.018 U	0.019 U	0.018 U
Benzo(b)Fluoranthene	0.019 U	0.018 U	0.018 U	0.018 U	0.018 U	0.019 U	0.018 U
Benzo(k)Fluoranthene	0.019 U	0.018 U	0.018 U	0.018 UJ	0.018 UJ	0.019 UJ	0.018 UJ
Chrysene	0.019 U	0.018 U	0.018 U	0.018 U	0.018 U	0.019 U	0.018 U
Dibenz(a,h)anthracene	0.039 U	0.037 U	0.036 U	0.036 UJ	0.037 UJ	0.039 UJ	0.037 UJ
Indeno(1,2,3-cd)pyrene	0.019 U	0.018 U	0.018 U	0.018 UJ	0.018 UJ	0.019 UJ	0.018 UJ
Total Carcinogenic PAHS (BaP TEQs)	0.063909 U	0.060598 U	0.030699	0.059598 U	0.060598 U	0.063909 U	0.060598 U
2-Methylnaphthalene		1.7 U					
Acenaphthene	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U
Acenaphthylene	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U
Anthracene	0.0095 U	0.0091 U	0.0088 U	0.0089 U	0.009 U	0.0095 U	0.0089 U
Benzo(g,h,i)Perylene	0.18	0.21	0.14	0.018 U	0.018 U	0.019 U	0.018 U
Fluoranthene	0.019 U	0.36 J	0.018 U	0.018 U	0.018 U	0.019 U	0.018 U
Fluorene	0.019 U	0.018 U	0.018 U	0.018 U	0.018 U	0.019 U	0.018 U
Naphthalene	0.095 U	0.091 U	0.088 U	0.089 U	0.09 U	0.095 U	0.089 U
Phenanthrene	0.0095 U	0.54 J	0.0088 U	0.0089 U	0.009 U	0.0095 U	0.0089 U
Pyrene	0.019 U	0.018 U	0.018 U	0.018 UJ	0.018 UJ	0.019 UJ	0.018 UJ
PAH (Non-Carc) - Total	0.4555	2.20805	0.3998	0.5388 U	0.54 U	0.57 U	0.5388 U

Table B.21-5
Area 8 - Bunker C Pipeline Soil PAH Results

Area	8	8	8	8	8
Sample ID	8-VS-45	8-VS-46	8-VS-47	8-VS-48	8-VS-49
Date Sampled	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93
Depth	9 to 10	13 to 14	15 to 15.5	12 to 13	12 to 13
PAH (mg/kg)					
Benzo(a)Anthracene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Benzo(a)Pyrene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Benzo(b)Fluoranthene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Benzo(k)Fluoranthene	0.017 UJ	0.017 UJ	0.017 UJ	0.018 UJ	0.018 UJ
Chrysene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Dibenz(a,h)anthracene	0.036 UJ	0.036 UJ	0.036 UJ	0.036 UJ	0.037 UJ
Indeno(1,2,3-cd)pyrene	0.017 UJ	0.017 UJ	0.017 UJ	0.018 UJ	0.018 UJ
Total Carcinogenic PAHS (BaP TEQs)	0.058287 U	0.058287 U	0.058287 U	0.059598 U	0.060598 U
2-Methylnaphthalene					
Acenaphthene	0.17 U	0.17 U	0.17 U	0.18 U	0.18 U
Acenaphthylene	0.17 U	0.17 U	0.17 U	0.18 U	0.18 U
Anthracene	0.0087 U	0.0087 U	0.0087 U	0.0088 U	0.0089 U
Benzo(g,h,i)Perylene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Fluoranthene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Fluorene	0.017 U	0.017 U	0.017 U	0.018 U	0.018 U
Naphthalene	0.087 U	0.087 U	0.087 U	0.088 U	0.089 U
Phenanthrene	0.0087 U	0.0087 U	0.0087 U	0.0088 U	0.0089 U
Pyrene	0.017 UJ	0.017 UJ	0.017 UJ	0.018 UJ	0.018 UJ
PAH (Non-Carc) - Total	0.5124 U	0.5124 U	0.5124 U	0.5376 U	0.5388 U

Table B.21-5
Area 8 - Bunker C Pipeline Soil PAH Results

Area	8	8	8	8	8
Sample ID	8-VS-50	8-VS-51	8-VS-59	8-VS-61	S-10
Date Sampled	6/23/93	6/23/93	7/12/93	7/12/93	1/28/92
Depth	15 to 15.5	15 to 15.5	15 to 15.5	37 to 38	15.5 to 16
PAH (mg/kg)					
Benzo(a)Anthracene	0.018 U	0.017 U	0.93 U	0.019 U	0.0036 U
Benzo(a)Pyrene	0.018 U	0.017 U	0.93 U	0.019 U	0.0036 U
Benzo(b)Fluoranthene	0.018 U	0.017 U	0.93 U	0.019 U	0.0036 U
Benzo(k)Fluoranthene	0.018 UJ	0.017 UJ	0.93 U	0.082	0.0036 U
Chrysene	0.018 U	0.017 U	0.93 U	0.019 U	0.0036 U
Dibenz(a,h)anthracene	0.036 UJ	0.035 UJ	1.9 U	0.19	0.0071 U
Indeno(1,2,3-cd)pyrene	0.018 UJ	0.017 UJ	1.1	0.1	0.0036 U
Total Carcinogenic PAHS (BaP TEQs)	0.059598 U	0.057287 U	1.623115	0.2122295	0.0118196 U
2-Methylnaphthalene					
Acenaphthene	0.18 U	0.17 U	9.3 U	0.19 U	0.036 U
Acenaphthylene	0.18 U	0.17 U	9.3 U	0.19 U	0.036 U
Anthracene	0.0088 U	0.0086 U	0.46 U	0.0094 U	0.0018 U
Benzo(g,h,i)Perylene	0.018 U	0.017 U	0.93 U	0.03	0.0036 U
Fluoranthene	0.018 U	0.017 U	0.93 U	0.019 U	0.0036 U
Fluorene	0.018 U	0.017 U	0.93 U	0.019 U	0.0036 U
Naphthalene	0.088 U	0.086 U	4.6 U	0.094 U	0.018 U
Phenanthrene	0.0088 U	0.0086 U	0.46 U	0.0094 U	0.0018 U
Pyrene	0.018 UJ	0.017 UJ	0.93 U	0.019 U	0.0036 U
PAH (Non-Carc) - Total	0.5376 U	0.5112 U	27.84 U	0.3049	0.108 U

Table B.21-6
Area 8 - Bunker C Pipeline Soil TPH Results

Area	8	8	8	8	8	8	8	8	8	8
Sample ID	8-BS-1-S-4	8-BS-1-S-7	8-BS-2-S-4	8-BS-3-S-3	8-BS-3-S-5	8-LD-VS-1	8-LD-VS-10	8-LD-VS-14	8-LD-VS-15	8-LD-VS-19
Date Sampled	6/9/92	6/9/92	6/9/92	6/10/92	6/10/92	1/12/96	1/12/96	1/12/96	1/12/96	1/12/96
Depth	17.5 to 19	32.5 to 34	22.5 to 24	17.5 to 19	27_5 to 29	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP TPH (mg/L)										
TPH										
TPH (mg/kg)										
#2 Diesel		240								
Motor Oil		880								
TPH 418.1										
TPH	2800	2400	25 U	150	25 U	73	1100	250	160	940
TPH 8015										
Bunker C		10 U								
Bunker C (Aged)										
Gasoline		10 U								
Kensol		10 U								
Kerosene		10 U								
Stoddard Solvent		10 U								
TPH-8015		10 U								

Area	8	8	8	8	8	8	8	8	8	8
Sample ID	8-LD-VS-2	8-LD-VS-20	8-LD-VS-24	8-LD-VS-25	8-TP-10-S-4	8-TP-7-S-4	8-TPS-02-S-1	8-TPS-04-S-1	8-TPS-04-S-2	8-VS-41
Date Sampled	1/12/96	1/12/96	1/12/96	1/12/96	5/27/92	5/27/92	1/30/92	1/31/92	1/31/92	6/23/93
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	15 to 16	19 to 20	17 to 17.5	14.5 to 15	16.5 to 17	15 to 15.5
TCLP TPH (mg/L)										
TPH										
TPH (mg/kg)										
#2 Diesel							10 U	1000	660	
Motor Oil							10 U	3000	2100	
TPH 418.1										
TPH	75	870	120	190	94	1400				160 J
TPH 8015										
Bunker C							10 U	10 U	10 U	
Bunker C (Aged)										
Gasoline							10 U	10 U	10 U	
Kensol							10 U	10 U	10 U	
Kerosene							10 U	10 U	10 U	
Stoddard Solvent							10 U	10 U	10 U	
TPH-8015							10 U	10 U	10 U	

Table B.21-6
Area 8 - Bunker C Pipeline Soil TPH Results

Area	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Sample ID	8-VS-42	8-VS-43	8-VS-44	8-VS-45	8-VS-46	8-VS-47	8-VS-48	8-VS-49	8-VS-50	8-VS-51	8-VS-52	8-VS-53	8-VS-55	8-VS-56
Date Sampled	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93	6/23/93	7/12/93	7/12/93	7/12/93	7/12/93
Depth	15 to 15.5	15 to 15.5	12 to 13	9 to 10	13 to 14	15 to 15.5	12 to 13	12 to 13	15 to 15.5	15 to 15.5	15 to 15.5	15 to 15.5	15 to 15.5	10 to 10.5
TCLP TPH (mg/L)														
TPH														
TPH (mg/kg)														
#2 Diesel														
Motor Oil														
TPH 418.1														
TPH	210 J	4000 J	21 U	21 U	24 J	77 J	22 U	30 J	21 U	55 J	45 J	50 U	260	200
TPH 8015														
Bunker C														
Bunker C (Aged)														
Gasoline														
Kensol														
Kerosene														
Stoddard Solvent														
TPH-8015														

Area	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Sample ID	8-VS-57	8-VS-58	8-VS-59	8-VS-60	8-VS-61	8-VS-62	8-VS-63	8-VS-64	8-VS-65	8-VS-66	8-VS-67	8-VS-68	8-VS-69	8-VS-70
Date Sampled	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93	7/12/93
Depth	10 to 10.5	15 to 15.5	15 to 15.5	20 to 20.5	37 to 38	6 to 7	9 to 10	4 to 5	3 to 4	12 to 13	7 to 8	15 to 15.5	10 to 11	5 to 7
TCLP TPH (mg/L)														
TPH			1 U											
TPH (mg/kg)														
#2 Diesel														
Motor Oil														
TPH 418.1														
TPH	81	110	7200	50 U	2500	50 U	48 J	61	50 U	50 U	50 U	540	50 U	50 U
TPH 8015														
Bunker C														
Bunker C (Aged)														
Gasoline														
Kensol														
Kerosene														
Stoddard Solvent														
TPH-8015														

Table B.21-6
Area 8 - Bunker C Pipeline Soil TPH Results

Area	8	8	8	8	8	8	8	8	8	8	8
Sample ID	8-VS-72	8-VS-73	8-VS-74	8-VS-75	8-VS-76	8-VS-77	8-VS-78	8-VS-80	8-VS-81	8-VS-82	8-VS-83
Date Sampled	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93	7/28/93
Depth	20 to 20.5	20 to 20.5	18 to 18.5	20 to 20.5	20 to 20.5	20 to 20.5	18 to 18.5	20 to 20.5	20 to 20.5	18 to 18.5	20 to 20.5
TCLP TPH (mg/L)											
TPH									1 U		
TPH (mg/kg)											
#2 Diesel											
Motor Oil											
TPH 418.1											
TPH	6300	96	1300	5100	7500	64	1100	6100	11000	50 U	340
TPH 8015											
Bunker C											
Bunker C (Aged)											
Gasoline											
Kensol											
Kerosene											
Stoddard Solvent											
TPH-8015											

Area	8	8
Sample ID	8-VS-84	S-10
Date Sampled	7/28/93	1/28/92
Depth	18 to 18.5	15.5 to 16
TCLP TPH (mg/L)		
TPH		
TPH (mg/kg)		
#2 Diesel		10 U
Motor Oil		
TPH 418.1		
TPH	50 U	
TPH 8015		
Bunker C		10 U
Bunker C (Aged)		10 U
Gasoline		10 U
Kensol		10 U
Kerosene		10 U
Stoddard Solvent		10 U
TPH-8015		10 U

Table B.22-1
Area 19 - Maintenance Areas Soil Metals Results

Area	19A	19A	19A	19A	19A	19A	19B
Sample ID	01-F15-SS[F-129]C2-005	01-F15-SS[F-130]C2-005	01-F15-SS[F-131]C2-005	01-F15-SS[F-132]C2-005	19A-TP-1-S-1	19A-TP-1-S-2	19B-OI-TP-1 (S-1)
Date Sampled	6/26/01	6/26/01	6/26/01	6/26/01	7/31/92	7/31/92	7/31/92
Depth	2 to 2.5	2 to 2.5	2 to 2.5	2 to 2.5	5 to 6	7 to 8	2 to 2.5
Total Metals (mg/kg)							
Aluminum							12000
Antimony (metallic)							0.25 UJ
Arsenic (inorganic)	2.5	3.2	1.9 U	2.3	2.5 J	5.5 J	2.6 J
Beryllium							0.31
Cadmium (food)							0.077
Chromium							13
Copper							11
Lead (and compounds) (inorganic)	8.4	4.2	23	2.5	86	960	11
Mercury (inorganic)							0.081 U
Nickel (soluble salts)							19
Selenium (and compounds)							0.23 U
Silver							0.25 U
Thallium							0.23 U
Zinc and Compounds							49

Area	19B	19B	19B	19B	19B	19B	19A
Sample ID	19B-OI-TP-1 (S-2)	19B-VS-15	19B-VS-16	19B-VS-17	19B-VS-18	19B-VS-19-DAVG	19-VS-20
Date Sampled	7/31/92	10/19/92	10/19/92	10/19/92	10/19/92	10/19/92	9/14/99
Depth	4 to 4.5	5 to 6	5 to 6	5 to 6	5 to 6	0 to 0.5	2 to 4.5
Total Metals (mg/kg)							
Aluminum	13000						
Antimony (metallic)	0.26 UJ						
Arsenic (inorganic)	2 J						3.3
Beryllium	0.32						
Cadmium (food)	0.041						
Chromium	18						
Copper	4.8						
Lead (and compounds) (inorganic)	5.1 U	5 U	7.1	5.9	10	6.7	17 J
Mercury (inorganic)	0.081 U						
Nickel (soluble salts)	24						
Selenium (and compounds)	0.24 U						
Silver	0.25 U						
Thallium	0.24 U						
Zinc and Compounds	29						

Table B.22-1
Area 19 - Maintenance Areas Soil Metals Results

Area	19A	19A	19A	19A	19A	19C
Sample ID	19-VS-28	19-VS-29	19-VS-46-DAVG	19-VS-60	19-VS-61	19-VS-62
Date Sampled	9/14/99	9/14/99	9/14/99	10/19/99	10/19/99	10/19/99
Depth	0 to 0.5	2 to 4.5	0 to 0.5	2 to 4.5	2 to 4.5	0 to 0.5
Total Metals (mg/kg)						
Aluminum						
Antimony (metallic)						
Arsenic (inorganic)	17	9.8	69	2 U	1.9 U	19
Beryllium						
Cadmium (food)						
Chromium						
Copper						
Lead (and compounds) (inorganic)	240 J	270 J	140	6.1 U	5.8 U	110
Mercury (inorganic)						
Nickel (soluble salts)						
Selenium (and compounds)						
Silver						
Thallium						
Zinc and Compounds						

Table B.22-2
Area 19 - Maintenance Areas Soil TPH Results

Area	19B	19B	19B	19B
Sample ID	19B-OI-TP-1 (S-1)	19B-OI-TP-1 (S-2)	19B-VS-10-DAVG	19B-VS-11
Date Sampled	7/31/92	7/31/92	10/19/92	10/19/92
Depth	2 to 2.5	4 to 4.5	0 to 0.5	4 to 5
TPH (mg/kg)				
TPH	42	21 U	25 U	25 U

Area	19B	19B	19B	19B
Sample ID	19B-VS-12	19B-VS-13	19B-VS-14	19B-VS-15
Date Sampled	10/19/92	10/19/92	10/19/92	10/19/92
Depth	4 to 5	4 to 5	4 to 5	5 to 6
TPH (mg/kg)				
TPH	25 U	25 U	25 U	25 U

Area	19B	19B	19B	19B
Sample ID	19B-VS-16	19B-VS-17	19B-VS-18	19B-VS-19-DAVG
Date Sampled	10/19/92	10/19/92	10/19/92	10/19/92
Depth	5 to 6	5 to 6	5 to 6	0 to 0.5
TPH (mg/kg)				
TPH	25 U	25 U	25 U	25 U

Table B.23-1
Area 24/24A - Upper Power House Soil Metals Results

Area	24A	24A	24A	24A	24A
Sample ID	24-VS-104	24-VS-105	24-VS-106	24-VS-107	24-VS-108
Date Sampled	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic (inorganic)	18	18	11	14	12
Cadmium (food)	2	1.6	0.48	0.65	2.5
Lead (and compounds) (inorganic)	280	1100	2400	560	390
Mercury (inorganic)	0.81	10	2.3	31	1.3

Area	24A	24A	24A	24A	24A
Sample ID	24-VS-109	24-VS-110	24-VS-111-DAVG	24-VS-112	24-VS-113
Date Sampled	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Total Metals (mg/kg dry)					
Arsenic (inorganic)	6.4	6.1	6.1	17	10
Cadmium (food)	0.56	0.22	0.28	1.4	0.69
Lead (and compounds) (inorganic)	49	230	270	450	230
Mercury (inorganic)	0.13	0.24	1.9	0.86	0.43

Table B.23-1
Area 24/24A - Upper Power House Soil Metals Results

Area	24A	24A	24A	24A	24
Sample ID	24-VS-114	24-VS-115	24-VS-116	24-VS-117	24-VS-120
Date Sampled	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	3 to 6
Total Metals (mg/kg dry)					
Arsenic (inorganic)	6.7	7.8	15	12	2.8
Cadmium (food)	0.28	0.2	0.42	0.24	0.19
Lead (and compounds) (inorganic)	120	66	73	46	59
Mercury (inorganic)	4.2	1	0.21	0.29	0.24

Area	24	24	24
Sample ID	24-VS-121	24-VS-122-DAVG	24-VS-123
Date Sampled	10/10/95	10/10/95	10/10/95
Depth	6 to 7	3 to 6	7 to 8
Total Metals (mg/kg dry)			
Arsenic (inorganic)	3.6	6.2	3.4
Cadmium (food)	0.13	0.48	0.27
Lead (and compounds) (inorganic)	20	150	74
Mercury (inorganic)	0.11 U	8.9	7.7

Table B.23-2
Area 24/24A - Upper Power House Soil PAH Results

Area	24A	24A	24A
Sample ID	24-VS-125	24-VS-126	24-VS-127
Date Sampled	3/27/96	3/27/96	3/27/96
Depth	15 to 15.5	15 to 15.5	3 to 4
PAH (mg/kg)			
Benzo(a)Anthracene	0.097	0.2	0.06
Benzo(a)Pyrene	0.15	0.23	0.067
Benzo(b)Fluoranthene	0.12	0.16	0.039
Benzo(k)Fluoranthene	0.069	0.1	0.026
Chrysene	0.14	0.28	0.11
Dibenz(a,h)anthracene	0.0082	0.0035 U	0.0037 U
Indeno(1,2,3-cd)pyrene	0.14	0.17	0.062
Total Carcinogenic PAHS	0.19473	0.28603	0.08532
2-Methylnaphthalene	0.019 U	0.037	0.019 U
Acenaphthene	0.019 U	0.036	0.019 U
Acenaphthylene	0.037 U	0.035 U	0.037 U
Anthracene	0.02	0.073	0.026
Benzo(g,h,i)Perylene	0.16	0.21	0.046
Fluoranthene	0.27	0.7 U	0.25 U
Fluorene	0.0074	0.038	0.013
Naphthalene	0.019 U	0.018 U	0.019 U
Phenanthrene	0.15	0.51	0.16
Pyrene	0.28	0.63	0.26
PAH (Non-Carc) - Total	0.9344	1.9105	0.677

Table B.23-3
Area 24/24A - Upper Power House Soil TPH Results

Area	24A	24A	24A	24A	24A	24A
Sample ID	24-VS-104	24-VS-105	24-VS-106	24-VS-107	24-VS-108	24-VS-109
Date Sampled	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)						
TPH	100.00	2500.00	330.00	210.00	260.00	190.00

Area	24A	24A	24A	24A	24A	24A
Sample ID	24-VS-110	24-VS-111-DAVG	24-VS-112	24-VS-113	24-VS-114	24-VS-115
Date Sampled	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TPH (mg/kg)						
TPH	760	210	58	280	970	62

Area	24A	24A	24	24	24	24
Sample ID	24-VS-116	24-VS-117	24-VS-120	24-VS-121	24-VS-122-DAVG	24-VS-123
Date Sampled	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95	10/10/95
Depth	0 to 0.5	0 to 0.5	3 to 6	6 to 7	3 to 6	7 to 8
TPH (mg/kg)						
TPH	50 U	50 U	1,400	50 U	720	350

Area	24A	24A	24A	24A	24A
Sample ID	24-VS-124	24-VS-125	24-VS-126	24-VS-127	24-VS-128
Date Sampled	3/27/96	3/27/96	3/27/96	3/27/96	3/27/96
Depth	7 to 7.5	15 to 15.5	15 to 15.5	3 to 4	5.5 to 6
TPH (Mg/kg)					
TPH	170	360	460	750	2,600

Table B.24-1
Area 20 - Railroad Debris Area Soil Metals Results

Area	20	20	20	20	20	20	20
Sample ID	31-VS-549	31-VS-550	31-VS-558	31-VS-559	31-VS-626	31-VS-632	31-VS-633
Date Sampled	4/19/00	4/19/00	4/19/00	4/19/00	5/24/00	6/29/00	6/29/00
Depth	2 to 4.5	2 to 4.5	2 to 4.5	2 to 4.5	1.5 to 3.5	1.5 to 3.5	1.5 to 3.5
Arsenic (mg/kg)							
Arsenic	3.3	13	11	14	8.2	6.5	6.3
Lead (mg/kg)							
Lead	5.3	8.9	14	9.9	9.4	5.5	15

Table B.25-1
Area 36 - Lead Melt House Area Soil Metals Results

Area	36	36	36	36	36	36	36	36	36	36	36	36	36
Sample ID	36-SS-07	36-SS-10	36-SS-18	36-SS-20	36-SS-21	36-SS-24	36-SS-25	36-SS-26	36-SS-27	36-SS-29	36-SS-30	36-SS-31	36-SS-32
Date Sampled	1/10/92	1/10/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/30/92	4/30/92	4/30/92	4/27/92	4/27/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
Arsenic (mg/kg)													
Arsenic													
Lead (mg/kg)													
Lead	92	140	23	5 U	120	5 U	29	1300	130	320	150	1000	74

Area	36	36	36	36	36	36	36	36	36	36	36	36	36
Sample ID	36-TP-1-S-3	36-TP-2-S-3	36-TP-4-S-3	36-TP-5-S-3	36-TP-6-S-1	36-TP-6-S-2	36-TP-6-S-3	36-VS-10	36-VS-11	36-VS-12	36-VS-21	36-VS-6	36-VS-8
Date Sampled	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	4/27/92	9/20/99	9/20/99	9/20/99	10/1/99	9/20/99	9/20/99
Depth	3 to 5	3 to 5	3 to 5	3 to 5	0 to 1	1 to 2	3 to 5	1 to 2.5	1 to 2.5	1 to 2.5	3 to 4.5	0-0.5	1 to 2.5
Arsenic (mg/kg)													
Arsenic								9	4	2.4	4.1 U	2.7	3
Lead (mg/kg)													
Lead	240	10	5 U	5 U	75	5 U	5 U	1800	100	44	6.9	9.4	37

Table B.26-1
Area 39 - Laboratory Area Soil Metals Results

Area	39	39	39	39	39	39	39	39	39	39
Sample ID	39-B-1-S-6	39-B-1-S-7	39-SS-01	39-SS-03	39-SS-04	39-SS-05	39-SS-06	39-SS-08	39-SS-12	39-SS-16
Date Sampled	1/8/92	1/8/92	1/7/92	1/7/92	1/7/92	1/7/92	1/7/92	1/7/92	1/7/92	1/7/92
Depth	0.5 to 2	2 to 3.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)										
Lead										
Mercury (inorganic)										
Total Metals (mg/kg)										
Aluminum										
Antimony (metallic)										
Arsenic										
Beryllium										
Cadmium										
Chromium										
Copper										
Lead										
Mercury (inorganic)	0.52	0.4	0.54	1.9	0.81	0.51	0.84	1.4	0.17	0.43
Nickel (soluble salts)										
Selenium (and compounds)										
Silver										
Thallium										
Zinc and Compounds										

Table B.26-1
Area 39 - Laboratory Area Soil Metals Results

Area	39	39	39	39	39	39	39	39	39
Sample ID	39-VS-10	39-VS-11	39-VS-12	39-VS-13	39-VS-14	39-VS-15	39-VS-16	39-VS-17-DAVG	39-VS-18
Date Sampled	4/21/92	4/20/92	4/20/92	4/17/92	6/1/92	6/1/92	6/1/92	6/1/92	4/17/92
Depth	2 to 9	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)									
Lead									
Mercury (inorganic)		0.0002 U	0.00035						0.0002 U
Total Metals (mg/kg)									
Aluminum	10000				20400	18000	19200	21000	
Antimony (metallic)					2.9 UJ	2.8 UJ	2.9 UJ	2.9 UJ	
Arsenic	1.3				11.2	9.34	6.66	7.29	
Beryllium	0.11 U				0.51	0.41	0.53	0.52	
Cadmium	0.073 J				0.34	0.17	0.17	0.14	
Chromium	13				15.5	13.9	15.8	18	
Copper	13				21	18	16.3	15.4	
Lead	26	110	180	47	28	55	69	37	68
Mercury (inorganic)	2.6 J	13 J	72 J	2.4 J	7.45	7.02	22.5	1.52	7.9 J
Nickel (soluble salts)	17				21.1	20	20	21.2	
Selenium (and compounds)	0.27 U				0.31	0.28 U	0.29 U	0.29 U	
Silver	0.34				0.29 U	0.28 U	0.48	0.29 U	
Thallium	0.27 U				0.29 U	0.28 U	0.29 U	0.29 U	
Zinc and Compounds	25				61.2	47.8	39.9	42.6	

Table B.26-1
Area 39 - Laboratory Area Soil Metals Results

Area	39	39	39	39	39	39	39	39	39
Sample ID	39-VS-19	39-VS-1-DAVG	39-VS-2	39-VS-20	39-VS-21	39-VS-22	39-VS-23	39-VS-24	39-VS-25
Date Sampled	4/17/92	4/16/92	4/16/92	4/21/92	4/21/92	4/21/92	4/20/92	4/21/92	4/21/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5	2 to 12	2 to 12	2 to 12	9 to 12
TCLP Metals (mg/L)									
Lead									
Mercury (inorganic)									
Total Metals (mg/kg)									
Aluminum		16000	17000			16000	13000	16000	10000
Antimony (metallic)		3 J	3 UJ				0.64 J		0.31 J
Arsenic		120	27 J			1.7	2.8	1.6	1.6
Beryllium		0.38	0.36			0.11 U	0.11 U	0.11 U	0.11 U
Cadmium		0.18	0.24 J			0.27 J	0.54 J	0.25 J	0.14 J
Chromium		14	13			20	20	18	18
Copper		25	17			12	15	12	23
Lead	210	170	80	140	230	60	140	23	100
Mercury (inorganic)	5.7 J	1.6 J	9.2 J	7 J	7.4 J	3.3 J	13 J	4.7 J	11 J
Nickel (soluble salts)		18	16			22	20	21	20
Selenium (and compounds)		0.33 J	0.3 UJ			0.29 U	0.28 U	0.29 U	0.27 U
Silver		0.49	0.55			0.93	1.3	0.86	0.28
Thallium		0.31 U	0.3 U			0.29 U	0.28 U	0.29 U	0.27 U
Zinc and Compounds		36	54			39	270	42	33

Table B.26-1
Area 39 - Laboratory Area Soil Metals Results

Area	39	39	39	39	39	39	39	39	39	39
Sample ID	39-VS-26	39-VS-27	39-VS-28	39-VS-29	39-VS-3	39-VS-30	39-VS-31	39-VS-32	39-VS-33	39-VS-34
Date Sampled	4/21/92	4/12/92	4/20/92	4/21/92	4/16/92	5/7/92	5/7/92	5/7/92	5/7/92	6/3/92
Depth	12 to 12.5	2 to 12	2 to 12	0 to 0.5	0 to 0.5	21 to 21.5	2 to 6	2 to 6	6 to 6.5	0 to 0.5
TCLP Metals (mg/L)										
Lead										
Mercury (inorganic)										
Total Metals (mg/kg)										
Aluminum	12000	14000	11000		19000	11400	15300	20200	26200	19300
Antimony (metallic)			0.31 J		3.2 UJ					2.6 UJ
Arsenic	5	2.2	1.8		9.5	3.88 J	3.43 J	2.11 J	3.18 J	26.9
Beryllium	0.11 U	0.11 U	0.11 U		0.41	0.2	0.3	0.7	0.5	0.78
Cadmium	0.2 J	0.43 J	0.11 J		0.52 J	0.05	0.09	0.04	0.05	1.31
Chromium	15	21	17		13	13.5	18	45.4	30.9	25.6
Copper	16	9.8	14		13	17.8	16.1	22.6	15.5	80.4
Lead	46	29	21	19	21	5.3 U	5.4 U	5.3 U	5.7 U	560
Mercury (inorganic)	4.9 J	4.3 J	4.7 J	3.7 J	1.6	0.11 U	0.11 U	0.11 U	0.12 U	4.45
Nickel (soluble salts)	18	16	16		17	17	19.4	35.7	32.6	25.5
Selenium (and compounds)	0.27 U	0.16	0.27 U		0.32 UJ	0.27 UJ	0.27 UJ	0.27 UJ	0.27 J	2.3
Silver	0.67	1.5	0.57		0.58	0.3	0.27 U	0.27 U	0.3 U	0.26 U
Thallium	0.27 U	0.28 U	0.27 U		0.32 U	0.27 U	0.27 U	0.27 U	0.3 U	1.7
Zinc and Compounds	38	51	32		160	26.2	25.4	46.4	37.6	276

Table B.26-1
Area 39 - Laboratory Area Soil Metals Results

Area	39	39	39	39	39	39	39	39	39	39
Sample ID	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-39	39-VS-4	39-VS-40	39-VS-41	39-VS-42	39-VS-5
Date Sampled	6/27/92	6/27/92	6/27/92	6/27/92	8/14/92	4/16/92	6/27/92	8/14/92	8/14/92	4/16/92
Depth	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5	0 to 0.5	4 to 5	4 to 5	4 to 5	0 to 0.5
TCLP Metals (mg/L)										
Lead										
Mercury (inorganic)										
Total Metals (mg/kg)										
Aluminum						19000				18000
Antimony (metallic)						3 UJ				3 UJ
Arsenic					2.3	3.7		1.3	5.8	12
Beryllium						0.39				0.39
Cadmium						0.37 J				0.36 J
Chromium						13				12
Copper						12				19
Lead	10	5.6 U	5.1 U	17		7.7	22			220
Mercury (inorganic)					0.1	0.5 J		0.08 U	0.92	6.7 J
Nickel (soluble salts)						16				15
Selenium (and compounds)						0.31 J				0.31 UJ
Silver						0.44				0.5
Thallium						0.31 U				0.31 U
Zinc and Compounds						47				89

Table B.26-1
Area 39 - Laboratory Area Soil Metals Results

Area	39	39	39	39
Sample ID	39-VS-6	39-VS-7	39-VS-8	39-VS-9
Date Sampled	4/16/92	4/16/92	4/17/92	4/20/92
Depth	0 to 0.5	0 to 0.5	0 to 0.5	0 to 0.5
TCLP Metals (mg/L)				
Lead				
Mercury (inorganic)				0.0002 U
Total Metals (mg/kg)				
Aluminum	18000	19000		
Antimony (metallic)	3.2 J	3.1 UJ		
Arsenic	29 J	23		
Beryllium	0.4	0.41		
Cadmium	0.31 J	0.24 J		
Chromium	13	13		
Copper	31	48		
Lead	160	54	160	220
Mercury (inorganic)	14 J	6.8 J	15 J	44 J
Nickel (soluble salts)	17	17		
Selenium (and compounds)	0.3 UJ	0.38 J		
Silver	0.49	0.45		
Thallium	0.3 U	0.32 U		
Zinc and Compounds	82	43		

Table B.26-2
Area 39 - Laboratory Area Soil Explosives Results

Area	39	39	39	39	39	39	39
Sample ID	39-VS-10	39-VS-26	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-40
Date Sampled	4/21/92	4/21/92	6/27/92	6/27/92	6/27/92	6/27/92	6/27/92
Depth	2 to 9	12 to 12.5	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5
Explosives (mg/kg)							
2,4-Dinitrotoluene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2,6-Dinitrotoluene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
DNT - Total	0.36 U	0.38 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Nitrobenzene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

Table B.26-3
Area 39 - Laboratory Area Soil VOC Results

Area	39	39	39	39	39	39	39
Sample ID	39-VS-10	39-VS-26	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-40
Date Sampled	4/21/92	4/21/92	6/27/92	6/27/92	6/27/92	6/27/92	6/27/92
Depth	2 to 9	12 to 12.5	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5
VOCs (mg/kg)							
Acetone	1.1 U	1.1 U	11 U	11 U	11 U	11 U	11 U
Benzene	0.053 U	0.056 U	0.027 U	0.027 U	0.027 U	0.026 U	0.027 U
Bromodichloromethane	0.053 U	0.056 U					
Bromoform	0.27 U	0.28 U					
Bromomethane	0.53 U	0.56 U					
Carbon Disulfide	0.053 U	0.056 U					
Carbon Tetrachloride	0.053 U	0.056 U					
Chlorobenzene	0.053 U	0.056 U	0.027 U	0.027 U	0.027 U	0.026 U	0.027 U
Chloroform	0.053 U	0.056 U					
Chloromethane	0.53 U	0.56 U					
Dibromochloromethane	0.053 U	0.056 U					
1,1-Dichloroethane	0.053 U	0.056 U					
1,2-Dichloroethane	0.053 U	0.056 U					
1,1-Dichloroethene	0.053 U	0.056 U					
1,2-Dichloroethylene (Mixed Isomers)	0.053 U	0.056 U					
Dichloromethane	0.53 U	0.53 U					
1,2-Dichloropropane	0.053 U	0.056 U					
Cis-1,3-Dichloropropene	0.053 U	0.056 U					
Trans-1,3-Dichloropropene	0.053 U	0.056 U					
Ethyl Benzene	0.053 U	0.056 U	0.027 U	0.027 U	0.027 U	0.026 U	1.5
Ethyl Chloride	0.053 U	0.056 U					
2-Hexanone	0.53 U	0.56 U					
Methyl Ethyl Ketone	0.53 U	0.56 U					
Methyl Isobutyl Ketone	0.53 U	0.56 U					
Styrene	0.053 U	0.056 U					
1,1,2,2-Tetrachloroethane	0.053 U	0.056 U					
Tetrachloroethene	0.053 U	0.056 U					
Toluene	0.053 U	0.056 U	0.027 U	0.027 U	0.027 U	0.026 U	0.027 U
1,1,1-Trichloroethane	0.053 U	0.056 U					
1,1,2-Trichloroethane	0.053 U	0.056 U					
Trichloroethylene	0.053 U	0.056 U					
Vinyl Acetate	0.53 U	0.56 U					
Vinyl Chloride	0.053 U	0.056 U					
Xylenes	0.053 U	0.056 U	0.027 U	0.027 U	0.027 U	0.026 U	2.8

Table B.26-4
Area 39 - Laboratory Area Soil SVOC Results

Area	39	39	39	39	39	39	39
Sample ID	39-VS-10	39-VS-26	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-40
Date Sampled	4/21/92	4/21/92	6/27/92	6/27/92	6/27/92	6/27/92	6/27/92
Depth	2 to 9	12 to 12.5	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5
SVOCs (mg/kg)							
Aniline	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Benzidine	1.8 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzoic Acid	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
Benzyl Alcohol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-Chloroethoxy)methane	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-Chloroisopropyl)ether	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bis(2-ethylhexyl)Phthalate (DEHP)	0.044 J	0.19 U	0.18 U	0.18 U	0.18 U	0.046 J	0.18 U
Bis(Chloroethyl)ether	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Bromodiphenyl ether	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
N-Butyl Benzyl Phthalate	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Chloroaniline	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Chloronaphthalene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Chlorophenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Chlorophenyl-phenyl ether	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Dibenzofuran	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Dibutyl Phthalate	0.18 U	0.19 U	0.18 U	0.25	0.18 U	0.18 U	0.18 U
1,2-Dichlorobenzene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3-Dichlorobenzene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,4-Dichlorobenzene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
3,3-Dichlorobenzidine	0.36 U	0.38 U	0.36 U	0.36 U	0.36 U	0.35 U	0.36 U
2,4-Dichlorophenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Diethyl Phthalate	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Dimethyl Phthalate	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2,4-Dimethylphenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4,6-Dinitro-o-Cresol	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
2,4-Dinitrophenol	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
Di-N-Octylphthalate	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachlorobenzene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachlorobutadiene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

Table B.26-4
Area 39 - Laboratory Area Soil SVOC Results

Area	39	39	39	39	39	39	39
Sample ID	39-VS-10	39-VS-26	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-40
Date Sampled	4/21/92	4/21/92	6/27/92	6/27/92	6/27/92	6/27/92	6/27/92
Depth	2 to 9	12 to 12.5	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5
SVOCs (mg/kg)							
Hexachlorocyclopentadiene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachloroethane	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Isophorone	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Methylphenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Methylphenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2-Nitroaniline	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
3-Nitroaniline	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
4-Nitroaniline	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
2-Nitrophenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-Nitrophenol	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
N-Nitrosodimethylamine	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
N-Nitrosodi-N-propylamine	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
N-Nitrosodiphenylamine	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Pentachlorophenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Phenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,2,4-Trichlorobenzene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
2,4,5-Trichlorophenol	0.91 U	0.96 U	0.91 U	0.91 U	0.9 U	0.88 U	0.9 U
2,4,6-Trichlorophenol	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

Table B.26-5
Area 39 - Laboratory Area Soil PAH Results

Area	39	39	39	39	39	39	39
Sample ID	39-VS-10	39-VS-26	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-40
Date Sampled	4/21/92	4/21/92	6/27/92	6/27/92	6/27/92	6/27/92	6/27/92
Depth	2 to 9	12 to 12.5	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5
PAH (mg/kg)							
Benzo(a)Anthracene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.038 J
Benzo(a)Pyrene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Benzo(b)Fluoranthene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Benzo(k)Fluoranthene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Chrysene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.039 J
Dibenz(a,h)anthracene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Indeno(1,2,3-cd)pyrene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Total Carcinogenic PAHS (BaP TEQs)	0.41598 U	0.43909 U	0.41598 U	0.41598 U	0.41598 U	0.41598 U	0.202739
2-Methylnaphthalene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.038 J
Acenaphthene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Acenaphthylene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Anthracene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Benzo(g,h,i)Perylene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Fluoranthene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.076 J
Fluorene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Naphthalene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Phenanthrene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.047 J
Pyrene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	0.18 U	0.077 J
PAH (Non-Carc) - Total	1.8 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	0.778

Table B.26-6
Area 39 - Laboratory Area Soil TPH Results

Area	39	39	39	39	39
Sample ID	39-VS-35	39-VS-36	39-VS-37	39-VS-38	39-VS-40
Date Sampled	6/27/92	6/27/92	6/27/92	6/27/92	6/27/92
Depth	0 to 5	0 to 5	0 to 5	0 to 5	4 to 5
TPH (mg/kg)					
#2 Diesel	25 U	25 U	25 U	25 U	61
Gasoline	5 U	5 U	5 U	5 U	87

Appendix C

Groundwater, Surface Water, and Freshwater Sediment Quality Data

Appendix C provides groundwater, surface water, and freshwater sediment quality data for the Site. Specific notes for the tables are as follows:

1. Blanks indicate no analysis for a specific constituent.
2. Data qualifiers include the following:

   U Not detected at associated detection limit
   J Estimated concentration
   UJ Not detected; associated detection limit is an estimate
   R Rejected data, as determined during data validation
   S Sum of individual constituent concentrations (e.g., total cPAH and total PCBs)
3. Surface water sample ID suffixes include the month and year of sample collection (e.g., -3-88 sample ID suffix indicates sample collection in March 1988).
4. Field duplicate samples are designated with sample ID suffixes of D or DUP (these suffixes have identical meanings).

Groundwater Quality Data

Table C-1 - Summary of Total DNT Data for Groundwater

| | TOTAL DINITROTOLUENE CONCENTRATION IN µg/L | | |

Table C-1 - Summary of Total DNT Data for Groundwater

	TOTAL DINITROTOLUENE CONCENTRATION IN µg/L															
									RI							
LOCATION	Jan-95	Apr-95	Jul-95	Oct-95	Jan-96	Apr-96	Jul-96	Oct-96	Jan-97	Apr-97	Jul-97	Oct-97	Mar-98	Mar-99	Mar-00	Mar-01
MW-1																
MW-2																
MW-3	0.13	0.16	0.19	0.25	0.14	0.09	0.04	0.11	0.14	0.56	0.16	0.15	0.16 J	0.07	Dry	0.06 U
MW-4																
MW-5																
MW-6	0.44	0.26	0.50	0.31	0.38	0.27	0.35	0.27	0.43	0.39	0.33	0.23	0.33	0.08	0.38	0.06 U
MW-7																
MW-8	0.21	0.12	0.19	0.13	0.18	0.17	0.07	0.08	0.12	0.13	0.12	0.11	NS	NS	NS	NS
MW-9																
MW-11																
MW-12																
MW-13																
MW-14																
MW-15	0.16	0.16	Dry	Dry	0.10	0.09	Dry	Dry	0.03	0.08	Dry	Dry	NS	NS	NS	NS
MW-16																
MW-17																
MW-18																
MW-19	0.43	0.42	0.29	0.46	0.50	0.40	0.16	0.22	0.32	0.90	0.43	0.36	0.37	0.07	0.44	0.06 U
MW-20																
MW-21																
MW-22	0.52	0.35	0.46	0.27	0.42	0.87	0.23	0.11	0.52	0.53	0.24	0.17	0.39	0.05	0.30	0.06 U
MW-24																
MW-27	3.8	0.68	Dry	Dry	0.41	Dry	Dry	Dry	1.7	Dry	Dry	Dry	NS	NS	NS	NS
7-B-503																
Seep-1	0.20	0.22	0.20	0.08	0.14	0.12	0.08	0.14	0.25	0.27	0.02 U	0.03 U	NS	NS	NS	NS
Seep-2																
SPR-4																
W-1		0.19			0.24	0.21	0.11	0.13	0.18	0.65	0.18	0.13	NS	NS	NS	NS
W-2		0.27			0.27	0.20	0.15	0.18	0.23	0.60	0.25	0.17	0.22	0.07	0.24	0.06 U
W-3					0.02 U											

Notes:

Blanks indicate no analysis

U: not detected at associated reporting limit concentration

J: estimated concentration

NS: Not sampled in accordance with Ecology agreement for interim sampling dated March 6, 1998

Analyses performed by MultiChem Analytical Services Inc.

Total DNT equals sum of 2,4-DNT and 2,6-DNT concentrations with 1/2 detection limits used for nondetects.

I:\97-1033\nc\RI\RI2\06RT.tbl\a\Tbl3-2-4.xls

Table C-2 - Summary of NAX Results for Filtered and Unfiltered Groundwater Samples

Analyte	Concentration in µg/L*			Concentration in µg/L*		
	MW-19 (Unfiltered)	MW-19F (Filtered)	MW-19 Filtrate (Particulate)	MW-22 (Unfiltered)	MW-22F (Filtered)	MW-22 Filtrate (Particulate)
2,4-DNT	0.19	0.32	0.031 U	0.12	0.13	0.031 U
2,6-DNT	0.33	0.25	0.013 U	0.37	0.38	0.013 U
2,4,6-TNT	0.14	0.13	0.13 U	0.13 U	0.13 U	0.13 U
NB	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,3-DNB	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,3,5-TNB	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U

Notes:

1) * Particulate concentrations are per liter of water filtered (1 liter per sample).
2) Samples collected in October 1992.
3) U Not detected at indicated concentration.

Table C-3 - Summary of Nitrate Data for Groundwater

Sample Number	Nitrate as Nitrogen Concentration in mg/L												
	Pre-RI								RI				
	Dec-86	Mar-88	Apr-88	Jun-88	Oct-88	Jan-89	Nov-89	Aug-90	Mar-92	Jun/Jul-92	Sep-92	Dec-92	Jan-93
MW-1		4.2		4.8	4.2	5.4	3.7	4.2	3.4	3.4	0.73	8.2	
MW-2		1.4		1.4	1.5	1.4			1.2	1.43 J	1.2	1.2	
MW-3		1.2		1.4	1.4	1.3		2.1	1.3	1.72 J	1.9	1.7	
MW-4		1.6		1.6	1.6	1.5			1.2	1.35	1.56	1.3	
MW-5		2.3		2.7	6.0	7.5			1.5	1.58	1.73	2.1	
MW-6		13.0	14.0	8.2	9.8	9.5		7.5	7.1	6.0	8.5	6.1	
MW-7		0.5		0.23	0.21	0.44			0.62	0.27 J	0.17	0.3	
MW-8		0.7		0.62	0.38	0.94		0.28	0.54	0.65	0.56	0.34	
MW-9		0.2 U		0.044	0.041	0.029			0.41	0.27	0.09	0.19	
MW-11		1.0	1.1	1.1	0.92	2.3			1.1	1.29 J	0.96	1.0	
MW-12		1.0	1.1	1.6	1.1	1.1			1.4	1.39 J	1.2	1.1	
MW-13		13.0	9.6	6.4	8.5	10.0		4.6	4.2	1.75 J	4.2	3.1	
MW-14		1.4		0.68	9.2	3.4			1.2	0.67	2.8	2.8	
MW-15		0.3		1.4		1.5	1.7	1.7	2.1	1.4		1.4	1.4
MW-16		1.2		0.89	1.6	1.1	1.1		1.1	1.26	1.1	1.0	
MW-17						0.36			0.37	0.59	0.26	0.43	
MW-18							1.3	0.23	0.1 U	0.25	0.32	0.19	
MW-19							5.9	5.4	4.0	4.9	4.2	4.0	
MW-20									1.0	0.9	1.1	1.2	
MW-21									0.7	1.03	1.0	1.1	
MW-22									0.1 U	9.9	10.3	9.5	
MW-24									0.27	0.35 J	0.33	0.32	
MW-27									0.41	0.22	DRY		
7-B-503													
SEEP1							1.2	1.4	0.9	1.07	1.1	1.1	
SEEP2							0.31	0.3	0.31	0.29	0.33	0.36	
SPR-4	0.28	0.3		0.22	0.51	0.79			0.27	0.14	0.08	0.13	

Notes:
1) U: not detected at associated concentration
   J: estimated concentration
2) Blanks indicate no analysis.
3) Pre-RI analyses performed by Laucks Testing Labs; RI analyses performed by Analytical Technologies Inc

Surface Water and Freshwater Sediment Quality Data

The following appendix material was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

Table ... -1 - Total Metal Results for Surface Water Samples

Sample ID:	Sampling Date	Concentration in mg/L Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead
SW-1-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-1-1-89	01/04/89								0.003 U
SW-1-3-92	03/13/92	0.038	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-1-6-92	06/25/92	0.036	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW-1D-6-92	06/25/92	0.046	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW-1-12-92	12/08/92	2.3	0.005 UJ	0.0073	0.002 U	0.0008 UJ	0.01 U	0.014	0.039
SW-1D-12-92	12/08/92	1.4	0.005 UJ	0.025 UJ	0.002 U	0.0008 UJ	0.01 U	0.0096	0.02
SW#2,SW#2	12/02/86		0.005 U				0.005 U		0.01 U
SW-2-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-2-1-89	01/04/89								0.003 U
SW-2-3-92	03/13/92	0.041	0.005 U	0.005 U	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-2-6-92	06/25/92	0.035	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW-2-9-92	09/23/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.0055	0.003 U
SW-2-12-92	12/08/92	0.03 U	0.005 UJ	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW#3,SW#3	12/02/86		0.005 U				0.005 U		0.01 U
SW-3-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-3-1-89	01/04/89								0.003 U
SW-3-3-92	03/13/92	0.036	0.005 U	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-3-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW-3-9-92	09/23/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-3-12-92	12/08/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW#4,SW#4	12/02/86		0.005 U				0.005 U		0.01 U
SW-4-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-4-1-89	01/04/89								0.003 U
SW-4-3-92	03/13/92	0.051	0.005 U	0.005 U	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-4-6-92	06/25/92	0.086	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW#5,SW#5	12/03/86		0.005 U				0.005 U		0.01 U
SW-5-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-5-1-89	01/04/89								0.003
SW-5-3-92	03/16/92	0.036	0.005 U	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-5D-3-92	03/16/92	0.05	0.005 U	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-5-6-92	06/25/92	0.14	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW-5-9-92	09/23/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-5-12-92	12/07/92	0.063	0.005 UJ	0.005 U	0.002 U	0.0002 U	0.01 U	0.0075	0.003 U
SW#6,SW#6	12/03/86		0.005 U				0.005 U		0.01 U
SW-6-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-6-1-89	01/04/89								0.003 U
SW-6-3-92	03/16/92	0.06	0.005 U	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-6-6-92	06/25/92	0.051	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.006	0.003 U
SW-6-9-92	09/23/92	0.15	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.0088	0.0063
SW-6-12-92	12/07/92	0.39	0.005 UJ	0.005 U	0.002 U	0.0002 U	0.01 U	0.005	0.013
SW-7-3-88	02/23/88		0.005 U				0.001 U		0.005 U
SW-7-1-89	01/04/89								0.003 U
SW-7-3-92	03/13/92	0.058	0.005 U	0.005 U	0.002 U	0.0002 U	0.013	0.0074	0.0031
SW-7-6-92	06/25/92	0.043	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-7-9-92	09/23/92	0.047	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.0058	0.003
SW-7D-9-92	09/23/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.0055	0.003 U
SW-7-12-92	12/07/92	0.039	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U

Sample ID:	Sampling Date	Concentration in mg/L Mercury	Nickel	Selenium	Silver	Thallium	Zinc	Iron	Manganese
SW-1-3-88	02/23/88						0.002 B	0.12 B	0.004
SW-1-1-89	01/04/89								
SW-1-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.015		
SW-1-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.02		
SW-1D-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.017		
SW-1-12-92	12/08/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.025 UJ	0.042		
SW-1D-12-92	12/08/92	0.0002 U	0.01 U	0.025 UJ	0.0002 U	0.025 UJ	0.03		
SW#2,SW#2	12/02/86								
SW-2-3-88	02/23/88						0.002 B	0.11 B	0.002
SW-2-1-89	01/04/89								
SW-2-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.00032	0.005 UJ	0.025		
SW-2-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.014		
SW-2-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW-2-12-92	12/08/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW#3,SW#3	12/02/86								
SW-3-3-88	02/23/88						0.005 B	0.14 B	0.002
SW-3-1-89	01/04/89								
SW-3-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.018		
SW-3-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.015		
SW-3-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW-3-12-92	12/08/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW#4,SW#4	12/02/86								
SW-4-3-88	02/23/88						0.003 B	0.8 B	0.016
SW-4-1-89	01/04/89								
SW-4-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.014		
SW-4-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.016		
SW#5,SW#5	12/03/86								
SW-5-3-88	02/23/88						0.001 B	0.04 B	0.001 U
SW-5-1-89	01/04/89								
SW-5-3-92	03/16/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.032		
SW-5D-3-92	03/16/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.026		
SW-5-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.022		
SW-5-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.011		
SW-5-12-92	12/07/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW#6,SW#6	12/03/86								
SW-6-3-88	02/23/88						0.002 B	0.01 B	0.001 U
SW-6-1-89	01/04/89								
SW-6-3-92	03/16/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.012		
SW-6-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.016		
SW-6-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.038		
SW-6-12-92	12/07/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW-7-3-88	02/23/88						0.011 B	0.02 B	0.001
SW-7-1-89	01/04/89								
SW-7-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.024		
SW-7-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.015		
SW-7-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.016		
SW-7D-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		
SW-7-12-92	12/07/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U		

Sample ID:	Sampling Date	Concentration in mg/L Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead
SW-1-6-88	06/29/88								0.003 U
SW-1-10-88	10/04/88								0.003 U
SW-1-11-89	11/01/89								0.003 U
SW-1D-11-89	11/01/89								0.003 U
SW-1-3-92	03/13/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.0098
SW-1-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.013	0.003 U
SW-1D-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.01	0.003 U
SW-1-12-92	12/08/92	0.06 UJ	0.0056 U	0.005 U	0.002 U	0.0008 UJ	0.01 U	0.0077	0.015 UJ
SW-1D-12-92	12/08/92	0.03 U	0.0065 U	0.025 UJ	0.002 U	0.0008 UJ	0.01 U	0.005	0.003 U
SW-2-6-88	06/29/88								0.003 U
SW-2-10-88	10/04/88								0.003 U
SW-2-3-92	03/13/92	0.03	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-2-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.013	0.003 U
SW-2-9-92	09/23/92	0.03 U	0.0051	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-2-12-92	12/08/92	0.03 U	0.0088 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-3-6-88	06/29/88								0.003 U
SW-3-10-88	10/04/88								0.003 U
SW-3-3-92	03/13/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 UJ	0.01 U	0.14	0.003 U
SW-3-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.009	0.003 U
SW-3-9-92	09/23/92	0.03 U	0.0053	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-3-12-92	12/08/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-4-6-88	06/29/88								0.003 U
SW-4-3-92	03/13/92	0.042	0.005 U	0.005 U	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.0043
SW-4-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.01	0.003 U
SW-5-6-88	06/29/88								0.003 U
SW-5-10-88	10/04/88								0.003 U
SW-5-3-92	03/16/92	0.03 U	0.005 U	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 UJ
SW-5D-3-92	03/16/92	0.03 U	0.0065	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-5-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.009	0.003 U
SW-5-9-92	09/23/92	0.03 U	0.0082	0.005 U	0.002 U	0.0002 U	0.01 U	0.0052	0.003 U
SW-5-12-92	12/07/92	0.03 U	0.0071	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-6-6-88	06/29/88								0.006
SW-6-10-88	10/04/88								0.003 U
SW-6-3-92	03/16/92	0.03 U	0.006	0.005 UJ	0.002 U	0.0002 UJ	0.01 U	0.005 U	0.003 U
SW-6-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.009	0.003 U
SW-6-9-92	09/23/92	0.03 U	0.018	0.005 U	0.002 U	0.0002 U	0.01 U	0.0067	0.003 U
SW-6-12-92	12/07/92	0.03 U	0.0084	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U
SW-7-6-88	06/29/88								0.003 U
SW-7-10-88	10/04/88								0.003 U
SW-7-3-92	03/13/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.0048
SW-7-6-92	06/25/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.01	0.003 U
SW-7-9-92	09/23/92	0.03 U	0.0098	0.005 U	0.002 U	0.0002 U	0.01 U	0.0073	0.003 U
SW-7D-9-92	09/23/92	0.03 U	0.01	0.005 U	0.002 U	0.0002 U	0.01 U	0.0083	0.003 U
SW-7-12-92	12/07/92	0.03 U	0.005 U	0.005 U	0.002 U	0.0002 U	0.01 U	0.005 U	0.003 U

Sample ID:	Sampling Date	Concentration in mg/L Mercury	Nickel	Selenium	Silver	Thallium	Zinc
SW-1-6-88	06/29/88						
SW-1-10-88	10/04/88						
SW-1-11-89	11/01/89						
SW-1D-11-89	11/01/89						
SW-1-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.011
SW-1-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.02
SW-1D-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.015
SW-1-12-92	12/08/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.025 UJ	0.01 U
SW-1D-12-92	12/08/92	0.0002 U	0.01 U	0.025 UJ	0.0002 U	0.025 UJ	0.01 U
SW-2-6-88	06/29/88						
SW-2-10-88	10/04/88						
SW-2-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.015
SW-2-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.027
SW-2-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-2-12-92	12/08/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-3-6-88	06/29/88						
SW-3-10-88	10/04/88						
SW-3-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 UJ	0.01 U
SW-3-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.018
SW-3-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-3-12-92	12/08/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-4-6-88	06/29/88						
SW-4-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-4-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.013
SW-5-6-88	06/29/88						
SW-5-10-88	10/04/88						
SW-5-3-92	03/16/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.031
SW-5D-3-92	03/16/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.023
SW-5-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.016
SW-5-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-5-12-92	12/07/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-6-6-88	06/29/88						
SW-6-10-88	10/04/88						
SW-6-3-92	03/16/92	0.0002 U	0.01 U	0.005 UJ	0.0002 U	0.005 U	0.027
SW-6-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.012
SW-6-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.011
SW-6-12-92	12/07/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-7-6-88	06/29/88						
SW-7-10-88	10/04/88						
SW-7-3-92	03/13/92	0.0002 U	0.01 U	0.005 U	0.0004 U	0.005 UJ	0.02
SW-7-6-92	06/25/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.02
SW-7-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U
SW-7D-9-92	09/23/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.011
SW-7-12-92	12/07/92	0.0002 U	0.01 U	0.005 U	0.0002 U	0.005 U	0.01 U

Table C-3W-3 - Nitroaromatic Explosive Results for Surface Water Samples

Sample ID:	Sampling Date	Concentration in µg/L						
		Nitro-benzene	1,3-Dinitro-benzene	1,3,5-Trinitro-benzene	2,4-Dinitro-toluene	2,6-Dinitro toluene	2,4,6-Trinitro-toluene	Total DNT
SW-1-10-88	10/04/88				0.01 U	0.01 U	0.01 U	0.010 U
SW-1-1-89	01/04/89				0.05 U	0.01 J	0.05 U	0.035 J
SW-1-11-89	11/01/89				0.05 U	0.05 U	0.05 U	0.050 U
SW-1-3-92	03/13/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-1-6-92	06/25/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-1D-6-92	06/25/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-1-12-92	12/08/92	8.5 U	2.2 U	0.8 U	0.16 U	0.065 U	0.65 U	0.113 U
SW-1D-12-92	12/08/92	8.5 U	2.2 U	0.8 U	0.16 U	0.065 U	0.65 U	0.113 U
SW-2-10-88	10/04/88				0.01 U	0.01 U	0.01 U	0.010 U
SW-2-1-89	01/04/89				0.01 J	0.02 J	0.05 U	0.030 J
SW-2-3-92	03/13/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-2-6-92	06/25/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-2-9-92	09/23/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-2-12-92	12/08/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-3-10-88	10/04/88				0.01 U	0.01 U	0.01 U	0.010 U
SW-3-1-89	01/04/89				0.05 U	0.03 J	0.05 U	0.055 J
SW-3-3-92	03/13/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-3-6-92	06/25/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-3-9-92	09/23/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-3-12-92	12/08/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-4-1-89	01/04/89				0.05 U	0.05 U	0.05 U	0.050 U
SW-4-3-92	03/13/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-4-6-92	06/25/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-5-10-88	10/04/88				0.01	0.01 U	0.01 U	0.015 S
SW-5-1-89	01/04/89				0.05 U	0.05 U	0.05 U	0.050 U
SW-5-3-92	03/16/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-5D-3-92	03/16/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-5-6-92	06/25/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-5-9-92	09/23/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-5-12-92	12/07/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-6-10-88	10/04/88				0.01	0.01 U	0.01 U	0.015 S
SW-6-1-89	01/04/89				0.05 U	0.05 U	0.05 U	0.050 U
SW-6-3-92	03/16/92	1.9 U	0.49 U	0.18 U	0.034 U	0.014 U	0.14 U	0.024 U
SW-6-6-92	06/25/92	8.5 U	2.2 U	0.8 U	0.16 U	0.065 U	0.65 U	0.113 U
SW-6-9-92	09/23/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-6-12-92	12/07/92	3.4 U	0.88 U	0.32 U	0.062 U	0.026 U	0.26 U	0.044 U
SW-7-10-88	10/04/88				0.01	0.01 U	0.01 U	0.015 S
SW-7-1-89	01/04/89				0.05 U	0.05 U	0.05 U	0.050 U
SW-7-3-92	03/13/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-7-6-92	06/25/92	3.4 U	0.88 U	0.32 U	0.062 U	0.026 U	0.26 U	0.044 U
SW-7-9-92	09/23/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-7D-9-92	09/23/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U
SW-7-12-92	12/07/92	1.7 U	0.44 U	0.16 U	0.031 U	0.013 U	0.13 U	0.022 U

Table C-SW-4 - Monomethylamine Nitroglycerin Results for Surface Water Samples

Sample ID:	Sampling Date	Concentration in µg/L Monomethyl-amine	Nitrogly-cerine
SW-1-3-88	02/23/88	1 U	
SW-1-10-88	10/04/88	1 U	0.05 U
SW-1-1-89	01/04/89	1 U	0.05 U
SW-1-11-89	11/01/89	1 U	0.05 U
SW-1-3-92	03/13/92	38 U	2.5 UJ
SW-1-6-92	06/25/92	38 U	2.5 U
SW-1D-6-92	06/25/92	38 U	2.5 U
SW-2-3-88	02/23/88	1 U	
SW-2-10-88	10/04/88	1 U	0.05 U
SW-2-1-89	01/04/89	1 U	0.05 U
SW-2-3-92	03/13/92	38 U	2.5 UJ
SW-2-6-92	06/25/92	38 U	2.5 U
SW-3-3-88	02/23/88	1 U	
SW-3-10-88	10/04/88	1 U	0.05 U
SW-3-1-89	01/04/89	1 U	0.05 U
SW-3-3-92	03/13/92	38 U	2.5 UJ
SW-3-6-92	06/25/92	38 U	2.5 U
SW-4-3-88	02/23/88	1 U	
SW-4-1-89	01/04/89	1 U	0.05 U
SW-4-3-92	03/13/92	38 U	2.5 UJ
SW-4-6-92	06/25/92	38 U	2.5 U
SW-5-3-88	02/23/88	1 U	
SW-5-10-88	10/04/88	1 U	0.05 U
SW-5-1-89	01/04/89	1 U	0.05 U
SW-5-3-92	03/16/92	38 U	2.5 UJ
SW-5D-3-92	03/16/92	38 U	2.5 UJ
SW-5-6-92	06/25/92	38 U	2.5 U
SW-6-3-88	02/23/88	1 U	
SW-6-10-88	10/04/88	1 U	0.05 U
SW-6-1-89	01/04/89	1 U	0.05 U
SW-6-3-92	03/16/92	38 U	2.5 UJ
SW-6-6-92	06/25/92	38 U	2.5 U
SW-7-3-88	02/23/88	1 U	
SW-7-10-88	10/04/88	1 U	0.05 U
SW-7-1-89	01/04/89	1 U	0.05 U
SW-7-3-92	03/13/92	38 U	2.5 UJ
SW-7-6-92	06/25/92	38 U	2.5 U

Table C-SW-5 - Total Petroleum Hydrocarbon (Method 418.1) Results for Surface Water Samples

Sample ID:	Sampling Date	Concentration in mg/L Total Petroleum Hydrocarbons (418.1)
SW-1-3-92	03/13/92	1 U
SW-1-6-92	06/25/92	1 U
SW-1D-6-92	06/25/92	1 U
SW-1-12-92	12/08/92	1 U
SW-2-3-92	03/13/92	1 U
SW-2-6-92	06/25/92	1 U
SW-2-9-92	09/23/92	1 U
SW-2-12-92	12/08/92	1 U
SW-3-3-92	03/13/92	1 U
SW-3-6-92	06/25/92	1 U
SW-3-9-92	09/23/92	1 U
SW-3-12-92	12/08/92	1 U
SW-4-3-92	03/13/92	1 U
SW-4-6-92	06/25/92	1 U
SW-5-3-92	03/16/92	1 U
SW-5D-3-92	03/16/92	1 U
SW-5-6-92	06/25/92	1 U
SW-5-9-92	09/23/92	1 U
SW-5-12-92	12/07/92	1 U
SW-6-3-92	03/16/92	1 U
SW-6-6-92	06/25/92	1 U
SW-6-9-92	09/23/92	1 U
SW-6-12-92	12/07/92	1 U
SW-7-3-92	03/13/92	1 U
SW-7-6-92	06/25/92	1 U
SW-7-9-92	09/23/92	1 U
SW-7D-9-92	09/23/92	1 U
SW-7-12-92	12/07/92	1 U

Sample ID:	Sampling Date	Concentration in µg/L										
		Acetone	Benzene	Bromo-dichloro-methane	Bromo-form	Bromo-methane	Carbon Disulfide	Carbon Tetra-chloride	Chloro-benzene	Chloro-ethane	Chloro-form	Chloro-methane
SW-1-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U
SW-1-11-89	11/01/89	5 U	1 U	1 U	1 U	1 U	1 U	1 U	3 U	3 U	1 U	1 U
SW-2-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U
SW-3-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U
SW-4-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U
SW-5-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U
SW-6-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U
SW-7-3-88	02/23/88		1 U	1 U	5 U	10 U		1 U	1 U	10 U	1 U	10 U

Sample ID:	Concentration in µg/L											
	Dibromo-chloro-methane	Ethyl-benzene	Methylene Chloride	Styrene	Tetra-chloro-ethene	Toluene	Trichloro-ethene	Vinyl Acetate	Vinyl Chloride	Xylene (Total)	2-Butanone	2-Hexanone
SW-1-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			
SW-1-11-89	3 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3 U	3 U
SW-2-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			
SW-3-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			
SW-4-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			
SW-5-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			
SW-6-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			
SW-7-3-88	1 U	1 U	5 U		1 U	1 U	1 U		10 U			

Sample ID:	Concentration in µg/L											
	4-Methyl-2-Pentanone	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-ethene(Total)	1,2-Dichloro-propane	1,3(cis)-Dichloro-propene	1,3(trans)-Dichloro-propene	1,1,1-Trichloro-ethane	1,1,2-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane
SW-1-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U
SW-1-11-89	3 U	1 U	1 U	1 U	1 U	1 U	3 U	3 U	1 U	1 U	3 U
SW-2-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U
SW-3-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U
SW-4-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U
SW-5-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U
SW-6-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U
SW-7-3-88		1 U	1 U	1 U		1 U	1 U	1 U	1 U	1 U	1 U

Sample ID:	Sampling Date	Explosives Concentration in µg/L		
		Nitro-benzene	2,4-Dinitro-toluene	2,6-Dinitro-toluene
SW-1-3-92	03/13/92	10 U	10 U	10 U
SW-2-3-92	03/13/92	10 U	10 U	10 U
SW-3-3-92	03/13/92	10 U	10 U	10 U
SW-4-3-92	03/13/92	10 U	10 U	10 U
SW-5-3-92	03/16/92	10 U	10 U	10 U
SW-5D-3-92	03/16/92	10 U	10 U	10 U
SW-6-3-92	03/16/92	10 U	10 U	10 U
SW-7-3-92	03/13/92	10 U	10 U	10 U

Sample ID:	Non-carcinogenic PAHs Concentration in µg/L									
	Acenaph-thene	Acenaph-thylene	Anthracene	Benzo(g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	2-Methyl-naphthalene
SW-1-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-2-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-3-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-4-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-5-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-5D-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-6-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-7-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Sample ID:	Carcinogenic PAHs Concentration in µg/L							
	Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene	Indeno (1,2,3-c,d) Pyrene	Total cPAHs
SW-1-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-2-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-3-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-4-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-5-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-5D-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-6-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US
SW-7-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	35 US

Sample ID:	Phenols Concentration in µg/L									
	Phenol	2-Chloro-phenol	2-Methyl-phenol	4-Methyl-phenol	2-Nitro-phenol	4-Nitro-phenol	2,4-Dichloro-phenol	2,4-Dimethyl-phenol	2,4-Dinitro-phenol	4-Chloro-3-Methyl-phenol
SW-1-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-2-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-3-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-4-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-5-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-5D-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-6-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U
SW-7-3-92	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	50 U	10 U

Sample ID:	Phenols Concentration in µg/L				Phthalates Concentration in µg/L					
	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	4,6-Dinitro-2-Methyl-phenol	Penta-chloro-phenol	Bis(2-Ethylhexyl) Phthalate	Butyl-benzyl-Phthalate	Di-N-Butyl-phthalate	Di-N-Octyl-phthalate	Diethyl-phthalate	Dimethyl-phthalate
SW-1-3-92	50 U	10 U	50 U	10 U	14	10 U	10 U	10 U	10 U	10 U
SW-2-3-92	50 U	10 U	50 U	10 U	3 J	10 U	10 U	10 U	10 U	10 U
SW-3-3-92	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-4-3-92	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-5-3-92	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-5D-3-92	50 U	10 U	50 U	10 U	1.3 J	10 U	10 U	10 U	10 U	10 U
SW-6-3-92	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-7-3-92	50 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Sample ID:	Other Semivolatiles Concentration in µg/L									
	Aniline	Benzidine	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloro-ethoxy) Methane	Bis(2-Chloro-ethyl) Ether	Bis(2-Chloro-isopropyl) Ether	Dibenzo-furan	Hexachloro-benzene	Hexachloro-butadiene
SW-1-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-2-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-3-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-4-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-5-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-5D-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-6-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SW-7-3-92	10 U	100 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Sample ID:	Other Semivolatiles Concentration in µg/L									
	Hexachloro-cyclo-pentadiene	Hexachloro-ethane	Isophorone	N-Nitroso-Di-Phenyl-amine	N-Nitroso-Di-Propyl-amine	N-Nitroso-Di-methyl amine	2-Chloro-naphthalene	4-Chloro-aniline	2-Nitro-aniline	3-Nitro-aniline
SW-1-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U
SW-2-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 R
SW-3-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U
SW-4-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U
SW-5-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U
SW-5D-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U
SW-6-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U
SW-7-3-92	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	50 U

Sample ID:	Other Semivolatiles Concentration in µg/L							
	4-Nitro-aniline	4-Bromophenyl Phenyl Ether	4-Chlorophenyl-Phenyl Ether	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	3,3'-Dichloro-benzidine	1,2,4-Trichloro-benzene
SW-1-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-2-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-3-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-4-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-5-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-5D-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-6-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
SW-7-3-92	50 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U

Sample ID:	Sampling Date	Concentration in µg/L Acenaph-thene	Acenaph-thylene	Anthracene	Benzo(g,h,i) Perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
SW-1-3-92	03/13/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-1-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.04	0.01 U
SW-1D-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.02	0.01 U
SW-1-12-92	12/08/92	0.05 U	0.2 U	0.03	0.14	0.38	0.02 U	0.05 U	0.13 U	0.16 J
SW-1D-12-92	12/08/92	0.05 U	0.2 U	0.03	0.18	0.41	0.02 U	0.05 U	0.15 U	0.24 J
SW-2-3-92	03/13/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-2-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U
SW-2-9-92	09/23/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-2-12-92	12/08/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.03 U	0.01 U
SW-3-3-92	03/13/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-3-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U
SW-3-9-92	09/23/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-3-12-92	12/08/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.03 U	0.01 U
SW-4-3-92	03/13/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-4-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U
SW-5-3-92	03/16/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.02	0.01 U
SW-5D-3-92	03/16/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.025	0.01 U
SW-5-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.04	0.01 U
SW-5-9-92	09/23/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-5-12-92	12/07/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.05	0.01 U
SW-6-3-92	03/16/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.025	0.01 U
SW-6-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.02	0.01 U
SW-6-9-92	09/23/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-6-12-92	12/07/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.05	0.01 U
SW-7-3-92	03/13/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.02	0.01 U
SW-7-6-92	06/25/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.01 U	0.05 U	0.01 U	0.01 U
SW-7-9-92	09/23/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-7D-9-92	09/23/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.01 U	0.01 U
SW-7-12-92	12/07/92	0.05 U	0.2 U	0.01 U	0.02 U	0.01 U	0.02 U	0.05 U	0.03	0.01 U

Sample ID:	Sampling Date	Concentration in µg/L Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene	Indeno(1,2,3-c,d)Pyrene	Total cPAHs
SW-1-3-92	03/13/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-1-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-1D-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-1-12-92	12/08/92	0.09	0.09	0.17	0.06 J	0.23	0.01 U	0.07	0.71 JS
SW-1D-12-92	12/08/92	0.08	0.09	0.17	0.09 J	0.25	0.01 U	0.08	0.76 JS
SW-2-3-92	03/13/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-2-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-2-9-92	09/23/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-2-12-92	12/08/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-3-3-92	03/13/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-3-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-3-9-92	09/23/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-3-12-92	12/08/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-4-3-92	03/13/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-4-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-5-3-92	03/16/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-5D-3-92	03/16/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-5-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-5-9-92	09/23/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-5-12-92	12/07/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-6-3-92	03/16/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-6-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-6-9-92	09/23/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-6-12-92	12/07/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-7-3-92	03/13/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-7-6-92	06/25/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-7-9-92	09/23/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-7D-9-92	09/23/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US
SW-7-12-92	12/07/92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.005 US

Table SW-9 - PCB Results for Surface Water Samples

Sample ID:	Sampling Date	Concentration in µg/L							
		PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	Total PCBs
SW#2,SW#2	12/02/86	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.00225 US
SW#3,SW#3	12/02/86	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.00225 US
SW#4,SW#4	12/02/86	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.001 U	0.001 U	0.00225 US

Table C-SW-10 - OCPesticide Results for Surface Water Samples

Sample ID:	Sampling Date	Concentration in µg/L								
		Aldrin	Alpha-BHC	Beta-BHC	Gamma-BHC	Delta-BHC	Chlordane	Dieldrin	Endosulfan I	Endosulfan II
SW#2,SW#2	12/02/86	0.002 J	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.1 U	0.05 U	0.1 U
SW#3,SW#3	12/02/86	0.002 J	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.1 U	0.05 U	0.1 U
SW#4,SW#4	12/02/86	0.003 J	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.1 U	0.05 U	0.1 U

Sample ID:	Endosulfan Sulfate	Endrin	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	4,4'-DDD	4,4'-DDE	4,4'-DDT
SW#2,SW#2	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.5 U	1 U	0.1 U	0.1 U	0.1 U
SW#3,SW#3	0.1 U	0.1 U	0.003 J	0.05 U	0.05 U	0.5 U	1 U	0.1 U	0.1 U	0.1 U
SW#4,SW#4	0.1 U	0.004 J	0.004 J	0.05 U	0.05 U	0.5 U	1 U	0.1 U	0.1 U	0.1 U

Sample ID:	Sampling Date	Total Dissolved Solids in mg/L	Total Suspended Solids in mg/L	Total Organic Carbon in Percent	Nitrite + Nitrate in mg/L	Temperature in C	Dissolved Oxygen in mg/L	pH	Conductivity in umhos/cm
SW-1-3-88	02/23/88	84			0.6	6		7.2	113
SW-1-6-88	06/29/88	80			0.55	12		7.3	7.3
SW-1-10-88	10/04/88	96			0.6	8.9		6.9	128
SW-1-1-89	01/04/89	72 E			0.86			6.8	50
SW-1-11-89	11/01/89	86	1 U		0.58 J			7.9	110
SW-1D-11-89	11/01/89	88	1 U		0.54 J			7.9	110
SW-1-3-92	03/13/92	130 J	16 J		0.5	9	11.5	6.4	60
SW-1-6-92	06/25/92	80	10 U	1.8	0.94	13.6	10.3	7	90
SW-1D-6-92	06/25/92	93	10 U	1.7	1				
SW-1-12-92	12/08/92	28000	160	1.3	0.38	7.3	10.4	5.3	20000
SW#2,SW#2	12/02/86				0.33				
SW-2-3-88	02/23/88	78			0.4	5		65	110
SW-2-6-88	06/29/88	80			0.28	12		7	7
SW-2-10-88	10/04/88	94			0.47	8.9		7.3	123
SW-2-1-89	01/04/89	72 E			0.71			6.9	50
SW-2-3-92	03/13/92	130 J	10 UJ		0.39	10	10.7	6.1	80
SW-2-6-92	06/25/92	90	10 U	1.4	0.52	13.3	10.1	7.2	100
SW-2-9-92	09/23/92	100	10 UJ	0.5 U	0.52	12.9	10.5	7.2	120
SW-2-12-92	12/08/92	82	10 U	0.5 U	0.67	5.8	12	6.7	300
SW#3,SW#3	12/02/86				0.32				
SW-3-3-88	02/23/88	84			0.4	6		7.1	110
SW-3-6-88	06/29/88	82			0.28	12		6.9	6.9
SW-3-10-88	10/04/88	99			0.4	8.9		7.25	127
SW-3-1-89	01/04/89	72 E			0.67	9.4		7	60
SW-3-3-92	03/13/92	140 J	10 UJ		0.36	10	10.7	5.9	70
SW-3-6-92	06/25/92	91	10 U	1	0.4	12.6	9.7	7.4	110
SW-3-9-92	09/23/92	110	10 UJ	0.7	0.45	12.1	10.8	7.9	120
SW-3-12-92	12/08/92	88	10 U	0.5 U	0.68	6.9	11.4	5.2	120
SW#4,SW#4	12/02/86				0.05 U				
SW-4-3-88	02/23/88	90			0.2 U	8		7.1	117
SW-4-6-88	06/29/88	78			0.025 U	12			
SW-4-1-89	01/04/89	83 E			0.046			6.3	50
SW-4-3-92	03/13/92	120 J	10 UJ		0.06	9	11.7	6.1	80
SW-4-6-92	06/25/92	84	10 U	3.5	0.08	21.6	7.4	7.8	110
SW#5,SW#5	12/03/86				0.05 U				
SW-5-3-88	02/23/88	42			0.2 U	4		7.7	
SW-5-6-88	06/29/88	56			0.025 U	18		6.5	6.5
SW-5-10-88	10/04/88	91			0.045	10.6		7.2	70
SW-5-1-89	01/04/89	58 E			0.028	6.9		6.7	70
SW-5-3-92	03/16/92	11 J	10 UJ		0.26	11	10.7	6.7	90
SW-5D-3-92	03/16/92	48 J	10 UJ		0.33				
SW-5-6-92	06/25/92	67	30	5.8	0.05	26.6	10.9	8.8	100
SW-5-9-92	09/23/92	110	20 UJ	11.8	0.05	18.8	8.2		170
SW-5-12-92	12/07/92	85 J	10 UJ	5.1	0.07	4	8.9	7.6	90
SW-6-10-92									
SW#6,SW#6	12/03/86				0.05 U				
SW-6-3-88	02/23/88	40			0.2 U	5		7.8	
SW-6-6-88	06/29/88	65			0.025 U	18		6.5	6.5
SW-6-10-88	10/04/88	89			0.032	11.1		7.2	70
SW-6-1-89	01/04/89	58 E			0.039	7.1		6.7	70
SW-6-3-92	03/16/92	32 J	10 UJ		0.46	12	11	8.5	80
SW-6-6-92	06/25/92	72	10 U	4.7	0.25	25.2	10.8	8.5	100
SW-6-9-92	09/23/92	250	26 J	11.9	0.05 U	18.5	5.8		150
SW-6-12-92	12/07/92	110 J	10 UJ	5.1	0.08	4.3	8.5	7.2	110
SW-7-3-88	02/23/88	38			0.2 U	5		7.6	84
SW-7-6-88	06/29/88	68			0.04	19		6.5	6.5
SW-7-10-88	10/04/88	85			0.067	11.1		7.1	80
SW-7-1-89	01/04/89	51 E			0.026	7.3		6.6	80
SW-7-3-92	03/13/92	120 J	10 J		0.31	14	13.7	6.3	70
SW-7-6-92	06/25/92	95	10 U	5.3	0.1	24.7	9.6	8.4	100
SW-7-9-92	09/23/92	110	64 J	10.1	0.05 U	19.7	9.2	7.2	160
SW-7D-9-92	09/23/92	110	72 J	11.3	0.05 U				
SW-7-12-92	12/07/92	98 J	10 UJ	7.7	0.05 U	4.2	8.5	8.3	100

Table C-SD-1 - Total Metal Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead
SPR#4SED,SPR#4	12/02/86		3 U				26		14
SW#1SED,SW#1	12/02/86		3 U				25		18
SW#2SED,SW#2	12/02/86		3 U				30		26
SW#3SED,SW#3	12/02/86		3 U				27		18
SW#4SED,SW#4	12/02/86		3 U				25		24
SW#5,SW#5SED	12/03/86		3 U				24		26
SW#6SED,SW#6	12/03/86		3 U				39		35
SD-1-3-92	03/13/92	7300	0.29 UJ	2.3	0.14 U	0.065	11	9.7	5.8
SD-2-3-92	03/13/92	7300	0.28 UJ	2.4	0.13 U	0.069	10	8.7	6
SD-3-3-92	03/13/92	6100	0.28 UJ	2.5	0.11 U	0.044	12	9.9	5.5 U
SD-4-3-92	03/13/92	12000	0.55 UJ	7.6	0.22 U	0.17	18	33	18
SD-5-3-92	03/16/92	7600	2.7	7.4	0.36 U	1.4	22	60	180
SD-5D-3-92	03/16/92	8300	2.4	9.7	0.43 U	1.2	23	64	180
SD-6-3-92	03/16/92	10000	0.7 U	4.2	0.28 U	0.58	26	28	68
SD-7-3-92	03/13/92	7600	0.96 UJ	2.9	0.16 U	0.25	12	11	35
FW-SD-501A	08/19/93								170
FW-SD-501B	08/19/93								26
FW-SD-502A	08/19/93								130
FW-SD-502AD	08/19/93								140
FW-SD-502B	08/19/93								29
FW-SD-503A	08/19/93								69
FW-SD-503B	08/19/93								19 U
FW-SD-504A	08/19/93								98
FW-SD-504B	08/19/93								34
FW-SD-505A	08/19/93								110
FW-SD-505B	08/19/93								9.4
FW-SD-506A	08/19/93								90
FW-SD-506B	08/19/93								43

Table C-SD-1 - Total Metal Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg Mercury	Nickel	Selenium	Silver	Thallium	Zinc
SPR#4SED,SPR#4	12/02/86						
SW#1SED,SW#1	12/02/86						
SW#2SED,SW#2	12/02/86						
SW#3SED,SW#3	12/02/86						
SW#4SED,SW#4	12/02/86						
SW#5,SW#5SED	12/03/86						
SW#6SED,SW#6	12/03/86						
SD-1-3-92	03/13/92	0.086 U	13	0.29 U	0.013 U	0.29 U	32
SD-2-3-92	03/13/92	0.078 U	12	0.28 U	0.012 U	0.28 U	31
SD-3-3-92	03/13/92	0.084 U	12	0.28 U	0.012 U	0.28 U	29
SD-4-3-92	03/13/92	0.16 U	14	0.55 U	0.026	0.55 U	66
SD-5-3-92	03/16/92	0.26 U	10	0.92 UJ	0.65	0.92 U	89
SD-5D-3-92	03/16/92	0.32 U	11	1.2 UJ	0.75	1.2 U	98
SD-6-3-92	03/16/92	0.21 U	14	0.72 UJ	0.36	0.72 U	45
SD-7-3-92	03/13/92	0.12 U	8.1	0.41 U	0.069	0.41 U	47
FW-SD-501A	08/19/93						
FW-SD-501B	08/19/93						
FW-SD-502A	08/19/93						
FW-SD-502AD	08/19/93						
FW-SD-502B	08/19/93						
FW-SD-503A	08/19/93						
FW-SD-503B	08/19/93						
FW-SD-504A	08/19/93						
FW-SD-504B	08/19/93						
FW-SD-505A	08/19/93						
FW-SD-505B	08/19/93						
FW-SD-506A	08/19/93						
FW-SD-506B	08/19/93						

Table C-SD-2 - Nitroaromatic Explosive Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg						
		Nitro-benzene	1,3-Dinitro-benzene	1,3,5-Trinitro-benzene	2,4-Dinitro-toluene	2,6-Dinitro toluene	2,4,6-Trinitro-toluene	Total DNT
SD-1-3-92	03/13/92	0.07 U	0.047 U	0.036 U	0.0071 U	0.0071 U	0.0036 U	0.0071 U
SD-2-3-92	03/13/92	0.068 U	0.046 U	0.034 U	0.0068 U	0.0068 U	0.0034 U	0.0068 U
SD-3-3-92	03/13/92	0.068 U	0.046 U	0.035 U	0.0069 U	0.0069 U	0.0035 U	0.0069 U
SD-4-3-92	03/13/92	0.14 U	0.096 U	0.072 U	0.014 U	0.014 U	0.0072 U	0.014 U
SD-5-3-92	03/16/92	0.2 U	0.13 U	0.099 U	0.02 U	0.02 U	0.0099 U	0.02 U
SD-5D-3-92	03/16/92	0.23 U	0.15 U	0.12 U	0.023 U	0.023 U	0.012 U	0.023 U
SD-6-3-92	03/16/92	0.13 U	0.089 U	0.067 U	0.013 U	0.013 U	0.0067 U	0.013 U
SD-7-3-92	03/13/92	0.14 U	0.095 U	0.071 U	0.014 U	0.014 U	0.0071 U	0.014 U

Table C-SD-3 - Monomethylamine Nitroglycerin Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg
		Monomethyl-amine
SD-1-3-92	03/13/92	5.9 UJ
SD-2-3-92	03/13/92	5.7 UJ
SD-3-3-92	03/13/92	5.8 UJ
SD-4-3-92	03/13/92	12 UJ
SD-5-3-92	03/16/92	17 UJ
SD-5D-3-92	03/16/92	19 UJ
SD-6-3-92	03/16/92	11 UJ
SD-7-3-92	03/13/92	12 UJ

Table C-SD-4 - Total Petroleum Hydrocarbon (Method 418.1) Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg Total Petroleum Hydrocarbons (418.1)
SD-1-3-92	03/13/92	20 U
SD-2-3-92	03/13/92	20 U
SD-3-3-92	03/13/92	20 U
SD-4-3-92	03/13/92	20 U
SD-5-3-92	03/16/92	20 U
SD-5D-3-92	03/16/92	20 U
SD-6-3-92	03/16/92	20 U
SD-7-3-92	03/13/92	20 U

Table C-SD-5 - Semivolatile Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Explosives Concentration in mg/kg		
		Nitro-benzene	2,4-Dinitro-toluene	2,6-Dinitro-toluene
SD-1-3-92	03/13/92	0.19 U	0.19 U	0.19 U
SD-2-3-92	03/13/92	0.19 U	0.19 U	0.19 U
SD-3-3-92	03/13/92	0.19 U	0.19 U	0.19 U
SD-4-3-92	03/13/92	0.35 U	0.35 U	0.35 U
SD-5-3-92	03/16/92	0.62 U	0.62 U	0.62 U
SD-5D-3-92	03/16/92	0.76 U	0.76 U	0.76 U
SD-6-3-92	03/16/92	0.49 U	0.49 U	0.49 U
SD-7-3-92	03/13/92	0.26 U	0.26 U	0.26 U

Sample ID:	Non-carcinogenic PAHs Concentration in mg/kg									
	Acenaph-thene	Acenaph-thylene	Anthracene	Benzo(g,h,i) Perylene	Fluoran-thene	Fluorene	Naph-thalene	Phenan-threne	Pyrene	2-Methyl-naphthalene
SD-1-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
SD-2-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
SD-3-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
SD-4-3-92	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
SD-5-3-92	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
SD-5D-3-92	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
SD-6-3-92	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
SD-7-3-92	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U

Table C-SD-5 - Semivolatile Results for Freshwater Sediment Samples

Sample ID:	Carcinogenic PAHs Concentration in mg/kg							
	Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene	Indeno (1,2,3-c,d) Pyrene	Total cPAHs
SD-1-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.665 US
SD-2-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.665 US
SD-3-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.665 US
SD-4-3-92	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.225 US
SD-5-3-92	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	2.17 US
SD-5D-3-92	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	2.66 US
SD-6-3-92	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	1.715 US
SD-7-3-92	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.91 US

Sample ID:	Phenols Concentration in mg/kg									
	Phenol	2-Chloro-phenol	2-Methyl-phenol	4-Methyl-phenol	2-Nitro-phenol	4-Nitro-phenol	2,4-Dichloro-phenol	2,4-Dimethyl-phenol	2,4-Dinitro-phenol	4-Chloro-3-Methyl-phenol
SD-1-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.96 U	0.19 U	0.19 U	0.96 U	0.19 U
SD-2-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.97 U	0.19 U	0.19 U	0.97 U	0.19 U
SD-3-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.96 U	0.19 U	0.19 U	0.96 U	0.19 U
SD-4-3-92	0.35 U	0.35 U	0.35 U	0.081 J	0.35 U	1.8 U	0.35 U	0.35 U	1.8 U	0.35 U
SD-5-3-92	0.62 U	0.62 U	0.62 U	0.19 J	0.62 U	3.1 U	0.62 U	0.62 U	3.1 U	0.62 U
SD-5D-3-92	0.76 U	0.76 U	0.76 U	0.19 J	0.76 U	3.8 U	0.76 U	0.76 U	3.8 U	0.76 U
SD-6-3-92	0.49 U	0.49 U	0.49 U	0.11 J	0.49 U	2.5 U	0.49 U	0.49 U	2.5 U	0.49 U
SD-7-3-92	0.26 U	0.26 U	0.26 U	0.055 J	0.26 U	1.3 U	0.26 U	0.26 U	1.3 U	0.26 U

Table C-SD-5 - Semivolatile Results for Freshwater Sediment Samples

Sample ID:	Phenols Concentration in mg/kg				Phthalates Concentration in mg/kg					
	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	4,6-Dinitro-2-Methyl-phenol	Penta-chloro-phenol	Bis(2-Ethylhexyl) Phthalate	Butyl-benzyl-Phthalate	Di-N-Butyl-phthalate	Di-N-Octyl-phthalate	Diethyl-phthalate	Dimethyl-phthalate
SD-1-3-92	0.96 U	0.19 U	0.96 U	0.19 U	0.19 U	0.19 U	0.27 U	0.19 U	0.19 U	0.19 U
SD-2-3-92	0.97 U	0.19 U	0.97 U	0.19 U	0.19 U	0.19 U	0.2 U	0.19 U	0.19 U	0.19 U
SD-3-3-92	0.96 U	0.19 U	0.96 U	0.19 U	0.2 U	0.19 U	0.31 U	0.19 U	0.19 U	0.19 U
SD-4-3-92	1.8 U	0.35 U	1.8 U	0.35 U	0.35 U	0.35 U	0.81 U	0.35 U	0.35 U	0.35 U
SD-5-3-92	3.1 U	0.62 U	3.1 U	0.62 U	1.9 U	0.62 U	3.1 U	0.62 U	0.62 U	0.62 U
SD-5D-3-92	3.8 U	0.76 U	3.8 U	0.76 U	0.76 U	0.76 U	2 U	0.76 U	0.76 U	0.76 U
SD-6-3-92	2.5 U	0.49 U	2.5 U	0.49 U	0.49 U	0.49 U	0.67 U	0.49 U	0.49 U	0.49 U
SD-7-3-92	1.3 U	0.26 U	1.3 U	0.26 U	0.26 U	0.26 U	0.34 U	0.26 U	0.26 U	0.26 U

Sample ID:	Other Semivolatiles Concentration in mg/kg									
	Aniline	Benzidine	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloro-ethoxy) Methane	Bis(2-Chloro-ethyl) Ether	Bis(2-Chloro-isopropyl) Ether	Dibenzo-furan	Hexachloro-benzene	Hexachloro-butadiene
SD-1-3-92	0.19 U	1.9 U	0.96 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
SD-2-3-92	0.19 U	1.9 U	0.97 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
SD-3-3-92	0.19 U	1.9 U	0.96 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
SD-4-3-92	0.35 U	3.5 U	1.8 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
SD-5-3-92	0.62 U	6.2 U	0.25 J	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
SD-5D-3-92	0.76 U	7.6 U	0.3 J	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
SD-6-3-92	0.49 U	4.9 U	0.23 J	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
SD-7-3-92	0.26 U	2.6 U	1.3 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U

Table C-SD-5 - Semivolatile Results for Freshwater Sediment Samples

Sample ID:	Other Semivolatiles Concentration in mg/kg									
	Hexachloro-cyclo-pentadiene	Hexachloro-ethane	Isophorone	N-Nitroso-Di-Phenyl-amine	N-Nitroso-Di-Propyl-amine	N-Nitroso-Di-methyl amine	2-Chloro-naphthalene	4-Chloro-aniline	2-Nitro-aniline	3-Nitro-aniline
SD-1-3-92	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.96 U	0.96 U
SD-2-3-92	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.97 U	0.97 U
SD-3-3-92	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.96 U	0.96 U
SD-4-3-92	0.35 UJ	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.8 U	1.8 U
SD-5-3-92	0.62 UJ	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	3.1 U	3.1 U
SD-5D-3-92	0.76 UJ	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	3.8 U	3.8 U
SD-6-3-92	0.49 UJ	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	2.5 U	2.5 U
SD-7-3-92	0.26 UJ	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	1.3 U	1.3 U

Sample ID:	Other Semivolatiles Concentration in mg/kg							
	4-Nitro-aniline	4-Bromophenyl Phenyl Ether	4-Chlorophenyl-Phenyl Ether	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	3,3'-Dichloro-benzidine	1,2,4-Trichloro-benzene
SD-1-3-92	0.96 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U
SD-2-3-92	0.97 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.39 U	0.19 U
SD-3-3-92	0.96 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.38 U	0.19 U
SD-4-3-92	1.8 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.71 U	0.35 U
SD-5-3-92	3.1 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	1.2 U	0.62 U
SD-5D-3-92	3.8 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	1.5 U	0.76 U
SD-6-3-92	2.5 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U
SD-7-3-92	1.3 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.53 U	0.26 U

Table C-SD-6 - PAH Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg Acenaph-thene	Acenaph-thylene	Anthracene	Benzo(g,h,i) Perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
SD-1-3-92	03/13/92	0.2 U	0.2 U	0.01 U	0.02 U	0.02 U	0.02 U	0.1 U	0.01 U	0.02 U
SD-2-3-92	03/13/92	0.19 U	0.19 U	0.0095 U	0.019 U	0.019 U	0.019 U	0.095 U	0.0095 U	0.019 U
SD-3-3-92	03/13/92	0.19 U	0.19 U	0.0095 U	0.019 U	0.019 U	0.019 U	0.095 U	0.0095 U	0.019 U
SD-4-3-92	03/13/92	0.4 U	0.4 U	0.02 U	0.04 U	0.04 U	0.04 U	0.2 U	0.02 U	0.04 U
SD-5-3-92	03/16/92	0.55 U	0.55 U	0.027 U	0.12	0.055 U	0.055 U	0.27 U	0.077	0.082
SD-5D-3-92	03/16/92	0.65 U	0.65 U	0.032 U	0.065 U	0.065 U	0.065 U	0.32 U	0.12	0.065 U
SD-6-3-92	03/16/92	0.37 U	0.37 U	0.019 U	0.037 U	0.037 U	0.037 U	0.19 U	0.056	0.037 U
SD-7-3-92	03/13/92	0.4 U	0.4 U	0.02 U	0.04 U	0.04 U	0.04 U	0.2 U	0.02 U	0.04 U

Sample ID:	Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene	Indeno(1,2,3-c,d)Pyrene	Total cPAHs
SD-1-3-92	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.04 U	0.02 U	0.08 US
SD-2-3-92	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.039 U	0.019 U	0.0765 US
SD-3-3-92	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.039 U	0.019 U	0.0765 US
SD-4-3-92	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.082 U	0.04 U	0.161 US
SD-5-3-92	0.055 U	0.055 U	0.066	0.055 U	0.099	0.19	0.055 U	0.465 S
SD-5D-3-92	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.13 U	0.065 U	0.26 US
SD-6-3-92	0.037 U	0.037 U	0.037 U	0.037 U	0.037 U	0.074 U	0.037 U	0.148 US
SD-7-3-92	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.082 U	0.04 U	0.161 US

Table C-SD-7 - PCB Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	Total PCBs
SPR#4SED,SPR#4	12/02/86	0.0261 U	0.0261 U	0.0261 U	0.0261 U	0.0261 U	0.0522 U	0.0522 U	0.11745 US
SW#1SED,SW#1	12/02/86	0.101 U	0.101 U	0.101 U	0.101 U	0.101 U	0.202 U	0.202 U	0.4545 US
SW#2SED,SW#2	12/02/86	0.0202 U	0.0202 U	0.0202 U	0.0202 U	0.0202 U	0.0405 U	0.0405 U	0.091 US
SW#3SED,SW#3	12/02/86	0.0269 U	0.0269 U	0.0269 U	0.0269 U	0.0269 U	0.0537 U	0.0537 U	0.12095 US
SW#4SED,SW#4	12/02/86	0.0246 U	0.0246 U	0.0246 U	0.0246 U	0.0246 U	0.0492 U	0.0492 U	0.1107 US
SW#5,SW#5SED	12/03/86	0.0181 U	0.0181 U	0.0181 U	0.0181 U	0.0181 U	0.0361 U	0.0361 U	0.08135 US
SW#6SED,SW#6	12/03/86	0.0215 U	0.0215 U	0.0215 U	0.0215 U	0.0215 U	0.043 U	0.043 U	0.09675 US
SD-1-3-92	03/13/92	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.385 US
SD-2-3-92	03/13/92	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.42 US
SD-3-3-92	03/13/92	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.385 US
SD-4-3-92	03/13/92	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.735 US
SD-5-3-92	03/16/92	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	1.295 US
SD-5D-3-92	03/16/92	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	1.575 US
SD-6-3-92	03/16/92	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	1.015 US
SD-7-3-92	03/13/92	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.56 US

Table C-SD-8 - OC Pesticide Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg								
		Aldrin	Alpha-BHC	Beta-BHC	Gamma-BHC	Delta-BHC	Chlordane	Dieldrin	Endosulfan I	Endosulfan II
SPR#4SED,SPR#4	12/02/86	2.61 U	2.61 U	2.61 U	0.0715 J	2.61 U	26.1 U	5.22 U	2.61 U	5.22 U
SW#1SED,SW#1	12/02/86	10.1 U	10.1 U	10.1 U	10.1 U	10.1 U	101 U	20.2 U	10.1 U	20.2 U
SW#2SED,SW#2	12/02/86	2.02 U	2.02 U	2.02 U	2.02 U	2.02 U	20.2 U	0.289 J	2.02 U	4.05 U
SW#3SED,SW#3	12/02/86	2.69 U	2.69 U	2.69 U	2.69 U	2.69 U	26.9 U	5.37 U	2.69 U	5.37 U
SW#4SED,SW#4	12/02/86	2.46 U	2.46 U	2.46 U	2.46 U	2.46 U	24.6 U	1.35 J	2.46 U	4.92 U
SW#5,SW#5SED	12/03/86	1.81 U	1.81 U	1.81 U	1.81 U	1.81 U	18.1 U	3.61 U	1.81 U	3.61 U
SW#6SED,SW#6	12/03/86	2.15 U	2.15 U	2.15 U	2.15 U	2.15 U	21.5 U	4.3 U	2.15 U	4.3 U
SD-1-3-92	03/13/92	0.0057 U	0.0057 UJ	0.0057 U	0.0057 U	0.0057 U	0.057 U	0.011 U	0.0057 U	0.011 U
SD-2-3-92	03/13/92	0.0058 U	0.0058 UJ	0.0058 U	0.0058 U	0.0058 U	0.058 U	0.012 U	0.0058 U	0.012 U
SD-3-3-92	03/13/92	0.0057 U	0.0057 UJ	0.0057 U	0.0057 U	0.0057 U	0.057 U	0.011 U	0.0057 U	0.011 U
SD-4-3-92	03/13/92	0.011 U	0.011 UJ	0.011 U	0.011 U	0.011 U	0.11 U	0.021 U	0.011 U	0.021 U
SD-5-3-92	03/16/92	0.019 U	0.019 UJ	0.019 U	0.019 U	0.019 U	0.19 U	0.037 U	0.019 U	0.037 U
SD-5D-3-92	03/16/92	0.023 U	0.023 UJ	0.023 U	0.023 U	0.023 U	0.23 U	0.045 U	0.023 U	0.045 U
SD-6-3-92	03/16/92	0.015 U	0.015 UJ	0.015 U	0.015 U	0.015 U	0.15 U	0.029 U	0.015 U	0.029 U
SD-7-3-92	03/13/92	0.0079 U	0.0079 UJ	0.0079 U	0.0079 U	0.0079 U	0.079 U	0.016 U	0.0079 U	0.016 U

Table C-SD-8 - OC Pesticide Results for Freshwater Sediment Samples

Sample ID:	Sampling Date	Concentration in mg/kg Endosulfan Sulfate	Endrin	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	4,4'-DDD	4,4'-DDE	4,4'-DDT
SPR#4SED,SPR#4	12/02/86	5.22 U	0.619 J	5.22 U	2.61 U	2.61 U	26.1 U	52.2 U	0.267 J	5.22 U	5.22 U
SW#1SED,SW#1	12/02/86	20.2 U	20.2 U	20.2 U	10.1 U	10.1 U	101 U	202 U	0.4 J	20.2 U	20.2 U
SW#2SED,SW#2	12/02/86	4.05 U	0.494 J	4.05 U	2.02 U	2.02 U	20.2 U	40.5 U	0.664 J	0.812 J	0.419 J
SW#3SED,SW#3	12/02/86	5.37 U	5.37 U	5.37 U	2.69 U	2.69 U	26.9 U	53.7 U	0.491 J	5.37 U	5.37 U
SW#4SED,SW#4	12/02/86	4.92 U	4.92 U	4.92 U	2.46 U	2.46 U	24.6 U	49.2 U	2.23 J	4.92 U	4.92 U
SW#5,SW#5SED	12/03/86	3.61 U	0.16 J	3.61 U	1.81 U	1.81 U	18.1 U	36.1 U	3.61 U	3.61 U	3.61 U
SW#6SED,SW#6	12/03/86	4.3 U	4.3 U	4.3 U	2.15 U	2.15 U	21.5 U	43 U	4.3 U	4.3 U	4.3 U
SD-1-3-92	03/13/92	0.011 U	0.011 U	0.011 U	0.0057 U	0.0057 U	0.057 UJ	0.11 U	0.011 UJ	0.011 U	0.011 U
SD-2-3-92	03/13/92	0.012 U	0.012 U	0.012 U	0.0058 U	0.0058 U	0.058 UJ	0.12 U	0.012 UJ	0.012 U	0.012 U
SD-3-3-92	03/13/92	0.011 U	0.011 U	0.011 U	0.0057 U	0.0057 U	0.057 UJ	0.11 U	0.011 UJ	0.011 U	0.011 U
SD-4-3-92	03/13/92	0.021 U	0.021 U	0.021 U	0.011 U	0.011 U	0.11 U	0.21 U	0.021 U	0.021 U	0.021 U
SD-5-3-92	03/16/92	0.037 U	0.037 U	0.037 U	0.019 U	0.019 U	0.19 U	0.37 U	0.037 U	0.037 U	0.037 U
SD-5D-3-92	03/16/92	0.045 U	0.045 U	0.045 U	0.023 U	0.023 U	0.23 U	0.45 U	0.045 U	0.045 U	0.045 U
SD-6-3-92	03/16/92	0.029 U	0.029 U	0.029 U	0.015 U	0.015 U	0.15 U	0.29 U	0.029 U	0.029 U	0.029 U
SD-7-3-92	03/13/92	0.016 U	0.016 U	0.016 U	0.0079 U	0.0079 U	0.079 UJ	0.16 U	0.016 UJ	0.016 U	0.016 UJ

Table C-SD-9 - General Chemistry for Freshwater Sediment Samples

Sample ID:	Sampling Date	Total Organic Carbon in Percent	Nitrite + Nitrate in mg/L
SD-1-3-92	03/13/92	0.53	1.4
SD-2-3-92	03/13/92	0.58	3.1
SD-3-3-92	03/13/92	0.4	0.5 U
SD-4-3-92	03/13/92	10.6	2.7
SD-5-3-92	03/16/92	25.9	8.9
SD-5D-3-92	03/16/92	25.2	5.2
SD-6-3-92	03/16/92	8.1	2.7
SD-7-3-92	03/13/92	16.5	2.4
SPR#4SED,SPR#4	12/02/86		2
SW#1SED,SW#1	12/02/86		3.2
SW#2SED,SW#2	12/02/86		1.7
SW#3SED,SW#3	12/02/86		1.1
SW#4SED,SW#4	12/02/86		1.5
SW#5,SW#5SED	12/03/86		1
SW#6SED,SW#6	12/03/86		1.5

Appendix D

Laboratory Physical Soils Testing

This appendix material was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

The Hart Crowser soils laboratory conducted mechanical (sieve) and hydrometer analyses to provide grain size distributions for aquifer and aquitard materials, respectively. In addition, flexible-wall permeability tests were conducted to estimate vertical hydraulic conductivity of the aquitard material.

Mechanical Analyses. The Hart Crowser soils laboratory conducted mechanical grain size analyses using standard sieve sizes in accordance with ASTM D 422. The wet sieve analyses were performed to determine the size distribution greater than the No. 200 mesh sieve. Figure 1 presents the classification system used for the grain size analyses. The results of the tests are presented as curves in Figures 2 through 12, plotting percent finer against grain size.

Hydrometer Analyses. Samples of the Kitsap Aquitard material were analyzed using the hydrometer method, or a combined analysis (mechanical plus hydrometer), to determine the size distribution smaller than the No. 200 mesh sieve (i.e., determine percent silt and percent clay). The hydrometer testing was conducted in accordance with ASTM D 422. The results of the tests are presented as curves in Figures 2 and 4.

Laboratory Vertical Hydraulic Conductivity Testing. Testing of vertical hydraulic conductivity was conducted on two undisturbed samples of the Kitsap Aquitard material.

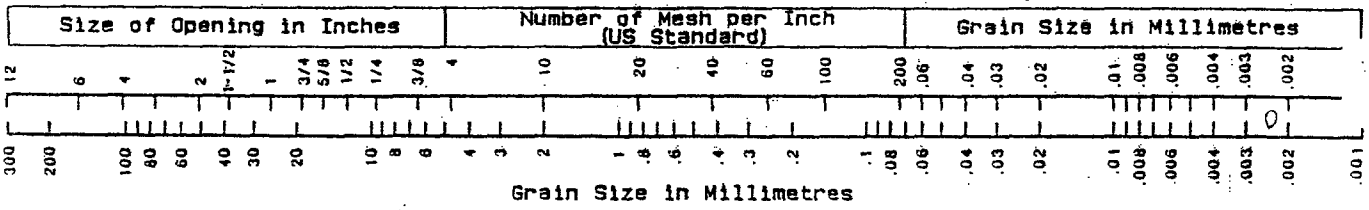
The tests were performed in a triaxial cell using "flexible wall" permeameter techniques, which allowed application of confining stresses approximately equal to the in situ effective overburden stresses. The sample was oriented in its stratigraphically correct position (up versus down) and flow was directed vertically downward through the sample using falling head techniques. The tests were run until steady state conditions were established. The results of the vertical hydraulic conductivity testing are presented in Table 1.

Table 1
Summary of Laboratory Vertical Hydraulic Conductivity (K) Results for Kitsap Aquitard Samples

Sample No.	Sample Description	Estimated Vertical K in cm/sec
MW-20, S-24E	Slightly clayey, sandy SILT	8×10^{-7}
MW-23, S-25A	Very sandy SILT with trace peat and sand partings	1×10^{-7}
	Geometric Mean:	3×10^{-7} cm/sec

Unified Soil Classification (USC) System

Soil Grain Size



COBBLES	GRAVEL	SAND	SILT and CLAY
Coarse-Grained Soils			Fine-Grained Soils

Coarse-Grained Soils

G W	G P	G M	G C	S W	S P	S M	S C
Clean GRAVEL <5% fines		GRAVEL with >12% fines		Clean SAND <5% fines		SAND with >12% fines	
GRAVEL >50% coarse fraction larger than No. 4				SAND >50% coarse fraction smaller than No. 4			
Coarse-Grained Soils >50% larger than No. 200 sieve							

G W and S W $\left(\frac{D_{60}}{D_{10}}\right) > 4$ for G W, > 6 for S W & $1 \leq \left(\frac{(D_{30})^2}{D_{10} \times D_{60}}\right) \leq 3$

G P and S P Clean GRAVEL or SAND not meeting requirements for G W and S W

G M and S M Atterberg limits below A Line with PI <4

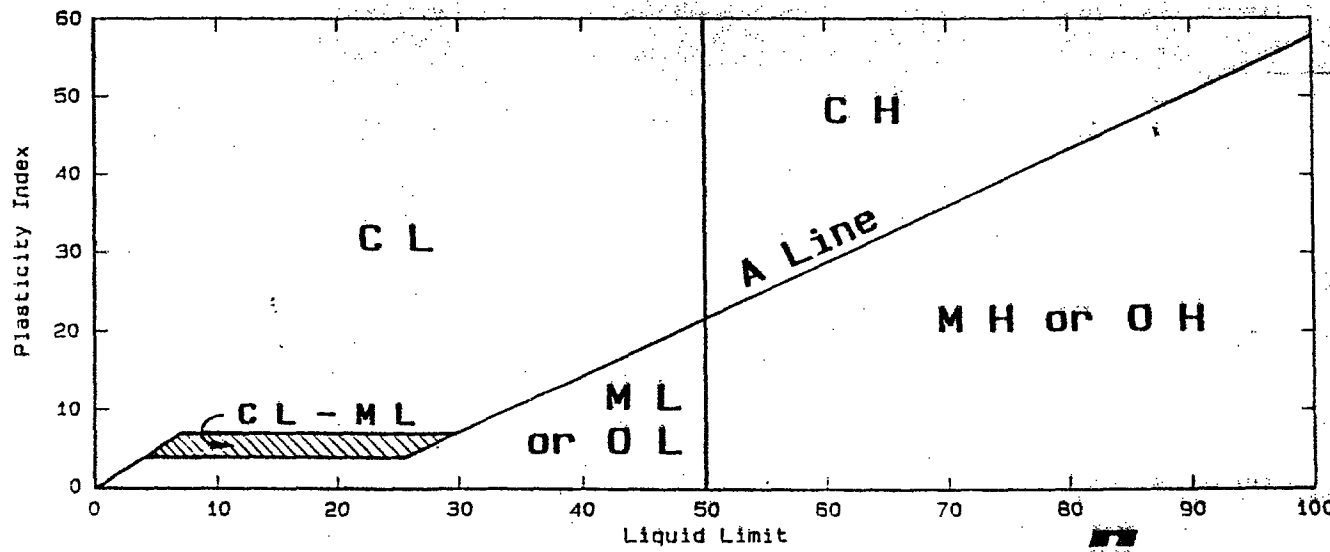
G C and S C Atterberg limits above A Line with PI >7

* Coarse-grained soils with percentage of fines between 5 and 12 are considered borderline cases requiring use of dual symbols.

D_{10}, D_{30}, and D_{60} are the particle diameter of which 10, 30, and 60 percent, respectively, of the soil weight are finer.

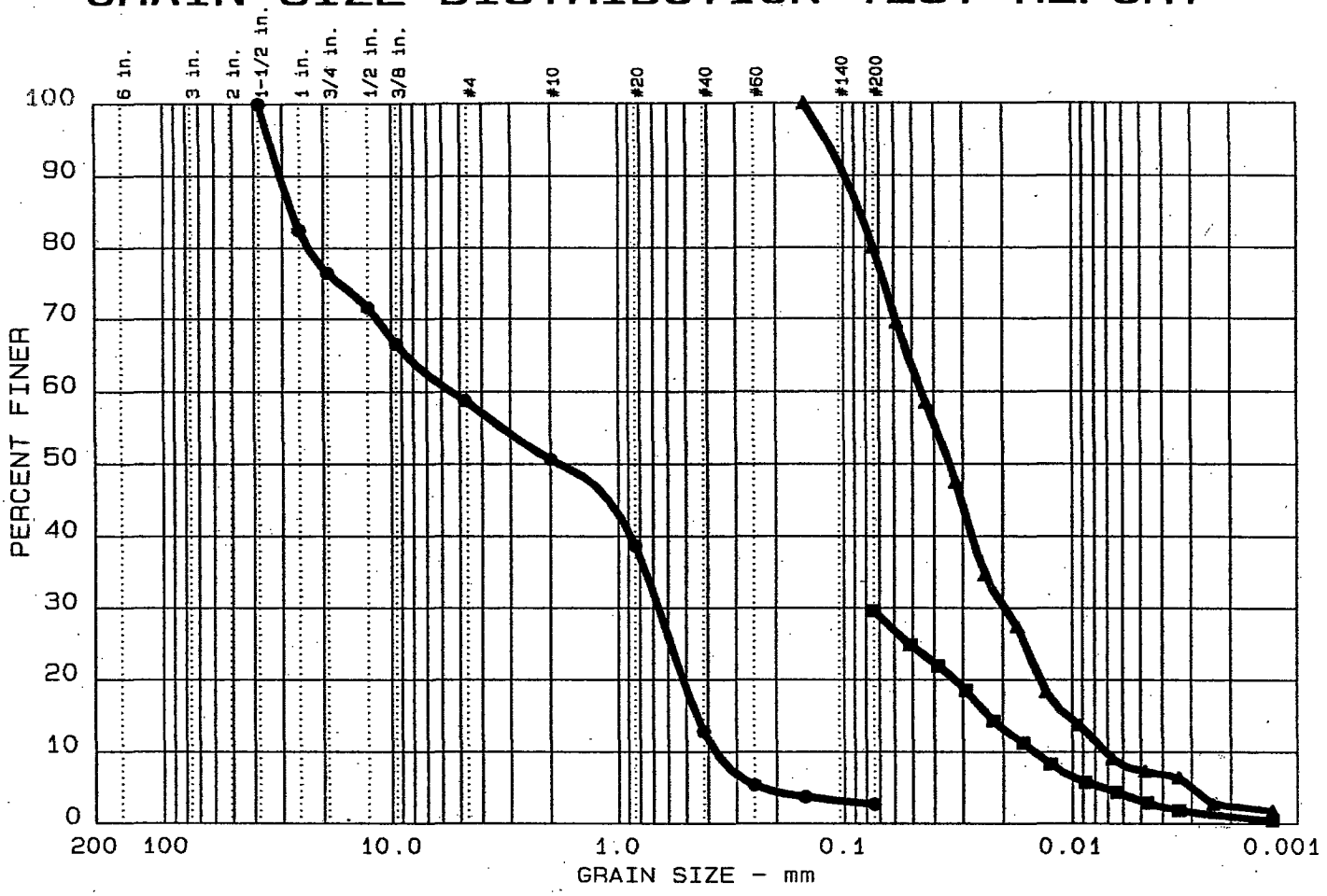
Fine-Grained Soils

M L	C L	O L	M H	C H	O H	Pt
SILT	CLAY	Organic	SILT	CLAY	Organic	Highly Organic Soils
Soils with Liquid Limit <50%			Soils with Liquid Limit >50%			
Fine-Grained Soils >50% smaller than No. 200 sieve						



HARTCROWSER
J-3534-07 4/92
Figure 1

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	41.2	56.1	2.7	
▲	0.0	0.0	20.0	72.6	7.4
■	0.0	0.0	70.4	26.4	3.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			27.23	5.43	1.78	0.661	0.4513	0.3711	0.22	14.6
▲			0.08		0.03	0.019	0.0104	0.0071	1.17	6.3
■					0.07	0.074	0.0231	0.0146	5.07	5.1

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Very gravelly SAND	SP	10%
▲ Slightly clayey, sandy SILT (Kitsap Aquitard)	ML	42%
■ Very silty SAND (Kitsap Aquitard)	SM	26%

Remarks:

Project: Weyco Dupont

● Location: MW-20, S-17, Depth: 85.0' - 86.5'

▲ Location: MW-20, S-24E, Depth: 135.0'-135.5'

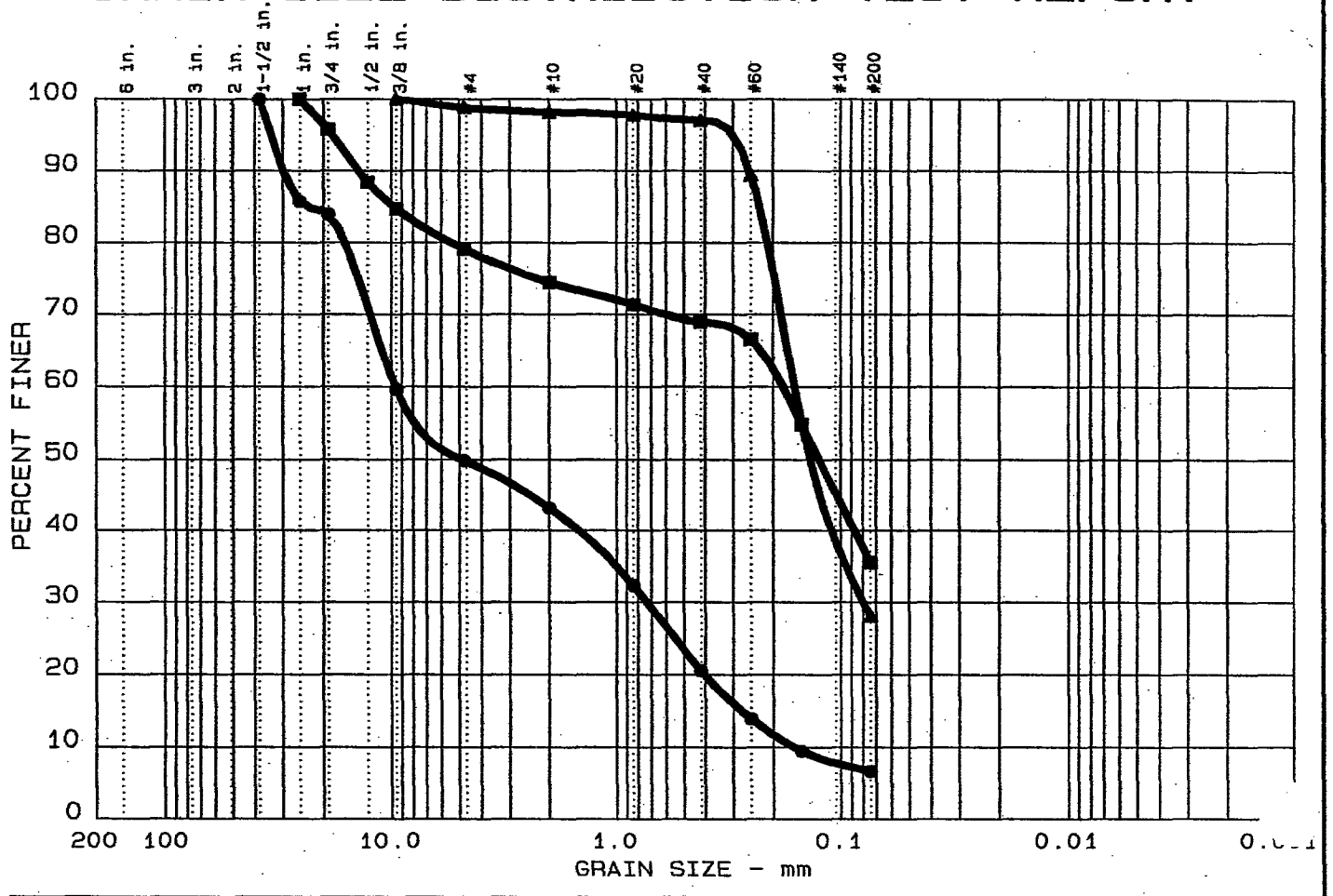
■ Location: MW-20, S-24D, Depth: 135.5'-136.0'

HARTCROWSER

J-3534-07 4/92

Figure 2

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	50.2	43.2	6.6	
▲	0.0	1.2	70.7	28.1	
■	0.0	20.9	43.6	35.5	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			23.71	9.63	4.77	0.730	0.2745	0.1616	0.34	59.6
▲			0.23	0.16	0.14	0.079				
■			9.77	0.18	0.12					

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Slightly silty, very sandy GRAVEL	GP-GM	9%
▲ Silty, fine SAND	SM	29%
■ Gravelly, very silty, medium to fine SAND	SM	22%

Remarks:

Project: Weyco DuPont

● Location: MW-21, S-17, Depth: 85.0' - 86.0'

▲ Location: MW-21, S-23, Depth: 148.0'- 149.0'

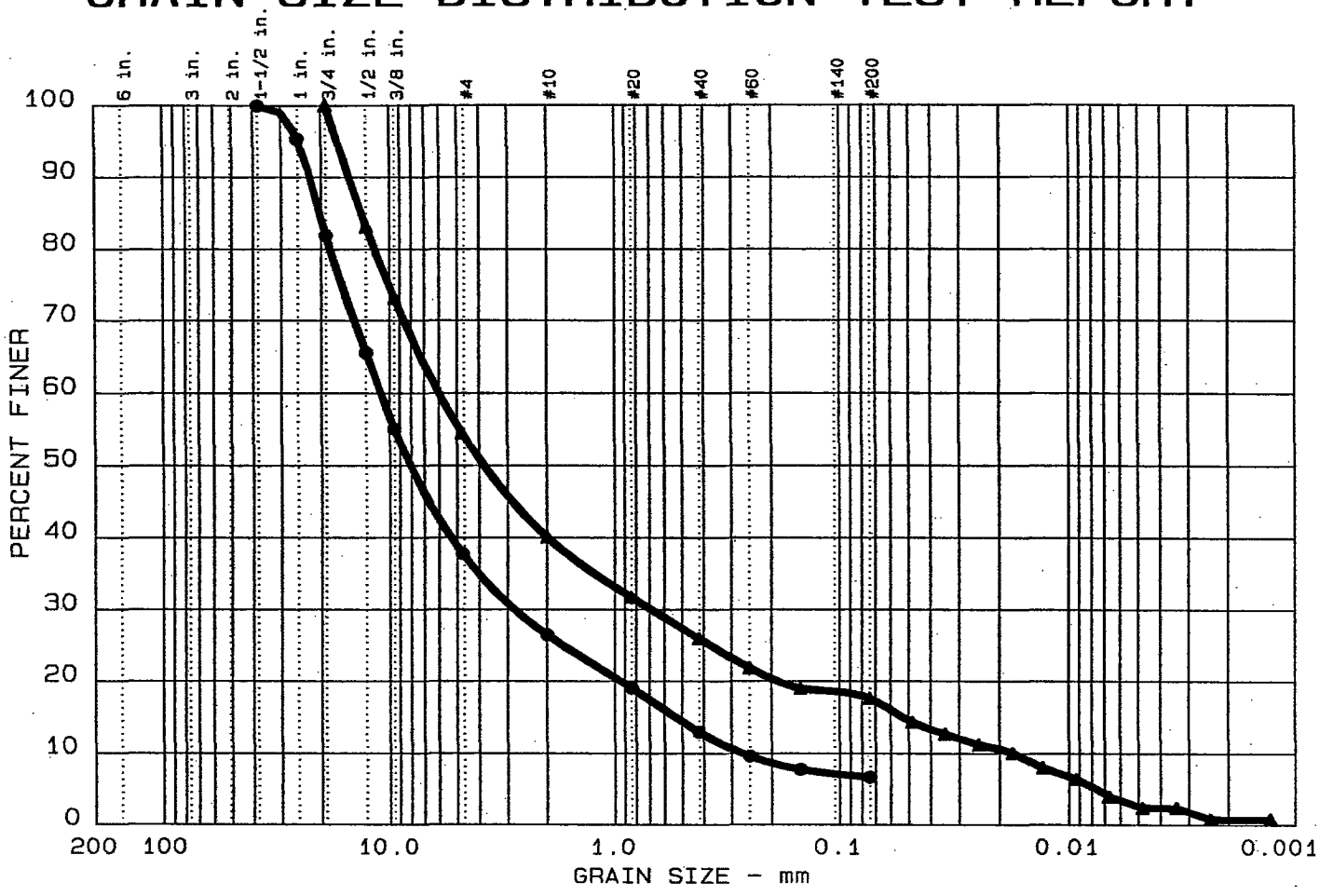
■ Location: MW-21, S-26, Depth: 165.0'- 165.5'

HARTCROWSER

J-3534-07 4/92

Figure 3

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	62.2	31.2	6.6	
▲	0.0	45.5	36.9	15.0	2.6

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			20.28	10.89	8.07	2.767	0.5272	0.2642	2.66	41.2
▲			13.34	6.01	3.79	0.682	0.0524	0.0175	4.42	342.8

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Slightly silty, very sandy GRAVEL	GW-GM	9%
▲ Silty, sandy GRAVEL (Kitsap Aquitard)	GM	8%

Remarks:

Project: Weyco DuPont

● Location: MW-22, S-20, Depth: 109.5'- 111.0'

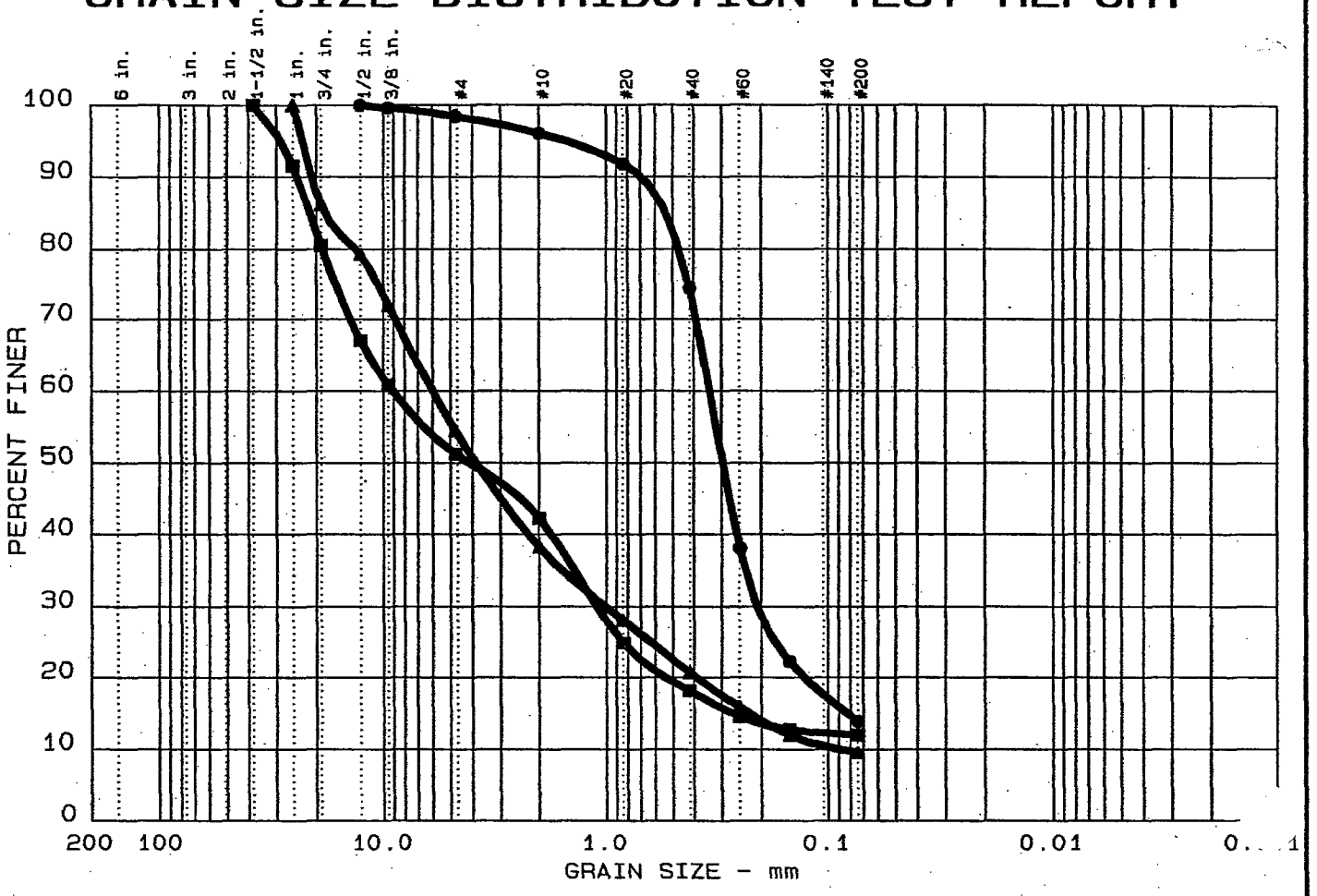
▲ Location: MW-22, S-21B, Depth: 121.0'-122.0'

HARTCROWSER

J-3534-07 4/92

Figure 4

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	1.6	84.6	13.8	
▲	0.0	45.5	45.0	9.5	
■	0.0	48.8	39.3	11.9	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
●			0.54	0.34	0.30	0.209	0.0821			
▲			18.34	6.00	3.83	0.997	0.2257	0.0888	1.86	67.6
■			21.28	9.08	4.15	1.102	0.2642			

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Silty, medium to fine SAND	SM	25%
▲ Slightly silty, very sandy GRAVEL	GW-GM	9%
■ Slightly silty, very sandy GRAVEL	GP-GM	7%

Remarks:

Project: Weyco DuPont

● Location: MW-23, S-23, Depth: 119.0'- 120.5'

▲ Location: MW-24, S-11, Depth: 25.0' - 26.5'

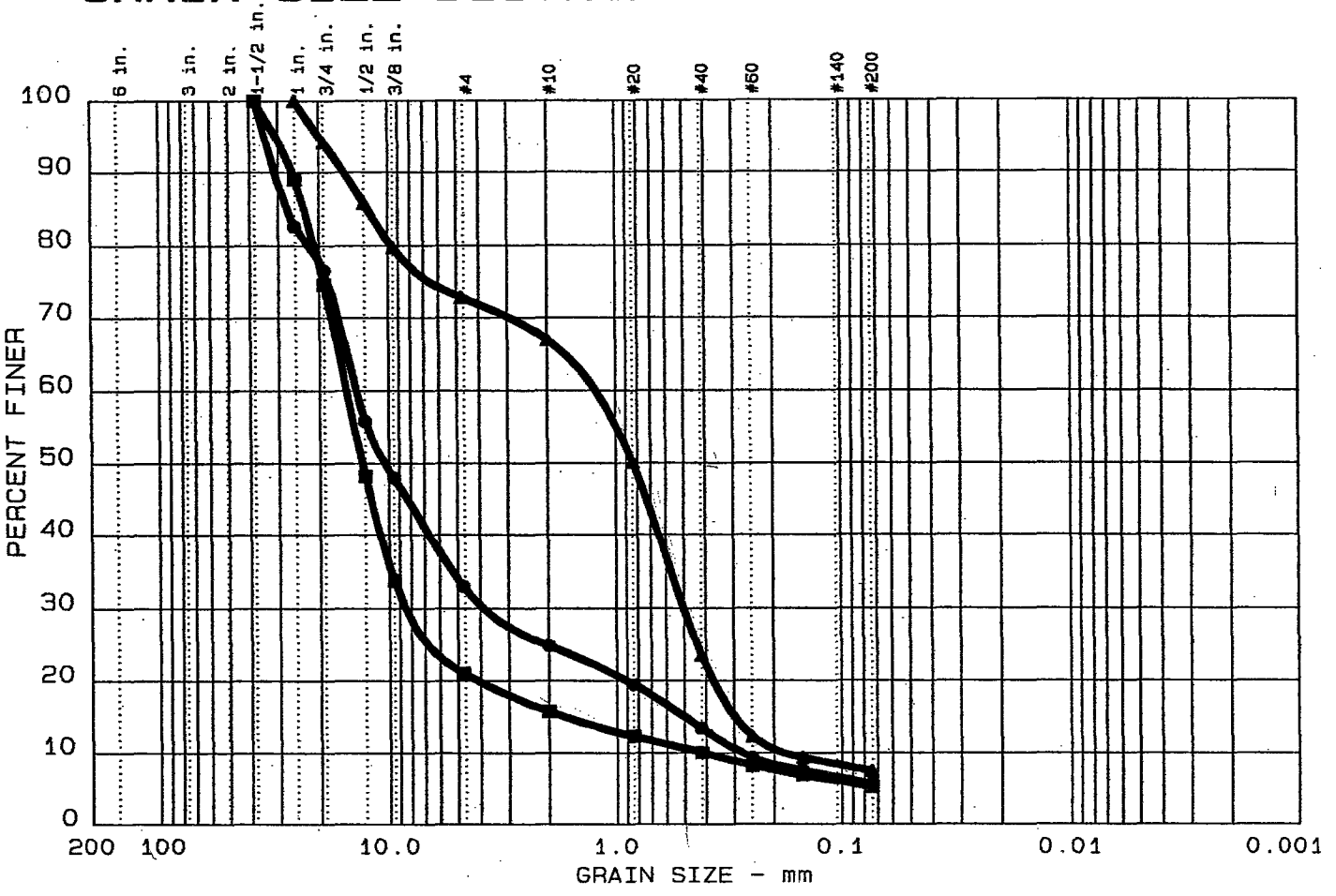
■ Location: MW-27, S-08, Depth: 39.0' - 40.5'

HARTCROWSER

J-3534-07 4/92

Figure 5

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	66.9	27.4	5.7	
▲	0.0	27.2	65.4	7.4	
■	0.0	78.9	15.8	5.3	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			27.54	13.80	10.47	3.846	0.4955	0.2786	3.85	49.5
▲			12.27	1.21	0.84	0.502	0.2992	0.1762	1.18	6.9
■			23.12	15.22	13.08	8.521	1.7002	0.4126	11.56	36.9

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Slightly silty, sandy, GRAVEL	GP-GM	16.5%
▲ Slightly silty, gravelly, SAND	SW-SM	14.7%
■ Slightly silty, sandy, GRAVEL	GP-GM	27.2%

Remarks:

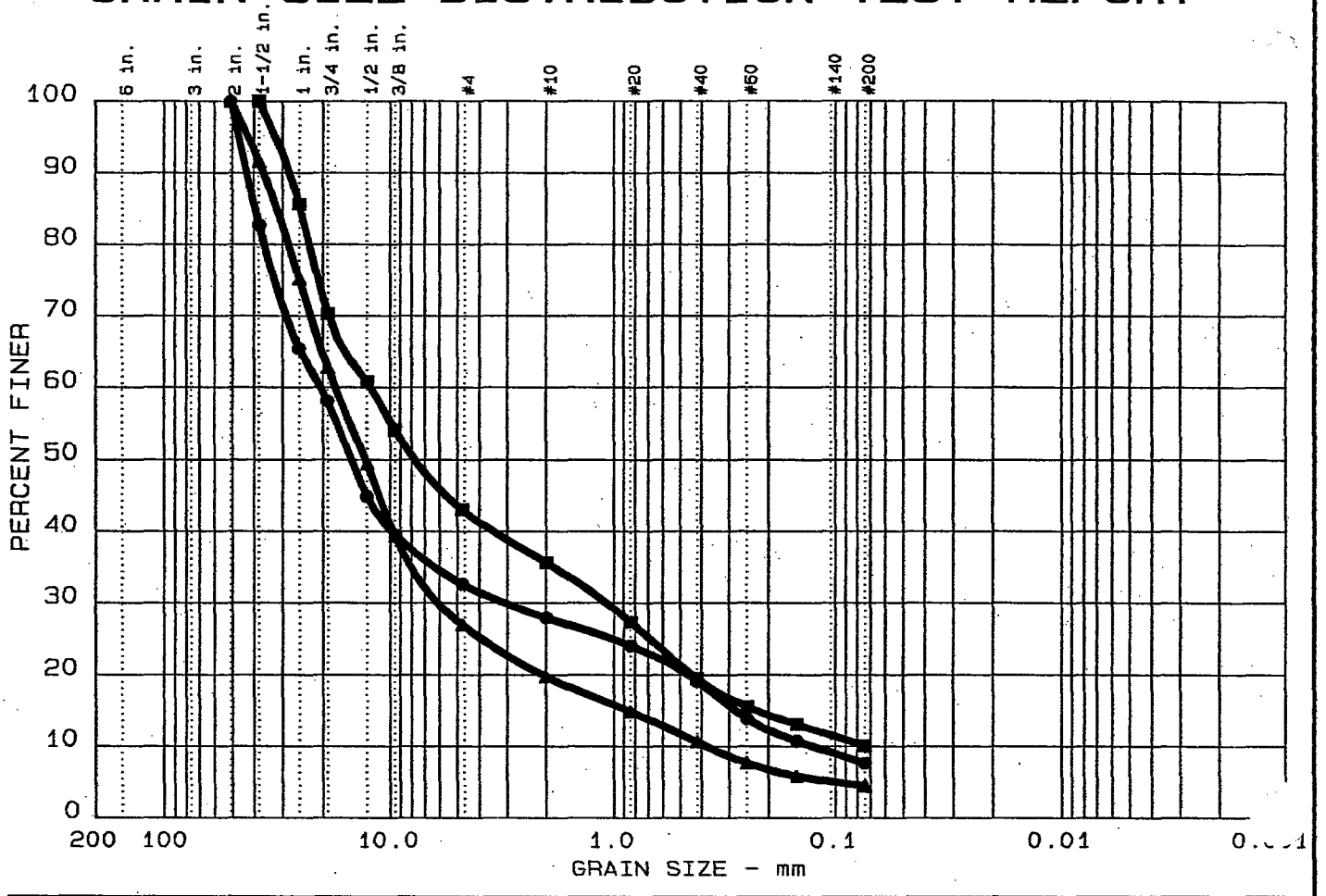
Project: Weyco/DuPont
- ● Location: LR-17, Depth 0"-6"
- ▲ Location: LR-20, Depth 0"-6"
- ■ Location: LR-59, Depth 0"-6"

HARTCROWSER

J-3534-07 4/94

Figure 6

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	67.4	25.0	7.6	
▲	0.0	73.0	22.5	4.5	
■	0.0	56.9	33.0	10.1	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			39.67	20.35	14.91	2.975	0.2809	0.1269	3.43	160.3
▲			31.88	17.68	12.91	6.109	0.8630	0.3724	5.67	47.5
■			25.09	12.15	7.75	1.070	0.2211			

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Slightly silty, sandy GRAVEL	GP-GM	17%
▲ Sandy, GRAVEL	GP	15%
■ Slightly silty, very sandy, GRAVEL	GP-GM	18%

Remarks:

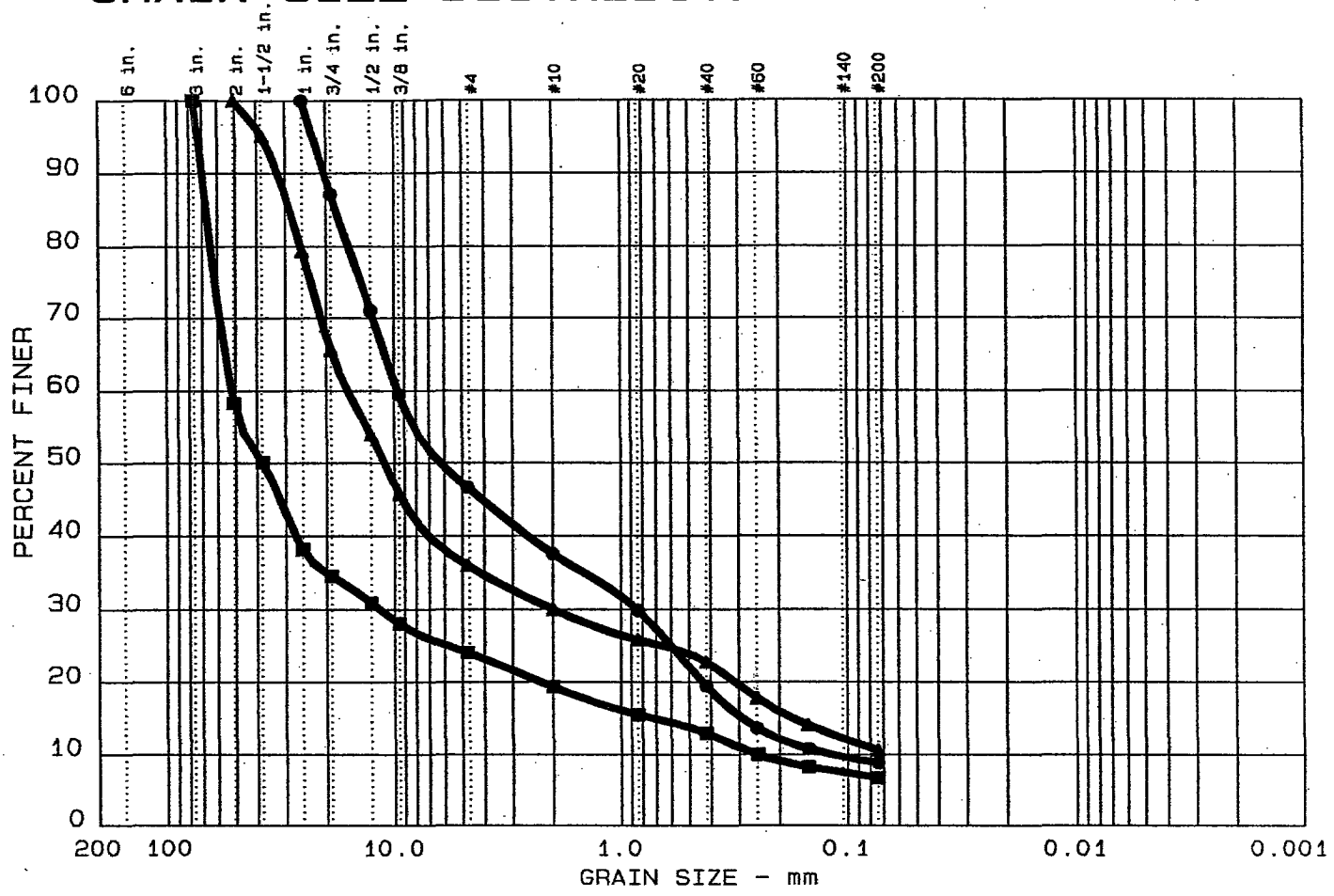
Project: Weyco/DuPont
- ● Location: LR-60, Depth 0"-6"
- ▲ Location: LR-68, Depth 0"-6"
- ■ Location: LR-91, Depth 0"-6"

HARTCROWSER

J-3534-07 4/94

Figure 7

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	53.3	37.9	8.8	
▲	0.0	63.9	25.5	10.6	
■	0.0	75.9	17.3	6.8	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			18.07	9.67	6.24	0.842	0.2887	0.1176	0.62	82.2
▲			28.67	16.07	11.08	1.970	0.1736			
■			67.45	52.18	37.80	11.548	0.7203	0.2526	10.12	206.5

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● slightly silty, very sandy, GRAVEL	GP-GM	11.1%
▲ Slightly silty, sandy, GRAVEL	GP-GM	19.1%
■ Slightly silty, sandy, GRAVEL	GP-GM	13.2%

Remarks:

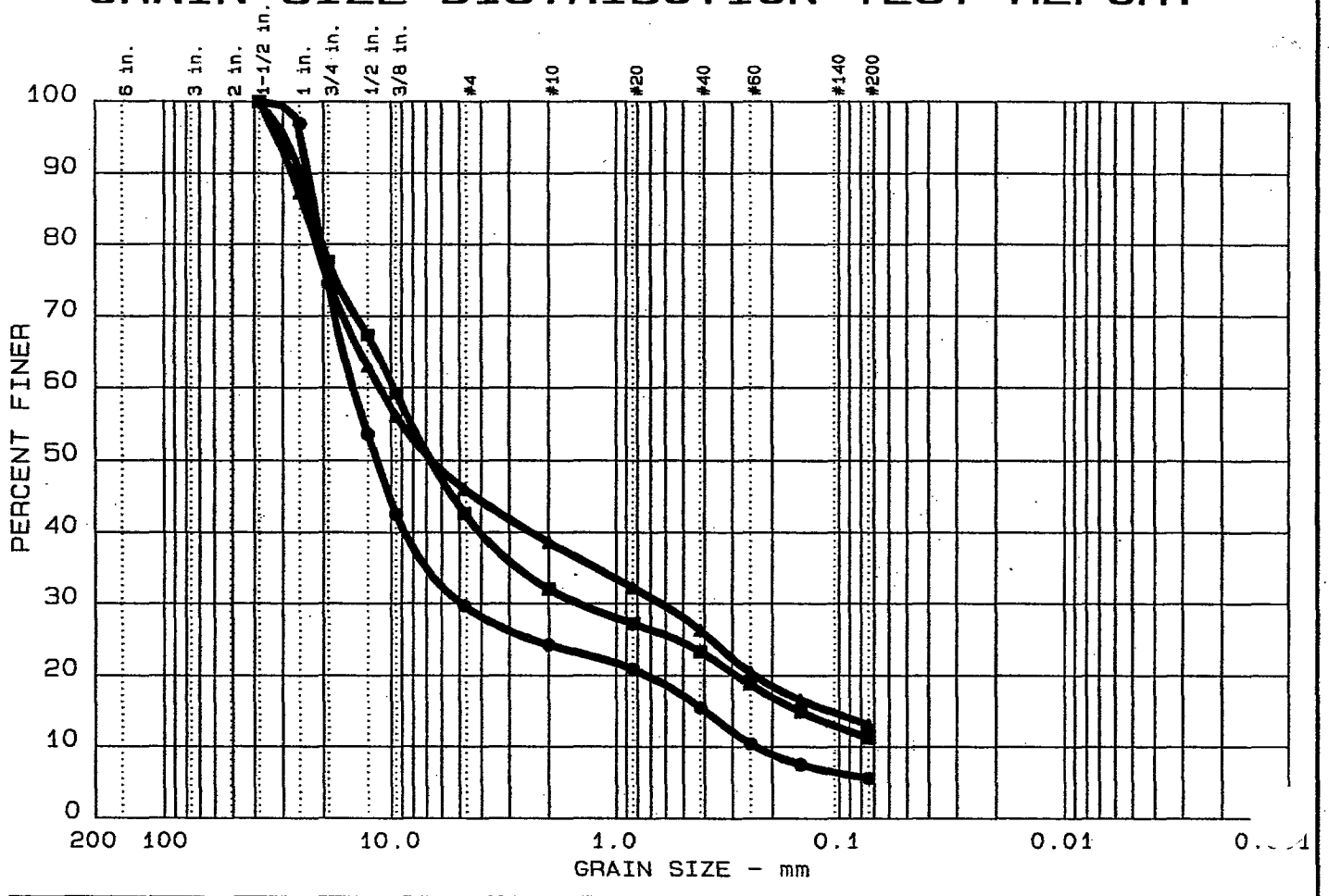
Project: Weyco/DuPont
- ● Location: LR-104, Depth 0"-6"
- ▲ Location: LR-126, Depth 0"-6"
- ■ Location: LR-130, Depth 0"-6"

HARTCROWSER

J-3534-07 4/94

Figure 8

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	70.3	24.1	5.6	
▲	0.0	53.9	33.0	13.1	
■	0.0	57.3	31.5	11.2	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			21.88	14.79	11.61	4.898	0.3981	0.2371	6.84	62.4
▲			23.99	11.22	6.68	0.624	0.1109			
■			22.49	9.77	6.74	1.457	0.1508			

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● slightly silty, sandy, GRAVEL	GP-GM	13.7%
▲ Slightly silty, very sandy, GRAVEL	GM	22.9%
■ Slightly silty, very sandy, GRAVEL	GP-GM	23.3%

Remarks:

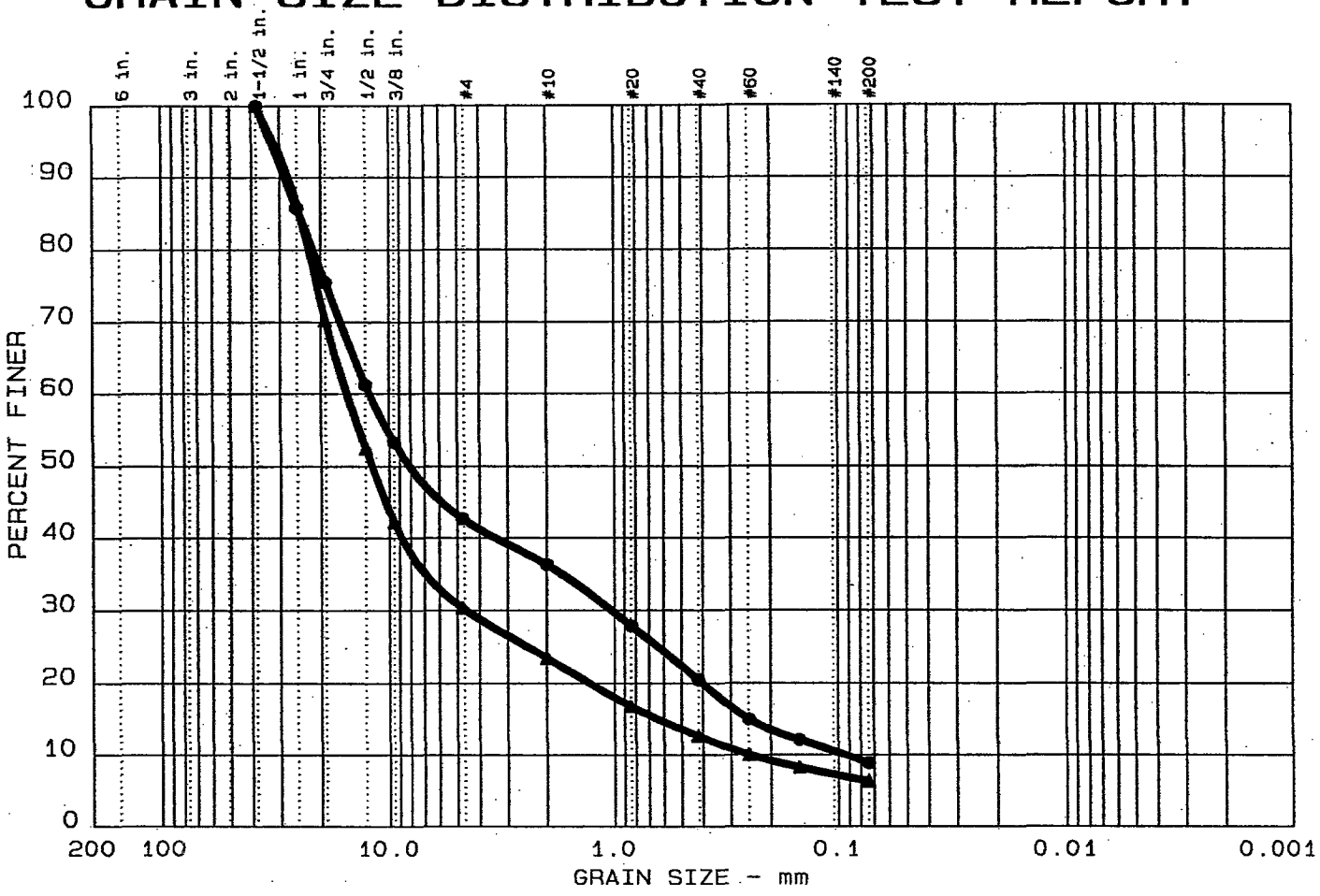
Project: Weyco/DuPont
- ● Location: LR-154, Depth 0"-6"
- ▲ Location: LR-158, Depth 0"-6"
- ■ Location: LR-223, Depth 0"-6"

HARTCROWSER

J-3534-07 4/94

Figure 9

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	57.3	33.9	8.8	
▲	0.0	69.7	24.1	6.2	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			24.83	12.16	8.13	1.023	0.2483	0.0933	0.92	130.3
▲			24.72	15.35	11.91	4.581	0.6324	0.2518	5.43	61.0

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Slightly silty, very sandy GRAVEL	GP-GM	26%
▲ Slightly silty, sandy GRAVEL	GP-GM	16%

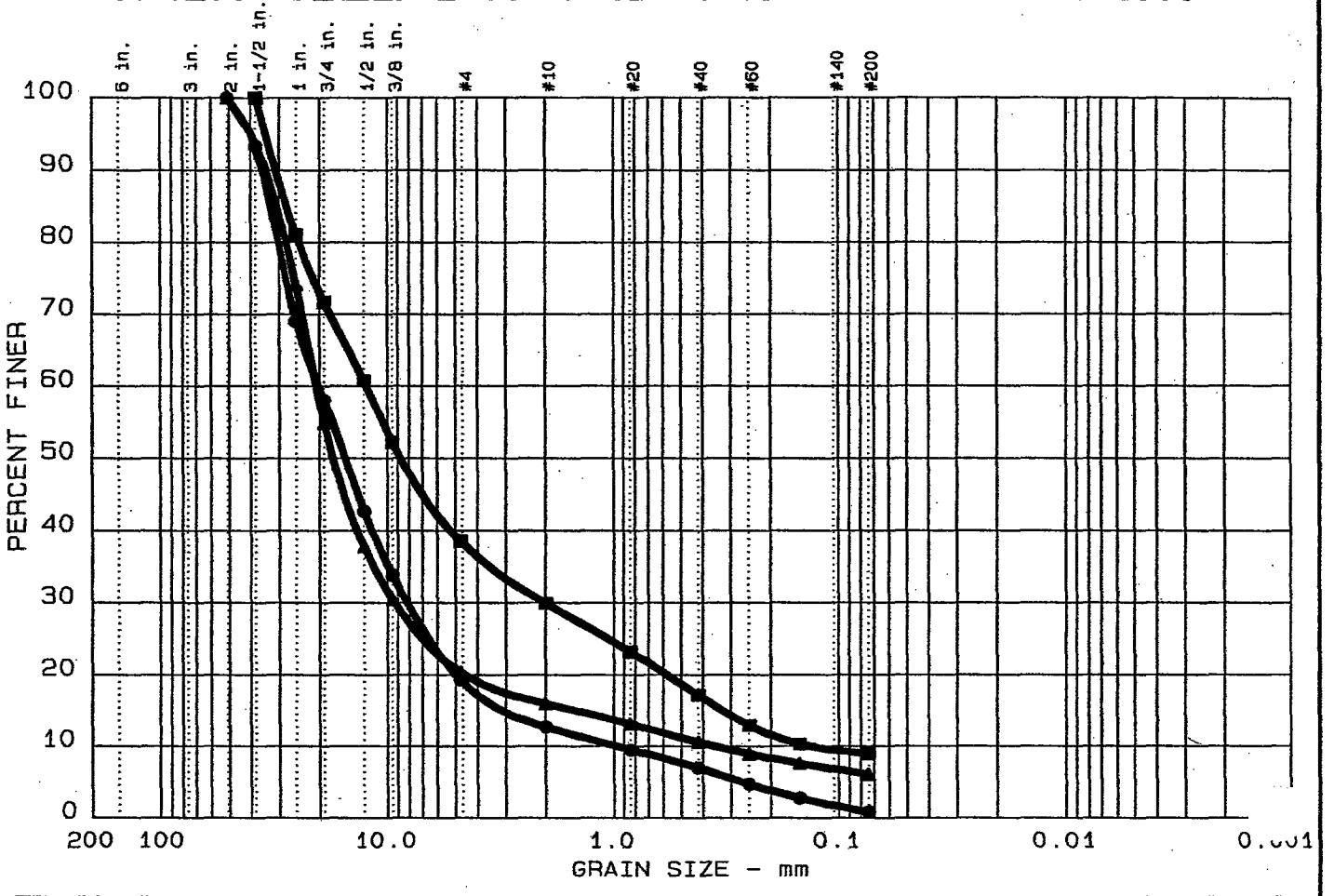
Remarks:

Project: Weyco DuPont
● Location: LR-245, Depth 0"-6"
▲ Location: LR-715, Depth 0"-6"

HARTCROWSER

J-3534-07 4/94
Figure 10

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75 mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	80.8	18.4	0.8	
▲	0.0	79.7	14.3	6.0	
■	0.0	61.4	29.7	8.9	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			32.70	20.16	15.38	8.166	3.1405	0.9817	3.37	20.5
▲			30.55	20.65	17.46	9.268	1.4028	0.3565	11.67	57.9
■			27.86	12.39	8.77	2.009	0.3258	0.1327	2.45	93.3

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Sandy, GRAVEL	GP	18.7%
▲ Slightly silty, sandy, GRAVEL	GP-GM	10.5%
■ Slightly silty, sandy, GRAVEL	GW-GM	20.9%

Remarks:

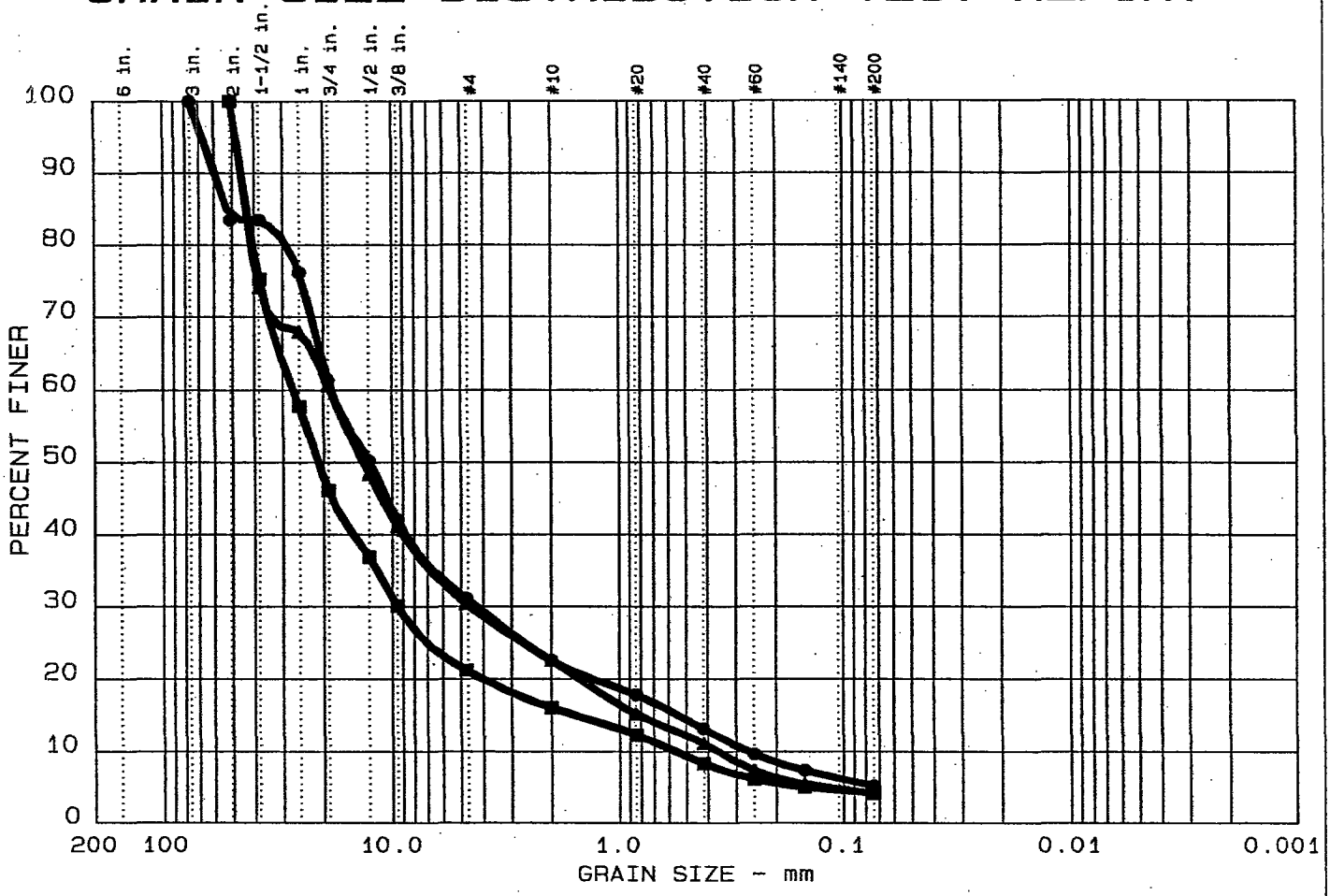
Project: Weyco/DuPont
- ● Location: 18R-10, Depth 0"-6"
- ▲ Location: 18R-15, Depth 0"-6"
- ■ Location: 18R-19 Depth 0"-6"

HARTCROWSER

J-3534-07 4/94

Figure 11

GRAIN SIZE DISTRIBUTION TEST REPORT



	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	0.0	68.8	26.0	5.2	
▲	0.0	69.6	26.3	4.1	
■	0.0	78.8	16.9	4.3	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			52.48	18.41	12.59	4.217	0.5370	0.2630	3.67	70.0
▲			43.90	18.69	13.38	4.534	0.8063	0.3602	3.05	51.9
■			43.15	26.92	21.09	9.419	1.5631	0.5546	5.94	48.5

MATERIAL DESCRIPTION	USCS	NAT. MOIST.
● Slightly silty, sandy, GRAVEL	GP-GM	6.2%
▲ Sandy, GRAVEL	GP	8.8%
■ Sandy, GRAVEL	GP	8.3%

Remarks:

Project: Weyco/DuPont
- ● Location: RR-502, Depth 0"-6"
- ▲ Location: RR-509, Depth 0"-6"
- ■ Location: RR-515, Depth 0"-6"

HARTCROWSER

J-3534-07 4/94

Figure 12

Appendix E
Data Quality Assessments

Recent Data Quality Assessment

Laboratory Analytical Data Validation Results

1 Summary

The soil sample analytical data reviewed for the 2001 Interim Corrective Actions at the Former DuPont Works Site in DuPont, Washington are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan.[1] The data may be used to assess analyte concentrations with the stated qualifications.

2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of samples for the 2001 Interim Corrective Actions at the former DuPont Works Site in Dupont, Washington, from May 7, 2001 through September 19, 2001. Samples were submitted to Sound Analytical Services, Inc. (SAS) located in Tacoma, Washington for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Surrogate recoveries
- Matrix spike / blank spike (MS / BS) recoveries
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992. (Management Plan)
- Work Plan, Interim Source Removal Actions: Impacted Foundations and Narrow Gauge Railroad Beds at the Former DuPont Works Site, Dupont, Washington, Pioneer Technologies Corporation, West Shore Corporation, NW, December 6, 2000.
- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- National Functional Guidelines for Organic Data Review, EPA, February 1994.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data were compared to criteria referenced in the Management Plan. The samples were analyzed for one or more of the following chemicals by the analytical methods shown:

• Metals (Arsenic, Lead and/or 23 metal target analyte list)	EPA 6000/7000 series
• Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene and 2,4,6-Trinitrotoluene)	EPA 8330
• Diesel-range and motor oil-range total petroleum hydrocarbons (TPH)	NWTPH-Dx

[1] Hart Crowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, WA.

3 Sample Case

The sample data groups (SDGs) identified in Table . 1 were included in this data review.

Table 1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
97962 *	5/7/01
98654	6/6/01
98684	6/7/01
98762	6/12/01
98830	6/14/01
98881	6/18/01
98938	6/19/01
98976	6/20/01
99001	6/21/01
99002	6/21/01
99100	6/26/01
99114	6/27/01
99246	7/2/01
99277	7/3/01
99382	7/9/01
99452	7/11/01
99474	7/12/01
99583	7/17/01
99620	7/18/01
99660	7/19/01
99700	7/23/01
99729	7/24/01
99847	7/30/01
99881	7/31/01
99905	8/1/01

* This data review includes only a subset of the samples included with this SDG.

Sound Analytical Services Data Group Number	Date Sampled
99931	8/2/01
99996	8/6/01
100020	8/7/01
100052	8/8/01
100088	8/9/01
100144	8/13/01
100171	8/14/01
100198	8/15/01
100234	8/16/01
100280	8/20/01
100308	8/21/01
100330	8/22/01
100375	8/23/01
100443	8/27/01
100481	8/28/01
100529	8/29/01
100558	8/30/01
100606	9/4/01
100759	9/4/01
100645	9/5/01
100780	9/10/01–9/12/01
100804	9/13/01
100855	9/17/01
100856	9/17/01
100921	9/19/01

4 Laboratory Report and Reporting of Required Analyses

The laboratory reports included method blanks, surrogate recoveries (if appropriate), sample results, sample preparation logs, matrix spike results and matrix duplicate results. Blank spike data were reported for all organic analyses and were reported for metals only when matrix spike recovery data were outside of the control limits. Generally, the reports were adequate to evaluate the data quality given that blank spikes are not consistently reported. All sample analyses were reported as requested.

5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. With the exception of the samples collected on September 10, 2001 (SAS # 100780), samples were submitted to the laboratory on the day of sample collection. All sample bottles were received in good condition. All samples were digested or extracted and analyzed within the method-required holding times.

6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met.

Field blanks (rinse blanks) were collected to assess potential cross-contamination in the field. Forty-five (45) field blanks were collected and analyzed for arsenic and lead. Arsenic was detected in 2 of the field blanks at concentrations of 0.02 mg/L and 0.01 mg/L. These field blanks are associated with the analytical groups 98830 and 100052, respectively. Lead was detected in 15 field blanks at concentrations ranging from 0.01 mg/L to 0.11 mg/L. These field blanks are associated with the analytical groups 98976, 99001, 99474, 99620, 99660, 99700, 99729, 99996, 100020, 100052, 100171, 100198, 100330, 100606 and 100645. Concentrations of arsenic and lead detected in the soil samples associated with these field blanks typically were reported with significantly higher concentrations of the metals (i.e. greater than 10X the concentration in the field blank). Data qualifiers were not assigned to associated soil analytical data based on method or field blank results.

7 Surrogate Recoveries

Laboratory performance on individual samples analyzed for explosives and TPH was assessed by reviewing the recoveries of system monitoring compounds (surrogates). Surrogate recoveries for samples analyzed for explosives and TPH were acceptable and data qualifiers were not assigned.

8 Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS per analytical batch or one MS per 20 samples was met. In some cases, the MS was performed on samples unrelated to this site. Thirty (30) SDGs contained MS analyses on samples unrelated to this site. These SDGs are listed in the Laboratory Duplicates section of this report. Data qualifiers were not assigned based on results from MS analyses performed on samples unrelated to this site. Blank spike (BS) analyses were used to assess the overall performance of the analytical system when matrix spike recoveries were not acceptable.

Arsenic and Lead by EPA 6010

The MS results were compared to the method control limits of 75 to 125%. The lead recovery (376%) and the arsenic recovery (51%) for the MS performed on sample 01-OS02-SS[LR-68-600E-TRANSECT]-C1-000 (SDG 100529) were outside of the control limits. Per data validation guidelines, when the concentration of the analyte in the parent sample is greater than 4X the spike level, data are not qualified based on the MS recovery. Lead results were not qualified due to the MS recovery in sample 01-OS02-SS[LR-68-600E-TRANSECT]-C1-000 based on the 4X rule. Results for arsenic in the samples in the same analytical batch as 01-OS02-SS[LR-68-600E-TRANSECT]-C1-000 (SDG 100529) were qualified as estimated and flagged "J" or "UJ" based on MS results.

The recovery of lead (44%) in the MS performed on sample 02-N01-SS[NGRR-145-2]C2-025 (SDG 100558) was below the control limits due to sample matrix interference. Results for lead for samples in the same analytical batch as sample 02-N01-SS[NGRR-145-2]C2-025 (SDG100558) were qualified as estimated and flagged "J" based on the MS results. The results for arsenic in SDG 100558 were not qualified.

Based on review of the sample preparation log sheets, blank spikes were prepared at the appropriate frequency although the results were reported only when MS recoveries were outside of control limits. The blank spike recoveries provided were all within the control limits of 80 to 120%. Data provided included sets of blank spike/blank spike duplicates for lead associated with samples from SDGs 100529 and 100558 and arsenic associated with samples from SDG 100529. Blank spike/blank spike duplicate data were also provided for chromium and nickel associated with samples from SDG 99002 and lead associated with samples from SDG 100375, where the MS was performed on a non-project sample. Data qualifiers were not assigned to associated samples based on blank spike/blank spike duplicate results.

Explosives by EPA 8330

The recovery of 2,4,6-trinitrotoluene (2,4,6-TNT) in the MS (1,900 %) and the recoveries of 2,4-dinitrotoluene (2,4-DNT, 465%), 2,6-dinitrotoluene (2,6-DNT, 132%) and 2,4,6-TNT (200,000%) in the MSD performed on sample 03-IN01-SS[10-VS-5]D2-7.0 (SDG 99905) were outside of the laboratory control limits of 69–110% for 2,4,6-TNT, 78-105% for 2,4-DNT, and 68-108% for 2,6-DNT. The relative percent differences (RPDs) for 2,4,6-TNT (200%), 2,4-DNT (130%) and 2,6-DNT (21%) were greater than the RPD control limits of 9%, 13%, and 10% for 2,4,6-TNT, 2,4-DNT and 2,6-DNT, respectively. Recoveries of explosives in the blank spike/blank spike duplicate were acceptable. Results for 2,4,6-TNT, 2,4-DNT and 2,6-TNT for sample 03-IN01-SS[10-VS-5]D2-7.0 were qualified as estimated and assigned "J" or "UJ" flags based on MS/MSD results.

Diesel-Range and Motor Oil-Range TPH by NWTPH-Dx

A MS/MSD was not performed on any of the samples submitted for diesel-range and motor oil-range TPH analysis. Data were assessed based on the BS/BSD results that were acceptable.

9 Laboratory Duplicates

Laboratory duplicate results were used to assess the precision of laboratory measurements. The laboratory duplicate results were compared to the project control limit for relative percent difference (RPD) of 35% when sample results were greater than or equal to five times the reporting limit. A control limit of plus or minus the reporting limit was used for evaluation of duplicate samples where one or both of the results are less than five times the reporting limit. The QC frequency requirement of one duplicate per analytical batch or one duplicate per 20 samples was met. In some cases, the duplicate was performed on samples unrelated to this site. Thirty (30) SDGs include samples or subsets of samples that are associated with duplicate analyses performed on samples unrelated to this site (summarized below). Data qualifiers were not assigned to sample data based on duplicate analyses of non-project samples.

SDGs with MS and Laboratory Duplicate Analysis performed on non-project samples

98654*	99100*	99474	100052	100308	100558
98684	99114*	99905	100088	100330	100606
98938*	99246*	99660*	100171	100375	100645*
99001	99382*	99931	100198	100481*	100780*
99002	99452*	99996	100280*	100529	100804*

* Associated with water samples only

Arsenic and Lead by EPA 6010

A total of sixty-two samples were qualified as estimated based on the results of laboratory duplicate analyses. All qualified results for metals analysis are summarized in Table A-2. Of the samples qualified based on laboratory duplicates, 20 samples were qualified due to an RPD that is greater than 35% and 42 sample results were qualified due to a difference of greater than the reporting limit between a sample and

its duplicate. Qualified data were assigned "J" flags if the sample result was reported as detected and "UJ" flags if reported as not detected.

Explosives by EPA 8330

Second column confirmation for detected compounds was performed on samples analyzed for explosives by EPA Method 8330. The RPDs of the results were evaluated by the laboratory and found to be greater than 40% for 2,4,6-TNT in samples 03-IN01-SS[10-VS-8]D2-5.0, 03-IN01-SS[10-VS-9]D2-5.0 and 03-IN01-SS[10-VS-10]D3-5.0, and for 2,4-DNT in sample 03-IN01-SS[10-VS-5]D2-7.0 (SDG 99905). Sample results were qualified as estimated and flagged with a "J" for 2,4,6-TNT in samples 03-IN01-SS[10-VS-8]D2-5.0, 03-IN01-SS[10-VS-9]D2-5.0 and 03-IN01-SS[10-VS-10]D3-5.0 and for 2,4-DNT in sample 03-IN01-SS[10-VS-5]D2-7.0.

10 Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples collected was met for metals and explosives analyses. Forty-nine (49) sets of field duplicate samples for metals analysis were collected and one set of duplicate samples were collected for explosives. A field duplicate was not collected for diesel-range and motor oil-range TPH analysis. Table A-3 presents the RPDs of detected compounds that were calculated for the duplicate pairs of soil samples analyzed for metals and explosives.

11 Reporting Limits

Reporting limits were reviewed to ensure that results reported meet project goals. The reporting limits are acceptable for the project needs. The data are summarized in Tables A-4 through A-12:

Analytical Results for Sampling, May - September 2001

Table A-4	Foundations
Table A-5	NGRR
Table A-6	Industrial
Table A-7	Sequalitchew Creek
Table A-8	Hot Spot
Table A-9	Historical Areas
Table A-10	Core Drilling
Table A-11	Topsoil Laydown Areas
Table A-12	Production Well
Table A-13	Hoffman Reservoir

Arsenic and Lead by EPA 6010

The samples analyzed on August 23, 2001 were reported with elevated PQLs. This affects the samples collected on August 20, 2001 (SDG 100280) and a subset of samples collected August 21, 2001 (SDG 100308). The typical PQLs for lead and arsenic analyses performed on soil samples for this project were approximately 2 mg/kg for both metals. Samples analyzed on August 23, 2001 were reported with PQLs of approximately 20 mg/kg for lead and 40 mg/kg for arsenic. The soil screening levels for lead and arsenic (118 mg/kg and 64 mg/kg, respectively) are greater than the elevated PQLs reported for the August 23 analyses, therefore the elevated PQLs do not affect the use of these data for project objectives.

Explosives by EPA 8330

The result for 2,4-DNT reported by the laboratory for sample 18-TR-18N,S-1 (0.023 mg/kg) was below the reported PQL for 2,4-DNT (0.045 mg/kg). The laboratory assigned a "J" flag to the sample result, as they typically do when reporting below the PQL. The Corps of Engineers requires SAS to report all confirmed detections of explosives even if compounds are detected below the PQL.

Diesel-Range and Motor Oil-Range TPH by NWTPH-Dx

The result for diesel-range TPH reported by the laboratory for sample WEY-GEO-4 (18 mg/kg) was below the reported PQL for diesel-range TPH (30 mg/kg). The laboratory assigned a "J" flag to the sample result, as they typically do when reporting below the PQL.

Table A-2

Summary of Qualified Results for Lead and Arsenic
Interim Source Removal Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date	As (mg/kg)	Flag	Pb (mg/kg)	Flag	Reason
01-F03-ER[F-172]C4-000	20-Jun-01	0.01	U	0.021	J	Dup (1)
01-N01-ER[NGRR-61]C4-000	12-Jul-01	0.01	U	0.03	J	Dup (2)
01-F34-SS[F-170]C2-005	17-Jul-01	3.1		5.5	J	Dup (1)
01-F34-SS[F-171]C2-005	17-Jul-01	3		29	J	Dup (1)
01-N01-SS[NGRR-62]C2-005	17-Jul-01	21		6	J	Dup (1)
01-N01-SS[NGRR-63]C2-005	17-Jul-01	7.6		3.1	J	Dup (1)
01-N01-SS[NGRR-64]C2-005	17-Jul-01	2.8		1.8	UJ	Dup (1)
01-N01-SS[NGRR-65]C2-005	17-Jul-01	3.8		2.1	UJ	Dup (1)
01-N01-SS[NGRR-66]C2-005	17-Jul-01	12		5.3	J	Dup (1)
01-N01-SS[NGRR-67]C2-005	17-Jul-01	3.9		7.3	J	Dup (1)
01-N01-SS[NGRR-69]C2-005	17-Jul-01	210		18	J	Dup (1)
01-N01-SS[NGRR-70]C2-005	17-Jul-01	6.5		2.8	J	Dup (1)
01-N01-SS[NGRR-71]C2-005	17-Jul-01	9.9		2	UJ	Dup (1)
01-N01-SS[NGRR-72]C2-005	17-Jul-01	11		2.6	J	Dup (1)
01-N01-SS[NGRR-73]C2-005	17-Jul-01	3.7		1.8	UJ	Dup (1)
01-N01-ER[NGRR-86]C4-000	18-Jul-01	0.01	U	0.032	J	Dup (1)
01-N01-ER[NGRR-119]C4-000	23-Jul-01	0.01	U	0.011	J	Dup (1)
01-N01-ER[NGRR-137]C4-000	24-Jul-01	0.01	U	0.011	J	Dup (1)
01-N01-ER[NGRR-257]C4-000	13-Aug-01	0.01	U	0.01	UJ	Dup (1)
01-F35-ER[F-258]C4-000	14-Aug-01	0.01	U	0.017	J	Dup (1)
01-N01-ER[NGRR-296]C4-000	15-Aug-01	0.01	U	0.013	J	Dup (1)
01-N01-ER[NGRR-311]C4-000	16-Aug-01	0.01	U	0.01	UJ	Dup (1)
01-N01-SS[NGRR-342]C2-005	20-Aug-01	42	U	46	J	Dup (1)
01-N01-SS[NGRR-343]C3-005	20-Aug-01	42	U	21	UJ	Dup (1)
01-N01-SS[NGRR-344]C2-005	20-Aug-01	43	U	21	UJ	Dup (1)
01-N01-SS[NGRR-345]C2-005	20-Aug-01	39	U	20	UJ	Dup (1)
01-N01-SS[NGRR-346]C2-005	20-Aug-01	41	U	21	UJ	Dup (1)
01-N01-SS[NGRR-347]C2-005	20-Aug-01	38	U	19	UJ	Dup (1)
01-N01-SS[NGRR-348]C2-005	20-Aug-01	41	U	20	UJ	Dup (1)
01-N01-SS[NGRR-349]C2-005	20-Aug-01	38	U	19	UJ	Dup (1)
01-N01-SS[NGRR-350]C2-005	20-Aug-01	40	U	20	UJ	Dup (1)
01-N01-SS[NGRR-351]C2-005	20-Aug-01	42	U	21	UJ	Dup (1)
01-N01-SS[NGRR-352]C2-005	21-Aug-01	40	U	20	UJ	Dup (1)
01-N01-SS[NGRR-353]C3-005	21-Aug-01	43	U	21	UJ	Dup (1)
01-N01-SS[NGRR-354]C2-005	21-Aug-01	43	U	21	UJ	Dup (1)
01-N01-SS[NGRR-355]C2-005	21-Aug-01	45	U	22	UJ	Dup (1)
01-N01-SS[NGRR-356]C2-005	21-Aug-01	42	U	21	UJ	Dup (1)
01-N01-SS[NGRR-357]C2-005	21-Aug-01	40	U	20	UJ	Dup (1)
01-N01-SS[NGRR-358]C2-005	21-Aug-01	37	U	18	UJ	Dup (1)
01-N01-SS[NGRR-359]C2-005	21-Aug-01	43	U	22	UJ	Dup (1)
01-N01-SS[NGRR-360]C2-005	21-Aug-01	44	U	22	UJ	Dup (1)
01-N01-SS[NGRR-361]C2-005	21-Aug-01	40	U	20	UJ	Dup (1)
01-OS02-SS[LR-68-600E-TRANSECT]-C1-000	29-Aug-01	20	J	1700		MS
01-OS02-SS[LR-68-300W-TRANSECT]-C1-000	29-Aug-01	20	J	23		MS
01-OS02-SS-[LR-68-1500W-TRANSECT]-C1-000	29-Aug-01	10	J	22		MS
01-OS02-SS-[LR-68-3600W-TRANSECT]-C1-000	29-Aug-01	27	J	38		MS
02-N01-SS[NGRR-27-2]C2-025	29-Aug-01	31	J	14		MS
02-N01-SS[NGRR-29-2]C2-025	29-Aug-01	17	J	16		MS
02-N01-SS[NGRR-30-2]C2-025	29-Aug-01	6	J	4.8		MS
02-F23-SS[F-161-2]C2-030	29-Aug-01	6.7	J	180		MS
02-F23-SS[F-162-2]C2-030	29-Aug-01	12	J	31		MS

Table A-2

Summary of Qualified Results for Lead and Arsenic
Interim Source Removal Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date	As (mg/kg)	Flag	Pb (mg/kg)	Flag	Reason
02-F11-SS[F-244-2]C2-030	29-Aug-01	16	J	720		MS
02-F11-SS[F-245-2]C2-030	29-Aug-01	11	J	2100		MS
02-F11-SS[F-246-2]C2-030	29-Aug-01	6.4	J	38		MS
02-F11-SS[F-248-2]C2-030	29-Aug-01	4.8	J	96		MS
02-F11-SS[F-249-2]C2-030	29-Aug-01	9.2	J	4900		MS
02-F11-SS[F-250-2]C3-030	29-Aug-01	10	J	710		MS
02-F11-SS[F-251-2]C2-030	29-Aug-01	8.5	J	150		MS
02-F11-SS[F-252-2]C2-030	29-Aug-01	5.4	J	140		MS
02-F11-SS[F-253-2]C2-030	29-Aug-01	24	J	65		MS
02-F11-SS[F-254-2]C2-030	29-Aug-01	20	J	280		MS
02-F11-SS[F-255-2]C2-030	29-Aug-01	11	J	47		MS
02-N01-SS[NGRR-07-2]C2-025	30-Aug-01	4.6		22	J	Dup (2), MS
02-N01-SS[NGRR-08-2]C3-025	30-Aug-01	4.5		21	J	Dup (2), MS
02-N01-SS[NGRR-125-2]C2-025	30-Aug-01	4.9		15	J	Dup (2), MS
02-N01-SS[NGRR-126-2]C3-025	30-Aug-01	5.7		14	J	Dup (2), MS
02-N01-SS[NGRR-132-2]C2-025	30-Aug-01	3.9		9.9	J	Dup (2), MS
02-N01-SS[NGRR-145-2]C2-025	30-Aug-01	7.2		250	J	Dup (2), MS
02-N01-SS[NGRR-179-2]C2-025	30-Aug-01	52		140	J	Dup (2), MS
02-N01-SS[NGRR-279-2]C2-025	30-Aug-01	14		34	J	Dup (2), MS
02-N01-SS[NGRR-280-2]C3-025	30-Aug-01	11		19	J	Dup (2), MS
02-N01-SS[NGRR-281-2]C2-025	30-Aug-01	35		40	J	Dup (2), MS
02-N01-SS[NGRR-282-2]C2-025	30-Aug-01	7.3		29	J	Dup (2), MS
02-N01-SS[NGRR-301-2]C2-025	30-Aug-01	6		14	J	Dup (2), MS
02-N01-SS[NGRR-302-2]C2-025	30-Aug-01	5.3		8.6	J	Dup (2), MS
02-F30-SS[F-227-2]C2-030	30-Aug-01	5.6		35	J	Dup (2), MS
02-F31-SS[F-233-2]C2-030	30-Aug-01	5.7		54	J	Dup (2), MS
02-F08-SS[F-08-2]C2-030	30-Aug-01	2.6		90	J	Dup (2), MS
02-F15-SS[F-128-2]C2-030	30-Aug-01	6		200	J	Dup (2), MS
02-F15-SS[F-133-2]C2-030	30-Aug-01	4.1		55	J	Dup (2), MS
02-F38-SS[F-259-2]C2-030	30-Aug-01	5.2		57	J	Dup (2), MS
01-E18-ER[F-329]C4-000	19-Sep-01	0.01	U	0.01	UJ	Dup (1)

Equipment (field) blank sample. Results given as mg/L.

U The analyte was analyzed for, but was not detected above the reporting limit shown.
J Estimated Value, qualifier assigned during data review
UJ Analyte was analyzed for, but was not detected above the reporting limit shown. The reporting limit is estimated.
Dup (1) Both the sample and duplicate results were less than 5X the PQL. Data were evaluated by comparing the difference between values and qualifying data that were outside of +/- the reporting limit.
Dup (2) Both the sample and duplicate results were greater than or equal to 5X the PQL. Data were evaluated based on their relative percent difference (RPD).
MS - Data was qualified based on the matrix or matrix spike duplicate.

Table A-3

Summary of Duplicate Samples

Interim Source Removal Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Metals Analysis					
Sample ID	**Date**	**As Result (mg/kg)**	**RPD (As) %**	**Pb Result (mg/kg)**	**RPD (Pb) %**
01-F08-SS[F-01] C2-005	6-Jun-01	4.1	10.3	3.5	0.0
01-F08-SS[F-02] C3-005		3.7		3.5	
01-F08-SS[F-17] C2-005	6-Jun-01	2.9	12.9	2.8	15.4
01-F08-SS[F-18] C3-005		3.3		2.4	
01-N01-SS[NGRR-07]C2-005	7-Jun-01	130	7.4	16	31.6
01-N01-SS[NGRR-08]C3-005		140		22	
01-F01-SS[F-48]C2-005	14-Jun-01	4.4	14.7	14	44.4
01-F01-SS[F-49]C3-005		5.1		22	
01-F01-SS[F-83]C2-005	18-Jun-01	4.3	17.0	120	0.0
01-F01-SS[F-84]C3-005		5.1		120	
01-F03-SS[F-102]C2-005	20-Jun-01	8.3	42.3	30	55.4
01-F03-SS[F-103]C3-005		5.4		53	
01-F04-SS[F-116]C2-005	20-Jun-01	8.7	21.7	16	0.0
01-F04-SS[F-117]C3-005		7		16	
01-N01-SS[NGRR-14]C2-005	26-Jun-01	4.6	4.4	6.9	1.4
01-N01-SS[NGRR-15]C3-005		4.4		7	
01-N01-SS[NGRR-19]C2-005	2-Jul-01	3.8	51.0	3.2	9.8
01-N01-SS[NGRR-20]C3-005		6.4		2.9	
01-H404-SS[11]D1-005	3-Jul-01	6.1	1.6	33	12.9
01-H404-SS[12]D2-005		6.2		29	
01-N01-SS[NGRR-36]C2-005	11-Jul-01	6	0.0	25	4.1
01-N01-SS[NGRR-37]C3-005		6		24	
01-N01-SS[NGRR-54]C2-005	12-Jul-01	6.2	12.0	7.3	19.5
01-N01-SS[NGRR-55]C3-005		5.5		6	
01-N01-SS[NGRR-74]C2-005	18-Jul-01	7.5	34.4	4.1	27.8
01-N01-SS[NGRR-75]C3-005		5.3		3.1	
01-N01-SS[NGRR-95]C2-005	19-Jul-01	3.7	42.6	5	5.8
01-N01-SS[NGRR-96]C3-005		2.4		5.3	
01-N01-SS[NGRR-103]C2-005	23-Jul-01	6.1	9.4	9.8	26.6
01-N01-SS[NGRR-104]C3-005		6.7		7.5	
01-N01-SS[NGRR-125]C2-005	24-Jul-01	97	12.0	23	4.4
01-N01-SS[NGRR-126]C3-005		86		22	
01-F37-SS[F-189]C2-005	30-Jul-01	4.9	17.8	3.5	37.3
01-F37-SS[F-190]C3-005		4.1		2.4	
01-N01-SS[NGRR-153]C2-005	31-Jul-01	3.5	0.0	2.3	4.4
01-N01-SS[NGRR-154]C3-005		3.5		2.2	
01-N01-SS[NGRR-164]C2-005	2-Aug-01	11	9.5	63	31.2
01-N01-SS[NGRR-165]C3-005		10		46	
01-N01-SS[NGRR-187]C2-005	6-Aug-01	35	13.3	11	8.7
01-N01-SS[NGRR-188]C3-005		40		12	
01-N01-SS[NGRR-193]C2-005	7-Aug-01	11	0.0	57	6.8
01-N01-SS[NGRR-194]C3-005		11		61	
01-N01-SS[NGRR-223]C2-005	8-Aug-01	6.6	9.5	5.6	6.9
01-N01-SS[NGRR-224]C3-005		6		6	
01-N01-SS[NGRR-235]C2-005	9-Aug-01	6.5	0.0	7.4	11.4
01-N01-SS[NGRR-236]C3-005		6.5		6.6	
01-N01-SS[NGRR-245]C2-005	13-Aug-01	8.6	7.8	10	10.5
01-N01-SS[NGRR-246]C3-005		9.3		9	
01-N01-SS[NGRR-261]C2-005	13-Aug-01	6.7	9.9	5.6	11.8
01-N01-SS[NGRR-262]C3-005		7.4		6.3	
01-N01-SS[NGRR-279]C2-005	14-Aug-01	140	19.4	79	20.5
01-N01-SS[NGRR-280]C3-005		170		97	
01-F11-SS[F-249]C2-005	14-Aug-01	20	4.9	2500	0.0
01-F11-SS[F-250]C3-005		21		2500	
01-N01-SS[NGRR-283]C2-005	15-Aug-01	12	8.7	20	10.5
01-N01-SS[NGRR-284]C3-005		11		18	
01-N01-SS[NGRR-301]C2-005	16-Aug-01	81	20.0	37	21.7
		99		46	

Table A-3

Summary of Duplicate Samples
Interim Source Removal Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Metals Analysis					
Sample ID	**Date**	**As Result (mg/kg)**	**RPD (As) %**	**Pb Result (mg/kg)**	**RPD (Pb) %**
01-N01-SS[NGRR-321]C2-005 01-N01-SS[NGRR-322]C3-005	20-Aug-01	42 U 41 U	NC	21 U 21 U	NC
01-N01-SS[NGRR-342]C2-005 01-N01-SS[NGRR-343]C3-005	20-Aug-01	42 U 42 U	NC	46 J 21 U	NC
01-N01-SS[NGRR-352]C2-005 01-N01-SS[NGRR-353]C3-005	21-Aug-01	40 U 43 U	NC	20 UJ 21 UJ	NC
01-F09-SS[F-260]C2-005 01-F09-SS[F-261]C3-005	22-Aug-01	4.4 4.7	6.6	5.2 3.5	39.1
01-N01-SS[NGRR-383]C2-005 01-N01-SS[NGRR-384]C3-005	23-Aug-01	5.2 4.9	5.9	5.5 5.2	5.6
01-N01-SS[NGRR-411]C2-005 01-N01-SS[NGRR-412]C3-005	27-Aug-01	9.7 8.9	8.6	8.8 7.4	17.3
01-F33-SS[F-273]C2-005 01-F33-SS[F-274]C3-005	28-Aug-01	15 14	6.9	98 62	45.0
02-F02-SS[F-83-2]C2-030 02-F02-SS[F-84-2]C3-030	28-Aug-01	4.8 3.6	28.6	89 76	15.8
02-F11-SS[F-249-2]C2-030 02-F11-SS[F-250-2]C3-030	29-Aug-01	9.2 J 10 J	8.3	4900 710	149.4
02-N01-SS[NGRR-07-2]C2-025 02-N01-SS[NGRR-08-2]C3-025	30-Aug-01	4.6 4.5	2.2	22 J 21 J	4.7
02-N01-SS[NGRR-279-2]C2-025 02-N01-SS[NGRR-280-2]C3-025	30-Aug-01	14 11	24.0	34 J 19 J	56.6
02-N01-SS[NGRR-125-2]C2-025 02-N01-SS[NGRR-126-2]C3-025	30-Aug-01	4.9 5.7	15.1	15 J 14 J	6.9
02-N01-SS[NGRR-301-2]C2-025 02-N01-SS[NGRR-302-2]C3-025	30-Aug-01	6 5.3	12.4	14 J 8.6 J	47.8
01-F20-SS[F-284]-C2-005 01-F20-SS[F-285]-C3-005	4-Sep-01	4.9 6.5	28.1	5.8 5.8	0.0
01-F20-SS-[F-294]-C2-005 01-F20-SS-[F-295]-C3-005	5-Sep-01	6.8 7.5	9.8	25 32	24.6
03-F02-SS-[F-76-3]-C2-050 03-F02-FD-[F-84-3]-C3-050	13-Sep-01	4.7 7.6	47.2	19 30	44.9
03-F02-SS-[F-77-3]-C2-050 03-F02-FD-[F-49-3]-C3-050	13-Sep-01	10 75	152.9	20 12	50.0
04-F02-SS-[F-89-4]-C2-060 01-F02-FD-[F-326]-C3-000	19-Sep-01	7.6 6.5	15.6	86 87	1.2
04-F02-SS-[F-90-4]-C2-060 01-F02-FD-[F-327]-C3-000	19-Sep-01	6.7 7.1	5.8	270 440	47.9
02-F18-SS-[F-319-2]-C2-030 01-F18-FD-[F-328]-C3-030	19-Sep-01	4.2 3.8	10.0	2.9 3.6	21.5

Explosives Analysis			
Sample ID	**Date**	**2,4,6-Trinitrotoluene Result (mg/kg)**	**RPD (Pb) %**
03-IN01-SS[10-VS-9]D2-5.0 03-IN01-SS[10-VS-10]D3-5.0	1-Aug-01	0.12 J 0.14 J	15.4

NC = Not Calculable

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F08-SS[F-01] C2-005	6-Jun-01	4.1		3.5		01-F08-SS[F-02] C3-005
01-F08-SS[F-02] C3-005	6-Jun-01	3.7		3.5		
01-F08-SS[F-03] C2-005	6-Jun-01	3.3		3.9		
01-F08-SS[F-04] C2-005	6-Jun-01	2.5		2.2		
01-F08-SS[F-05] C2-005	6-Jun-01	3.1		2.7		
01-F08-SS[F-06] C2-005	6-Jun-01	2.6		3.9		
01-F08-SS[F-07] C2-005	6-Jun-01	5		75		
01-F08-SS[F-08] C2-005	6-Jun-01	2	U	190		
01-F08-SS[F-09] C2-005	6-Jun-01	3.5		3.3		
01-F08-SS[F-10] C2-005	6-Jun-01	3.9		4.4		
01-F08-SS[F-11] C2-005	6-Jun-01	3.8		2.4		
01-F08-SS[F-12] C2-005	6-Jun-01	2.6		4.5		
01-F08-SS[F-13] C2-005	6-Jun-01	4.6		14		
01-F08-SS[F-14] C2-005	6-Jun-01	3.6		13		
01-F08-SS[F-15] C2-005	6-Jun-01	3.2		7		
01-F08-SS[F-16] C2-005	6-Jun-01	3.1		3.5		
01-F08-SS[F-17] C2-005	6-Jun-01	2.9		2.8		01-F08-SS[F-18] C3-005
01-F08-SS[F-18] C3-005	6-Jun-01	3.3		2.4		
01-F08-ER[F-19] C4-000	6-Jun-01	0.01	U	0.01	U	
01-F07-SS[F-20]C2-005	7-Jun-01	2.8		2.3		
01-F07-SS[F-21]C2-005	7-Jun-01	2.7		2.5		
01-F07-SS[F-22]C2-005	7-Jun-01	2.5		2.3		
01-F07-SS[F-23]C2-005	7-Jun-01	2	U	2.1		
01-F07-SS[F-24]C2-005	7-Jun-01	3.4		2.3		
01-F06-SS[F-25]C2-005	7-Jun-01	2.5		2.3		
01-F06-SS[F-26]C2-005	7-Jun-01	3.8		8.2		
01-F06-SS[F-27]C2-005	7-Jun-01	4.1		3		
01-F06-SS[F-28]C2-005	7-Jun-01	2.4		24		
01-F01-SS[F-29]C2-005	12-Jun-01	5.6		8.5		
01-F01-SS[F-30]C2-005	12-Jun-01	4.1		28		
01-F01-SS[F-31]C2-005	12-Jun-01	12		37		
01-F01-SS[F-32]C2-005	12-Jun-01	13		70		
01-F01-SS[F-33]C2-005	12-Jun-01	3.5		3.6		
01-F01-SS[F-34]C2-005	12-Jun-01	4.2		15		
01-F01-SS[F-35]C2-005	12-Jun-01	7		18		
01-F01-SS[F-36]C2-005	12-Jun-01	5.4		41		
01-F01-SS[F-37]C2-005	12-Jun-01	13		43		
01-F01-SS[F-38]C2-005	12-Jun-01	13		93		
01-F01-SS[F-39]C2-005	12-Jun-01	12		19		
01-F01-SS[F-40]C2-005	12-Jun-01	5.5		40		
01-F01-ER[F41]C4-000	12-Jun-01	0.01	U	0.01	U	
01-F01-SS[F-42]C2-005	12-Jun-01	9.8		150		
01-F01-SS[F-43]C2-005	12-Jun-01	7.7		53		
01-F01-SS[F-44]C2-005	12-Jun-01	7.9		41		
01-F01-SS[F-45]C2-005	12-Jun-01	9.1		67		
01-F01-SS[F-46]C2-005	14-Jun-01	7.8		37		
01-F01-SS[F-47]C2-005	14-Jun-01	3.2		120		
01-F01-SS[F-48]C2-005	14-Jun-01	4.4		14		01-F01-SS[F-49]C3-005
01-F01-SS[F-49]C3-005	14-Jun-01	5.1		22		
01-F01-SS[F-50]C2-005	14-Jun-01	3		2.4		
01-F01-SS[F-51]C2-005	14-Jun-01	6.3		9.3		
01-F01-SS[F-52]C2-005	14-Jun-01	9.8		23		
01-F01-SS[F-53]C2-005	14-Jun-01	7.4		26		
01-F01-SS[F-54]C2-005	14-Jun-01	3.6		4.9		
01-F01-SS[F-55]C2-005	14-Jun-01	4.2		4.7		
01-F01-SS[F-56]C2-005	14-Jun-01	6.5		29		
01-F01-SS[F-57]C2-005	14-Jun-01	6.8		6.2		
01-F01-SS[F-58]C2-005	14-Jun-01	2.6		2.7		

Table A-4

Soil Analytical Results for Lead and Arsenic Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F01-SS[F-59]C2-005	14-Jun-01	5.3		2.4	U	
01-F01-SS[F-60]C2-005	14-Jun-01	4.4		2.2	U	

Table A-4

Soil Analytical Results for Lead and Arsenic Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F01-SS[F-61]C2-005	14-Jun-01	3.9		2.3	U	
01-F01-SS[F-62]C2-005	14-Jun-01	3.8		2.4		
01-F01-SS[F-63]C2-005	14-Jun-01	4.7		88		
01-F01-SS[F-64]C2-005	14-Jun-01	11		430		
01-F01-ER[F-65]C4-000	14-Jun-01	0.02		0.01	U	
01-F01-SS[F-66]C2-005	18-Jun-01	6.3		59		
01-F01-SS[F-67]C2-005	18-Jun-01	5.4		340		
01-F01-SS[F-68]C2-005	18-Jun-01	4.1		10		
01-F01-SS[F-69]C2-005	18-Jun-01	4.5		4.8		
01-F01-SS[F-70]C2-005	18-Jun-01	2.9		49		
01-F01-ER[F-71]C4-000	18-Jun-01	0.01	U	0.01	U	
01-F02-SS[F-72]C2-005	18-Jun-01	4.7		170		
01-F02-SS[F-73]C2-005	18-Jun-01	3.7		10		
01-F02-SS[F-74]C2-005	18-Jun-01	7.6		10		
01-F02-SS[F-75]C2-005	18-Jun-01	3.7		5.9		
01-F02-SS[F-76]C2-005	18-Jun-01	5.5		140		
01-F02-SS[F-77]C2-005	18-Jun-01	5.9		130		
01-F02-SS[F-78]C2-005	18-Jun-01	9		320		
01-F02-SS[F-79]C2-005	18-Jun-01	7.5		780		
01-F02-SS[F-80]C2-005	18-Jun-01	4.2		410		
01-F02-SS[F-81]C2-005	18-Jun-01	7.4		210		
01-F02-SS[F-82]C2-005	18-Jun-01	3.5		3		
01-F02-SS[F-83]C2-005	18-Jun-01	4.3		120		01-F01-SS[F-84]C3-005
01-F02-SS[F-84]C3-005	18-Jun-01	5.1		120		
01-F02-SS[F-85]C2-005	19-Jun-01	8.3		270		
01-F02-SS[F-86]C2-005	19-Jun-01	8.5		100		
01-F02-SS[F-87]C2-005	19-Jun-01	5		6.8		
01-F02-SS[F-88]C2-005	19-Jun-01	9.3		500		
01-F02-SS[F-89]C2-005	19-Jun-01	4.7		250		
01-F02-SS[F-90]C2-005	19-Jun-01	3.2		670		
01-F02-SS[F-91]C2-005	19-Jun-01	8.6		350		
01-F02-SS[F-92]C2-005	19-Jun-01	5.1		400		
01-F02-ER[F93]C4-000	19-Jun-01	0.01	U	0.01	U	
01-F03-SS[F-94]C2-005	19-Jun-01	3.9		7.7		
01-F03-SS[F-95]C2-005	19-Jun-01	10		89		
01-F03-SS[F-96]C2-005	19-Jun-01	2.8		5		
01-F03-SS[F-97]C2-005	19-Jun-01	5.5		83		
01-F03-SS[F-98]C2-005	19-Jun-01	5.2		3.5		
01-F03-SS[F-99]C2-005	19-Jun-01	4.9		3.2		
01-F03-SS[F-100]C2-005	19-Jun-01	7.8		23		
01-F03-SS[F-101]C2-005	19-Jun-01	5.3		150		
01-F03-SS[F-102]C2-005	20-Jun-01	8.3		30		01-F03-SS[F-103]C3-005
01-F03-SS[F-103]C3-005	20-Jun-01	5.4		53		
01-F03-SS[F-104]C2-005	20-Jun-01	5.8		30		
01-F03-SS[F-105]C2-005	20-Jun-01	8.5		95		
01-F03-SS[F-106]C2-005	20-Jun-01	2.9		38		
01-F03-SS[F-107]C2-005	20-Jun-01	14		9.9		
01-F03-SS[F-108]C2-005	20-Jun-01	9.7		18		
01-F03-SS[F-109]C2-005	20-Jun-01	7.3		22		
01-F03-SS[F-110]C2-005	20-Jun-01	7.1		75		
01-F03-SS[F-111]C2-005	20-Jun-01	11		4.8		
01-F03-SS[F-112]C2-005	20-Jun-01	8.2		82		
01-F03-SS[F-113]C2-005	20-Jun-01	12		26		
01-F03-ER[F-114]C4-000	20-Jun-01	0.01	U	0.041	J	
01-F04-SS[F-115]C2-005	20-Jun-01	7.1		5.2		
01-F04-SS[F-116]C2-005	20-Jun-01	8.7		16		01-F04-SS[F-117]C3-005
01-F04-SS[F-117]C3-005	20-Jun-01	7		16		
01-F04-SS[F-118]C2-005	20-Jun-01	100		10		

Table A-4

Soil Analytical Results for Lead and Arsenic Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F04-SS[F-119]C2-005	20-Jun-01	150		270		
01-F04-SS[F-120]C2-005	20-Jun-01	11		2.6		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F04-SS[F-121]C2-005	21-Jun-01	130		8.1		
01-F04-SS[F-122]C2-005	21-Jun-01	7.8		3.1		
01-F04-SS[F-123]C2-005	21-Jun-01	39		22		
01-F04-SS[F-124]C2-005	21-Jun-01	21		150		
01-F04-SS[F-125]C2-005	21-Jun-01	6.4		43		
01-F04-ER[F-126]C4-000	21-Jun-01	0.01	U	0.023		
01-F12-SS[F-127]C2-005	21-Jun-01	4.4		3.9		
01-F15-SS[F-128]C2-005	26-Jun-01	2.8		1100		
01-F15-SS[F-129]C2-005	26-Jun-01	2.5		8.4		
01-F15-SS[F-130]C2-005	26-Jun-01	3.2		4.2		
01-F15-SS[F-131]C2-005	26-Jun-01	1.9	U	23		
01-F15-SS[F-132]C2-005	26-Jun-01	2.3		2.5		
01-F15-SS[F-133]C2-005	26-Jun-01	2.7		160		
01-F15-SS[F-134]C2-005	26-Jun-01	2.5		27		
01-F15-SS[F-135]C2-005	26-Jun-01	1.9	U	4.7		
01-F19-SS[F-136]C2-005	26-Jun-01	3.3		6.1		
01-F19-SS[F-137]C2-005	26-Jun-01	2		39		
01-F20-SS[F-138]C2-005	27-Jun-01	5.2		9.3		
01-F20-SS[F-139]C2-005	27-Jun-01	3.6		2.2	U	
01-F20-SS[F-140]C2-005	27-Jun-01	3.5		3.7		
01-F20-SS[F-141]C2-005	27-Jun-01	4.7		4.9		
01-F20-SS[F-142]C2-005	27-Jun-01	3.9		4.2		
01-F20-SS[F-143]C2-005	27-Jun-01	6.6		10		
01-F20-ER[F-144]C4-000	27-Jun-01	0.01	U	0.01	U	
01-F22-SS[F-145]C2-005	2-Jul-01	4.8		2.7		
01-F22-SS[F-146]C2-005	2-Jul-01	4.5		2.5		
01-F22-SS[F-147]C2-005	2-Jul-01	3.7		3.2		
01-F22-SS[F-148]C2-005	2-Jul-01	4.8		3.6		
01-F22-SS[F-149]C2-005	2-Jul-01	3.9		6.2		
01-F22-SS[F-150]C2-005	2-Jul-01	3.7		2		
01-F22-SS[F-151]C2-005	2-Jul-01	3.2		1.8	U	
01-F22-SS[F-152]C2-005	2-Jul-01	13		6.8		
01-F22-SS[F-153]C2-005	2-Jul-01	3.4		3		
01-F22-SS[F-154]C2-005	2-Jul-01	2.7		2.8		
01-F22-SS[F-155]C2-005	2-Jul-01	5.9		5		
01-F22-SS[F-156]C2-005	2-Jul-01	3.7		7.2		
01-F22-SS[F-157]C2-005	2-Jul-01	3.6		2.6		
01-F22-SS[F-158]C2-005	2-Jul-01	26		35		
01-F22-SS[F-159]C2-005	2-Jul-01	4.9		2.3		
01-F22-ER[F-160]C4-000	2-Jul-01	0.01	U	0.01	U	
01-F23-SS[F-161]C2-005	9-Jul-01	46		270		
01-F23-SS[F-162]C2-005	9-Jul-01	37		200		
01-F23-SS[F-163]C2-005	9-Jul-01	5.9		9.1		
01-F23-SS[F-164]C2-005	9-Jul-01	8.6		6.9		
01-F23-SS[F-165]C2-005	9-Jul-01	6.7		5		
01-F23-SS[F-166]C2-005	9-Jul-01	18		15		
01-F23-SS[F-167]C2-005	9-Jul-01	60		5.6		
01-F23-SS[F-168]C2-005	9-Jul-01	5.5		4.4		
01-F23-SS[F-169]C2-005	9-Jul-01	14		6.6		
01-F34-SS[F-170]C2-005	17-Jul-01	3.1		5.5	J	
01-F34-SS[F-171]C2-005	17-Jul-01	3		29	J	
01-F24-SS[F-172]C2-005	18-Jul-01	3.6		2		
01-F24-SS[F-173]C2-005	18-Jul-01	3.3		2.5		
01-F24-SS[F-174]C2-005	18-Jul-01	4.4		3.6		
01-F24-SS[F-175]C2-005	18-Jul-01	2.5		1.9	U	
01-F24-SS[F-176]C2-005	18-Jul-01	3.7		4		
01-F10-SS[F-177]C2-005	19-Jul-01	2.4		4.5		
01-F10-SS[F-178]C2-005	19-Jul-01	11		98		

Table A-4

Soil Analytical Results for Lead and Arsenic Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F10-SS[F-179]C2-005	19-Jul-01	5.5		89		
01-F10-SS[F-180]C2-005	19-Jul-01	10		60		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F10-SS[F-181]C2-005	19-Jul-01	12		16		
01-F10-SS[F-182]C2-005	19-Jul-01	4.6		18		
01-F37-SS[F-183]C2-005	30-Jul-01	8.6		9		
01-F37-SS[F-184]C2-005	30-Jul-01	13		10		
01-F37-SS[F-185]C2-005	30-Jul-01	26		9.9		
01-F37-SS[F-186]C2-005	30-Jul-01	8.6		14		
01-F37-SS[F-187]C2-005	30-Jul-01	3.6		3.9		
01-F37-SS[F-188]C2-005	30-Jul-01	13		62		
01-F37-SS[F-189]C2-005	30-Jul-01	4.9		3.5		01-F37-SS[F-190]C3-005
01-F37-SS[F-190]C3-005	30-Jul-01	4.1		2.4		
01-F37-SS[F-191]C2-005	30-Jul-01	4.7		5.5		
01-F37-SS[F-192]C2-005	30-Jul-01	6.9		5.2		
01-F36-SS[F-193]C2-005	1-Aug-01	25		16		
01-F36-SS[F-194]C2-005	1-Aug-01	5		8.5		
01-F36-SS[F-195]C2-005	1-Aug-01	5.1		7.3		
01-F36-SS[F-196]C2-005	1-Aug-01	4		5.7		
01-F36-SS[F-197]C2-005	1-Aug-01	4.8		6		
01-F36-ER[F-198]C4-000	1-Aug-01	0.01	U	0.01	U	
01-F29-SS[F-199]C2-005	2-Aug-01	6		10		
01-F29-SS[F-200]C2-005	2-Aug-01	9.2		20		
01-F29-SS[F-201]C2-005	2-Aug-01	4.3		74		
01-F29-SS[F-202]C2-005	2-Aug-01	3.9		12		
01-F29-SS[F-203C2-005	2-Aug-01	4.1		11		
01-F29-SS[F-204]C2-005	2-Aug-01	4.7		25		
01-F29-SS[F-205]C2-005	2-Aug-01	5.3		440		
01-F29-SS[F-206]C2-005	2-Aug-01	3.8		6.7		
01-F29-SS[F-207]C2-005	2-Aug-01	17		53		
01-F29-SS[F-208]C2-005	2-Aug-01	5.2		24		
01-F29-SS[F-209]C2-005	2-Aug-01	8.1		33		
01-F29-SS[F-210]C2-005	2-Aug-01	9.5		51		
01-F16-SS[F-211]C2-005	6-Aug-01	3.8		20		
01-F16-SS[F-212]C2-005	6-Aug-01	5		40		
01-F16-SS[F-213]C2-005	6-Aug-01	4.7		35		
01-F16-SS[F-214]C2-005	6-Aug-01	3.5		20		
01-F16-SS[F-215]C2-005	6-Aug-01	4.2		45		
01-F16-SS[F-216]C2-005	6-Aug-01	25		69		
01-F16-SS[F-217]C2-005	6-Aug-01	33		60		
01-F16-SS[F-218]C2-005	6-Aug-01	7.9		49		
01-F16-ER[F-219]C4-000	6-Aug-01	0.01	U	0.034		
01-F30-SS[F-220]C2-005	8-Aug-01	7.2		7.8		
01-F30-SS[F-221]C2-005	8-Aug-01	8.7		23		
01-F30-SS[F-222]C2-005	8-Aug-01	8.7		12		
01-F30-SS[F-223]C2-005	8-Aug-01	6.9		15		
01-F30-SS[F-224]C2-005	8-Aug-01	6		7.9		
01-F30-SS[F-225]C2-005	8-Aug-01	4.6		5.7		
01-F30-SS[F-226]C2-005	8-Aug-01	5		11		
01-F30-SS[F-227]C2-005	8-Aug-01	25		380		
01-F30-SS[F-228]C2-005	8-Aug-01	4.8		12		
01-F30-SS[F-229]C2-005	8-Aug-01	7.4		9.3		
01-F30-ER[F-230]C4-000	8-Aug-01	0.01		0.028		
01-F31-SS[F-231]C2-005	9-Aug-01	8.4		7		
01-F31-SS[F-232]C2-005	9-Aug-01	5.4		6		
01-F31-SS[F-233]C2-005	9-Aug-01	15		240		
01-F31-SS[F-234]C2-005	9-Aug-01	5.1		4.5		
01-F31-SS[F-235]C2-005	9-Aug-01	6.1		14		
01-F31-SS[F-236]C2-005	9-Aug-01	6.9		16		
01-F31-SS[F-237]C2-005	9-Aug-01	3.6		14		
01-F31-SS[F-238]C2-005	9-Aug-01	5.2		29		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F31-SS[F-239]C2-005	9-Aug-01	4.9		5.1		
01-F31-SS[F-240]C2-005	9-Aug-01	6.5		6.1		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F35-SS[F-241]C2-005	14-Aug-01	6		12		
01-F35-SS[F-242]C2-005	14-Aug-01	8.3		25		
01-F35-SS[F-243]C2-005	14-Aug-01	24		68		
01-F11-SS[F-244]C2-005	14-Aug-01	30		270		
01-F11-SS[F-245]C2-005	14-Aug-01	25		720		
01-F11-SS[F-246]C2-005	14-Aug-01	8.9		1200		
01-F11-SS[F-247]C2-005	14-Aug-01	15		93		
01-F11-SS[F-248]C2-005	14-Aug-01	13		830		
01-F11-SS[F-249]C2-005	14-Aug-01	20		2500		01-F11-SS[F-250]C3-005
01-F11-SS[F-250]C3-005	14-Aug-01	21		2500		
01-F11-SS[F-251]C2-005	14-Aug-01	10		1400		
01-F11-SS[F-252]C2-005	14-Aug-01	15		1800		
01-F11-SS[F-253]C2-005	14-Aug-01	34		120		
01-F11-SS[F-254]C2-005	14-Aug-01	24		1300		
01-F11-SS[F-255]C2-005	14-Aug-01	22		1500		
01-F11-SS[F-256]C2-005	14-Aug-01	8.3		520		
01-F11-SS[F-257]C2-005	14-Aug-01	9.1		4400		
01-F35-ER[F-258]C4-000	14-Aug-01	0.01	U	0.017	J	
01-F38-SS[F-259]C2-005	16-Aug-01	8.2		360		
01-F09-SS[F-260]C2-005	22-Aug-01	4.4		5.2		01-F09-SS[F-261]C3-005
01-F09-SS[F-261]C3-005	22-Aug-01	4.7		3.5		
01-F09-SS[F-262]C2-005	22-Aug-01	3.7		4.4		
01-F09-SS[F-263]C2-005	22-Aug-01	5.9		7.7		
01-F09-SS[F-264]C2-005	22-Aug-01	4		3.6		
01-F09-SS[F-265]C2-005	22-Aug-01	4		17		
01-F09-SS[F-266]C2-005	22-Aug-01	6		5.7		
01-F09-ER[F-267]C4-000	22-Aug-01	0.01	U	0.024		
01-F32-SS[F-268]C2-005	22-Aug-01	3.6		3.9		
01-F32-SS[F-269]C2-005	22-Aug-01	26		32		
01-F32-SS[F-270]C2-005	22-Aug-01	4.5		4.3		
01-F32-SS[F-271]C2-005	22-Aug-01	2.8		2.5		
01-F32-SS[F-272]C2-005	22-Aug-01	4.4		5.6		
01-F33-SS[F-273]C2-005	28-Aug-01	15		98		01-F33-SS[F-274]C3-005
01-F33-SS[F-274]C3-005	28-Aug-01	14		62		
01-F33-SS[F-275]C2-005	28-Aug-01	5.8		7.8		
01-F33-SS[F-276]C2-005	28-Aug-01	20		45		
01-F33-SS[F-277]C2-005	28-Aug-01	4.7		3		
01-F33-SS[F-278]C2-005	28-Aug-01	6.5		4		
01-F33-SS[F-279]C2-005	28-Aug-01	8.6		12		
01-F33-SS[F-280]C2-005	28-Aug-01	4.9		5.1		
02-F01-SS[F-42-2]C2-030	28-Aug-01	7.4		22		
02-F01-SS[F-47-2]C2-030	28-Aug-01	6		160		
02-F01-SS[F-64-2]C2-030	28-Aug-01	6		200		
02-F01-SS[F-67-2]C2-030	28-Aug-01	3.4		22		
02-F02-SS[F-72-2]C2-030	28-Aug-01	4.6		160		
02-F02-SS[F-76-2]C2-030	28-Aug-01	6		190		
02-F02-SS[F-77-2]C2-030	28-Aug-01	6.2		260		
02-F02-SS[F-78-2]C2-030	28-Aug-01	4.5		100		
02-F02-SS[F-79-2]C2-030	28-Aug-01	11		470		
02-F02-SS[F-80-2]C2-030	28-Aug-01	5.9		480		
02-F02-SS[F-81-2]C2-030	28-Aug-01	7.6		120		
02-F02-SS[F-83-2]C2-030	28-Aug-01	4.8		89		02-F02-SS[F-84-2]C3-030
02-F02-SS[F-84-2]C3-030	28-Aug-01	3.6		76		
02-F02-SS[F-85-2]C2-030	28-Aug-01	6.9		80		
02-F02-SS[F-88-2]C2-030	28-Aug-01	5		130		
02-F02-SS[F-89-2]C2-030	28-Aug-01	5.7		140		
02-F02-SS[F-90-2]C2-030	28-Aug-01	2.8		130		
02-F02-SS[F-91-2]C2-030	28-Aug-01	6.2		62		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
02-F02-SS[F-92-2]C2-030	28-Aug-01	3.9		49		
02-F03-SS[F-101-2]C2-030	28-Aug-01	3.7		7.5		

Table A-4

Soil Analytical Results for Lead and Arsenic
Found During Sampling, May - September 2001
Weyerhaeuser - Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
02-F04-SS[F-118-2]C2-030	28-Aug-01	14		3.9		
02-F04-SS[F-119-2]C2-030	28-Aug-01	31		25		
02-F04-SS[F-121-2]C2-030	28-Aug-01	34		21		
02-F04-SS[F-124-2]C2-030	28-Aug-01	12		45		
02-F23-SS[F-161-2]C2-030	29-Aug-01	6.7	J	180		
02-F23-SS[F-162-2]C2-030	29-Aug-01	12	J	31		
02-F11-SS[F-244-2]C2-030	29-Aug-01	16	J	720		
02-F11-SS[F-245-2]C2-030	29-Aug-01	11	J	2100		
02-F11-SS[F-246-2]C2-030	29-Aug-01	6.4	J	38		
02-F11-SS[F-248-2]C2-030	29-Aug-01	4.8	J	96		
02-F11-SS[F-249-2]C2-030	29-Aug-01	9.2	J	4900		02-F11-SS[F-250-2]C3-030
02-F11-SS[F-250-2]C3-030	29-Aug-01	10	J	710		
02-F11-SS[F-251-2]C2-030	29-Aug-01	8.5	J	150		
02-F11-SS[F-252-2]C2-030	29-Aug-01	5.4	J	140		
02-F11-SS[F-253-2]C2-030	29-Aug-01	24	J	65		
02-F11-SS[F-254-2]C2-030	29-Aug-01	20	J	280		
02-F11-SS[F-255-2]C2-030	29-Aug-01	11	J	47		
02-F11-SS[F-256-2]C2-030	29-Aug-01	4.9		9.5		
02-F11-SS[F-257-2]C2-030	29-Aug-01	4.3		60		
01-F11-ER[F-281]C4-000	29-Aug-01	0.01	U	0.01	U	
02-F29-SS[F-205-2]C2-030	30-Aug-01	3.9		13		
02-F30-SS[F-227-2]C2-030	30-Aug-01	5.6		35	J	
02-F31-SS[F-233-2]C2-030	30-Aug-01	5.7		54	J	
02-F08-SS[F-08-2]C2-030	30-Aug-01	2.6		90	J	
02-F15-SS[F-128-2]C2-030	30-Aug-01	6		200	J	
02-F15-SS[F-133-2]C2-030	30-Aug-01	4.1		55	J	
02-F38-SS[F-259-2]C2-030	30-Aug-01	5.2		57	J	
01-F38-ER[F-282]C4-000	30-Aug-01	0.01	U	0.01	U	
01-F20-SS[F-283]-C2-005	4-Sep-01	4.1		5.3		
01-F20-SS[F-284]-C2-005	4-Sep-01	4.9		5.8		01-F20-SS[F-285]-C3-005
01-F20-SS[F-285]-C3-005	4-Sep-01	6.5		5.8		
01-F20-SS[F-286]-C2-005	4-Sep-01	4.1		4.3		
01-F20-SS[F-287]-C2-005	4-Sep-01	3.7		4.3		
01-F20-SS[F-288]-C2-005	4-Sep-01	4.8		7.3		
01-F20-SS[F-289]-C2-005	4-Sep-01	4.4		5.2		
01-F20-SS[F-290]-C2-005	4-Sep-01	9.6		14		
01-F20-SS[F-291]-C2-005	4-Sep-01	5.9		18		
01-F20-SS[F-292]-C2-005	4-Sep-01	13		27		
01-F20-ER[F-293]-C4-000	4-Sep-01	0.01	U	0.11		
01-F20-SS-[F-294]-C2-005	5-Sep-01	6.8		25		01-F20-SS-[F-295]-C3-005
01-F20-SS-[F-295]-C3-005	5-Sep-01	7.5		32		
01-F20-SS-[F-296]-C2-005	5-Sep-01	17		130		
01-F20-SS-[F-297]-C2-005	5-Sep-01	5		34		
01-F20-SS-[F-298]-C2-005	5-Sep-01	6.9		21		
01-F20-SS-[F-299]-C2-005	5-Sep-01	25		29		
01-F20-SS-[F-300]-C2-005	5-Sep-01	15		11		
01-F34-SS-[F-301]-C2-005	5-Sep-01	5.8		5		
01-F34-SS-[F-302]-C2-005	5-Sep-01	6.2		14		
01-F34-SS-[F-303]-C2-005	5-Sep-01	6.6		14		
01-F21-SS-[F-304]-C2-005	5-Sep-01	9.1		70		
01-F21-SS-[F-305]-C2-005	5-Sep-01	5.8		30		
01-F21-SS-[F-306]-C2-005	5-Sep-01	8.5		240		
01-F21-ER-[F-307]-C4-000	5-Sep-01	0.01	U	0.034		
03-F11-SS-[F-252-3]-C2-050	10-Sep-01	7		360		
03-F11-SS-[F-251-3]-C2-050	10-Sep-01	3.9		51		
03-F11-SS-[F-245-3]-C2-050	10-Sep-01	5.6		8.5		
03-F11-SS-[F-249-3]-C2-050	10-Sep-01	39		190		
03-F11-SS-[F-244-3]-C2-050	10-Sep-01	5.1		120		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
03-F11-SS-[F-254-3]-C2-050	10-Sep-01	19		170		
03-F23-SS-[F-161-3]-C2-050	10-Sep-01	4		10		

Table A-4

Soil Analytical Results for Lead and Arsenic
Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-F18-SS-[F-308]-C2-020	12-Sep-01	4.8		4.6		
01-F18-SS-[F-309]-C2-020	12-Sep-01	5.3		3.9		
01-F18-SS-[F-310]-C2-020	12-Sep-01	5.6		4.3		
01-F18-SS-[F-311]-C2-020	12-Sep-01	4.7		4.9		
01-F18-SS-[F-312]-C2-020	12-Sep-01	15		2		
01-F18-SS-[F-313]-C2-020	12-Sep-01	4		3.5		
01-F18-SS-[F-314]-C2-020	12-Sep-01	3.5		2.7		
01-F18-SS-[F-315]-C2-020	12-Sep-01	5.1		4.7		
01-F18-SS-[F-316]-C2-020	12-Sep-01	7.5		31		
01-F18-SS-[F-317]-C2-020	12-Sep-01	5.7		17		
01-F18-SS-[F-318]-C2-020	12-Sep-01	4.8		13		
01-F18-SS-[F-319]-C2-020	12-Sep-01	16		230		
01-F18-SS-[F-320]-C2-020	12-Sep-01	4.7		32		
01-F18-SS-[F-321]-C2-020	12-Sep-01	5.4		29		
01-F18-SS-[F-322]-C2-020	12-Sep-01	53		7.1		
01-F18-SS-[F-323]-C2-020	12-Sep-01	5.1		92		
01-F18-ER-[F-324]-C4-000	12-Sep-01	0.01	U	0.01	U	
03-F01-SS-[F-47-3]-C2-050	13-Sep-01	7.7		6.1		
03-F01-SS-[F-64-3]-C2-050	13-Sep-01	10		470		
03-F02-SS-[F-72-3]-C2-050	13-Sep-01	5.4		270		
03-F02-SS-[F-76-3]-C2-050	13-Sep-01	4.7		19		03-F02-FD-[F-84-3]-C3-050
03-F02-SS-[F-77-3]-C2-050	13-Sep-01	10		20		03-F02-FD-[F-49-3]-C3-050
03-F02-SS-[F-79-3]-C2-050	13-Sep-01	13		230		
03-F02-SS-[F-80-3]-C2-050	13-Sep-01	11		310		
03-F02-SS-[F-81-3]-C2-050	13-Sep-01	11		170		
03-F02-SS-[F-88-3]-C2-050	13-Sep-01	5.6		62		
03-F02-SS-[F-89-3]-C2-050	13-Sep-01	6.6		120		
03-F02-SS-[F-90-3]-C2-050	13-Sep-01	2.7		150		
03-F02-FD-[F-84-3]-C3-050	13-Sep-01	7.6		30		
03-F02-FD-[F-49-3]-C3-050	13-Sep-01	75		12		
03-F15-SS-[F-128-3]-C2-050	13-Sep-01	4.4		2.8		
02-F20-SS-[F-296-2]C2-030	17-Sep-01	7.9		7.6		
02-F21-SS-[F-306-2]C2-030	17-Sep-01	5.1		2.8		
01-F18-SS-[F-325]C2-015	17-Sep-01	4.8		2.8		
04-F01-SS-[F-64-4]-C2-060	19-Sep-01	4.9		66		
04-F02-SS-[F-72-4]-C2-060	19-Sep-01	3.3		23		
04-F02-SS-[F-77-4]-C2-060	19-Sep-01	2.7		40		
04-F02-SS-[F-79-4]-C2-060	19-Sep-01	9.6		290		
04-F02-SS-[F-80-4]-C2-060	19-Sep-01	12		520		
04-F02-SS-[F-81-4]-C2-060	19-Sep-01	8		65		
04-F02-SS-[F-89-4]-C2-060	19-Sep-01	7.6		86		01-F02-FD-[F-326]-C3-000
04-F02-SS-[F-90-4]-C2-060	19-Sep-01	6.7		270		01-F02-FD-[F-327]-C3-000
01-F02-FD-[F-326]-C2-060	19-Sep-01	6.5		87		
01-F02-FD-[F-327]-C2-060	19-Sep-01	7.1		440		
02-F18-SS-[F-319-2]-C2-030	19-Sep-01	4.2		2.9		01-F18-FD-[F-328]-C3-030
01-F18-FD-[F-328]-C3-030	19-Sep-01	3.8		3.6		
01-F18-ER-[F-329]-C4-000	19-Sep-01	0.01	U	0.01	UJ	

* Reported as mg/kg unless otherwise specified
Rinsate blank sample. Results are reported as mg/L
U The analyte was analyzed for, but was not detected above the reporting limit shown.
J Estimated value, qualifier assigned during data review
UJ Analyte was analyzed for, but was not detected above the reporting limit shown. The reporting limit is estimated.

Table A-4

Soil Analytical Results for Lead and Arsenic Foundations Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *	Lead (mg/kg) *	Duplicate Sample ID

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-01]C2-005	7-Jun-01	4.1		6.4		
01-N01-SS[NGRR-02]C2-005	7-Jun-01	2.4		3.1		
01-N01-SS[NGRR-03]C2-005	7-Jun-01	3.3		3.1		
01-N01-SS[NGRR-04]C2-005	7-Jun-01	5.4		5		
01-N01-SS[NGRR-05]C2-005	7-Jun-01	6.1		3.2		
01-N01-SS[NGRR-06]C2-005	7-Jun-01	2.9		2.9		
01-N01-SS[NGRR-07]C2-005	7-Jun-01	130		16		01-N01-SS[NGRR-08]C3-005
01-N01-SS[NGRR-08]C3-005	7-Jun-01	140		22		
01-N01-SS[NGRR-09]C2-005	7-Jun-01	33		11		
01-N01-ER[NGRR-10]C4-000	7-Jun-01	0.01	U	0.01	U	
01-N01-SS[NGRR-11]C2-005	21-Jun-01	110		21		
01-N01-SS[NGRR-12]C2-005	21-Jun-01	84		13		
01-N01-SS[NGRR-13]C2-005	21-Jun-01	72		14		
01-N01-SS[NGRR-14]C2-005	26-Jun-01	4.6		6.9		01-N01-SS[NGRR-15]C3-005
01-N01-SS[NGRR-15]C3-005	26-Jun-01	4.4		7		
01-N01-SS[NGRR-16]C2-005	26-Jun-01	3.5		4.9		
01-N01-SS[NGRR-17]C2-005	26-Jun-01	2.9		31		
01-N01-ER[NGRR-18]C4-000	26-Jun-01	0.01	U	0.01	U	
01-N01-SS[NGRR-19]C2-005	2-Jul-01	3.8		3.2		01-N01-SS[NGRR-20]C3-005
01-N01-SS[NGRR-20]C3-005	2-Jul-01	6.4		2.9		
01-N01-SS[NGRR-21]C2-005	2-Jul-01	4.2		3.5		
01-N01-SS[NGRR-22]C2-005	2-Jul-01	6.5		4.3		
01-N01-SS[NGRR-23]C2-005	2-Jul-01	4.1		5.1		
01-N01-SS[NGRR-24]C2-005	9-Jul-01	4.9		7.5		
01-N01-SS[NGRR-25]C2-005	9-Jul-01	5.8		10		
01-N01-SS[NGRR-26]C2-005	9-Jul-01	19		6.4		
01-N01-SS[NGRR-27]C2-005	9-Jul-01	110		42		
01-N01-ER[NGRR-28]C4-000	9-Jul-01	0.015	U	0.005	U	
01-N01-SS[NGRR-29]C2-005	9-Jul-01	390		130		
01-N01-SS[NGRR-30]C2-005	9-Jul-01	320		100		
01-N01-SS[NGRR-31]C2-005	9-Jul-01	24		6.7		
01-N01-SS[NGRR-32]C2-005	9-Jul-01	5.1		4.1		
01-N01-SS[NGRR-33]C2-005	9-Jul-01	3.4		3.2		
01-N01-SS[NGRR-34]C2-005	11-Jul-01	4.5		7.9		
01-N01-SS[NGRR-35]C2-005	11-Jul-01	17		9.4		
01-N01-SS[NGRR-36]C2-005	11-Jul-01	6		25		01-N01-SS[NGRR-37]C3-005
01-N01-SS[NGRR-37]C3-005	11-Jul-01	6		24		
01-N01-SS[NGRR-38]C2-005	11-Jul-01	3.3		4.1		
01-N01-SS[NGRR-39]C2-005	11-Jul-01	4.7		5.4		
01-N01-SS[NGRR-40]C2-005	11-Jul-01	7.3		6.8		
01-N01-SS[NGRR-41]C2-005	11-Jul-01	4.4		3.9		
01-N01-SS[NGRR-42]C2-005	11-Jul-01	5.5		4		
01-N01-SS[NGRR-43]C2-005	11-Jul-01	5.3		4.4		
01-N01-SS[NGRR-44]C2-005	11-Jul-01	4.2		4.6		
01-N01-SS[NGRR-45]C2-005	11-Jul-01	4.5		4.1		
01-N01-SS[NGRR-46]C2-005	11-Jul-01	3.3		3.2		
01-N01-SS[NGRR-47]C2-005	11-Jul-01	5		4.3		
01-N01-SS[NGRR-48]C2-005	11-Jul-01	5		3.4		
01-N01-SS[NGRR-49]C2-005	11-Jul-01	7.7		4.3		
01-N01-SS[NGRR-50]C2-005	11-Jul-01	2.6		2.6		
01-N01-ER[NGRR-51]C4-000	11-Jul-01	0.01	U	0.01	U	
01-N01-SS[NGRR-52]C2-005	12-Jul-01	13		40		
01-N01-SS[NGRR-53]C2-005	12-Jul-01	6.6		7.6		
01-N01-SS[NGRR-54]C2-005	12-Jul-01	6.2		7.3		01-N01-SS[NGRR-55]C3-005
01-N01-SS[NGRR-55]C3-005	12-Jul-01	5.5		6		
01-N01-SS[NGRR-56]C2-005	12-Jul-01	4.3		3.5		
01-N01-SS[NGRR-57]C2-005	12-Jul-01	16		3.7		
01-N01-SS[NGRR-58]C2-005	12-Jul-01	2.9		2.6		
01-N01-SS[NGRR-59]C2-005	12-Jul-01	3.6		3.5		
01-N01-SS[NGRR-60]C2-005	12-Jul-01	2.4		2		
01-N01-ER[NGRR-61]C4-000	12-Jul-01	0.01	U	0.053	J	
01-N01-SS[NGRR-62]C2-005	17-Jul-01	21		6	J	
01-N01-SS[NGRR-63]C2-005	17-Jul-01	7.6		3.1	J	
01-N01-SS[NGRR-64]C2-005	17-Jul-01	2.8		1.8	UJ	
01-N01-SS[NGRR-65]C2-005	17-Jul-01	3.8		2.1	UJ	

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-66]C2-005	17-Jul-01	12		5.3	J	
01-N01-SS[NGRR-67]C2-005	17-Jul-01	3.9		7.3	J	
01-N01-ER[NGRR-68]C4-000	17-Jul-01	0.01	U	0.01	U	
01-N01-SS[NGRR-69]C2-005	17-Jul-01	210		18	J	
01-N01-SS[NGRR-70]C2-005	17-Jul-01	6.5		2.8	J	
01-N01-SS[NGRR-71]C2-005	17-Jul-01	9.9		2	UJ	
01-N01-SS[NGRR-72]C2-005	17-Jul-01	11		2.6	J	
01-N01-SS[NGRR-73]C2-005	17-Jul-01	3.7		1.8	UJ	
01-N01-SS[NGRR-74]C2-005	18-Jul-01	7.5		4.1		01-N01-SS[NGRR-75]C3-005
01-N01-SS[NGRR-75]C3-005	18-Jul-01	5.3		3.1		
01-N01-SS[NGRR-76]C2-005	18-Jul-01	3.6		3.3		
01-N01-SS[NGRR-77]C2-005	18-Jul-01	4.3		3.1		
01-N01-SS[NGRR-78]C2-005	18-Jul-01	15		3.5		
01-N01-SS[NGRR-79]C2-005	18-Jul-01	15		3.7		
01-N01-SS[NGRR-80]C2-005	18-Jul-01	27		6		
01-N01-SS[NGRR-81]C2-005	18-Jul-01	120		11		
01-N01-SS[NGRR-82]C2-005	18-Jul-01	9.7		6.5		
01-N01-SS[NGRR-83]C2-005	18-Jul-01	3		3.1		
01-N01-SS[NGRR-84]C2-005	18-Jul-01	12		4.5		
01-N01-SS[NGRR-85]C2-005	18-Jul-01	4.2		3.2		
01-N01-ER[NGRR-86]C4-000	18-Jul-01	0.01	U	0.032	J	
01-N01-SS[NGRR-87]C2-005	19-Jul-01	3.4		5.1		
01-N01-SS[NGRR-88]C2-005	19-Jul-01	3.9		7.5		
01-N01-SS[NGRR-89]C2-005	19-Jul-01	37		25		
01-N01-SS[NGRR-90]C2-005	19-Jul-01	7.2		45		
01-N01-SS[NGRR-91]C2-005	19-Jul-01	3.1		3.8		
01-N01-SS[NGRR-92]C2-005	19-Jul-01	11		22		
01-N01-SS[NGRR-93]C2-005	19-Jul-01	11		7.5		
01-N01-SS[NGRR-94]C2-005	19-Jul-01	14		6.5		
01-N01-SS[NGRR-95]C2-005	19-Jul-01	3.7		5		01-N01-SS[NGRR-96]C3-005
01-N01-SS[NGRR-96]C3-005	19-Jul-01	2.4		5.3		
01-N01-SS[NGRR-97]C2-005	19-Jul-01	3.4		5		
01-N01-SS[NGRR-98]C2-005	19-Jul-01	5.3		36		
01-N01-SS[NGRR-99]C2-005	19-Jul-01	2.9		4.9		
01-N01-ER[NGRR-100]C4-000	19-Jul-01	0.01	U	0.011		
01-N01-SS[NGRR-101]C2-005	19-Jul-01	6.5		5.8		
01-N01-SS[NGRR-102]C2-005	19-Jul-01	3.1		76		
01-N01-SS[NGRR-103]C2-005	23-Jul-01	6.1		9.8		01-N01-SS[NGRR-104]C3-005
01-N01-SS[NGRR-104]C3-005	23-Jul-01	6.7		7.5		
01-N01-SS[NGRR-105]C2-005	23-Jul-01	4.3		4.4		
01-N01-SS[NGRR-106]C2-005	23-Jul-01	4.3		3.6		
01-N01-SS[NGRR-107]C2-005	23-Jul-01	5		14		
01-N01-SS[NGRR-108]C2-005	23-Jul-01	5.3		6.1		
01-N01-SS[NGRR-109]C2-005	23-Jul-01	9.3		18		
01-N01-SS[NGRR-110]C2-005	23-Jul-01	10		24		
01-N01-SS[NGRR-111]C2-005	23-Jul-01	5.7		3.7		
01-N01-SS[NGRR-112]C2-005	23-Jul-01	6.9		5.8		
01-N01-SS[NGRR-113]C2-005	23-Jul-01	55		26		
01-N01-SS[NGRR-114]C2-005	23-Jul-01	13		29		
01-N01-SS[NGRR-115]C2-005	23-Jul-01	12		5.2		
01-N01-SS[NGRR-116]C2-005	23-Jul-01	19		9		
01-N01-SS[NGRR-117]C2-005	23-Jul-01	7.6		3.7		
01-N01-SS[NGRR-118]C2-005	23-Jul-01	6.9		4.1		
01-N01-ER[NGRR-119]C4-000	23-Jul-01	0.01	U	0.011	J	
01-N01-SS[NGRR-120]C2-005	23-Jul-01	13		19		
01-N01-SS[NGRR-121]C2-005	23-Jul-01	4.3		3.9		
01-N01-SS[NGRR-122]C2-005	23-Jul-01	5.7		8.1		
01-N01-SS[NGRR-123]C2-005	23-Jul-01	3.8		3.4		
01-N01-SS[NGRR-124]C2-005	23-Jul-01	10		6.6		
01-N01-SS[NGRR-125]C2-005	24-Jul-01	97		23		01-N01-SS[NGRR-126]C3-005
01-N01-SS[NGRR-126]C3-005	24-Jul-01	86		22		
01-N01-SS[NGRR-127]C2-005	24-Jul-01	10		6.3		
01-N01-SS[NGRR-128]C2-005	24-Jul-01	12		4.8		
01-N01-SS[NGRR-129]C2-005	24-Jul-01	7.7		3.5		
01-N01-SS[NGRR-130]C2-005	24-Jul-01	7		4.3		

Table A-5
Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001
Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-131]C2-005	24-Jul-01	7.3		6.5		
01-N01-SS[NGRR-132]C2-005	24-Jul-01	35		490		
01-N01-SS[NGRR-133]C2-005	24-Jul-01	4.4		10		
01-N01-SS[NGRR-134]C2-005	24-Jul-01	21		19		
01-N01-SS[NGRR-135]C2-005	24-Jul-01	3.9		3.3		
01-N01-SS[NGRR-136]C2-005	24-Jul-01	24		14		
01-N01-ER[NGRR-137]C4-000	24-Jul-01	0.01	U	0.011	J	
01-N01-SS[NGRR-138]C2-005	30-Jul-01	4.8		9.4		
01-N01-SS[NGRR-139]C2-005	30-Jul-01	5.4		5.3		
01-N01-SS[NGRR-140]C2-005	30-Jul-01	18		16		
01-N01-SS[NGRR-141]C2-005	30-Jul-01	24		28		
01-N01-SS[NGRR-142]C2-005	30-Jul-01	13		15		
01-N01-SS[NGRR-143]C2-005	30-Jul-01	16		5.1		
01-N01-SS[NGRR-144]C2-005	30-Jul-01	11		8.8		
01-N01-SS[NGRR-145]C2-005	30-Jul-01	63		28		
01-N01-SS[NGRR-146]C2-005	30-Jul-01	28		12		
01-N01-ER[NGRR-147]C4-000	30-Jul-01	0.01	U	0.01	U	
01-N01-SS[NGRR-148]C2-005	31-Jul-01	13		8.2		
01-N01-SS[NGRR-149]C2-005	31-Jul-01	7.3		4.6		
01-N01-SS[NGRR-150]C2-005	31-Jul-01	5.8		3.4		
01-N01-SS[NGRR-151]C2-005	31-Jul-01	5.1		2.8		
01-N01-SS[NGRR-152]C2-005	31-Jul-01	3.6		2.1	U	
01-N01-SS[NGRR-153]C2-005	31-Jul-01	3.5		2.3		01-N01-SS[NGRR-154]C3-005
01-N01-SS[NGRR-154]C3-005	31-Jul-01	3.5		2.2		
01-N01-ER[NGRR-155]C4-000	31-Jul-01	0.01	U	0.01	U	
01-N01-SS[NGRR-156]C2-005	31-Jul-01	72		26		
01-N01-SS[NGRR-157]C2-005	31-Jul-01	6.4		6.8		
01-N01-SS[NGRR-158]C2-005	31-Jul-01	16		17		
01-N01-SS[NGRR-159]C2-005	31-Jul-01	10		3.9		
01-N01-SS[NGRR-160]C2-005	31-Jul-01	4.3		5		
01-N01-SS[NGRR-161]C2-005	31-Jul-01	4.7		5.5		
01-N01-SS[NGRR-162]C2-005	31-Jul-01	4.3		4.1		
01-N01-SS[NGRR-163]C2-005	31-Jul-01	10		9		
01-N01-SS[NGRR-164]C2-005	2-Aug-01	11		63		01-N01-SS[NGRR-165]C3-005
01-N01-SS[NGRR-165]C3-005	2-Aug-01	10		46		
01-N01-SS[NGRR-166]C2-005	2-Aug-01	5.7		8.5		
01-N01-SS[NGRR-167]C2-005	2-Aug-01	17		17		
01-N01-SS[NGRR-168]C2-005	2-Aug-01	7.7		13		
01-N01-SS[NGRR-169]C2-005	2-Aug-01	4.5		6.1		
01-N01-SS[NGRR-170]C2-005	2-Aug-01	5		6.1		
01-N01-SS[NGRR-171]C2-005	2-Aug-01	21		6.1		
01-N01-SS[NGRR-172]C2-005	2-Aug-01	6.4		7.6		
01-N01-SS[NGRR-173]C2-005	2-Aug-01	5.6		3.1		
01-N01-SS[NGRR-174]C2-005	2-Aug-01	3.5		2.2	U	
01-N01-SS[NGRR-175]C2-005	2-Aug-01	15		3.2		
01-N01-SS[NGRR-176]C2-005	2-Aug-01	4.6		2.7		
01-N01-ER[NGRR-177]C4-000	2-Aug-01	0.01	U	0.01	U	
01-N01-SS[NGRR-178]C2-005	6-Aug-01	3.5		37		
01-N01-SS[NGRR-179]C2-005	6-Aug-01	84		75		
01-N01-SS[NGRR-180]C2-005	6-Aug-01	18		9.9		
01-N01-SS[NGRR-181]C2-005	6-Aug-01	10		7.6		
01-N01-SS[NGRR-182]C2-005	6-Aug-01	23		11		
01-N01-SS[NGRR-183]C2-005	6-Aug-01	10		13		
01-N01-SS[NGRR-184]C2-005	6-Aug-01	5.2		13		
01-N01-SS[NGRR-185]C2-005	6-Aug-01	4.7		5.7		
01-N01-SS[NGRR-186]C2-005	6-Aug-01	6.2		8		
01-N01-SS[NGRR-187]C2-005	6-Aug-01	35		11		01-N01-SS[NGRR-188]C3-005
01-N01-SS[NGRR-188]C3-005	6-Aug-01	40		12		
01-N01-SS[NGRR-189]C2-005	6-Aug-01	26		21		
01-N01-SS[NGRR-190]C2-005	6-Aug-01	13		9.2		
01-N01-SS[NGRR-191]C2-005	6-Aug-01	15		8.8		
01-N01-SS[NGRR-192]C2-005	6-Aug-01	31		17		
01-N01-SS[NGRR-193]C2-005	7-Aug-01	11		57		01-N01-SS[NGRR-194]C3-005
01-N01-SS[NGRR-194]C3-005	7-Aug-01	11		61		
01-N01-SS[NGRR-195]C2-005	7-Aug-01	18		53		

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-196]C2-005	7-Aug-01	50		180		
01-N01-SS[NGRR-197]C2-005	7-Aug-01	76		30		
01-N01-SS[NGRR-198]C2-005	7-Aug-01	13		30		
01-N01-SS[NGRR-199]C2-005	7-Aug-01	4.6		7.3		
01-N01-SS[NGRR-200]C2-005	7-Aug-01	5.2		55		
01-N01-SS[NGRR-201]C2-005	7-Aug-01	5.3		14		
01-N01-SS[NGRR-202]C2-005	7-Aug-01	6.3		24		
01-N01-SS[NGRR-203]C2-005	7-Aug-01	46		120		
01-N01-SS[NGRR-204]C2-005	7-Aug-01	11		55		
01-N01-SS[NGRR-205]C2-005	7-Aug-01	5.6		36		
01-N01-SS[NGRR-206]C2-005	7-Aug-01	4.6		9.2		
01-N01-SS[NGRR-207]C2-005	7-Aug-01	6		51		
01-N01-ER[NGRR-208]C4-000	7-Aug-01	0.01	U	0.027		
01-N01-SS[NGRR-209]C2-005	8-Aug-01	8		7.5		
01-N01-SS[NGRR-210]C2-005	8-Aug-01	11		9.4		
01-N01-SS[NGRR-211]C2-005	8-Aug-01	7.7		4.1		
01-N01-SS[NGRR-212]C2-005	8-Aug-01	5		3.6		
01-N01-SS[NGRR-213]C2-005	8-Aug-01	4.9		3.3		
01-N01-SS[NGRR-214]C2-005	8-Aug-01	38		11		
01-N01-SS[NGRR-215]C2-005	8-Aug-01	55		4.2		
01-N01-SS[NGRR-216]C2-005	8-Aug-01	7.2		4.8		
01-N01-SS[NGRR-217]C2-005	8-Aug-01	5.2		4.8		
01-N01-SS[NGRR-218]C2-005	8-Aug-01	50		66		
01-N01-SS[NGRR-219]C2-005	8-Aug-01	7.4		6.2		
01-N01-SS[NGRR-220]C2-005	8-Aug-01	9.8		6.7		
01-N01-SS[NGRR-221]C2-005	8-Aug-01	9.1		5.4		
01-N01-SS[NGRR-222]C2-005	8-Aug-01	14		5.3		
01-N01-SS[NGRR-223]C2-005	8-Aug-01	6.6		5.6		01-N01-SS[NGRR-224]C3-005
01-N01-SS[NGRR-224]C3-005	8-Aug-01	6		6		
01-N01-SS[NGRR-225]C2-005	8-Aug-01	5.6		5.5		
01-N01-SS[NGRR-226]C2-005	8-Aug-01	18		25		
01-N01-SS[NGRR-227]C2-005	8-Aug-01	4.9		6.2		
01-N01-SS[NGRR-228]C2-005	8-Aug-01	5		4.2		
01-N01-SS[NGRR-229]C2-005	8-Aug-01	4.9		4.4		
01-N01-SS[NGRR-230]C2-005	8-Aug-01	16		9.4		
01-N01-SS[NGRR-231]C2-005	9-Aug-01	6.5		25		
01-N01-SS[NGRR-232]C2-005	9-Aug-01	6		4.9		
01-N01-SS[NGRR-233]C2-005	9-Aug-01	6.4		6		
01-N01-SS[NGRR-234]C2-005	9-Aug-01	5.1		4.8		
01-N01-SS[NGRR-235]C2-005	9-Aug-01	6.5		7.4		01-N01-SS[NGRR-236]C3-005
01-N01-SS[NGRR-236]C3-005	9-Aug-01	6.5		6.6		
01-N01-SS[NGRR-237]C2-005	9-Aug-01	4.8		6.1		
01-N01-SS[NGRR-238]C2-005	9-Aug-01	6		7.8		
01-N01-SS[NGRR-239]C2-005	9-Aug-01	4.6		5.4		
01-N01-SS[NGRR-240]C2-005	9-Aug-01	11		13		
01-N01-SS[NGRR-241]C2-005	9-Aug-01	13		8.3		
01-N01-SS[NGRR-242]C2-005	9-Aug-01	3.9		5.2		
01-N01-SS[NGRR-243]C2-005	9-Aug-01	5.9		4.8		
01-N01-ER[NGRR-244]C4-000	9-Aug-01	0.01	U	0.01	U	
01-N01-SS[NGRR-245]C2-005	13-Aug-01	8.6		10		01-N01-SS[NGRR-246]C3-005
01-N01-SS[NGRR-246]C3-005	13-Aug-01	9.3		9		
01-N01-SS[NGRR-247]C2-005	13-Aug-01	9.8		8.2		
01-N01-SS[NGRR-248]C2-005	13-Aug-01	7.8		11		
01-N01-SS[NGRR-249]C2-005	13-Aug-01	12		16		
01-N01-SS[NGRR-250]C2-005	13-Aug-01	7.9		6.6		
01-N01-SS[NGRR-251]C2-005	13-Aug-01	6.8		4.8		
01-N01-SS[NGRR-252]C2-005	13-Aug-01	9		6.1		
01-N01-SS[NGRR-253]C2-005	13-Aug-01	7.8		4.3		
01-N01-SS[NGRR-254]C2-005	13-Aug-01	6.3		5		
01-N01-SS[NGRR-255]C2-005	13-Aug-01	17		4.8		
01-N01-SS[NGRR-256]C2-005	13-Aug-01	9.6		4.8		
01-N01-ER[NGRR-257]C4-000	13-Aug-01	0.01	U	0.01	UJ	
01-N01-SS[NGRR-258]C2-005	13-Aug-01	6.8		5.7		
01-N01-SS[NGRR-259]C2-005	13-Aug-01	10		5.2		
01-N01-SS[NGRR-260]C2-005	13-Aug-01	6.8		6.6		

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-261]C2-005	13-Aug-01	6.7		5.6		01-N01-SS[NGRR-262]C3-005
01-N01-SS[NGRR-262]C3-005	13-Aug-01	7.4		6.3		
01-N01-SS[NGRR-263]C2-005	13-Aug-01	7.5		4.5		
01-N01-SS[NGRR-264]C2-005	13-Aug-01	9.5		6.2		
01-N01-SS[NGRR-265]C2-005	13-Aug-01	4		4.1		
01-N01-SS[NGRR-266]C2-005	13-Aug-01	6.7		5.8		
01-N01-SS[NGRR-267]C2-005	13-Aug-01	8.9		8		
01-N01-SS[NGRR-268]C2-005	13-Aug-01	9.5		6.8		
01-N01-SS[NGRR-269]C2-005	13-Aug-01	6.7		7		
01-N01-SS[NGRR-270]C2-005	13-Aug-01	8.2		9.1		
01-N01-SS[NGRR-271]C2-005	13-Aug-01	10		7.8		
01-N01-SS[NGRR-272]C2-005	13-Aug-01	11		6.6		
01-N01-SS[NGRR-273]C2-005	13-Aug-01	8.9		7.9		
01-N01-SS[NGRR-274]C2-005	13-Aug-01	8.5		7.9		
01-N01-SS[NGRR-275]C2-005	13-Aug-01	19		22		
01-N01-SS[NGRR-276]C2-005	13-Aug-01	25		360		
01-N01-SS[NGRR-277]C2-005	14-Aug-01	20		15		
01-N01-SS[NGRR-278]C2-005	14-Aug-01	34		110		
01-N01-SS[NGRR-279]C2-005	14-Aug-01	140		79		01-N01-SS[NGRR-280]C3-005
01-N01-SS[NGRR-280]C3-005	14-Aug-01	170		97		
01-N01-SS[NGRR-281]C2-005	14-Aug-01	47		230		
01-N01-SS[NGRR-282]C2-005	14-Aug-01	520		110		
01-N01-SS[NGRR-283]C2-005	15-Aug-01	12		20		01-N01-SS[NGRR-284]C3-005
01-N01-SS[NGRR-284]C3-005	15-Aug-01	11		18		
01-N01-SS[NGRR-285]C2-005	15-Aug-01	7.3		8.8		
01-N01-SS[NGRR-286]C2-005	15-Aug-01	7.1		6.7		
01-N01-SS[NGRR-287]C2-005	15-Aug-01	6		5.1		
01-N01-SS[NGRR-288]C2-005	15-Aug-01	7.4		5.9		
01-N01-SS[NGRR-289]C2-005	15-Aug-01	6.2		4.3		
01-N01-SS[NGRR-290]C2-005	15-Aug-01	8.2		5.1		
01-N01-SS[NGRR-291]C2-005	15-Aug-01	8.4		8.2		
01-N01-SS[NGRR-292]C2-005	15-Aug-01	12		12		
01-N01-SS[NGRR-293]C2-005	15-Aug-01	6.6		5.5		
01-N01-SS[NGRR-294]C2-005	15-Aug-01	6.8		7.3		
01-N01-SS[NGRR-295]C2-005	15-Aug-01	7.1		4.9		
01-N01-ER[NGRR-296]C4-000	15-Aug-01	0.01	U	0.011	J	
01-N01-SS[NGRR-297]C2-005	15-Aug-01	8.4		7.7		
01-N01-SS[NGRR-298]C2-005	15-Aug-01	7.8		9.6		
01-N01-SS[NGRR-299]C2-005	15-Aug-01	18		26		
01-N01-SS[NGRR-300]C2-005	15-Aug-01	5.9		55		
01-N01-SS[NGRR-301]C2-005	16-Aug-01	81		37		01-N01-SS[NGRR-302]C3-005
01-N01-SS[NGRR-302]C3-005	16-Aug-01	99		46		
01-N01-SS[NGRR-303]C2-005	16-Aug-01	46		20		
01-N01-SS[NGRR-304]C2-005	16-Aug-01	13		7.2		
01-N01-SS[NGRR-305]C2-005	16-Aug-01	13		10		
01-N01-SS[NGRR-306]C2-005	16-Aug-01	4.6		2.6		
01-N01-SS[NGRR-307]C2-005	16-Aug-01	17		5.5		
01-N01-SS[NGRR-308]C2-005	16-Aug-01	19		7.1		
01-N01-SS[NGRR-309]C2-005	16-Aug-01	34		11		
01-N01-SS[NGRR-310]C2-005	16-Aug-01	34		37		
01-N01-ER[NGRR-311]C4-000	16-Aug-01	0.01	U	0.01	UJ	
01-N01-SS[NGRR-312]C2-005	16-Aug-01	8		10		
01-N01-SS[NGRR-313]C2-005	16-Aug-01	12		13		
01-N01-SS[NGRR-314]C2-005	16-Aug-01	14		20		
01-N01-SS[NGRR-315]C2-005	16-Aug-01	5.5		5.7		
01-N01-SS[NGRR-316]C2-005	16-Aug-01	5.9		15		
01-N01-SS[NGRR-317]C2-005	16-Aug-01	4.9		8.2		
01-N01-SS[NGRR-318]C2-005	16-Aug-01	24		16		
01-N01-SS[NGRR-319]C2-005	16-Aug-01	8.9		76		
01-N01-SS[NGRR-320]C2-005	16-Aug-01	6.1		9.5		
01-N01-SS[NGRR-321]C2-005	20-Aug-01	42	U	21	U	01-N01-SS[NGRR-322]C3-005
01-N01-SS[NGRR-322]C3-005	20-Aug-01	41	U	21	U	
01-N01-SS[NGRR-323]C2-005	20-Aug-01	40	U	41		
01-N01-SS[NGRR-324]C2-005	20-Aug-01	37	U	18	U	
01-N01-SS[NGRR-325]C2-005	20-Aug-01	36	U	18	U	

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-326]C2-005	20-Aug-01	37	U	18	U	
01-N01-SS[NGRR-327]C2-005	20-Aug-01	36	U	18	U	
01-N01-SS[NGRR-328]C2-005	20-Aug-01	39	U	19	U	
01-N01-SS[NGRR-329]C2-005	20-Aug-01	37	U	19	U	
01-N01-SS[NGRR-330]C2-005	20-Aug-01	39	U	19	U	
01-N01-SS[NGRR-331]C2-005	20-Aug-01	35	U	18	U	
01-N01-ER[NGRR-332]C4-000	20-Aug-01	0.01	U	0.01	U	
01-N01-SS[NGRR-333]C2-005	20-Aug-01	46	U	23	U	
01-N01-SS[NGRR-334]C2-005	20-Aug-01	42	U	21	U	
01-N01-SS[NGRR-335]C2-005	20-Aug-01	43	U	22	U	
01-N01-SS[NGRR-336]C2-005	20-Aug-01	38	U	19	U	
01-N01-SS[NGRR-337]C2-005	20-Aug-01	39	U	19	U	
01-N01-SS[NGRR-338]C2-005	20-Aug-01	41	U	20	U	
01-N01-SS[NGRR-339]C2-005	20-Aug-01	38	U	19	U	
01-N01-SS[NGRR-340]C2-005	20-Aug-01	39	U	19	U	
01-N01-SS[NGRR-341]C2-005	20-Aug-01	41	U	21	U	
01-N01-SS[NGRR-342]C2-005	20-Aug-01	42	U	46	J	01-N01-SS[NGRR-343]C3-005
01-N01-SS[NGRR-343]C3-005	20-Aug-01	42	U	21	UJ	
01-N01-SS[NGRR-344]C2-005	20-Aug-01	43	U	21	UJ	
01-N01-SS[NGRR-345]C2-005	20-Aug-01	39	U	20	UJ	
01-N01-SS[NGRR-346]C2-005	20-Aug-01	41	U	21	UJ	
01-N01-SS[NGRR-347]C2-005	20-Aug-01	38	U	19	UJ	
01-N01-SS[NGRR-348]C2-005	20-Aug-01	41	U	20	UJ	
01-N01-SS[NGRR-349]C2-005	20-Aug-01	38	U	19	UJ	
01-N01-SS[NGRR-350]C2-005	20-Aug-01	40	U	20	UJ	
01-N01-SS[NGRR-351]C2-005	20-Aug-01	42	U	21	UJ	
01-N01-SS[NGRR-352]C2-005	21-Aug-01	40	U	20	UJ	01-N01-SS[NGRR-353]C3-005
01-N01-SS[NGRR-353]C3-005	21-Aug-01	43	U	21	UJ	
01-N01-SS[NGRR-354]C2-005	21-Aug-01	43	U	21	UJ	
01-N01-SS[NGRR-355]C2-005	21-Aug-01	45	U	22	UJ	
01-N01-SS[NGRR-356]C2-005	21-Aug-01	42	U	21	UJ	
01-N01-SS[NGRR-357]C2-005	21-Aug-01	40	U	20	UJ	
01-N01-SS[NGRR-358]C2-005	21-Aug-01	37	U	18	UJ	
01-N01-SS[NGRR-359]C2-005	21-Aug-01	43	U	22	UJ	
01-N01-SS[NGRR-360]C2-005	21-Aug-01	44	U	22	UJ	
01-N01-SS[NGRR-361]C2-005	21-Aug-01	40	U	20	UJ	
01-N01-SS[NGRR-362]C2-005	21-Aug-01	5.5		13		
01-N01-SS[NGRR-363]C2-005	21-Aug-01	6.7		8.3		
01-N01-SS[NGRR-364]C2-005	21-Aug-01	6		5.3		
01-N01-SS[NGRR-365]C2-005	21-Aug-01	3.6		3.4		
01-N01-SS[NGRR-366]C2-005	21-Aug-01	10		5.9		
01-N01-SS[NGRR-367]C2-005	21-Aug-01	6		7.2		
01-N01-ER[NGRR-368]C4-000	21-Aug-01	0.01	U	0.01	U	
01-N01-SS[NGRR-369]C2-005	21-Aug-01	11		6.4		
01-N01-SS[NGRR-370]C2-005	21-Aug-01	12		15		
01-N01-SS[NGRR-371]C2-005	21-Aug-01	4.5		5.6		
01-N01-SS[NGRR-372]C2-005	21-Aug-01	4.2		4.9		
01-N01-SS[NGRR-373]C2-005	21-Aug-01	6.2		5.1		
01-N01-SS[NGRR-374]C2-005	21-Aug-01	5.5		4		
01-N01-SS[NGRR-375]C2-005	21-Aug-01	4.2		3.6		
01-N01-SS[NGRR-376]C2-005	21-Aug-01	4.2		3.8		
01-N01-SS[NGRR-377]C2-005	21-Aug-01	7.2		7.1		
01-N01-SS[NGRR-378]C2-005	21-Aug-01	5.5		6.4		
01-N01-SS[NGRR-379]C2-005	21-Aug-01	5.8		5.1		
01-N01-SS[NGRR-380]C2-005	22-Aug-01	3.1		3.4		
01-N01-SS[NGRR-381]C2-005	22-Aug-01	2.5		2.7		
01-N01-SS[NGRR-382]C2-005	22-Aug-01	3.5		2.7		
01-N01-SS[NGRR-383]C2-005	23-Aug-01	5.2		5.5		01-N01-SS[NGRR-384]C3-005
01-N01-SS[NGRR-384]C3-005	23-Aug-01	4.9		5.2		
01-N01-SS[NGRR-385]C2-005	23-Aug-01	5.7		6.8		
01-N01-SS[NGRR-386]C2-005	23-Aug-01	6		3.8		
01-N01-SS[NGRR-387]C2-005	23-Aug-01	3.5		2.2	U	
01-N01-SS[NGRR-388]C2-005	23-Aug-01	6.6		6.2		
01-N01-SS[NGRR-389]C2-005	23-Aug-01	8.6		7		
01-N01-SS[NGRR-390]C2-005	23-Aug-01	5.9		3.7		

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-391]C2-005	23-Aug-01	7.1		3.4		
01-N01-SS[NGRR-392]C2-005	23-Aug-01	7.9		4.3		
01-N01-SS[NGRR-393]C2-005	23-Aug-01	3.6		62		
01-N01-ER[NGRR-394]C4-000	23-Aug-01	0.01	U	0.01	U	
01-N01-SS[NGRR-395]C2-005	23-Aug-01	4		4		
01-N01-SS[NGRR-396]C2-005	23-Aug-01	3.4		3.6		
01-N01-SS[NGRR-397]C2-005	23-Aug-01	7.8		17		
01-N01-SS[NGRR-398]C2-005	23-Aug-01	3.3		3.1		
01-N01-SS[NGRR-399]C2-005	23-Aug-01	13		15		
01-N01-SS[NGRR-400]C2-005	23-Aug-01	3.3		4.5		
01-N01-SS[NGRR-401]C2-005	23-Aug-01	4.5		2.7		
01-N01-SS[NGRR-402]C2-005	23-Aug-01	10		8.3		
01-N01-SS[NGRR-403]C2-005	23-Aug-01	8.4		9.3		
01-N01-SS[NGRR-404]C2-005	23-Aug-01	8.7		6.8		
01-N01-SS[NGRR-405]C2-005	23-Aug-01	7		6.1		
01-N01-SS[NGRR-406]C2-005	23-Aug-01	6.5		9		
01-N01-SS[NGRR-407]C2-005	23-Aug-01	9.8		16		
01-N01-SS[NGRR-408]C2-005	23-Aug-01	13		15		

Table A-5
Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001
Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-N01-SS[NGRR-409]C2-005	23-Aug-01	10		11		
01-N01-SS[NGRR-410]C2-005	23-Aug-01	14		18		
01-N01-SS[NGRR-411]C2-005	27-Aug-01	9.7		8.8		01-N01-SS[NGRR-412]C3-005
01-N01-SS[NGRR-412]C3-005	27-Aug-01	8.9		7.4		
01-N01-SS[NGRR-413]C2-005	27-Aug-01	3		2	U	
01-N01-SS[NGRR-414]C2-005	27-Aug-01	10		8.2		
01-N01-SS[NGRR-415]C2-005	27-Aug-01	6.6		3.9		
01-N01-SS[NGRR-416]C2-005	27-Aug-01	7.7		7.7		
01-N01-SS[NGRR-417]C2-005	27-Aug-01	11		11		
01-N01-SS[NGRR-418]C2-005	27-Aug-01	8.3		5.4		
01-N01-SS[NGRR-419]C2-005	27-Aug-01	11		8.6		
01-N01-SS[NGRR-420]C2-005	27-Aug-01	6.3		4		
01-N01-SS[NGRR-421]C2-005	27-Aug-01	6.4		5		
01-N01-SS[NGRR-422]C2-005	27-Aug-01	52		8.6		
01-N01-SS[NGRR-423]C2-005	27-Aug-01	19		2.4		
01-N01-SS[NGRR-424]C2-005	27-Aug-01	4.8		2.1		
01-N01-SS[NGRR-425]C2-005	27-Aug-01	4.4		3		
01-N01-SS[NGRR-426]C2-005	27-Aug-01	6.7		3.8		
01-N01-ER[NGRR-427]C4-000	27-Aug-01	0.01	U	0.01	U	
01-N01-SS[NGRR-428]C2-005	27-Aug-01	6.8		2.7		
01-N01-SS[NGRR-429]C2-005	27-Aug-01	14		8.2		
01-N01-SS[NGRR-430]C2-005	27-Aug-01	35		7.4		
01-N01-SS[NGRR-431]C2-005	27-Aug-01	25		13		
01-N01-SS[NGRR-432]C2-005	27-Aug-01	65		39		
01-N01-SS[NGRR-433]C2-005	27-Aug-01	30		62		
01-N01-SS[NGRR-434]C2-005	27-Aug-01	21		9.9		
02-N01-SS[NGRR-203-2]C2-025	28-Aug-01	16		37		
02-N01-SS[NGRR-196-2]C2-025	28-Aug-01	16		81		
02-N01-SS[NGRR-197-2]C2-025	28-Aug-01	5.1		10		
02-N01-SS[NGRR-11-2]C2-025	28-Aug-01	2.8		2.7		
02-N01-SS[NGRR-12-2]C2-025	28-Aug-01	5.1		3.2		
02-N01-SS[NGRR-13-2]C2-025	28-Aug-01	4.6		3.6		
02-N01-SS[NGRR-276-2]C2-025	28-Aug-01	7.2		97		
01-N01-ER[NGRR-435]C4-000	28-Aug-01	0.01	U	0.01	U	
02-N01-SS[NGRR-27-2]C2-025	29-Aug-01	31	J	14		
02-N01-SS[NGRR-29-2]C2-025	29-Aug-01	17	J	16		
02-N01-SS[NGRR-30-2]C2-025	29-Aug-01	6	J	4.8		
02-N01-SS[NGRR-69-2]C2-025	30-Aug-01	14		5.4		
02-N01-SS[NGRR-81-2]C2-025	30-Aug-01	6.9		3.5		
02-N01-SS[NGRR-156-2]C2-025	30-Aug-01	5.3		2		
02-N01-SS[NGRR-145-2]C2-025	30-Aug-01	7.2		250	J	
02-N01-SS[NGRR-07-2]C2-025	30-Aug-01	4.6		22	J	02-N01-SS[NGRR-08-2]C3-025
02-N01-SS[NGRR-08-2]C3-025	30-Aug-01	4.5		21	J	
02-N01-SS[NGRR-279-2]C2-025	30-Aug-01	14		34	J	02-N01-SS[NGRR-280-2]C3-025
02-N01-SS[NGRR-280-2]C3-025	30-Aug-01	11		19	J	
02-N01-SS[NGRR-281-2]C2-025	30-Aug-01	35		40	J	
02-N01-SS[NGRR-282-2]C2-025	30-Aug-01	7.3		29	J	
02-N01-SS[NGRR-179-2]C2-025	30-Aug-01	52		140	J	
02-N01-SS[NGRR-125-2]C2-025	30-Aug-01	4.9		15	J	02-N01-SS[NGRR-126-2]C3-025
02-N01-SS[NGRR-126-2]C3-025	30-Aug-01	5.7		14	J	
02-N01-SS[NGRR-301-2]C2-025	30-Aug-01	6		14	J	02-N01-SS[NGRR-302-2]C3-025
02-N01-SS[NGRR-302-2]C3-025	30-Aug-01	5.3		8.6	J	
02-N01-SS[NGRR-132-2]C2-025	30-Aug-01	3.9		9.9	J	
01-N01-SS-[NGRR-436]-C2-020	12-Sep-01	3.5		2.6		
01-N01-SS-[NGRR-437]-C2-020	12-Sep-01	2.8		2.2		
02-N01-SS-[NGRR-432-2]-C2-030	13-Sep-01	4.1		29		
03-N01-SS-[NGRR-179-3]-C2-050	13-Sep-01	4.8		87		
03-N01-SS-[NGRR-145-3]-C2-050	13-Sep-01	6		5.5		
02-N01-ER-[NGRR-432-2]-C4-000	13-Sep-01	0.01	U	0.01	U	
01-N01-SS-[NGRR-439]C2-015	17-Sep-01	5.4		3.7		
01-N01-SS-[NGRR-440]C2-015	17-Sep-01	13		5.8		

* Reported as mg/kg unless otherwise specified
Rinsate blank sample. Results are reported as mg/L

Table A-5

Soil Analytical Results for Lead and Arsenic
NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *	Lead (mg/kg) *	*Duplicate Sample ID*

U The analyte was analyzed for, but was not detected above the reporting limit shown.
J Estimated value, qualifier assigned during data review
UJ Analyte was analyzed for, but was not detected above the reporting limit shown. The reporting limit is estimated.

Table A-6

Soil Analytical Results for Lead, Arsenic and Explosives
Industrial Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Metals				Explosives						Field Duplicate Sample ID
		Arsenic (mg/kg)		Lead (mg/kg)		2,4,6-Trinitrotoluene (mg/kg)		2,4-Dinitrotoluene (mg/kg)		2,6-Dinitrotoluene (mg/kg)		
03-IN01-SS[10-VS-5]D2-7.0	1-Aug-01	NA		NA		38	J	0.19	J	0.05	UJ	
03-IN01-SS[10-VS-6]D2-5.0	1-Aug-01	NA		NA		1		0.046	U	0.046	U	
03-IN01-SS[10-VS-7]D2-5.0	1-Aug-01	NA		NA		25		0.049	U	0.049	U	
03-IN01-SS[10-VS-8]D2-5.0	1-Aug-01	NA		NA		0.073	J	0.044	U	0.044	U	
03-IN01-SS[10-VS-9]D2-5.0	1-Aug-01	NA		NA		0.12	J	0.044	U	0.044	U	03-IN01-SS[10-VS-10]D3-5.0
03-IN01-SS[10-VS-10]D3-5.0	1-Aug-01	NA		NA		0.14	J	0.043	U	0.043	U	
18-TR-18N,S-1	15-Aug-01	NA		NA		0.045	U	0.023	J	0.045	U	
03-IN01-SS-[10-VS-11]-C2-100	4-Sep-01	4.3		9.4	U	0.2		0.047	U	0.047	U	
03-IN01-SS-[10-VS-12]-C2-050	4-Sep-01	3.9		10	U	0.048	U	0.048	U	0.048	U	

NA Not Analyzed
U The analyte was analyzed for, but was not detected above the reporting limit shown.
J Estimated value, qualifier assigned during data review
UJ Analyte was analyzed for, but was not detected above the reporting limit shown. The reporting limit is estimated.

Table A-7

Soil Analytical Results for Lead and Arsenic
Sequalitchew Creek NGRR Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg)		Lead (mg/kg)		Duplicate Sample ID
02-OS02-SS[LR-68-0-02]C02-1.5	1-Aug-01	98		210		
02-OS02-SS[LR-68-75-02]C02-1.5	1-Aug-01	99		16		
02-OS02-SS[LR-68-525E-02]C02-1.5	1-Aug-01	85		190		
02-OS02-SS[LR-68-600E-02]C02-1.5	1-Aug-01	130		20		
02-OS02-SS[LR-68-1275E-02]C02-1.5	1-Aug-01	29		22		
02-OS02-SS[LR-68-1350E-02]C02-1.5	1-Aug-01	40		9.1		
02-OS02-SS[LR-68-1575E-02]C02-1.5	1-Aug-01	67		21		
01-OS02-SS[LR-68-600E-TRANSECT]-C1-000	29-Aug-01	20	J	1700		
01-OS02-SS[LR-68-300W-TRANSECT]-C1-000	29-Aug-01	20	J	23		
01-OS02-SS-[LR-68-1500W-TRANSECT]-C1-000	29-Aug-01	10	J	22		
01-OS02-SS-[LR-68-3600W-TRANSECT]-C1-000	29-Aug-01	27	J	38		
02-OS02-[LR-68-600E-2-TRANSECT]-D1-000	12-Sep-01	33		2900		
02-OS02-[LR-68-600E-3-TRANSECT]-D1-000	12-Sep-01	22		360		
02-OS02-[LR-68-600E-4-TRANSECT]-D1-000	12-Sep-01	19		260		
02-OS02-[LR-68-600E-5-TRANSECT]-D1-000	12-Sep-01	16		430		
02-OS02-[LR-68-600E-6-TRANSECT]-D1-000	12-Sep-01	19		10		

J Estimated value, qualifier assigned during data validation.

Table A-8

Soil Analytical Results for Lead and Arsenic
Hot Spot Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg)		Lead (mg/kg)		Duplicate Sample ID
01-C004-SS[38-VS-150]C2-2.00	1-Aug-01	11		26		
01-C004-SS[38-VS-151]D1-000	1-Aug-01	23		31		
01-C004-SS[38-VS-152]D1-000	1-Aug-01	330		44		
01-C004-SS[38-VS-153]D1-000	1-Aug-01	8.1		13		
02-C013-SS[R71C85-02]C2-1.0	31-Jul-01	19		4		
02-C013-SS[R71C85-03]D1-000	31-Jul-01	46		90		
02-C013-SS[R71C85-04]D1-000	31-Jul-01	38		70		
02-C013-SS[R71C85-05]D1-000	31-Jul-01	49		80		
02-C013-SS[R71C85-06]D1-000	31-Jul-01	55		99		

Table A-9

Soil Analytical Results for Lead and Arsenic
Historical Areas Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg) *		Lead (mg/kg) *		Duplicate Sample ID
01-H404-SS[1]D1-005	3-Jul-01	14		37		
01-H404-SS[2]D1-005	3-Jul-01	24		450		
01-H404-SS[3]D1-005	3-Jul-01	17		88		
01-H404-SS[4]D1-005	3-Jul-01	60		46		
01-H404-SS[5]D1-005	3-Jul-01	13		160		
01-H404-SS[6]D1-005	3-Jul-01	21		790		
01-H404-SS[7]D1-005	3-Jul-01	8.1		18		
01-H404-SS[8]D1-005	3-Jul-01	13		170		
01-H404-SS[9]D1-005	3-Jul-01	150		280		
01-H404-SS[10]D1-005	3-Jul-01	7.5		22		
01-H404-SS[11]D1-005	3-Jul-01	6.1		33		01-H404-SS[12]D2-005
01-H404-SS[12]D2-005	3-Jul-01	6.2		29		
01-H404-ER[13]D3-000	3-Jul-01	0.01	U	0.01	U	
01-SM-SS-[R69C4]-D1-005	17-Sep-01	28		36		
01-SM-SS-[R68C4]-D1-005	17-Sep-01	62		83		
01-SM-SS-[R67C4]-D1-005	17-Sep-01	47		35		
01-SM-SS-[R67C3]-D1-005	17-Sep-01	52		150		
01-SM-SS-[R68C3]-D1-005	17-Sep-01	6		4.7		
01-SM-SS-[R68C2]-D1-005	17-Sep-01	73		280		
01-SM-SS-[R67C2]-D1-005	17-Sep-01	52		22		

* Reported as mg/kg unless otherwise specified

Rinsate blank sample. Results are reported as mg/L

U Analyte was analyzed for, but was not detected above the reporting limit shown.

Table A-10

Soil Analytical Results for Metals and Petroleum Hydrocarbons, mg/kg
Core Drilling Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action

Dupont, Washington

URS Project # 53-02000093.01

Sample ID	Wey-Geo-1		Wey-Geo-2	Wey-Geo-3	Wey-Geo-4	Wey-Geo-5
Sample Date	6/21/01		6/21/01	6/21/01	6/21/01	6/21/01
Arsenic	13		NA	NA	NA	NA
Aluminum	530		NA	NA	NA	NA
Antimony	9.3	U	NA	NA	NA	NA
Barium	5		NA	NA	NA	NA
Beryllium	0.37	U	NA	NA	NA	NA
Cadmium	0.93	U	NA	NA	NA	NA
Calcium	190	U	NA	NA	NA	NA
Chromium	2		NA	NA	NA	NA
Cobalt	0.93	U	NA	NA	NA	NA
Copper	8.3		NA	NA	NA	NA
Iron	2600		NA	NA	NA	NA
Lead	5.1		NA	NA	NA	NA
Magnesium	190	U	NA	NA	NA	NA
Manganese	4		NA	NA	NA	NA
Mercury	0.019	U	NA	NA	NA	NA
Nickel	1.9	U	NA	NA	NA	NA
Potassium	370	U	NA	NA	NA	NA
Selenium	9.3	U	NA	NA	NA	NA
Silver	1.9	U	NA	NA	NA	NA
Sodium	190	U	NA	NA	NA	NA
Thallium	3.7	U	NA	NA	NA	NA
Vanadium	1.2		NA	NA	NA	NA
Zinc	1.9	U	NA	NA	NA	NA
#2 Diesel	NA		32	U	28	U	18	J	31	U
Motor Oil	NA		64	U	57	U	61	U	61	U

U The analyte was analyzed for, but was not detected above the reporting limit shown.

J Estimated Value, qualifier assigned during data review

NA Not Analyzed

Table A-11

Soil Analytical Results for Lead and Arsenic

Topsoil Laydown Areas Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg)		Lead (mg/kg)		Duplicate Sample ID
01-TS03-SS-[R23C09]-D1-015	4-Sep-01	7		17		
01-TS03-SS-[R24C09]-D1-015	4-Sep-01	10		9.2		
01-TS03-SS-[R24C08]-D1-015	4-Sep-01	5.8		8.8		
01-TS03-SS-[R25C08]-D1-015	4-Sep-01	9.5		21		
01-TS03-SS-[R25C09]-D1-015	4-Sep-01	8.9		96		
01-TS03-SS-[R24C10]-D1-015	4-Sep-01	10		28		
01-TS03-SS-[R25C10]-D1-015	4-Sep-01	4.8		12		
01-TS04-SS[R35C16]-D1-015	4-Sep-01	8.1		15		
01-TS04-SS[R34C15]-D1-015	4-Sep-01	31		120		
01-TS04-SS[R35C14]-D1-015	4-Sep-01	33		19		
01-TS04-SS[R36C16]-D1-015	4-Sep-01	19		31		
01-TS04-SS[R35C15]-D1-015	4-Sep-01	10		9.5		
01-TS04-SS[R37C17]-D1-015	4-Sep-01	16		22		
02-TS04-SS-[R34C15-2]-D2-030	19-Sep-01	8.2		5.8		

Table A-12

Soil Analytical Results for Lead and Arsenic
Production Well Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	Arsenic (mg/kg)		Lead (mg/kg)		Duplicate Sample ID
01-C-SS[PW-1]C2-005	11-Jul-01	6.4		8.6		

Table A-13

Soil Analytical Results for Explosives

Hoffman Reservoir Sampling, May - September 2001

Weyerhaeuser-Dupont Interim Source Removal Action
Dupont, Washington
URS Project # 53-02000093.01

Sample ID	Date Sampled	2,4,6-Trinitrotoluene (mg/kg)	2,4-Dinitrotoluene (mg/kg)	2,6-Dinitrotoluene (mg/kg)	Field Duplicate Sample ID
HOFRES	7-May-01	0.05 U	0.05 U	0.05 U	

U - The analyte was analyzed for, but was not detected above the reporting limit shown.

Laboratory Analytical Data Validation Results

1 Summary

The soil sample analytical data reviewed from the Stockpile Interim Action Program are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan.[1] The data may be used to assess analyte concentrations with the stated qualifications.

2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil stockpile samples from the former DuPont Works Site in Dupont, Washington, from March 19, 2001 through May 7, 2001. Samples were submitted to Sound Analytical Services, Inc. (SAS) located in Tacoma, Washington for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Surrogate recoveries
- Matrix spike / blank spike (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992. (Management Plan)
- Work Plan, Interim Source Removal Actions: On-site Stockpiles, Pioneer Technologies Corporation, West Shore Corporation, NW, March 9, 2001.
- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- National Functional Guidelines for Organic Data Review, EPA, February 1994.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data have been compared to criteria referenced in the Management Plan. The samples were analyzed for one or more of the following chemicals by the analytical methods shown.

• Metals (Arsenic and Lead)	EPA 6010
• Explosives (2,4-Dinitrotoluene, 2,6-Dinitrotoluene and 2,4,6-Trinitrotoluene)	EPA 8330
• Diesel range and motor oil range total petroleum hydrocarbons	NWTPH-Dx

[1] Hart Crowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, WA.

3 Sample Case

The sample data groups (SDGs) identified in Table A-1 were included in this data review.

Table A-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
96864	March 19, 2001
96890	March 20, 2001
96924	March 21, 2001
96959	March 22, 2001
97027	March 27, 2001
97185	April 3, 2001
97281	April 5, 2001
97962	May 7, 2001

.4 Laboratory Report and Reporting of Required Analyses

The laboratory reports included method blanks, surrogate recoveries, sample results, sample preparation logs, matrix spike results and matrix duplicate results. Blank spike data were reported only when matrix spike recovery data were outside of the control limits. Generally, the reports were adequate to evaluate the data quality given that blank spikes are not consistently reported. All sample analyses were reported as requested.

.5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were submitted to the laboratory on the day of sample collection. All sample bottles were received in good condition. The samples were digested and analyzed within the method-required holding times. Holding times were within specifications of the Management Plan.

.6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met.

Field blanks (rinse blanks) were collected to assess potential cross-contamination in the field. Two rinse blanks were collected and analyzed for arsenic and lead. The field blanks were free of contamination. Data qualifiers were not assigned to associated data based on method or field blank results.

7 Surrogate Recoveries

Laboratory performance on individual samples was assessed by reviewing the recoveries of system monitoring compounds (surrogates).

Explosives by EPA 8330

Recoveries of the surrogate 3,4-dinitrotoluene were above the laboratory control limits of 63-119% due to sample matrix interference in seven samples in SDG 97281: (01-S648-SO- [DS-648-A-2]-C-000 (356%), 01-S648-SO- [DS-648-B-2]-C-000 (622%), 01-S648-SO- [DS-648-C-2]-C-000 (136%), 01-S648-SO-

[DS-648-D-2]-C-000 (175%), 01-S648-SO- [DS-648-F-2]-C-000 (646%), 01-S648-SO- [DS-648-G-2]-C-000 (265%) and 01-S648-SO- [DS-648-H-2]-C-000 (520%)) and in seven samples in SDG 97027: (01-C648-SO- [648-DS-A]-C1-000 (287%), 01-C648-SO-[648-DS-B]-C1-000 (243%), 01-C648-SO-[648-DS-C]-C1-000 (588%), 01-C648-SO-[648-DS-D]-C1-000 (193%), 01-C648-SO-[648-DS-E]-C1-000 (129%), 01-C648-SO-[648-DS-F]-C1-000 (124%) and 01-C648-SO-[648-DS-G]-C1-000 (130%)). Sample results for 2,4,6-trinitrotoluene (2,4,6-TNT), 2,4-dinitrotoluene (2,4-DNT), and 2,6-dinitrotoluene (2,6-DNT) reported above the reporting limits for these samples have been qualified as estimated and flagged "J". Sample results reported as not detected were not qualified based on surrogate recoveries.

8 Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS per analytical batch or one MS per 20 samples was met. In some cases, the MS was performed on samples unrelated to this site. Samples included in SAS sample delivery groups (SDGs) 97185 and 97962 and a subset of samples included in SDGs 96890 and 96924 are associated with MS analyses performed on samples unrelated to this site. Data qualifiers were not assigned to sample data based on MS recoveries from non-project samples. Blank spike (BS) analyses were used to assess the overall performance of the analytical system when matrix spike recoveries were not acceptable.

Arsenic and Lead by EPA 6010

The MS results were compared to the method control limits of 75 to 125%. For matrix spikes performed on site samples, spike recoveries ranged from 93 to 122 percent for arsenic and 4 to 106 percent for lead. The lead recovery (4%) for the MS performed on sample 01-C625-SO- [625-A-DS]-C6-000 (SDG 96864) was outside of the control limits due to high concentrations of lead in the parent sample. Per data validation guidelines, when the concentration of the analyte in the parent sample is greater than 4X the spike level, data are not qualified based on the matrix spike recovery. Data qualifiers were not assigned to associated data based on matrix spike results.

Based on review of the sample preparation log sheets, blank spikes were prepared at the appropriate frequency although the results were reported only when MS recoveries were outside of control limits. The blank spike recoveries provided were all within the control limits of 80 to 120%. Data provided included sets of blank spike/blank spike duplicates for lead associated with samples from SDG 96864 and one set for lead associated with samples from SDG 96924 where the MS was performed on a non-project sample. Data qualifiers were not assigned to associated samples based on blank spike/blank spike duplicate results.

Explosives by EPA 8330

The recoveries of 2,4,6-trinitrotoluene 2,4,6-TNT (72.8%) in the MS and 2,6-DNT (149%) in the MSD performed on sample 01-S648-SO- [DS-648-A-2]-C-000 (SDG 97281) were outside of the laboratory control limits of 73-108% for 2,4,6-TNT and 79-103% for 2,6-DNT. The relative percent differences (RPDs) for 2,4,6-TNT (36%) and 2,6-DNT (47%) were greater than the RPD control limits of 18% for 2,4,6-TNT and 10% for 2,6-DNT. The recoveries of 2,4,6-TNT in the MS (69.2%) and the MSD (72.3%) performed on sample 01-S648-SO- [648-DS-J]-C1-000 (SDG 97027) were outside the control limits of 73-108% for 2,4,6-TNT. Sample results for samples 01-S648-SO- [DS-648-A-2]-C-000 and 01-S648-SO- [648-DS-J]-C1-000 were previously qualified based on surrogate recovery.

Diesel Range and Motor Oil Range TPH by NWTPH-Dx

An MS/MSD was not performed on the sample submitted for diesel range and motor oil range TPH analysis. Data were assessed based on the BS/BSD results that were acceptable.

9 Laboratory Duplicates

Laboratory duplicate results were used to assess the precision of laboratory measurements. The laboratory duplicate results were compared to the project control limit for relative percent difference (RPD) of 35%. The QC frequency requirement of one duplicate per analytical batch or one duplicate per 20 samples was met. In some cases, the duplicate was performed on samples unrelated to this site. Samples included in SAS SDG 97185 and a subset of samples included in SDGs 96890, 96924 and 97962 are associated with duplicate analyses performed on samples unrelated to this site. Data qualifiers were not assigned to associated sample data based on duplicate results from non-project samples.

10 Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples collected was met for metals and explosives analyses. Eight sets of field duplicate samples (seven for metals analysis, one for explosives analysis) were collected. Table A-2 presents the RPDs of detected compounds that were calculated for the duplicate pairs. Because only one sample was analyzed for diesel-range and motor oil-range petroleum hydrocarbons, a field duplicate was not collected for this analysis.

Table A-2 – RPD of Detected Compounds

Sample ID	Duplicate ID	Analyte	Primary Result (mg/kg)	Duplicate Result (mg/kg)	RPD %
01-C620-SO-[620-DS-C]-C1-000	01-C620-SO-[620-DS-G]-C1-000	Arsenic	61	90	38
		Lead	430	420	2
01-C629-SO-[629-DS-E]-C1-000	01-C629-SO-[629-DS-F]-C1-000	Arsenic	230	260	12
		Lead	3,600	5,000	33
01-C530-SO-[530-DS-F]-C1-000	01-C530-SO-[530-DS-G]-C1-000	Arsenic	11	8.7	23
		Lead	96	150	44
01-C543-SO-[543-DS-H]-C1-000	01-C543-SO-[543-DS-I]-C1-000	Arsenic	5.4	7.5	33
		Lead	170	170	NC
01-C558-SO-[558-DS-E]-C1-000	01-C558-SO-[558-DS-F]-C1-000	Arsenic	4.6	4.3	7
		Lead	32	31	3.2
01-S536-SO-[536-DS-E]-C1-000	01-S536-SO-[536-DS-F]-C1-000	Arsenic	190	180	5.4
		Lead	1,500	1,800	18
01-C632-SO-[632-DS-C]-C1-000	01-C632-SO-[632-DS-D]-C1-000	Arsenic	19	15	24
		Lead	36	29	22
01-C648-SO-[648-DS-I]-C1-000	01-C648-SO-[648-DS-J]-C1-000	2,4,6-TNT	0.11	0.12	9
		2,4-DNT	0.16	0.098	48
		2,6-DNT	0.076	0.057	29

11 Reporting Limits

Reporting limits were reviewed to ensure that results reported meet project goals. The reporting limits are acceptable for the project needs. The data are summarized in Tables A-3, A-4, and A-5 for metals, explosives and petroleum hydrocarbons, respectively.

Table A-3
Soil Analytical Results for Arsenic and Lead
Stockpile Interim Action Program

Sample ID	Date Sampled	Arsenic (mg/kg)	Lead (mg/kg)	Field Duplicate Sample ID
01-C625-SO-[625-A-DS]-C6-000	19-Mar-01	160	1200	
01-C625-SO-[625-B-DS]-C6-000	19-Mar-01	78	1200	
01-C625-SO-[625-C-DS]-C6-000	19-Mar-01	48	300	
01-C650-SO-[650-A-DS]-C6-000	19-Mar-01	110	440	
01-C650-SO-[650-B-DS]-C6-000	19-Mar-01	66	950	
01-C621-SO-[621-A-DS]-C6-000	19-Mar-01	200	480	
01-C621-SO-[621-B-DS]-C6-000	19-Mar-01	510	270	
01-C624-SO-[624-A-DS]-C6-000	19-Mar-01	4.8	210	
01-C802-SO-[802-A-DS]-C6-000	19-Mar-01	42	600	
01-C510-SO-[510-A-DS]-C6-000	19-Mar-01	27	1900	
01-C510-SO-[510-B-DS]-C6-000	19-Mar-01	25	1100	
01-C803-SO-[803-A-DS]-C6-000	19-Mar-01	77	13	
01-C800-SO-[800-A-DS]-C6-000	19-Mar-01	140	1000	
01-C801-SO-[801-A-DS]-C6-000	19-Mar-01	83	940	
01-C620-SO-[620-DS-A]-C1-000	20-Mar-01	480	140	
01-C620-SO-[620-DS-B]-C1-000	20-Mar-01	78	620	
01-C620-SO-[620-DS-C]-C1-000	20-Mar-01	61	430	01-C620-SO-[620-DS-G]-C1-000
01-C620-SO-[620-DS-G]-C1-000	20-Mar-01	90	420	
01-C620-SO-[620-DS-D]-C1-000	20-Mar-01	81	270	
01-C620-SO-[620-DS-E]-C1-000	20-Mar-01	31	320	
01-C620-SO-[620-DS-F]-C1-000	20-Mar-01	61	360	
01-C629-SO-[629-DS-A]-C1-000	20-Mar-01	270	4100	
01-C629-SO-[629-DS-B]-C1-000	20-Mar-01	260	3800	
01-C629-SO-[629-DS-C]-C1-000	20-Mar-01	320	4500	
01-C629-SO-[629-DS-D]-C1-000	20-Mar-01	200	4600	
01-C629-SO-[629-DS-E]-C1-000	20-Mar-01	230	3600	01-C629-SO-[629-DS-F]-C1-000
01-C629-SO-[629-DS-F]-C1-000	20-Mar-01	260	5000	
01-C651-SO-[651-DS-A]-C1-000	20-Mar-01	3	12	
01-C804-SO-[804-DS-A]-C1-000	20-Mar-01	23	23	
01-C530-SO-[530-DS-A]-C1-000	20-Mar-01	7.3	270	
01-C530-SO-[530-DS-B]-C1-000	20-Mar-01	8.7	190	
01-C530-SO-[530-DS-C]-C1-000	20-Mar-01	11	100	
01-C530-SO-[530-DS-E]-C1-000	20-Mar-01	12	100	
01-C530-SO-[530-DS-D]-C1-000	20-Mar-01	6.1	68	
01-C530-SO-[530-DS-F]-C1-000	20-Mar-01	11	96	01-C530-SO-[530-DS-G]-C1-000
01-C530-SO-[530-DS-G]-C1-000	20-Mar-01	8.7	150	
01-C543-SO-[543-DS-A]-C1-000	21-Mar-01	6.2	180	
01-C543-SO-[543-DS-B]-C1-000	21-Mar-01	5.4	220	
01-C543-SO-[543-DS-C]-C1-000	21-Mar-01	6.3	850	
01-C543-SO-[543-DS-D]-C1-000	21-Mar-01	7.6	160	
01-C543-SO-[543-DS-E]-C1-000	21-Mar-01	5	220	
01-C543-SO-[543-DS-F]-C1-000	21-Mar-01	5.7	170	
01-C543-SO-[543-DS-G]-C1-000	21-Mar-01	4.8	160	
01-C543-SO-[543-DS-H]-C1-000	21-Mar-01	5.4	170	01-C543-SO-[543-DS-I]-C1-000
01-C543-SO-[543-DS-I]-C1-000	21-Mar-01	7.5	170	
01-C545-SO-[545-DS-A]-C1-000	21-Mar-01	5.8	250	
01-C556-SO-[556-DS-A]-C1-000	21-Mar-01	7.8	160	
01-C556-SO-[556-DS-B]-C1-000	21-Mar-01	5.5	140	
01-C555-SO-[555-DS-A]-C1-000	21-Mar-01	3.9	190	
01-C555-SO-[555-DS-B]-C1-000	21-Mar-01	5.3	350	
01-C558-SO-[558-DS-A]-C1-000	21-Mar-01	3.9	37	
01-C558-SO-[558-DS-B]-C1-000	21-Mar-01	6	89	
01-C558-SO-[558-DS-C]-C1-000	21-Mar-01	4.9	35	

Table A-3
Soil Analytical Results for Arsenic and Lead
Stockpile Interim Action Program

Sample ID	Date Sampled	Arsenic (mg/kg)	Lead (mg/kg)	Field Duplicate Sample ID
01-C558-SO-[558-DS-D]-C1-000	21-Mar-01	6	39	
01-C558-SO-[558-DS-E]-C1-000	21-Mar-01	4.6	32	01-C558-SO-[558-DS-F]-C1-000
01-C558-SO-[558-DS-F]-C1-000	21-Mar-01	4.3	31	
01-C544-SO-[544-DS-A]-C1-000	21-Mar-01	3.7	390	
01-C544-SO-[544-DS-B]-C1-000	21-Mar-01	4.1	460	
01-C544-SO-[544-DS-C]-C1-000	21-Mar-01	2.8	320	
01-C544-SO-[544-DS-D]-C1-000	21-Mar-01	4.1	350	
01-C552-SO-[552-DS-A]-C1-000	22-Mar-01	7.9	550	
01-C631-SO-[631-DS-A]-C1-000	22-Mar-01	18	46	
01-C631-SO-[631-DS-B]-C1-000	22-Mar-01	16	46	
01-C631-CO-[631-DS-C]-C1-000	22-Mar-01	12	38	
01-C631-SO-[631-DS-D]-C1-000	22-Mar-01	14	56	
01-C631-SO-[631-DS-E]-C1-000	22-Mar-01	12	44	
01-C631-SO-[631-DS-F]-C1-000	22-Mar-01	23	100	
01-C631-SO-[631-DS-G]-C1-000	22-Mar-01	17	140	
01-C632-SO-[632-DS-A]-C1-000	22-Mar-01	25	33	
01-C632-SO-[632-DS-B]-C1-000	22-Mar-01	11	23	
01-C632-SO-[632-DS-C]-C1-000	22-Mar-01	19	36	01-C632-SO-[632-DS-D]-C1-000
01-C632-SO-[632-DS-D]-C1-000	22-Mar-01	15	29	
01-C805-SO-[805-DS-A]-C1-000	22-Mar-01	20	45	
01-C806-SO-[806-DS-A]-C1-000	22-Mar-01	7.9	15	
01-C647-SO-[647-DS-A]-C1-000	22-Mar-01	34	300	
01-C647-SO-[647-DS-B]-C1-000	22-Mar-01	34	200	
01-C647-SO-[647-DS-C]-C1-000	22-Mar-01	27	100	
01-C647-SO-[647-DS-D]-C1-000	22-Mar-01	17	81	
01-C645-SO-[645-DS-A]-C1-000	22-Mar-01	22	100	
01-C645-SO-[645-DS-B]-C1-000	22-Mar-01	22	91	
01-S536-SO-[536-DS-A]-C1-000	3-Apr-01	240	3100	
01-S536-SO-[536-DS-B]-C1-000	3-Apr-01	37	1700	
01-S536-SO-[536-DS-C]-C1-000	3-Apr-01	300	1900	
01-S536-SO-[536-DS-D]-C1-000	3-Apr-01	68	1400	
01-S536-SO-[536-DS-E]-C1-000	3-Apr-01	190	1500	01-S536-SO-[536-DS-F]-C1-000
01-S536-SO-[536-DS-F]-C1-000	3-Apr-01	180	1800	
R62C73	7-May-01	31	43	

J - Estimated Value, Qualifier assigned during data review

Note: Two rinsate blanks were collected on March 19, 2001 (RIN-031901) and April 3, 2001 (RIN-040301).
Arsenic and lead were not detected in either rinsate blank and results were reported as not detected for both elements (< 0.01 mg/L).

Table A-4
Soil Analytical Results for Explosives
Stockpile Interim Action Program

Sample ID	Date Sampled	2,4,6-Trinitrotoluene (mg/kg)	2,4-Dinitrotoluene (mg/kg)	2,6-Dinitrotoluene (mg/kg)	Field Duplicate Sample ID
01-C648-SO-[648-DS-A]-C1-000	27-Mar-01	0.54 J	1.1 J	2.2 J	
01-C648-SO-[648-DS-B]-C1-000	27-Mar-01	0.42 J	0.76 J	0.047 U	
01-C648-SO-[648-DS-C]-C1-000	27-Mar-01	0.7 J	0.48 J	52 J	
01-C648-SO-[648-DS-D]-C1-000	27-Mar-01	0.34 J	0.16 J	0.046 U	
01-C648-SO-[648-DS-E]-C1-000	27-Mar-01	0.29 J	0.37 J	0.14 J	
01-C648-SO-[648-DS-F]-C1-000	27-Mar-01	0.17 J	2.6 J	0.047 U	
01-C648-SO-[648-DS-G]-C1-000	27-Mar-01	0.19 J	0.29 J	0.095 J	
01-C648-SO-[648-DS-H]-C1-000	27-Mar-01	0.067	0.068	0.047 U	
01-C648-SO-[648-DS-I]-C1-000	27-Mar-01	0.11	0.16	0.076	01-C648-SO-[648-DS-J]-C1-000
01-C648-SO-[648-DS-J]-C1-000	27-Mar-01	0.12	0.098	0.057	
01-S648-SO-[DS-648-A-2]-C-000	5-Apr-01	0.9 J	0.13 J	0.4 J	
01-S648-SO-[DS-648-B-2]-C-000	5-Apr-01	9 J	2.7 J	2.2 J	
01-S648-SO-[DS-648-C-2]-C-000	5-Apr-01	0.38 J	0.093 J	0.074 J	
01-S648-SO-[DS-648-D-2]-C-000	5-Apr-01	0.48 J	10 J	0.047 U	
01-S648-SO-[DS-648-E-2]-C-000	5-Apr-01	0.078	0.14	0.11	
01-S648-SO-[DS-648-F-2]-C-000	5-Apr-01	1.3 J	0.21 J	1.1 J	
01-S648-SO-[DS-648-G-2]-C-000	5-Apr-01	0.57 J	0.23 J	0.45 J	
01-S648-SO-[DS-648-H-2]-C-000	5-Apr-01	3 J	0.65 J	1.4 J	
01-S648-SO-[DS-648-I-2]-C-000	5-Apr-01	0.097	0.11	0.071	
01-S648-SO-[DS-648-J-2]-C-000	5-Apr-01	0.12	0.13	0.075	
HOFRES	7-May-01	0.05 U	0.05 U	0.05 U	

J - Estimated Value, qualifier assigned during data review

U - The analyte was analyzed for, but was not detected above the reporting limit shown.

Table A-5
Soil Analytical Results for Petroleum Hydrocarbons
Stockpile Interim Action Program

Sample ID	Date Sampled	Total Petroleum Hydrocarbons	
		Diesel-range (mg/kg)	Motor Oil-range (mg/kg)
807	7-May-01	260*	250**

* The chromatogram suggests this may be aged or degraded diesel.

** The chromatogram does not match a typical motor oil pattern.

Laboratory Analytical Data Validation Results

1 Summary

The soil analytical data reviewed from the background samples are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan.[1] The data may be used to assess analyte concentrations with the stated qualifications.

2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil samples from the former DuPont Works Site in Dupont, Washington, from January 29 through April 3, 2001. Samples were submitted to Sound Analytical Services, Inc. for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits. The samples were analyzed for the following chemicals, using the noted analytical methods.

- Arsenic EPA 6010
- Lead EPA 6010

3 Sample Case

The sample data groups identified in Table A-1 were included in this data review.

Table A-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled
95757	1/29/2001
95881	1/30, 1/31, and 2/1/2001
95897	2/2/2001

[1] Hart Crowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, WA.

Table A-1 – Sample Data Groups Included in the Data Review

95980	2/5/2001
96014	2/7/2001
96084	2/8 – 2/9/2001
96171	2/12 – 2/14/2001
96257	2/14 – 2/15/2001
96322	2/20 – 2/21/2001
96362	2/22 – 2/23/2001
97186	4/3/2001
97187	4/3/2001

.4 Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that URS Inc., (URS) would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. The reports provide all necessary information to complete this review. All analytical methods were reported as requested.

5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled until arrival at the laboratory. Sample bottles were in good condition. The samples were extracted and analyzed within the 6 month holding time. Holding times were within specifications of the Management Plan.

.6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met. One rinse blank was collected. The field rinse blank was free of contamination. No data require qualification based on field rinse blank contamination.

7 Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS and one blank spike (BS) per analytical batch or one MS and one BS per 20 samples, was met. In instances where the concentration of the sample is at least 4 times greater than the spike added, the MS percent recoveries are not used to validate the associated sample data. The laboratory included BS reports only if the MS data were non-compliant.

The MS results were compared to evaluate the accuracy of laboratory procedures. The spike recoveries ranged from 81 to 107 percent and were within the laboratory-established control limits of 75-125, with the exception listed below. One blank spike was reported and was within the laboratory-established control limits of 80-120.

- MS 95881-01 (2/9/01): the lead percent recovery was below the control limit at 69%. Associated sample lead results were qualified as estimated and flagged with a "J".

8 Laboratory Duplicates

The relative percent differences (RPDs) ranged from 0 to 29 percent and were within the laboratory-established control limits of 35%, with two exceptions. The lead RPD for laboratory duplicate 96322-61 (3/5/01) was above the control limit at 39% due to matrix interference. Associated sample lead results

were qualified as estimated and were flagged with a "J". The arsenic and lead RPDs for laboratory duplicate 95881-61 (2/13/01) were greater than the control limit at 45%. Associated sample arsenic and lead results were qualified as estimated and flagged with a "J".

9 Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, or one field duplicate per day at a minimum, specified in the Management Plan, was met. Twenty-seven sets of field duplicate samples were collected. Table A-2 presents the RPD of detected compounds that were calculated for the duplicate pairs. The RPD is calculated only for sample results that are 5 times greater than the detection limit. The RPDs were acceptable (i.e., less than 35%) with the exception of twelve duplicate pairs with RPD greater than 35%. Arsenic and lead results for the sample and duplicate pairs were qualified as estimated and flagged with a "J" if the RPD was greater than 35%. The average RPD for all field duplicates collected was 30%, which is acceptable for this project.

Table A-2 – RPD of Detected Compounds

Sample ID & Duplicate ID	Analyte	Primary Result (mg/kg)	Duplicate Result (mg/kg)	RPD %
R74C67/R74C66	Arsenic	47	20	**81**
	Lead	120	56	**73**
R74C69/R74C65	Arsenic	66	43	**42**
	Lead	130	120	8
R79C74/R79C66	Arsenic	160	350	**75**
	Lead	39	54	32
R77C73/R77C66	Arsenic	25	31	21
	Lead	25	35	33
R72C74/R72C66	Arsenic	39	51	27
	Lead	46	79	**53**
R72C71/R72C65	Arsenic	51	62	19
	Lead	120	140	15
R63C74/R63C66	Arsenic	64	56	13
	Lead	57	84	**38**
R61C68/R61C66	Arsenic	42	48	13
	Lead	110	120	9
R69C72/R69C66	Arsenic	66	52	24
	Lead	85	49	**54**
R62C76/R60C76	Arsenic	19	30	**45**
	Lead	64	88	32
R65C81/R60C81	Arsenic	4.7	9.3	NC
	Lead	10	19	**62**
R73C83/R74C83	Arsenic	21	29	32
	Lead	33	40	19
R72C84/R73C84	Arsenic	4	4.6	NC
	Lead	7.8	11	NC
R63C86/R62C86	Arsenic	22	26	17
	Lead	46	50	8
R64C87/R63C87	Arsenic	9.9	13	27
	Lead	20	19	5
R68C88/R69C88	Arsenic	27	31	14
	Lead	37	39	5

Table A-2 – RPD of Detected Compounds

Sample ID & Duplicate ID	Analyte	Primary Result (mg/kg)	Duplicate Result (mg/kg)	RPD %
R47C66/R49C66	Arsenic	58	69	17
	Lead	96	81	17
R31C55/R31C54	Arsenic	17	16	6
	Lead	38	43	12
R30C55/R30C54	Arsenic	24	32	29
	Lead	53	79	**39**
R29C55/R29C54	Arsenic	12	12	0
	Lead	11	25	**78**
R29C61/R25C61	Arsenic	25	20	22
	Lead	41	37	10
R42C64/R44C64	Arsenic	7.7	10	NC
	Lead	8.9	13	NC
R37C62/R40C62	Arsenic	42	37	13
	Lead	30	29	3
R37C63/R42C63	Arsenic	31	46	**39**
	Lead	19	23	19
R22C56/R22C54	Arsenic	29	17	**52**
	Lead	31	21	**38**
R66C89/R66C90	Arsenic	10	14	**33**
	Lead	27	27	**0**
R65C89/R65C90	Arsenic	22	20	**10**
	Lead	40	37	**8**

10 Reporting Limits

To ensure the level of analytical reporting sensitivity meets project goals, reporting limits were reviewed. The reporting limits are acceptable for the project needs. No data require qualification based on reporting limits.

Laboratory Analytical Data Validation Results

1 Summary

The soil analytical data reviewed from the Sequalitchew Creek Canyon NGRR are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan.[1] The data may be used to assess analyte concentrations with the stated qualifications.

2 Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil samples from the former DuPont Works Site in Dupont, Washington, from January 10, through 16, 2001. Samples were submitted to Sound Analytical Services, Inc. for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits. The samples were analyzed for the following chemicals, using the noted analytical methods.

- Arsenic EPA 6010
- Lead EPA 6010

3 Sample Case

The sample data groups identified in Table A-1 were included in this data review.

Table A-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled	Sample ID
95386	11 Jan 01	01-OS02-SS-[LR-68-525W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-600W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-675W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-750W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-825W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-900W]-C1-000

[1] Hart Crowser. January 17, 1992. Management Plan. Remedial Investigation/Feasibility Study, Former DuPont Works Site, DuPont, WA.

Table A-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled	Sample ID
95386	11 Jan 01	01-OS02-SS-[LR-68-975W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1050W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1125W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1200W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1275W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1350W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1425W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1500W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1575W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1600W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1650W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1725W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1800W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1875W]-C1-000
95386	11 Jan 01	01-OS02-SS-[LR-68-1950W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-0]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2025W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2100W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2175W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2250W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2325W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2400W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2475W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2550W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2600W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2625W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2700W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2775W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2850W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-2925W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3000W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3075W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3150W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3225W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3300W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3375W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3450W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3525W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3600W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3675W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3750W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3825W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3900W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-3975W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4025W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4050W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4125W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4175W]-C1-000

Table A-1 – Sample Data Groups Included in the Data Review

Sound Analytical Services Data Group Number	Date Sampled	Sample ID
95438	12 Jan 01	01-OS02-SS-[LR-68-4200W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4275W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4325W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4350W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4425W]-C1-000
95438	12 Jan 01	01-OS02-SS-[LR-68-4475W]-C1-000

4 Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that URS Inc., (URS) would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. The reports provide all necessary information to complete this review. All analytical methods were reported as requested.

5 Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled until arrival at the laboratory. Sample bottles were in good condition. The samples were extracted and analyzed within the 6 month holding time. Holding times were within specifications of the Management Plan.

6 Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met. Three rinse blanks were analyzed. The field rinse blanks were free of contamination. No data require qualification based on field rinse blank contamination.

7 Matrix Spikes/Blank Spikes

Matrix spike (MS) analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS and one blank spike (BS) per analytical batch or one MS and one BS per 20 samples, was met. In instances where the concentration of the sample is at least 4 times greater than the spike added, the MS percent recoveries are not used to validate the associated sample data. The laboratory included BS reports only if the MS data were non-compliant.

The MS results were compared to evaluate the accuracy of laboratory procedures. The spike recoveries ranged from 88 to 117 percent and were within the laboratory-established control limits of 75-125 with the exceptions listed below. One blank spike was reported and was within the laboratory-established control limits of 80-120. No data require qualification based on MS or BS percent recoveries because the concentration of the spiked sample (matrix spike 95344-20, 1/18/01) was at least 4 times greater than the spike added.

8 Laboratory Duplicates

The relative percent differences (RPDs) ranged from 0 to 26 percent and were within the laboratory-established control limits of less than 35%, with one exception. The lead RPD for laboratory duplicate 95344-20 (1/17/01) was above the control limit at 78% due to matrix interference. Associated sample lead results were qualified as estimated and were qualified with a "J".

9 Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, or one field duplicate per day at a minimum, specified in the Management Plan, was met. Seven sets of field duplicate samples were collected. Table A-2 presents the RPD of detected compounds that were calculated for the duplicate pairs. The RPDs were acceptable (i.e., less than 35%) with the exception of two duplicate pairs LR-68-1575W/1600W and LR-68-4425/4475. The arsenic results for LR-68-1575W and the lead results for LR-68-4425 were qualified as estimated and flagged with a "J" due to the high duplicate RPD.

Table A-2 – RPD of Detected Compounds

Sample ID & Duplicate ID	Analyte	Primary Result (mg/kg)	Duplicate Result (mg/kg)	RPD %
LR-68-1575W/LR-68-1600W	Arsenic	180	120	**40**
	Lead	21	17	21
LR-68-3975W/LR-68-4025W	Arsenic	420	380	10
	Lead	28	26	7
LR-68-4125W/LR-68-4175W	Arsenic	350	270	26
	Lead	37	33	11
LR-68-4275W/LR-68-4325W	Arsenic	420	430	2
	Lead	55	60	9
LR-68-4425W/LR-68-4475W	Arsenic	290	370	24
	Lead	39	190	**132**
LR-68-2550W/LR-68-2600W	Arsenic	340	270	23
	Lead	33	26	24

10 Reporting Limits

To ensure the level of analytical reporting sensitivity meets project goals, reporting limits were reviewed. The reporting limits are acceptable for the project needs. No data require qualification based on reporting limits.

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data meet criteria specified in the 1992 Hart Crowser Management Plan. The data may be used to assess analyte concentrations with the stated qualifications.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil samples from the Weyerhaeuser-Dupont site in Dupont, Washington, from September 10, 1999 through July 17, 2000. Samples were submitted to Sound Analytical Services, Inc. for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Arsenic	EPA 6010
Lead	EPA 6010

Sample Case

The following sample data groups were included in this review.

SOUND ANALYTICAL SERVICES DATA GROUP NUMBER	DATE SAMPLED
84030	10 Sep 99
84055	13 Sep 99
84078	14 Sep 99
84117	15 Sep 99
84151	16 Sep 99
84215	20 Sep 99
84245	21 Sep 99
84297	22 Sep 99
84320	23 Sep 99
84401	27 Sep 99
84426	28 Sep 99
84479	29 Sep 99
84508	30 Sep 99
84520	1 Oct 99
84678	7 Oct 99
84745	11 Oct 99
84778	12 Oct 99
84800	13 Oct 99
84832	14 Oct 99
84863	15 Oct 99
84898	18 Oct 99
84932	19 Oct 99
84973	21 Oct 99
85323	4 Nov 99
86405	3 Jan 2000
87040	25 Jan 2000
87119	28 Jan 2000
87987	7 Mar 2000
89042	18 Apr 2000
89069	19 Apr 2000
89529	9 May 2000
89746	17 May 2000
89910	30 May 2000
90806	29 June 2000
91163	18 July 2000
91278	24 July 2000

Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that URSGWC would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. The reports provide all necessary information to complete this review.

Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled. Sample jars were in good condition.

The samples were extracted and analyzed within the 6 month holding time. No data require qualification based on missed holding times.

Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met. Field blanks were used to determine if samples were contaminated through sampling procedures or equipment. The rinse blanks had detections of lead or arsenic. No data require qualification based on these results.

SAMPLE ID	BATCH	ANALYTE	RESULT (mg/L)
Rinse Blank (rinsate)	84078	Lead	0.0032
Rinse Blank (rinsate 2)	84117	Lead	0.026
Rinse Blank (rinsate 3)	84117	Lead	0.016
Rinse Blank (rinsate 4)	84151	Lead	0.088
Rinse Blank (rinsate 5)	84215	Lead	0.031
Rinse Blank (rinsate 6)	84245	Arsenic Lead	0.034 0.026
Rinse Blank (rinsate 7)	84297	Lead	0.0061
Rinse Blank (rinsate 8)	84401	Lead	0.0065

Matrix Spikes / Blank Spikes

Matrix spike analyses were used to assess matrix effects with respect to the analytical data. Blank spike analyses were used to monitor the overall performance of the analysis, including sample preparation. The QC frequency requirement of one matrix spike and one blank spike per analytical batch or one matrix spike and one blank spike per 20 samples, was met.

The spike recoveries ranged from were within the control limits, with the following exceptions.

- Matrix spike 84055-1 (9-15/99): The lead percent recovery was above the control limits. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84055-21 (9-15/99): The lead percent recovery was above the control limits. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.

- Matrix spike 84078-42 (9/20/99): The lead matrix spike was not recovered. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84117-1 (9/17/99): The lead matrix spike was not recovered. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84117-21 (9/20/99): The lead matrix spike was not recovered. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84151-1 (9/20/99): The arsenic percent recovery was below the control limits at 74%. The associated blank spike was within the control limits; therefore, no data were qualified.
- Matrix spike 84215-2 (9/22/99): The lead percent recovery was above the control limits. The concentration of the spiked sample was at least 10 times greater than the spike added; therefore, no data were qualified.
- Matrix spike 84215-22 (9/22/99): The lead percent recovery was below the control limits at 74%. The associated blank spike was within the control limits; therefore, no data were qualified.
- Matrix spike 84245-2 (9/21/99): The lead percent recovery was below the control limits at 64%. The associated blank spike was within the control limits; therefore, no data were qualified.
- Matrix spike 84245-40 (9/23/99): The percent recoveries were below the control limits for arsenic at 74% and lead at 72%. The associated blank spike percent recoveries were within the control limits; therefore, no data were qualified.
- Matrix spike 84297-22 (9/27/99): The percent recoveries were below the control limits for arsenic at 73% and lead at 72%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 84297-42 (9/27/99): The percent recoveries were below the control limits for arsenic at 71% and lead at 69%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 84320-1 (9/28/99): The percent recoveries were below the control limits for arsenic at 71% and lead at 66%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 84320-21 (9/28/99): The percent recovery was above the control limit for lead at 133%. Associated quality control data were within the control limits; therefore, no data were qualified.
- Matrix spike 59069-21 (4/21/00): The arsenic and lead matrix spike percent recoveries were not recovered. The associated LCS and an additional matrix spike percent recoveries were within the control limits; therefore, no data were qualified.

- Blank spike S382 (9/20/99): The lead percent recovery was greater than the control limits at 133%. Associated data were qualified as estimated (J).
- Blank spike S392 (9/17/99): The lead percent recovery was greater than the control limits at 130%. Associated data were qualified as estimated (J).

Laboratory Duplicates

The laboratory duplicate relative percent differences (RPDs) were within the control limits, with the following exceptions.

- Laboratory duplicate 84030-15 (9/14/99): The lead RPD was above the control limit at 49% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.
- Laboratory duplicate 84078-42 (9/20/99): The lead RPD was above the control limit at 58% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.
- Laboratory duplicate 84508-21 (10/4/99): The arsenic RPD was above the control limit at 200%. The sample and duplicate results were not greater than five times the reporting limit; therefore, no data were qualified.
- Laboratory duplicate 85323-41 (11/5/99): The lead RPD was above the control limit at 46% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.
- Laboratory duplicate 87040-41 (1/27/00): The arsenic RPD was above the control limit at 50% due to matrix interference. Associated quality control data were within the control limits; therefore, no data were qualified.

Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The RPD was calculated only for sample results greater than 5 times the reporting limit. A total of 42 duplicate pairs were collected which meets the QC frequency requirement of one field duplicate for 5 percent of the total samples or one field duplicate for each day of sampling, specified in the Management Plan. The duplicate pairs show good agreement, with the following exceptions:

- Duplicate pair 38-VS-96/117: the arsenic and lead results were qualified as estimated (J) due to the high duplicate RPDs.
- Duplicate pair 31-VS-586/587: the arsenic and lead results were qualified as estimated (J) due to the high duplicate RPDs.
- Duplicate pair 31-VS-639/686: the arsenic and lead results were qualified as estimated (J) due to the high duplicate RPDs.

SAMPLE ID & DUPLICATE ID	ANALYTE	PRIMARY RESULT (ug/L)	DUPLICATE RESULT (ug/L)	RPD %
31-VS-68/31-VS-83	arsenic	12	15	22
	lead	1000	1100	10
31-VS-74/31-VS-84	arsenic	15	13	14
	lead	4300	3500	21
31-VS-80/31-VS-85	arsenic	35	32	9
	lead	4200	4000	5
31-VS-137/31-VS-162	arsenic	35	26	30
	lead	2500	2100	17
31-VS-135/31-VS-163	arsenic	7.7	7.5	3
	lead	170	170	0
31-VS-171/31-VS-175	arsenic	6.1	6.9	12
	lead	260	280	7
31-VS-196/31-VS-216	--	--	--	--
31-VS-503/31-VS-504	lead	13	25	63
31-VS-518/31-VS-519	--	--	--	--
31-VS-526/31-VS-527	arsenic	15	15	0
31-VS-540/31-VS-541	--	--	--	--
31-VS-560/31-VS-561	arsenic	130	92	34
	lead	7700	4400	55
31-VS-570/31-VS-570	arsenic	11	9.7	13
	lead	26	20	26
31-VS-577/31-VS-578	arsenic	8.2	13	45
	lead	19	32	51
31-VS-586/31-VS-587	arsenic	120	30	**120**
	lead	74	47	**45**
31-VS-597/31-VS-598	arsenic	12	16	29
	lead	39	62	51
31-VS-615/31-VS-627	arsenic	11	10	10
	lead	13	13	0
31-VS-619/31-VS-628	arsenic	11	11	0
	lead	11	13	17
31-VS-624/31-VS-629	--	--	--	--
31-VS-639/31-VS-686	arsenic	45	17	**90**
	lead	130	41	**104**
31-VS-649/31-VS-687	arsenic	55	60	9
	lead	52	52	0
31-VS-659/31-VS-688	lead	11	7.6	37
31-VS-669-/31-VS-689	arsenic	11	5.9	60
31-VS-679/31-VS-690	--	--	--	--
31-VS-713/31-VS-725	--	--	--	--
31-VS-724/31-VS-726	arsenic	12	14	15
	lead	21	25	17
19-VS-37/19-VS-44	lead	23	25	8
19-VS-30/19-VS-45	lead	20	17	16
19-VS-42/19-VS-46	arsenic	56	82	38
	lead	140	140	0
19-VS-50/19-VS-55	arsenic	90	86	5
	lead	280	310	10
APC-VS-11/APC-VS-17	arsenic	21	22	5
	lead	2600	2000	26

SAMPLE ID & DUPLICATE ID	ANALYTE	PRIMARY RESULT (µg/L)	DUPLICATE RESULT (µg/L)	RPD %
5-VS-121/5-VS-116	arsenic	2100	1600	27
	lead	15	20	29
26-VS-32/26-VS-35	--	--	--	
26-VS-39/26-VS-44	arsenic	180	180	0
	lead	23	25	8
18-VS-219/18-VS-224	--	--	--	--
12-VS-2/12-VS-7	arsenic	50	59	17
	lead	58	69	17
LR181-VS-1/LR181-VS-9	arsenic	51	57	11
	lead	62	68	9
38-VS-37/38-VS-47	arsenic	75	65	14
	lead	24	23	4
38-VS-46/38-VS-48	arsenic	190	180	5
	lead	36	35	3
38-VS-74/38-VS-80	arsenic	380	560	38
	lead	46	62	30
38-VS-96/38-VS-117	arsenic	17	38	**76**
	lead	5.7	16	**95**
SA5-8944/SA5-8940	arsenic	11	12	9
	lead	14	17	19

Reporting Limits

To ensure the level of sensitivity meets project goals, reporting limits were reviewed. Reported results are acceptable.

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data generally meet criteria specified in the 1992 Hart Crowser Management Plan. The data may be used to assess analyte concentrations without qualification.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of two soil samples from the Weyerhaeuser-Dupont site in Dupont, Washington, on February 17, 1999. Two primary samples were submitted to MultiChem Analytical Services for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using guidance from the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Arsenic	EPA 6010
Lead	EPA 6010

Sample Case
The following sample data group was included in this review:

MAS#: 902024

Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that URSGWC would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. Comprehensive data validation was not

requested for this round of sampling. The reports provide all necessary information to complete this review.

All analytical methods were reported as requested.

Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled. Sample jars were in good condition.

The samples were extracted and analyzed within the 6 month holding time. Holding times were within specifications of the Management Plan.

Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met. No data were qualified due to these results.

Matrix Spikes / Blank Spikes

Matrix spike analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS and one BS per analytical batch or one MS and one BS per 20 samples, was met.

The spike recoveries ranged from 93 to 99 percent and were within the control limits. No data were qualified due to these results.

Laboratory Duplicates

The laboratory relative percent difference (RPD) was 17 percent and was within the control limits. No data were qualified.

Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, specified in the Management Plan, was not met. No data were qualified.

Reporting Limits

To ensure the level of sensitivity meets project goals, reporting limits were reviewed. All sample results were detections. Reported results are acceptable.

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data generally meet criteria specified in the 1992 Hart Crowser Management Plan. The data may be used to assess analyte concentrations without qualification.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of soil samples from the Weyerhaeuser-Dupont site in Dupont, Washington, in November and December, 1998. Sixty-eight primary samples and three field duplicates were submitted to MultiChem Analytical Services for analysis. This review includes evaluation of the following:

- Laboratory report and reporting of required analyses
- Chain of custody and holding times
- Method blanks
- Matrix spike / blank spikes (MS / BS)
- Laboratory duplicates
- Field duplicates
- Reporting limits

The data quality review was conducted using the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Arsenic	EPA 6010/7060
Lead	EPA 6010/7421

Sample Case
The following sample data groups were included in this data review:

MAS#: 811052
MAS#: 812020
MAS#: 812021

Laboratory Report and Reporting of Required Analyses

The laboratory report was complete; all QC results were included. The project scope of work stated that Woodward-Clyde would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody. Comprehensive data validation was not requested for this round of sampling. The reports provide all necessary information to complete this review.

All analytical methods were reported as requested.

Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled until arrival at the laboratory. Sample bottles were in good condition.

The samples were extracted and analyzed within the 6 month holding time. Holding times were within specifications of the Management Plan.

Method and Field Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of target analytes. The QC frequency requirement of one laboratory blank per analytical batch was met.

Three rinse blanks were analyzed. The field rinse blanks were free of target analytes. No data were qualified due to these results.

Matrix Spikes / Blank Spikes

Matrix spike analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement of one MS and one BS per analytical batch or one MS and one BS per 20 samples, was met.

The matrix spike and blank spike results were compared to evaluate the accuracy of laboratory procedures. The spike recoveries ranged from 67 to 112 percent and were within the control limits with the following exception. Two of the lead MS percent recoveries were not calculated as the sample concentration was greater than four times the spike concentration. No data were qualified due to these results.

Laboratory Duplicates

The relative percent differences (RPDs) ranged from 0 to 26 percent and were within the control limits established by the laboratory. No data were qualified.

Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, specified in the Management Plan, was met. Three sets of field duplicate samples were collected. The RPD of detected compounds were calculated for the duplicate pairs (shown below). The RPDs were acceptable.

Sample ID	Analyte	Primary (mg/kg)	Duplicate (mg/kg)	Relative Percent Difference (percent)
98SCOM0105 / COM0111	arsenic	4.9	4.4	11
	lead	4.6	5.3	14
98SCHR0302 / CHR0311	arsenic	87	82	5.9
	lead	34000	42000	21
98SCHR0407 / CHR0411	arsenic	26	30	14
	lead	190	230	19

Reporting Limits

To ensure the level of sensitivity meets project goals, reporting limits were reviewed. All sample results were detections. Reported results are acceptable.

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data generally meet criteria specified in the 1992 Management Plan. The data may be used to assess analyte concentrations in the groundwater without qualification.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of groundwater samples from the former DuPont Works site in Dupont, Washington, on October 17, 1997. Eight primary samples and one QC sample (field duplicate) were submitted to MultiChem Analytical Services for analysis. This review includes evaluation of the following:

- Chain of custody and holding times
- Laboratory report and reporting of required analyses
- Laboratory blanks
- Rinsate (field) blanks
- Field duplicates
- Laboratory duplicates
- Matrix spike/matrix spike duplicates (MS/MSD)
- Surrogate recoveries (where applicable)
- Reporting limits

The data quality review was conducted using the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former DuPont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Explosives (NAX): SW846 8090 (modified)

Sample Case

The following samples were included in this data review:

MW-22
MW-22-D (Blind field duplicate of MW-22)
Seep-1
MW-3
MW-19
MW-6
MW-8
W-2
W-1

Chain of Custody and Holding Times

Samples were maintained under chain of custody until arrival at the laboratory. Samples were preserved and cooled.

The sample holding times were within specifications of the Management Plan.

Laboratory Report and Reporting of Required Analyses

The laboratory report was complete and all QC results were included. The project scope of work stated that Woodward-Clyde would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody.

Section 5.0 of the Management Plan gives the required QC level of effort, including QC measures such as calibration frequency. Some of these QC measures may have been met by the laboratory, but were not confirmed through data evaluation because comprehensive data validation was not requested. The reports provide all necessary information to complete this data assurance review.

All analytical methods were reported as requested.

Method Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of contamination. The QC frequency requirement specified in the Management Plan of one laboratory blank per analytical batch was met.

Rinsate (Field) Blanks

No rinsate blanks were associated with the samples because samples were transferred directly from dedicated bailers into sample jars.

Field Duplicates

Field duplicate samples were used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, specified in the Management Plan, was met. One set of field duplicate samples was collected at MW-22 and the duplicate was identified as MW-22-D. Only two compounds were detected; all other compounds were non-detect. The relative percent difference (RPD) of detected compounds were calculated for the duplicate pair (shown below). All RPDs were acceptable.

ANALYTE	PRIMARY (µg/L)	DUPLICATE (µg/L)	RELATIVE PERCENT DIFFERENCE (percent)
2,6-dinitrotoluene	0.14	0.14	0%
2,4-dinitrotoluene	0.029	0.027	7%

Laboratory Duplicates

The laboratory analyzed matrix spike/matrix spike duplicates for the explosives method.

Matrix Spike/Matrix Spike Duplicates

Matrix spike analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement specified in the Management Plan of one MS and one MSD per analytical batch was met.

The matrix spike and matrix spike duplicate results were compared to identify the laboratory precision. The MS/MSD RPDs were all within the control limits established by the laboratory and found in the Management Plan. No data were qualified.

All blank spike/blank spike duplicate (BS/BSD) recoveries were within the control limits. No data were qualified.

Surrogate Recoveries

Surrogate compounds were used in the analysis of organic compounds (EPA Method 8090 modified) to monitor analyte extraction efficiency/method accuracy on a per sample basis. All surrogate recoveries were within the Management Plan control limits. No data were qualified due to surrogate results.

Reporting Limits

To ensure that the level of sensitivity required for project goals was met, reporting limits were reviewed. The reporting limits requested in the Management Plan were met or exceeded.

ANALYTE	REQUESTED RL (µg/L)	ACTUAL RL (µg/L)
nitrobenzene	1.7	0.40
1,3-dinitrobenzene	0.44	0.040
2,6-dinitrotoluene	0.13	0.010
2,4-dinitrotoluene	0.13	0.020
1,3,5-trinitrobenzene	0.16	0.040
2,4,6-trinitrotoluene	2.9	0.040

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data generally meet criteria specified in the 1992 Hart Crowser Management Plan. The data may be used to assess analyte concentrations in the groundwater with the stated qualifications.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of groundwater samples from the Weyerhaeuser-Dupont site in Dupont, Washington, on March 23, 1999. Five primary samples, and one field duplicate were submitted to MultiChem Analytical Services for analysis. This review includes evaluation of the following:

- Chain of custody and holding times
- Laboratory report and reporting of required analyses
- Laboratory blanks
- Rinsate (field) blanks
- Field duplicates
- Laboratory duplicates
- Matrix spike/matrix spike duplicates (MS/MSD)
- Blank spike review
- Surrogate recoveries
- Reporting limits

The data quality review was conducted using the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Explosives (NAX): SW846 8091 (modified)

Sample Case

The following table includes samples associated with this data review, the laboratories sample identification number, any analytes that were qualified, and any qualifiers that were added to the laboratory data.

Sample ID	Laboratory ID	Analyte	Qualified Result
MW-3	903061-1	1,3-dinitrobenzene	0.21 J
MW-6	903061-2	1,3-dinitrobenzene	0.32 J
MW-19	903061-3	1,3-dinitrobenzene	0.39 J
MW-22	903061-4	1,3-dinitrobenzene	0.37 J
MW-29 duplicate of MW-19	903061-5	1,3-dinitrobenzene	0.4 J
W-2	903061-6	1,3-dinitrobenzene	none

Chain of Custody and Holding Times

The chain of custody forms indicate that the samples were maintained under chain of custody, the forms were signed during release and receipt, and the samples were appropriately preserved., with the following exception. The cooler temperature was 9.8 °C, outside of the recommended temperature range of 4±2 °C. No data were qualified due to chain of custody or holding time issues.

The water holding time for NAX is 7 days from collection to extraction, and 40 days from extraction to analysis. Holding times were met.

Laboratory Report and Reporting of Required Analyses

The laboratory reported all requested analyses and the laboratory report is complete. The project scope of work stated that Woodward-Clyde would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody.

Section 5 of the Management Plan gives the required QC level of effort, including QC measures such as calibration frequency. These QC measures may have been met by the laboratory, but were not confirmed through data evaluation because comprehensive data validation was not requested. The reports provide all necessary information to complete this data assurance review.

Method Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The laboratory method blanks were free of contamination. The QC frequency requirement specified in the Management Plan of one laboratory blank per analytical batch was met.

Rinsate (Field) Blanks

No rinsate blanks were associated with the samples.

Field Duplicates

Field duplicate samples are used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, specified in the Management Plan, was met. One set of field duplicate samples was collected at MW-19 and the duplicate was identified as MW-29. Four compounds were detected; all other compounds were non-detect. The relative percent difference (RPD) of detected compounds were calculated for the duplicate pair (shown below). All RPDs were acceptable.

Analyte	Primary (µg/L)	Duplicate (µg/L)	Relative Percent Difference (percent)
nitrobenzene	1.4	1.1	24%
2,4-dinitrotoluene	0.064	0.074	14%
1,3-dinitrobenzene	0.39	0.40	2.5%
2,4,6-trinitrotoluene	0.21	0.23	9%

Laboratory Duplicates

The laboratory analyzed matrix spike/matrix spike duplicates for the explosives method.

Matrix Spike/Matrix Spike Duplicates

Matrix spike analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement specified in the Management Plan of one matrix spike/matrix spike duplicate (MS/MSD) per analytical batch was met.

The matrix spike/matrix spike duplicate results were compared to identify the laboratory precision. The MS/MSD percent recoveries and RPDs were all within the control limits, with the following exceptions.

- The MS/MSD percent recoveries were above the control limits for 1,2-dinitrobenzene at 183% and 192%. Associated data above the reporting limit were qualified as estimated (J).
- The RPD for 2,4,6-trinitrotoluene was above the control limit at 76%. Since both the MS and MSD percent recoveries were within the control limits, no data were qualified due to these results.

Blank Spike Review

All blank spike/blank spike duplicate (BS/BSD) recoveries were within the control limits, with the following exception. The percent recovery for 1,3-dinitrobenzene was above the control limit at 164%. Since the associated matrix spike quality control data were also above the control limits, the associated data above the reporting limit were qualified as estimated (J).

Surrogate Recoveries

Surrogate compounds are used in the analysis of organic compounds to monitor analyte extraction efficiency/method accuracy on a per sample basis. All surrogate recoveries were within the Management Plan control limits. No data were qualified due to surrogate results.

Reporting Limits

To ensure that the level of sensitivity required for project goals was met, reporting limits were reviewed. The reporting limits requested in the Management Plan were met or exceeded.

Analyte	Requested RL (µg/L)	Actual RL (µg/L)
nitrobenzene	1.7	0.40
1,3-dinitrobenzene	0.44	0.040
2,6-dinitrotoluene	--	0.010
2,4-dinitrotoluene	--	0.020
1,3,5-trinitrobenzene	0.16	0.040
2,4,6-trinitrotoluene	--	0.040

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data generally meet criteria specified in the 1992 Hart Crowser Management Plan. The data may be used to assess analyte concentrations in the groundwater with the stated qualifications.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of groundwater samples from the Weyerhaeuser-Dupont site in Dupont, Washington, on March 28, 2000. Four primary samples and one field duplicate were submitted to MultiChem Analytical Services for analysis. This review includes evaluation of the following:

- Chain of custody and holding times
- Laboratory report and reporting of required analyses
- Laboratory blanks
- Rinsate (field) blanks
- Field duplicates
- Laboratory duplicates
- Matrix spike/matrix spike duplicates (MS/MSD)
- Blank spike review
- Surrogate recoveries
- Reporting limits

The data quality review was conducted using the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- National Functional Guidelines for Inorganic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Explosives (NAX): SW846 8091 (modified)

Sample Case

The following table includes samples associated with this data review, the laboratory sample identification number, any analytes that were qualified, and any qualifiers that were added to the laboratory data. Monitoring well MW-3 was not sampled due to an inadequate amount of sample available.

Sample ID	Laboratory ID	Analyte	Qualified Result
MW-3	not sampled		
W-2	89066-1	all NAX results	J or UJ
MW-19	89066-2	all NAX results	J or UJ
MW-29 duplicate of MW-19	89066-5	all NAX results	J or UJ
MW-22	89066-22	all NAX results	J or UJ
MW-6	89066-7	all NAX results	J or UJ

Chain of Custody and Holding Times

The chain of custody forms indicate that the samples were maintained under chain of custody, the forms were signed during release and receipt, and the samples were appropriately preserved. The samples were submitted to Multichem Analytical Services for analysis. Multichem went out of business on March 31, 2000; however, they were able to extract the samples. After confirming that Multichem was closed and would not be able to analyze the extracts, the samples and extracts were retrieved from Multichem on April 18, 2000. The samples and extracts were submitted to Sound Analytical for analysis.

The water holding time for NAX is 7 days from collection to extraction, and 40 days from extraction to analysis. Holding times were met.

Laboratory Report and Reporting of Required Analyses

The laboratory reported all requested analyses and the laboratory report is complete. The project scope of work stated that Woodward-Clyde would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody.

Section 5 of the Management Plan gives the required QC level of effort, including QC measures such as calibration frequency. These QC measures may have been met by the laboratory, but were not confirmed through data evaluation because comprehensive data validation was not requested. The reports provide all necessary information to complete this data assurance review.

Method Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The QC frequency requirement specified in the Management Plan of one laboratory blank per analytical batch was met. Target analytes in the method blank were below detection with the exceptions listed in the following table. Qualified data are summarized in the Sample Case section.

SAMPLE ID	ANALYTE	RESULT (µg/L)
Method Blank 89066-08	RDX	0.15
	1,3,5-Trinitrobenzene	0.083
	Tetryl	0.082
	2,4,6-Trinitrotoluene	0.084
	2-Amino-4,6-dinitrotoluene	0.12
	4-Amino-2,6-dinitrotoluene	0.074

Rinsate (Field) Blanks

No rinsate blanks were associated with the samples.

Field Duplicates

Field duplicate samples are used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, specified in the Management Plan, was met. One set of field duplicate samples was collected at MW-19 and the duplicate was identified as MW-29. One compound was detected; all other compounds were qualified as non-detect. The relative percent difference (RPD) of the detected compound was calculated for the duplicate pair (shown below). All RPDs were acceptable.

Analyte	Primary (µg/L)	Duplicate (µg/L)	Relative Percent Difference (percent)
2,6-dinitrotoluene	0.42	0.42	0

Laboratory Duplicates

The laboratory analyzed matrix spike/matrix spike duplicates for the explosives method.

Matrix Spike/Matrix Spike Duplicates

Matrix spike analyses were used to assess matrix effects with respect to the analytical data. The QC frequency requirement specified in the Management Plan of one matrix spike/matrix spike duplicate (MS/MSD) per analytical batch was met.

The matrix spike/matrix spike duplicate results were compared to identify the laboratory precision. The MS/MSD percent recoveries and RPDs were all within the control limits, with the following exceptions.

- The MSD percent recovery was above the control limits for nitrobenzene at 174%. The associated MS percent recovery was within the control limits; therefore, no data were qualified.

Blank Spike Review

All blank spike recoveries were within the control limits. No data require qualification based on blank spike percent recoveries.

Surrogate Recoveries

Surrogate compounds are used in the analysis of organic compounds to monitor analyte extraction efficiency/method accuracy on a per sample basis. Surrogate percent recoveries for all samples, except the blank spike, were outside of the control limits. All data were qualified as estimated (J).

Reporting Limits

To ensure that the level of sensitivity required for project goals was met, reporting limits were reviewed. The reporting limits requested in the Management Plan were met or exceeded.

Analyte	Requested RL (µg/L)	Actual RL (µg/L)
nitrobenzene	1.7	0.10
1,3-dinitrobenzene	0.44	0.05
2,6-dinitrotoluene	--	0.05
2,4-dinitrotoluene	--	0.05
1,3,5-trinitrobenzene	0.16	0.05
2,4,6-trinitrotoluene	--	0.05

Summary

The data reviewed are acceptable for use based on a majority of acceptable quality control data. The data meet most criteria specified in the 1992 Hart Crowser Management Plan. The data may be used to assess analyte concentrations in the groundwater without qualification.

Introduction

This section presents a quality control (QC) review of data generated from collection and analysis of groundwater samples from the Weyerhaeuser-Dupont site in Dupont, Washington, on March 28, 2001. Five primary samples and one field duplicate were submitted to Sound Analytical Services for analysis. This review includes evaluation of the following:

- Chain of custody and holding times
- Laboratory report and reporting of required analyses
- Laboratory blanks
- Field duplicates
- Laboratory duplicates
- Matrix spike/matrix spike duplicates (MS/MSD)
- Blank spike review
- Surrogate recoveries
- Reporting limits

The data quality review was conducted using the following documents:

- National Functional Guidelines for Organic Data Review, EPA, February 1994.
- Remedial Investigation/Feasibility Study, Former Dupont Works Site Management Plan, Hart Crowser, January 1992.

Criteria used to assess the data are found in Section 5 of the Management Plan. The analytical data has been compared to the Management Plan limits.

The samples were analyzed for the following chemicals and chemical groups.

Nitroamine & Nitroaromatic Compounds: SW846 8330

Sample Case

The following table includes samples associated with this data review, the laboratory sample identification number, any analytes that were qualified, and any qualifiers that were added to the laboratory data.

Sample ID	Laboratory ID	Analyte	Qualified Result
MW-44 (dup of MW-22)	97075-01	none	
MW-3	97075-02	none	
MW-6	97075-03	none	
MW-19	97075-04	none	
MW-22	97075-05	none	
W-2	97075-06	none	

Chain of Custody and Holding Times

The chain of custody forms indicate that the samples were maintained under chain of custody, the forms were signed during release and receipt, and the samples were appropriately preserved.

The water holding time for NAX is 7 days from collection to extraction, and 40 days from extraction to analysis. Holding times were met for all samples.

Laboratory Report and Reporting of Required Analyses

The laboratory reported all requested analyses and the laboratory report is complete. The project scope of work stated that URS would provide industry-accepted evaluation of data quality and documentation of sample acquisition and custody.

Section 5 of the Management Plan gives the required QC level of effort, including QC measures such as calibration frequency. These QC measures may have been met by the laboratory, but were not confirmed through data evaluation because comprehensive data validation was not requested. The reports provide all necessary information to complete this data assurance review.

Method Blanks

Method blanks were used to determine if samples were contaminated through laboratory procedures or equipment. The QC frequency requirement specified in the Management Plan of one laboratory blank per analytical batch was met. Target analytes in the method blank were below detection. No data require qualification based on method blank contamination.

Field Duplicates

Field duplicate samples are used to assess sampling precision and representativeness. The QC frequency requirement of one field duplicate for 5 percent of the total samples, specified in the Management Plan, was met. One set of field duplicate samples was collected at MW-22 and the duplicate was identified as MW-44. The primary and duplicate samples did not have any detections greater than the reporting limit. No data require qualification based on the field duplicate.

Laboratory Duplicates

The laboratory analyzed matrix spike/matrix spike duplicates for the explosives method.

Matrix Spike/Matrix Spike Duplicates

Matrix spike analyses are used to assess matrix effects with respect to the analytical data. The QC frequency requirement specified in the Management Plan of one matrix spike/matrix spike duplicate (MS/MSD) per analytical batch was not met. The laboratory did not have enough sample volume to perform an MS/MSD. The laboratory did perform a blank spike/blank spike duplicate. No data were qualified.

Blank Spike Review

All blank spike recoveries were within the control limits. No data require qualification based on blank spike percent recoveries.

Surrogate Recoveries

Surrogate compounds are used in the analysis of organic compounds to monitor analyte extraction efficiency/method accuracy on a per sample basis. Surrogate percent recoveries were within the control limits for all samples, with the following exception. The surrogate percent recovery for sample MW-19 was greater than the control limits at 158%. The associated sample results were less than the reporting limit; therefore, no data were qualified.

Reporting Limits

To ensure that the level of sensitivity required for project goals was met, reporting limits were reviewed. The reporting limits requested in the Management Plan were met or exceeded with the exception of the reporting limits for 2,4-dinitrotoluene and 2,5-dinitrotoluene. No data were qualified.

Analyte	Requested RL (µg/L)	Actual RL (µg/L)
nitrobenzene	8	0.4
1,3-dinitrobenzene	1.6	0.5

Analyte	Requested RL (µg/L)	Actual RL (µg/L)
2,6-dinitrotoluene	0.13	0.4
2,4-dinitrotoluene	0.13	0.4
1,3,5-trinitrobenzene	0.8	0.5
2,4,6-trinitrotoluene	2.9	0.4

Pre-1994 Data Quality Assessment

This appendix material was developed in draft form by Hart Crowser for the 1994 Draft RI (Hart Crowser 1994d). For completeness, it is retained here as it was developed. It includes references to all sampling conducted as specified in the RI/FS Management Plan (Hart Crowser 1992a). As a result, it refers to locations sampled outside the Consent Decree Boundary that will be the subject of additional reports.

DATA QUALITY ASSESSMENT

This appendix describes the assessment of data quality of the chemical analyses performed for the remedial investigation (RI) as outlined in the RI/FS Management Plan (Hart Crowser, 1992), including the pre-RI, RI, and interim source removal data. Much of the previous investigation data quality work conducted on the Site is summarized in the data quality sections of the pre-RI reports (Hart Crowser, 1986 and 1987, respectively). If data quality review was not conducted on pre-RI data, we reviewed the data as part of this project, and any data quality considerations are addressed in this appendix. A data quality review was conducted in order to evaluate data usability to determine the distribution of chemicals on the Site in the RI and to evaluate risk to human health and the environment (EPA, 1990).

The data validation and data quality review reports as of April 1994 are for results of approximately 4,800 soil samples, 28 freshwater sediment samples, 11 marine sediment samples, 16 Bunker C samples, 70 surface water samples, and 335 groundwater samples as summarized in this appendix.

This data quality assessment appendix contains the following sections:

- Section F.1 — Summary of analytical methods used for chemical analysis of samples collected for the RI as specified in the Management Plan;
- Section F.2 — Evaluation of Site data for explosives method performance;
- Section F.3 — Summary of specific data quality results; and
- Section F.4 — Evaluation of overall precision, accuracy, representativeness, completeness, and comparability, and RI sample handling, holding times, and reporting limits. The detailed data validation reports are contained in supplemental reports in Hart Crowser's Weyerhaeuser/DuPont Project File.

Table F-1 summarizes the total number of critical data points and the extent of data qualification. Table F-2 presents a list of critical data that have been qualified based on our validation efforts and includes reasons for the qualification. Critical data include sample results that were greater than or within twenty percent of the MTCA screening level as specified in Section 1-1 of the RI. This list was analyzed to identify trends in quality control parameters that may impact specific data sets and overall data quality. Critical data were evaluated in order to assess the level of uncertainty in the data used to define chemical distribution for the RI, evaluate FS cleanup options, and quantify risk. No trends impacting overall critical data quality were identified; therefore, there is a high level of confidence associated with the data.

Analytical Methods

Sampling and analysis of soil, sediment, surface water, and groundwater from the Site used analytical methods and data quality objectives specified in the Quality Assurance Project Plan (QAPP; Section 5.0 of Hart Crowser, 1992a). Analytical methods were based on SW-846 protocols or other Ecology-approved methods in accordance with WAC 173-340-830(4)(a) (see page 5-5 of the Management Plan). Ecology approved the analytical methods for explosives analyses and lead (see Attachment 5-8 of the Management Plan). Appropriate methods were selected to achieve sufficient reporting limits to evaluate results against MTCA screening levels.

Chemical analyses were performed by Analytical Technologies, Incorporated (ATI). Explosives analyses were performed at the ATI Fort Collins laboratory. The other chemical analyses were performed at ATI in Renton, Washington, or San Diego, California. Samples for a given chemical analysis method were performed by the same ATI regional laboratory except for metals. Most soil samples were analyzed for metals by the ATI Renton laboratory. A limited number of soil samples were analyzed for metals at the ATI San Diego laboratory (see discussion in Section F.4.5 on comparability).

In addition, a limited number of soil samples were analyzed by the Hart Crowser *FAST* Laboratory for lead and TPH. These data received a limited review, which is also discussed in this appendix.

Evaluation of Explosives Method Performance

Analysis methods were developed by Hart Crowser and ATI for nitroaromatic explosives, MMAN, and nitroglycerin in order to achieve reporting limits low enough to meet MTCA screening levels. Method performance was evaluated in order to determine if reporting limits were achievable. Results of ATI's Method Detection Limit (MDL) study for nitroaromatic explosives were compared with reporting limits and MTCA screening levels for groundwater and surface water. The MDL study was performed according to EPA guidance (40 CFR 136B). Reporting limits are less than MTCA screening levels; however, in some cases dilution was required prior to analysis and as a result, sample detection limits for selected samples were elevated above the screening levels.

Reporting limits and MTCA screening levels were also compared to ATI instrument calibration ranges. For all analytes, the reporting limit is comparable to the lowest level calibration standard, indicating that accurate quantitation can be achieved at this concentration.

Summary of Specific Data Quality Results

In general, overall data quality for this project was very good. Table F-1 summarizes by matrix the total number of critical data points, the number of estimated (J) and rejected (R) critical data points, and the percent of the critical data not requiring qualification. The percent of critical data not requiring qualification was in most cases greater than 90 percent. This indicates that overall data quality was high and meets data usability requirements as defined by EPA (1990). The limited amount of qualification of critical data indicates that the data are highly reliable for use in the RI/RA/FS.

In two cases, data review resulted in the rejection of data based on EPA guidance (EPA, 1988a and 1988b) (or on professional judgment). Two data sets were identified that were rejected or not used: organophosphate pesticides (OP Pesticides) in freshwater sediments and PAHs in marine sediments.

Freshwater Sediment OP Pesticides. OP pesticide results were rejected for all freshwater sediments analyzed by EPA Method 8140 for several reasons. Initial and continuing calibration was outside of established control limits, surrogate recoveries were high, ranging from 164 to 501 percent (outside the control limits of 50 to 150 percent), and matrix spike recovery was high (outside the control limit of 120 percent). Because of the cumulative effect of multiple qualifiers, all sample results were qualified as rejected (R) based on EPA guidance.

Marine Sediment PAHs. PAH results were not used for all marine sediment samples analyzed by EPA Method 8310 because of data quality issues and the availability of a more reliable data set. PAH results from the semivolatiles analyses (EPA Method 8270) for these samples were used instead. PAHs were determined by two analytical methods in order to meet sediment management standards for all compounds. Method 8310 may be able to achieve lower detection limits than Method 8270 for some PAH compounds; however, the 8310 results may be less qualitatively reliable due to matrix interferences and associated compound resolution problems, and lack of confirmation of compound identities. The 8270 method is a confirmation method and thus more qualitatively reliable; however, detection limits may be higher for some compounds than can be achieved by Method 8310.

Results from the 8310 analyses indicated there were interferences that resulted in poor matrix spike recovery, and the duplicate precision was not as good as those from the 8270 analysis. Method 8270 was also able to achieve sufficiently low sample detection limits for all compounds to evaluate results against sediment management standards, therefore only the PAH results from the Method 8270 analysis for marine sediments were used.

Data Quality Review Results

In general, the data quality objectives of the project as specified in the QAPP were met with the exception of the rejected data. The analytical data, as qualified, are deemed acceptable for use in this RI/RA/FS. All laboratory data were subjected to one of two levels of quality

assurance review as described below by either Hart Crowser, or EcoChem, Inc., of Seattle, Washington. The detailed data validation reports and original laboratory data are available in Hart Crowser's project files. The following discussion summarizes the findings detailed in the data validation reports.

To confirm the usability of the data for the RI/RA/FS, approximately twenty percent of all soil data produced by ATI received full validation in accordance with EPA's Laboratory Data Validation Functional Guidelines for Evaluating Organics Analysis (EPA, 1988a) and with Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis (EPA, 1988b), including evaluation of raw data sample chromatograms and initial and continuing calibration verifications. In addition, all Round 1 and Round 8 groundwater, surface water, and freshwater and marine sediments received full validation.

The remaining soil and water chemical data used in the risk assessment and any field screening data were reviewed with regard to the following, as appropriate to the particular analysis:

- Holding times;
- Blanks;
- Detection limits;
- Duplicates;
- MS/MSDs;
- Surrogate recoveries;
- Completeness;
- Comparability; and
- Reporting limits.

Chemical analyses of quality control samples such as method blanks, MS/MSD, and laboratory duplicates were performed as specified in the applicable analytical protocols and in the QAPP. Field duplicates were collected to evaluate field and laboratory precision with respect to sample homogeneity, collection, handling, shipping, storage, preparation, and analysis.

Assessment of overall data quality was based upon quantitative (precision, accuracy, completeness) and qualitative (representativeness, comparability) quality assurance objectives. Definitions of these parameters and the applicable quality control procedures are given below in Sections F.4.1 through F.4.5.

Precision

Precision measures the reproducibility of measurements under a specific set of conditions. It is a quantitative measure of the variability of a group of measurements compared to their average values. Analytical precision is measured through matrix spike/matrix spike duplicate (MS/MSD) samples for organics analyses and through laboratory duplicate samples for inorganic analyses. Analytical precision is quantitatively expressed as the relative percent difference (RPD) between the MS/MSD or duplicates. Analytical precision measurements

were carried out on site matrices at a minimum frequency of one per laboratory analysis group or one in 20 samples, whichever was more frequent, per matrix analyzed.

The RPD is calculated as follows:

$$RPD = \frac{(C_1 - C_2) \times 100\%}{(C_1 + C_2)/2}$$

Where:
C_1 = Larger of the two observed values
C_2 = Smaller of the two observed values

MS/MSD and laboratory duplicate precision generally met data quality performance criteria and were deemed acceptable. A number of metals including cadmium, chromium, lead, mercury, and nickel, and PAH data were qualified based on poor laboratory duplicate precision (see Table
F-2). The poor PAH precision values were caused by sample dilution that was required due to high concentrations and/or matrix interference. The poor metals precision may be due to the heterogeneous sample matrix.

Field duplicates were used to assess both laboratory and field precision. Field duplicate precision is discussed in Section F.4.4.

Accuracy

Accuracy measures the closeness of the measured value to the true value. The accuracy of chemical test results is assessed by "spiking" samples with known standards (surrogates or matrix spike) and establishing the percent recovery (%R). Accuracy measurements on matrix spike samples were carried out at a minimum frequency of one in 20 samples per matrix analyzed for both organic and inorganic analyses. Surrogate recoveries were determined for every sample analyzed for organics in accordance with SW-846 requirements for organic analysis.

Percent recovery is calculated as follows:

$$\%R = 100\% \times (S-U)/C_{SA}$$

Where:
S = Measured concentration in spiked aliquot
U = Measured concentration in unspiked aliquot
C_{SA} = Actual concentration of spike added

In general, the data accuracy is adequate for the purposes of this RI/RA/FS. Several sample matrix spike and/or surrogate recoveries of organics analyses were outside of control limits and the data were qualified accordingly (see Table F-2). Samples were qualified as rejected (R) when either matrix or analytical spikes were not recovered in a number of metals

analysis, including cadmium and antimony, and one nitroglycerin and one sample analyzed for nitroaromatic explosives.

Surrogate recoveries were often out of control limits when sample dilution was required. This occurred primarily with explosives and PAH data.

Completeness

Completeness is defined as the percentage of measurements made which are judged to be valid measurements. Results will be considered valid if all the precision, accuracy, and representativeness objectives are met. The target completeness goal for this RI/RA/FS is 90 percent as defined in the QAPP.

Measurement of completeness (C) is based on overall usefulness of the data and is defined as the ratio of acceptable measurements obtained to the total number of planned measurements for an activity.

$$C = \frac{\text{Total No. of data within target QC limits}}{\text{Total No. of data points}} \times 100$$

Total number of data within target QC limits is calculated by subtracting the total number of rejected (R) data points from the total number of data points. (Note that each analyte counts as one point.)

A total of approximately 64,300 data points were generated as part of the sampling and analysis program outlined in the Management Plan and conducted during the RI.

Overall completeness of the data is 99.5 percent. A number of specific data points were rejected for various quality control reasons. Table F-2 outlines the reasons for rejecting specific data points.

Representativeness

Representativeness is a measure of how closely the measured results reflect the actual concentration or distribution of the chemical compounds in the matrix sampled. The sampling plan design, sampling techniques, and sample handling protocols (e.g., storage, preservation, and transportation) were designed to assure representative samples with respect to the site. Representativeness is evaluated based on the collection and analysis of field duplicates, rinseate blanks, trip blanks, and laboratory method blanks.

- Field duplicates were used to assess field and method variation.

- Rinseate blanks were used as a quality control check on the effectiveness of sampling equipment decontamination procedures and possible contamination carry over during collection of the samples.

- Trip blanks were used to assess the potential contamination of water samples by volatile organic compounds during sample handling, storage, and transport to the laboratory.

- Laboratory method blanks were used to assess laboratory contamination during the performance of the method.

Additionally, elevated dissolved antimony concentrations were found to be derived from filters from the manufacturer and were therefore not representative of Site conditions (see the discussion below and in Section 3.2.3 of the RI).

Field Duplicates. Field duplicates and blind field duplicates were used to assess field and analysis method variation and were obtained at a minimum frequency of 1 per 20 samples, except groundwater field duplicates, which were collected at a frequency of 1 per 28 samples. Blind field duplicates were submitted to the laboratory without identifying them as field duplicates.

Field duplicate precision was evaluated by calculating the relative percent difference (RPD) between the reported results for a sample and its duplicate. Field duplicate precision data quality performance criteria have not been established by EPA (EPA, 1988a and 1988b). A screening level of 50 percent was used to evaluate detected sample results. Non-detected results cannot be reliably evaluated for precision.

Since duplicate analyses measure both field and laboratory precision, results may be quite variable. Poor precision can be a reflection of the difficulties associated with collecting identical field samples and sample heterogeneity. Poor precision can also be attributed to low levels detected near the detection limit as observed with the explosives and PAH analyses. Precision was generally acceptable at higher concentrations of these analyte groups.

The overall precision of the field duplicate analysis was acceptable. For all matrices and analytes combined, 80% of the RPDs calculated were below 50 percent. In addition to field duplicates, approximately 40 blind duplicates were submitted for analysis during the last round of surface soil sampling for arsenic. Blind duplicates were submitted to evaluate potential bias in precision of the non-blind field duplicate samples. No field duplicate bias was found. The average RPD of the field duplicates and blind duplicates were essentially equal, at 20 and 21 percent, respectively.

No data were qualified based on field duplicate or blind duplicate precision.

Rinseate Blanks. Potential contamination of groundwater samples in the field is assessed through analysis of rinseate blanks. Rinseate blanks are collected from the final rinse with de-ionized water of decontaminated sampling equipment. Rinseate blanks contained low concentrations (less than screening levels) of one or more of the following target analytes:

- Total aluminum, cadmium, antimony, copper, chromium, selenium, and zinc were detected in one of five rinseate blank samples;
- Dissolved antimony (detected in four of five samples) and zinc (detected in one of five

samples);

- 2,4,6-TNT and 2,4-DNT were detected in one of five samples;
- PCBs were detected in three of five samples;
- PAHs were detected in four of five samples;
- TOC was detected in four of five samples; and
- TDS was detected in one of five samples.

Detections may be attributed to poor decontamination techniques. However, all detections were less than screening levels and therefore cross-contamination from sampling equipment did not impact reported sample results.

For samples associated with a blank containing a detectable concentration of a target analyte, action was taken by comparing sample detects to 5X (10X for common organic laboratory contaminants) the level detected in the blank (action level). If the sample result was less than the action level, the result was qualified as not detected (U) with an elevated reporting limit.

Trip Blanks. Trip blanks, consisting of organic-free distilled, de-ionized water in sealed VOA bottles, were carried into the field during groundwater sampling operations. Two trip blanks were stored and shipped to ATI with each round of groundwater samples and analyzed for volatile organics to assess outside sources of contamination. Two trip blanks had detectable concentrations of chloroform, a common laboratory contaminant. The chloroform contamination may be due to residual solvent from the laboratory bottle decontamination process.

Laboratory Blanks. Laboratory method blanks were analyzed by the laboratory at a minimum of 5 percent frequency to assess laboratory contamination. Several laboratory method and instrument blanks associated with both soil and water analyses contained analytes at concentrations at or above the reporting limit. Common laboratory contaminants were methylene chloride, acetone, hexane, di-n-butylphthalate, bis(2-ethylhexyl) phthalate, and di-n-octylphthalate.

Dissolved Antimony Related to Sample Filtration. Filters used in the collection of filtered groundwater and surface water samples for dissolved metals analyses contributed antimony to the filtered samples. Antimony was detected consistently in filtered groundwater and surface water samples from the Site, but not in unfiltered samples. This is contrary to the typical situation, where total metals concentrations were substantially higher than dissolved concentrations due to sample turbidity. Strong evidence, including independent data from the manufacturer, exists that the filters contributed antimony to the filtered water samples, and that antimony is not present at detectable concentrations in Site groundwater or surface water. Section 3.2.3 in Volume 1 provides additional details.

Comparability

Comparability is a qualitative parameter expressing the confidence of one data set compared with another. The use of standard techniques for both sample collection and laboratory analysis should make data collected comparable to data generated by different laboratories or by the same laboratory at different times. Comparability can be judged by evaluating the consistency in sampling and analysis methods used, and the differences between results produced by different laboratories.

Field Sampling. Throughout field activities, field sampling procedures were followed as outlined in the RI/FS Management Plan (Hart Crowser, 1992). Field audits were conducted during soil and groundwater sampling activities during the RI to evaluate adherence to sampling protocols. Three audits were conducted during soil sampling events on November 18, 1993, December 10, 1993, and January 7,1994. One audit was conducted during groundwater sampling on January 4, 1993.

Due to the non-homogeneous nature of the soil matrix, it is essential that consistent sampling methods are used to collect representative samples. We noted during our field audits that surface soil samples were consistently collected from 0- to 6-inch depths. Care was taken to collect approximately equal amounts from the entire soil horizon and to mix the sample well prior to placing in the sample jar. We found that the sampling methods were consistent between sampling events and field teams.

Groundwater sampling consistency is maintained by routinely purging three casing volumes of water from each well prior to sampling, monitoring pH, temperature, and conductivity during well purging, and using dedicated bailers to avoid cross contamination. Purging the well and collecting only fresh water from the aquifer assures samples are representative of aquifer conditions.

Based on the results of these audits, samples were collected according to protocols outlined in the RI/FS Management Plan and therefore results for soil and groundwater are considered representative of site conditions.

Ecology Split Data Evaluation. Fifty-two field duplicate samples were collected and submitted to ATI and Manchester for analysis for arsenic in soil. ATI and Manchester prepared the samples according to ATI's SOP which was approved by Ecology as part of the Sampling and Analysis Plan in the Management Plan (Hart Crowser, 1992). RPDs ranged from 0.71 to 49 percent, typical values for the preparation and analysis of soil samples. Four of 52 RPD values were greater than 35 percent, EPA's precision criteria for evaluating soil laboratory duplicates (EPA, 1988b). No EPA or state criteria have been established for evaluating field duplicate precision.
Results for field duplicates analyzed by ATI were confirmed by Manchester, therefore, arsenic results reported by ATI for this project are considered to be representative of conditions on the Site.

Analysis Methods. SW-846 or EPA-approved methods (see page 5-5 and Attachment 5-8 of the Management Plan) were used during all sampling for all parameters. Although our analyses of explosives compounds by GC/ECD, MMAN by GC/FPD, and nitroglycerin by HPLC did not employ a standard SW-846 method, Standard Operating Procedures (SOPs) were used by ATI which produced internally comparable results. All RI data collected for this work were comparable because samples of a given matrix that were analyzed by a specific analytical method were consistently sent to the same ATI laboratory with only one exception.

A small number of soil samples were analyzed in the ATI San Diego laboratory for total metals. SW-846 methods were employed as by the ATI Renton laboratory with only one exception. Matrix spikes from the graphite furnace analyses in Renton were not analytically spiked like the samples analyzed at ATI San Diego. Matrix spike percent recoveries were therefore evaluated based on sample and matrix spike results which were derived from the same calculations and do not account for analytical spike corrections. Because SW-846 methods were followed by both laboratories, data produced by the San Diego laboratory are considered comparable to that produced by the Renton laboratory.

Total lead in soil was also analyzed by the Hart Crowser *FAST* Laboratory using an Ecology-approved method (see Attachment 5-8 of the Management Plan). The *FAST* Laboratory digestion method is different than the
SW-846 method. The Hart Crowser mobile laboratory used a microwave digestion technique for determination of total lead by atomic absorption. At the start of this project microwave digestion was not an SW-846 method; however, an approval letter from Ecology for use of Hart Crowser lead analyses as an approved method in accordance with WAC 173-340-830(4)(a)(vii) was included as Attachment 5-8 in the QAPP. Evaluation of the correlation between the *FAST* Laboratory and SW-846 methods indicate comparable results. A total of 16 samples were analyzed by both Hart Crowser's *FAST* Lab and ATI. A regression analysis of the data resulted in a correlation coefficient (r^2) of 0.91. The *FAST* Lab screening results show excellent comparability when compared to ATI's SW-846 method for the analysis of lead.

Sample Handling. Sample handling involved the collection of samples and the transportation of intact samples from field to laboratory. This pathway was monitored through field notes, custody forms, and data tracking sheets completed by Hart Crowser personnel. Samples were collected and handled following appropriate procedures to obtain representative samples (40 CFR Part 136, 1985 and EPA, 1986) (see Section 5-6 of the Management Plan). Appropriate containers and preservatives were used to maintain sample integrity. Samples were received by ATI within 24 hours of collection. Samples were received in good condition with the accompanying chain of custody documentation.

Holding Times. Holding time requirements for compounds are stated in Table 5-2 of the Management Plan (Hart Crowser, 1992). Holding times were calculated according to the date of sample collection. In general, all samples were extracted and analyzed within the recommended holding times. However, a number of PAH and mercury data were qualified as estimated (J) due to extraction or analysis beyond the recommended holding times (see

Table F-2).

Reporting Limits. Required reporting limits were established to meet the MTCA screening levels listed in Table 1-1 of the RI. For most analyses, reporting limits were less than or equal to MTCA screening levels. Reporting limits for non-detected results, which were above screening levels, were elevated due to dilution and were primarily associated with nitroaromatic explosives analyses for soil samples, chlorinated benzene in the marine sediment samples, and indeno(1,2,3-c,d)pyrene in the groundwater samples.

Most elevated nitroaromatic reporting limits were due to dilution of soil samples for quantitation of high positive levels of one or more analyte(s). Chlorinated benzene reporting limits were elevated due to high sample moisture content. The screening level for indeno(1,2,3-c,d)pyrene is between the MDL and reporting limit. ATI identifies compounds that are detected below the reporting limit and qualifies them as estimated because they are below the quantitation limit; however, since none of the sample results were qualified for this reason, it is unlikely that indeno
(1,2,3-c,d)pyrene was present in the samples at concentrations above the screening level. Additionally, semivolatile results were qualified as estimated mainly because target compounds were detected below the reporting limit.

Table F-1 – Qualified Critical Data Results (Greater Than or Within 20% of MTCA Screening Level) Sheet 1 of 2

	Chemistry Group	Compound Name	Total Data Points	Number of Samples		Percentage of Unqualified Data
				Qualified J	Qualified R	
Groundwater						
	Explosive	2,4-Dinitrotoluene	253	2		99.21
	Explosive	2,6-Dinitrotoluene	253	7		97.23
	Explosive	Total DNTs (Not U)	100	8		92.00
	Metal (Diss)	Antimony	163	16	1	89.57
	Metal (Diss)	Arsenic	142	5		96.48
	Metal (Diss)	Lead	247	3		98.79
	Metal (Diss)	Thallium	142	16		88.73
	Metal (Total)	Aluminum	141	19		86.52
	Metal (Total)	Antimony	156	55	1	64.10
	Metal (Total)	Arsenic	142	32		77.46
	Metal (Total)	Lead	155	6		96.13
	Metal (Total)	Nickel	142	1		99.30
	Metal (Total)	Thallium	141	5		96.45
	PAH (Carc)	Benzo(a)Anthracene	142	6		95.77
	PAH (Carc)	Benzo(a)Pyrene	142	6		95.77
	PAH (Carc)	Benzo(b)Fluoranthene	142	6		95.77
	PAH (Carc)	Benzo(k)Fluoranthene	142	6		95.77
	PAH (Carc)	Chrysene	142	7		95.07
	PAH (Carc)	Dibenzo(a,h)Anthracene	142	6		95.77
	PAH (Carc)	Indeno(1,2,3-c,d)Pyrene	142	6		95.77
	Semivolatile	Bis(2-Ethylhexyl)Phthalate	42	3		92.86
	TPH-418	TPH (418.1)	139	17		87.77
Soil						
	Explosive	2,4,6-Trinitrotoluene	919	5		99.46
	Explosive	2,4-Dinitrotoluene	1250	51		95.92
	Explosive	2,6-Dinitrotoluene	1250	57		95.44
	Explosive	Total DNTs (Not U)	318	67		78.93
	Metal (TCLP)	TCLP Lead	67	9		86.57
	Metal (Total)	Antimony	233	2		99.14
	Metal (Total)	Arsenic	1953	142		92.73
	Metal (Total)	Lead	2728	39	1	98.53
	Metal (Total)	Mercury	864	12		98.61
	PAH (Carc)	Benzo(a)Anthracene	228	23		89.91
	PAH (Carc)	Benzo(a)Pyrene	228	25		89.04
	PAH (Carc)	Benzo(b)Fluoranthene	228	26		88.60
	PAH (Carc)	Benzo(k)Fluoranthene	228	20		91.23
	PAH (Carc)	Chrysene	228	27		88.16
	PAH (Carc)	Dibenzo(a,h)Anthracene	228	18		92.11
	PAH (Carc)	Indeno(1,2,3-c,d)Pyrene	228	23		89.91
	PAH (Carc)	Total CPAHs (1/2 U)	227	14		93.83
	PAH (Carc)	Total CPAHs (Not U)	128	2		98.44
	Semivolatile	Benzo(a)Anthracene	149	3		97.99
	Semivolatile	Benzo(a)Pyrene	149	2		98.66
	Semivolatile	Benzo(b)Fluoranthene	149	1		99.33
	Semivolatile	Chrysene	149	4		97.32
	Semivolatile	Total CPAHs (1/2 U)	149	10		93.29
	TPH-418	TPH (418.1)	697	13		98.13

Table F-1 – Qualified Critical Data Results (Greater Than or Within 20% of MTCA Screening Level) Sheet 2 of 2

Chemistry Group	Compound Name	Total Data Points	Number of Samples		Percentage of Unqualified Data
			Qualified J	Qualified R	
Surface Water					
Metal (Diss)	Cadmium	29	2		93.10
Metal (Diss)	Lead	44	2		95.45
Metal (Total)	Arsenic	29	5		82.76
Metal (Total)	Selenium	29	1		96.55
Metal (Total)	Thallium	29	7		75.86
OCPesticide	Aldrin	3	3		0.00
OCPesticide	Endrin	3	1		66.67
PAH (Carc)	Benzo(k)Fluoranthene	29	2		93.10
Semivolatile	Bis(2-Ethylhexyl)Phthalate	8	1		87.50
Marine Sediment					
Explosive	2,4-Dinitrotoluene	11	2		81.82
Explosive	2,6-Dinitrotoluene	11	3		72.73
PAH (Non-Carc)	Phenanthrene	11	1		90.91
Semivolatile	Acenaphthene	11	1		90.91
Semivolatile	Benzo(g,h,i)Perylene	11	1		90.91
Semivolatile	Dibenzo(a,h)Anthracene	11	1		90.91
Semivolatile	Fluoranthene	11	2		81.82

F:\DUPONT\REQ-736A.WK1 KML

Table F-2 - Qualified Critical Data Results Greater Than or Within 20 Percent of the Screening Level

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Groundwater						
Explosives in µg/L						
2,4-Dinitrotoluene	9210-102-2	MW-19F-10-92	0.32	J	0.13	Low surrogate recovery (22%)
2,4-Dinitrotoluene	9008389-08	MW-3-8-90	0.14	J	0.13	Low surrogate recovery, 46% and Matrix spide %R above control
2,6-Dinitrotoluene	9210-102-2	MW-19F-10-92	0.25	J	0.13	Low surrogate recovery (22%)
2,6-Dinitrotoluene	9203-138-1	MW-19-3-92	0.23	J	0.13	1) 1-C-3NB surrogate %R = 43% (50-150%) 2) 1,5-DNN surrogate %R = 34% (50-150%)
2,6-Dinitrotoluene	9008389-07	MW-19-8-90	0.32	J	0.13	Low surrogate recovery, 46% and MS %R above control
2,6-Dinitrotoluene	9008389-08	MW-3-8-90	0.18	J	0.13	Low sample and blank surrogate recovery
2,6-Dinitrotoluene	9008389-06	MW-6-8-90	0.23	J	0.13	Low sample and blank surrogate recovery
2,6-Dinitrotoluene	9008378-02	MW-8-8-90	0.14	J	0.13	Low sample and blank surrogate recovery
2,6-Dinitrotoluene	9211-192-1	NP-7007 (5D)	0.13	J	0.13	Low sample and blank surrogate recovery
Dissolved Metals in mg/L						
Antimony	9207-218-1	7-B-503	0.69	R	0.006	MS %R = 13% (62-152%)
Antimony	9203-158-6	MW-1-3-92	0.0055	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-7	MW-11-3-92	0.0067	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-8	MW-17-3-92	0.0084	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-10	MW-20-3-92	0.0072	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-13	MW-22-3-92	0.0069	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-14	MW-27-3-92	0.013	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-9	MW-6-3-92	0.0065	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-5	SPR-3-3-92	0.0058	J	0.006	Laboratory control sample %R = 48% (62-152%)
Antimony	9203-158-1	83-93-3-92	0.0054	J	0.006	MS = 68-69% below QC Limit of 71%
Antimony	9203-158-2	83-94-3-92	0.007	J	0.006	MS = 68-69% below QC Limit of 71%
Total Metals in mg/L						
Aluminum	9206-207-4	MW-16-6-92	3.7	J	0.2	MS %R = 129% (75-125%)
Aluminum	9209-228-6	MW-17-9-92	19	J	0.2	MS %R = 400% (75-125%)
Aluminum	9206-207-3	MW-18-6-92	1.4	J	0.2	MS %R = 129% (75-125%)
Aluminum	9206-207-7	MW-19-6-92	1.1	J	0.2	MS %R = 129% (75-125%)
Aluminum	9209-228-14	MW-20-9-92	97	J	0.2	MS %R = 400% (75-125%)
Aluminum	9206-207-8	MW-22-6-92	36	J	0.2	MS %R = 129% (75-125%)
Aluminum	9206-207-5	MW-23-6-92	7.8	J	0.2	MS %R = 129% (75-125%)
Aluminum	9209-228-8	MW-23-9-92	50	J	0.2	MS %R = 400% (75-125%)

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Aluminum	9209-228-7	MW-24-9-92	42	J	0.2	MS %R = 400% (75-125%)
Aluminum	9209-228-11	MW-4-9-92	7.1	J	0.2	MS %R = 400% (75-125%)
Aluminum	9209-228-12	MW-5-9-92	0.76	J	0.2	MS %R = 400% (75-125%)
Aluminum	9209-228-13	MW-6-9-92	0.27	J	0.2	MS %R = 400% (75-125%)
Aluminum	9209-228-1	MW-7-9-92	57	J	0.2	MS %R = 400% (75-125%)
Aluminum	9206-207-1	MW-8-6-92	2.2	J	0.2	MS %R = 129% (75-125%)
Aluminum	9209-228-2	MW-8-9-92	13	J	0.2	MS %R = 400% (75-125%)
Aluminum	9206-207-2	MW-8D-6-92	2.2	J	0.2	MS %R = 129% (75-125%)
Aluminum	9209-228-3	MW-8D-9-92	14	J	0.2	MS %R = 400% (75-125%)
Aluminum	9206-207-6	MW-9-6-92	2.8	J	0.2	MS %R = 129% (75-125%)
Aluminum	9209-228-4	MW-9-9-92	54	J	0.2	MS %R = 400% (75-125%)
Antimony	9207-218-1	7-B-503	0.61	R	0.006	MS %R = 13% (62-152%)
Antimony	9212-037-6	MW-22-12-92	0.005	J	0.006	Dissolved antimony is greater than total
Arsenic	9207-218-1	7-B-503	0.097	J	0.005	1) Laboratory Duplicate RPD = 160% (≤20%) 2) Matrix spike %R = 986% (71-131%)
Arsenic	9209-260-1	MW-11-9-92	0.0057	J	0.005	MS %R = 42% (71-131%)
Arsenic	9209-260-3	MW-13-9-92	0.017	J	0.005	MS %R = 42% (71-131%)
Arsenic	9209-260-4	MW-14-9-92	0.01	J	0.005	MS %R = 42% (71-131%)
Arsenic	9203-158-10	MW-20-3-92	0.0149	J	0.005	1) MS %R outside limits (68%) (71-131%) 2) Analytical spike %R outside limits (85-115%)
Arsenic	9203-158-11	MW-21-3-92	0.0125	J	0.005	MS %R outside limits (68%) (71-131%)
Arsenic	9203-138-8	MW-24-3-92	0.0143	J	0.005	Analytical spike %R outside limits
Arsenic	9209-260-7	MW-25-9-92	0.013	J	0.005	MS %R = 42% (71-131%)
Arsenic	9209-260-8	MW-26-9-92	0.012	J	0.005	MS %R = 42% (71-131%)
Arsenic	9203-158-1	83-93-3-92	0.0132	J	0.005	MS = 64+24% below QC limit of 62% Average 49%
Arsenic	9203-158-2	83-94-3-92	0.0207	J	0.005	MS = 64+24% below QC limit of 62% Average 49%
Lead	9207-218-1	7-B-503	0.233	J	0.015	Laboratory duplicate RPD = 188% (≤20%)
Lead	9203-158-11	MW-21-3-92	0.026	J	0.015	Analytical spike %R outside limits (85-115%)
Lead	9203-158-14	MW-27-3-92	0.027	J	0.015	Analytical spike %R outside limits (85-115%)
Lead	9201-190-10	36-SS-04	4100	J	250	Analytical duplicate RPD high (42%).
Lead	9201-190-8	36-TP-1-S-2	3100	J	250	Analytical duplicate RPD high (42%).
Nickel	9207-218-1	7-B-503	0.5	J	0.1	MS %R = 69% (73-121%)

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
PAHs (Carc) in µg/L						
Chrysene	9209-228-1	MW-7-9-92	0.01	J	0.012	MS %R = 111 and 117% (18-93%)
Semivolatiles in µg/L						
Bis(2-Ethylhexyl)Phthalate	9206-207-4	MW-16-6-92	7.9	J	6.3	Detected below quantification limit
Bis(2-Ethylhexyl)Phthalate	9209-228-4	MW-9-9-92	34	J	6.3	Detected below quantification limit
Bis(2-Ethylhexyl)Phthalate	9212-027-4	SPR-4-12-92	5.9	J	6.3	Detected below quantification limit
Soil						
Explosives in mg/kg						
2,4,6-Trinitrotoluene	9205-110-6	18-TP-511-S-1	75	J	33	Calibration criteria not met
2,4,6-Trinitrotoluene	9205-110-7	18-TP-511-S-1D	66	J	33	Calibration criteria not met
2,4,6-Trinitrotoluene	9307-121-1	40-VS-SC-142	160	J	33	Surrogate Recoveries Low (8% and 11%);
2,4-Dinitrotoluene	3553-219	11-TP-5,S-1	0.08	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	3553-220	11-TP-5,S-2	0.07	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	3553-222	11-TP-6,S-2	0.09	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	9211-070-8	18-B-502-S-5B	110	J	0.013	Extracted beyond 14-day holding time (13 days)
2,4-Dinitrotoluene	9304-124-1	18-CS-AW-1-10	0.017	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	9304-124-4	18-CS-AW-31-40	0.024	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	18-SS-606	18-SS-606	0.06	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	9211-138-2	18-SS-715	0.046	J	0.013	1-C-3-NB (surrogate) %R = 46% (50-150%)
2,4-Dinitrotoluene	9205-016-1	18-TP-502-S-1	0.65	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met
2,4-Dinitrotoluene	9205-016-4	18-TP-503-S-1	0.12	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met
2,4-Dinitrotoluene	9205-110-1	18-TP-510-S-1	0.16	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-2	18-TP-510-S-1D	0.087	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-3	18-TP-510-S-2	0.013	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-6	18-TP-511-S-1	6900	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-7	18-TP-511-S-1D	7300	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-8	18-TP-511-S-2	23	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-10	18-TP-511-S-3	48	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-11	18-TP-512-S-2	0.21	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-12	18-TP-512-S-3	0.048	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9205-110-15	18-TP-515-S-2	1	J	0.013	Calibration criteria not met

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
2,4-Dinitrotoluene	9205-086-4	18-TP-519-S-3	0.15	J	0.013	IC3NB %R = 48%, 1,5DNN %R = 18% 950-150%)
2,4-Dinitrotoluene	9205-016-8	18-TP-547-S-1D	0.077	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met
2,4-Dinitrotoluene	9205-016-12	18-TP-549-S-1	0.026	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met
2,4-Dinitrotoluene	18-VS-12ADU	18-VS-12ADUP	0.04	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	9310-081-2	18-VS-176	0.035	J	0.013	Concentration was not confirmed quantitatively
2,4-Dinitrotoluene	9304-108-12	18-VS-31	0.13	J	0.013	Detected below quantification limit .
2,4-Dinitrotoluene	18-VS-5A	18-VS-5A	0.04	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	3553-185	31-TP-8,S-1	0.064	J	0.013	Detected below quantification limit
2,4-Dinitrotoluene	9307-121-1	40-VS-SC-142	0.089	J	0.013	Surrogate Recoveries Low (8% and 11%);
2,4-Dinitrotoluene	9204-054-1	DRUM-VS-1	0.51	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9204-054-2	DRUM-VS-2	1.7	J	0.013	Calibration criteria not met
2,4-Dinitrotoluene	9204-054-3	DRUM-VS-3	0.33	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9211-070-8	18-B-502-S-5B	86	J	0.013	Extracted beyond 14-day holding time (13 days)
2,6-Dinitrotoluene	9304-124-1	18-CS-AW-1-10	0.021	J	0.013	Detected below quantification limit
2,6-Dinitrotoluene	9210-258-5	18-SS-604	0.13	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9210-258-6	18-SS-605	40	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9210-258-7	18-SS-605DUP	80	J	0.013	1) Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	18-SS-606	18-SS-606	0.03	J	0.013	Detected below quantification limit
2,6-Dinitrotoluene	9211-006-6	18-SS-632	0.028	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9211-006-13	18-SS-652	0.084	J	0.013	2,6-DNT MS %R = 33%, 41% (50-15-%)
2,6-Dinitrotoluene	9211-138-1	18-SS-714	0.047	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9211-138-2	18-SS-715	0.023	J	0.013	1) Calibration criteria not met (value is less than QL) 2) 1-C-3-NB (surrogate) %R = 83% (50-15-%)
2,6-Dinitrotoluene	9211-138-3	18-SS-716	0.011	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9211-138-5	18-SS-720	0.012	J	0.013	1) Calibration criteria not met (value is less than QL) 2) Matrix spike (2,4-DNT) %R = 153% (50-150%)
2,6-Dinitrotoluene	3553-217	18-TP-23,S-1	0.07	J	0.013	Detected below quantification limit
2,6-Dinitrotoluene	9205-016-1	18-TP-502-S-1	0.49	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met
2,6-Dinitrotoluene	9205-016-4	18-TP-503-S-1	0.16	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
2,6-Dinitrotoluene	9205-110-6	18-TP-511-S-1	7900	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9205-110-7	18-TP-511-S-1D	9200	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9205-110-8	18-TP-511-S-2	13	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9205-110-10	18-TP-511-S-3	16	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9205-110-11	18-TP-512-S-2	0.028	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9205-110-12	18-TP-512-S-3	0.013	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9205-086-4	18-TP-519-S-3	0.14	J	0.013	IC3NB %R = 48%, 15DNN %R = 18% (50-150%)
2,6-Dinitrotoluene	9205-016-8	18-TP-547-S-1D	0.1	J	0.013	1) Extracted beyond 14-day holding time (20 days) 2) Calibration criteria not met
2,6-Dinitrotoluene	9304-108-12	18-VS-31	0.089	J	0.013	Detected below quantification limit .
2,6-Dinitrotoluene	9304-109-9	18-VS-55	0.028	J	0.013	Detected below quantification limit .
2,6-Dinitrotoluene	9304-109-10	18-VS-56	0.07	J	0.013	Detected below quantification limit .
2,6-Dinitrotoluene	18-VS-5A	18-VS-5A	0.02	J	0.013	Detected below quantification limit
2,6-Dinitrotoluene	9211-014-14	25-TP-525-S-1	0.13	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9211-014-16	25-TP-525-S-3	6.2	J	0.013	Calibration criteria not met (value is less than QL)
2,6-Dinitrotoluene	9307-121-1	40-VS-SC-142	0.035	J	0.013	Surrogate Recoveries Low (8% and 11%);
2,6-Dinitrotoluene	9302-196-6	5D-VS-52	0.13	J	0.013	Detected below quantification limit.
2,6-Dinitrotoluene	3553-74	5-SS-16	0.099	J	0.013	Detected below quantification limit
2,6-Dinitrotoluene	9204-054-1	DRUM-VS-1	0.44	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9204-054-2	DRUM-VS-2	1.4	J	0.013	Calibration criteria not met
2,6-Dinitrotoluene	9204-054-3	DRUM-VS-3	0.19	J	0.013	Calibration criteria not met
TCLP Metals in mg/L						
TCLP Lead	9205-173-1	5-DH-TP-1-S-1	46.2	J	5	Laboratory duplicate RPD high (24%).
TCLP Lead	9208-160-1	5-TP-511-S-1	4.54	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-160-2	5-TP-511-S-2	35.6	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-160-4	5-TP-512-S-1	11.6	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-160-5	5-TP-512-S-2	10.8	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-160-7	5-TP-513-S-1	62.9	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-160-8	5-TP-513-S-2	234	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-159-1	5-TP-515-S-1	71.1	J	5	Laboratory duplicate RPD high (25%).
TCLP Lead	9208-159-2	5-TP-515-S-2	12.8	J	5	Laboratory duplicate RPD high (25%).
Total Metals in mg/kg						
Antimony	9204-119-28	40-PU-SS-502	28	J	32	Analytical spike outside control limits

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Antimony	9204-121-5	40-PU-TP-501-S	43	J	32	Analyzed beyond 180-day holding time (217 days)
Arsenic	9311-075-15	10-SS-401	48	J	32	1) CCV recoveries were below the control limit (86.7-89.5) 2) Correlation coefficient (r) = 0.994
Arsenic	9203-084-18	16-TP-507-S-3	244	J	32	Analyzed beyond 180-day holding time (≥217 days)
Arsenic	9303-359-14	18R-05	36	J	32	High MS recovery (140%)
Arsenic	9303-359-17	18R-09	39	J	32	High MS recovery (140%)
Arsenic	9312-146-10	18R-112-S-2	42	J	32	MS recovery below 75 percent (55 %).
Arsenic	9306-310-2	18R-119	89	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-5	18R-121	130	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-8	18R-124	43	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-9	18R-125	66	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-10	18R-126	32	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-11	18R-127	66	J	32	MS/MSD recovery high (170%)
Arsenic	9303-359-9	18R-23	66	J	32	High MS recovery (140%)
Arsenic	9311-171-20	18R-461	100	J	32	Analytical spike recovery below control limits at 83.5 percent.
Arsenic	9311-181-15	18R-464E	31	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-11	18R-466	51	J	32	Analytical spike was 82.1 percent.
Arsenic	9311-181-18	18R-468	110	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-14	18R-470	27	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-1	18R-474	89	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-20	18R-474 SSE	71	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9203-249-3	19A-VS-1	92	J	32	MS %R = 129% (56-122%)
Arsenic	9208-010-4	19A-VS-3	92	J	32	MS %R = 129% (56-122%)
Arsenic	9208-010-5	19A-VS-4	230	J	32	MS %R = 129% (56-122%)
Arsenic	9310-208-5	25-SS-527	370	J	32	Analytical spike recovery low (83%)
Arsenic	9310-208-6	25-SS-528	28	J	32	Analytical spike recovery low (83%)
Arsenic	9204-249-9	25-TP-503-S-2	670	J	32	Analytical spike outside of control limits
Arsenic	9204-249-11	25-TP-504-S-1	380	J	32	Analytical spike outside of control limits
Arsenic	9311-075-13	31-SS-404	110	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) Correlation coefficient (r) = 0.994
Arsenic	9210-272-10	38-HA-502-S-1	32	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-12	38-HA-503-S-1	31	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-1	38-SS-514	475	J	32	Laboratory duplicate RPD = 43% (≤35%)

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Arsenic	9210-272-2	38-SS-515	35	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-3	38-SS-516	58	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-4	38-SS-516 DUP	135	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-5	38-SS-517	62	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-6	38-SS-518	47	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-7	38-SS-519	59	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-8	38-SS-520	61	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9210-272-9	38-SS-521	550	J	32	Laboratory duplicate RPD = 43% (≤35%)
Arsenic	9204-157-3	39-VS-2	27	J	32	Analytical spike recovery outside control limits
Arsenic	9204-157-7	39-VS-6	29	J	32	Analytical spike recovery outside control limits
Arsenic	9211-107-6	40-BG-SS04-PL	81	J	32	MS %R = 128% (56-122)
Arsenic	9204-119-28	40-PU-SS-502	110	J	32	Analytical spike %R outside limits (85-115%)
Arsenic	9211-107-1	40-SS-03-PL	70	J	32	MS %R = 48% (56-122%)
Arsenic	9211-107-5	40-SS-149-PL	74	J	32	MS %R = 48% (56-122%)
Arsenic	9211-107-2	40-SS-30-PL	94	J	32	MS %R = 48% (56-122%)
Arsenic	9204-119-31	40-SS-506	62	J	32	Analytical spike %R outside limits (85-115%)
Arsenic	9204-119-33	40-SS-511	110	J	32	Analytical spike %R outside limits (85-115%)
Arsenic	9307-227-9	40-VS-27	100	J	32	CCV %R Outside Control Limits (89%)
Arsenic	9307-227-13	40-VS-31	68	J	32	CCV %R Outside Control Limits (89%)
Arsenic	9307-228-6	40-VS-44	44	J	32	Analytical Spike Outside Control Limits (78%)
Arsenic	9307-228-17	40-VS-54	33	J	32	CCVs %R Outside Control Limits (89% and 88%)
Arsenic	9307-230-10	40-VS-86	46	J	32	CCV %R Outside Control Limits (89%)
Arsenic	9304-121-13	5D-VS-39 DUP	46	J	32	Analytical spike recovery low (80%).
Arsenic	9302-196-1	5D-VS-43	35	J	32	Analytical spike recovery low (76%).
Arsenic	9311-153-1	APA-SS-401	45	J	32	Analytical spike recovery below control limits at 76.1 percent.
Arsenic	9311-153-3	APA-SS-401-SSE	44	J	32	Analytical spike recovery below control limits at 83.2 percent.
Arsenic	9210-270-2	APF-SS-504	76	J	32	1) CCV %R high (112%) 2) Correlation coefficient (r) = 0.992
Arsenic	9210-270-3	APF-SS-505	76	J	32	1) CCV %R high (112%) 2) Correlation coefficient (r) = 0.992
Arsenic	9210-270-5	APF-SS-507	87	J	32	1) CCV %R high (112%) 2) Correlation coefficient (r) = 0.992

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Arsenic	9311-075-4	LR-055	55	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9311-075-17	LR-058	64	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9311-075-20	LR-070	62	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9311-075-10	LR-071	34	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9303-359-3	LR-071S	55	J	32	High MS recovery (140%)
Arsenic	9311-075-9	LR-072	42	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9311-109-2	LR-082	42	J	32	Correlation coefficient (r)= 0.994 and the analytical spike was 81.2 percent.
Arsenic	9311-109-9	LR-083	28	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-109-10	LR-083 SSE	30	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-109-3	LR-096	68	J	32	Correlation coefficient (r)= 0.994 and the analytical spike was 83.2 percent.
Arsenic	9311-109-1	LR-098	34	J	32	Correlation coefficient (r) = 0.994 and the analytical spike was 81.5 percent.
Arsenic	9311-075-12	LR-103	40	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9311-075-7	LR-103 SSE	42	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9303-359-6	LR-104	690	J	32	High MS Percent Recovery (140%)
Arsenic	9312-211-11	LR-104A	100	J	32	High MS Percent Recovery (164%)
Arsenic	9311-289-15	LR-108	46	J	32	Analytical spike recovery below control limits at 82.6 percent.
Arsenic	9311-109-7	LR-113	99	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-109-20	LR-115	44	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-109-19	LR-116	130	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9312-165-20	LR-116A	57	J	32	MS Not Recovered Due to Matrix Interference
Arsenic	9311-075-8	LR-117	80	J	32	1) CCV recoveries below the control limit (86.7-89.5) 2) (r) = 0.994.
Arsenic	9312-211-12	LR-120	27	J	32	High MS Percent Recovery (164%)
Arsenic	9311-109-12	LR-131	33	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-109-5	LR-144	54	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-109-4	LR-145	30	J	32	Correlation coefficient (r)= 0.994 and the analytical spike was 83.2 percent.

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Arsenic	9311-095-17	LR-150	51	J	32	Analytical spike recovery below control limits at 82.2 percent.
Arsenic	9311-109-14	LR-161 SSE	34	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-4	LR-233	61	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-2	LR-257	38	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-5	LR-258	58	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9311-181-7	LR-260	38	J	32	Correlation coefficient (r)= 0.994.
Arsenic	9306-310-12	LR-301	33	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-13	LR-302	29	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-15	LR-304	26	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-17	LR-306	45	J	32	MS/MSD recovery high (170%)
Arsenic	9306-310-19	LR-308	62	J	32	MS/MSD recovery high (170%)
Arsenic	9303-359-1	LR-68	170	J	32	High MS recovery (140%)
Arsenic	9303-359-8	LR-68 DUP	190	J	32	High MS recovery (140%)
Arsenic	9307-049-2	RR-517	71	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-3	RR-518	28	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-4	RR-519	31	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-7	RR-521	76	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-10	RR-524	26	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-13	RR-527	42	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-14	RR-528	400	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-146-18	RR-528-S-2	100	J	32	MS recovery below 75 percent, (55 %).
Arsenic	9312-146-19	RR-528-S-3	40	J	32	MS recovery below 75 percent, (55 %).
Arsenic	9307-049-15	RR-529	85	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-16	RR-530	290	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-17	RR-531	140	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-18	RR-532	92	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-19	RR-533	50	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-049-20	RR-534	140	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-146-8	RR-538-S-2	34	J	32	MS recovery below 75 percent, (55 %).
Arsenic	9312-146-9	RR-538-S-3	30	J	32	MS recovery below 75 percent, (55 %).
Arsenic	9307-063-1	RR-539	260	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-063-2	RR-541	580	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-165-4	RR-541-S-2	73	J	32	MS Not Recovered Due to Matrix Interference

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Arsenic	9307-063-3	RR-542	180	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-165-6	RR-542-S-2	29	J	32	MS Not Recovered Due to Matrix Interference
Arsenic	9312-165-7	RR-542-S-3	26	J	32	MS Not Recovered Due to Matrix Interference
Arsenic	9307-063-4	RR-543	45	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-063-5	RR-544	270	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-063-6	RR-545	530	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-146-12	RR-545-S-2	33	J	32	MS recovery below 75 percent, (55 %).
Arsenic	9307-063-7	RR-546	950	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-165-8	RR-546-S-2	45	J	32	MS Not Recovered Due to Matrix Interference
Arsenic	9307-063-8	RR-547	810	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-063-9	RR-548	420	J	32	Calibration coefficient (r) = 0.993
Arsenic	9307-063-10	RR-549	410	J	32	Calibration coefficient (r) = 0.993
Arsenic	9312-165-10	RR-549-S-2	100	J	32	MS Not Recovered Due to Matrix Interference
Arsenic	9312-211-5	RR-595-S-2	150	J	32	High MS Percent Recovery (164%)
Arsenic	9312-211-6	RR-595-S-2 SSE	120	J	32	High MS Percent Recovery (164%)
Arsenic	9312-211-1	RR-596-S-2	360	J	32	High MS Percent Recovery (164%)
Arsenic	9312-211-2	RR-596-S-3	120	J	32	High MS Percent Recovery (164%)
Arsenic	9312-318-1	RR-600	70	J	32	MS recovery above 125 percent, (147 %).
Arsenic	9312-318-3	RR-602	39	J	32	MS recovery above 125 percent, (147 %).
Arsenic	9312-318-4	RR-603	160	J	32	MS recovery above 125 percent, (147 %).
Arsenic	9312-318-5	RR-604	130	J	32	MS recovery above 125 percent, (147 %).
Arsenic	9312-318-6	RR-604 SSE	170	J	32	MS recovery above 125 percent, (147 %).
Lead	9310-189-5	16-SS-508	200	J	250	MS Recovery Low (55%)
Lead	9310-189-9	16-SS-512	1100	J	250	MS Recovery Low (55%)
Lead	9310-189-10	16-SS-513	210	J	250	MS Recovery Low (55%)
Lead	9310-189-13	16-SS-516	1300	J	250	MS Recovery Low (55%)
Lead	9208-209-1	18S-VS-1	360	J	250	Laboratory duplicate RPD high (59%)
Lead	18-SS-883	18-SS-883	220	J	250	MS Recovery Low (69%)
Lead	9203-249-3	19A-VS-1	21000	J	250	Lab duplicate RPD outside control limits (54%)
Lead	9203-249-5	19B-VS-3	1100	J	250	Lab duplicate RPD outside control limits (54%)
Lead	25-VS-SC-120	25-VS-SC-120	6500	J	250	Duplicate RPD Outside Control Limits (37%).
Lead	9307-137-1	31-VS-13	29000	J	250	Lab duplicate RPD outside control limits (37%)
Lead	9307-137-2	31-VS-14	48000	J	250	Lab duplicate RPD outside control limits (37%)

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Lead	9307-137-3	31-VS-14 DUP	56000	J	250	Lab duplicate RPD outside control limits (37%)
Lead	9307-137-4	31-VS-15	66000	J	250	Lab duplicate RPD outside control limits (37%)
Lead	9307-137-5	31-VS-16	75000	J	250	Lab duplicate RPD outside control limits (37%)
Lead	9307-137-6	31-VS-17	73000	J	250	Lab duplicate RPD outside control limits (37%)
Lead	9301-071-7	31-VS-6 DUP	220	J	250	Analytical duplicate RPD high (220%); MS recovery low (0%).
Lead	9201-190-9	36-SS-03	13000	J	250	Analytical duplicate RPD high (42%).
Lead	9201-073-1	39-B-1-S-1	7900	J	250	Analytical duplicate RPD high (42%)
Lead	420 HC*7	39-SS-09	230	J	250	No analytical Dup or MS/MSD
Lead	9201-037-8	39-SS-10	950	J	250	No analytical Dup or MS/MSD
Lead	9201-073-8	39-TP-1-S-1	930	J	250	No analytical Dup or MS/MSD
Lead	9201-073-10	39-TP-2-S-1	6200	J	250	No analytical Dup or MS/MSD
Lead	420 HC*2	39-TP-2-S-2	2052	J	250	No analytical Dup or MS/MSD
Lead	9201-073-14	39-TP-4-S-1	400	J	250	No analytical Dup or MS/MSD
Lead	9307-121-1	40-VS-SC-142	11000	J	250	MS %R <30%
Lead	9304-119-16	5D-VS-21	260	J	250	Laboratory duplicate RPD high (126%).
Lead	9304-119-20	5D-VS-25	1600	J	250	Laboratory duplicate RPD high (126%).
Lead	9304-119-3	5D-VS-6	300	J	250	Laboratory duplicate RPD high (126%).
Lead	3553-75	5-SS-17	380	AR	250	Sample result reported on an as received basis.
Lead	9302-197-15	5-VS-15	210	J	250	MS recovery above control limits (151%).
Lead	LR-68-B	LR-68-B	4700	J	250	Laboratory duplicate RPD high (51%)
Lead	9312-030-6	RR-559	3300	J	250	MS Recovery Low (57%)
Lead	9312-030-19	RR-591	1200	J	250	MS Recovery Low (57%)
Lead	9312-043-11	RR-597	720	J	250	MS Recovery Low (57%)
Mercury	9203-084-13	16-TP-505-S-1	420	J	24	Analyzed after 28-day holding time (140 days)
Mercury	9203-084-16	16-TP-507-S-1	120	J	24	Analyzed after 28-day holding time (115 days)
Mercury	9202-034-1	39-SS-02 RE	100	J	24	Exceeded holding time, LCS %r low (69%), MS %R low (57%)
Mercury	420 HC*7	39-SS-09	116.41	J	24	Analytical duplicate PRD high (76, 67%) and MS % R = (70%)
Mercury	420 HC*1	39-TP-1-S-2	40.36	J	24	Analytical duplicate PRD high (76, 67%) and MS % R = (70%)
Mercury	420 HC*2	39-TP-2-S-2	124.58	J	24	Analytical duplicate PRD high (76, 67%) and MS % R = (70%)
Mercury	9204-215-4	39-VS-12	72	J	24	Analytical duplicate RPD high (53%); MS %R high (454%)
Mercury	9204-215-2	39-VS-9	44	J	24	Analytical duplicate RPD high (53%); MS %R high (454%)
Mercury	9304-121-14	5D-VS-40	25	J	24	MS percent recoveries outside control limits (52,142%).
Mercury	9309-085-7	5D-VS-95	130	J	24	MS percent recoveries outside control limits (141%).

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Mercury	9302-197-2	5-VS-2	22	J	24	MS percent recoveries outside control limits (190%).
Mercury	9302-197-4	5-VS-4	80	J	24	MS percent recoveries outside control limits (190%).
PAHs (Carc) in mg/kg						
Benzo(a)Anthracene	9202-189-11	16-B-502-S-1	0.79	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Anthracene	9203-084-13	16-TP-505-S-1	0.5	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Anthracene	9203-084-19	16-TP-508-S-1	2.3	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Anthracene	9202-228-32	26-B-501-S-1	8.6	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(a)Anthracene	9202-228-33	26-B-501-S-1D	7.2	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Anthracene	9304-119-13	5D-VS-19	8.6	J	0.14	No surrogate recovery due to dilution and RPDs out of control limits.
Benzo(a)Anthracene	9304-121-10	5D-VS-37	1.2	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control.
Benzo(a)Anthracene	9304-121-20	5D-VS-46	0.84	J	0.14	No surrogate recovery due to dilution factor of 10 and RPDs out of control.
Benzo(a)Anthracene	9304-120-1	5D-VS-47	0.79	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control limits.
Benzo(a)Anthracene	9304-120-2	5D-VS-48	0.15	J	0.14	Surrogate recovery (147%), MS/MSD results (None - 84%).
Benzo(a)Anthracene	9205-173-1	5-DH-TP-1-S-1	1.1	J	0.14	MS compounds not recovered.
Benzo(a)Anthracene	9203-084-60	5-HA-504-S-1	4.7	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(a)Anthracene	99775-151	5-SS-6	50.92	J	0.14	Detected below quantification limit
Benzo(a)Anthracene	9302-197-16	5-VS-16	0.37	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Benzo(a)Anthracene	9302-197-2	5-VS-2	0.98	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Benzo(a)Anthracene	9305-234-3	8-VS-SC-7-S-1	3.1	J	0.14	1) Surrogate not recovered due to dilution and MS/MSD RPD above limits (67%) 2) No MS % R
Benzo(a)Pyrene	9202-189-11	16-B-502-S-1	0.86	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Pyrene	9203-084-13	16-TP-505-S-1	1.2	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Pyrene	9203-084-16	16-TP-507-S-1	0.18	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(a)Pyrene	9203-084-19	16-TP-508-S-1	1.8	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(a)Pyrene	9202-228-32	26-B-501-S-1	4.8	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(a)Pyrene	9202-228-33	26-B-501-S-1D	5.6	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Pyrene	9304-119-13	5D-VS-19	7.5	J	0.14	No surrogate recovery due to dilution and RPDs out of control limits.
Benzo(a)Pyrene	9304-121-10	5D-VS-37	1.2	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control.

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Benzo(a)Pyrene	9304-121-20	5D-VS-46	0.76	J	0.14	No surrogate recovery due to dilution factor of 10 and RPDs out of control.
Benzo(a)Pyrene	9304-120-1	5D-VS-47	1.2	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control limits.
Benzo(a)Pyrene	9304-120-2	5D-VS-48	0.17	J	0.14	Surrogate recovery (147%), MS/MSD results (0 - 84%).
Benzo(a)Pyrene	9205-173-1	5-DH-TP-1-S-1	1.1	J	0.14	MS compounds not recovered.
Benzo(a)Pyrene	9205-173-7	5-DH-TP-2-S-4	7	J	0.14	No surrogate recovery information available (diluted out).
Benzo(a)Pyrene	9203-084-60	5-HA-504-S-1	4.6	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(a)Pyrene	9203-238-27	5-HA-512-S-2	0.73	J	0.14	Extracted beyond 14-day holding time
Benzo(a)Pyrene	99775-151	5-SS-6	43.28	J	0.14	Detected below quantification limit
Benzo(a)Pyrene	9302-197-16	5-VS-16	0.6	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Benzo(a)Pyrene	9302-197-2	5-VS-2	1.07	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Benzo(a)Pyrene	9306-052-12	8-VS-SC-130	0.66	J	0.14	Surrogate recovery = 200%
Benzo(b)Fluoranthene	9202-189-11	16-B-502-S-1	0.52	J	0.14	Extracted beyond 14-day holding time
Benzo(b)Fluoranthene	9203-084-13	16-TP-505-S-1	1.7	J	0.14	Extracted beyond 14-day holding time
Benzo(b)Fluoranthene	9203-084-16	16-TP-507-S-1	0.23	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(b)Fluoranthene	9203-084-19	16-TP-508-S-1	1.6	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(b)Fluoranthene	9202-228-32	26-B-501-S-1	7	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(b)Fluoranthene	9202-228-33	26-B-501-S-1D	6.1	J	0.14	Extracted beyond 14-day holding time
Benzo(b)Fluoranthene	9202-228-42	26-B-502-S-1	0.15	J	0.14	Extracted beyond 14-day holding time
Benzo(b)Fluoranthene	9204-121-6	40-PR-HA-501-S	1.4	J	0.14	Surrogate %R = 140% (23-136%)
Benzo(b)Fluoranthene	9304-119-13	5D-VS-19	5.2	J	0.14	No surrogate recovery due to dilution and RPDs out of control limits.
Benzo(b)Fluoranthene	9304-121-10	5D-VS-37	1.6	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control.
Benzo(b)Fluoranthene	9304-121-20	5D-VS-46	1.4	J	0.14	No surrogate recovery due to dilution factor of 10 and RPDs out of control.
Benzo(b)Fluoranthene	9304-120-1	5D-VS-47	1.7	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control limits.
Benzo(b)Fluoranthene	9304-120-2	5D-VS-48	0.32	J	0.14	Surrogate recovery (147%), MS/MSD results (None - 84%).
Benzo(b)Fluoranthene	9205-173-1	5-DH-TP-1-S-1	0.91	J	0.14	MS compounds not recovered.
Benzo(b)Fluoranthene	9203-084-60	5-HA-504-S-1	3	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(b)Fluoranthene	9302-197-16	5-VS-16	1.76	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Benzo(b)Fluoranthene	9302-197-2	5-VS-2	0.73	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Benzo(b)Fluoranthene	9206-031-5	8-TP-8-S-1	1.3	J	0.14	No surrogate recovery information available (diluted out).
Benzo(b)Fluoranthene	9306-064-1	8-VS-SC-178	0.35	J	0.14	Surrogate recovery high - maybe high bias.
Benzo(b)Fluoranthene	9305-234-3	8-VS-SC-7-S-1	0.46	J	0.14	1) Surrogate not recovered due to dilution and MS/MSD RPD above limits (67%) 2) No MS %R
Benzo(k)Fluoranthene	9202-189-11	16-B-502-S-1	0.23	J	0.14	Extracted beyond 14-day holding time
Benzo(k)Fluoranthene	9203-084-13	16-TP-505-S-1	0.68	J	0.14	Extracted beyond 14-day holding time
Benzo(k)Fluoranthene	9203-084-19	16-TP-508-S-1	1	J	0.14	Extracted beyond 14-day holding time
Benzo(k)Fluoranthene	9202-228-32	26-B-501-S-1	2.3	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(k)Fluoranthene	9202-228-33	26-B-501-S-1D	2.6	J	0.14	Extracted beyond 14-day holding time
Benzo(k)Fluoranthene	9304-121-20	5D-VS-46	0.45	J	0.14	No surrogate recovery due to dilution factor of 10 and RPDs out of control.
Benzo(k)Fluoranthene	9304-120-1	5D-VS-47	0.45	J	0.14	No surrogate recovery due to dilution factor of 20 and RPDs out of control limits.
Benzo(k)Fluoranthene	9205-173-1	5-DH-TP-1-S-1	0.45	J	0.14	MS compounds not recovered.
Benzo(k)Fluoranthene	9203-084-60	5-HA-504-S-1	1.7	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Benzo(k)Fluoranthene	9203-238-27	5-HA-512-S-2	0.72	J	0.14	Extracted beyond 14-day holding time
Benzo(k)Fluoranthene	9302-197-16	5-VS-16	0.61	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Benzo(k)Fluoranthene	9302-197-2	5-VS-2	0.27	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Chrysene	9202-189-11	16-B-502-S-1	0.86	J	0.14	Extracted beyond 14-day holding time
Chrysene	9203-084-13	16-TP-505-S-1	0.68	J	0.14	Extracted beyond 14-day holding time
Chrysene	9203-084-16	16-TP-507-S-1	0.14	J	0.14	Extracted beyond 14-day holding time
Chrysene	9203-084-19	16-TP-508-S-1	3.4	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Chrysene	9202-228-32	26-B-501-S-1	14	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Chrysene	9202-228-33	26-B-501-S-1D	11	J	0.14	Extracted beyond 14-day holding time
Chrysene	9202-228-42	26-B-502-S-1	0.14	J	0.14	Extracted beyond 14-day holding time
Chrysene	9204-121-6	40-PR-HA-501-S	9	J	0.14	Surrogate %R = 140% (23-136%)
Chrysene	9304-119-13	5D-VS-19	6	J	0.14	No surrogate recovery due to dilution and RPDs out of control limits.
Chrysene	9304-121-20	5D-VS-46	1.3	J	0.14	No surrogate recovery due to dilution factor of 10 and RPDs out of control.
Chrysene	9304-120-2	5D-VS-48	0.2	J	0.14	Surrogate recovery (147%), MS/MSD results (0 - 84%).
Chrysene	9205-173-1	5-DH-TP-1-S-1	1.3	J	0.14	MS compounds not recovered.

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Chrysene	9203-084-60	5-HA-504-S-1	5.7	J	0.14	1) Extracted beyond 14-day holding time 2) Calibration range exceeded
Chrysene	99775-149	5-SS-4	59.9	J	0.14	Detected below quantification limit
Chrysene	99775-151	5-SS-6	87.84	J	0.14	Detected below quantification limit
Chrysene	9302-197-2	5-VS-2	1.44	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Chrysene	9305-234-3	8-VS-SC-7-S-1	5.2	J	0.14	1) Surrogate not recovered due to dilution and MS/MSD RPD above limits (67%) 2) No MS % R
Chrysene	9305-234-4	8-VS-SC-7-S-2	4.2	J	0.14	Surrogate recovery above limits. RPD outside.
Dibenzo(a,h)Anthracene	9202-189-11	16-B-502-S-1	0.54	J	0.14	Extracted beyond 14-day holding time
Dibenzo(a,h)Anthracene	9203-084-19	16-TP-508-S-1	0.52	J	0.14	Extracted beyond 14-day holding time
Dibenzo(a,h)Anthracene	9205-173-1	5-DH-TP-1-S-1	0.62	J	0.14	MS compounds not recovered.
Dibenzo(a,h)Anthracene	9203-084-60	5-HA-504-S-1	2	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9202-189-11	16-B-502-S-1	0.82	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9203-084-19	16-TP-508-S-1	1.4	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9203-219-7	26-SS-502	0.24	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9304-121-20	5D-VS-46	0.57	J	0.14	No surrogate recovery due to dilution factor of 10 and RPDs out of control.
Indeno(1,2,3-c,d)Pyrene	9304-120-2	5D-VS-48	0.19	J	0.14	Surrogate recovery (147%), MS/MSD results (0 - 84%).
Indeno(1,2,3-c,d)Pyrene	9205-173-1	5-DH-TP-1-S-1	0.44	J	0.14	MS compounds not recovered.
Indeno(1,2,3-c,d)Pyrene	9203-084-60	5-HA-504-S-1	3.6	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9203-238-25	5-HA-512-S-1	4.6	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9203-238-26	5-HA-512-S-1D	4.6	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9203-238-27	5-HA-512-S-2	0.33	J	0.14	Extracted beyond 14-day holding time
Indeno(1,2,3-c,d)Pyrene	9302-197-16	5-VS-16	0.93	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Indeno(1,2,3-c,d)Pyrene	9302-197-2	5-VS-2	0.71	J	0.14	MS/MSD RPDs (200%) and surrogate recovery (140%) above control limits.
Indeno(1,2,3-c,d)Pyrene	9305-234-4	8-VS-SC-7-S-2	0.57	J	0.14	Surrogate recovery above limits and MS/MSD RPD out
Indeno(1,2,3-c,d)Pyrene	9201-246-1	S-5	1.6	J	0.14	No surrogate
Indeno(1,2,3-c,d)Pyrene	9201-246-2	S-7	3.1	J	0.14	No surrogate
Semivolatiles in mg/kg						
Benzo(a)Anthracene	9209-314-7	5D-TPS-12-S-2	2	J	1	Detected below quantification limit
Benzo(a)Anthracene	99775-151	5-SS-6	50.92	J	1	Detected below quantification limit
Benzo(a)Pyrene	9209-314-7	5D-TPS-12-S-2	2.3	J	1	Detected below quantification limit
Benzo(a)Pyrene	99775-151	5-SS-6	43.28	J	1	Detected below quantification limit
Chrysene	9209-314-7	5D-TPS-12-S-2	7.4	J	1	Detected below quantification limit

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Chrysene	99775-149	5-SS-4	59.9	J	1	Detected below quantification limit
Chrysene	99775-151	5-SS-6	87.84	J	1	Detected below quantification limit
Chrysene	9206-031-2	8-TP-6-S-2	1.1	J	1	Detected below quantification limit
Total Petroleum Hydrocarbons (418.1) in mg/kg						
TPH-418	9207-140-1	16-B-501-S-1	1600	J	200	MS/MSD %R = 68%/18% (82-130%)
TPH-418	9202-189-11	16-B-502-S-1	2000	J	200	Blank spike %R = 132% (82-130%)
TPH-418	9202-209-2	16-B-504-S-1D	240	J	200	Blank spike %R = 154% (82-130%)
TPH-418	9202-228-32	26-B-501-S-1	2000	J	200	1) Blank spike %R = 140% (82-130%) 2) MS/MSD %R outside of limits (82-130%)
TPH-418	9202-228-33	26-B-501-S-1D	1700	J	200	1) Blank spike %R = 140% (82-130%) 2) MS/MSD %R outside of limits (82-130%)
TPH-418	9202-228-42	26-B-502-S-1	2200	J	200	1) Blank spike %R = 14% (82-130%) 2) MS/MSD %R outside of limits (82-130%)
TPH-418	9202-209-35	31-TP-508-S-2	200	J	200	1) Blank spike %R = 134-153% (82-130%) 2) MS/MSD %R outside of limits (82-130%)
TPH-418	9202-209-15	5-TP-505-S-1	190	J	200	1) Blank spike %R = 134-153% (82-130%) 2) MS/MSD %R outside of limits (82-130%)
TPH-418	9202-228-11	7-B-502-S-2	240	J	200	Blank spike %R = 140% (82-130%)
TPH-418	9306-234-1	8-VS-41	160	J	200	Laboratory duplicate RPD = 62%
TPH-418	9306-234-2	8-VS-42	210	J	200	Laboratory duplicate RPD = 62%
TPH-418	9306-234-3	8-VS-43	4000	J	200	Laboratory duplicate RPD = 62%
TPH-418	9305-234-7	8-VS-SC-11-S-1	1200	J	200	1) Analyzed past holding time MS/MSD RPD (42-80%) 2) MS/MSD %R outside of limits (82-130%)
Surface Water						
OCPesticides in µg/L						
Aldrin	99775-220	SW#2,SW#2	0.002	J	0.0001	Detected below quantification limit
Aldrin	99775-218	SW#3,SW#3	0.002	J	0.0001	Detected below quantification limit
Aldrin	99775-219	SW#4,SW#4	0.003	J	0.0001	Detected below quantification limit
Endrin	99775-219	SW#4,SW#4	0.004	J	0.0023	Detected below quantification limit
Semivolatiles in µg/L						
Bis(2-Ethylhexyl)Phthalate	9203-118-2	SW-2-3-92	3	J	3.6	Detected below quantification limit

	Lab-ID	Sample-ID	Conc.	Q	Screening Level	Reason for Qualification
Marine Sediments						
Explosives in µg/kg						
2,6-Dinitrotoluene	B142F	SDM-5	24	NJ	12.6	1) Continuing calibration criteria not met for surrogate 1,5-DNN 2) 1,5-DNN surrogate not recovered due to matrix interference
2,6-Dinitrotoluene	B142G	SDM-6	19	NJ	12.6	1) Continuing calibration criteria not met for surrogate 1,5-DNN 2) 1,5-DNN surrogate not recovered due to matrix interference
2,6-Dinitrotoluene	B142H	SDM-7	25	NJ	12.6	1) Continuing calibration criteria not met for surrogate 1,5-DNN 2) 1,5-DNN surrogate not recovered due to matrix interference
PAHs (Non-Carc) in µg/kg						
Phenanthrene	B142I	SDM-8	220	J	100	MS/MSD not recovered
Semivolatiles in µg/kg						
Acenaphthene	B142F	SDM-5	14	J	16	Detected below reporting limit
Benzo(g,h,i)Perylene	B142I	SDM-8	100	J	31	Calibration criteria not met
Dibenzo(a,h)Anthracene	B142I	SDM-8	34	J	12	Calibration criteria not met
Fluoranthene	B142F	SDM-5	390	J	160	Calibration criteria not met (28.4%D)
Fluoranthene	B142G	SDM-6	490	J	160	Calibration criteria not met (28.4%D)

Notes:

J	Estimated value
R	Rejected
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
MS/MSD	Matrix Spike/Matrix Spike Duplicate
%R	Percent Recovery
%D	Percent Difference
RPD	Relative Percent Difference
CCV	Continuing Calibration Verification
QL	Quantification Limit
QC	Quality Control
Dup	Duplicate
Q	Qualifier

Table 1-1
Status of Site Areas

Area	Remedial Investigation Characterization (1992-1993)	Interim Source Removal (1990-1993)	Additional Characterization (1999-2002)	Additional Interim Source Removal (1999-2002)
1/2/3/4	X	X	X	X
5		X	X	X
6	X	X		X
7	X		X	X
8		X		X
10	X	X	X	X
11	X			X
12	X			
16	X			
18	X	X	X	X
19		X	X	X
20		X		X
22 (AP-B)	X	X		X
23 (AP-G)	X			
24A	X	X		X
25	X	X	X	X
26	X	X	X	X
30		X		X
31	X	X	X	X
35		X		
36		X	X	X
38	X	X	X	X
39		X	X	
AP-A	X			
AP-C	X			X
AP-D	X			
AP-E	X			
AP-F	X		X	X
Site Reference	X		X	X
Historical RR Grades	X		X	X
Sequalitchew Creek NGRR	X		X	X
Miscellaneous			X	X

Notes:
Areas 20 and 40 (Parcel 2) achieved No Further Action status in 1993 and 1996, respectively.
Areas 15 and 32 within the CDB underwent Independent Cleanup Actions (1981 to 1988).
Areas outside the CDB that are/will be the subject of other reports: 9, 13, 14, 17, 21, 24B, 27, 28, 29, 33, 34, and 37.
Areas outside the CDB that underwent Independent Cleanup Actions (1981 to 1988): 9, 21, 27, 28, 29, and 33.
Areas outside the CDB that achieved No Further Action status: 21, 27, 28, and 29.
CDB - Consent Decree Boundary
NGRR - Narrow Gauge Railroad
RR - railroad

Table 2.2-1
Summary Statistics of Soil Quality in Area Background Samples

	Range of Concentrations	Maximum Detection	Detection Frequency	Arithmetic Mean	Arithmetic Std. Dev.	Nat. Log. Mean	Nat. Log. Std. Dev.
Metal (total) in mg/kg							
Aluminum	11,000 to 33,000	33,000	13/13	19,462	6,936	9.82	0.34
Antimony	0.28 UJ to 3	3	9/13	1.1	0.8	-0.35	0.92
Arsenic	9.1 to 36	36	20/20	20.7	7.6	2.96	0.40
Beryllium	0.22 to 0.42	0.42	10/10	0.29	0.07	-1.25	0.22
Cadmium	0.22 J to 1.2 J	1.2	10/10	0.60	0.3	-0.66	0.59
Chromium	8 to 24	24	13/13	15.5	4.5	2.70	0.29
Copper	15 to 33	33	10/10	22.5	7.4	3.06	0.33
Lead	6.4 U to 57	57	12/13	28.2	16	3.05	0.76
Mercury	0.083 U to 0.2	0.2	3/10	0.17	0.06	-2.66	0.63
Nickel	11 to 22	22	10/10	16.6	3.6	2.79	0.24
Selenium	0.29 UJ to 0.34 J	0.34	1/10	0.34	0.06	-1.77	0.25
Silver	0.04 J to 0.12	0.12	10/10	0.08	0.03	-2.67	0.43
Thallium	0.29 U to 0.35 U	N/A	0/10	N/A	0.01	-1.85	0.06
Zinc	27 to 54	54	13/13	38.4	7.6	3.63	0.20
Explosives in mg/kg							
Monomethylamine nitrate	5.9 U to 7.6 U	N/A	0/10	3.16	0.26	1.15	0.08
Nitroglycerine	0.24 U to 0.31 U	N/A	0/10	0.13	0.01	-2.06	0.08
Nitrobenzene	0.07 U to 0.091 U	N/A	0/10	0.04	0.00	-3.29	0.08
1,3-Dinitrobenzene	0.047 U to 0.061 U	N/A	0/10	0.03	0.00	-3.68	0.08
1,3,5-Trinitrobenzene	0.035 U to 0.046 U	N/A	0/10	0.02	0.00	-3.97	0.08
2,4-Dinitrotoluene	0.0071 U to 0.0092 U	N/A	0/10	0.00	0.00	-5.58	0.08
2,6-Dinitrotoluene	0.0071 U to 0.0092 U	N/A	0/10	0.00	0.00	-5.58	0.08
2,4,6-Trinitrotoluene	0.0035 U to 0.0046 U	N/A	0/10	0.00	0.00	-6.27	0.08
PAHs (noncarcinogenic) in mg/kg							
Acenaphthene	0.2 U to 0.46	0.46	1/10	0.14	0.11	-2.10	0.47
Acenaphthylene	0.2 U to 0.25 U	N/A	0/10	0.11	0.01	-2.25	0.07
Anthracene	0.0099 U to 0.013 U	N/A	0/10	0.01	0.00	-5.24	0.09
Benzo(g,h,i)perylene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
Fluoranthene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
Fluorene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
Naphthalene	0.099 U to 0.13 U	N/A	0/10	0.05	0.00	-2.94	0.09
Phenanthrene	0.0099 U to 0.013 U	N/A	0/10	0.01	0.00	-5.24	0.09
Pyrene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
PAHs (carcinogenic) in mg/kg							
Benzo(a)anthracene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
Benzo(a)pyrene	0.02 U to 0.025	0.025	1/10	0.01	0.00	-4.47	0.28
Benzo(b)fluoranthene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
Benzo(k)fluoranthene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
Chrysene	0.01 U to 0.16	0.16	7/10	0.04	0.05	-3.63	1.02
Dibenzo(a,h)anthracene	0.04 U to 0.052 U	N/A	0/10	0.02	0.00	-3.84	0.08
Indeno(1,2,3-c,d)pyrene	0.02 U to 0.025 U	N/A	0/10	0.01	0.00	-4.55	0.07
TPH in mg/kg							
TPH (418.1)	24 U to 31 U	N/A	0/10	12.75	1.06	2.54	0.08
Semivolatile organics in mg/kg							
bis(2-Ethylhexyl)phthalate	0.043 J to 0.71	0.71	4/11	0.15	0.19	-2.21	0.68
	No other constituents detected above detection limit						
Volatile organics in mg/kg	No constituents detected						
PCBs in mg/kg	No constituents detected						
Organochlorine pesticides in mg/kg	No constituents detected						
Organophosphorus pesticides in mg/kg	No constituents detected						

Notes:
J - estimated value
mg/kg - milligram per kilogram
N/A - not sufficient detections to calculate
PAH - polycyclic aromatic hydrocarbons
PCB - polychlorinated biphenyl
TPH - total petroleum hydrocarbons
U - not detected a detection limit indicated
UJ - not detected at estimated detection limit indicated

Table 2.2-2
90th Percentile Metals Concentrations in Site Area and Regional Background Samples

	Concentration in mg/kg (ppm)						
	RI Site Area Background[a,b]				Puget Sound[c]	Northern Puget Sound[d]	Western United States[e]
	n-censored	n-uncensored	Mean	90th %			
Aluminum	0	13	19,462	29,498	32,600		
Antimony	2	11	1.1	2.5			0.62
Arsenic	0	20	21	33	7.0		
Beryllium	0	10	0.29	0.39	0.6		
Cadmium	0	10	0.60	1.2	1.0		
Chromium	0	13	16	22	48		
Copper	0	10	23	33	36		
Lead	1	12	28	51	24		
Mercury	7	3	0.17	0.20	0.07		
Nickel	0	10	17	22	48		
Selenium	10	1	0.34	0.32			0.34
Silver	0	10	0.08	0.13		0.5	
Thallium	10	0	N/A	N/A			9.8
Zinc	0	13	38	49	85		

[a]Source: Hart Crowser 1987 and current study
[b]Source: Hart Crowser 1987 and current study
[c]Source: Ecology 1994
[d]Source: Harper & Owes 1985; METRO (unpublished)
[e]Source: Shacklette & Boerngen 1984

Notes:
mg/kg - milligram per kilogram
PPM - parts per million
RI - remedial investigation

Table 3.1-1
Summary of Hydraulic Conductivity (K) Estimates

Water Table Aquifer

Site-Specific Data:

Well No.	Method	Estimated K in cm/sec
MW-12	Short-term pumping test	2×10^{-2}
MW-7	Short-term pumping test	7×10^{-2}
MW-8	Slug test	2×10^{-3}
MW-14	Slug test	1×10^{-2}
MW-22	Slug test	2×10^{-3}
MW-24	Slug test	2×10^{-3}
Various[a]	Grain size data	5×10^{-1} to 4

Regional Data:

Well No.	Method	Estimated K in cm/sec
City of DuPont No. 1[b]	Pumping test	4×10^{-3}
PW-1A[c]	Pumping test	9×10^{-3} to 2×10^{-2}

Best Estimate Range[d] for Water Table Aquifer:	5×10^{-3} to 5×10^{-2}

Semi-confined Sea Level Aquifer (East of "Cutoff")

Site-Specific Data:

Well No.	Method	Estimated K in cm/sec
MW-18	Slug test	4×10^{-3}

Regional Data:

Well No.	Method	Estimated K in cm/sec
Bell Hill No. 1[e]	Pumping test	5×10^{-2}
Bell Hill No. 2[f]	Pumping test	4×10^{-2}
Weyerhaeuser No. 3[b]	Pumping test	1×10^{-2}
Fort Lewis No. 18[b]	Pumping test	6×10^{-3}

Best Estimate Range[d] for Semi-confined Sea Level Aquifer:	1×10^{-2} to 5×10^{-2}

Unconfined Sea Level Aquifer (West of "Cutoff")

Site-Specific Data:

Well No.	Method	Estimated K in cm/sec
MW-2	Slug test	3×10^{-3}
MW-4	Slug test	2×10^{-3}
MW-6	Slug test	4×10^{-2}
MW-16	Slug test	2×10^{-2}
Various[a]	Grain size data	2×10^{-1} to 1

Regional Data:

Well No.	Method	Estimated K in cm/sec
None[c]	Literature review	4×10^{-1} to 4

Best Estimate Range[d] for Unconfined Sea Level Aquifer:	1×10^{-2} to 1

Table 3.1-1 (Continued)
Summary of Hydraulic Conductivity (K) Estimates

[a]K estimates from grain size data are presented in Table 3.1-2.
[b]From Associated Earth Sciences 1984.
[c]From Woodward-Clyde Consultants 1990.
[d]The Best Estimate Range represents the best estimate of the reasonable range of aquifer K values based on all available data.
[e]From Hart Crowser 1988b.
[f]Pumping test conducted in Bell Hill No. 1 during drilling of Bell Hill No. 2 to deeper aquifer (from Hart Crowser 1990).

Note:
cm/sec - centimeter per second

Table 3.1-2
Hydraulic Conductivity (K) Estimates Based on Application of Kozeny-Carmen Equation to Grain Size Data

Sample No.	Sample Description From Grain Size	d50 in cm	Estimated K in cm/sec assuming	
			porosity = 0.2	porosity = 0.35
Water Table Aquifer				
MW-13, S-3	Slightly silty, very sandy GRAVEL	0.7	3	24
MW-20, S-17	Very gravelly SAND	0.178	0.2	2
MW-21, S-17	Slightly silty, very sandy GRAVEL	0.484	1	11
MW-22, S-20	Slightly silty, very sandy GRAVEL	0.807	4	32
MW-24, S-11	Slightly silty, very sandy GRAVEL	0.383	0.9	7
	Geometric Mean of Values:		1.2	10
Unconfined Sea Level Aquifer (West of Cutoff)				
MW-4, S-8	Gravelly SAND	0.1	0.06	0.5
MW-5, S-8	Slightly silty, gravelly SAND	0.3	0.5	4
	Geometric Mean of Values:		0.2	1

Notes:

Grain size data for wells MW-20 through MW-24 presented in Appendix D.

Grain size data for MW-13, MW-4, and MW-5 from Hart Crowser 1988a.

Kozeny Carmen Equation is $(\rho g/1.8\mu) * (d50)^2 * [n^3/(1-n)^2]$ (Freeze and Cherry 1979),

where ρ = density of water in kg/m^3; g = gravitational acceleration in m/sec^2; 1.8 is units correction factor;

n = porosity; d50 is median grain size in cm. At 15°C, $\rho g/1.8\mu$ is 478 $cm^{-1}sec^{-1}$.

cm/sec - centimeter per second

Table 3.1-1 (Continued)
Summary of Hydraulic Conductivity (K) Estimates

[a]K estimates from grain size data are presented in Table 3.1-2.
[b]From Associated Earth Sciences 1984.
[c]From Woodward-Clyde Consultants 1990.
[d]The Best Estimate Range represents the best estimate of the reasonable range of aquifer K values based on all available data.
[e]From Hart Crowser 1988b.
[f]Pumping test conducted in Bell Hill No. 1 during drilling of Bell Hill No. 2 to deeper aquifer (from Hart Crowser 1990).

Note:
cm/sec - centimeter per second

Table 3.2-1
Summary of Groundwater Sampling (by Location) Conducted to Date

	Pre-RI							RI											
Sampling Location	Dec-86	Mar-88	Jun-88	Oct-88	Jan-89	Nov-89	Aug-90	Mar-92	Jun/ Jul-92	Sep-92	Dec-92	Jan-93	Apr-93	Jul-93	Oct-93	Jan-94	Apr-94	Jul-94	Oct-94
MW-1		X	X	X	X	X	X	X	X	X	X								
MW-2		X	X	X	X			X	X	X	X								
MW-3		X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X
MW-4		X	X	X	X			X	X	X	X								
MW-5		X	X	X	X			X	X	X	X								
MW-6		X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X
MW-7		X	X	X	X			X	X	X	X								
MW-8		X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X
MW-9		X	X	X	X			X	X	X	X								
MW-11		X	X	X	X			X	X	X	X								
MW-12		X	X	X	X			X	X	X	X								
MW-13		X	X	X	X		X	X	X	X	X								
MW-14		X	X	X	X			X	X	X	X								
MW-15		X	X		X	X	X	X	X	Dry	X	X	X	X	X	X	X	Dry	Dry
MW-16		X	X	X	X	X		X	X	X	X								
MW-17		Dry			X	X	X	X	X	X	X								
MW-18						X	X	X	X	X	X								
MW-19						X	X	X	X	X	X		X	X	X	X	X	X	X
MW-20								X	X	X	X								
MW-21								X	X	X	X								
MW-22								X	X	X	X		X	X	X	X	X	X	X
MW-24								X	X	X	X								
MW-26									X	X	X	X							
MW-27								X	X	Dry	X	X	X	X	Dry	X	X	Dry	Dry
7-B-503									X										
SEEP 1						X	X	X	X	X	X		X	X	X	X	X	X	X
SEEP 2						X	X	X	X	X	X								
SPR-4	X	X	X	X	X			X	X	X	X								
W-1																			
W-2																			
W-3															X				

Table 3.2-1 (Continued)
Summary of Groundwater Sampling (by Location) Conducted to Date

Sampling Location	RI																
	Jan-95	Apr-95	Jul-95	Oct-95	Jan-96	Apr-96	Jul-96	Oct-96	Jun/ Jan-97	Apr-97	Jul-97	Oct-97	Mar-98	Mar-99	Mar-00	Mar-01	Mar-02
MW-1																	
MW-2																	
MW-3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Dry	X	X
MW-4																	
MW-5																	
MW-6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-7																	
MW-8	X	X	X	X	X	X	X	X	X	X	X	X					
MW-9																	
MW-11																	
MW-12																	
MW-13																	
MW-14																	
MW-15	X	X	Dry	Dry	X	X	Dry	Dry	X	X	Dry	Dry					
MW-16																	
MW-17																	
MW-18																	
MW-19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-20																	
MW-21																	
MW-22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-24																	
MW-26																	
MW-27	X	X	Dry	Dry	X	Dry	Dry	Dry	X	Dry	Dry	Dry					
7-B-503																	
SEEP 1	X	X	X	X	X	X	X	X	X	X	X	X					
SEEP 2																	
SPR-4																	
W-1		X			X	X	X	X	X	X	X	X					
W-2		X			X	X	X	X	X	X	X	X	X	X	X	X	X
W-3					X												

Notes:
RI - remedial investigation
X - location sampled

Table 3.2-2
Number of Usable Data Points (Analyses) for Each Groundwater Sampling Location

Location	Nitrate	Total Lead Only	14 Total Metals	Dissolved Lead Only	14 Dissolved Metals	NAX	NG	MMAN	TPH	PAHs	PCBs	OC Pesticides	OP Pesticides	VOCs	SVOCs
MW-1	10		4	4	4	8	6	7	4	4				[3]	
MW-2	8		4	3	4	6	4	5	4	4	4	4	4	4	4
MW-3	9		4	3	4	29	5	6	4	4	4	4	4	6	4
MW-4	8		4	3	4	6	4	5	4	4	4			[1]	
MW-5	8		4	3	4	6	4	5	4	4	4	4	4	[1]	
MW-6	10		4	3	4	30	5	6	4	4				[2]	
MW-7	8		4	3	4	6	4	5	4	4	4			[1]	
MW-8	9	2	4	3	4	26	5	6	4	4	4			4	4
MW-9	8		4	3	4	6	4	5	4	4				4	4
MW-11	9		4	3	4	6	4	5	4	4				4	4
MW-12	9		4	3	4	6	4	5	4	4		4	4	4	4
MW-13	10		4	3	4	7	5	6	4	4				[2]	
MW-14	8		4	3	4	6	4	5	4	4				[1]	
MW-15	9	1	4	3	4	18	4	5	3	4	2			4	2
MW-16	9	2	4	4	4	7	5	6	4	4	4			5	4
MW-17	5		4	1	4	7	5	5	4	4				[2]	
MW-18	6		4	1	4	6	4	4	4	4				[2]	
MW-19	6		4	1	4	30	4	4	4	4	4			[2]	
MW-20	4		4		4	4	4	4	4	4					
MW-21	4		4		4	4	4	4	4	4					
MW-22	4		4		4	28	4	4	4	4					
MW-24	4		4		4	4	4	4	4	4	4				
MW-27	2		1		2	12	2	2	1	1					
7-B-503	0		1		1	1	0	0	0	1					
SEEP 1	6	1	4	1	4	25	4	4	4	4	4				
SEEP 2	6		4	1	4	6	4	4	4	4	4				
SPR-4	9	1	4	3	4	6	4	5	4	4				4	4
W-1						7									
W-2						13									
W-3						2									

Notes:

Blanks indicate constituent was not proposed for analysis at that sampling location in the RI/FS Management Plan.

Numbers in brackets [ ] are usable data points for constituents not proposed for analysis in RI/FS Management Plan, but analyses were conducted.

Total number of total or dissolved lead analyses are equal to the sum of the lead only (pre-RI) and 14 metals (RI) numbers of analyses.

Table 3.2-2 (Continued)
Number of Usable Data Points (Analyses) for Each Groundwater Sampling Location

FS - feasibility study
MMAN - monomethylamine nitrate
NAX - nitroaromatic explosives
NG - nitroglycerine
OC - organochlorine
OP - organophosphorus
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
RI - remedial investigation
SVOC - semivolatile organic compound
TPH - total petroleum hydrocarbons
VOC - volatile organic compound

Table 4.1-1
Number of Usable Data Points (Analyses) for Each Surface Water Sampling Location

Location	Nitrate	Total Lead Only	14 Total Metals	Dissolved Lead Only	14 Dissolved Metals	NAX	NG	MMAN	TPH	PAHs	PCBs	OC Pesticides	OP Pesticides	VOCs	SVOCs
Sequalitchew Creek															
SW-3	4	1	4	2	4	6	4	5	4	4		[1]		[1]	[1]
SW-4	2	1	2	2	2	3	3	4	2	2		[1]		[1]	[1]
Old Fort Lake															
SW-5	4	1	4	2	4	6	4	5	4	4				[1]	[1]
SW-6	4	1	4	2	4	6	4	5	4	4				[1]	[1]
SW-7	4	1	4	2	4	6	4	5	4	4				[1]	[1]

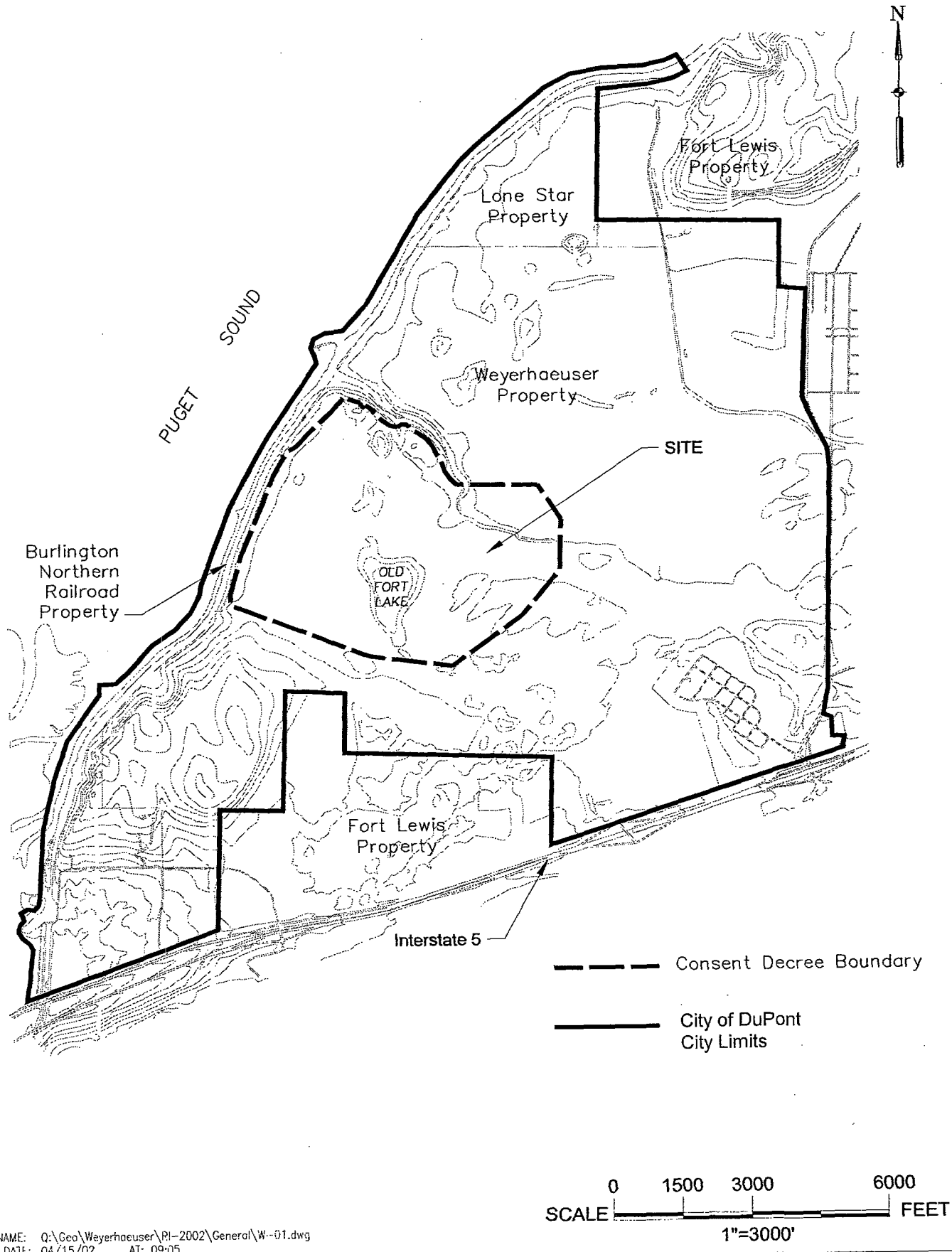
Notes:

Blanks indicate constituent was not proposed for analysis at that sampling location in the RI/FS Management Plan.

Numbers in brackets [ ] are usable data points for constituents not proposed for analysis in RI/FS Management Plan, but analyses were conducted.

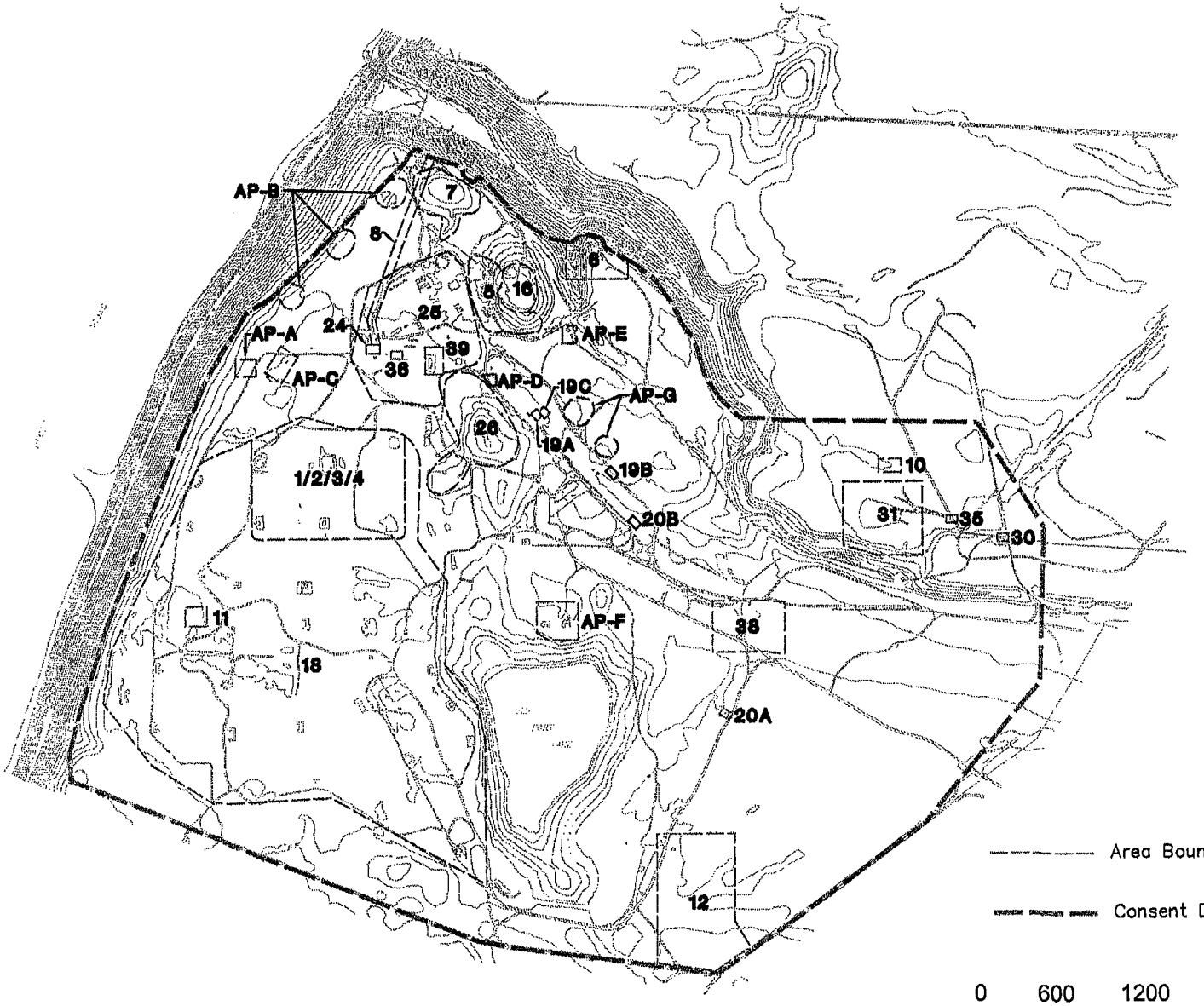
Total number of total or dissolved lead analyses are equal to the sum of the lead only (pre-RI) and 14 metals (RI) numbers of analyses.

FS - feasibility study
MMAN - monomethylamine nitrate
NAX - nitroaromatic explosives
NG - nitroglycerine
OC - organochlorine
OP - organophosphorus
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
RI - remedial investigation
SVOC - semivolatile organic compound
TPH - total petroleum hydrocarbons
VOC - volatile organic compound



FILENAME: Q:\Geo\Weyerhaeuser\PI-2002\General\W-01.dwg
EDIT DATE: 04/15/02 AT: 09:05

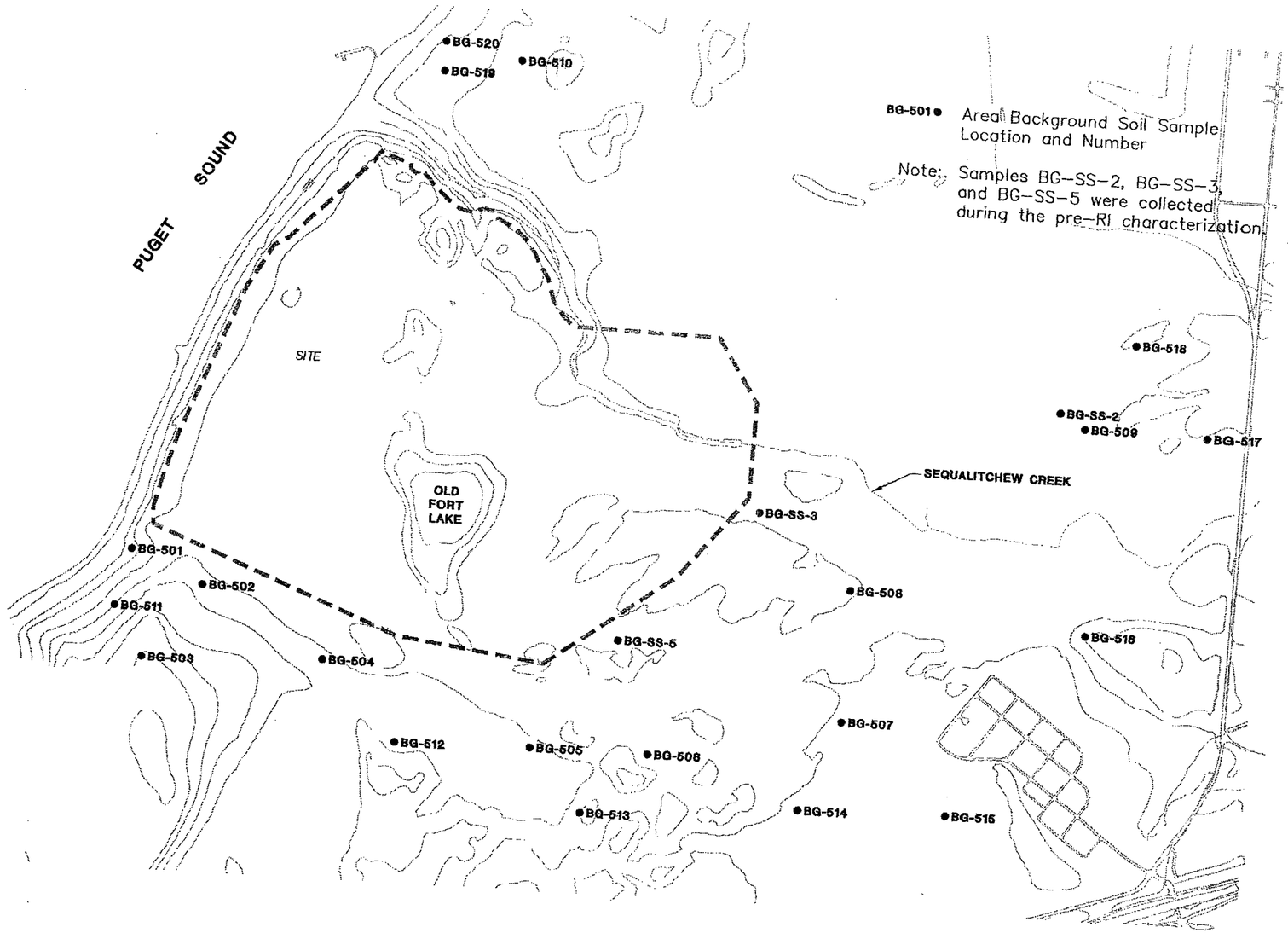
Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Vicinity Map	Figure 1-1
URS			



FILENAME: O:\Geo\Weyerhaeuser\RI-2002\General\W-02.dwg
EDIT DATE: 04/15/02 AT: 12:42

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Former DuPont Works Site Map RI and Interim Source Removal Areas	Figure 1-2
URS			

EJC 6/28/94 1=1500 HC.pcp
353405A2



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\General\FIG2-2-1.dwg
EDIT DATE: 04/15/02 AT: 09:08

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area Background Soil Sampling Location Plan	Figure 2.2-1
URS			

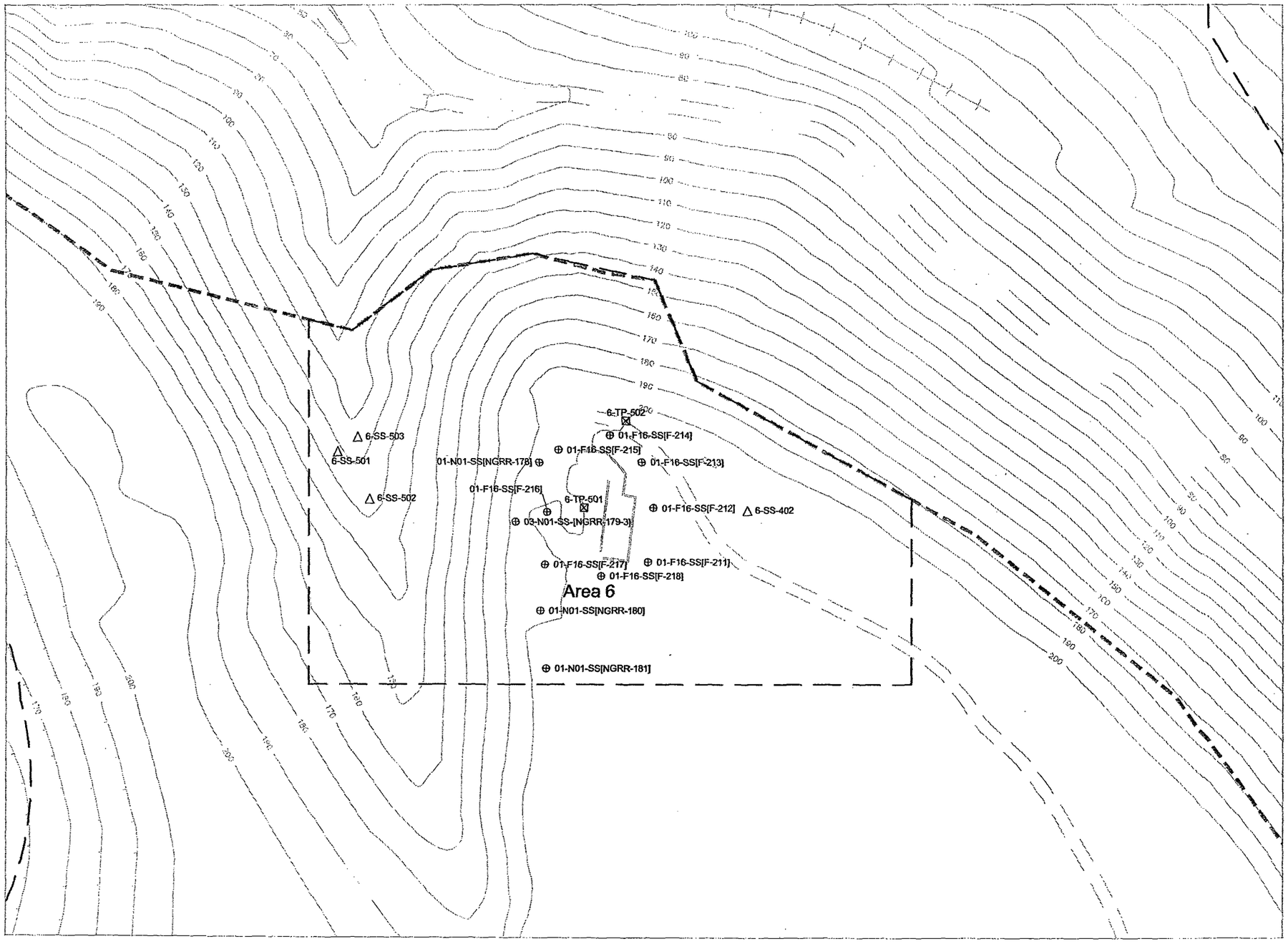
Exploration	Exploration Symbol	Exploration No. (1)
Soil Boring Sample	●	AREA NO.–B–___
Test Pit Sample	⊠	AREA NO.–TP–___
Hand–Augered Boring Sample	○	AREA NO.–HA–___
Surface Sample	△	AREA NO.–SS–___
Verification Sample	⊕	AREA NO.–VS–___
Monitoring Well	⌖	MW–___
Trench	⧄	AREA NO.–TR–___
Railroad Location Sample	⊗	AREA NO.–RR–___
Lead Reference Sample	◒	AREA NO.–LR–___
Utility Corridor Sample	Ⓤ	AREA NO.–UC–___
Unknown Sample	◇	AREA NO.–S–___

Notes:

1. Exploration number consists of the area number–exploration type–discrete number for the exploration. The addition of a GS designation (–TP–GS– or –SS–GS–) to the exploration number indicates a grid sampling location. Symbol types do not differentiate between pre–RI and RI explorations.
2. Area 18 has four maps, each map delineating the locations of a specific sample type.

FILENAME: Q:\Geo\Weyerhaeuser\RI–2002\General\W–03.dwg
DATE: 04/15/02 AT: 09:06

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Legend for Area-Specific Soil Location Maps	Figure 2.3-1
URS			



N

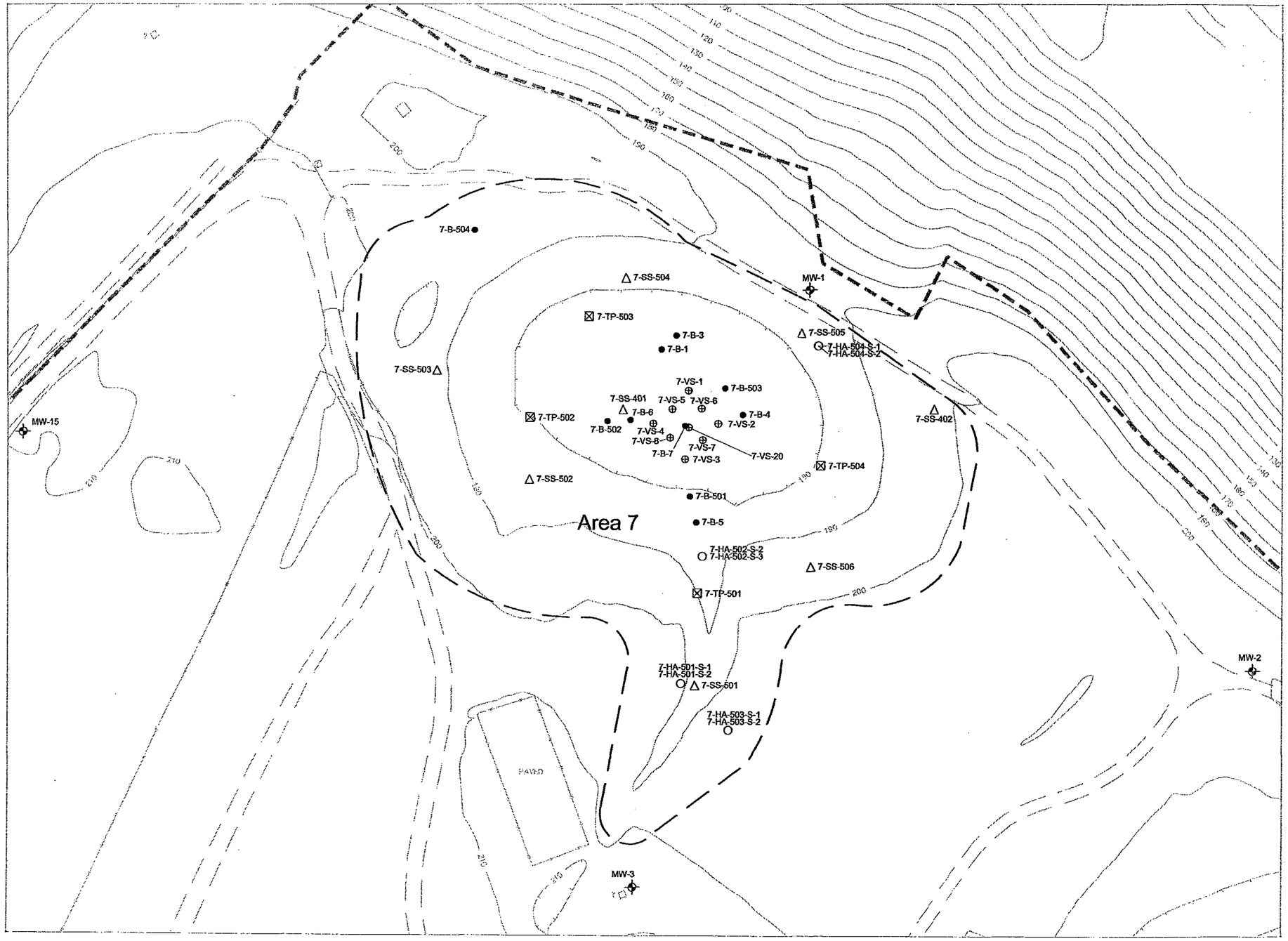
Legend

- Surface Sample Location (31-SS-632)
- Test Pit Sample Location (31-TP-506)
- Verification Sample Location (31-VS-501)
- Contour Line (ft) (220)
- Road or Trail
- Area Boundary
- Consent Decree Boundary

SCALE 0 40 80 160 FEET
1"=80'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 06\Area-6-rev1.dwg
EDIT DATE: 04/15/02 AT: 09:15

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 6 Soil Sample Locations	Figure 2.4-1
URS			



N

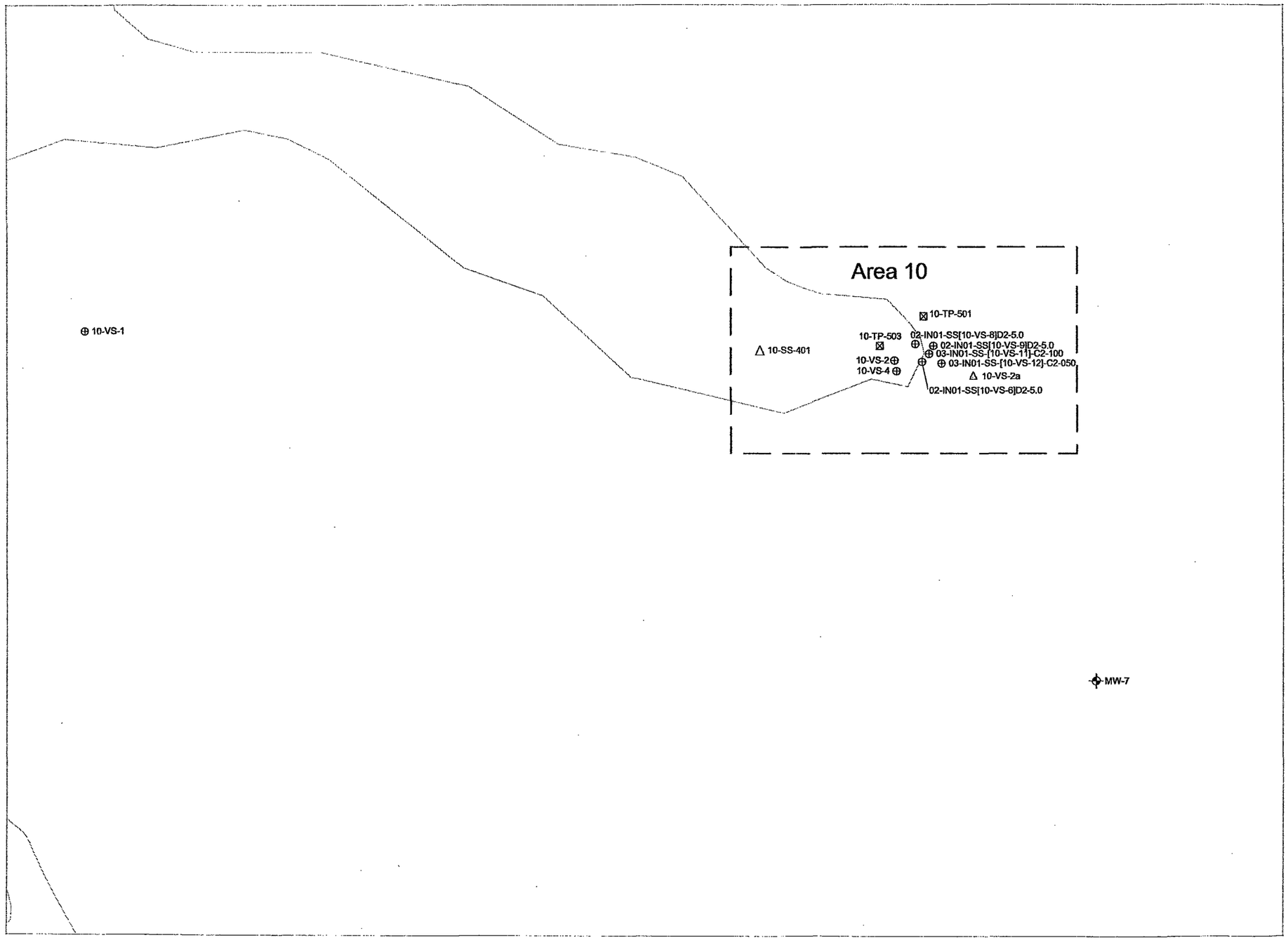
Legend

- MW-7 — Monitoring Well Location
- 7-B-504 — Boring Sample Location
- 7-HA-502 — Hand Auger Sample Location
- 7-SS-632 — Surface Sample Location
- 7-TP-506 — Test Pit Sample Location
- 7-VS-129 — Verification Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Consent Decree Boundary

SCALE 0 40 80 160 FEET
1"=80'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 07\Area-7-Rev1.dwg
EDIT DATE: 04/15/02 AT: 09:20

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 7 Soil Sample Locations	Figure 2.5-1
URS			



N

Legend

- MW-7 — Monitoring Well Location
- 7-SS-632 — Surface Sample Location
- 7-TP-506 — Test Pit Sample Location
- 7-VS-129 — Verification Sample Location
- 220 — Contour Line (ft)
- Area Boundary

SCALE 0 25 50 100 FEET
1"=50'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 10\Area-10-rev1.dwg
EDIT DATE: 04/09/02 AT: 08:48

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 10 Soil Sample Locations	Figure 2.6-1
URS			

N

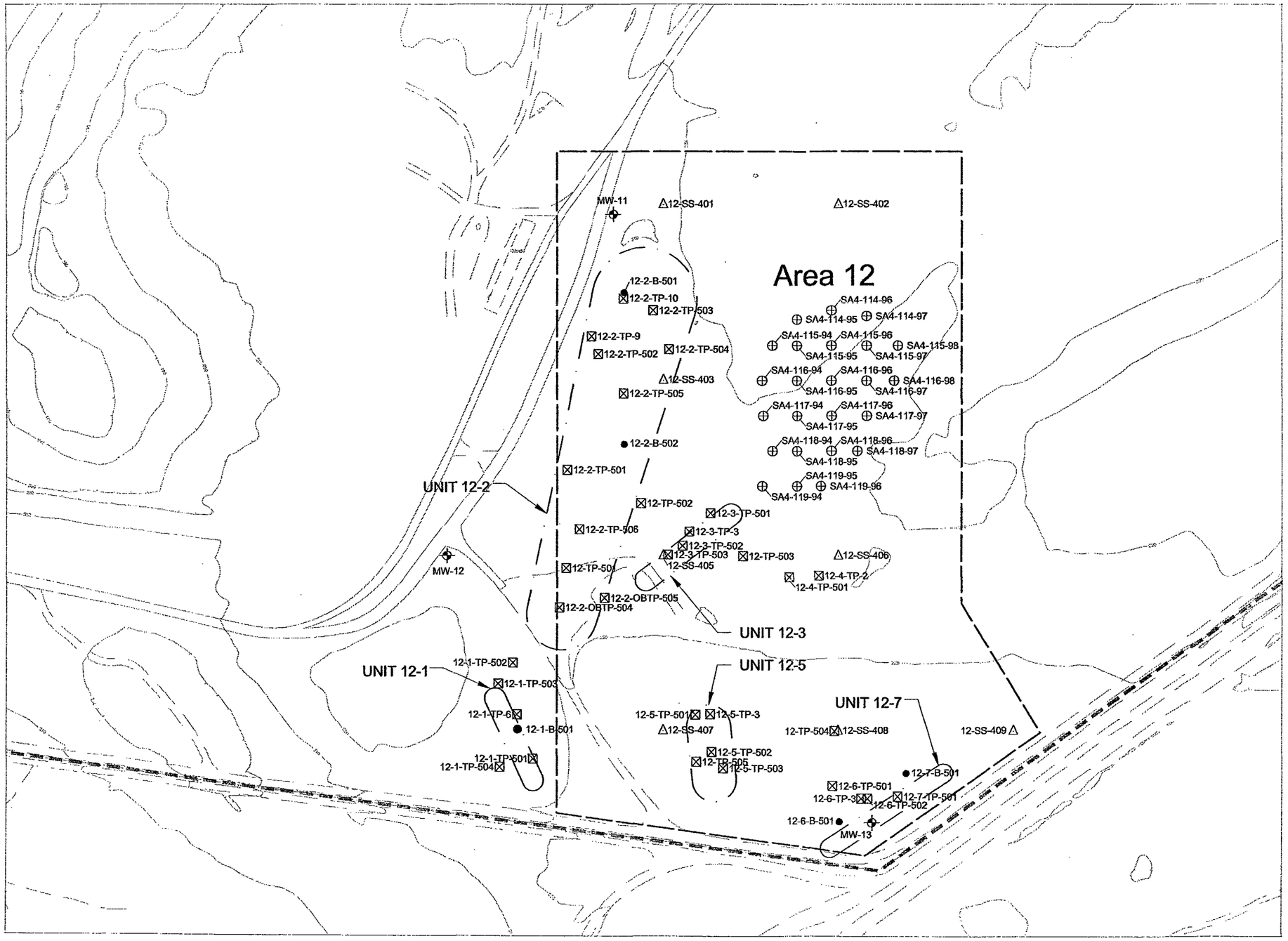
Legend

- 11-B-501 — Boring Sample Location
- 11-TP-502 — Test Pit Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Fence

SCALE 0 25 50 100 FEET
1"=50'

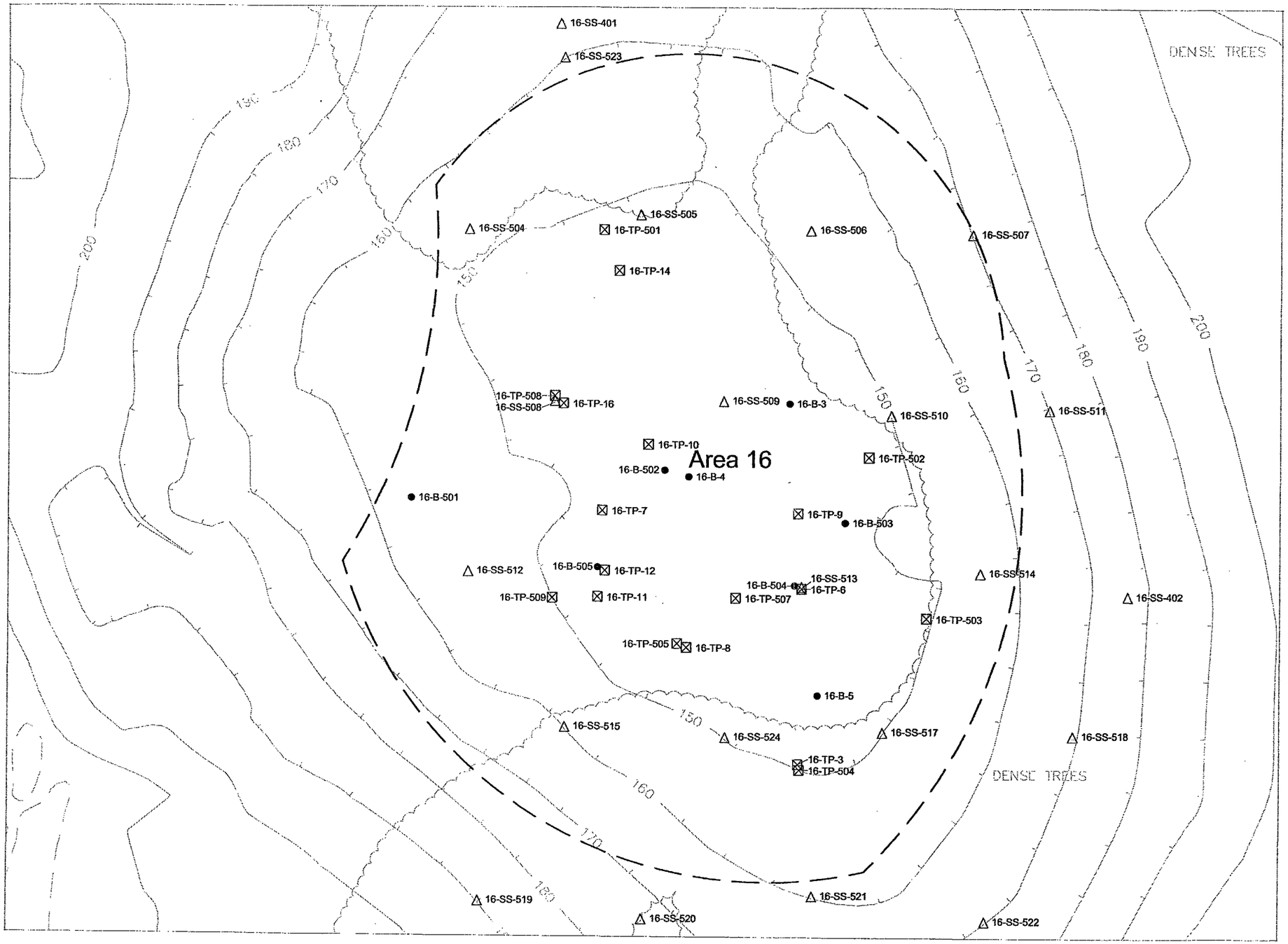
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 11\Area-11 Rev1.dwg
EDIT DATE: 04/09/02 AT: 08:54

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 11 Soil Sample Locations	Figure 2.7-1
URS			



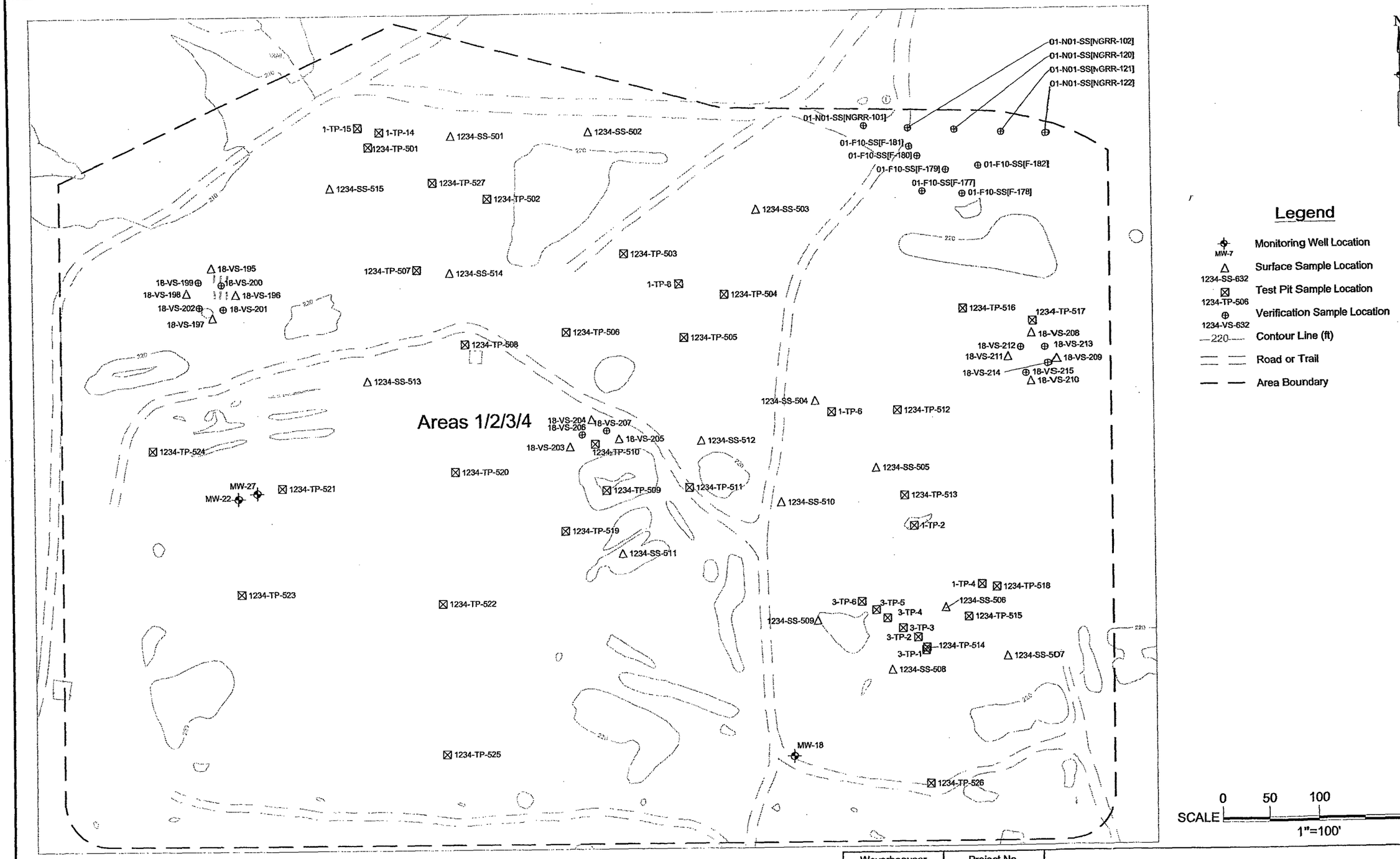
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 12\Area-12 Rev1.dwg
EDIT DATE: 04/15/02 AT: 09:27

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 12 Soil Sample Locations	Figure 2.8-1
URS			



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 16\Area 16-Rev 3.dwg
EDIT DATE: 04/15/02 AT: 11:10

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 16 Soil Sample Locations	Figure 2.9-1
URS			



Weyerhaeuser DuPont, WA	Project No. 54-974033NC
URS	

Areas 1/2/3/4
Soil Sample Locations

Figure 2.10-1

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 1234\Area-1234-Rev2.dwg
EDIT DATE: 04/09/02 AT: 08:55

N

Legend

- MW-7 — Monitoring Well Location
- 18-MH-1 — Boring Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary

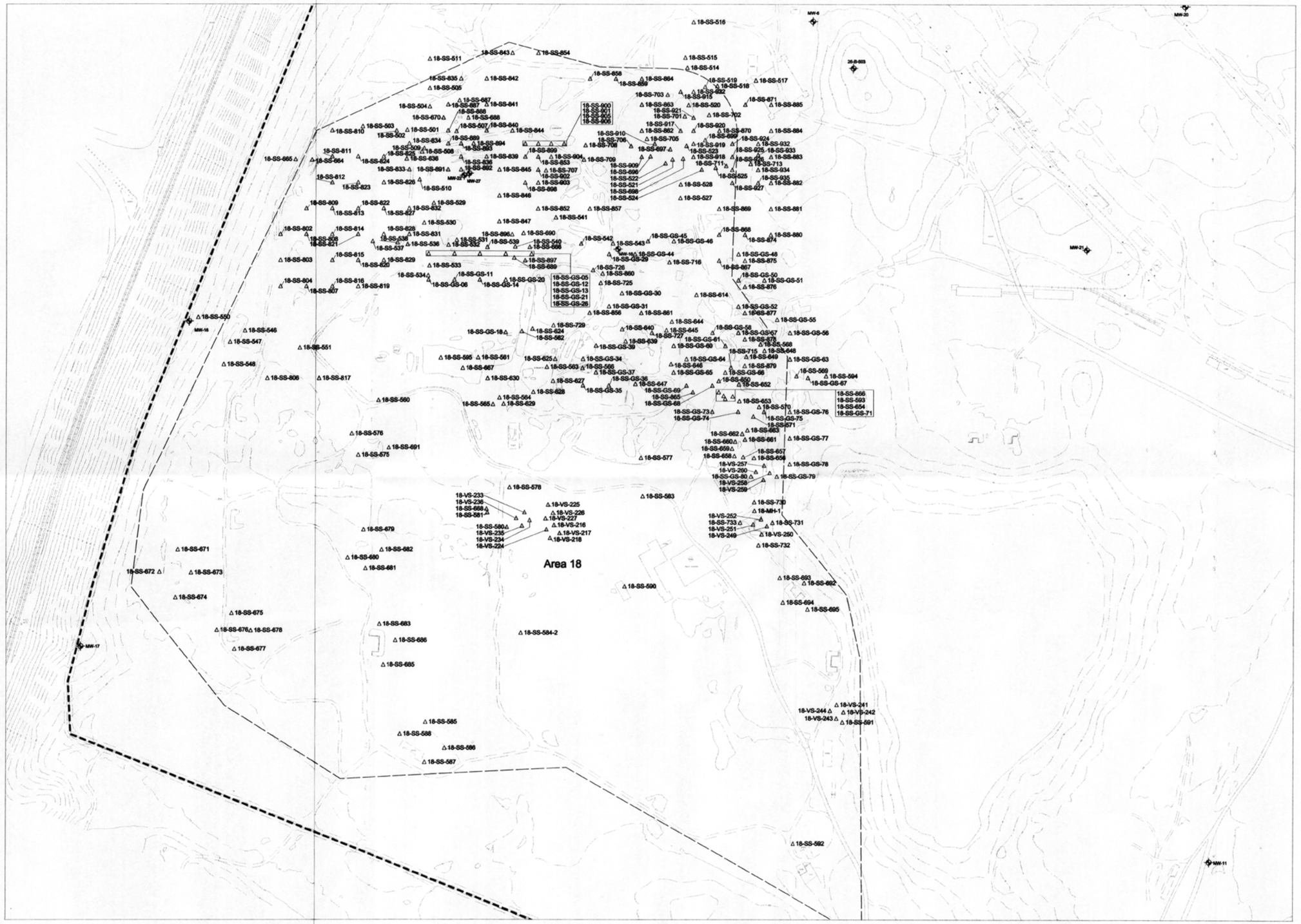
SCALE 0 100 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

Area 18 Boring Soil Sample Locations Sheet 1/4

URS | Project No. 54-974033NC | Figure 2.10-2

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 18\Area-18-Borings-Rev2.dwg
EDIT DATE: 05/01/02 AT: 10:28



Legend

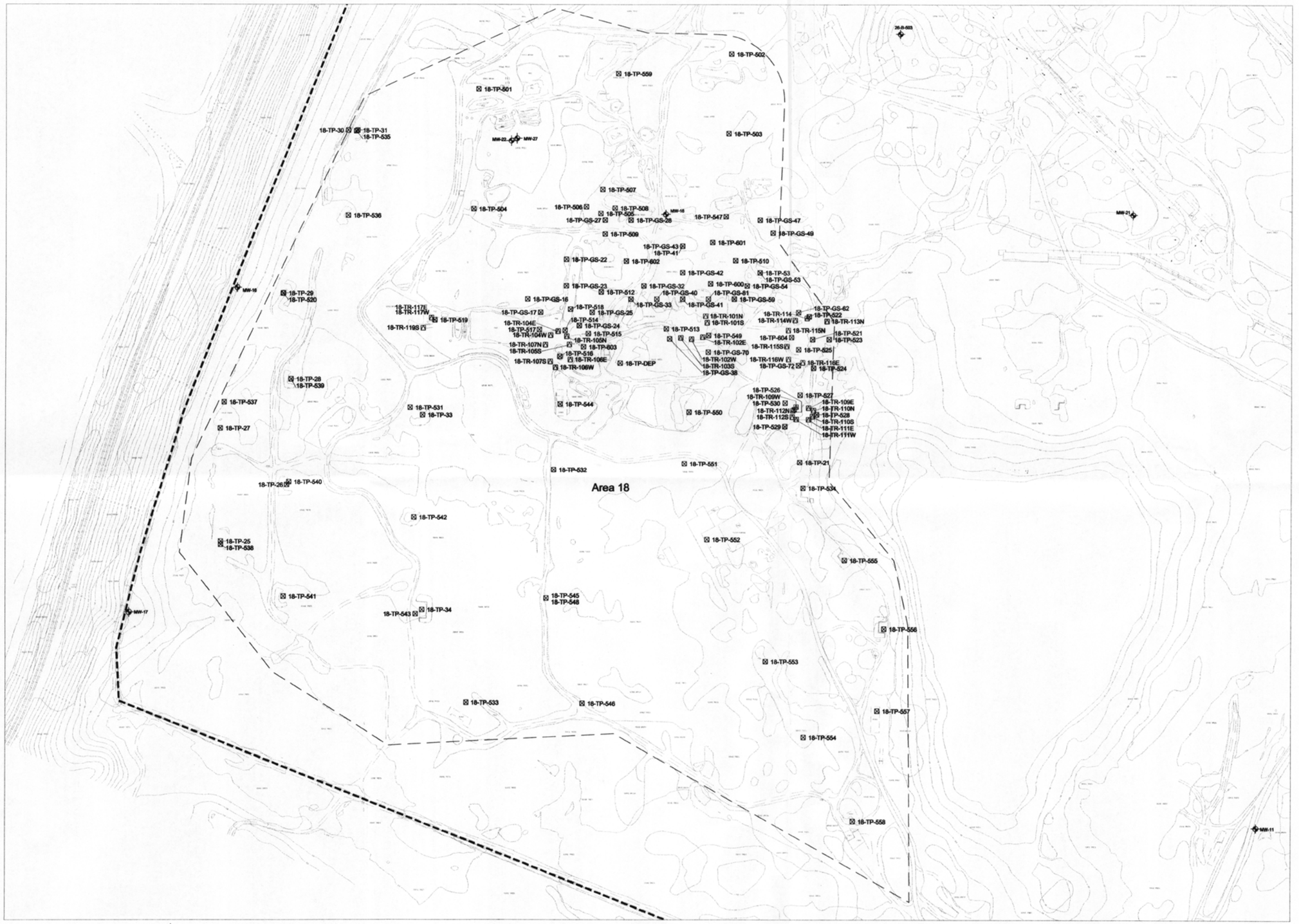
- Monitoring Well Location (MW-7)
- Surface Sample Location (18-SS-632)
- Contour Line (ft) (220)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary

Weyerhaeuser - DuPont, WA

Area 18 Surface Soil Sample Locations Sheet 2/4

URS | Project No. 54-974033NC | Figure 2.10-3

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 18\Area-18-ss-Rev1.dwg
EDIT DATE: 04/09/02 AT: 09:21



Legend

- MW-7 — Monitoring Well Location
- 31-TP-506-S-2 — Test Pit Sample Location
- 31-TR-111W — Trench Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary

SCALE 0 100 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

Area 18 Test Pit Soil Sample Locations Sheet 3/4

URS | Project No. 54-974033NC | Figure 2.10-4

FILENAME: Q:\Geo\Weyerhaeuser\R0-2002\AREA 18\Area-18-tp-Rev 2.dwg
EDIT DATE: 05/01/02 AT: 10:39

PUGET SOUND

Area 18

N

Legend

- Monitoring Well Location (MW-7)
- Verification Sample Location (31-VS-129)
- Contour Line (ft) (220)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary

SCALE 0 100 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

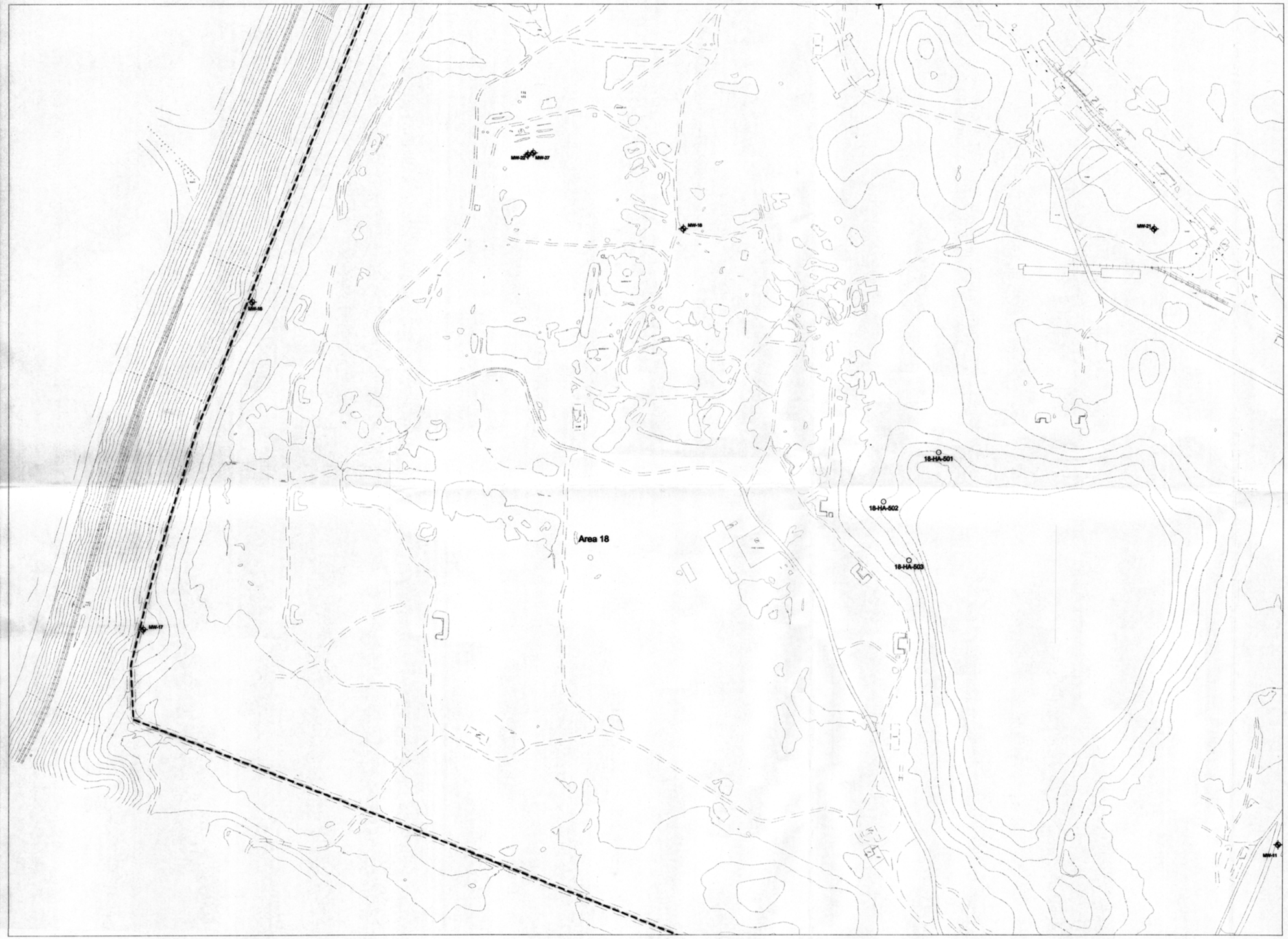
Area 18 Verification Soil Sample Locations Sheet 4/4

URS

Project No. 54-974033NC

Figure 2.10-5

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 18\Area-18-vs-Rev 2.dwg
EDIT DATE: 05/01/02 AT: 10:45



N

Legend

- MW-7 — Monitoring Well Location
- 31-HA-502-0-3 — Hand Auger Sample Location
- Consent Decree Boundary

Notes

1) Draft Final RI Figure for Review

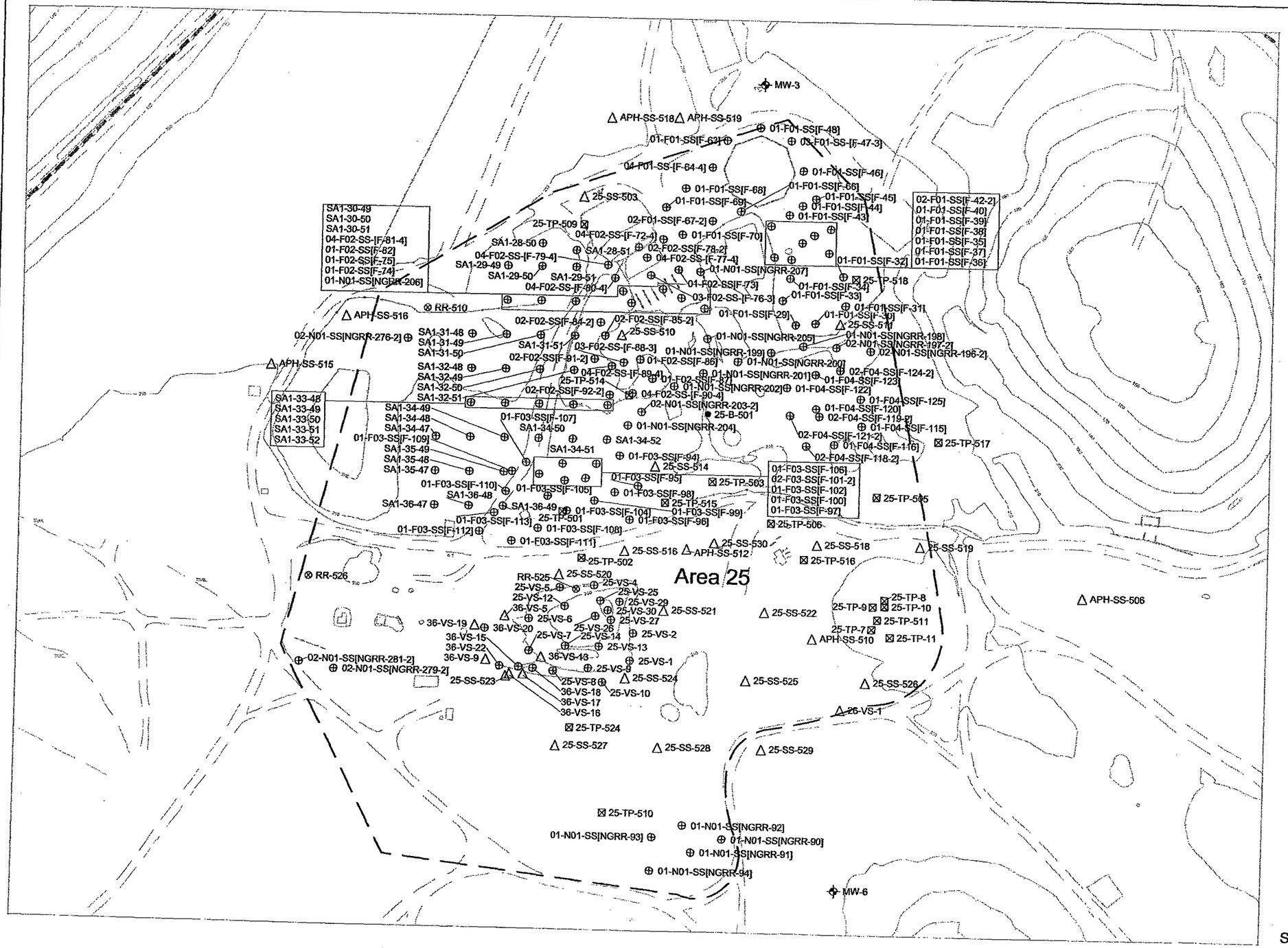
SCALE 0 100 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

Area 18
Hand Auger
Soil Sample Locations

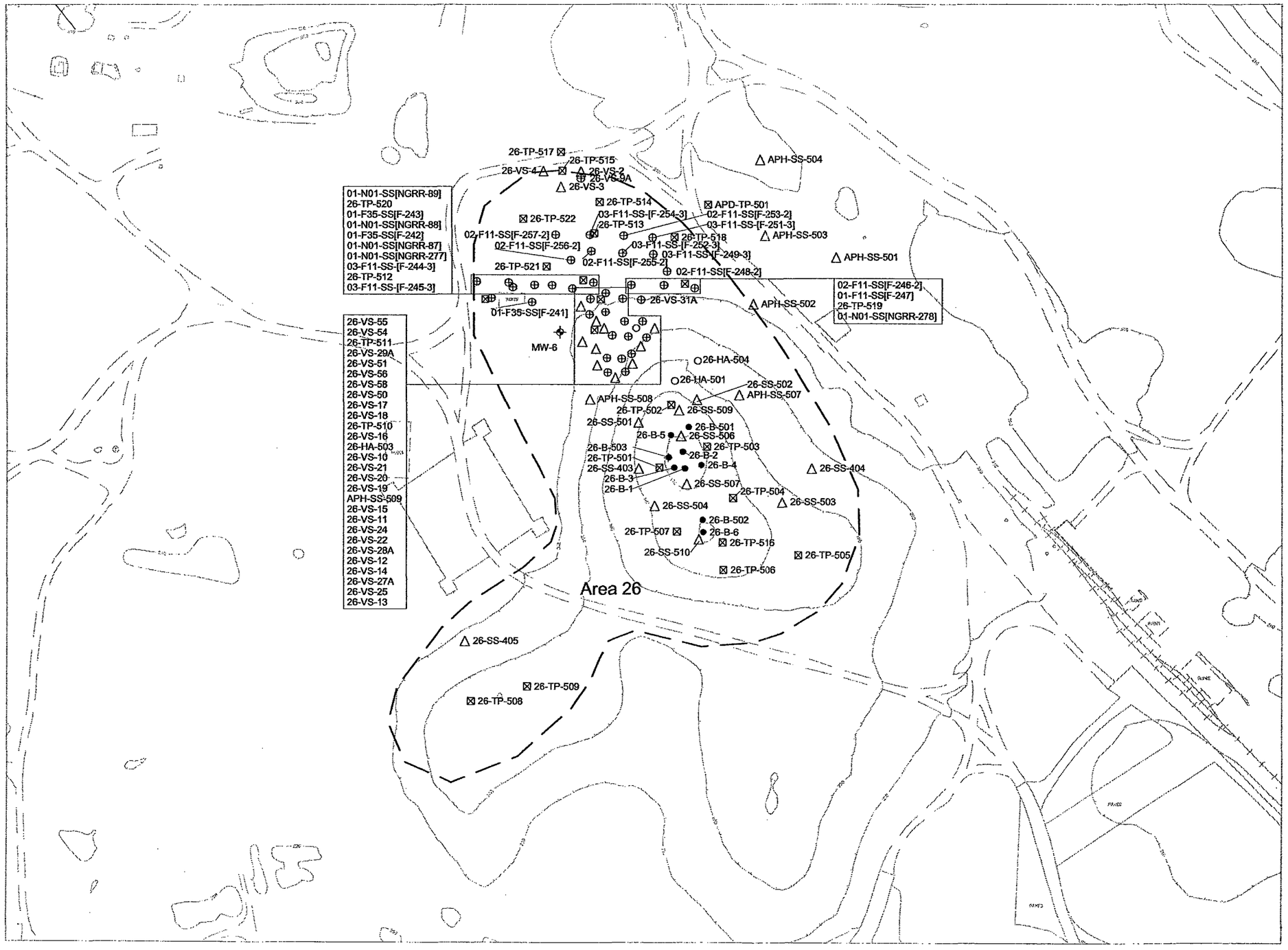
URS | Project No. 54-974033NC | Figure 2.10-6

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 18\Area-18-hat-Rev1.dwg
EDIT DATE: 03/18/02 AT: 14:54



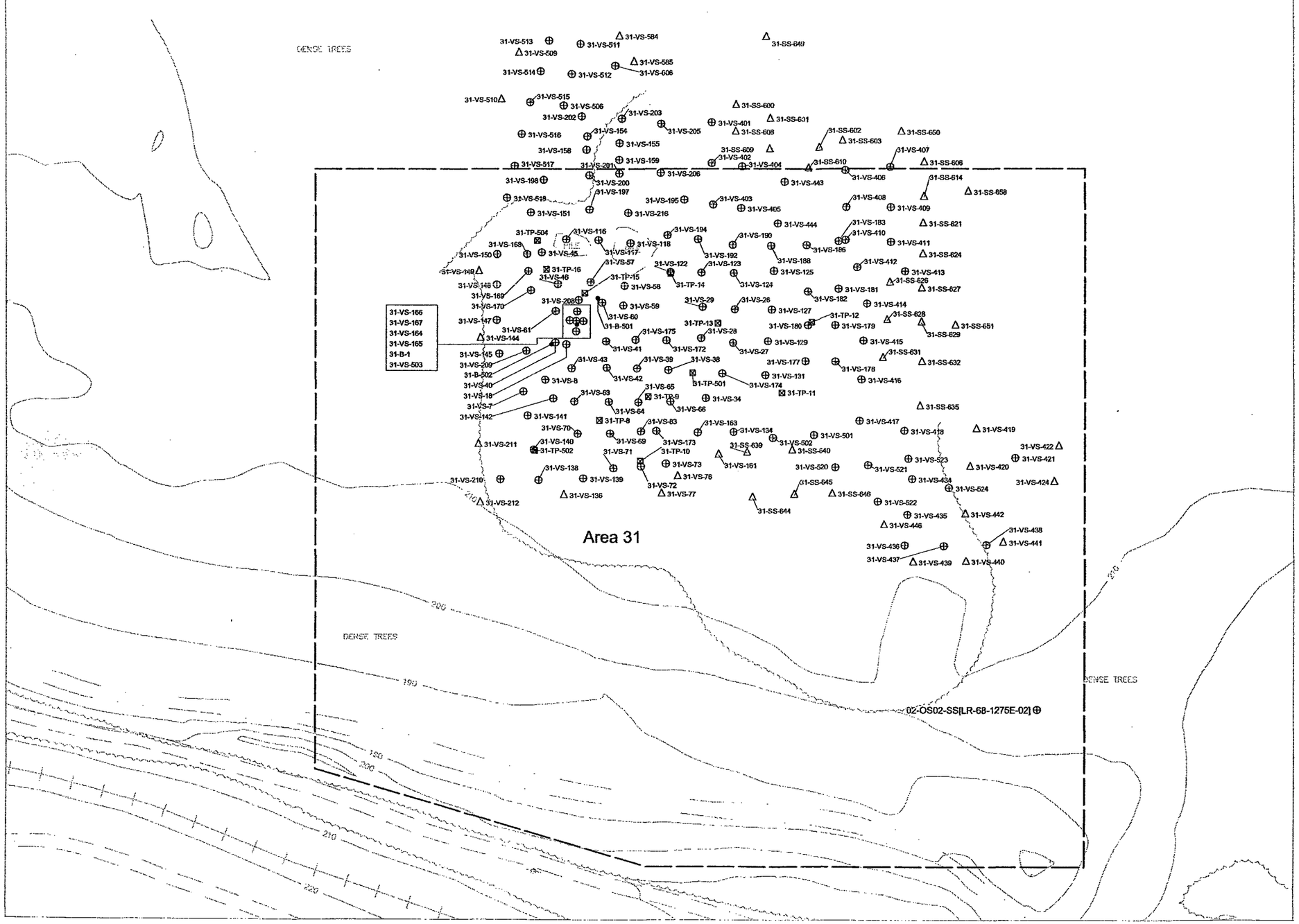
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 25\Area 25-Rev 3.dwg
EDIT DATE: 04/15/02 AT: 09:45

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 25 Soil Sample Locations	Figure 2.11-1
URS			



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 26\Area 26A-Rev 3.dwg
EDIT DATE: 03/18/02 AT: 09:20

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 26 Soil Sample Locations	Figure 2.12-1
URS			



N

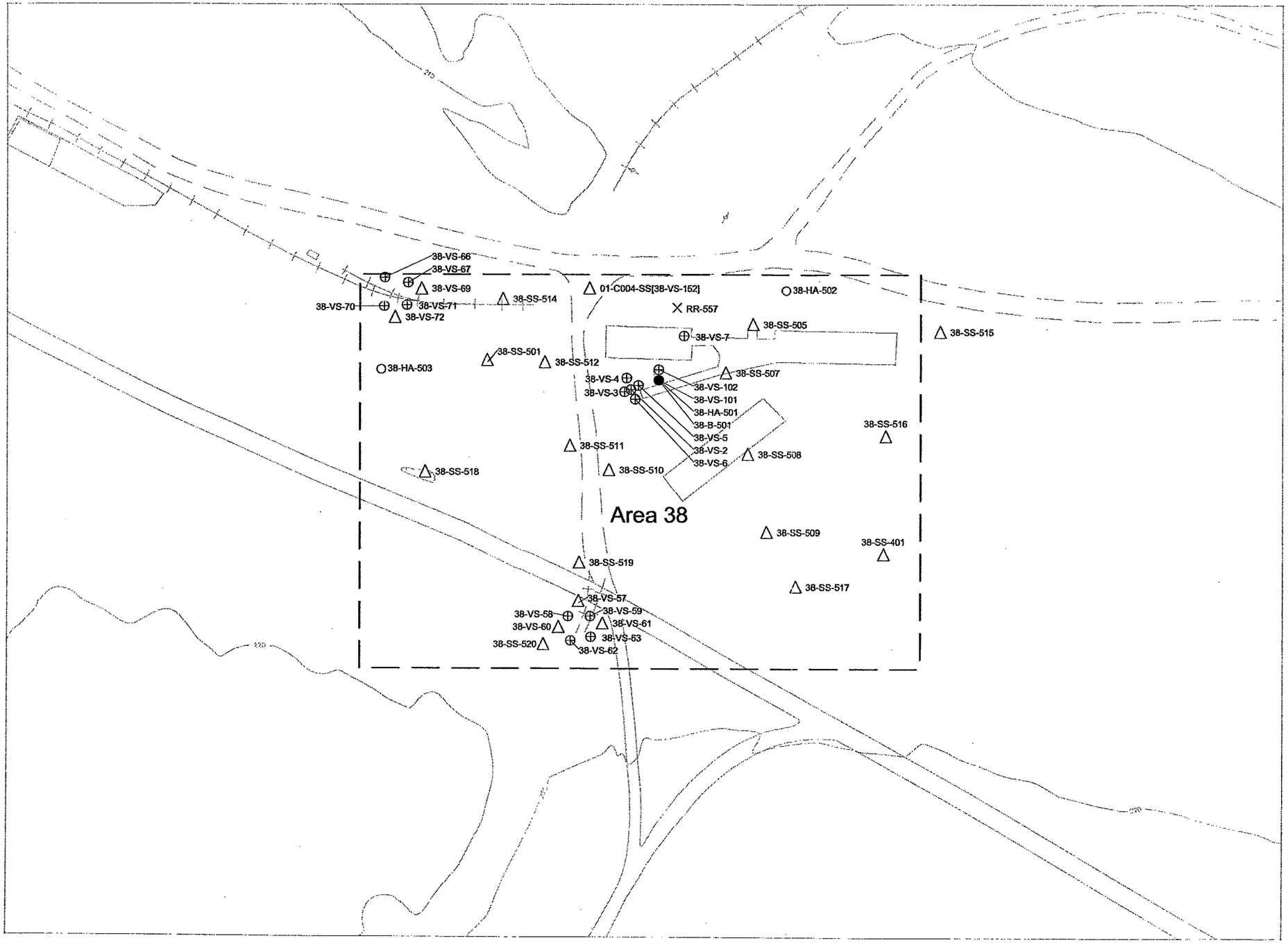
Legend

- 31-B-504 — Boring Sample Location
- 31-SS-632 — Surface Sample Location
- 31-TP-506 — Test Pit Sample Location
- 31-VS-129 — Verification Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary

SCALE 0 40 80 160 FEET
1"=80'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 31\Area-31b 1_80-Rev 3.dwg
EDIT DATE: 04/25/02 AT: 13:41

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 31 Soil Sample Locations	Figure 2.13-1
URS			



N

Legend

- 38-B-501 — Boring Sample Location
- 38-HA-501 — Hand Auger Sample Location
- RR-557 — Railroad Sample Location
- 26-SS-502 — Surface Sample Location
- 38-VS-101 — Verification Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Railroad

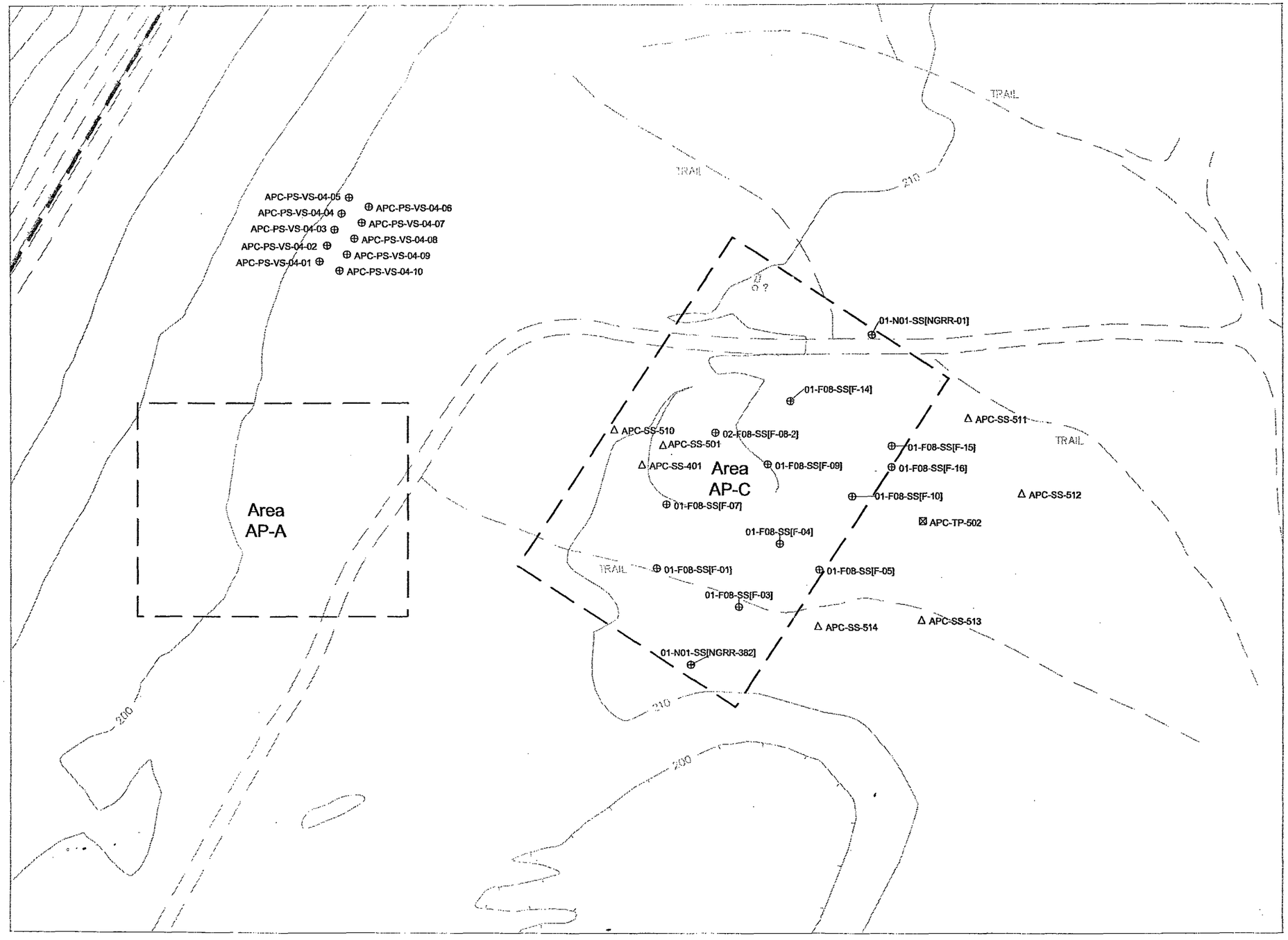
Notes

1) Samples 38-HA-501, 38-B-501, 38-VS-101 and 38-VS-102 are all at the same coordinate points.
2) 38-HA-501 is a Hand Auger Location
   38-B-501 is a Boring Location
   38-VS-101 is a Verification Location

SCALE 0 50 100 200 FEET
1"=100'

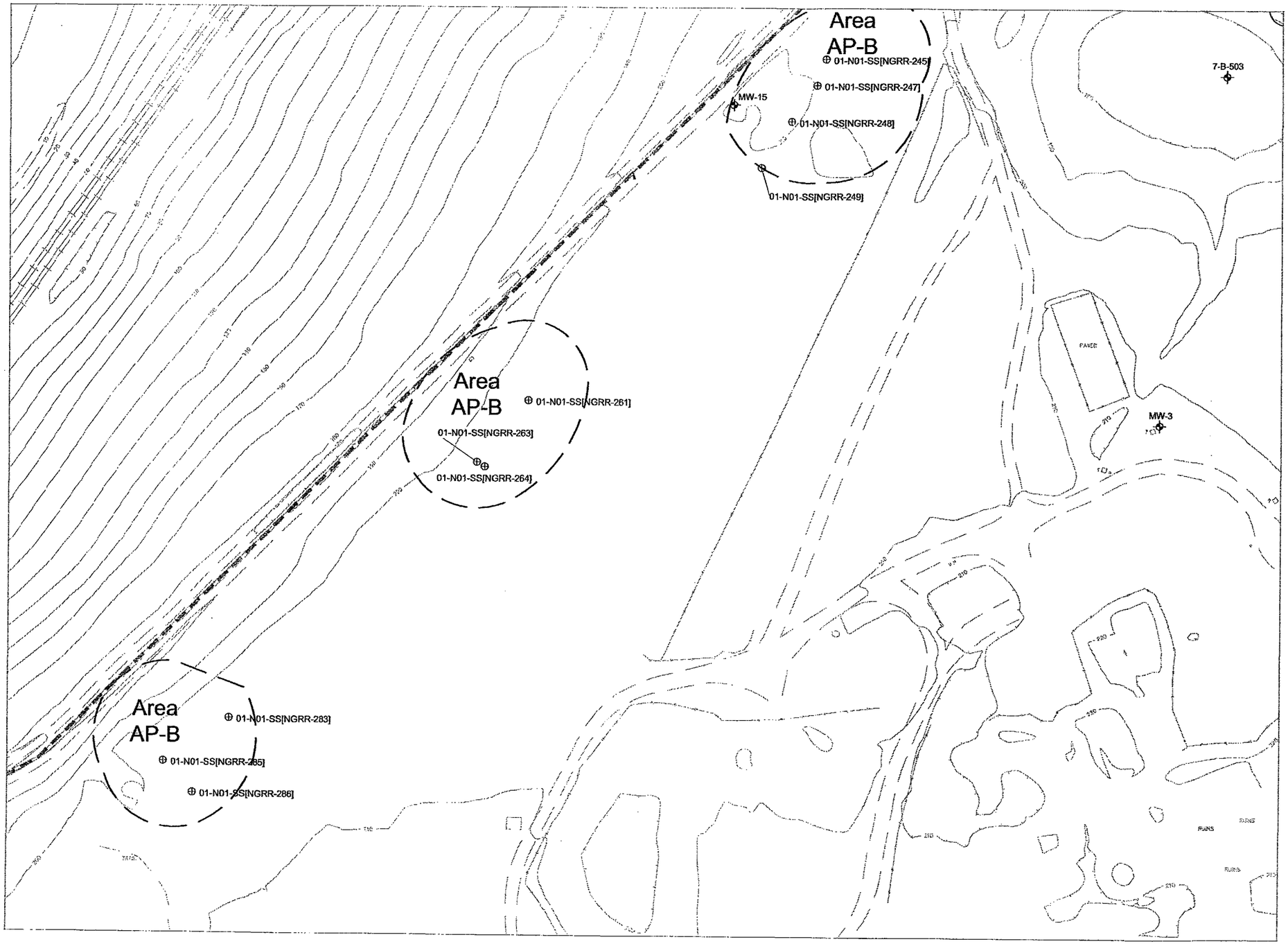
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 38\Area-38-Rev 3.dwg
EDIT DATE: 04/15/02 AT: 09:54

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 38 Soil Sample Locations	Figure 2.14-1
URS			



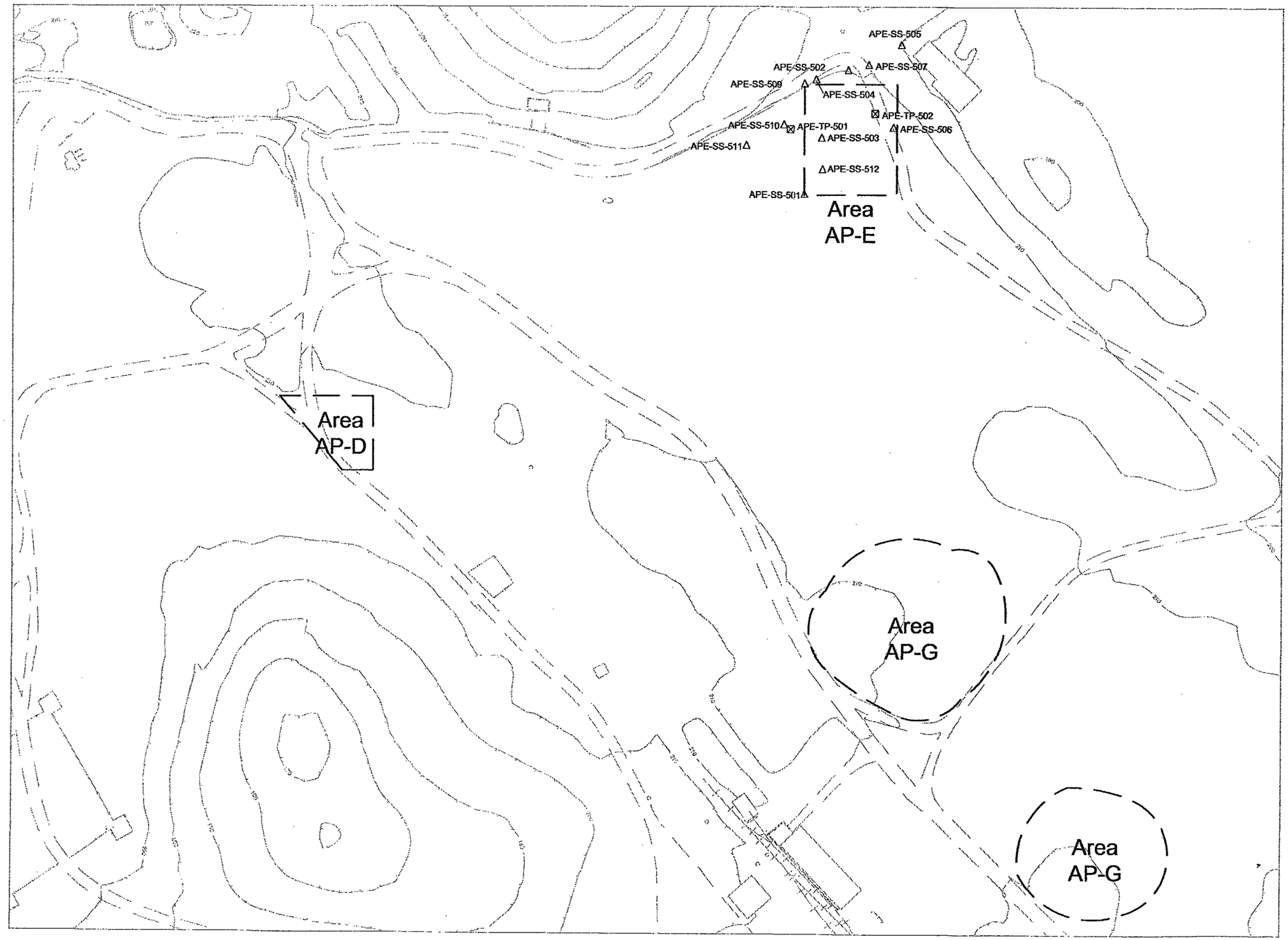
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AP\AP-A-C-Rev2.dwg
EDIT DATE: 04/15/02 AT: 09:59

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Areas AP-A and AP-C Soil Sample Locations	Figure 2.15-1
URS			



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AP\AP-B.dwg
EDIT DATE: 04/15/02 AT: 10:02

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area AP-B Soil Sample Locations	Figure 2.15-2
URS			



N

Legend

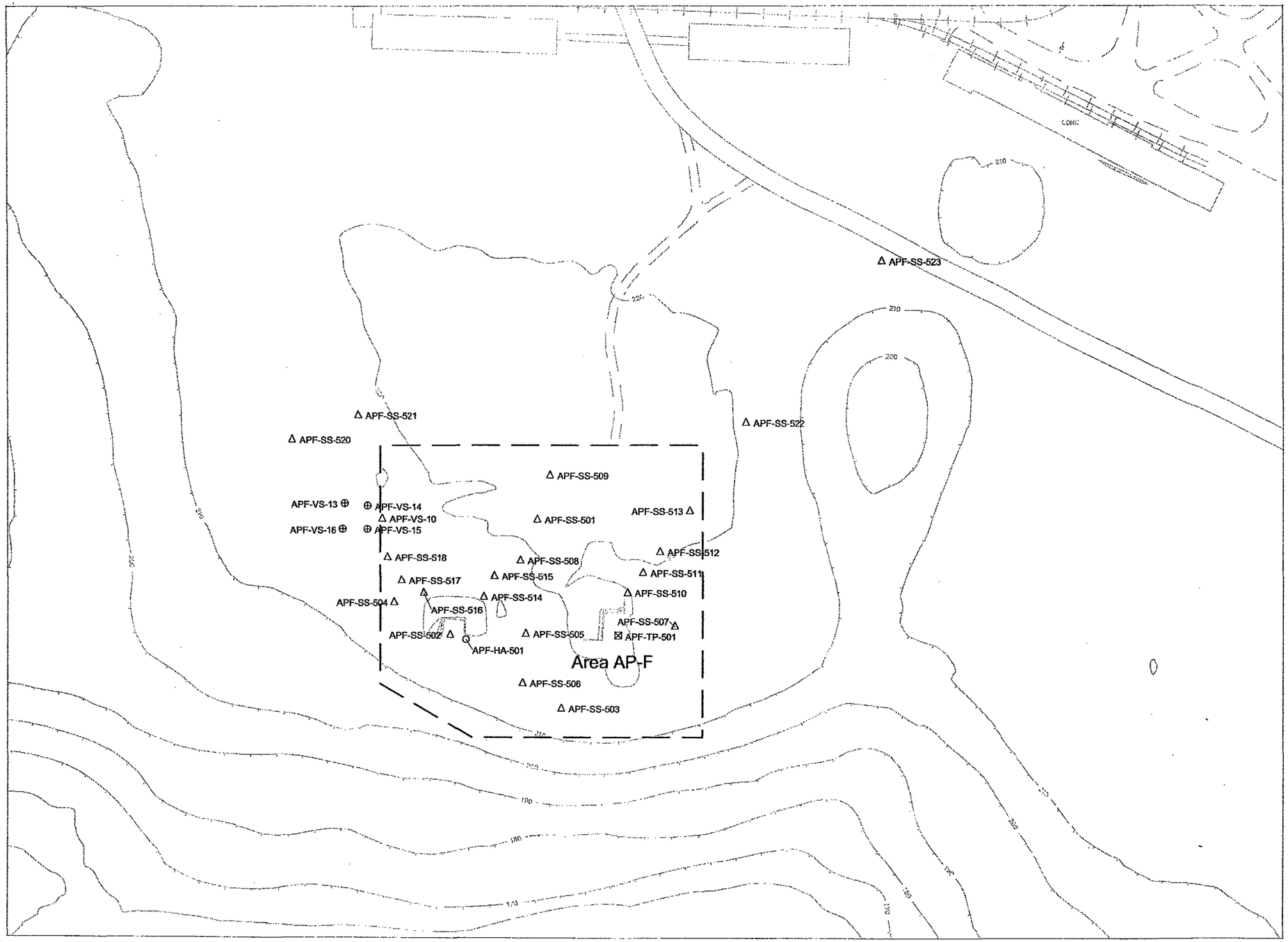
- Surface Sample Location (APE-SS-510)
- Test Pit Sample Location (APE-TP-501)
- Contour Line (ft) (220)
- Road or Trail
- Area Boundary
- Fence
- Railroad

SCALE 0 60 120 240 FEET

SCALE: 1"=120'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AP\AP-D-E-G-Rev1.dwg
EDIT DATE: 04/15/02 AT: 10:04

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Areas AP-D, E, and G Soil Sample Locations	Figure 2.15-3
URS			



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AP\AP-F-Rev 3.dwg
EDIT DATE: 04/09/02 AT: 09:01

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area AP-F Soil Sample Locations	Figure 2.15-4
URS			

PUGET SOUND

Area 18

N

Legend

- Monitoring Well Location (MW-7)
- Reference Sample Location (18R-11)
- 220 Contour Line (ft)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary

SCALE 0 50 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

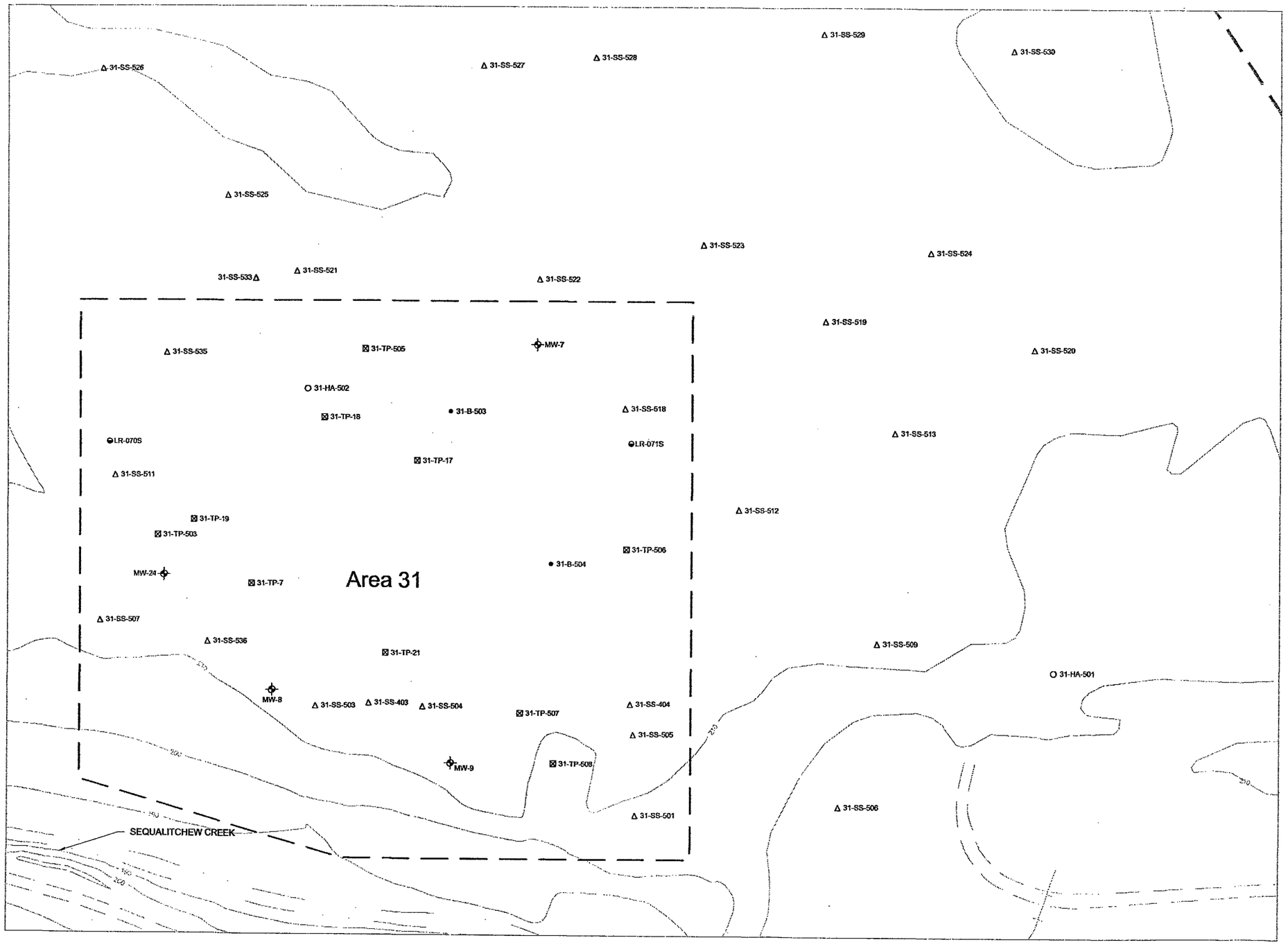
Area 18 Reference Soil Sample Locations

URS

Project No. 54-974033NC

Figure 2.16-1

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 18\Area-18-REF-Rev 2.dwg
EDIT DATE: 05/01/02 AT: 10:31



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 31\Area-31Ref-Rev3.dwg
EDIT DATE: 04/15/02 AT: 10:13

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 31 Reference Soil Sample Locations	Figure 2.16-2
URS			

PUGET SOUND

OLD FORT LAKE

SEQUALITCHEW CREEK

N

Legend

- Monitoring Well Location (MW-7)
- LR Sample Location (LR-157)
- Railroad Sample Location (RR-157)
- Surface Sample Location (APG-SS-501)
- Test Pit Sample Location (APG-TP-503)
- Utility Corridor Sample Location (UC-10)
- Contour Line (ft) (220)
- Road or Trail
- Fence
- Railroad
- Consent Decree Boundary

Note

1) Sample labels shown in columns represent west to east locations.

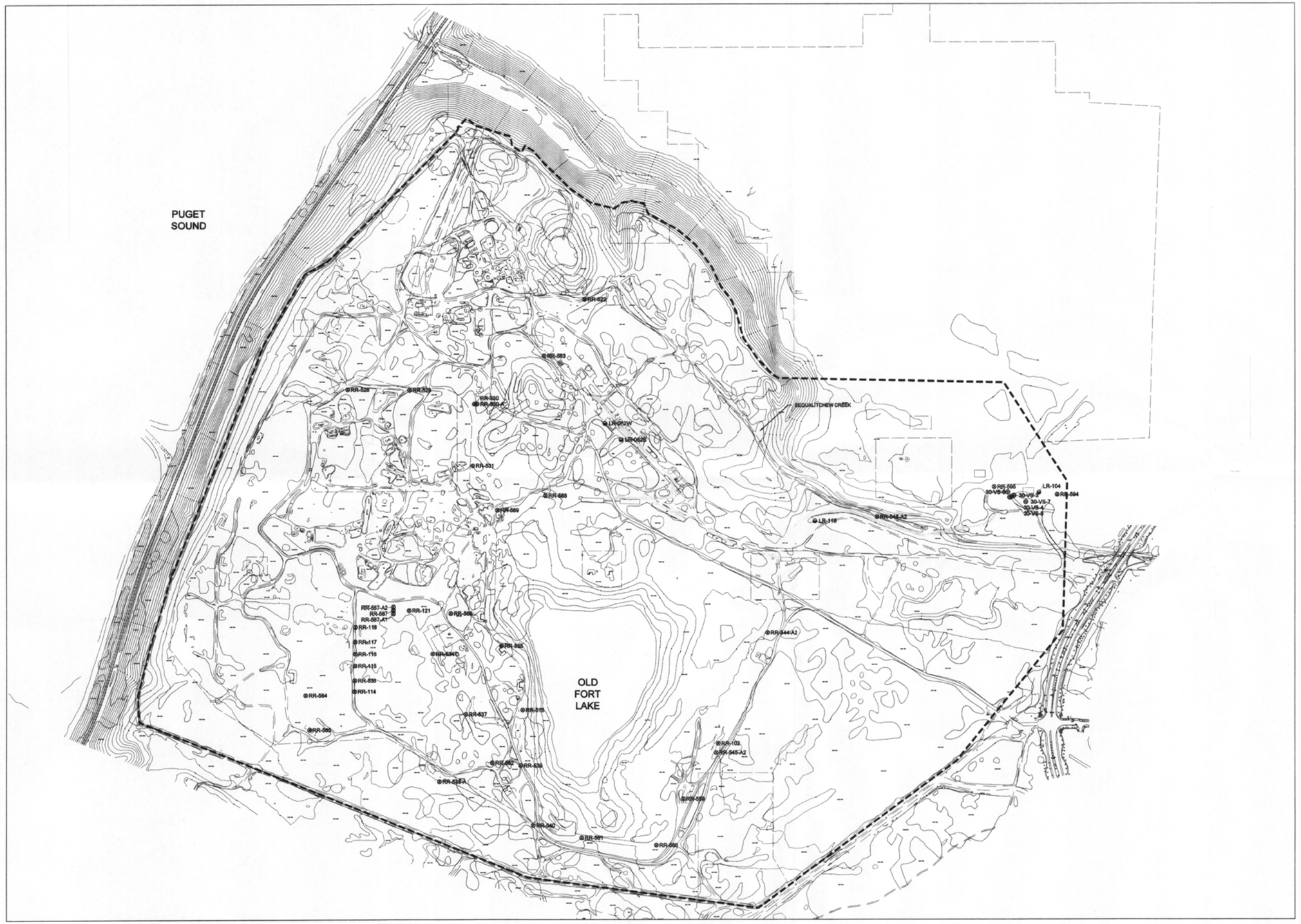
SCALE 0 200 400 800 FEET
1"=400

Weyerhaeuser - DuPont, WA

Lead Reference Soil Sample Locations

URS | Project No. 54-974033NC | Figure 2.16-3

FILENAME: Q:\Geo\Weyerhaeuser\R-2002\LR\LR-Rev-2.dwg
EDIT DATE: 04/15/02 AT: 14:25



N

Legend

- LR-101 — Lead Reference Sample Location
- RR-130 — RR Sample Location
- 30-VS-6 — Verification Sample Location
- 220 — Contour Line
- Road or Trail
- Consent Decree Boundary
- Fence

SCALE 0 200 400 800 FEET
1"=400

Weyerhaeuser - DuPont, WA

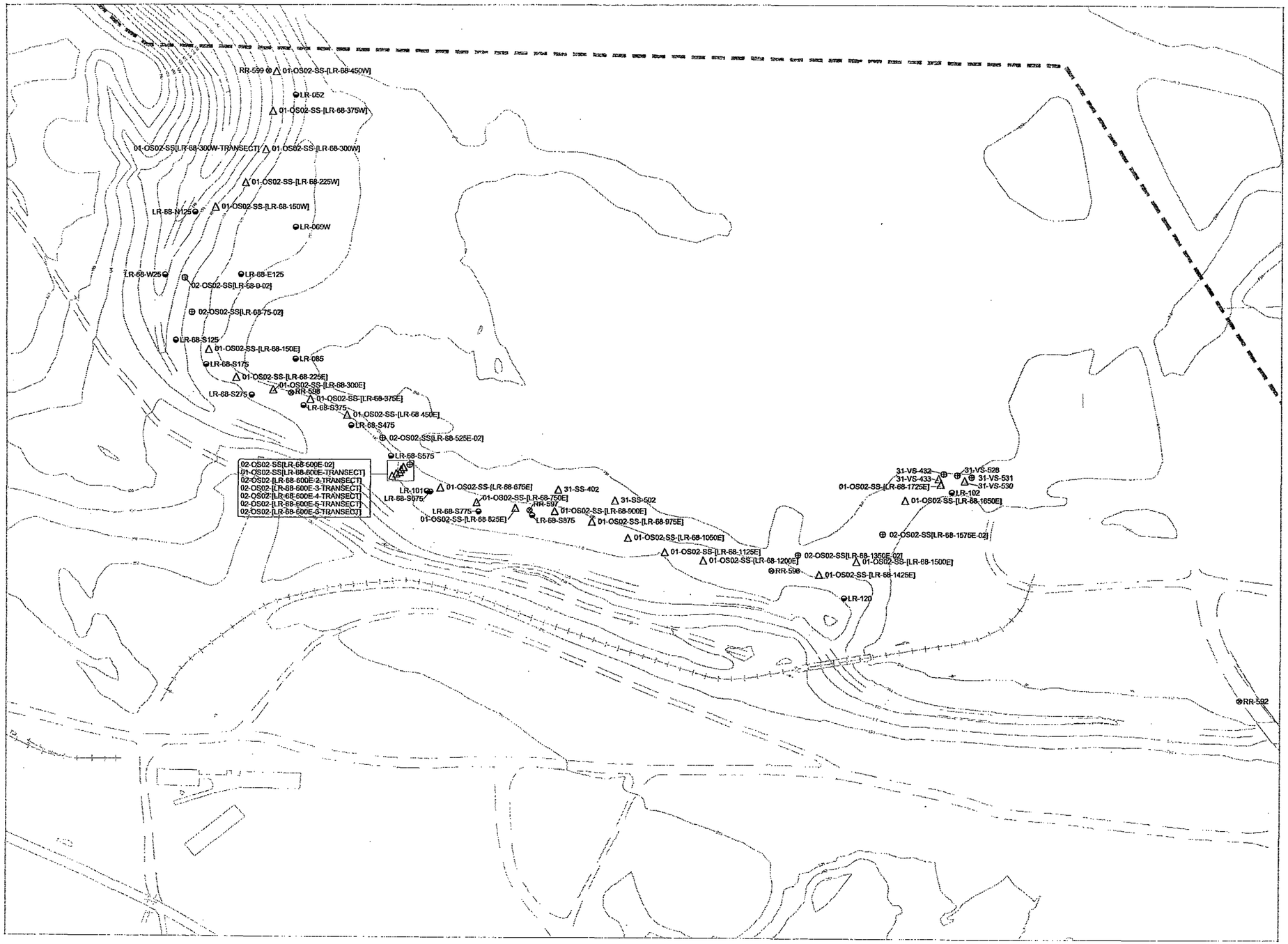
Historical Railroad Soil Sample Locations

Created by URS
Modified by PIONEER

Project No. 54-974033NC

Figure 2.17-1

FILENAME: Q:\Geo\Weyerhaeuser\IR-2002\RR\RR-Rev-3.dwg
EDIT DATE: 04/10/02 AT: 08:24



N

Legend

- RR-596 — Railroad Sample Location
- 7-SS-632 — Surface Sample Location
- 7-VS-129 — Verification Sample Location
- 7-LR-129 — Lead Reference Sample Location
- Road or Trail
- Railroad
- Consent Decree Boundary

SCALE 0 100 200 400 FEET
1"=200'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Creek\Creek-Rev-3.dwg
EDIT DATE: 04/15/02 AT: 10:16

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Creek Soil Sample Locations	Figure 2.18-1
URS			

N

Legend

- MW-7 — Monitoring Well Location
- 180-11 — Surface Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary

Notes

1) Sample labels shown in columns represent west to east locations.

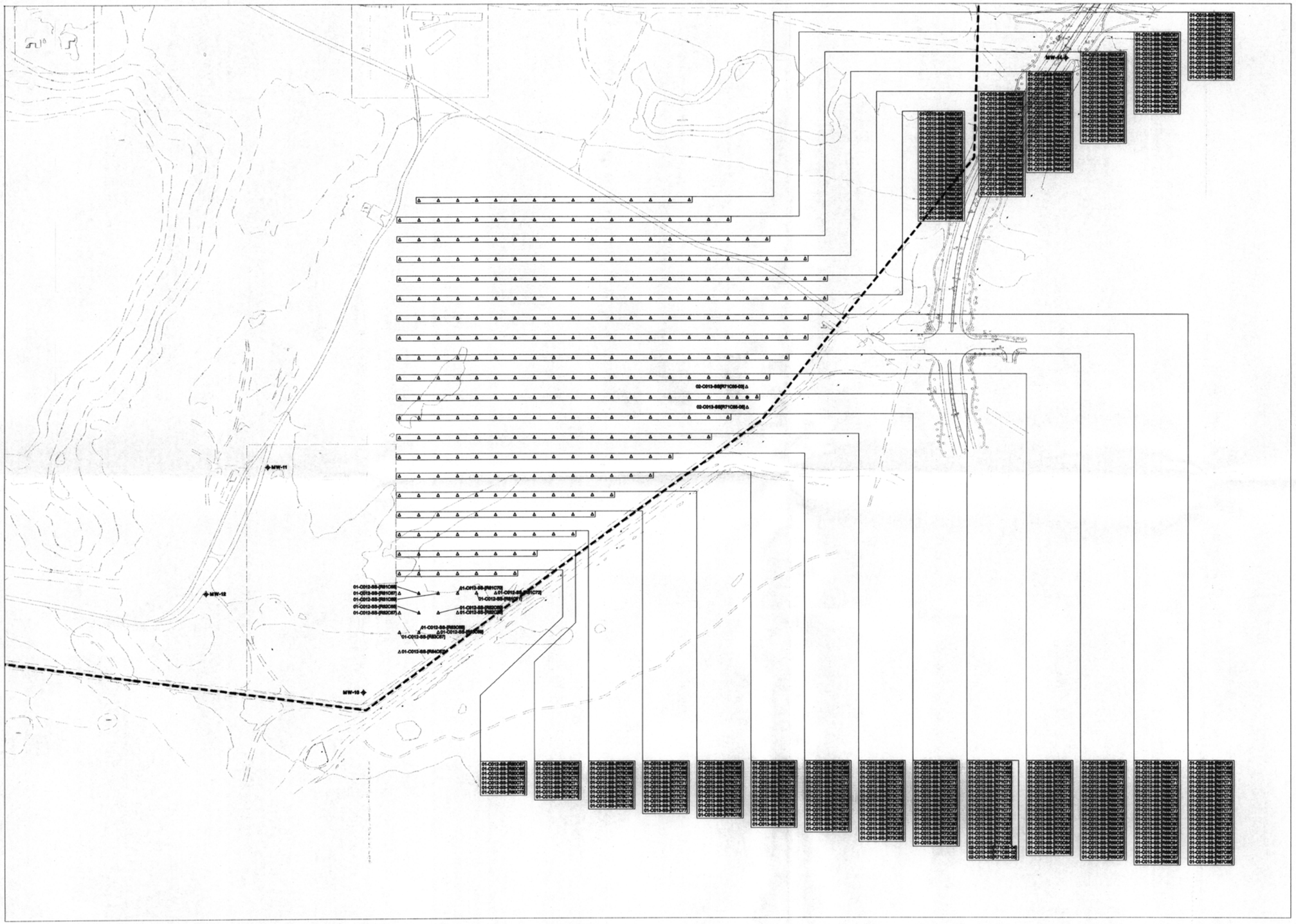
SCALE 0 100 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

Candidate North Soil Sample Locations

UBS | Project No. 54-974033NC | Figure 2.19-1

FILENAME: G:\Geo\Weyerhaeuser\Rl~2002\Candidate\Candidate 1.dwg
EDIT DATE: 04/09/02 AT: 09:31



N

Legend

- MW-7 — Monitoring Well Location
- 1SR-11 — Surface Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Consent Decree Boundary
- Fence
- Railroad

Note

1) Sample labels shown in columns represent west to east locations.

SCALE 0 100 200 400 FEET
1"=200'

Weyerhaeuser - DuPont, WA

Candidate South Soil Sample Locations

UBS | Project No. 54-974033NC | Figure 2.19-2

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Candidate\Candidate 2.dwg
EDIT DATE: 04/09/02 AT: 09:37

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	North of Creek Sample Locations	Figure 2-19-3
URS			

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\NOC\NOC-Rev1.dwg
EDIT DATE: 04/29/02 AT: 11:30

PUGET SOUND

OLD FORT LAKE

SEQUALITCHEW CREEK

South Midden Samples

N

Legend

- Surface Sample Location
- Verification Sample Location
- Lead Reference Sample Locations
- 220 Contour Line (ft)
- Road or Trail
- Consent Decree Boundary
- Fence
- Railroad

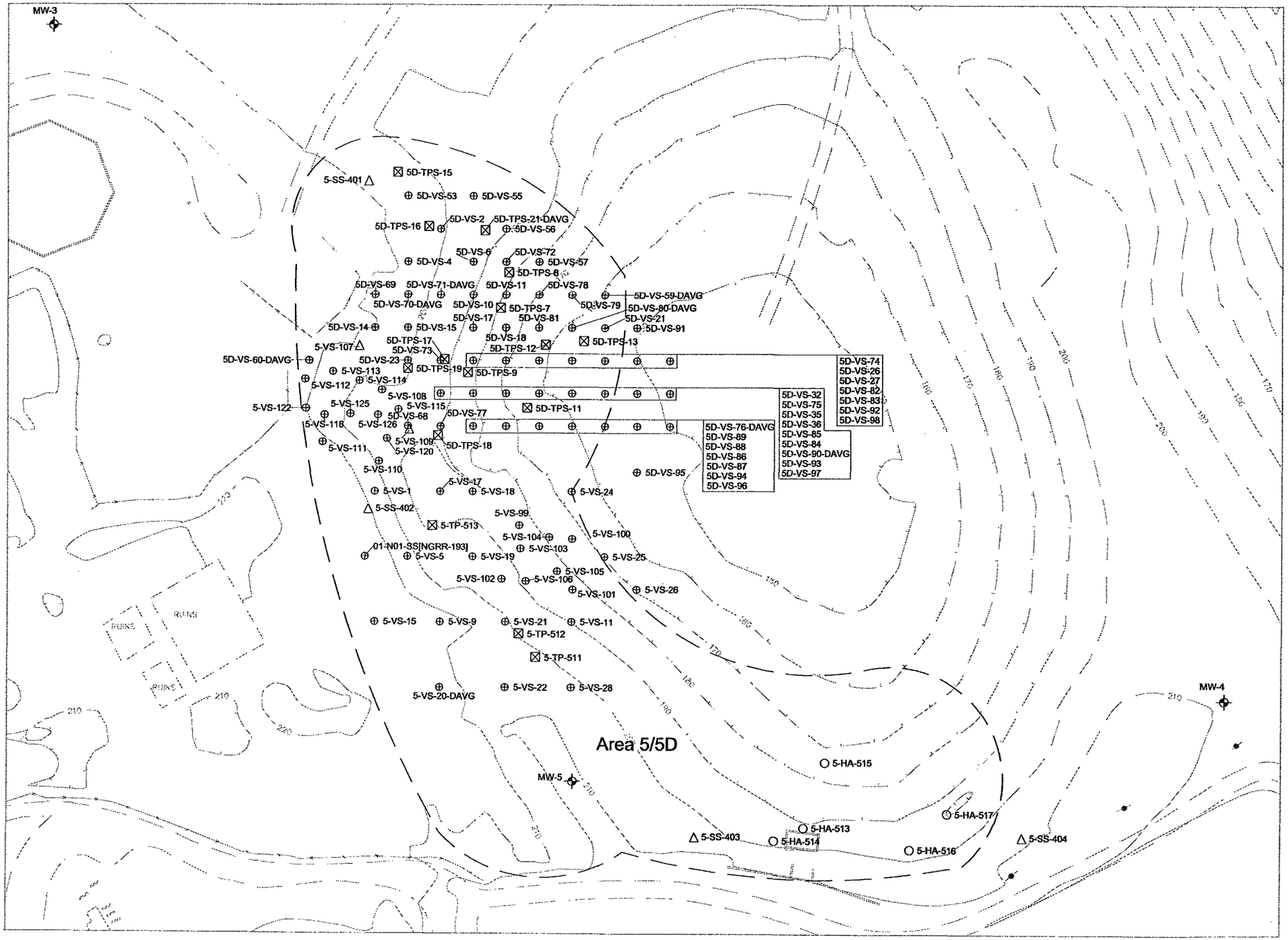
SCALE 0 150 300 600 FEET
1"=300'

Weyerhaeuser - DuPont, WA

Miscellaneous Soil Sample Locations

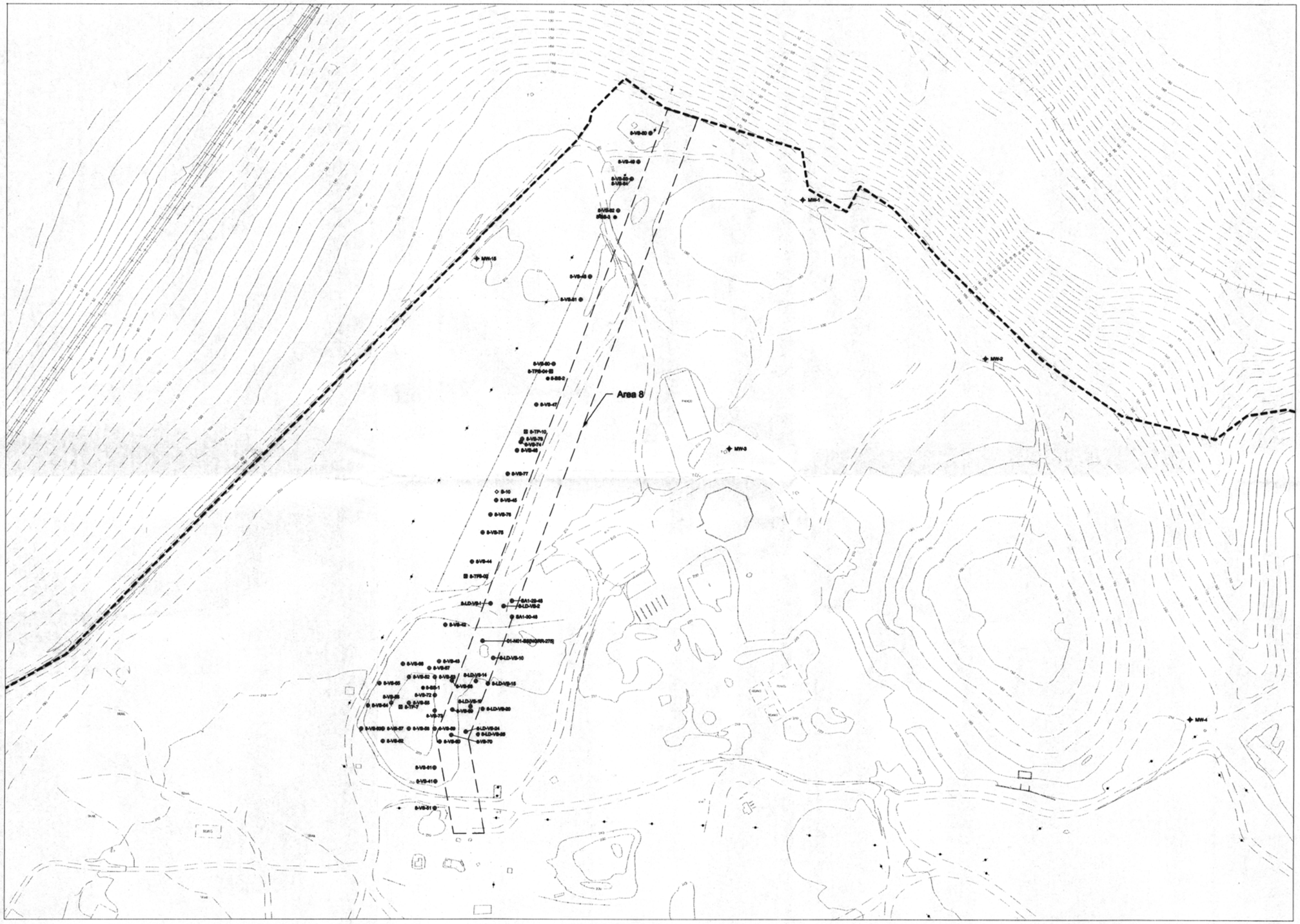
URS | Project No. 54-974033NC | Figure 2.19-4

FILENAME: Q:\Ceo\Weyerhaeuser\RI-2002\Misc\Misc-Rev-3.dwg
EDIT DATE: 04/15/02 AT: 14:00



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 05\Area-5.dwg
EDIT DATE: 04/10/02 AT: 11:08

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Areas 5/5D Soil Sample Locations	Figure 2.20-1
URS			



N

Legend

- MW-5 — Monitoring Well Location
- 7-B-604 — Boring Sample Location
- 7-HA-602 — Hand Auger Sample Location
- 7-TP-606 — Test Pit Sample Location
- S-10 — Characterization Sample Location
- VS-129 — Verification Sample Location
- Area Boundary
- Consent Decree Boundary

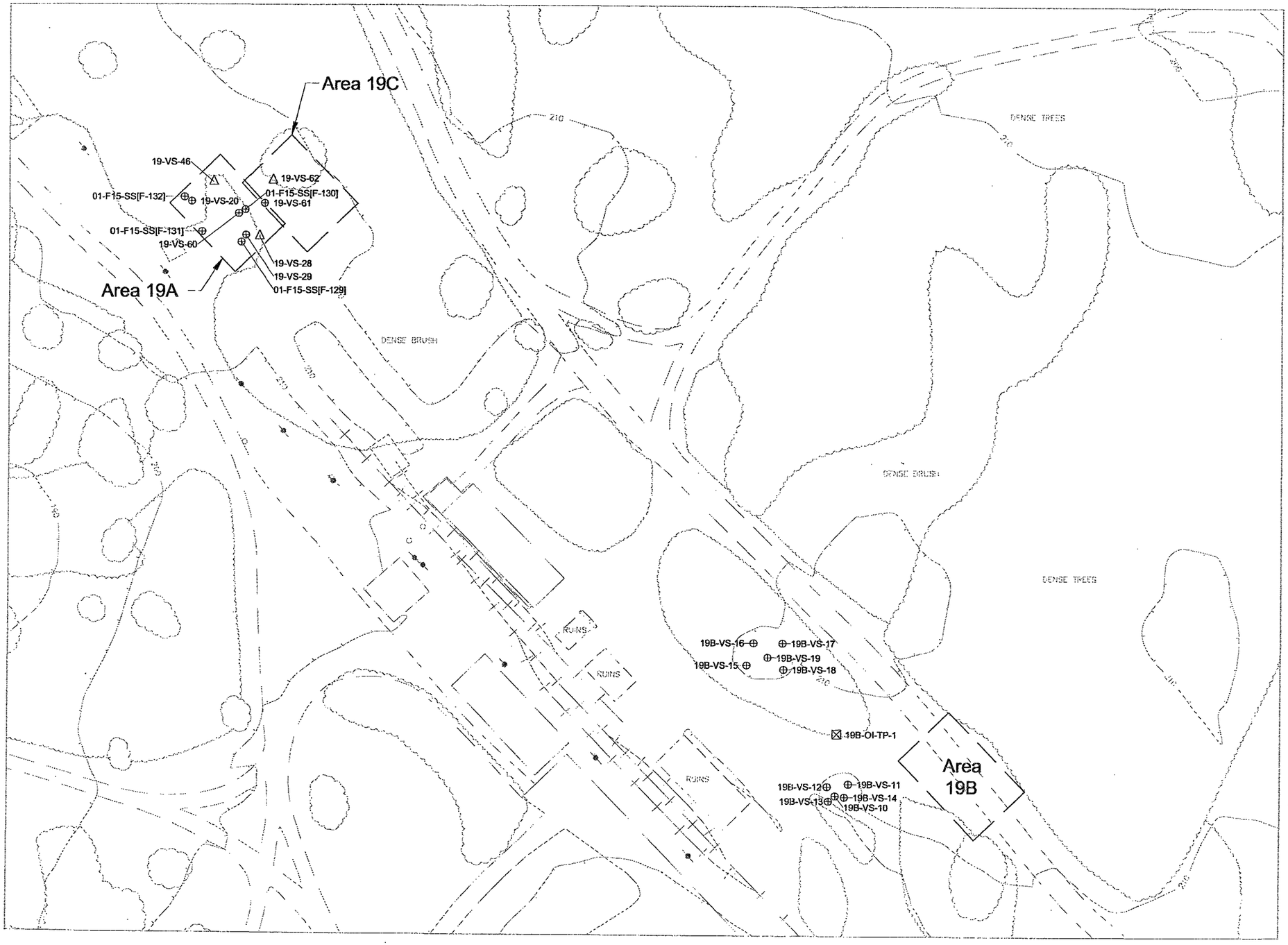
SCALE 0 50 100 200 FEET
1"=100'

Weyerhaeuser - DuPont, WA

Area 8 Soil Sample Locations

UBS | Project No. 84-974033NC | Figure 2.20-2

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 08\Area-8.dwg
EDIT DATE: 04/11/02 AT: 14:09



N

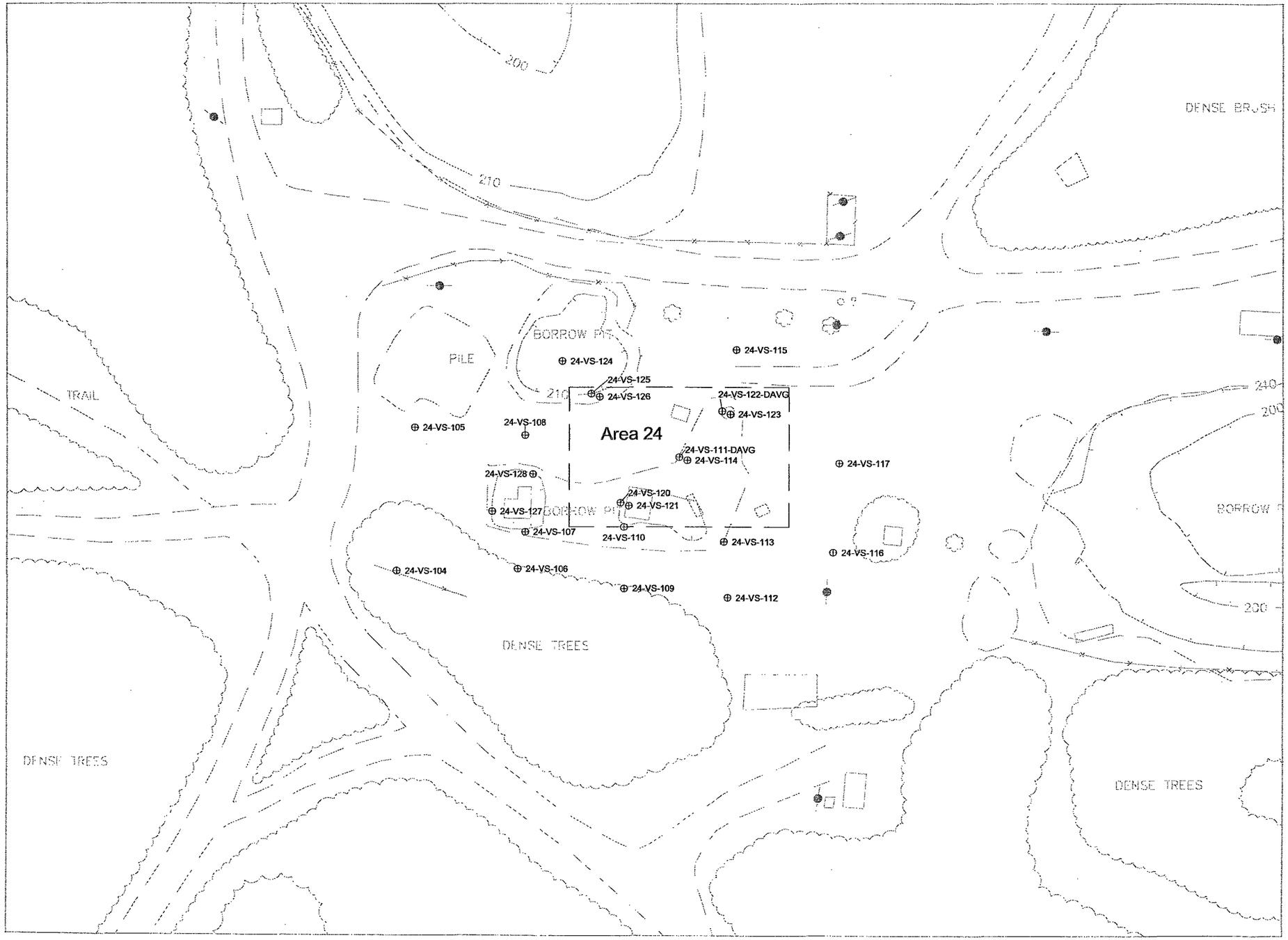
Legend

- △ 7-SS-632 — Surface Sample Location
- ⊠ 7-TP-506 — Test Pit Sample Location
- ⊕ 7-VS-129 — Verification Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Railroad

SCALE 0 40 80 160 FEET
1"=80'

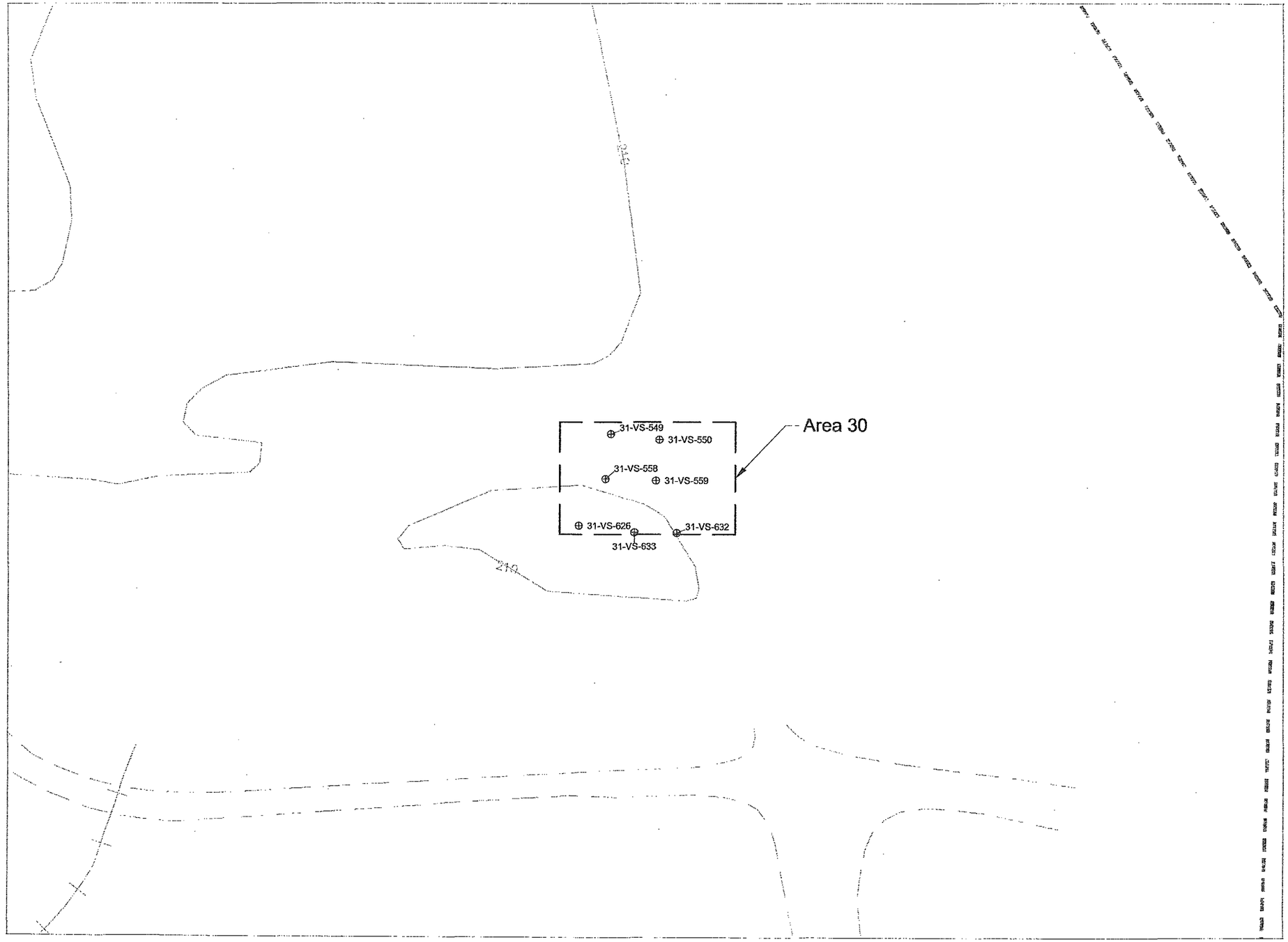
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 19\Area 19.dwg
EDIT DATE: 04/10/02 AT: 15:32

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 19 Soil Sample Locations	Figure 2.20-3
URS			



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 24\Area-24.dwg
EDIT DATE: 04/29/02 AT: 11:19

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 24 Soil Sample Locations	Figure 2.20-4
URS			



N

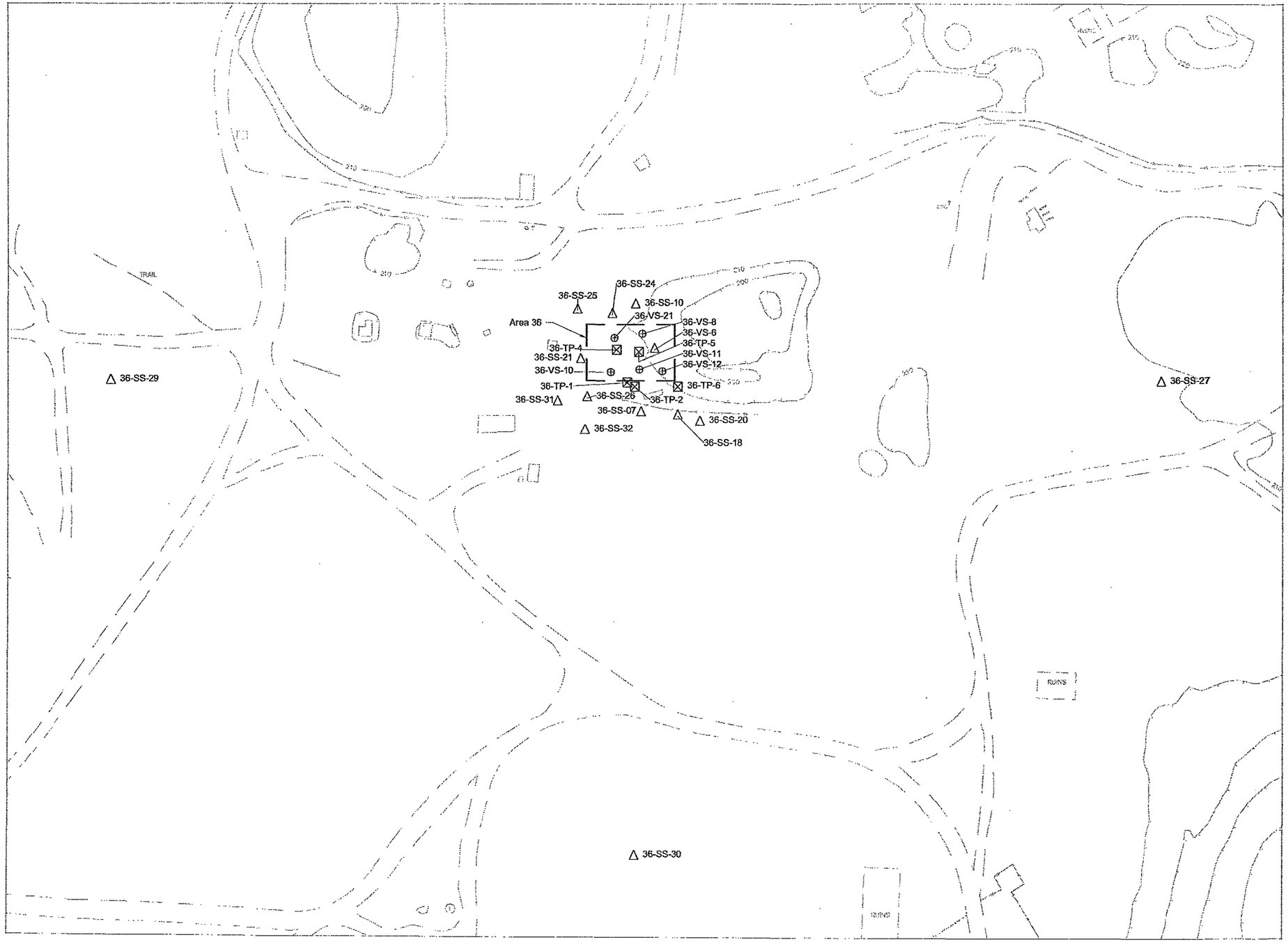
Legend

- ⊕ 7-VS-129 — Verification Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary
- Consent Decree Boundary
- Railroad

SCALE 0 25 50 100 FEET
1"=50'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 30\Area 30.dwg
EDIT DATE: 04/11/02 AT: 10:35

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 30 Soil Sample Locations	Figure 2.20-5
URS			



N

Legend

- 7-SS-632 — Surface Sample Location
- 7-TP-506 — Test Pit Sample Location
- 7-VS-129 — Verification Sample Location
- 220 — Contour Line (ft)
- Road or Trail
- Area Boundary

SCALE 0 50 100 200 FEET
1"=100'

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\AREA 36\Area 36.dwg
EDIT DATE: 04/11/02 AT: 11:12

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 36 Soil Sample Locations	Figure 2.20-6
URS			

FILENAME: Q:\Geo\Weyerhaeuser\RI- 2002\AREA 39\Area 39.dwg
EDIT DATE: 04/11/02 AT: 11:39

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Area 39 Soil Sample Locations	Figure 2.20-7
URS			

N

Legend

- Monitoring Well Location (MW-7)
- Verification Sample Location (SA3-77-124)
- Contour Line (ft) (220)
- Road or Trail
- Area Boundary
- Fence
- Railroad
- Consent Decree Boundary
- Sand Laydown Area

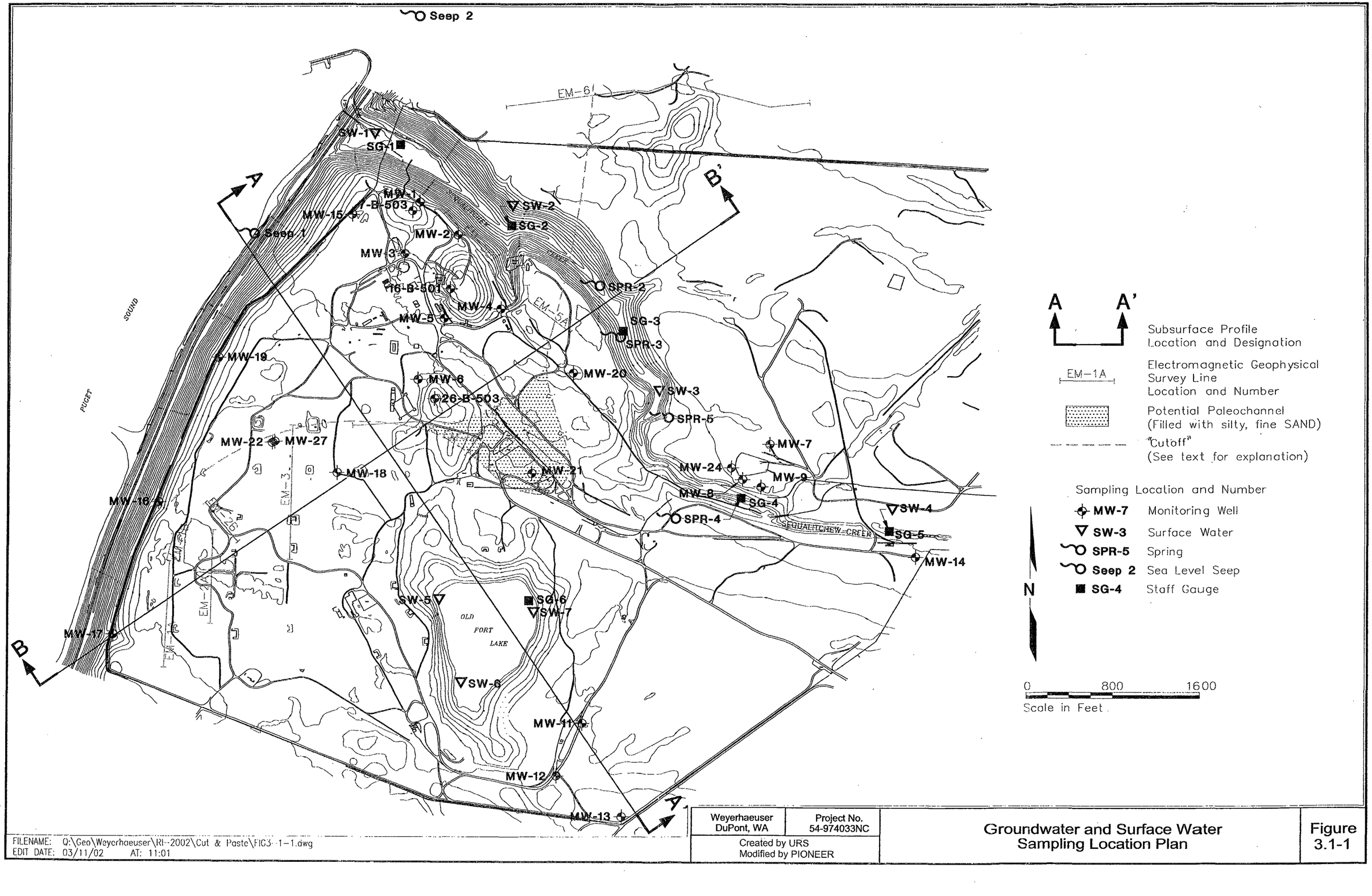
SCALE 0 150 300 600 FEET
1"=200'

Weyerhaeuser - DuPont, WA

Sand Laydown Areas Verification Soil Sample Locations

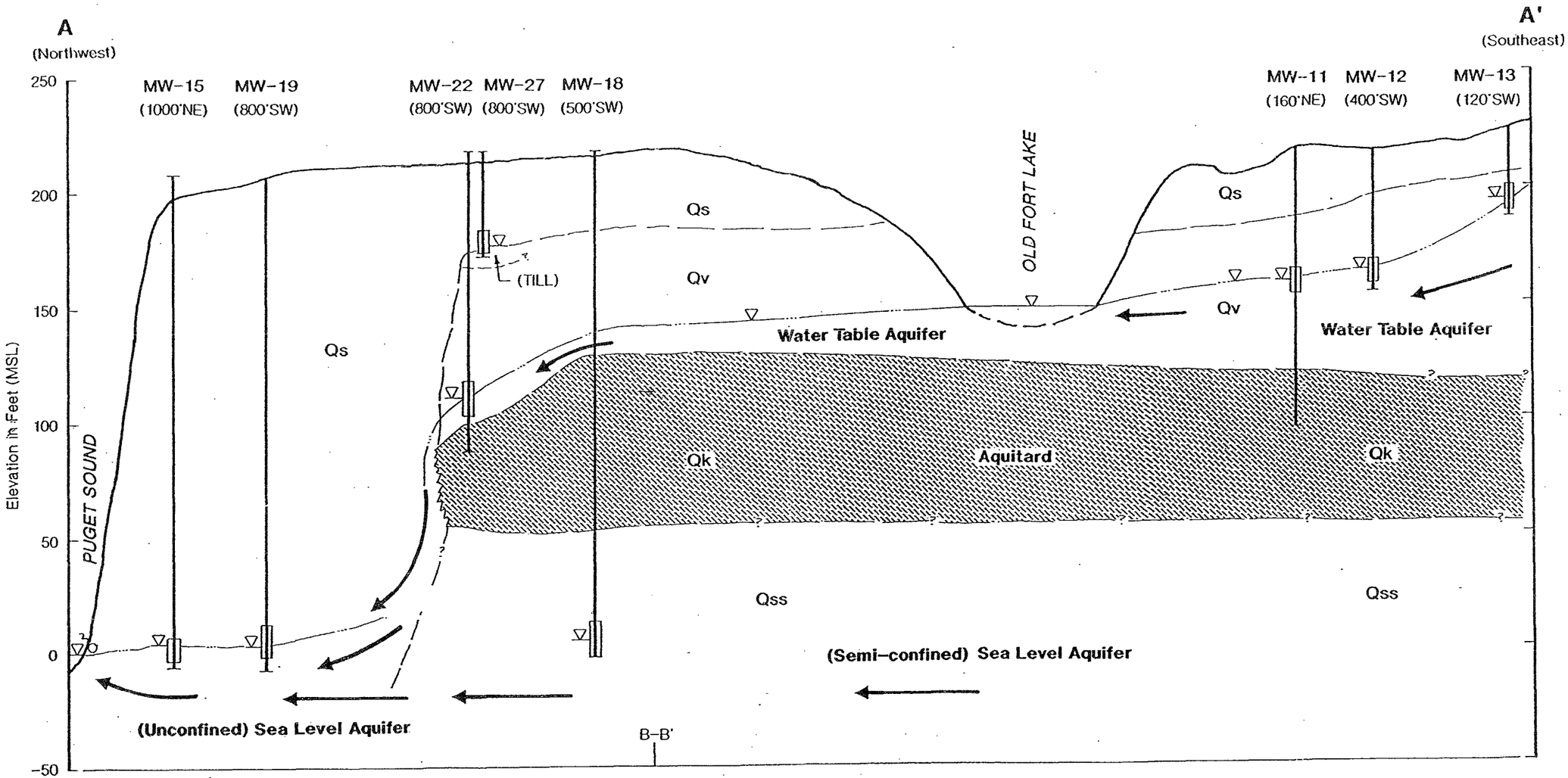
URS | Project No. 54-974033NC | Figure 2.20-8

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Sand Laydown Areas\Sand Laydown Areas.dwg
EDIT DATE: 04/23/02 AT: 16:02



Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Groundwater and Surface Water Sampling Location Plan	Figure 3.1-1
Created by URS Modified by PIONEER			

FILENAME: Q:\Geo\Weyerhaeuser\RI--2002\Cut & Paste\FIG3-1-1.dwg
EDIT DATE: 03/11/02 AT: 11:01



MW-15 Monitoring Well Number
(1600'NE) Offset Distance and Direction
Monitoring Well Location
Water Level
Screened Interval
Groundwater Seep
Schematic Groundwater Flow Direction
Water Table

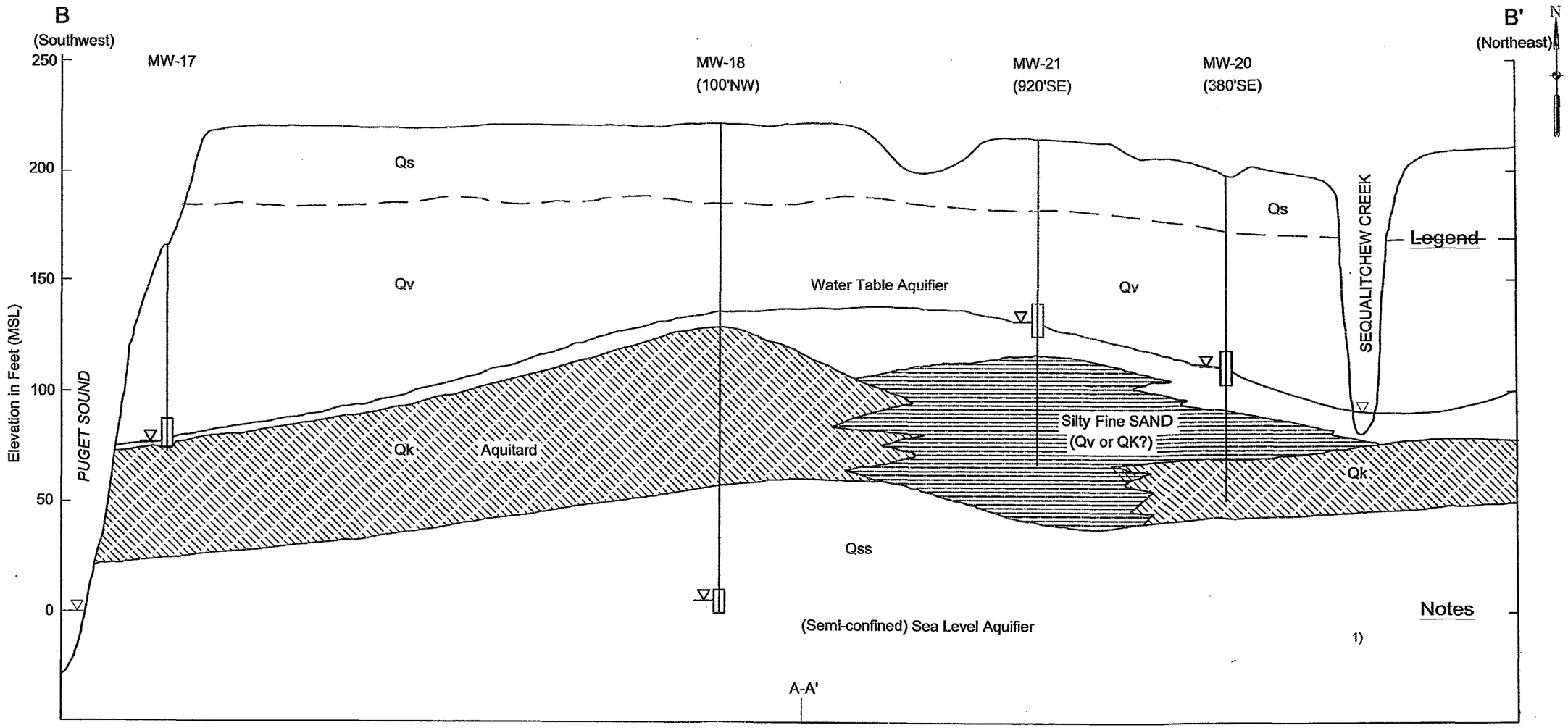
Qs	Steilacoom Gravels
Qv	Vashon Drift
Qk	DBD-OB sequence
Qss	Salmon Springs Glaciation

Notes:
1. Contacts between soil units are based upon interpolation between explorations and represent our interpretation of substance conditions based on currently available data.
2. Profile Location shown of Figure 3.1-1.
3. DBD-OB sequence = "Olympia Beds/Possession Drift/ Whidbey Formation/Double Bluff Drift sequence"

Horizontal Scale in Feet
0 500 1000
0 50 100
Vertical Scale in Feet
Vertical Exaggeration x 10

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Generalized Subsurface Profile A-A'	Figure 3.1-2
Created by URS Modified by PIONEER			

FILENAME: \\sea2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Borders\FIG3-1-2.dwg
EDIT DATE: 12/19/00 AT: 15:37



MW-18 (100"NW) — Monitoring Well Number; Offset Distance and Direction; Monitoring Well Location; Water Level; Screened Interval; Water Table

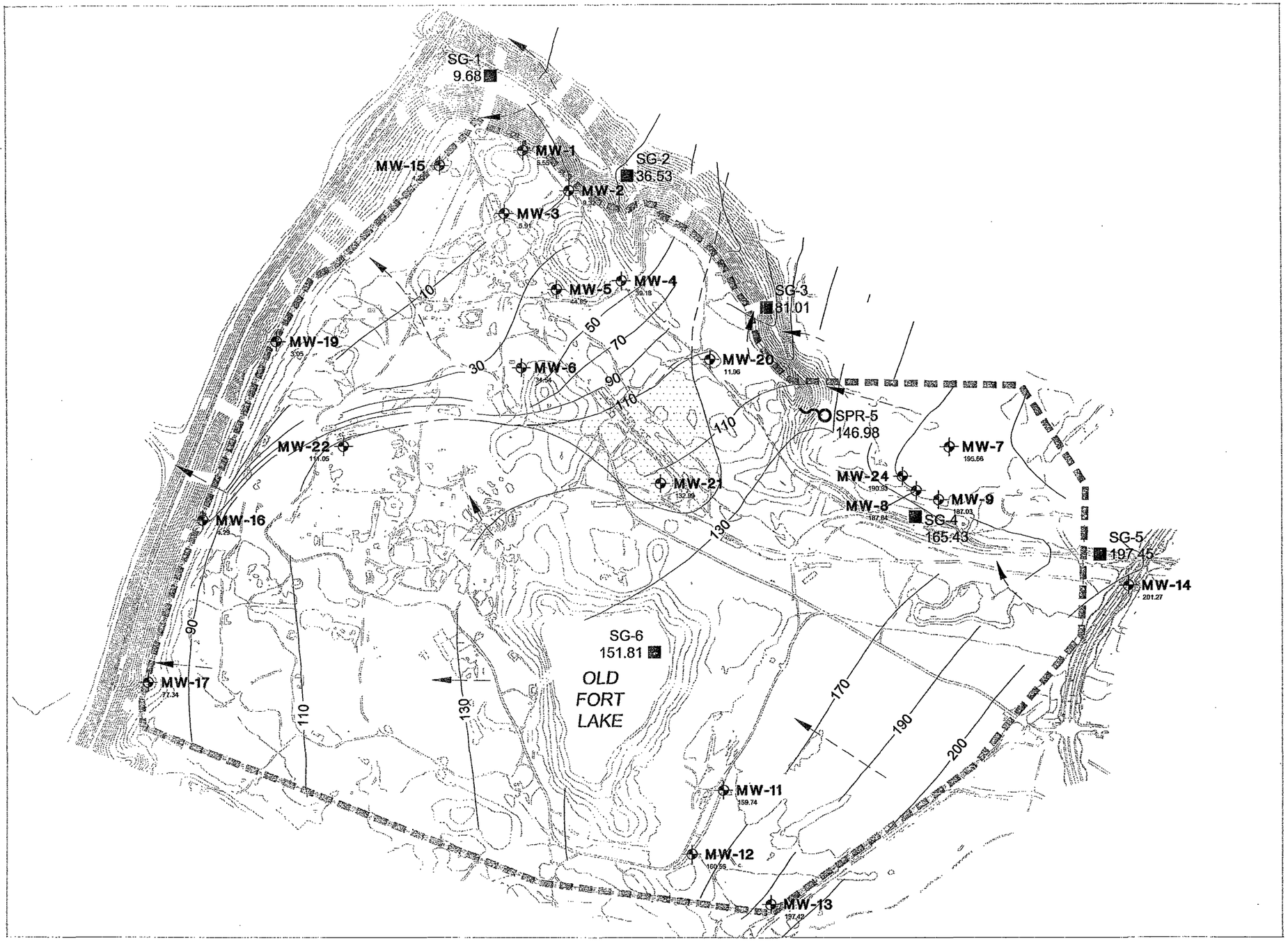
Qs	Steilacoom Gravels
Qv	Vashon Drift
(Qv or Qk)	Silty Fine Sand
Qk	DBD-OB sequence
Qss	Salmon Springs Glaciation

Horizontal Scale in Feet
0 500 1000
0 50 100
Vertical Scale in Feet
Vertical Scale Exaggeration x 10

Notes:
1. Contacts between soil units are based upon interpolation between explorations and represent our interpretation of substance conditions based on currently available data.
2. Profile Location shown of Figure 3.1-1.
3. DBD-OB sequence = "Olympia Beds/Possession Drift/ Whidbey Formation/Double Bluff Drift sequence"

FILENAME: Q:\Geol\Weyerhaeuser\RI-2002\Cut & Paste\FIG 3-1-3.dwg
EDIT DATE: 04/15/02 AT: 13:00

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Generalized Subsurface Profile B-B'	Figure 3.1-3
Created by URS Modified by PIONEER			



N

Poential Paleochannel (Filled with silty, find SAND)

"Cutoff" (See text for explanation)

—200— Water Table Elevation Contour in Feet (MSL)

Generalized Groundwater Flow Direction

201.27 Water Table Elevation in Feet (MSL)

Consent Decree Boundary

MW-14 201.27 Monitoring Well

SPR-5 Spring

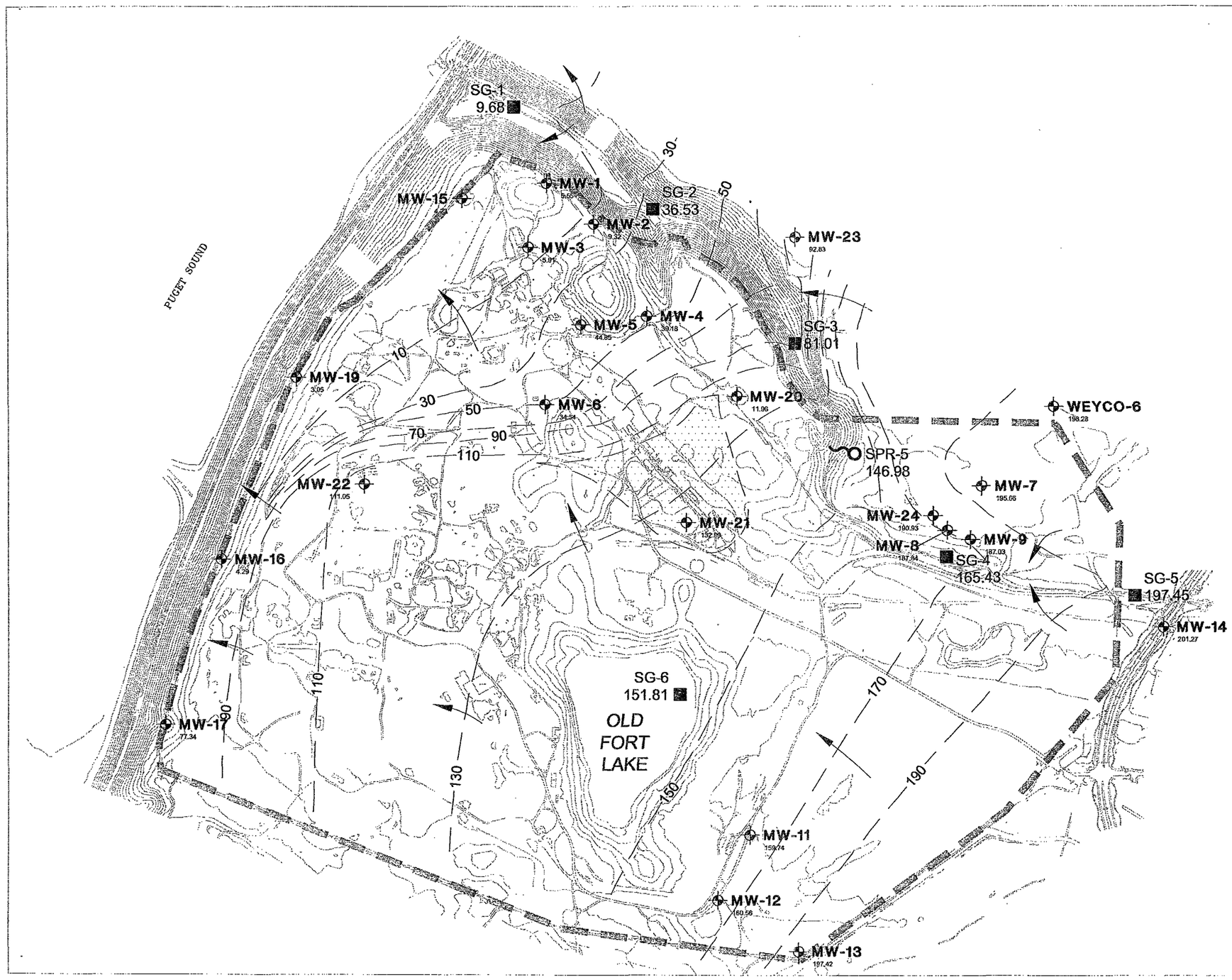
SG-4 Staff Gauge

SCALE 0 400 800 1600 FEET

1"=800'

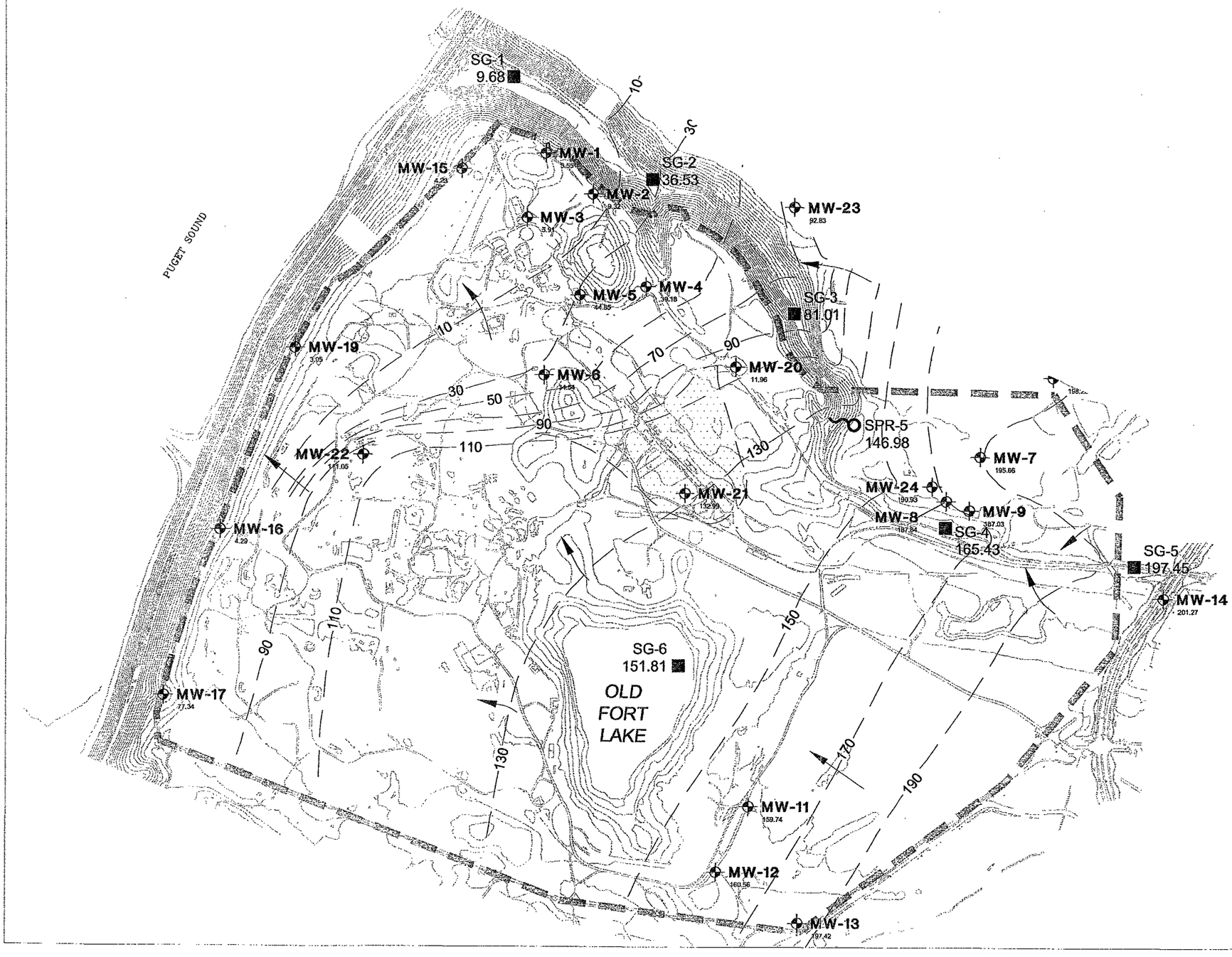
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\FIG 3-1-4.dwg
EDIT DATE: 04/15/02 AT: 10:17

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Water Table Elevation Contour Map - April 1992	Figure 3.1-4
Created by URS Modified by PIONEER			



FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\FIG 3-1-5.dwg
EDIT DATE: 04/15/02 AT: 10:21

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Water Table Elevation Contour Map - August 1992	Figure 3.1-5
Created by URS Modified by PIONEER			



N

Poential Paleochannel
(Filled with silty, find SAND)

Cutoff
(See text for explanation)

—200— Water Table Elevation Contour in Feet (MSL)

Generalized Groundwater Flow Direction

201.27 Water Table Elevation in Feet (MSL)

Consent Decree Boundary

MW-14 Monitoring Well

SPR-5 Spring

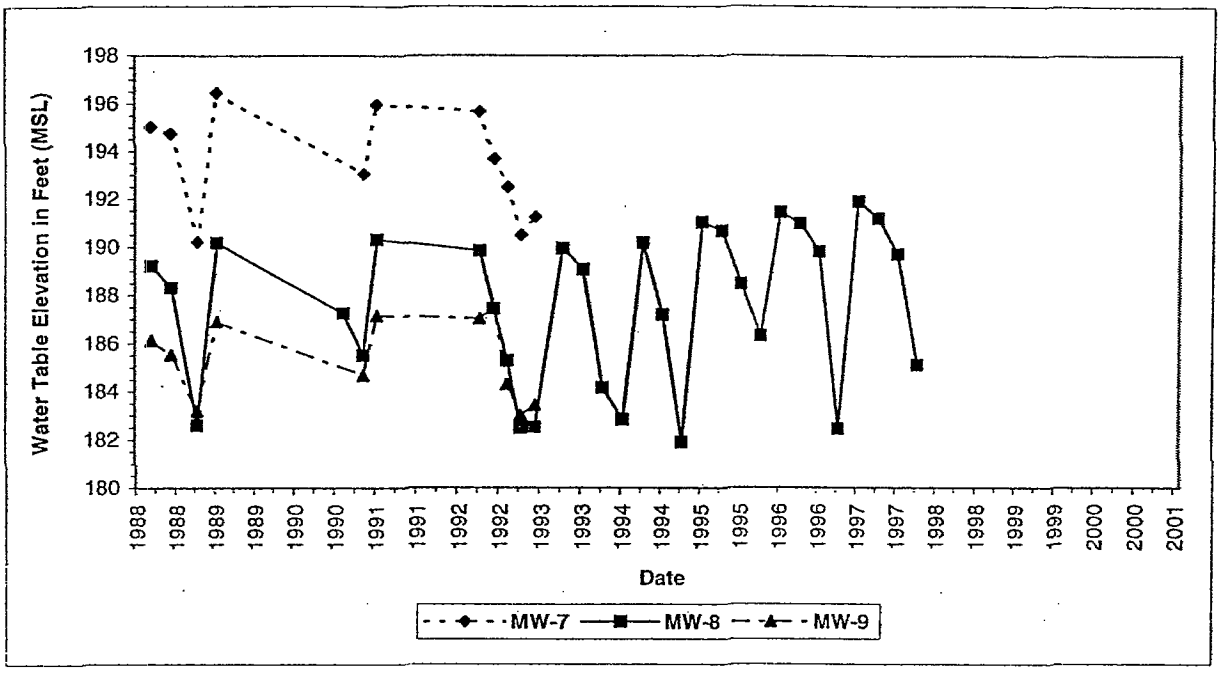
SG-4 Staff Gauge

SCALE 0 400 800 1600 FEET
1"=800'

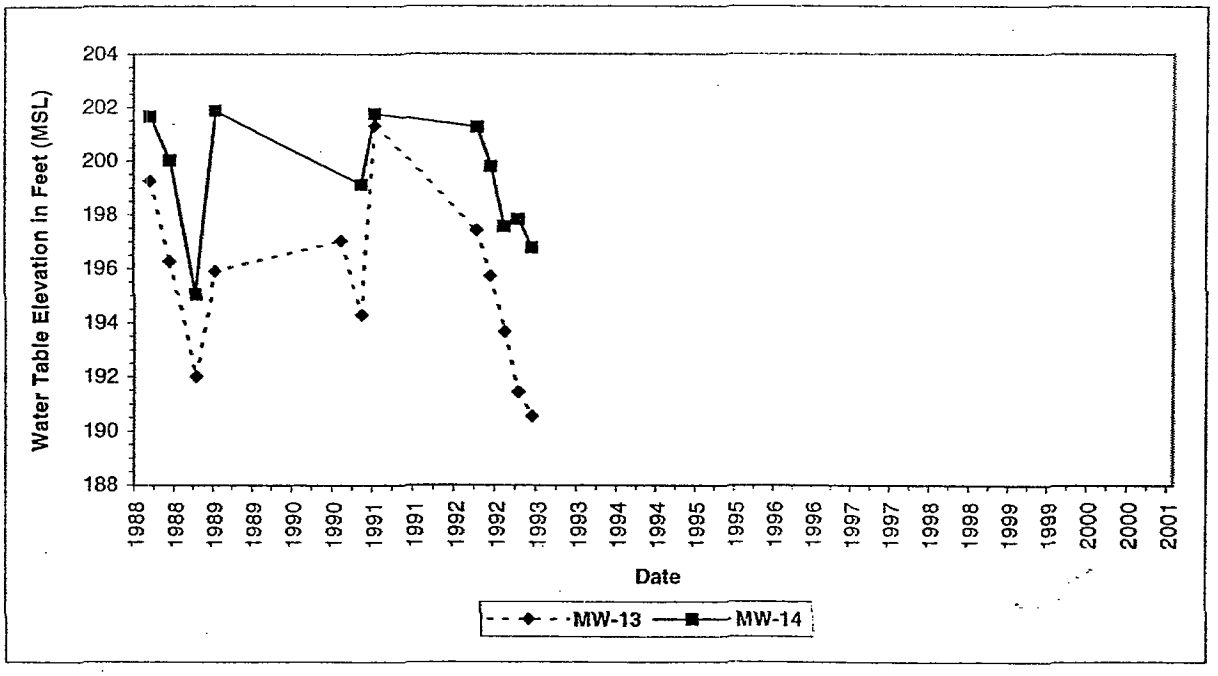
FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\FIG 3-1-6.dwg
EDIT DATE: 04/15/02 AT: 10:21

Weyerhauser Dupont, WA	Project No. 54-974033NC	Water Table Elevation Contour Map - December 1992	Figure 3.1-6
Created by URS Modified by PIONEER			

Monitoring Wells North of Sequalitchew Creek



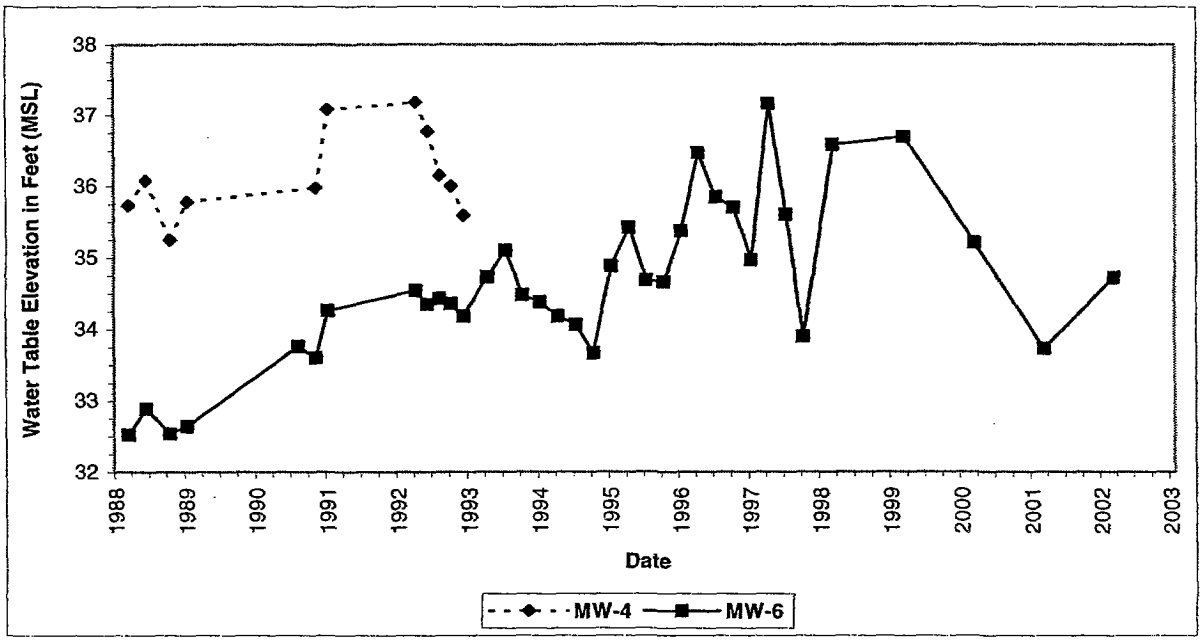
Monitoring Wells South of Sequalitchew Creek



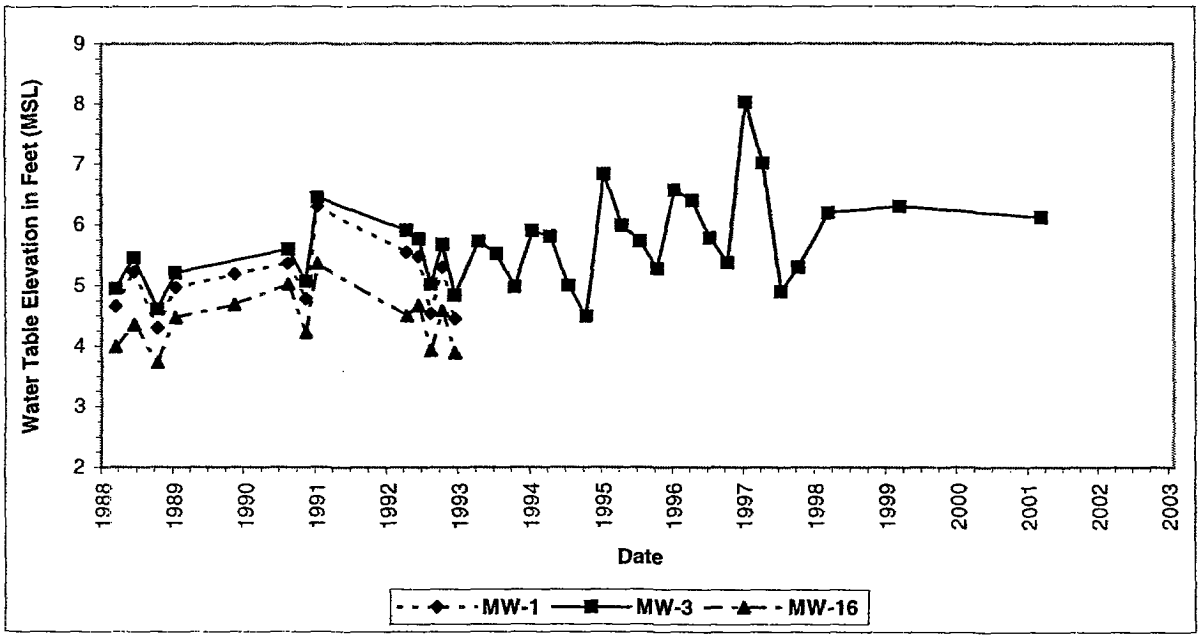
FILENAME: \\seo2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Border\Fig3-1-7.dwg
EDIT DATE: 12/15/00 AT: 07:41

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Long-Term Hydrographs for Wells in the Water Table Aquifer	Figure 3.1-7
URS			

Monitoring Wells Immediately West of "Cutoff"



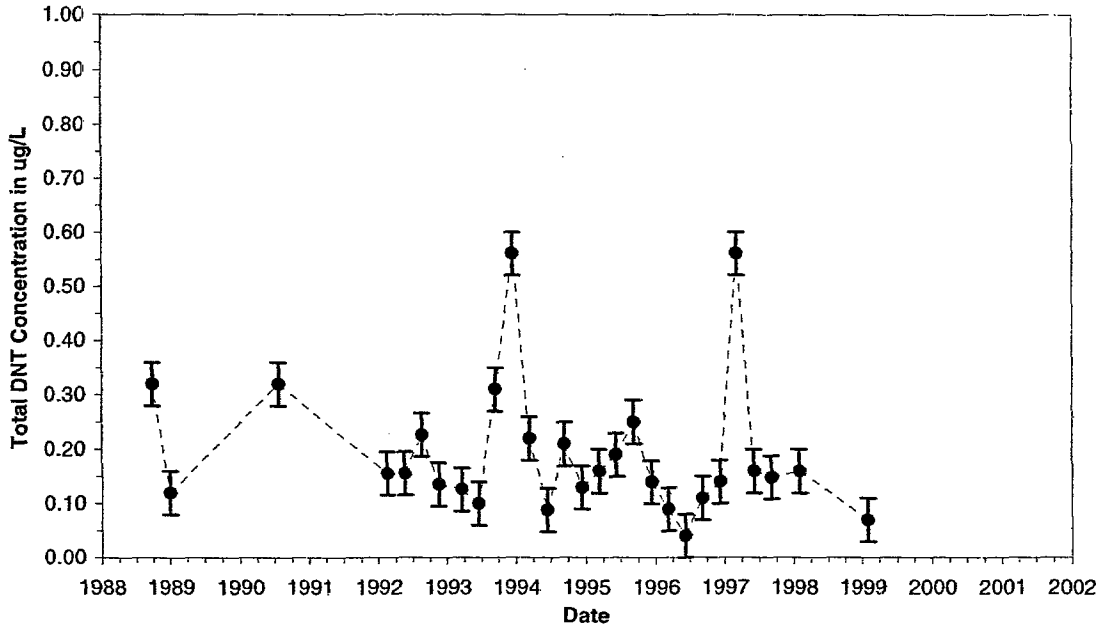
Monitoring Wells Further West of "Cutoff"



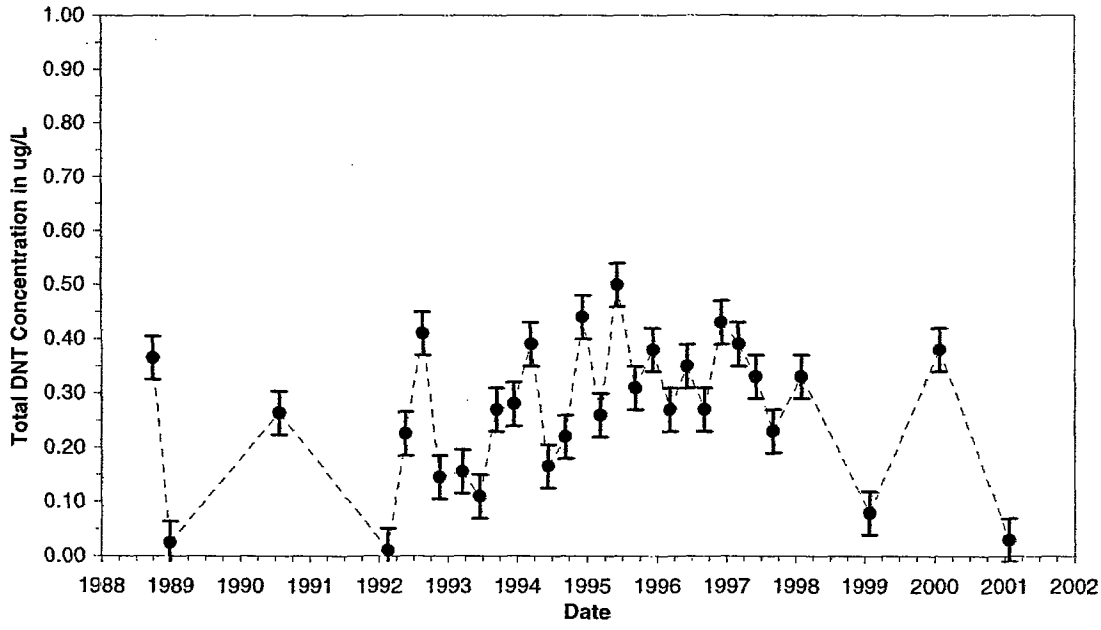
FILENAME: \\sea2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Border\FIG3-1-8.dwg
DIT DATE: 12/19/00 AT: 11:35

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Long-Term Hydrographs for Wells in the Sea Level Aquifer	Figure 3.1-8
Created by URS Modified by PIONEER			

MW-3
Sea Level Aquifer Downgradient of Area 5



MW-6
Sea Level Aquifer Downgradient of Area 26



Notes:

1) Nondetects are plotted as 1/2 the sample detection limits.

2) Error bars are +0.04 ug/L (average difference observed between field duplicate sample pairs).

I:\974033nc\RI\Ri2000\Figures\Fig3.2-1to5.xls

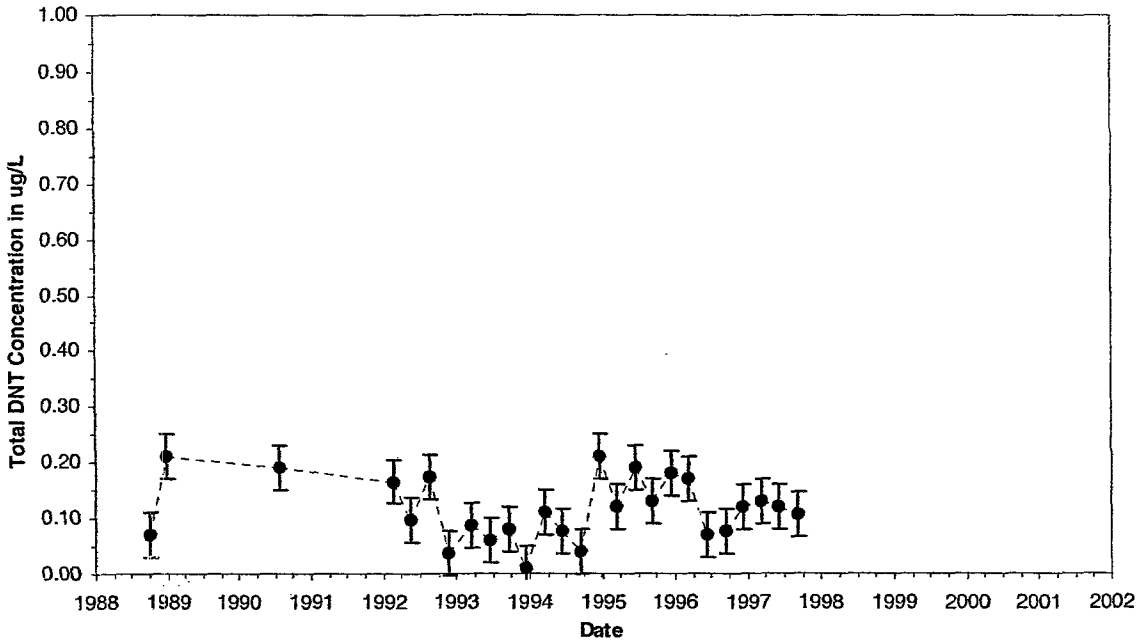
FILENAME: Q:\scm2\WeyerProjects\Projects\Weyer&Poste\Borders\WA3-2s\Civil & Poste\Border\FIG3-1-8.dwg
EDIT DATE: 02/19/00 AT: 11:03

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total DNT Concentrations in Groundwater Over Time (MW-3 and MW-6)	Figure 3.2-1

URS

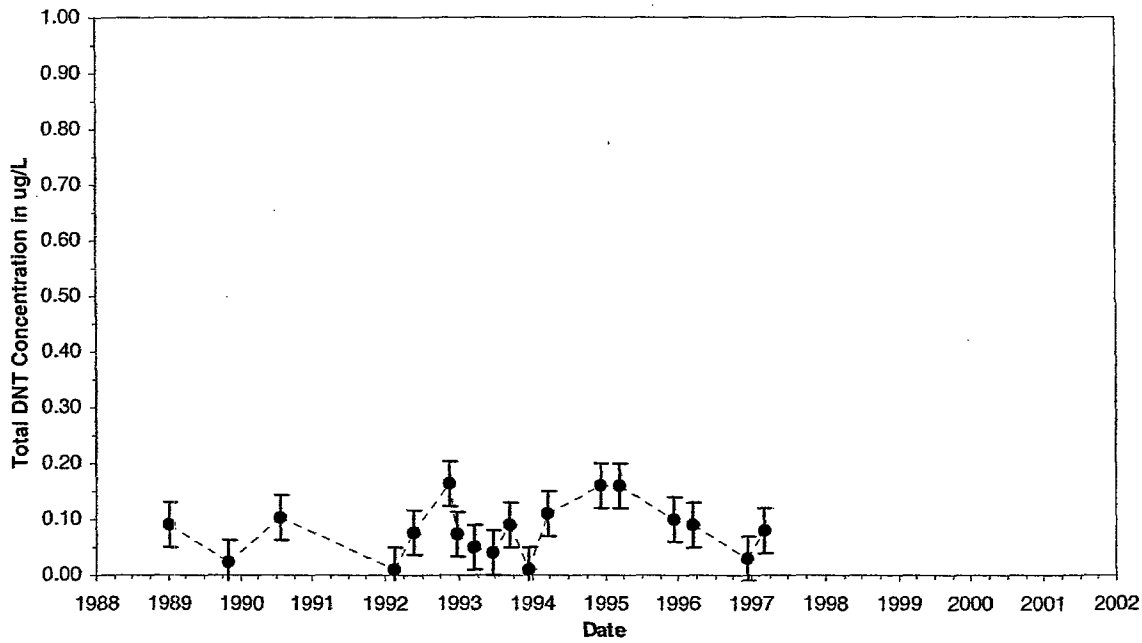
MW-8

Water Table Aquifer Downgradient of Area 31



MW-15

Sea Level Aquifer Downgradient of Area 5



Notes:

1) Nondetects are plotted as 1/2 the sample detection limits.

2) Error bars are +0.04 ug/L (average difference observed between field duplicate sample pairs).

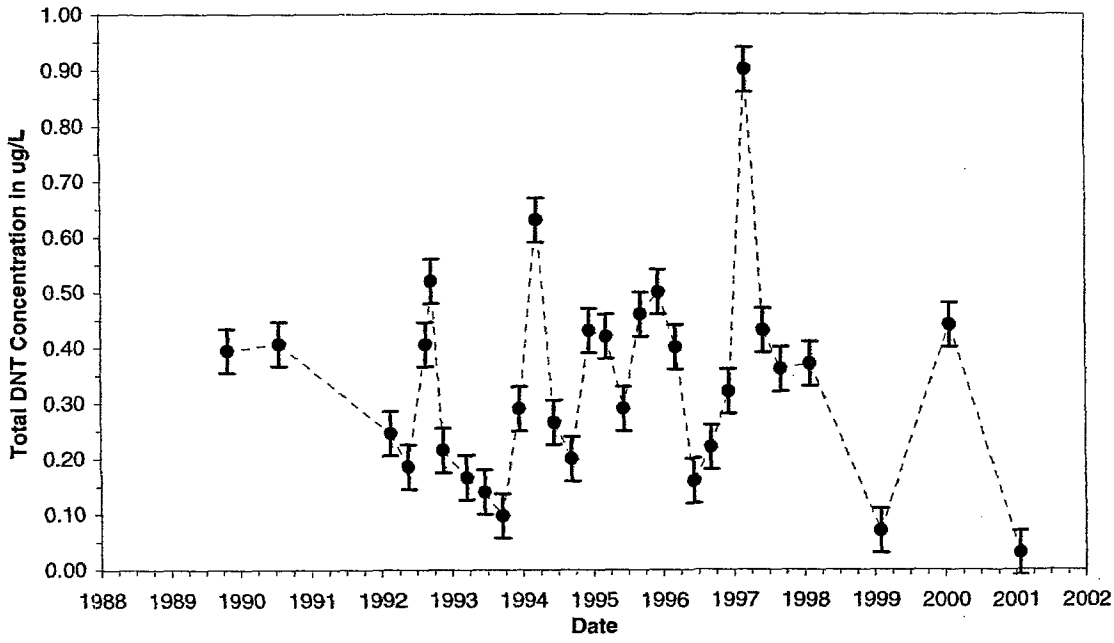
E:\974033nc\RARI2000\Figures\Fig3.2-1to5.xls

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\Borders\MW-08 and MW-15.dwg

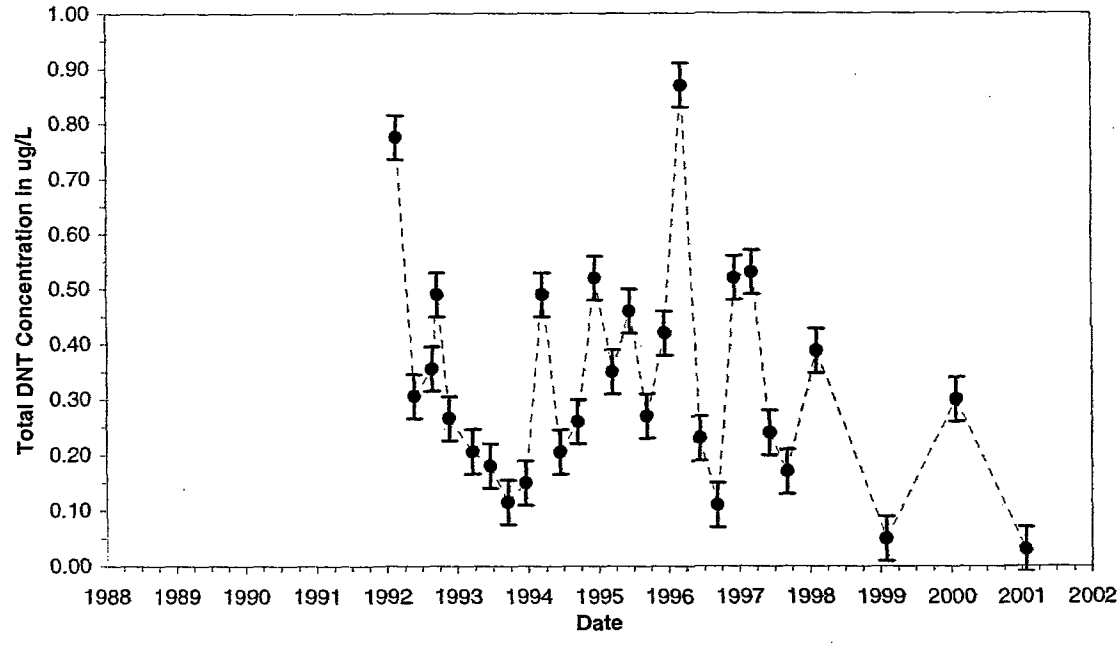
PLOT DATE: 04/02/02 AT: 15:46

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total DNT Concentrations in Groundwater Over Time (MW-8 and MW-15)	Figure 3.2-2
URS			

MW-19
Sea Level Aquifer Downgradient of Area 18



MW-22
Water Table Aquifer Downgradient of Area 18



Notes:

1) Nondetects are plotted as 1/2 the sample detection limits.

2) Error bars are +0.04 ug/L (average difference observed between field duplicate sample pairs).

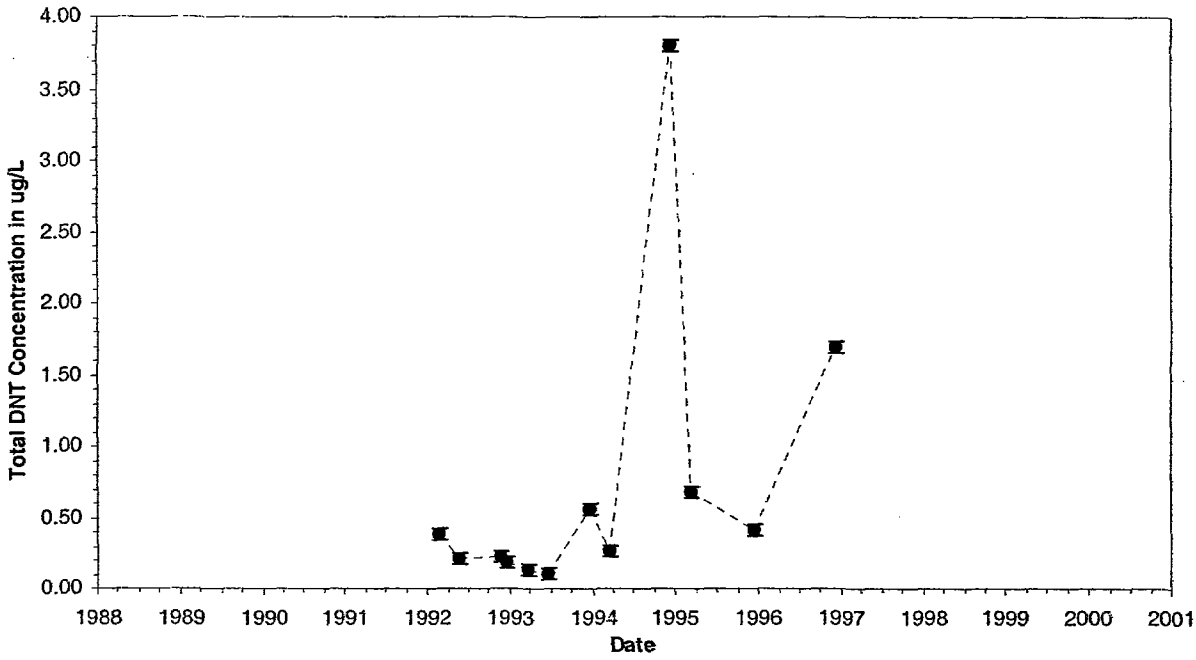
I:\974033nc\RI\Ri2000\Figures\Fig3.2-1to5.xls

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\Borders\FIG3-2-3.dwg
EDIT DATE: 03/11/02 AT: 11:08

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total DNT Concentrations in Groundwater Over Time (MW-19 and MW-22)	Figure 3.2-3
URS			

MW-27

Zone of Seasonally Perched Groundwater Beneath Area 18



Notes:

1) Nondetects are plotted as 1/2 the sample detection limits.

2) Error bars are +0.04 ug/L (average difference observed between field duplicate sample pairs).

I:\974033nc\RI\Ri2000\Figures\Fig3.2-1to5.xls

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\Borders\MW-27.dwg
DATE: 04/02/02 AT: 15:46

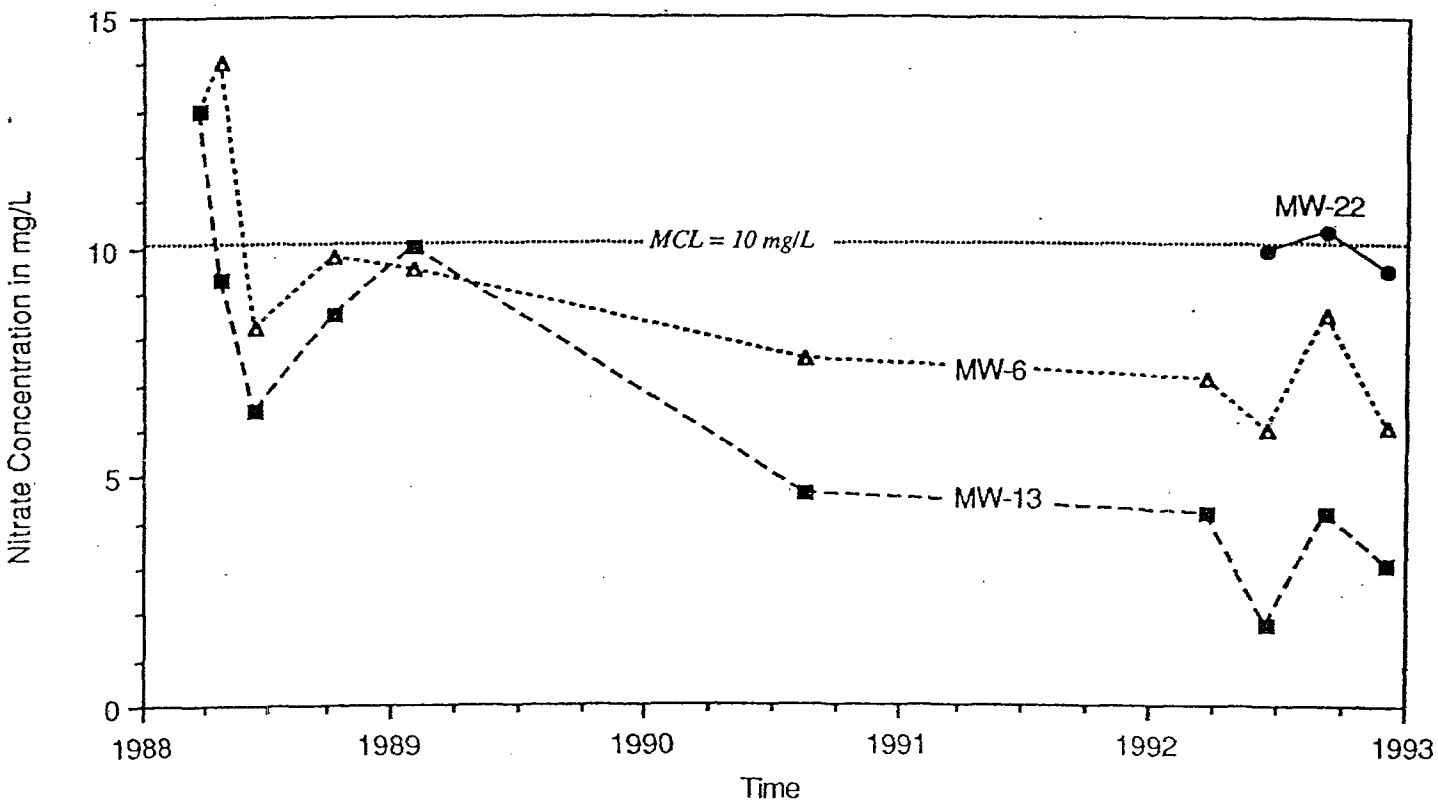
Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total DNT Concentrations in Groundwater Over Time (MW-27)	Figure 3.2-4
URS			

Data from Seven Quarterly Monitoring Well Locations

I:\974033nc\RI\RI2002\Figures\Fig3.2-1to5.xls

FILENAME: Q:\Geo\Weyerhaeuser\RI-2002\Cut & Paste\Borders\FIG3-2-5-REV1.dwg
EDIT DATE: 04/29/02 AT: 16:04

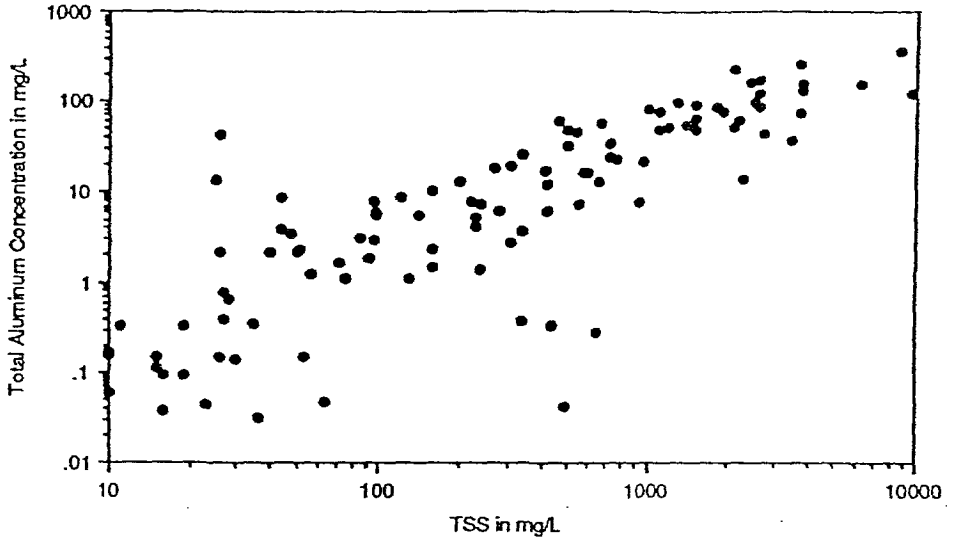
Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Groundwater DNT Concentrations as a Function of Groundwater Elevation	Figure 3.2-5
URS			



FILENAME: \\sea2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Border\FIG3-2-6.dwg
EDIT DATE: 12/19/00 AT: 12:57

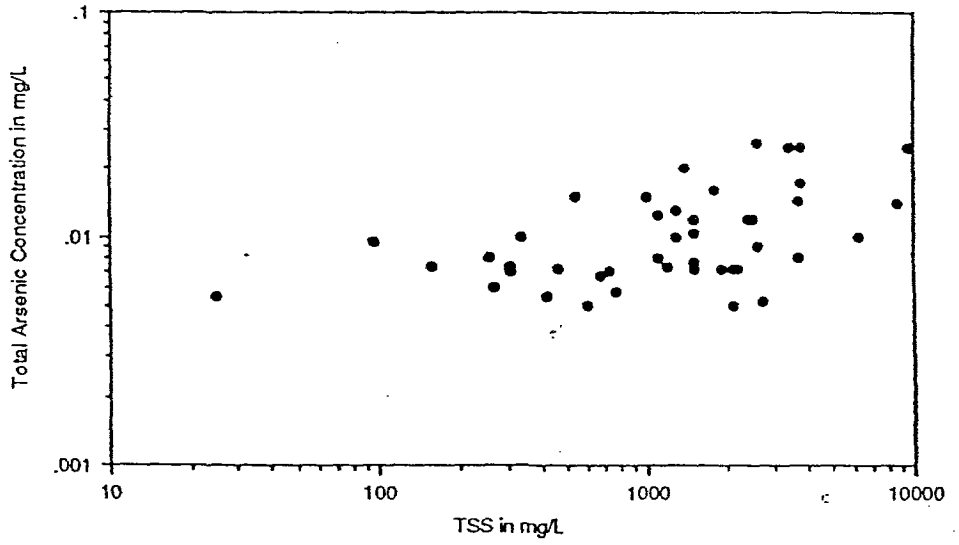
Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Nitrate Concentrations in Groundwater Over Time	Figure 3.2-6
URS			

Total Aluminum vs. Total Suspended Solids (TSS)



Note: Only data with both detectable total aluminum and detectable TSS are plotted.

Total Arsenic vs. Total Suspended Solids (TSS)

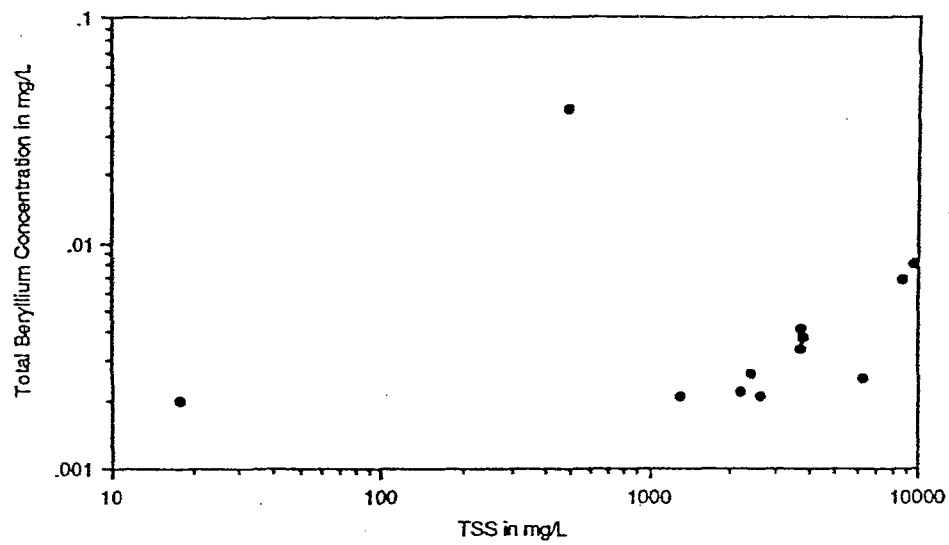


Note: Only data with both detectable total arsenic and detectable TSS are plotted.

FILENAME: \\sea2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Border\FIG3-2-7.dwg
PLOT DATE: 12/19/00 AT: 12:59

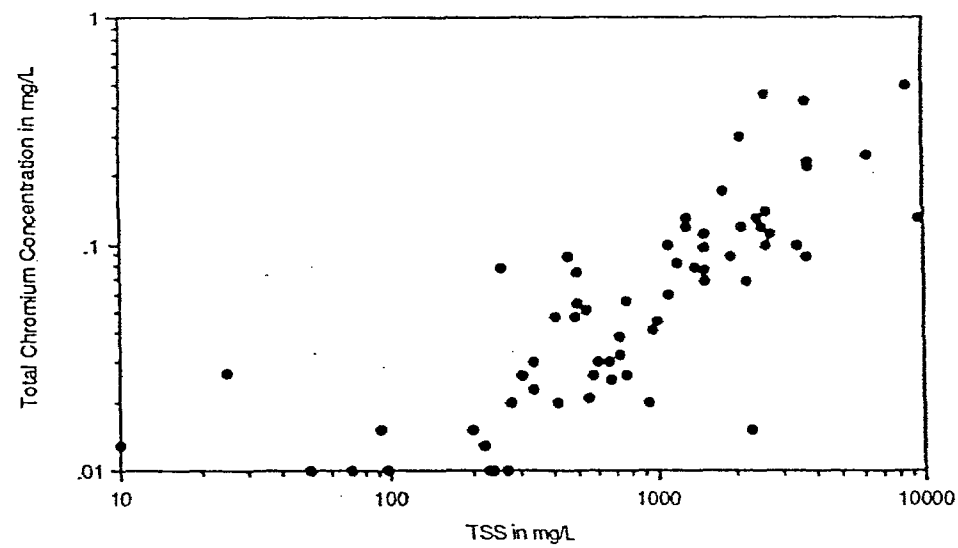
Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total Aluminum vs. Total Suspended Solids (TSS) Total Arsenic vs. Total Suspended Solids (TSS)	Figure 3.2-7
URS			

Total Beryllium vs. Total Suspended Solids (TSS)



Note: Only data with both detectable total beryllium and detectable TSS are plotted.

Total Chromium vs. Total Suspended Solids (TSS)

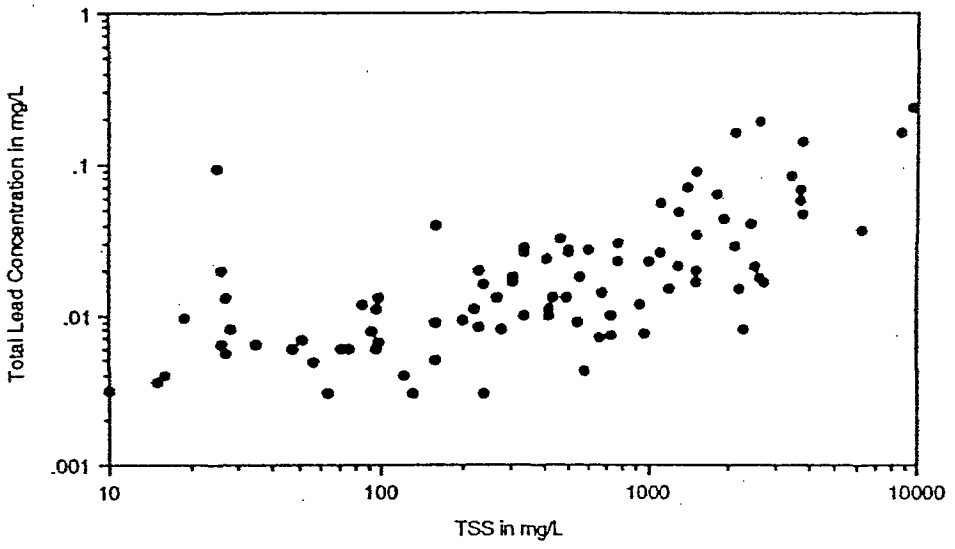


Note: Only data with both detectable total chromium and detectable TSS are plotted.

FILENAME: \\seo2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Border\FIG3-2-8.dwg
PLOT DATE: 12/19/00 AT: 13:00

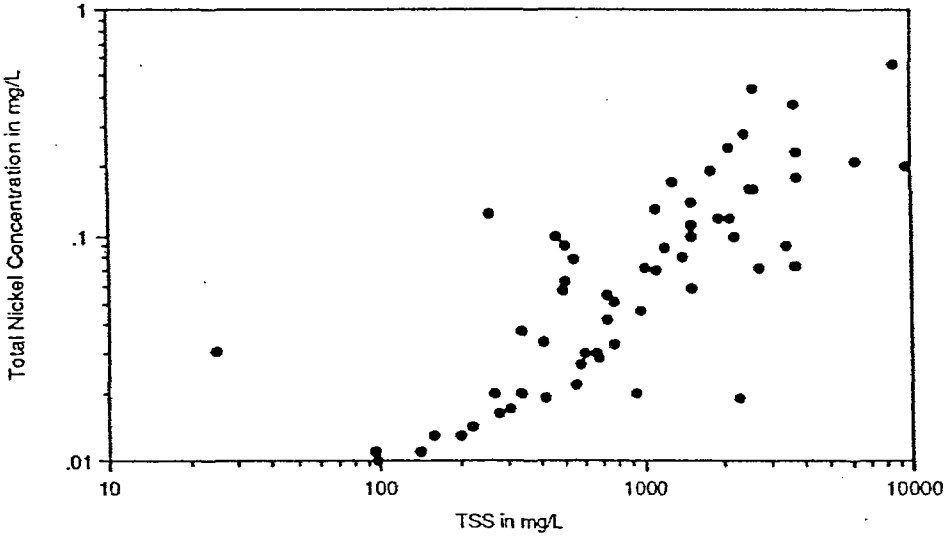
Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total Beryllium vs. Total Suspended Solids (TSS) Total Chromium vs. Total Suspended Solids (TSS)	Figure 3.2-8
URS			

Total Lead vs. Total Suspended Solids (TSS)



Note: Only data with both detectable total lead and detectable TSS are plotted.

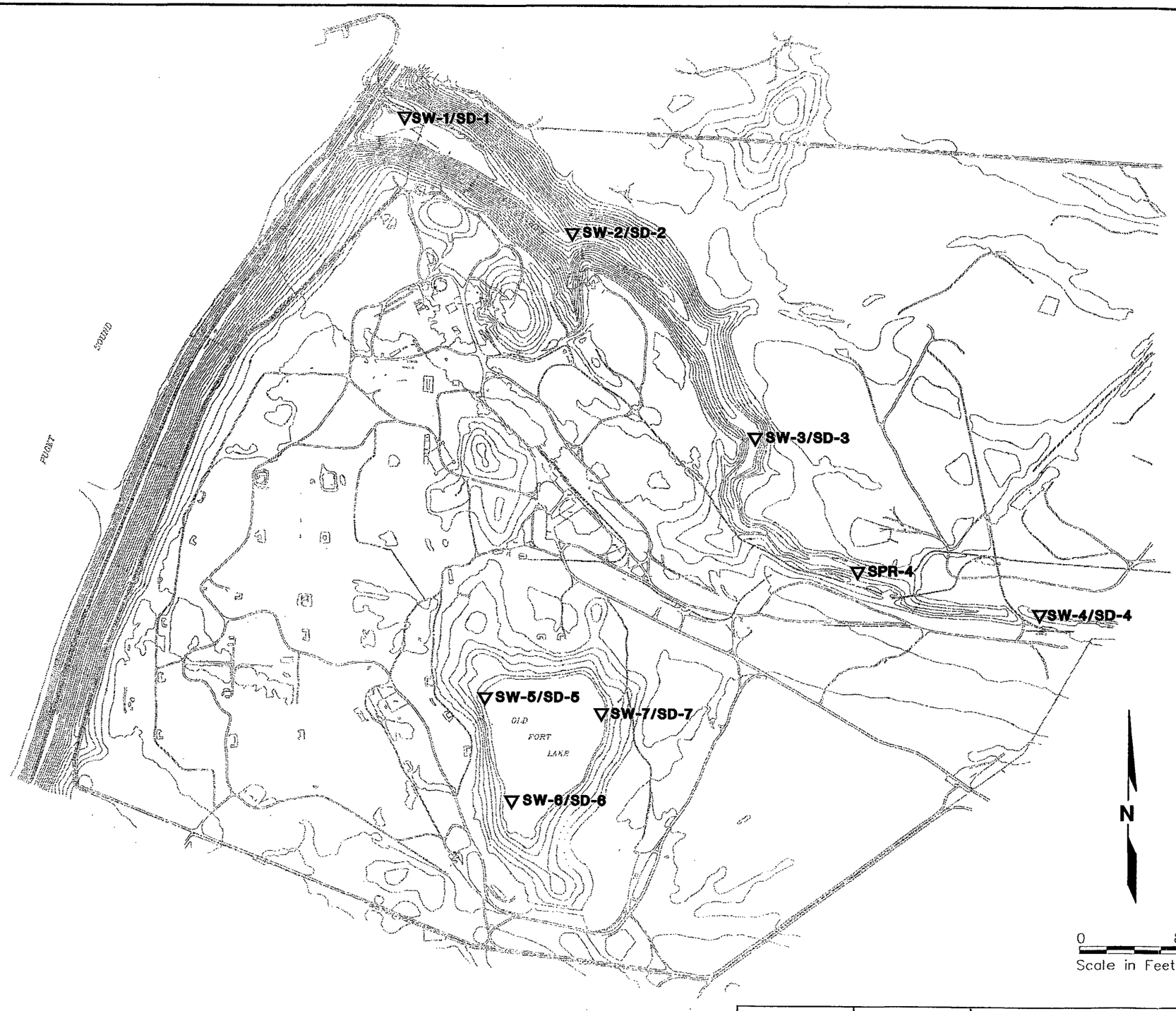
Total Nickel vs. Total Suspended Solids (TSS)



Note: Only data with both detectable total nickel and detectable TSS are plotted.

FILENAME: \\sea2\CAD Projects\Projects\Weyerhaeuser\DuPont WA\Areas\Cut & Paste\Border\FIG3--2--9.dwg
EDIT DATE: 12/19/00 AT: 13:02

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Total Lead vs. Total Suspended Solids (TSS) Total Nickel vs. Total Suspended Solids (TSS)	Figure 3.2-9
URS			



Sampling Location and Number

SW-4/SD-4 Surface Water and Freshwater Sediment

Note: A Pre–RI Freshwater Sediment Sample from SPR–4 was collected. Groundwater, not Surface Water Samples were also collected at this location (refer to Figure 3.1–1).

FILENAME: Q:\Geo\Weyerhaeuser\RI–2002\Cut & Paste\FIG4–1–1.dwg
EDIT DATE: 03/11/02 AT: 14:48

Weyerhaeuser DuPont, WA	Project No. 54-974033NC	Surface Water and Freshwater Sediment Sampling Location Plan	Figure 4.1-1
URS			

APPENDIX D

MSU REMEDIATION DOCUMENTATION

APPENDIX D- MSU REMEDIATION

The purpose of this appendix is to document the successful remediation of all of the Miscellaneous Small Units (MSUs). MSUs are areas where isolated, small occurrences of total petroleum hydrocarbons, (i.e., TPH , which includes motor oil and Bunker C), 2,4-ditrotoluene (2,4-DNT), 2,6-dinitrotoluene (2,6-DNT), 2,4,6-trinitrotoluene (TNT), nitrobenzene, benzo(a)pyrene, aldrin, tetrachloroethene, arsenic, copper, lead, and/or mercury were present and required remediation.

The cleanup goals for constituents in each MSU were either cleanup levels (CL), remediation levels (RL), or a screening level (SL). RLs were derived using human health risk assessment procedures, incorporating exposure assumptions and other media-specific factors reflecting future Site conditions. There was one SL used, which was a value for lead derived by Ecology for protection of terrestrial ecological receptors. The CL, RL or SL for the same constituent varies according to the Remediation Unit (RU) where they are located. For example, the RL for arsenic in a Placement Area (PA) is 530 mg/kg, while the RL in Commercial Areas is 60 mg/kg. In Open Space Areas the target arsenic level is a CL of 32 mg/kg. To see a list of the CLs, RLs, and the SL for the different RUs see Tables 2-1, 3-1, 4-1, 5-1, and 6-1 of the main document.

In general, the process for achieving CLs, RLs, or the SL at each MSU was to excavate a box of a prescribed dimension around the sample location where there was an exceedance. CLs were either MTCA table values derived by Ecology using default exposure assumptions, or Site-specific values derived by Ecology. After excavation, verification samples were then collected to confirm that the concentration of the constituents of concern (COC) was below the associated CL, RL, or SL. If the concentration of the COC was not below the CL, RL, or SL, then further excavation and sampling was performed until the verification samples confirmed that concentration of the COC was below the cleanup goal. All verification samples collected from the bottom of excavations were five-point composite samples. A five-point composite sample consisted of soil collected from the center of an excavation and from locations equidistant from the center and the four corners of the excavation. All verification samples identified as sidewall samples were collected by scraping the excavation sidewall at the depth interval where the COC was originally identified.

In this appendix, general MSUs are presented first followed by the Narrow Gauge Railroad (NGRR) MSUs, Foundation MSUs, and Debris Area MSUs.

The majority of the historical TPH-impacted soil was associated with Bunker-C fuel oil that was used at the Old Powerhouse. In a couple of instances it was confirmed that TPH-impacted soil was not due to a release of Bunker C and in those cases TPH was reported as motor oil. More recent analytical results for both constituents are reported as a motor oil concentration.

D.1 MSUs–General

For MSUs not associated with specific NGRR, Foundations, or Debris areas, a historical sample that exceeded cleanup goals would identify the location and associated COC for an MSU. An area, usually 20

x 20 feet, would delineate the dimensions of the MSU for excavation and sampling purposes. After excavation, if verification sample results were below cleanup goals, excavation and sampling at that MSU would be finished. If, however, verification sample results were above cleanup goals, excavation and sampling would continue until such time as sample results verified that the concentration of the COC was below cleanup the goal.

Many MSUs overlap with excavations that were part of previous Interim Remedial Actions (IRAs), (i.e. previous cleanup programs). Where this occurred, sample and excavation depths were adjusted based on previous excavations.

If excavation at an MSU exceeded two feet, then sidewall samples were collected to verify COCs were not present laterally. However, if the MSU excavation depth was less than two feet, then sidewall samples were not collected.

In some cases, MSU footprints in close proximity merged together when excavations of one MSU extended into the area of another MSU. In some instances data from merged MSUs were used collectively to show compliance. In addition, in some instances a location with the 75-foot sampling grid (completed as part of the Large-Scale Excavation program across the Site) was included in the data set to demonstrate that an MSU excavation boundary was adequate.

D.1.1 MSU-1

Bunker C was identified in a one historical sample (7-SS-505) at MSU-1 at a concentration of 10,000 mg/kg and was greater than the CL of 7,600 mg/kg, at a depth of a half foot. An area 50 x 50 feet surrounding this sample location was excavated to a depth of one and a half feet. The excavated soil was placed on the MSU Laydown Area (i.e., an asphalt pad) for off-Site disposal. Verification samples were collected from the bottom of the excavation, and from the north, east and west sidewalls from a depth of zero to a half foot. The resulting motor oil concentration for the bottom sample was 37 mg/kg which was less than the CL of 7,600 mg/kg, and motor oil was not detected in any of the three sidewall samples. The sidewall sample to the south could not be collected because the excavation depth of the adjoining MSU caused it to be no longer in place (NLIP). The excavation boundary, confirmation sample locations and analytical results are presented on Figure D-1.

D.1.2 MSU-2

Bunker C was identified in one historical sample (8-VS-81) at MSU-2 at a concentration of 11,000 mg/kg which was greater than the CL of 7,600 mg/kg, at a depth of 20 to 20.5 feet. This area (i.e., the Area 8 Pipeline) had been previously excavated to a depth of 20 feet and then backfilled with clean fill when the original Bunker C pipeline was removed. An area 20 x 20 feet was excavated at a depth beginning at 20 feet to a depth of 21.5 feet surrounding the sample location. This resulted in a 20 x 20 x 1.5 foot layer being excavated at this MSU. The top 20 feet of excavated soil was placed to the side in a stockpile and the remaining one and a half feet of excavated soil was placed on the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east and west sidewalls at a depth of 20 to 21.5 feet. The verification sample concentrations ranged from 48.2 to 49.8 mg/kg which were all less than the CL of 7,600 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-2.

D.1.3 MSU-3

Lead was identified in one historical sample (7-B-503-S-1C-DAVG) at MSU-3 at a concentration of 530 mg/kg which was greater than the SL of 118 mg/kg, at a depth of two and a half to four feet. An area 80 x 120 feet was excavated from a depth beginning at two and a half feet to a depth of five feet surrounding the sample location, and the soil was placed in the closest Placement Area (PA). Verification samples were collected from the bottom of the excavation, and from each of the sidewalls at depth of two and a half to four feet. The lead concentrations in the verification samples ranged from 5.0 to 88.2 mg/kg and were all below the lead SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-1.

D.1.4 MSU-10

2,4-DNT and 2,6-DNT (reported as DNT-Total) and TNT were identified in one historical sample (25-VS-13) at MSU-10. DNT-Total was found at a concentration of 5.0 mg/kg, which was greater than the CL of 3.0 mg/kg at a depth of 15 to 16 feet. TNT was found at a concentration of 7.0 mg/kg which was greater than the CL of 1.75 mg/kg, at a depth of 15 to 16 feet. An area 15 x 15 feet was excavated at a depth beginning at 15 feet to a depth of 21 feet. This resulted in a 15 x 15 x 6 foot layer being excavated at this MSU. The excavated soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of 15 to 17 feet. The concentrations of TNT detected in the verification samples ranged from 0.2 mg/kg to 0.3 mg/kg which were all less than the CL of 1.75. The concentrations of DNT-Total detected in the verification samples ranged from 0.30 mg/kg to 0.60 mg/kg, which were all less than the CL of 3.0 mg/kg. As this MSU location was within the final boundary of PA-01, it was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-3.

D.1.5 MSU-13

One foot of soil had previously been removed from this area as part of the Pilot Scraping Study. Lead was identified in one historical sample (APC-PS-VS-04-05) at MSU-13 at a concentration of 150 mg/kg which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area 15 x 15 feet was excavated at a depth of one to two and a half feet surrounding this sample location. The excavated soil was placed in the closest PA. A verification sample was collected from the bottom of the excavation and the lead concentration was 22.8 mg/kg which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-4.

D.1.6 MSU-14, 15, 16

Lead was identified in one historical sample (26-B-503-S-1-DAVG) at MSU-14 at a concentration of 250,000 mg/kg, at a depth of zero to one foot. This concentration was greater than the PA RL of 4,100 mg/kg. An area 20 x 20 feet surrounding this sample location was excavated to a depth of three feet. The excavated soil was placed on the MSU Laydown Area for off-Site disposal. After the MSU was excavated, one verification sample was collected from the bottom of the excavation. The resulting lead

concentration was 85.2 mg/kg which was less than the PA RL of 4,100 mg/kg. The excavation boundary and sample locations and results are presented on Figure D-5.

Motor oil was identified in one historical sample (26-B-503-S-1-DAVG) at MSU-14 at concentration of 5,600 mg/kg, in one historical sample (26-B-502-S-1) at MSU-15 at concentration of 2,200 mg/kg, and in one historical sample (26-TP-516-S-1) at MSU-16 at a concentration of 3,500 mg/kg. Each of these results was greater than the CL of 2,000 mg/kg, and all were collected at a depth of zero to one foot. Excavations began around each of these historical sample locations, but enlarged excavations around each area caused the MSUs to merge into one large MSU. To define a perimeter for this merged MSU, samples were collected around the perimeter of a natural depression, as defined by the pre-existing topography. The motor oil concentrations measured in samples collected ranged from 50.5 mg/kg to 1,980 mg/kg and were all less than the CL of 2,000 mg/kg. The excavated soil was placed on the MSU Laydown Area for off-Site disposal. As this MSU location was within the final boundary of PA-04, it was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-5.

D.1.7 MSU-18

Tetrachloroethene was identified in one historical sample (1234-TP-510-S-2-DAVG) at MSU-18 at a concentration of 0.063 mg/kg which was greater than the CL of 0.0091 mg/kg, at a depth of three to six feet. An area approximately 30 x 30 feet was excavated from a depth beginning at three feet to a depth of seven feet surrounding the sample location. The first three feet of soil was placed in the nearest PA and the remaining four feet of soil was placed on the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation at a depth of three to six feet, and tetrachloroethene was not detected in any of these samples. As this MSU location was within the final boundary of PA-05, it was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-6.

D.1.8 MSU-19

Nitrobenzene was identified in one historical sample (31-B-501-S-3) at MSU-19 at a concentration of 0.064 mg/kg at a depth of 10 to 14.5 feet, and in another historical sample (31-B-501-S-3) at a concentration of 0.067 mg/kg at a depth of 15 to 19.5 feet. Both of these concentrations were greater than the CL of 0.051 mg/kg. An area 30 x 30 feet was excavated from a depth beginning at zero feet to a depth of 20.5 feet surrounding the sample locations. The soil from a depth of zero to five feet was placed in a PA, and the remaining dirt from a depth of five to 20.5 feet was placed in the MSU Laydown Area, for off-Site disposal. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east, and west sidewalls at a depth between five to eight feet, 10 to 14.5 feet, and 15 to 19.5 feet. Nitrobenzene was not detected in any of these verification samples. The excavation boundary, sample locations and analytical results are presented on Figure D-7.

D.1.9 MSU-20

Nitrobenzene was identified in one historical sample (10-TP-501-S-3) at MSU-20 at a concentration of 0.065 mg/kg at a depth of four to six feet, and in another historical sample (31-B-503-S-3) at a

concentration of 0.073 mg/kg at a depth of 10 to 13 feet. Both of these concentrations were greater than the CL of 0.051 mg/kg. An area 20 x 30 feet was excavated from a depth beginning at zero feet to a depth of 14 feet surrounding the sample locations. The soil from a depth of 0 to 4 feet was placed in a PA, and the remaining soil from a depth of four to 14 feet was placed in the MSU Laydown Area, for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at a depth between four to six and a half feet, and 10 to 13 feet. Nitrobenzene was not detected in any of these verification samples. The excavation boundary, sample locations and analytical results are presented on Figure D-7.

D.1.10 MSU-21

Copper was identified in one historical sample (38-B-501-S-3) at MSU-21 at a concentration of 330 mg/kg which was greater than the CL of 263 mg/kg, at a depth of 12 to 13 feet. An area approximately 15 x 25 feet was excavated at a depth beginning at 12 feet to a depth of 14 feet surrounding the sample location and the soil was placed in the closest MSU Laydown Area. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of 12 to 14 feet. The concentrations of copper detected in the verification samples ranged from 9.7 mg/kg to 18.0 mg/kg which were all less than the CL of 263 mg/kg. As this MSU location was within the final boundary of PA-03, it was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-8.

D.1.11 MSU-22

Nitrobenzene was identified in a historical sample (11-TP-501-S-1) at MSU 22 at a concentration of 0.092 at a depth of zero to one foot. Another historical sample taken at the same location (11-TP-501-S-2) had a nitrobenzene concentration of 0.12 mg/kg at a depth of three to six feet. A third historical sample (11-TP-501-S-3) at the same location had a nitrobenzene concentration of 0.068 mg/kg at a depth of eight to 10 feet. All three of these samples had nitrobenzene concentrations that exceeded the CL of 0.051 mg/kg. An area 30 x 30 feet was excavated from a depth beginning at zero feet to a depth of 11 feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at a depth between zero to one foot, three to six feet, and eight to 11 feet. Nitrobenzene was not detected in any of these verification samples. The excavation boundary, sample locations and analytical results are presented on Figure D-9.

D.1.12 MSU-23

Nitrobenzene was identified in one historical sample (11-TP-502-S-1) at MSU 23 at a concentration of 0.078 which was greater than the CL of 0.051 mg/kg, at a depth of zero to one foot. Two more historical samples at depths of three to six feet (11-TP-502-S-2) and eight to 10 feet (11-TP-502-S-3) had nitrobenzene concentrations below the CL of 0.051 mg/kg. An area 30 x 20 feet was excavated from a depth beginning at zero feet to a depth of 11 feet surrounding these sample locations and the soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at a depth between zero to one foot, three to six feet, and eight to 11 feet. Nitrobenzene was not detected in any of these

verification samples. The excavation boundary, sample locations and analytical results are presented on Figure D-9.

D.1.13 MSU-24

TNT was identified in one historical sample (11-TP-6-S-2) at MSU-24 at a concentration of 42 mg/kg which was greater than the CL of 1.75 mg/kg, at a depth of three to six feet. An area 55 x 60 feet was excavated from a depth beginning at zero feet to a depth of seven feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at a depth between three to six feet. The concentrations of TNT in the verification samples ranged from undetected to 0.20 mg/kg, which were all less than the CL of 1.75 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-9.

D.1.14 MSU-25

TNT was identified in one historical sample (11-TP-5-S-2-DAVG) at MSU-25 at a concentration of 15 mg/kg, which was greater than the CL of 1.75 mg/kg, at a depth of three to six feet. An area 40 x 55 feet was excavated from a depth beginning at zero feet to a depth of seven feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. After the MSU was excavated, verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at a depth between three to six feet. The concentrations of TNT in the verification samples ranged from undetected to 1.6 mg/kg, which were all less than the CL of 1.75 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-9.

D.1.15 MSU-26

TNT was identified in one historical sample (18-TP-600-S-1) at MSU-26 at a concentration of 2.4 mg/kg, which was greater than the CL of 1.75 mg/kg, at a depth of three to six feet. An area 15 x 15 feet was excavated from a depth beginning at zero feet to a depth of eight feet surrounding the sample location. The soil from a depth of zero to three feet was placed in the nearest PA and the remaining soil from a depth of three to eight was placed in the MSU Laydown Area, for off-Site disposal. Verification samples were collected from each of the north, south, east, and west sidewalls at a depth between three to eight feet. The concentrations of TNT in the verification samples ranged from 0.20 mg/kg to 0.30 mg/kg, which were all less than the CL of 1.75 mg/kg. No verification sample was collected at the bottom of the excavation since a historical sample (18-TP-600) had a concentration of 0.8 mg/kg at a depth of eight feet. The excavation boundary, sample locations and analytical results are presented on Figure D-10.

D.1.16 MSU-27

TNT was identified in one historical sample (18-VS-117) at MSU-27 at a concentration of 1.98 mg/kg, which was greater than the CL of 1.75 mg/kg, at a depth of one to three feet. An area 15 x 15 feet was excavated from a depth beginning at zero feet to a depth of four feet surrounding the sample location. The soil from a depth of zero to one foot was placed in the closest PA and the remaining soil from a depth of one to four feet was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at

a depth between one to four feet. The concentrations of TNT detected in the verification samples ranged from 0.080 mg/kg to 0.20 mg/kg, which were all less than the CL of 1.75 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-11.

D.1.17 MSU-28

TNT was identified in one historical sample (18-VS-106) at MSU-28 at a concentration of 3.1 mg/kg, which was greater than the CL of 1.75 mg/kg, at a depth of 15 to 16 feet. An area 15 x 15 feet was excavated from a depth beginning at zero feet to a depth of 17 feet surrounding the sample location. The soil from a depth of zero to 17 feet was placed in the MSU Laydown Area, for off-Site disposal. Verification samples were collected from the bottom of the excavation and from each of the north, south, east, and west sidewalls at a depth between one to 17 feet. In addition, samples were collected a half foot outside the excavation to the north, south, east and west at a depth of six to six and a half feet. The concentrations of TNT in the verification samples ranged from 0.050 mg/kg to 0.80 mg/kg, which were all less than the CL of 1.75 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-12.

D.1.18 MSU-29

Arsenic was identified in one historical sample (01-C013-SS-[R66C88]-D1-000) at MSU-29 at a concentration of 160 mg/kg which was greater than the RL of 60 mg/kg, at a depth of zero to a half foot. An area 30 x 25 feet was excavated from a depth of zero to a half foot surrounding the sample location, and placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to a half foot. The concentrations of arsenic in the verification samples ranged from 10.6 mg/kg to 54.1 mg/kg, which were all less than the RL of 60 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-55.

D.1.19 MSU-30

Arsenic was identified in one historical sample (LR-207) at MSU-30 at a concentration of 140 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of zero to a half foot. An area 25 x 25 feet was excavated from a depth of zero to one and a half feet surrounding the sample location, and placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to a half foot. The concentrations of arsenic in the verification samples ranged from 13.0 mg/kg to 56.1 mg/kg, which were all less than the RL of 60 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-55.

D.1.20 MSU-31

One foot of soil had previously been removed from this area as part of the Pilot Scraping Study. Lead was identified in one historical sample (APC-PS-VS-04-08) at MSU-31 at a concentration of 250 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one to one and a half feet. An area 15 x 15 feet was excavated at a depth of one to two and a half feet surrounding the sample location. This resulted in a one and a half foot layer being excavated at this MSU. The excavated soil was placed in the closest PA. A verification sample was collected from the bottom of the excavation. The lead concentration in this

verification sample was 15 mg/kg, which was less than the SL of 118 mg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-4.

D.1.21 MSU-32

Lead was identified in one historical sample (7-VS-5) at MSU-32 at a concentration of 120 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one foot. Soil was excavated at a depth beginning at one foot to a depth of two and a half feet surrounding the sample location, extending out to the borders of adjacent MSUs. The one and a half feet of excavated soil was moved to the closest PA. A verification sample was collected from the bottom of the excavation. The lead concentration in this verification sample was 31.3 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-1.

D.1.22 MSU-33

Lead was identified in one historical sample (7-B-6-S-1) at MSU-33 at a concentration of 140 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of three and a half feet. An area 110 x 125 feet was excavated at a depth beginning at three and a half feet to a depth of five feet surrounding the sample location. This resulted in a one and a half foot layer being excavated at this MSU. The excavated soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of three to four and a half feet. The lead concentrations in these verification samples ranged from 7.0 mg/kg to 103.0 mg/kg, which were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-1.

D.1.23 MSU-34

Lead was identified in one historical sample (7-B-7-S-4-DAVG) at MSU-34 at a concentration of 230 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of 12 to 12.5 feet. Soil was excavated at a depth beginning at 12 feet to a depth of 13.5 feet, extending out to the borders of adjacent MSUs. The excavated soil was placed in the closest PA. A verification sample was collected from the bottom of the excavation. The lead concentration in the verification sample was 42.4 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-1.

D.1.24 MSU-35

Lead was identified in one historical sample (7-B-501-S-1A) at MSU-35 at a concentration of 350 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of two and a half feet. Lead was identified in another historical sample (7-B-501-S-2-DAVG) at MSU-35 at a concentration of 280 mg/kg at a depth of five to eight feet. An area 50 x 80 feet was excavated at a depth beginning at two and a half feet to a depth of nine feet surrounding the sample locations and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east, and west sidewalls at a depth of two and a half to nine feet. The lead concentrations in the verification samples ranged from 7.4 mg/kg to 103.0 mg/kg, which were less than the SL of 118 mg/kg.

The excavation boundary, sample locations and analytical results are presented on Figure D-1.

D.1.25 MSU-36

Lead was identified in one historical sample (7-B-5-S-1-DAVG) at MSU-36 at a concentration of 320 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of three to four and a half feet. An area 30 x 40 feet was excavated at a depth beginning at three feet to a depth of five and a half feet surrounding the sample location and the soil was placed in the closest PA. The southern verification sample result exceeded the SL for lead. Therefore, MSU excavation was extended to the south until results were less than the SL. Verification samples were collected from the bottom of the excavation and from each of the north, south, east and west sidewalls from a depth of three to five and a half feet. The lead concentrations in the verification samples ranged from 43.3 mg/kg to 117.0 mg/kg, which were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-1.

D.1.26 MSU-37

Lead was identified in one historical sample (7-HA-501-S-2) at MSU-37 at a concentration of 650 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one to two feet. An area 60 x 45 feet was excavated at a depth of one to three feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east, and west sidewalls at a depth of one to two feet. The lead concentrations in the verification samples ranged from 10.0 mg/kg to 86.0 mg/kg, which were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-13.

D.1.27 MSU-38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53

Three feet of soil was removed from this whole area as part of the Sand Laydown Area Excavation IRA (See Appendix C). Verification samples from this IRA defined the lateral extent of the excavation. Lead exceeded the SL of 118 mg/kg in all of these16 MSUs based on historical sample results (MSU 38: 7-HA-501-S-2; MSU 39: SA1-28-51, MSU 40: SA1-29-49, MSU 41: SA1-29-50; MSU-42: SA1-29-51; MSU-43: 04-F02-SS-[F-79-4]-C2-060; MSU-44: 04-F02-SS-[F-80-4]-C2-060; MSU-45: SA1-30-50; MSU-46: SA1-31-50; MSU-47: SA1-31-51; MSU-48: SA1-32-50; MSU-49: SA1-33-50; MSU-50: SA1-33-51; MSU-51: SA1-33-52; MSU-52: 25-TP-514-S-4; and MSU-53: 04-F02-SS-[F-90-4]-C2-060-DAVG). Each of these historical samples exceeded the lead SL of 118 mg/kg and all samples were collected at a depth ranging from zero to a half foot, except for: MSU-43, MSU-44, and MSU-53, which were collected at a sample depth of two to two and a half feet, and MSU-52, which was collected at a sample depth of six to eight feet. As each MSU was excavated, the borders began to merge until it became one large MSU. Sample labels on the figure indicate the location of the initial MSU (e.g., the sample location labeled MSU-39-VS-B was located in MSU-39 initially). Verification samples were collected from each MSU until the results were less than the SL. This resulted in different excavation depths in this merged MSU. The excavation depth near MSU-38, MSU-49, MSU-50, and MSU-51 was four and a half to five feet. The excavation depth near MSU-46, MSU-47 and MSU-48 was six and a half feet. The excavation depth near MSU-45 was eight feet. The excavation depth near MSU-40, and MSU-41 was nine feet. The excavation depth near MSU-39 and MSU-42 was 10 to 11 feet. The excavation

depth near MSU-43, MSU-44, MSU-52, and MSU-53 was 12 to 13 feet. All of the soil excavated for these16 MSUs was placed in the nearest PA. The lead concentrations in the verification samples for MSU-38 to MSU-53 ranged from 6.6 mg/kg to 106.0 mg/kg, which were all less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.1.28 MSU-54

Two and a half feet of soil had previously been excavated from this area as part of the Sand Laydown Area IRA (See Appendix C). Lead was identified in one historical sample (SA2-42-67) at MSU-54 at a concentration of 160 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area 15 x 15 feet was excavated at a depth beginning at zero feet to a depth of four feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 16.5 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-15.

D.1.29 MSU-55

Four feet of soil had previously been excavated as part of the 2000 Foundation Excavations IRA (See Appendix C). Lead was identified in one historical sample (03-F11-SS-[F-254-3]-C2-050) at MSU-55 at a concentration of 170 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 25 x 40 feet was excavated at a depth beginning at zero feet to a depth of five and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 72.8 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.1.30 MSU-56

Lead was identified in one historical sample (26-TP-518-S-2) at MSU-56 at a concentration of 1,100 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one to two feet. Another historical sample (26-TP-518-S-3) in MSU-56 also had a lead concentration of 1,100 mg/kg, at a depth of three to five feet. An area approximately 20 x 20 feet surrounding the two historical samples initially defined MSU-56. However, in the course of excavation debris was encountered. This debris expanded the size of MSU-56 mostly to the east and to the north, creating an area approximately 95 x 185 feet, and excavation depths ranging from three and a half to six and a half feet. Verification samples were collected from the bottom of the excavation. The concentrations of lead in the verification samples ranged from 2.0 mg/kg to 6.5 mg/kg, which were all less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-17.

D.1.31 MSU-57

Four feet of soil had previously been excavated as part of the 2000 Foundation Excavations IRA (See Appendix C). Lead was identified in one historical sample (03-F11-SS-[F-252-3]-C2-050) at MSU-57 at a concentration of 360 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half

foot. An area approximately 22 x 38 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The concentration of lead in the verification sample collected from the bottom of the excavation was 80.2 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.1.32 MSU-58

Four feet of soil had previously been excavated as part of the 2000 Foundation Excavations IRA (See Appendix C). Lead was identified in one historical sample (03-F11-SS-[F-249-3]-C2-050) at MSU-58 at a concentration of 190 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 20 x 55 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet. Additional rounds of excavation and sampling were performed until the excavation reached a depth of seven and a half feet. All excavated soil was placed in the closest PA. The concentration of lead in the verification sample collected from the bottom of the excavation was 106 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.1.33 MSU-59

Four feet of soil had previously been excavated as part of the 2000 Foundation Excavations IRA (See Appendix C). Lead was identified in one historical sample (03-F11-SS-[F-244-3]-C2-050) at MSU-59 at a concentration of 120 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 35 x 25 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location. Further excavation and sampling was performed until the MSU reached a depth of three and a half feet. Excavated soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 4.5 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.1.34 MSU-60

Four feet of soil had previously been excavated as part of the 2000 Hot Spot Excavations IRA (See Appendix C). Lead was identified in one historical sample (26-VS-55) at MSU-60 at a concentration of 3,800 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 25 x 18 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location. Additional excavation and sampling was performed until the excavation reached a depth of six and a half feet. All excavated soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 59.1 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.1.35 MSU-61

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (See Appendix C). Lead was identified in one historical sample (26-VS-54) at MSU-61 at a concentration of 2,600 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of two to two and a half feet. An area approximately 25 x 15 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 46 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in adjacent MSU-60 also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.1.36 MSU-62

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of this MSU was defined by previous excavation verification sampling results and the HI-02 boundary. Lead was identified in one historical sample (19-VS-27) at MSU-62 at a concentration of 1,100 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half feet. An area approximately 28 x 10 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location. Additional excavation and sampling increased the excavation depth to five and a half feet. The lead concentration in the verification sample collected from the bottom of the excavation was 3.6 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.37 MSU-63

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of the MSU was defined by previous excavation verification sampling results. Lead was identified in one historical sample (19-VS-27) at MSU-63 at a concentration of 1,500 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 28 x 10 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location. Additional excavation and sampling increased the excavation to a depth of five feet. The excavated soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 29.3 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.38 MSU-64

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of the MSU was defined by previous excavation verification sampling results and the HI-02 boundary. Lead was identified in one historical sample (19-VS-29) at MSU-64 at a concentration of 270 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 28 x 10 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location. Further excavation and sampling increased the excavation to

a depth of 3.5 feet. The excavated soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 19.3 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.39 MSU-65

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of the MSU was defined by previous excavation verification sampling results and the HI-02 boundary. Lead was identified in one historical sample (19-VS-49) at MSU-65 at a concentration of 250 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 10 x 15 feet was excavated at a depth beginning at zero feet to a depth of 2.5 feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 17.1 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.40 MSU-66

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of the MSU was defined by previous excavation verification sampling results and the HI-02 boundary. Lead was identified in one historical sample (19-VS-25) at MSU-66 at a concentration of 200 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 20 x 10 feet was excavated at a depth beginning at zero feet to a depth of two and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 15.5 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.41 MSU-67

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of the MSU was defined by previous excavation verification sampling results and the HI-02 boundary. Lead was identified in one historical sample (19-VS-47) at MSU-67 at a concentration of 240 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 20 x 15 feet was excavated at a depth beginning at zero feet to a depth of two and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 37.3 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.42 MSU-68

Two feet of soil was removed as part of the 2000 Hot Spot Excavation IRA (see Appendix C). In addition, the lateral extent of the MSU was defined by previous excavation verification sampling results. Lead was identified in one historical sample (19-VS-53) at MSU-68 at a concentration of 310 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 30 x 9 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 16.3 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-18.

D.1.43 MSU-69

Lead was identified in one historical sample (26-TP-508-S-2) at MSU-69 at a concentration of 1,300 mg/kg at a depth of three to six feet and in another historical sample (26-TP-508-S-3) at a concentration of 230 mg/kg at a depth of eight to 10 feet. Both of these results were greater than the SL of 118 mg/kg. An area approximately 15 x 20 feet was excavated at a depth beginning at three feet to a depth of 11 feet surrounding these sample locations and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at depths of three to six feet and eight to 10 feet. The lead concentrations in these verification samples ranged from 2.5 mg/kg to 29.3 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-19.

D.1.44 MSU-70

Lead was identified in one historical sample (26-TP-508-S-2) at MSU-70 at a concentration of 240 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of two to two and a half feet. An area approximately 15 x 15 feet was excavated at a depth beginning at two feet to a depth of four feet surrounding the sample location and the soil was placed in the closest PA. A verification sample was collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at depths of two to two and a half feet. In addition, other samples collected for MSU-70 were used to characterize this area. The lead concentrations in these verification samples were 4.7 mg/kg and 15.4 mg/kg, and were less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-12.

D.1.45 MSU-71

Lead was identified in one historical sample (18-VS-90) at MSU-71 at a concentration of 120 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one to one and a half feet. An area approximately 15 x 15 feet was excavated at a depth beginning at one foot to a depth of three and a half feet surrounding the sample location and the soil was placed in the closest PA. A verification sample was collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of one and a half to two feet. The lead concentrations in these verification samples ranged from

3.8 mg/kg to 40.5 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-11.

D.1.46 MSU-72

Lead was identified in one historical sample (18-VS-175-ST) at MSU-72 at a concentration of 520 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one to two feet. An area approximately 15 x 70 feet was excavated at a depth beginning at one foot to a depth of four and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of one to four and a half feet. The lead concentrations in these verification samples ranged from 11.5 mg/kg to 118 mg/kg and were all less than or equal to the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-20.

D.1.47 MSU-73

Lead was identified in one historical sample (1234-TP-525-S-2) at MSU-73 at a concentration of 330 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to one foot. However, this historical sample was located within the final boundaries of PA-05, where the target lead concentration is the RL of 4,100 mg/kg. Since the sample was less than the RL, no additional sampling or excavation was performed. The location of MSU-73 is presented on Figure D-6.

D.1.48 MSU-74

One and a half feet of soil was removed from this area as part of the Sand Laydown Area Excavation IRA (see Appendix C). Lead was identified in one historical sample (SA6-71-33) at MSU-74 at a concentration of 1,600 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 15 x 15 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 4.6 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-21.

D.1.49 MSU-75

One and a half feet of soil was removed from this area as part of the Sand Laydown Area Excavation IRA (see Appendix C). Lead was identified in one historical sample (SA6-71-33) at MSU-75 at a concentration of 120 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 15 x 15 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 4.6 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-22.

D.1.50 MSU-76

Lead was identified in one historical sample (18-TP-31- S-1) at MSU-76 at a concentration of 390 mg/kg,

which was greater than the SL of 118 mg/kg, at a depth of zero to five feet. Copper was also identified in one historical sample (18-TP-535-S-2) at a concentration of 2,400, which was greater than the CL of 263 mg/kg, at a depth of 15 to 16 feet. An area approximately 25 x 15 feet was excavated at a depth beginning at zero feet to a depth of 17.5 feet surrounding the sample location. The soil from zero to 15 feet was placed in the closest PA, and the soil from 15 to 17.5 feet was placed in the MSU Laydown Area for off-Site disposal. A verification sample was collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at depths of zero to a half foot, zero to six feet, and 15 to 17 feet. The lead concentrations in the verification samples ranged from 2.0 mg/kg to 101.0 mg/kg, which were all less than the SL of 118 mg/kg. The copper concentrations in the verification samples ranged from 22.9 to 59.0 mg/kg and were all less than the CL of 263 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-23.

D.1.51 MSU-77

One and a half feet of soil was removed in this area as part of the NGRR Excavation IRA (See Appendix C). Lead was identified in one historical sample (18-TP-30-S-1) at MSU-77 at a concentration of 730 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to three and a half feet. An area approximately 20 x 20 feet was excavated at a depth beginning at zero feet to a depth of five and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to three and a half feet. The lead concentrations in these verification samples ranged from 1.5 mg/kg to 3.2 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-23.

D.1.52 MSU-78

One foot of soil was removed as part of the 2000 Hot Spot IRA (see Appendix C). Lead was identified in one historical sample (18-VS-202) at MSU-78 at a concentration of 580 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 25 x 25 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 21.7 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-24.

D.1.53 MSU-79

One foot of soil was removed as part of the 2000 Hot Spot IRA (See Appendix C). Arsenic was identified in one historical sample (18-VS-201) at MSU-79 at a concentration of 110 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of zero to a half foot. An area approximately 25 x 25 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The arsenic concentration in the verification sample collected from the bottom of the excavation was 4.2 mg/kg, which was less than the RL of 60 mg/kg. This area was further characterized by surrounding samples collected for nearby MSU and NGRR locations. Samples collected in close proximity to this MSU also had arsenic concentrations less than the

RL. The excavation boundary, sample locations and analytical results are presented on Figure D-24.

D.1.54 MSU-80

One foot of soil was removed as part of the 2000 Hot Spot IRA (see Appendix C). Lead was identified in one historical sample (18-VS-199) at MSU-80 at a concentration of 380 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 25 x 25 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 11.9 mg/kg, which was less than the SL of 118 mg/kg. This area was further characterized by surrounding samples collected for nearby MSU and NGRR locations. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-24.

D.1.55 MSU-81

One foot of soil was removed as part of the 2000 Hot Spot IRA (see Appendix C). Lead was identified in one historical sample (18-VS-200) at MSU-81 at a concentration of 200 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 25 x 25 feet was excavated at a depth beginning at zero feet to a depth of two and a half feet surrounding the sample location. Further excavation and sampling was performed until the MSU reached a depth of three and a half feet. The excavated soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 8.6 mg/kg, which was less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-24.

D.1.56 MSU-82

Lead was identified in one historical sample (18-TP-29,S-1) at MSU-82 at a concentration of 390 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to five feet. An area approximately 25 x 20 feet was excavated at a depth beginning at zero feet to a depth of six and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation and from the north, south, east, and west sidewalls. The lead concentrations in these verification samples ranged from 8.1 mg/kg to 26.7 mg/kg, and were less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-22.

D.1.57 MSU-83

Two feet of soil was removed from this area as part of the 2000 Foundation Excavation IRA (see Appendix C). Lead was identified in one historical sample (18-TP-33-S-1-DAVG) at MSU-83 at a concentration of 2,900 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to two feet. An area approximately 15 x 15 feet was excavated at a depth beginning at zero feet to a depth of three feet surrounding the sample location and the soil was placed in the closest PA. Foundations bound the lateral extent of this MSU. Verification samples were collected from the bottom of the excavation and from the north sidewall at a depth of zero to three feet. The lead concentrations in all of these verification samples ranged from 3.9 mg/kg to 54.0 mg/kg and were all below the SL of 118 mg/kg. The excavation

boundary, sample locations and analytical results are presented on Figure D-25.

D.1.58 MSU-84

Lead was identified in one historical sample (18-TP-26-S-1) at MSU-84 at a concentration of 520 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to four feet. An area approximately 25 x 25 feet was excavated at a depth beginning at zero feet to a depth of five feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to four feet. The lead concentrations in these verification samples ranged from 5.3 mg/kg to 19.9 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-26.

D.1.59 MSU-85

Lead was identified in one historical sample (18-TP-27-S-1) at MSU-85 at a concentration of 120 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to five feet. An area approximately 25 x 25 feet was excavated at a depth beginning at zero feet to a depth of seven and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to five feet. The lead concentrations in these verification samples ranged from 4.0 mg/kg to 48.1 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-26.

D.1.60 MSU-86

Two feet of soil was removed from this area as part of the 2000 Foundation Excavation IRA (see Appendix C). Lead was identified in one historical sample (18-TP-25-S-1) at MSU-86 at a concentration of 2,400 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to two feet. An area approximately 15 x 15 feet was excavated at a depth beginning at zero feet to a depth of three feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, east and west sidewalls at a depth of zero to three feet. The lead concentrations in these verification samples ranged from 1.8 mg/kg to 43.9 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by one historical sample (18-TP-538-S-3) to the south, which had a lead concentration below the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-27.

D.1.61 MSU-87

Lead was identified in one historical sample (18-VS-176-ST) at MSU-87 at a concentration of 300 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of one to two feet. An area approximately 25 x 50 feet was excavated at a depth beginning at one foot to a depth of three feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 2.7 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary was delineated by surrounding foundation and narrow gauge excavations, and adjacent foundations. The excavation boundary, sample locations and analytical results are presented on

Figure D-28.

D.1.62 MSU-88

Lead was identified in one historical sample (18-TP-555-S-2-DAVG) at MSU-88 at a concentration of 160 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to six feet. An area approximately 20 x 20 feet was excavated at a depth of zero to seven feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the northwest and southeast sidewalls. The lead concentrations in these verification samples ranged from 3.6 mg/kg to 16.6 mg/kg and were all less than the SL of 118 mg/kg. The extent of the northern edge of MSU-88 is verified by MSU-F-27, which has a lead concentration below the SL. The southwest sidewall sample was extended to a still-in-place bunker foundation. The lead and arsenic concentrations in the sidewall sample taken at the base of the foundation were 710 mg/kg, and 118 mg/kg, respectively, which exceeded both the lead SL of 118 mg/kg and the arsenic RL of 60 mg/kg. However, the bunker foundation prevented any additional excavation to the southwest. The excavation boundary, sample locations and analytical results are presented on Figure D-29.

D.1.63 MSU-89

Two feet of soil was removed from this area as part of the 2000 Foundation Excavation IRA (see Appendix C). Lead was identified in one historical sample (18-TP-34-S-1) at MSU-89 at a concentration of 250 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to one foot. An area approximately 50 x 40 feet was excavated at a depth of zero to two feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to two feet. The lead concentrations in the verification samples ranged from 3.1 mg/kg to 39.9 mg/kg and were all less than the SL of 118 mg/kg. Samples collected in close proximity to this MSU also had lead concentrations less than the SL. The excavation boundary, sample locations and analytical results are presented on Figure D-30.

D.1.64 MSU-90

One and a half feet of soil was removed from this area as part of the Sand Laydown IRA (see Appendix C). Lead was identified in one historical sample (SA3-79-121) at MSU-90 at a concentration of 120 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to one and a half feet. An area approximately 15 x 15 feet was excavated to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to one and a half feet. The lead concentrations in the verification samples ranged from 1.6 mg/kg to 3.32 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-31.

D.1.65 MSU-91

Arsenic was identified in one historical sample (5-VS-122) at MSU-91 at a concentration of 490 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of one and a half to two feet. An area

approximately 15 x 15 feet was excavated at a depth of zero to three feet surrounding the sample location. Additional excavation and sampling was performed until the MSU reached a depth of 14 feet. The excavated soil was placed in the closest PA. The location of this MSU was later included in the final boundary of PA-02A, where the RL for arsenic was 530 mg/kg. The arsenic concentration in the verification sample collected from the bottom of the excavation was 21.7 mg/kg, which was less than the PA and non-PA golf course RLs. This MSU was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.1.66 MSU-92

Arsenic was identified in one historical sample (5-VS-113) at MSU-92 at a concentration of 370 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of one to one and a half feet. An area approximately 15 x 20 feet was excavated at a depth beginning at one foot to a depth of two and a half feet surrounding the sample location and the soil was placed in the closest PA. Additional excavation and sampling was performed until the MSU reached a depth of eight feet. The arsenic concentration in the verification sample was collected from the bottom of the excavation was 110 mg/kg, which exceeded the non-PA golf course RL of 60 mg/kg. However, the location of this MSU was later included in the final boundary of PA-02A, where the RL for arsenic was 530 mg/kg. Therefore, additional soil excavation was not required, and this area was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.1.67 MSU-93

Between one and two feet of soil was removed from this area as part of a Hot Spot, NGRR, or Foundation Excavation IRAs (see Appendix C). Arsenic was identified in one historical sample (38-VS-94) at MSU-93 at a concentration of 75 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of zero to a half foot. An area approximately 50 x 30 feet was excavated at a depth of zero to one and a half feet surrounding the sample location and the soil was placed in the closest PA. Arsenic was not detected in the verification sample collected from the bottom of the excavation. Samples collected in close proximity to this MSU also had arsenic concentrations less than the RL. The excavation boundary, sample locations and analytical results are presented on Figure D-8.

D.1.68 MSU-94

One and a half feet of soil was previously removed as part of the NGRR Excavation IRA (see Appendix C). Arsenic was identified in one historical sample (01-C011-SS-[R47C71]-D1-000) at MSU-94 at a concentration of 89 mg/kg, and was greater than the RL of 60 mg/kg, at a depth of zero to a half foot. An area approximately 35 x 25 feet was excavated to a depth of one foot surrounding the sample location and the soil was placed in the closest PA. The arsenic concentration in the verification sample collected from the bottom of the excavation was 4.0 mg/kg, and was less than the RL of 60 mg/kg. Samples collected in close proximity to this MSU also had arsenic concentrations less than the RL. The excavation boundary, sample locations and analytical results are presented on Figure D-8.

D.1.69 MSU-96

Arsenic was identified in one historical sample (5-VS-125) at MSU-96 at a concentration of 1500 mg/kg,

which was greater than the RL of 60 mg/kg, at a depth of one to one and a half feet. An area approximately 20 x 25 feet was excavated at a depth of one to two and a half feet surrounding the sample location and the soil was placed in the closest PA. Additional excavation and sampling was performed until the MSU reached a depth of 12 feet. The arsenic concentration in the verification sample collected from the bottom of the excavation was 431 mg/kg, which exceeded the non-PA golf course RL of 60 mg/kg. However, the location of this MSU was included in the final boundary of PA-02A, where the RL for arsenic was 530 mg/kg. Therefore, additional soil excavation was not required, and this area was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.1.70 MSU-97

Arsenic was identified in one historical sample (5-VS-126) at MSU-97 at a concentration of 1500 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of one to one and a half feet. An area approximately 30 x 30 feet was excavated at a depth beginning at one foot to a depth of two and a half feet surrounding the sample location and the soil was placed in the closest PA. Further excavation and sampling was performed until the MSU reached a depth of 12 feet. The arsenic concentration in the verification sample collected from the bottom of the excavation was 463 mg/kg, which exceeded the non-PA golf course RL of 60 mg/kg. However, the location of this MSU was later included in the final boundary of PA-02A, where the RL for arsenic was 530 mg/kg. Therefore, additional soil excavation was not required, and this area was covered by the ecological cap and human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.1.71 MSU-98

Arsenic was identified in one historical sample (RR-592) at MSU-98 at a concentration of 39 mg/kg, which was greater than the Open Space arsenic CL of 32 mg/kg, at a depth of zero to a half foot. An area approximately 40 x 45 feet was excavated to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to one and a half feet. The arsenic concentrations in these verification samples ranged from 4.6 mg/kg to 12.6 mg/kg and were all less than the CL of 32 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-33.

D.1.72 MSU-99

Arsenic was identified in one historical sample (RR-548-B2) at MSU-99 at a concentration of 61 mg/kg, which was greater than the Open Space arsenic CL of 32 mg/kg, at a depth of zero to a half foot. An area approximately 60 x 60 feet was excavated at a depth beginning at zero feet to a depth of one and a half feet surrounding the sample location and the soil was placed in the closest PA. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to one and a half feet. All but one of the arsenic concentrations in these verification samples were less than the CL of 32 mg/kg with concentrations that ranged from 5.3 mg/kg to 28 mg/kg. The north sidewall sample had an arsenic concentration of 41.9 mg/kg and was located on the top of the bank, overlooking Sequalitchew Creek. A steep slope leads down from the north sidewall sample

location to the creek, and any additional excavation in this direction would have caused soil to be deposited into the creek. Therefore, based on an evaluation of the net environmental benefit, no additional excavation was performed in this direction. The excavation boundary, sample locations and analytical results are presented on Figure D-34.

D.1.73 MSU-100

Arsenic was identified in one historical sample (LR-137) at MSU-100 at a concentration of 33 mg/kg, which was greater than the Open Space arsenic CL of 32 mg/kg, at a depth of zero to a half foot. An area approximately 50 x 50 feet was excavated at a depth of zero to one and a half feet surrounding the sample location and the soil was placed in the closest PA. Further excavation and sampling was performed until the MSU increased to an area approximately 75 x 50 feet. Verification samples were collected from the bottom of the excavation, and from each of the north, south, east and west sidewalls at a depth of zero to one and a half feet. All but one of the arsenic concentrations in these verification samples were less than the CL of 32 mg/kg, and ranged from undetected to 8.5 mg/kg. The north sidewall sample had an arsenic concentration of 50.3 mg/kg, and was located on the top of a bank overlooking Sequalitchew Creek. A steep slope leads down from the north sidewall sample location to the creek, and any additional excavation in this direction would have caused soil to be deposited into the creek. Therefore, based on an evaluation of the net environmental benefit, no additional excavation was performed in this direction. The excavation boundary, sample locations and analytical results are presented on Figure D-33.

D.1.74 MSU-101

Arsenic was identified in one historical sample (LR-117) at MSU-101 at a concentration of 80 mg/kg, which was greater than the RL of 60 mg/kg, at a depth of zero to a half foot. An area approximately 50 x 50 feet was excavated at a depth of zero to one and a half feet surrounding the sample location and the soil was placed in the closest PA. Further excavation and sampling increased the size of the MSU to an area approximately 75 x 55 feet. Verification samples were collected from the bottom of the excavation, and from each of the north, east and west sidewalls at a depth of zero to one and a half feet. The arsenic concentrations in these verification samples ranged from 6.2 mg/kg to 50.2 mg/kg and were all less than the RL of 60 mg/kg. A sample was not collected on the south sidewall because this area was added to the future commercial property. As a result, the soil surrounding this MSU was excavated to a depth of one foot as part of the mass excavation program, thereby removing the interval of concern. The excavation boundary, sample locations and analytical results are presented on Figure D-34.

D.1.75 MSU-102, 103

Arsenic was identified in one historical sample (LR-135) at MSU-102 at a concentration of 110 mg/kg, which was greater than the Open Space CL of 32 mg/kg, at a depth of zero to a half foot. Arsenic also exceeded the Open Space CL in another historical sample (LR-135) at MSU-103 at a concentration of 50 mg/kg, at a depth of zero to a half foot. An area approximately 50 x 50 feet was excavated at a depth of zero to one and a half feet surrounding the sample location in each of these MSUs and the soil was placed in the closest PA. Further excavation and sampling was performed until the MSUs merged, increasing the size of this new MSU to an area approximately 85 x 430 feet. An eastern sidewall sample taken for the initial MSU-103 verified the concentration of arsenic was less than the CL. Additional verification

samples were then collected from the bottom of the excavation going toward the west, at a depth of zero to one and a half feet. The arsenic concentrations in these verification samples ranged from 6.2 mg/kg to 29.2 mg/kg and were all less than the CL of 32 mg/kg. Verification samples were not collected from the north sidewall because it was located on the top of a bank overlooking Sequalitchew Creek. A steep slope leads down from the north sidewall sample location to the creek, and any additional excavation in this direction would have caused soil to be deposited into the creek. Therefore, based on an evaluation of the net environmental benefit, no additional excavation was performed in this direction. The excavation boundary, sample locations and analytical results are presented on Figure D-33.

D.1.76 MSU-104, 105, 106

Lead was identified in one historical sample (6-SS-501) at MSU-104 at a concentration of 180 mg/kg, which was greater than the SL of 118 mg/kg. Lead also exceeded the SL in another historical sample (6-SS-502) at MSU-105 at a concentration of 410 mg/kg. In MSU-106 lead exceeded the SL in one historical sample (6-SS-503) at a concentration of 400 mg/kg. All of these samples exceeded the SL at a depth of zero to a half foot. Soil was excavated at a depth of zero to one and a half feet surrounding each of these sample locations, and the soil was placed in the closest PA. Additional excavation and sampling was performed until the MSUs merged, increasing the size of this new MSU to an area approximately 90 x 85 feet. Excavations in the western side of the merged MSU, around sample locations taken for MSU-104 and 106, were at a depth of zero to one and a half feet, while excavations in the eastern side of the merged MSU, around sample locations collected for MSU-105, were at a depth of zero to three feet. Verification samples were collected from the bottom of the merged MSU, and from each of the north, south, east and west sidewalls of each MSU. The lead concentrations in the verification samples taken from this merged MSU ranged from15.8 mg/kg to 109.0 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-35.

D.1.77 MSU-108, 109, 110, 111, 112, 113 (Shell Midden Historical Area)

Aldrin, arsenic and lead were identified in historical samples in concentrations that exceeded the RL, CL and SL, respectively. However, no excavation was performed in this Historical Area to ensure the preservation of historical artifacts. Soil remediation in this area involved the placement of a protective soil cap constructed in the same manner as the golf course cap over the entire area. The Shell Midden area is identified in this report as Historical Area RU HI-04. The location and boundary of these MSUs within HI-04 are presented on Figure D-64.

D.1.78 MSU-114, 115, 116, 117 (1833 Fort Nisqually Historical Area)

Lead was identified in historical samples in concentrations that exceeded the SL. However, minimal remediation was performed in this Historical Area to ensure the preservation of the historical artifacts. No excavation was performed for MSU-116 because it was within the boundary of the 1833 Fort Nisqually Site and the arsenic concentration was only slightly above the Commercial RL. Remediation activities included the excavation of two small areas, MSU-114,115 and MSU-117, to remove elevated lead concentrations. The lead concentrations in the verification samples taken from these MSUs ranged from 6.9 mg/kg to 101.0 mg/kg, and were all less than the SL of 118 mg/kg. The 1833 Fort Nisqually Site is identified in this report as Historical Area RU HI-01. The excavation boundary, sample locations

and analytical results are presented on Figure D-65.

D.1.79 MSU-118

Lead was identified in one historical sample (18-SS-883) at MSU-118 at a concentration of 220 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 20 x 20 feet was excavated at a depth of zero to one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 14.9 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-19.

D.1.80 MSU-119

Lead was identified in one historical sample (18-SS-932) at MSU-119 at a concentration of 160 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. An area approximately 15 x 20 feet was excavated at a depth of zero to one and a half feet surrounding the sample location and the soil was placed in the closest PA. The lead concentration in the verification sample collected from the bottom of the excavation was 3.0 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-19.

D.1.81 MSU-120

The arsenic CL for the 1833 Fort Nisqually Site was 32 mg/kg. Because MSU-120 originally fell within the boundary of the 1833 Fort Nisqually Site and one historical sample result identified an arsenic concentration of 50 mg/kg, excavation was required. However, when the boundary for the 1833 Historical Site changed, MSU-120 fell within the bounds of a Commercial Area, where the arsenic RL was 60 mg/kg. Because the historical sample that had exceeded the arsenic CL was now below the Commercial Area RL, no excavation or sampling was required at MSU-120. The location of MSU-120 is presented on Figure D-65.

D.1.82 MSU-121

Mercury was identified in one historical sample (16-B-501-Hg-2) at a concentration of 86.7 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 10 x 10 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Additional rounds of excavation and sampling were performed until the excavation reached an area of 30 x 20 feet. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.020 mg/kg to 7.5 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-61.

D.1.83 MSU-122

Mercury was identified in one historical sample (16-B-501-S-1) at a concentration of 100 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 20 x 10 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area

for off-Site disposal. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.020 mg/kg to 17.8 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-61.

D.1.84 MSU-123

Mercury was identified in one historical sample (5D-VS-95) at a concentration of 130 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 15 x 10 feet was originally excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Additional rounds of excavation and sampling were performed until the excavation reached an area of 15 x 35 feet. Verification samples were collected from the bottom, and from each of the south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.40 mg/kg to 21.1 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-61.

D.1.85 MSU-124

Mercury was identified in one historical sample (16-SS-513) at a concentration of 42 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 15 x 15 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.5 mg/kg to 4.4 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-61.

D.1.86 MSU-125

Mercury was identified in one historical sample (16-SS-524) at a concentration of 59 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 55 x 55 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.030 mg/kg to 0.80 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-61.

D.1.87 MSU-126

Mercury was identified in one historical sample (24-VS-107) at a concentration of 31 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 15 x 10 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Verification samples were collected from the bottom, and from each of the south, east and west sidewalls at a depth of zero to two and a half feet. A foundation to the north of the MSU-126 prevented a sidewall sample from being taken. The mercury concentrations in the verification samples ranged from 0.20 mg/kg to 9.5 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-62.

D.1.88 MSU-127

Mercury was identified in one historical sample (39-VS-9) at a concentration of 44 mg/kg, which was greater than the CL of 24 mg/kg. Originally, an area approximately 10 x 10 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Additional rounds of excavation and sampling were performed until the excavation reached an area of 10 x 30 feet. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.030 mg/kg to 8.2 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-63.

D.1.89 MSU-128

Mercury was identified in one historical sample (39-VS-12) at a concentration of 72 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 15 x 15 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Additional rounds of excavation and sampling were performed until the excavation reached an area of 15 x 25 feet. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.10 mg/kg to 6.7 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-63.

D.1.90 MSU-129

Mercury was identified in one historical sample (39-VS-16-Hg-5) at a concentration of 35.2 mg/kg, which was greater than the CL of 24 mg/kg. An area approximately 15 x 15 feet was excavated to a depth of two and a half feet surrounding the sample location and the soil was placed in the MSU Laydown Area for off-Site disposal. Additional rounds of excavation and sampling were performed until the excavation reached an area of 10 x 25 feet. Verification samples were collected from the bottom, and from each of the north, south, east and west sidewalls at a depth of zero to two and a half feet. The mercury concentrations in the verification samples ranged from 0.060 mg/kg to 3.0 mg/kg and were all less than the CL of 24 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-63.

D.1.91 MSU-133, 134, 135, 136, 137, and 138 (Fort Nisqually Cemetery)

Arsenic and lead were identified in historical samples in concentrations that exceeded the RL, CL and SL, respectively. However, no excavation was performed in this Historical Area to ensure the preservation of historical artifacts. Soil remediation in this area involved the placement of a protective soil cap over the entire area, constructed in the same manner as the golf course cap. The Fort Nisqually Cemetery is identified in this report as Historical Area RU HI-02. The location and boundary of RU HI-02 is presented on Figure D-66.

D.1.92 MSU-150

MSU-150 falls within a small ravine where motor oil was visually identified. An area approximately 35 x 40 feet was excavated following the natural contours of the pre-existing topography to a depth of zero to one foot. The motor oil concentrations in the verification samples collected from the bottom of the excavation were 48.1 mg/kg and 997.00 mg/kg and were less than the CL of 2,000 mg/kg for motor oil. The excavation boundary, sample locations and analytical results are presented on Figure D-13.

D.2 MSU–NGRR

Elevated arsenic and lead concentrations were found associated with the NGRR. Consistent with the previous work plan (PIONEER and West Shore, 2000), the top one and a half feet of soil was excavated along the total length of the NGRR outside the proposed golf course land-use footprint.

The sections of NGRR identified as MSUs were those that remained after IRAs were completed. The top one and a half feet of soil within 25 feet of the centerline of the NGRR was excavated and placed in the nearest PA. Following excavation, verification soil sampling was conducted. One five-point composite verification sample was collected from the excavation floor every 50 feet along the NGRR. This resulted in 50 x 50 foot boxes with one five-point composite verification sample collected from each box. Each sample was composited from soil in the middle of the track and soil collected on both sides of the track, no more than 10 feet from the track centerline.

Cleanup goals for NGRR MSUs were a RL of 60 mg/kg for arsenic and a SL of 118 mg/kg for lead, unless otherwise noted.

Reference:

PIONEER (PIONEER Technologies Corporation) and West Shore Corporation. 2000. Work plan: Interim Source Removal Actions: Impacted Foundations and Narrow Gauge Railroad Beds at the Former DuPont Works Site. DuPont, Washington. Prepared for the Weyerhaeuser Company and E.I. duPont de Nemours and Company. December 6, 2000.

D.2.1 NGRR-1

NGRR-1 is an area approximately 40 x 45 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One five-point composite verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.2 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration collected was 3.0 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-42.

D.2.2 NGRR-01-1

NGRR-01-1 is an area approximately 25 x 40 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One five-point composite verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 4.5 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration was 3.9 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are

presented on Figure D-53.

D.2.3 NGRR-01-2

NGRR-01-2 is an area approximately 95 x 20 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One five-point composite verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 4.6 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration was 3.3 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-53.

D.2.4 NGRR-02

NGRR-02 is an area approximately 95 x 20 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One composite verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 4.2 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration was 4.1 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-46.

D.2.5 NGRR-03

NGRR-03 is an area approximately 50 x 35 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One composite verification sample had arsenic and lead concentrations that were less than the RL and SL The arsenic concentration in the verification sample was 6.3 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration was 65.3 mg/kg, which was less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations below the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-14

D.2.6 NGRR-04

NGRR-04 is an area approximately 35 x 50 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One composite verification sample had arsenic and lead concentrations that were less than the RL and SL The arsenic concentration in the verification sample was 2.6 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration was 24.6 mg/kg, which was less than the SL 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-35.

D.2.7 NGRR-05

NGRR-05 is an area approximately 75 x 40 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. One composite verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 34.2 mg/kg, which was less than the RL of 60 mg/kg and the lead concentration was 49.5 mg/kg, which was less than the SL 118 mg/kg. This area was further characterized by sampling results from surrounding non-PA locations, which had arsenic and lead concentrations below the RL and SL. The excavation boundary,

sample locations and analytical results are presented on Figure D-14.

D.2.8 NGRR-06

NGRR-06 is an area approximately 340 x 65 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.0 mg/kg to 33.3 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.7 mg/kg to 15.8 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.2.9 NGRR-07

NGRR-07 is an area approximately 55 x 240 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.3 mg/kg to 8.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.2 mg/kg to 7.8 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-38.

D.2.10 NGRR-08

NGRR-08 is an area approximately 180 x 65 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.64 mg/kg to 4.06 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.03 mg/kg to 6.93 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-3.

D.2.11 NGRR-09

NGRR-09 is an area approximately 180 x 65 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 19.7 mg/kg and 39.2 mg/kg, and were less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 12.1 mg/kg to 26.2 mg/kg and were both less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-45.

D.2.12 NGRR-11

NGRR-11 is an area approximately 255 x 55 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.9 mg/kg to 36.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.2 mg/kg to 6.0 mg/kg and were all less than the SL of 118 mg/kg. The excavation

boundary, sample locations and analytical results are presented on Figure D-40.

D.2.13 NGRR-12A

NGRR-12A is an area approximately 60 x 290 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.4 mg/kg to 25.7 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.1 mg/kg to 7.7 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-41.

D.2.14 NGRR-12B

NGRR-12B is an area approximately 50 x 390 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.3 mg/kg to 11.1 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 5.9 mg/kg to 80.9 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-45.

D.2.15 NGRR-14

NGRR-14 is an area approximately 45 x 65 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 15.6 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 21.7 mg/kg and was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-42.

D.2.16 NGRR-15

NGRR-15 is an area approximately 395 x 15 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 3.6 mg/kg and 4.8 mg/kg, which were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 2.9 mg/kg and 6.5 mg/kg, which were both less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-44.

D.2.17 NGRR-16

NGRR-16 is an area approximately 50 x 35 feet. Soil was excavated at a depth of one and a half feet and

was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 5.4 mg/kg and was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 2.6 mg/kg and was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-8.

D.2.18 NGRR-19

NGRR-19 is an area approximately 50 x 450 feet. Soil was excavated at a depth of one and a half feet and removed to the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.2 mg/kg to 6.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.4 mg/kg to 8.0 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-37.

D.2.19 NGRR-20

NGRR-20 is an area approximately 50 x 205 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.4 mg/kg to 7.5 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.1 mg/kg to 15.5 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-37

D.2.20 NGRR-21

NGRR-21 is an area approximately 1,460 x 65 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.1 mg/kg to 39.9 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.2 mg/kg to 9.5 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-39.

D.2.21 NGRR-22

NGRR-22 is an area approximately 45 x 570 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.2 mg/kg to 29.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.8 mg/kg to 23.3 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-50.

D.2.22 NGRR-23

NGRR-23 is an area approximately 165 x 40 feet. Soil was excavated at a depth of one and a half feet and removed to the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.0 mg/kg to 9.7 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from undetected to 7.4 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-43.

D.2.23 NGRR-24

NGRR-24 is an area approximately 80 x 45 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 5.1 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 3.7 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-43.

D.2.24 NGRR-25

NGRR-25 is an area approximately 50 x 120 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 25.6 mg/kg to 46.5 mg/kg, and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 11.8 mg/kg to 28.2 mg/kg, and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-30.

D.2.25 NGRR-26

NGRR-26 is an area approximately 60 x 35 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 4.9 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 5.1 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-30.

D.2.26 NGRR-27

NGRR-27 is an area approximately 89 x 45 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 4.3 mg/kg and 50.8 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 6.8 mg/kg and 7.9 mg/kg and were both less than the RL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-30.

D.2.27 NGRR-28

NGRR-28 is an area approximately 730 x 75 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.6 mg/kg to 31.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.8 mg/kg to 61.0 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which also had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary and sample location and results are presented on Figure D-30.

D.2.28 NGRR-29

NGRR-29 is an area approximately 30 x 40 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 5.4 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 5.6 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-27.

D.2.29 NGRR-30

NGRR-30 is an area approximately 30 x 45 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 4.6 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 6.4 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-27.

D.2.30 NGRR-31

NGRR-31 is an area approximately 50 x 50 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 6.6 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 6.9 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-51.

D.2.31 NGRR-32

NGRR-32 is an area approximately 190 x 40 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 8.2 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 7.9 mg/kg, which was less than the SL of 118 mg/kg. This area was further characterized by sampling results from an adjacent location, which had arsenic and lead concentrations that were less than the RL and SL. The

excavation boundary, sample locations and analytical results are presented on Figure D-39.

D.2.32 NGRR-33A

NGRR-33A is an area approximately 1,280 x 65 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.1 mg/kg to 53.5 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.6 mg/kg to 118.0 mg/kg and were all at or less than the SL 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-20.

D.2.33 NGRR-33B

NGRR-33B is an area approximately 105 x 70 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.9 mg/kg to 17.7 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.4 mg/kg to 34.9 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-28.

D.2.34 NGRR-33C

NGRR-33C is an area approximately 455 x 55 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.7 mg/kg to 53.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.3 mg/kg to 65.4 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-29.

D.2.35 NGRR-33D

NGRR-33D is an area approximately 93 x 64 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 5.08 mg/kg and 29.30 mg/kg and were less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 8.23 mg/kg and 69.60 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-28.

D.2.36 NGRR-34

NGRR-34 is an area approximately 135 x 25 feet. Soil was excavated at a depth of one and a half feet

and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 2.8 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 2.5 mg/kg, which was less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which also show lead and arsenic concentrations below the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-40.

D.2.37 NGRR-35A

NGRR-35A is an area approximately 155 x 175 feet. Soil was excavated to a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.2 mg/kg to 24.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.5 mg/kg to 76 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-12.

D.2.38 NGRR-35B

NGRR-35B is an area approximately 265 x 60 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.5 mg/kg to 21.9 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.4 mg/kg to 61.5 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-49.

D.2.39 NGRR-36

NGRR-36 is an area approximately 200 x 50 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.1 mg/kg to 59.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 4.2 mg/kg to 75.4 mg/kg and all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-21.

D.2.40 NGRR-37A

NGRR-37A is an area approximately 105 x 70 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.8 mg/kg to 18.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.2 mg/kg to 41.5 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from adjacent MSU locations, which had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-24.

D.2.41 NGRR-37B

NGRR-37B is an area approximately 35 x 100 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. This area was characterized by verification sampling results from surrounding locations, which all had lead and arsenic concentrations below the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-58.

D.2.42 NGRR-38

NGRR-38 is an area approximately 45 x 45 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.5 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 2.7 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-25.

D.2.43 NGRR-39

NGRR-39 is an area approximately 265 x 70 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.1 mg/kg to 8.9 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 5.3 mg/kg to 17.5 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from adjacent MSU locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-24.

D.2.44 NGRR-40

NGRR-40 is an area approximately 45 x 115 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.5 mg/kg to 11.4 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 4.1 mg/kg to 19.8 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-52.

D.2.45 NGRR-41

NGRR-41 is an area approximately 35 x 35 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.8 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 16.0 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-47.

D.2.46 NGRR-42

NGRR-42 is an area approximately 15 x 35 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 6.0 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 7.1 mg/kg, which was less than the SL 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-48.

D.2.47 NGRR-43

NGRR-43 is an area approximately 45 x 50 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 7.5 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 6.0 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-47.

D.2.48 NGRR-44

NGRR-44 is an area approximately 30 x 60 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.5 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 5.1 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-4.

D.2.49 NGRR-46

NGRR-46 is an area approximately 25 x 50 feet. Soil was excavated at a depth of one and a half feet and was placed in the closest PA. A verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 4.1 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 2.7, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-53.

D.2.50 NGRR-47

NGRR-47 is an area approximately 2,280 x 20 feet. Soil was excavated to a depth of one and a half feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.8 mg/kg to 51.9 mg/kg, which were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.8 m/kg to 117 mg/kg, which were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-56.

D.2.51 NGRR-48

NGRR-48 is an area approximately 50 x 20 feet. Lead was identified in one historical sample (01-OS02-SS [LR-68-600E-TRANSECT]-C1-000) at NGRR-48 at a concentration of 1,700 mg/kg, which was greater than the SL of 118 mg/kg, at a depth of zero to a half foot. Soil was excavated to a depth of two and a half feet and was placed in the closest PA. Verification samples had concentrations that exceeded the SL for lead, at concentrations of 152.0 and 142.0 mg/kg. A steep slope leads down from the south of this MSU to the creek, and any additional excavation in this direction would have caused soil to be deposited into the creek. Therefore, based on an evaluation of the net environmental benefit, no additional excavation was performed in this direction. The excavation boundary, sample locations and analytical results are presented on Figure D-56.

D.2.52 NGRR-49

NGRR-49 is an area approximately 50 x 20 feet. Lead was identified in one historical sample (02-SS-[LR-68-A-VS-B]-C2) at NGRR-48 at a concentration of 3,460 mg/kg, and in another historical sample (01SS-[LR68-B-VS-B]-C2) at a concentration of 1,260 mg/kg, both of which exceeded the SL of 118 mg/kg, at a depth of zero to a half foot. Soil was excavated to a depth of two and a half feet and was placed in the closest PA. Verification samples had lead concentrations that exceeded the SL for lead, at concentrations of 3,460 mg/kg and 368 mg/kg. A steep slope leads down from the south of this MSU to the creek, and any further excavation in this direction would have caused soil to be deposited into the creek. Therefore, based on an evaluation of the net environmental benefit, no additional excavation was performed in this direction. The excavation boundary, sample locations and analytical results are presented on Figure D-56.

D.3 MSU–Foundations

Historical soil sampling at the Site identified elevated lead concentrations in soil adjacent to building foundations. The source of this lead was lead sheeting that had been used to line the buildings, and/or lead-based paint chips remaining after building demolition. Consistent with the previous work plan (PIONEER and West Shore, 2000), the top two feet of soil around selected foundations was excavated in areas outside of the proposed golf course land-use footprint and placed in the nearest PA.

Following excavation, verification samples were collected on the excavation floor on each side of the foundation. To ensure that adequate characterization was performed, each of the samples consisted of a composite of five different locations. Further details of the sampling design are described in the Interim Source Removal Action Work Plan (PIONEER and West Shore, 2000).

The soil cleanup goals for arsenic and lead in the areas around the foundations were an RL for arsenic of 60 mg/kg, and an SL for lead of 118 mg/kg.

Reference

PIONEER (PIONEER Technologies Corporation) and West Shore Corporation. 2000. Work plan: Interim Source Removal Actions: Impacted Foundations and Narrow Gauge Railroad Beds at the Former DuPont Works Site. DuPont, Washington. Prepared for the Weyerhaeuser Company and E.I. duPont de Nemours and Company. December 6, 2000.

D.3.1 MSU-F-02

MSU-F-02 is an area comprised of two neighboring foundations that are each an area approximately 30 x 70 feet. Soil was excavated at a depth of two feet and was placed in the closest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.9 mg/kg to 7.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.8 mg/kg to 13.9 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.3.2 MSU-F-03

MSU-F-03 is an area approximately 120 x 85 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.7 mg/kg to 5.7 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.0 mg/kg to 17.3 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-38.

D.3.3 MSU-F-04

MSU-F-04 is an area approximately 30 x 40 feet. Soil was excavated to a depth of two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 4.3 mg/kg and 4.4 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 6.1 mg/kg and 14.9 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-47.

D.3.4 MSU-F-CU-4A

MSU-F-CU-4A is an area approximately 60 x 60 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.2 mg/kg to 14.9 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 8.4 mg/kg to 65.9 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-49.

D.3.5 MSU-F-CU-5A

MSU-F-CU-5A is an area approximately 55 x 60 feet. Soil was removed to a depth of two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 2.7 mg/kg and 3.4 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 3.5 mg/kg and 11.9 mg/kg and were both less than the SL 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-21.

D.3.6 MSU-F-08

MSU-F-08 is an area approximately 60 x 65 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.7 mg/kg to 5.7 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.9 mg/kg to 7.1 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-36.

D.3.7 MSU-F-09

MSU-F-09 is an area approximately 105 x 70 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.2 mg/kg to 12.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.1 mg/kg to 23.7 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-36.

D.3.8 MSU-F-19

MSU-F-19 is an area approximately 60 x 90 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.7 mg/kg to 6.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.1 mg/kg to 9.3 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-37.

D.3.9 MSU-F-20

MSU-F-20 is an area approximately 75 x 110 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.8 mg/kg to 5.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.0 mg/kg to 11.3 mg/kg and were all less than the SL 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-37.

D.3.10 MSU-F-21

MSU-F-21 is an area approximately 110 x 90 feet. Soil was excavated to a depth two feet and was placed

in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.9 mg/kg to 13.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 14.2 mg/kg to 97.6 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-20.

D.3.11 MSU-F-23

MSU-F-23 is an area approximately 65 x 60 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.1 mg/kg to 51.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.3 mg/kg to 32.9 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-28.

D.3.12 MSU-F-24

MSU-F-24 is an area approximately 115 x 115 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.6 mg/kg to 6.5 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.7 mg/kg to 7.3 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-29.

D.3.13 MSU-F-25

MSU-F-25 is an area approximately 200 x 25 feet. Soil was excavated to a depth of two to three feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 1.5 mg/kg to 21.1 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.5 mg/kg to 83.2 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-28.

D.3.14 MSU-F-26

MSU-F-26 is an area approximately 480 x 25 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.6 mg/kg to 40.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.9 mg/kg to 28.6 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-

28.

D.3.15 MSU-F-27

MSU-F-27 is an area approximately 140 x 75 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.4 mg/kg to 9.9 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 5.3 mg/kg to 20.0 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL, with the exception of the sample that was collected on the southwest sidewall of MSU-88 (i.e., where a bunker foundation prevented any additional excavation). The excavation boundary, sample locations and analytical results are presented on Figure D-29.

D.3.16 MSU-F-28

MSU-F-28 is an area approximately 160 x 80 feet. Soil was excavated to a depth two to three feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.5 mg/kg to 10.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.6 mg/kg to 9.2 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-28.

D.3.17 MSU-F-29

MSU-F-29 is an area approximately 120 x 80 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.1 mg/kg to 3.8 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.3 mg/kg to 34.4 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-30.

D.3.18 MSU-F-31

MSU-F-31 is an area approximately 125 x 85 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.9 mg/kg to 5.1 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 8.4 mg/kg to 107.0 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-29.

D.3.19 MSU-F-32

MSU-F-32 is an area approximately 125 x 50 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.0 mg/kg to 5.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 4.8 mg/kg to 16.6 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-39.

D.3.20 MSU-F-33

MSU-F-33 is an area approximately 65 x 125 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.5 mg/kg to 6.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 4.0 mg/kg to 19.7 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-39.

D.3.21 MSU-F-35

MSU-F-35 is an area approximately 170 x 55 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.0 mg/kg to 7.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from undetected to 45.8 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-43.

D.3.22 MSU-F-36

MSU-F-36 is an area approximately 85 x 70 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.5 mg/kg to 35.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.2 mg/kg to 10.8 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-39.

D.3.23 MSU-F-37A

MSU-F-37A is an area approximately 100 x 25 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the

RL and SL. The arsenic concentration in the verification sample was 4.6 mg/kg and was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 58.6 mg/kg and was all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-29.

D.3.24 MSU-F-37B

MSU-F-37B is an area approximately 100 x 25 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.2 mg/kg to 6.9 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 6.2 mg/kg to 83.1 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-58.

D.3.25 MSU-F-38

MSU-F-38 is an area approximately 205 x 25 feet around this foundation. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 3.6 mg/kg to 7.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.6 mg/kg to 7.8 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from an adjacent MSU, which had an arsenic and lead concentration less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-40.

D.3.26 MSU-F-39

MSU-F-39 is an area approximately 50 x 85 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 2.1 mg/kg and 3.1 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were undetected and 2.4 mg/kg and were both less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-41.

D.3.27 MSU-F-40

MSU-F-40 is an area approximately 30 x 215 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.8 mg/kg to 6.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 2.4 mg/kg to 7.7 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-42.

D.3.28 MSU-F-41

MSU-F-41 is an area approximately 230 x 10 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. A verification sample was less than the RL and SL for arsenic and lead. The arsenic concentration in the verification sample was 7.6 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 30.2 mg/kg, which was less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-44.

D.3.29 MSU-F-42

MSU-F-42 is an area approximately 55 x 60 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.7 mg/kg to 36.1 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.7 mg/kg to 8.8 mg/kg and were all less than the SL of 118 mg/kg. This area was further characterized by sampling results from surrounding locations, which had arsenic and lead concentrations less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-36.

D.3.30 MSU-F-44

MSU-F-44 is an area approximately 145 x 75 feet. Soil was excavated to a depth two to three feet and placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.1 mg/kg to 7.1 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 3.0 mg/kg to 74.1 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-38.

D.3.31 MSU-F-45

MSU-F-45 is an area approximately 40 x 45 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 3.5 mg/kg and 4.4 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 3.3 mg/kg and 7.7 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-45.

D.3.32 MSU-F-46

MSU-F-46 is an area approximately 100 x 90 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 2.5 mg/kg to 5.6 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 5.3 mg/kg to 45.0 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample

locations and analytical results are presented on Figure D-17.

D.3.33 MSU-F-47

MSU-F-47 is an area approximately 84 x 29 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 3.8 mg/kg and 4.3 mg/kg which were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 5.1 and 4.4 which were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-3.

D.3.34 MSU-F-48

MSU-F-48 is an area approximately 52 x 30 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. The verification sample had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification samples was 2.7 mg/kg which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 4.3 mg/kg which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-65.

D.3.35 MSU-F-49

MSU-F-49 is an area approximately 30 x 115 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentration that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 8.9 mg/kg to 34.3 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 21.9 mg/kg to 84.0 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.3.36 MSU-F-50

MSU-F-50 is an area approximately 50 x 65 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 2.1 mg/kg and 5.2 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 2.7 mg/kg and 11.4 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-46.

D.3.37 MSU-F-51

MSU-F-51 is an area 65 x 60 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 4.4 mg/kg and 4.8 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 8.8 mg/kg and 8.8 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-47.

D.3.38 MSU-F-52

MSU-F-52 is an area approximately 50 x 50. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were undetected and 2.8 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 3.6 mg/kg and 3.7 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-48.

D.3.39 MSU-F-53

MSU-F-53 is an area approximately 55 x 55. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 2.5 mg/kg and 2.8 mg/kg and were both less than the RL of 60 mg/kg. The lead concentration in the verification samples were 4.4 mg/kg and 4.9 mg/kg and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-48.

D.3.40 MSU-F-54

MSU-F-54 is an area approximately 60 x 90 feet. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 13.9 mg/kg and 33.5 mg/kg and were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 15.1 mg/kg and 17.0 and were both less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-31.

D.3.41 MSU-F-55

MSU-F-55 is an area approximately 85 x 35. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 5.5 mg/kg to 13.1 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 4.4 mg/kg to 13.4 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-54.

D.3.42 MSU-F-56

MSU-F-56 is an area approximately 15 x 25. Soil was excavated to a depth two feet and was placed in the nearest PA. Verification samples had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 4.4 mg/kg to 6.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 4.7 mg/kg to 58.9 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-54.

D.4 MSU–Debris Areas

In the course of excavation, areas of debris were identified. Debris consisted of piping, brick and other construction materials. Some of the debris was painted at one time and was tested to determine if the paint was lead-based.

Depending on the results of the lead screening evaluation, debris was excavated and moved either to a PA or the MSU Laydown Area for off-Site disposal. Verification samples were then collected from the soil below the debris if the debris pile extended greater than one foot below the ground surface. In other cases, the debris was removed, and additional soil was excavated as part of the mass excavation program. Verification soil sample results were collected after excavation and compared to cleanup goals to determine the need for additional excavation.

The soil cleanup goals for arsenic and lead in the areas around the debris piles were an RL for arsenic of 60 mg/kg and an SL for lead of 118 mg/kg.

D.4.1 MSU-D-1

MSU-D-1 consisted of brick, wood, and soil debris defining an area approximately 30 x 30 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were negative, indicating that the material could be placed in a PA. Excavation of the debris resulted in an estimated 50 cubic yards of material being removed and placed in the nearest PA. Verification samples and additional samples from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 1.0 mg/kg to 15.2 mg/kg and were all less than the RL of 60 mg/kg. The lead concentration in the verification sample was 3.5 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.4.2 MSU-D-2

MSU-D-2 was identified as a debris area, but was actually unpainted brick that was part of an existing foundation. Therefore no action was taken. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 6.2 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 24.5 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.4.3 MSU-D-3

MSU-D-3 consisted of brick and soil debris, defining an area approximately 3 x 5 feet. No paint was evident on the debris. The small size of this debris area resulted in an estimated one cubic yard of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.7 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 10.0 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.4.4 MSU-D-4

MSU-D-4 consisted of brick, wood and soil debris, defining an area approximately 115 x 25 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were negative, indicating that the material could be placed in a PA. Debris was excavated to a depth of 15 feet resulting in an estimated 90 cubic yards of material being removed and placed in the nearest PA. The arsenic concentration in the verification sample was 10.9, which was less than the RL of 60 mg/kg. The lead concentration at this depth was 554 mg/kg, which was above the SL of 118 mg/kg. Since this excavation depth was 15 feet below ground surface, which is below the depth of concern for direct contact under MTCA, additional excavation was not performed. The existing lead concentration is not a concern for potential groundwater impacts. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.4.5 MSU-D-5

MSU-D-5 consisted of brick, wood and soil debris, defining an area approximately 15 x 10 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were negative, indicating that the material could be placed in a PA. Excavation resulted in an estimated 10 cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.4.6 MSU-D-6

MSU-D-6 consisted of brick and soil debris, defining an area approximately 45 x 15 feet. No paint was evident on the debris. Excavation resulted in 30 cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.4.7 MSU-D-7

MSU-D-7 consisted of brick and soil debris, defining an area 75 x 15 feet. No paint was evident on the debris. This debris area fell almost entirely within the boundary of NGRR-05, and the excavation of NGRR-05 to a depth of two and a half feet brought arsenic and lead concentrations in MSU-D-7 to less than the RL and SL. The composite verification sample collected for NGRR-05 characterized MSU-D-7, confirming that arsenic and lead were less than the RL and SL. The arsenic concentration in the verification sample was 34.2 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 49.5 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-14.

D.4.8 MSU-D-8

MSU-D-8 consisted of brick, wood and soil debris, defining an area approximately 15 x 15 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were negative, indicating that the material could be placed in a PA. Excavation resulted in an estimated five cubic yards

of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.4.9 MSU-D-9

MSU-D-9 consisted of brick, wood and soil debris, defining an area approximately 10 x 13 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were negative, indicating that the material could be placed in a PA. Excavation resulted in an estimated five cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-32.

D.4.10 MSU-D-10

MSU-D-10 consisted of brick, wood and soil debris, defining an area approximately 20 x 45 feet. No paint was evident on the debris. Excavation resulted in an estimated 30 cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The final boundary of MSU-D-10 was located within PA-01; therefore this area was placed under the ecological cap and the human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-57.

D.4.11 MSU-D-11

MSU-D-11 consisted of brick, wood and soil debris, defining an area approximately 25 x 10 feet. No paint was evident on the debris. Excavation resulted in an estimated 10 cubic yards of material being removed and placed in the nearest PA. Samples surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The final boundary of MSU-D-11 was located within placement area PA-01; therefore this area was placed under the ecological cap and the human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-57.

D.4.12 MSU-D-12

MSU-D-12 consisted of brick debris, defining an area approximately 100 x 95 feet. No paint was evident on the debris. Excavation resulted in an estimated 300 cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples ranged from 8.9 mg/kg to 24.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the verification samples ranged from 47.0 mg/kg to 110.0 mg/kg, and were all less than the SL of 118 mg/kg. In addition, verification samples for MSU-55, MSU-57 and MSU-58 were used to characterize the soil in MSU-D-12. Arsenic and lead concentrations from these MSUs were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.4.13 MSU-D-13

MSU-D-13 consisted of brick, wood and soil debris, defining an area approximately 25 x 30 feet. No paint was evident on the debris. Excavation resulted in an estimated 20 cubic yards of material being

removed and placed in the nearest PA. Samples from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentrations in the verification samples were 3.0 mg/kg and 6.5 mg/kg which were both less than the RL of 60 mg/kg. The lead concentrations in the verification samples were 470 mg/kg and 525 mg/kg, which were less than the RL of 4,100 mg/kg. The final boundary of MSU-D-13 was located within placement area PA-04; therefore this area was placed under the ecological cap and the human health cap. The excavation boundary, sample locations and analytical results are presented on Figure D-16.

D.4.14 MSU-D-14

MSU-D-14 consisted of brick and wood debris, defining an area 25 x 40 feet. No paint was evident on the debris. Excavation resulted in an estimated 40 cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-41.

D.4.15 MSU-D-15

MSU-D-15 consisted of brick and wood debris, defining an area 15 x 20 feet. No paint was evident on the debris. Excavation resulted in an estimated 15 cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-41.

D.4.16 MSU-D-16

MSU-D-16 consisted of brick, wood and soil debris, defining an area approximately 5 x 20 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were negative, indicating that the material could be placed in a PA. Excavation resulted in an estimated five cubic yards of material being removed and placed in the nearest PA. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 24.0 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 16.0 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-58.

D.4.17 MSU-D-17

MSU-D-17 consisted of brick, wood and soil debris, defining an area approximately 40 x 65 feet. No paint was evident on the debris. Excavation resulted in an estimated 90 cubic yards of material being removed and placed in the nearest PA. The arsenic concentrations in the surrounding samples ranged from 3.9 mg/kg to 17.0 mg/kg and were all less than the RL of 60 mg/kg. The lead concentrations in the surrounding samples ranged from 10.0 mg/kg to 74.0 mg/kg and were all less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-59.

D.4.18 MSU-D-18

MSU-D-18 consisted of defining an area 45 x 35 feet. Sample results from an adjacent location had

arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.6 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 3.9 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-30.

D.4.19 MSU-D-19

MSU-D-19 consisted of brick, wood and soil debris, defining an area approximately 45 x 30 feet. Because paint was evident on the some of the debris, lead screening was performed. The results were positive, indicating that the material had to be disposed of off Site. Excavation resulted in an estimated 45 cubic yards of material being removed and placed in the MSU Laydown Area for off-Site disposal. A verification sample and additional samples from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 5.8 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 16.8 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-53.

D.4.20 MSU-D-20

MSU-D-20 consisted of brick, wood and soil debris, defining an area approximately 45 x 30 feet. No paint was evident on the debris. Excavation resulted in an estimated 45 cubic yards of material being removed and placed in the nearest PA. Samples from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-60.

D.4.21 MSU-D-21

MSU-D-21 consisted of brick, wood and soil debris, defining an area approximately 45 x 30 feet. No paint was evident on the debris. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-60.

D.4.22 MSU-D-22

MSU-D-22 consisted of brick, wood and soil debris, defining an area approximately 45 x 30 feet. No paint was evident on the debris. Sample results from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The excavation boundary, sample locations and analytical results are presented on Figure D-35.

D.4.23 MSU-D-23

MSU-D-23 consisted of brick, wood and soil debris, defining an area approximately 45 x 30 feet. No paint was evident on the debris. Excavation resulted in an estimated 45 cubic yards of material being removed and placed in the nearest PA. Samples from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 3.5 mg/kg which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 8.8 mg/kg which was less than the SL of 118 mg/kg. The excavation boundary, sample

locations and analytical results are presented on Figure D-45.

D.4.24 MSU-D-24

MSU-D-24 consisted of brick, wood and soil debris, defining an area approximately 45 x 30 feet. No paint was evident on the debris. Excavation resulted in an estimated 45 cubic yards of material being removed and placed in the nearest PA. Samples from surrounding locations had arsenic and lead concentrations that were less than the RL and SL. The arsenic concentration in the verification sample was 6.5 mg/kg, which was less than the RL of 60 mg/kg. The lead concentration in the verification sample was 3.4 mg/kg, which was less than the SL of 118 mg/kg. The excavation boundary, sample locations and analytical results are presented on Figure D-43.

MSU FIGURES INDEX

MSU	Figure
MSU-01	D-1
MSU-02	D-2
MSU-03	D-1
MSU-10	D-3
MSU-13	D-4
MSU-14, 15, 16	D-5
MSU-18	D-6
MSU-19	D-7
MSU-20	D-7
MSU-21	D-8
MSU-22	D-9
MSU-23	D-9
MSU-24	D-9
MSU-25	D-9
MSU-26	D-10
MSU-27	D-11
MSU-28	D-12
MSU-29	D-55
MSU-30	D-55
MSU-31	D-4
MSU-32	D-1
MSU-33	D-1
MSU-34	D-1
MSU-35	D-1
MSU-36	D-1
MSU-37	D-13
MSU-38 to 53	D-14
MSU-54	D-15
MSU-55	D-16
MSU-56	D-17
MSU-57	D-16
MSU-58	D-16
MSU-59	D-16
MSU-60	D-16
MSU-61	D-16

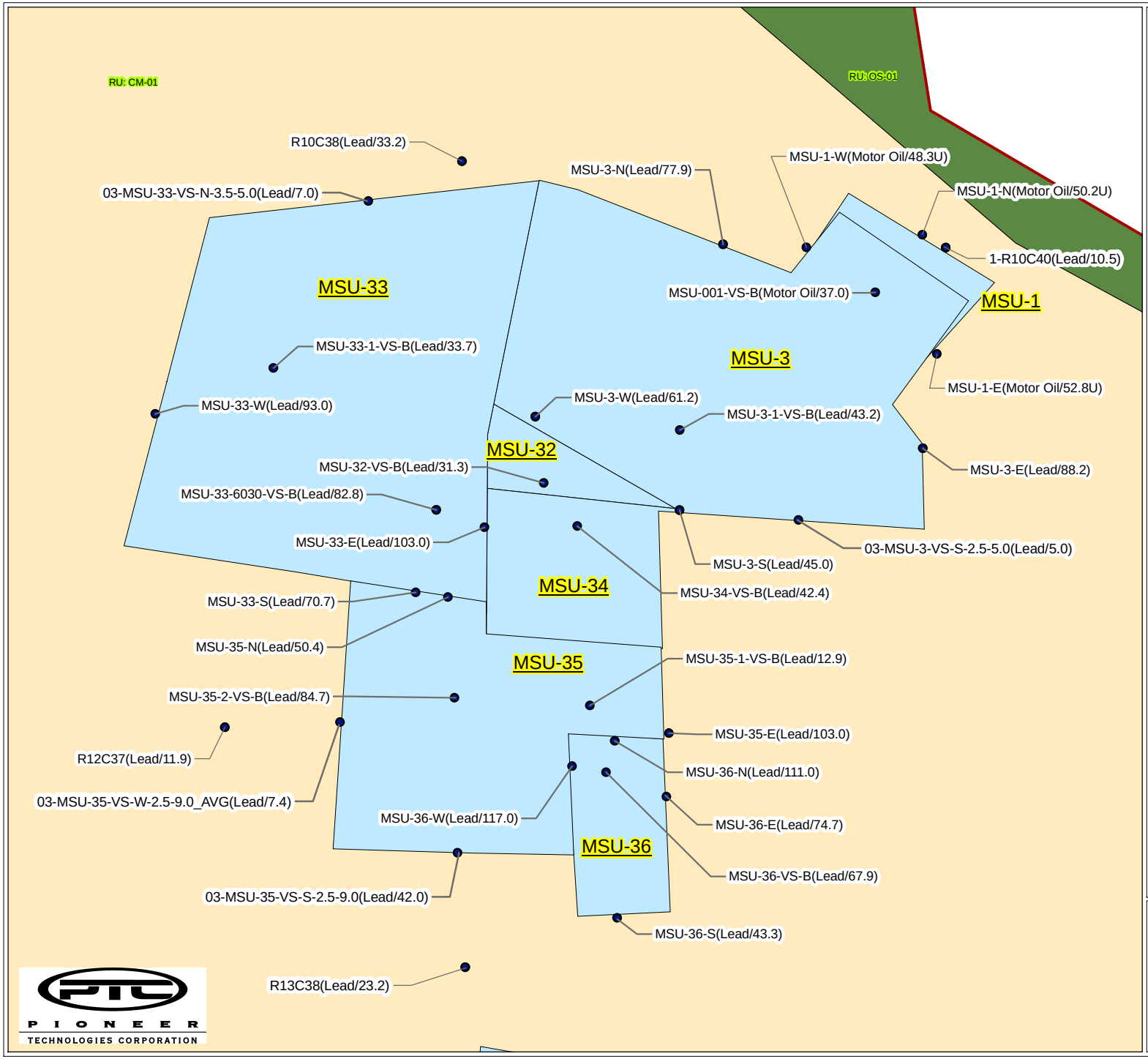
MSU	Figure
MSU-62	D-18
MSU-63	D-18
MSU-64	D-18
MSU-65	D-18
MSU-66	D-18
MSU-67	D-18
MSU-68	D-18
MSU-69	D-19
MSU-70	D-12
MSU-71	D-11
MSU-72	D-20
MSU-73	D-6
MSU-74	D-21
MSU-75	D-22
MSU-76	D-23
MSU-77	D-23
MSU-78	D-24
MSU-79	D-24
MSU-80	D-24
MSU-81	D-24
MSU-82	D-22
MSU-83	D-25
MSU-84	D-26
MSU-85	D-26
MSU-86	D-27
MSU-87	D-28
MSU-88	D-29
MSU-89	D-30
MSU-90	D-31
MSU-91	D-32
MSU-92	D-32
MSU-93	D-8
MSU-94	D-8
MSU-96	D-32
MSU-97	D-32
MSU-98	D-33
MSU-99	D-34
MSU-100	D-33

MSU	Figure
MSU-101	D-34
MSU-102, 103	D-33
MSU-104, 105, 106	D-35
MSU-108	D-64
MSU-109	D-64
MSU-110	D-64
MSU-111	D-64
MSU-112	D-64
MSU-113	D-64
MSU-114, 115	D-65
MSU-116	D-65
MSU-117	D-65
MSU-118	D-19
MSU-119	D-19
MSU-120	D-19
MSU-121	D-61
MSU-122	D-61
MSU-123	D-61
MSU-124	D-61
MSU-125	D-61
MSU-126	D-62
MSU-127	D-63
MSU-128	D-63
MSU-129	D-63
MSU-133	D-66
MSU-134	D-66
MSU-135	D-66
MSU-136	D-66
MSU-137	D-66
MSU-138	D-66
MSU-150	D-13
NGRR-1	D-42
NGRR-01-1	D-53
NGRR-01-2	D-53
NGRR-02	D-46
NGRR-03	D-14
NGRR-04	D-35
NGRR-05	D-14

MSU	Figure
NGRR-06	D-32
NGRR-07	D-38
NGRR-08	D-3
NGRR-09	D-45
NGRR-11	D-40
NGRR-12A	D-41
NGRR-12B	D-45
NGRR-14	D-42
NGRR-15	D-44
NGRR-16	D-8
NGRR-19	D-37
NGRR-20	D-37
NGRR-21	D-39
NGRR-22	D-50
NGRR-23	D-43
NGRR-24	D-43
NGRR-25	D-30
NGRR-26	D-30
NGRR-27	D-30
NGRR-28	D-30
NGRR-29	D-27
NGRR-30	D-27
NGRR-31	D-51
NGRR-32	D-39
NGRR-33A	D-20
NGRR-33B	D-28
NGRR-33C	D-29
NGRR-33D	D-28
NGRR-34	D-40
NGRR-35A	D-12
NGRR-35B	D-49
NGRR-36	D-21
NGRR-37A	D-24
NGRR-37B	D-58
NGRR-38	D-25
NGRR-39	D-24
NGRR-40	D-52
NGRR-41	D-47

MSU	Figure
NGRR-42	D-48
NGRR-43	D-47
NGRR-44	D-4
NGRR-46	D-53
NGRR-47	D-56
NGRR-48	D-56
NGRR-49	D-56
MSU-F-02	D-32
MSU-F-03	D-38
MSU-F-04	D-47
MSU-F-CU-4A	D-49
MSU-F-CU-5A	D-21
MSU-F-08	D-36
MSU-F-09	D-36
MSU-F-19	D-37
MSU-F-20	D-37
MSU-F-21	D-20
MSU-F-23	D-28
MSU-F-24	D-29
MSU-F-25	D-28
MSU-F-26	D-28
MSU-F-27	D-29
MSU-F-28	D-28
MSU-F-29	D-30
MSU-F-31	D-29
MSU-F-32	D-39
MSU-F-33	D-39
MSU-F-35	D-43
MSU-F-36	D-39
MSU-F-37A	D-29
MSU-F-37B	D-58
MSU-F-38	D-40
MSU-F-39	D-41
MSU-F-40	D-42
MSU-F-41	D-44
MSU-F-42	D-36
MSU-F-44	D-38
MSU-F-45	D-45

MSU	Figure
MSU-F-46	D-17
MSU-F-47	D-3
MSU-F-48	D-65
MSU-F-49	D-14
MSU-F-50	D-46
MSU-F-51	D-47
MSU-F-52	D-48
MSU-F-53	D-48
MSU-F-54	D-31
MSU-F-55	D-54
MSU-F-56	D-54
MSU-D-1	D-14
MSU-D-2	D-14
MSU-D-3	D-14
MSU-D-4	D-14
MSU-D-5	D-14
MSU-D-6	D-32
MSU-D-7	D-14
MSU-D-8	D-32
MSU-D-9	D-32
MSU-D-10	D-57
MSU-D-11	D-57
MSU-D-12	D-16
MSU-D-13	D-16
MSU-D-14	D-41
MSU-D-15	D-41
MSU-D-16	D-58
MSU-D-17	D-59
MSU-D-18	D-30
MSU-D-19	D-53
MSU-D-20	D-60
MSU-D-21	D-60
MSU-D-22	D-35
MSU-D-23	D-45
MSU-D-24	D-43

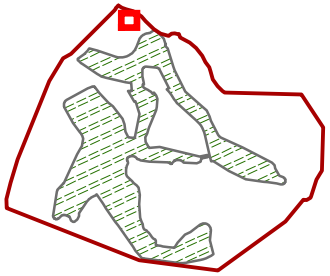


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU
- OS Area RU



Notes:

CL = Cleanup Level
CM = Commerical
MSU = Miscellaneous Small Unit
OS = Open Space
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg
Motor Oil (Bunker C) 7,600 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

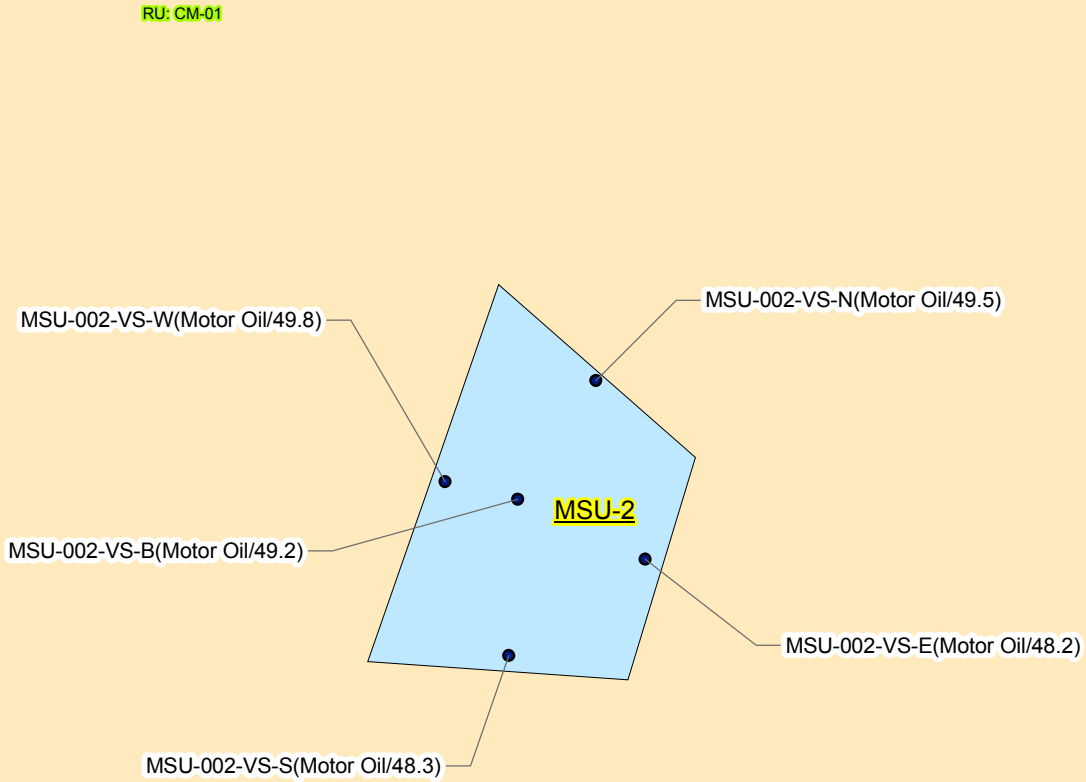
0 5 10 20 30 40 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-1

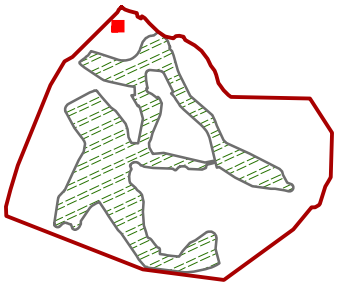


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Motor Oil (Bunker C) 7,600 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

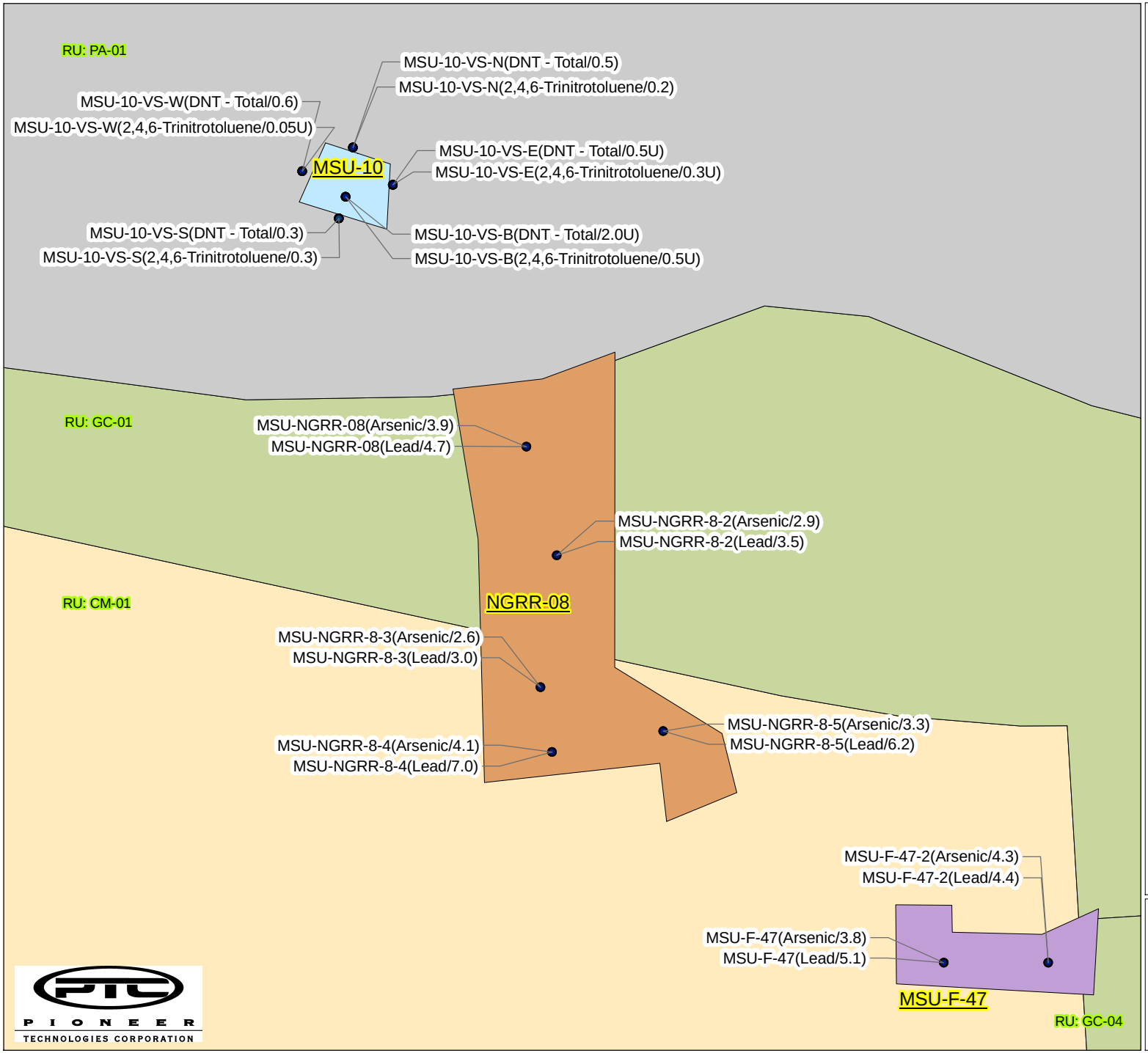
0 2 4 8 12 16 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-2



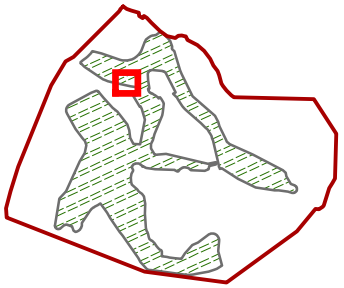
PIONEER TECHNOLOGIES CORPORATION

Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
2,4,6-Trinitrotoluene 1.75 mg/kg
Arsenic 60 mg/kg
DNT-Total 3 mg/kg
Lead 118 mg/kg

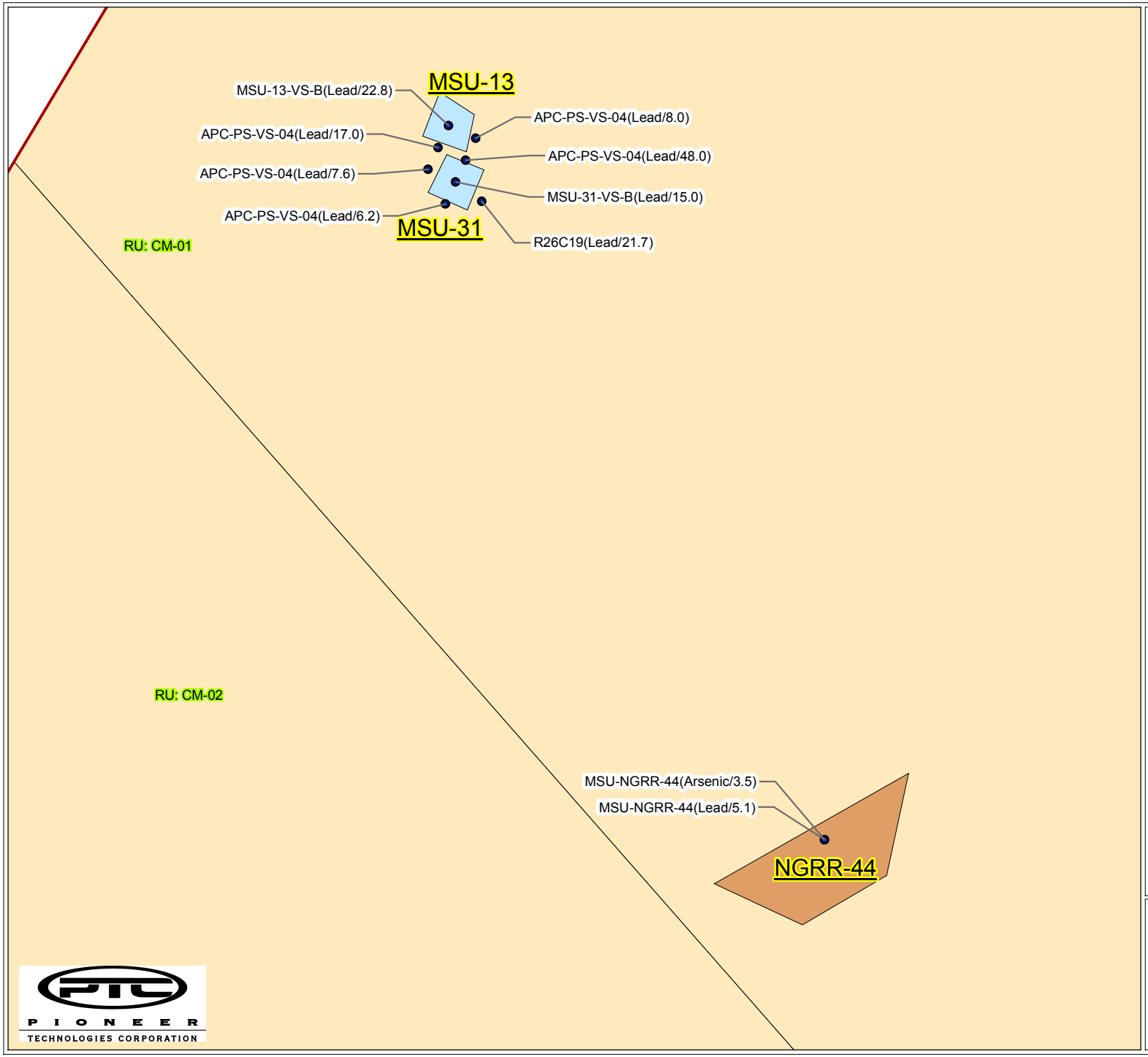
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 15 30 45 60 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-3

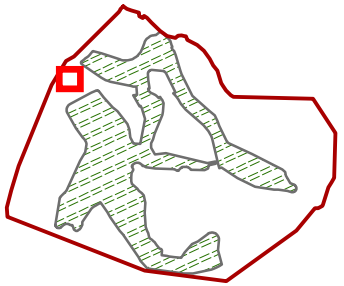


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

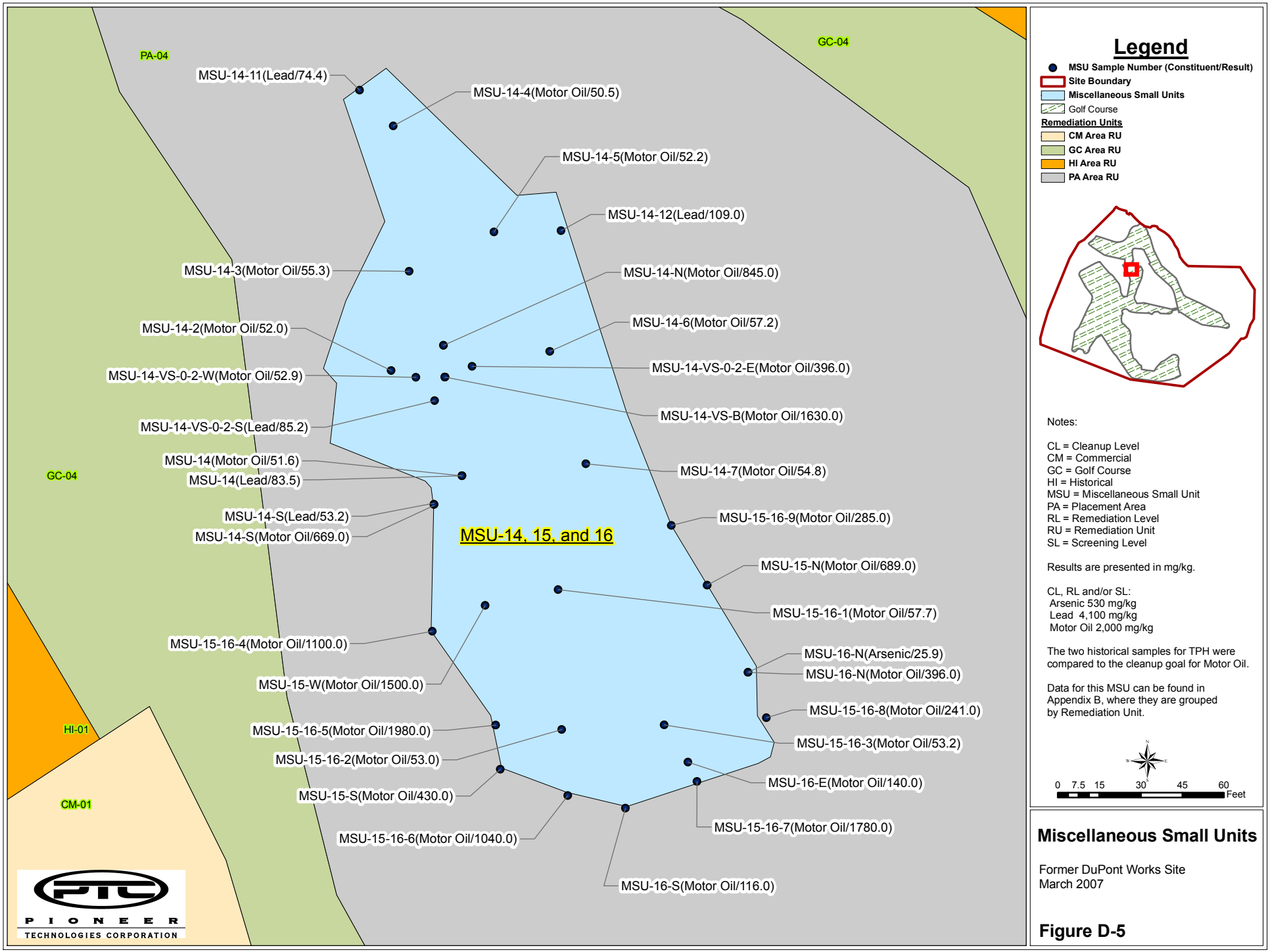
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-4



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- HI Area RU
- PA Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
HI = Historical
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 530 mg/kg
Lead 4,100 mg/kg
Motor Oil 2,000 mg/kg

The two historical samples for TPH were compared to the cleanup goal for Motor Oil.

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

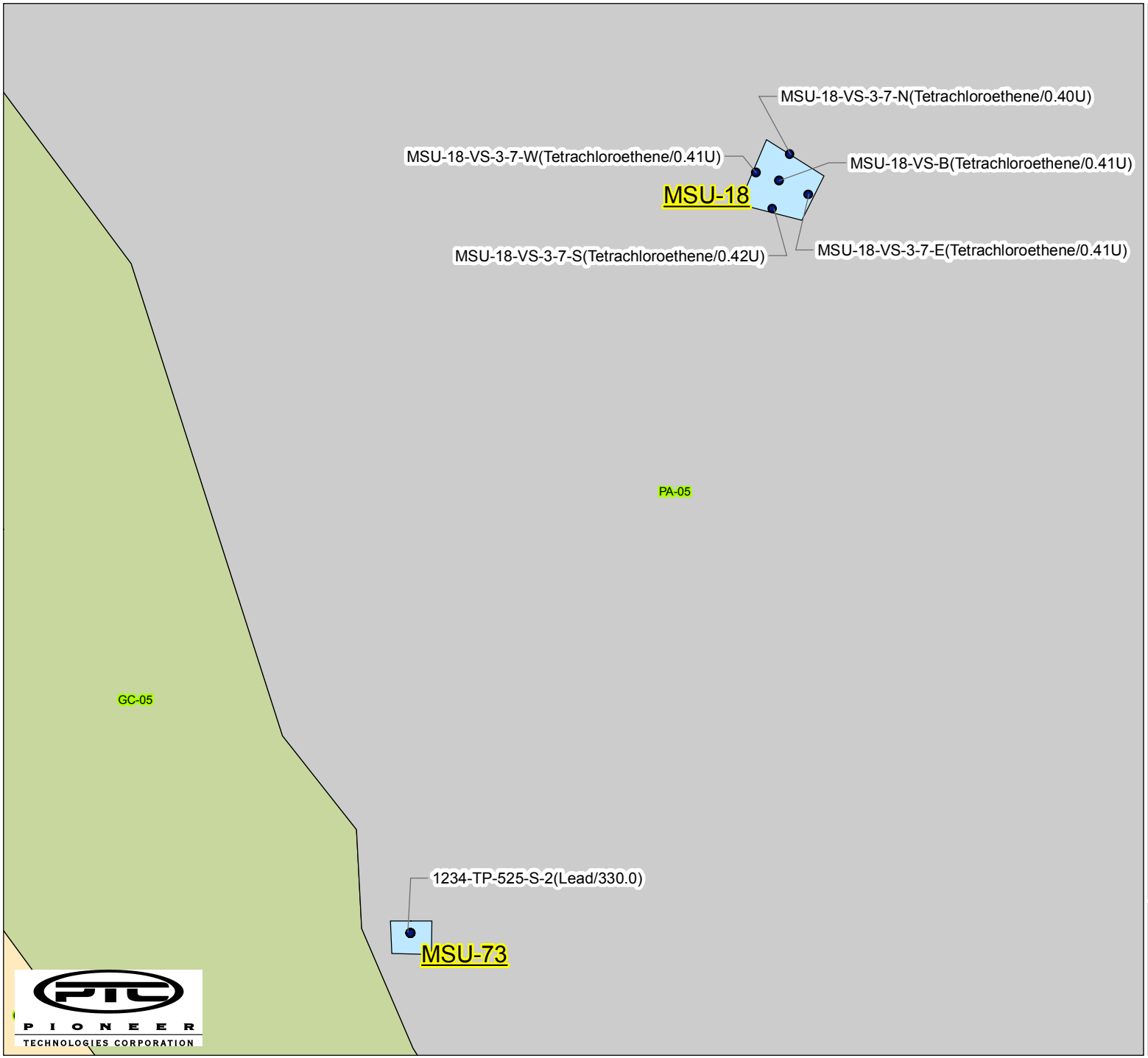
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-5

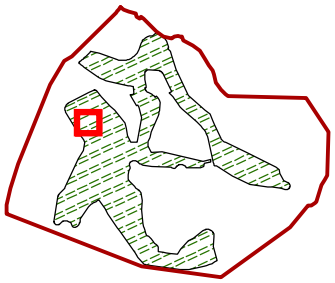


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Tetrachloroethene 0.0091 mg/kg
Lead 4,100 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

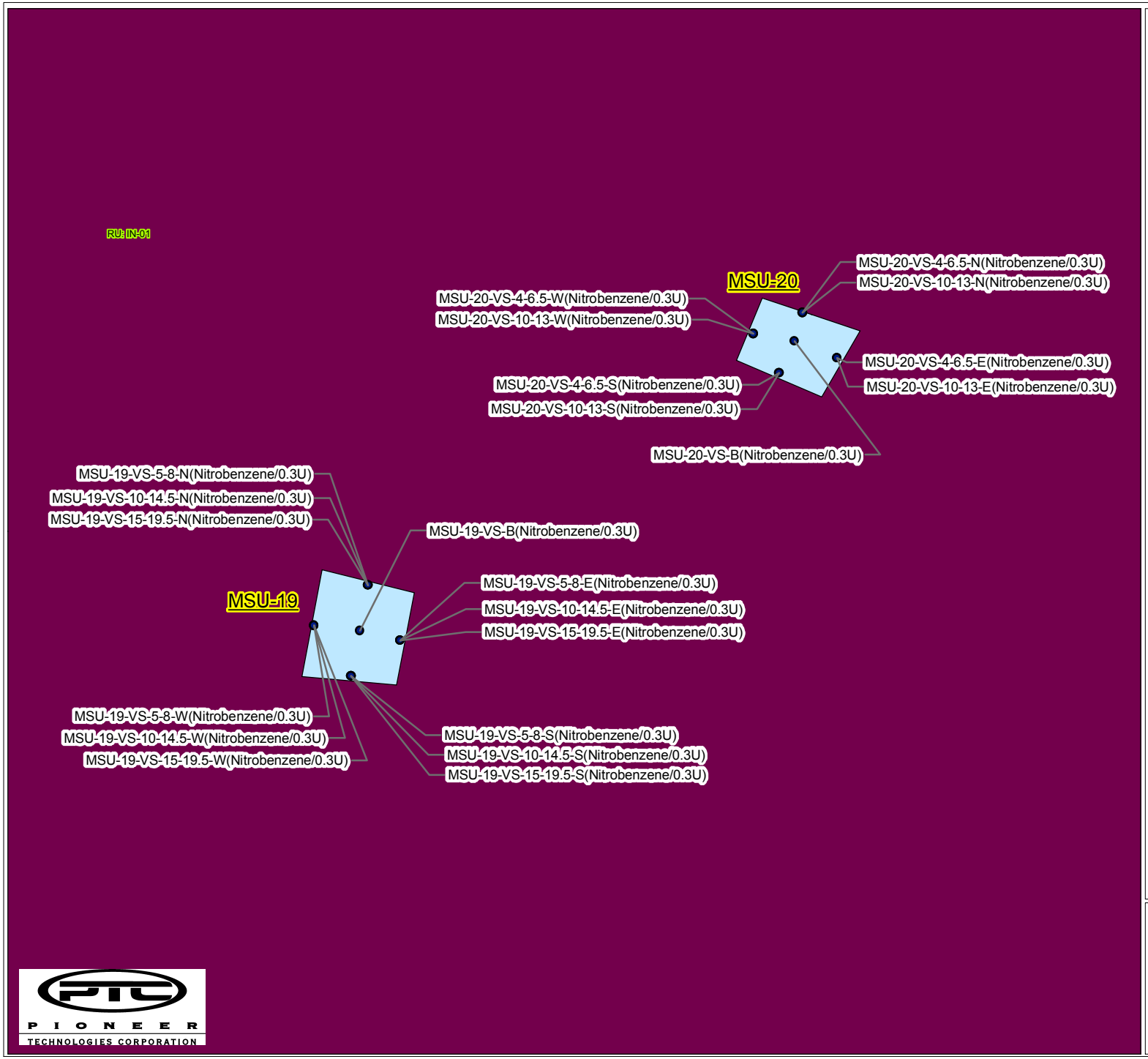
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-6

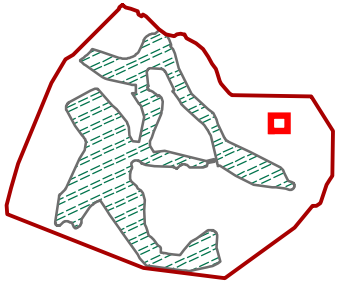


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- IN Area RU



Notes:

CL = Cleanup Level
IN = Industrial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Nitrobenzene 0.051 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

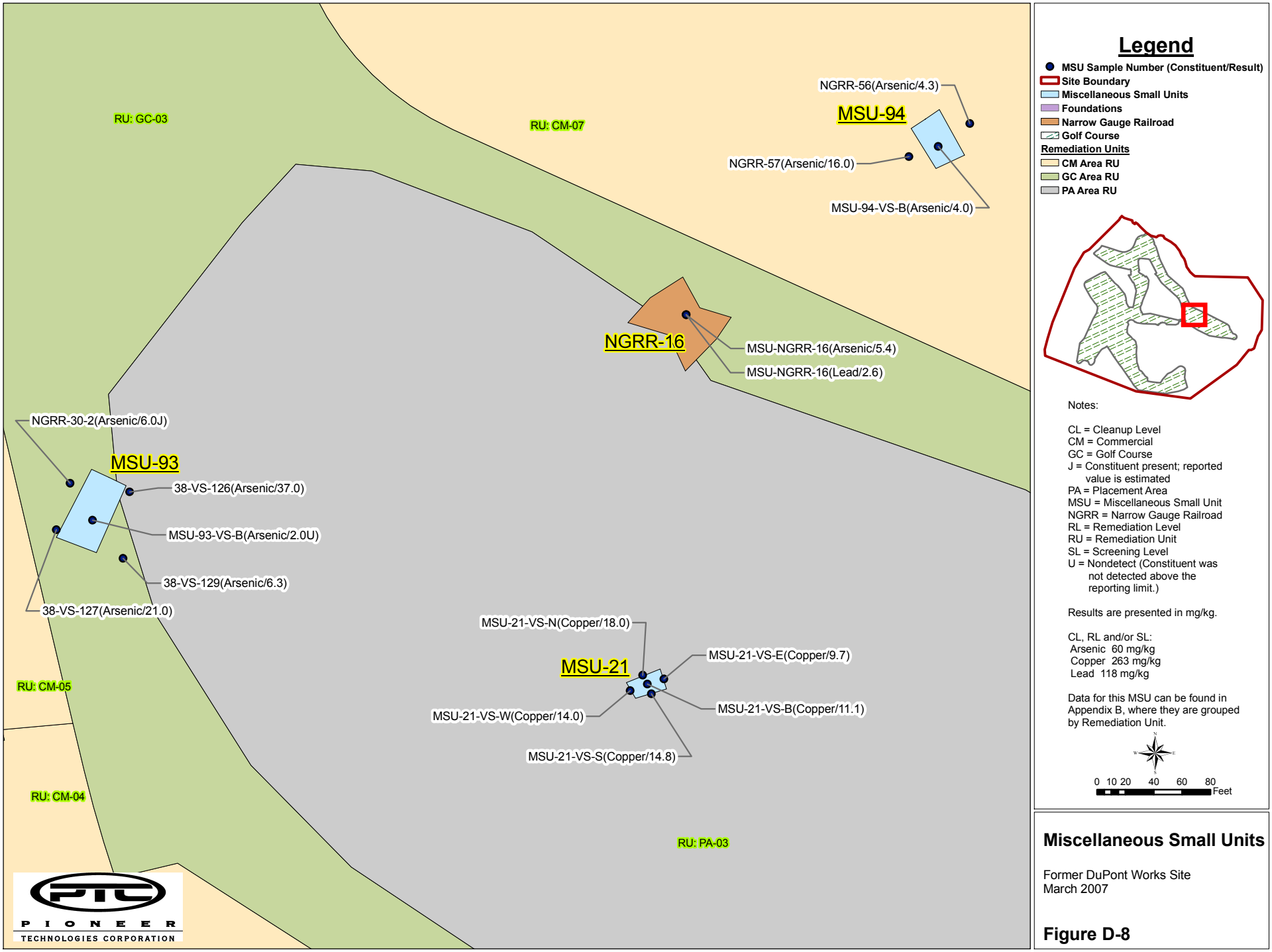
0 10 20 30 40 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-7



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
J = Constituent present; reported value is estimated
PA = Placement Area
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Copper 263 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

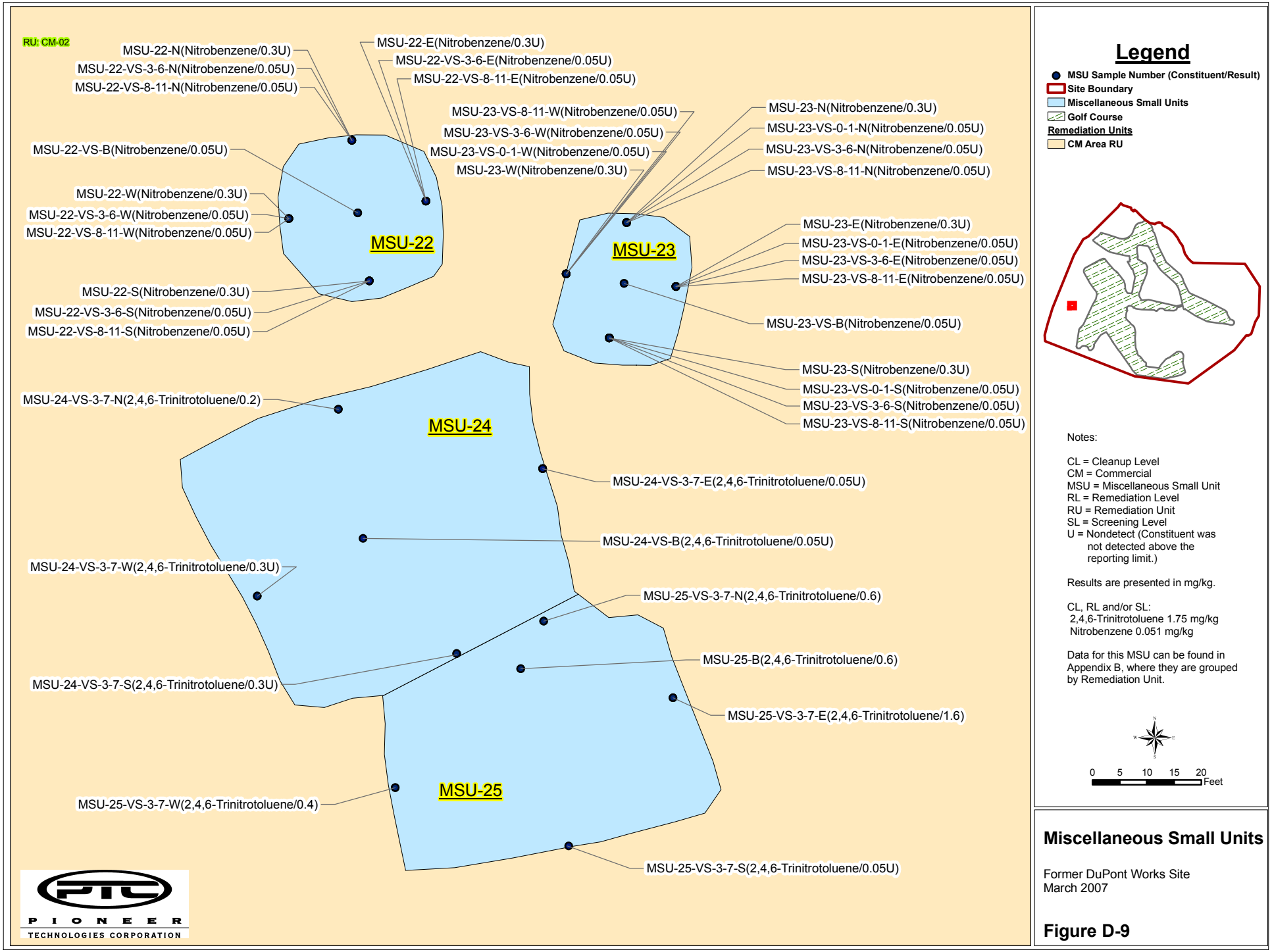
0 10 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-8



Miscellaneous Small Units

Former DuPont Works Site
March 2007

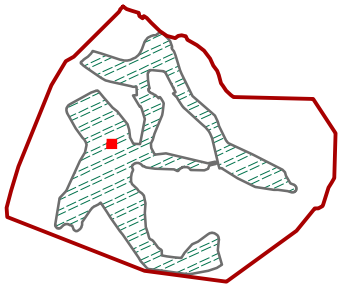
Figure D-9

Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU



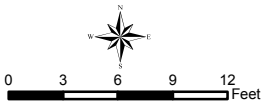
Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
2,4,6-Trinitrotoluene 1.75 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

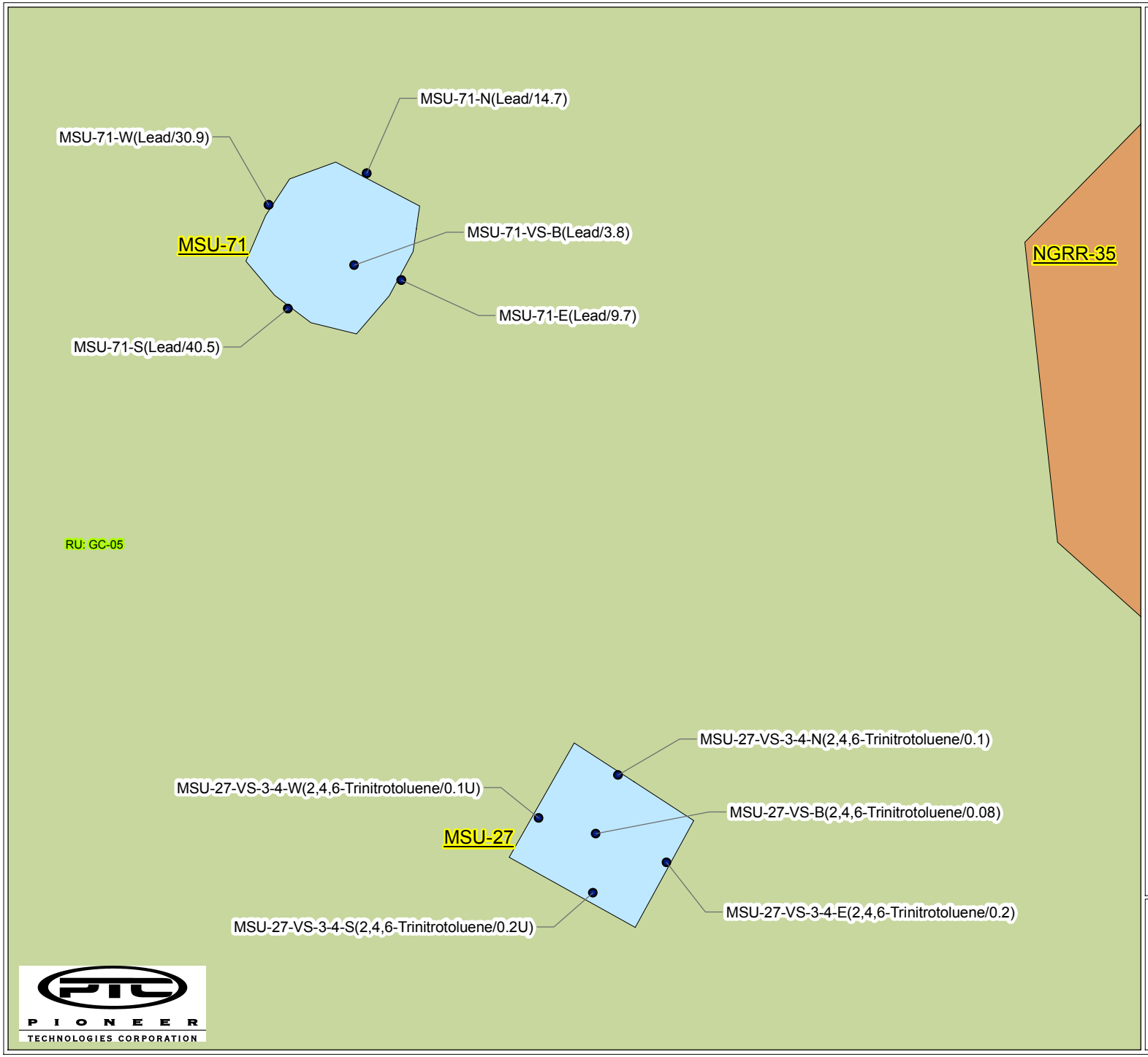


PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-10



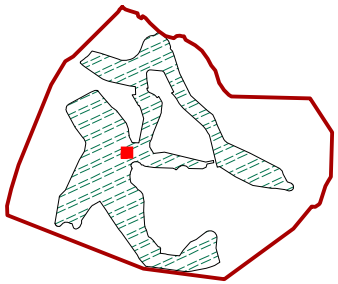
PIONEER TECHNOLOGIES CORPORATION

Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Golf Course Areas

Remediation Units

- GC Area RU



Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
2,4,6-Trinitrotoluene 1.75 mg/kg
Lead 118 mg/kg

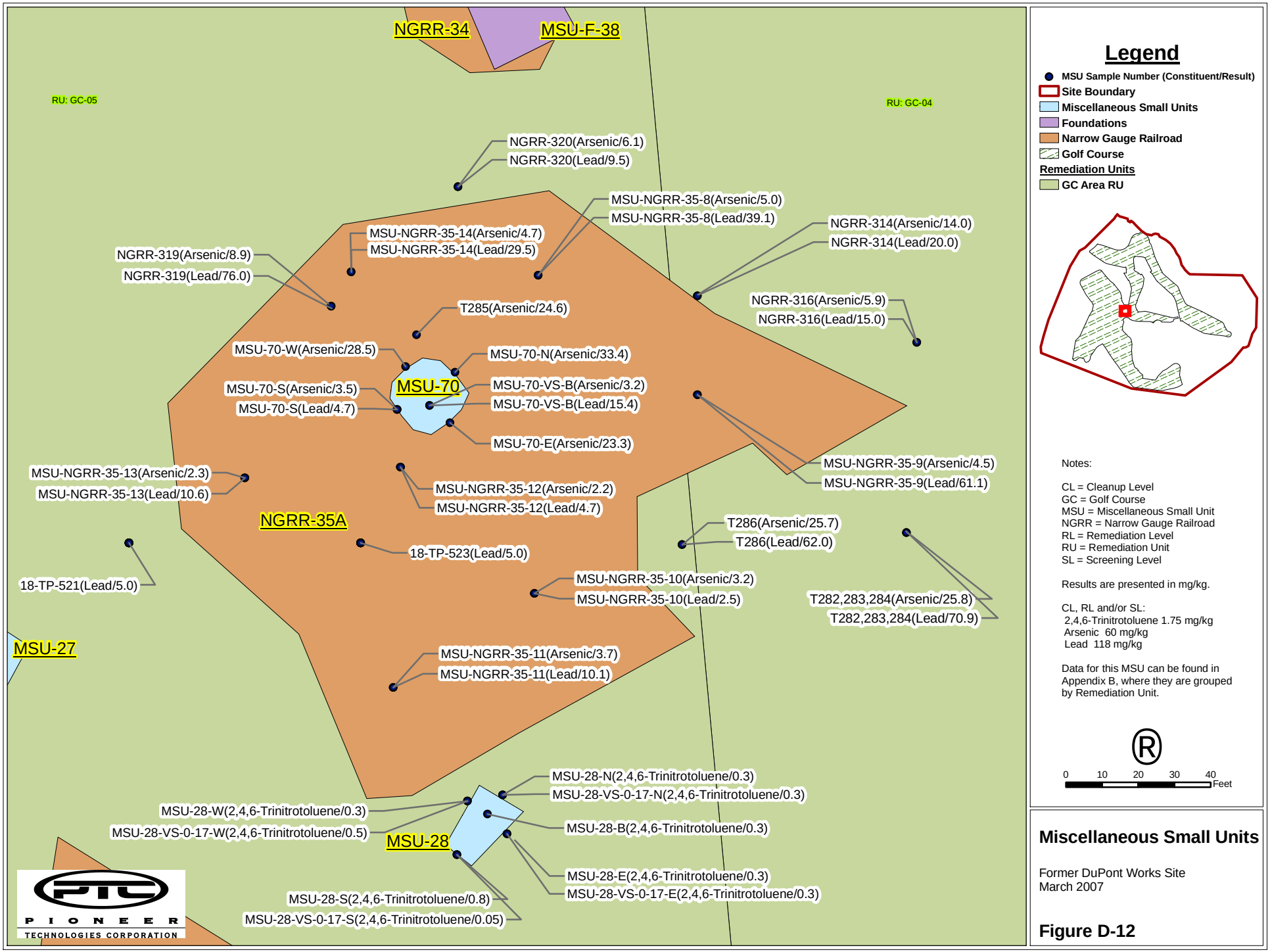
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 4 8 12 16 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-11



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- GC Area RU

Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
2,4,6-Trinitrotoluene 1.75 mg/kg
Arsenic 60 mg/kg
Lead 118 mg/kg

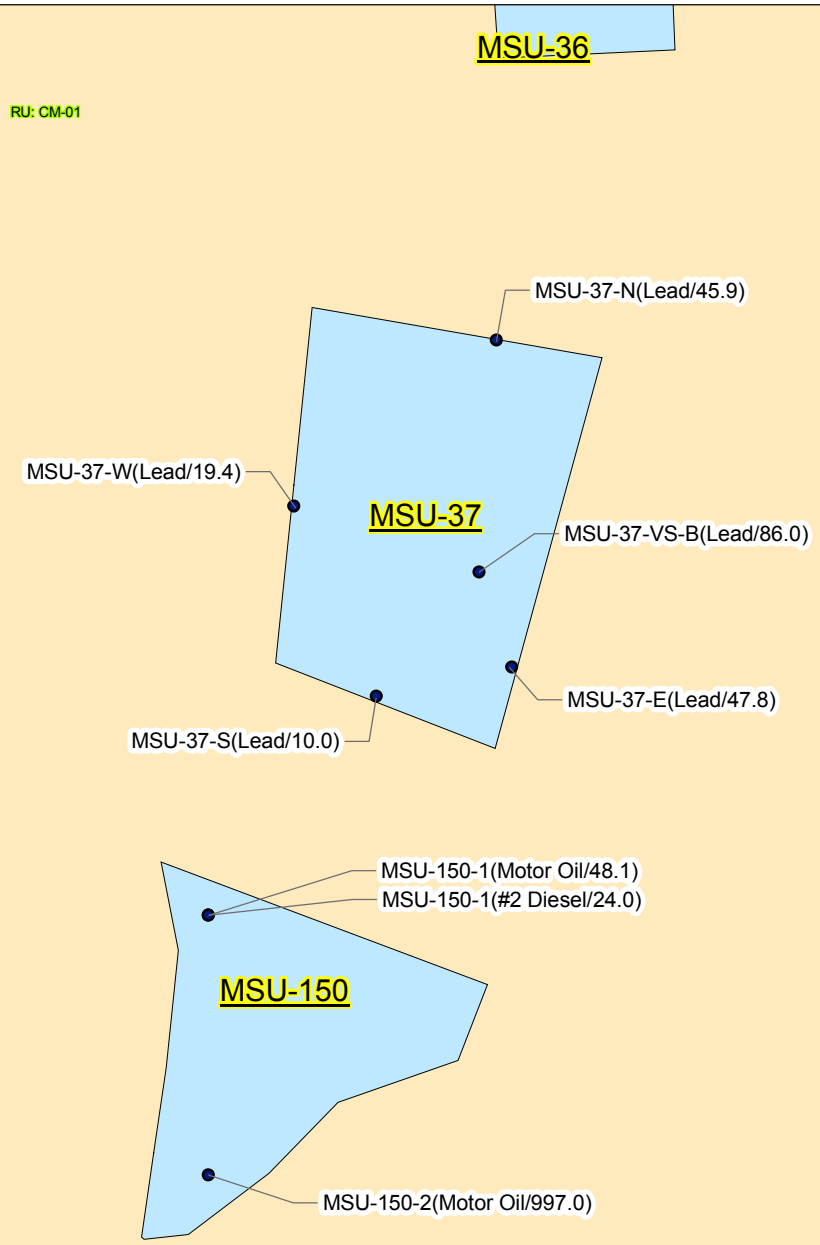
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 10 20 30 40 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-12

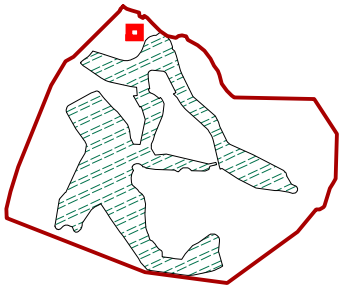


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg
Motor Oil 2,000 mg/kg
Diesel 2,000 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

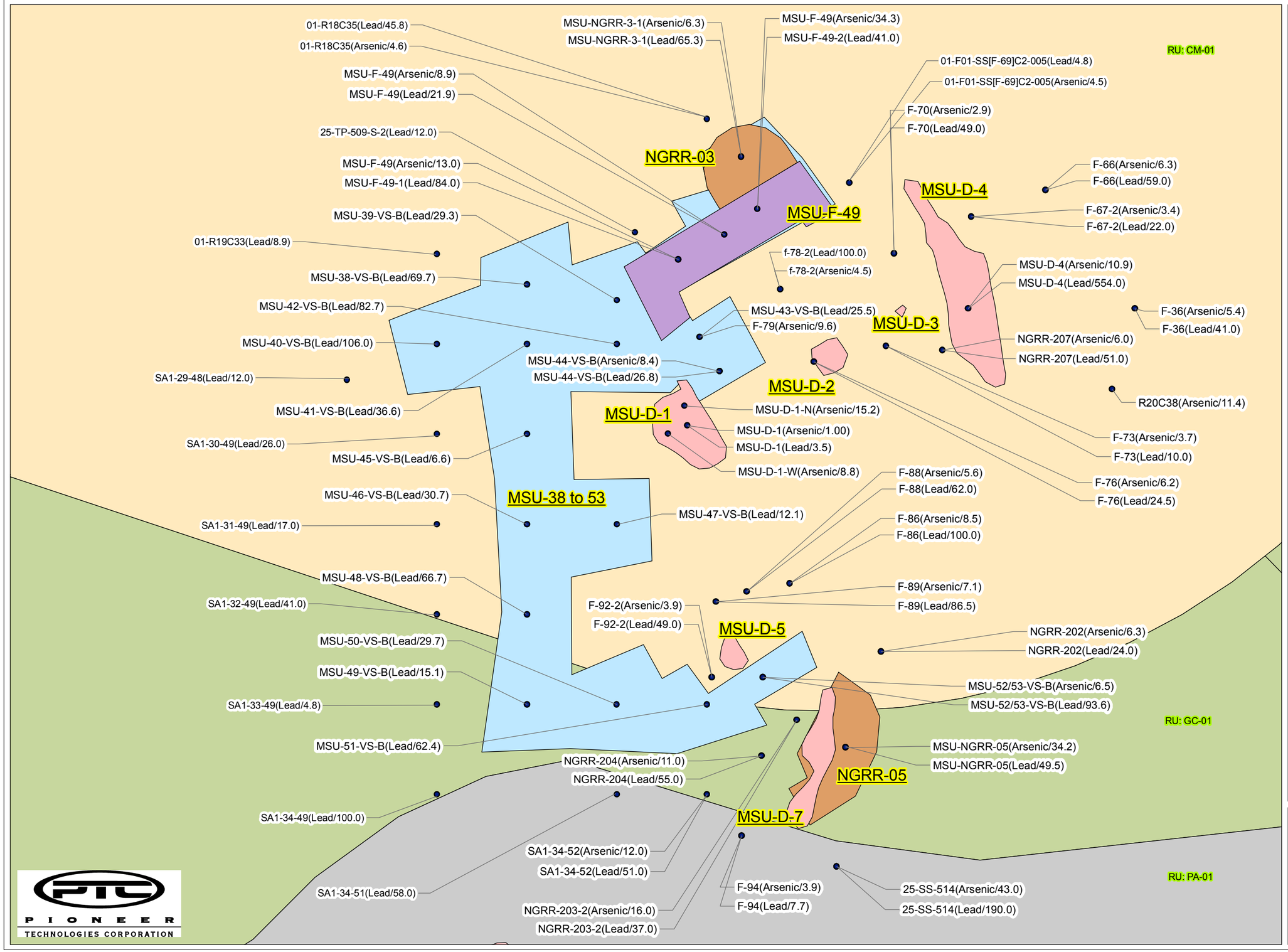
0 10 20 30 40 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-13

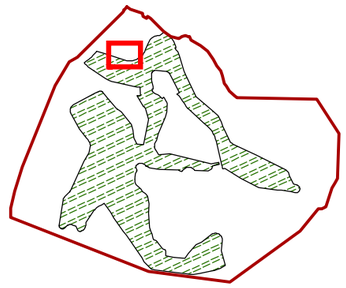


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Foundations
- Debris Locations
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
IN = Industrial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
OS = Open Space
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 5 10 20 30 40 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-14

RU: CM-05

MSU-54-VS-B(Lead/16.5)

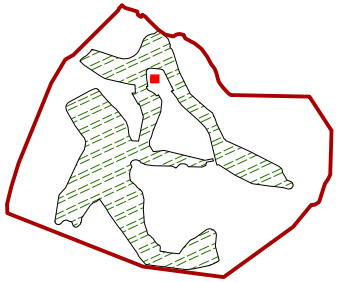
MSU-54

Legend

- MSU Sample Number(Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

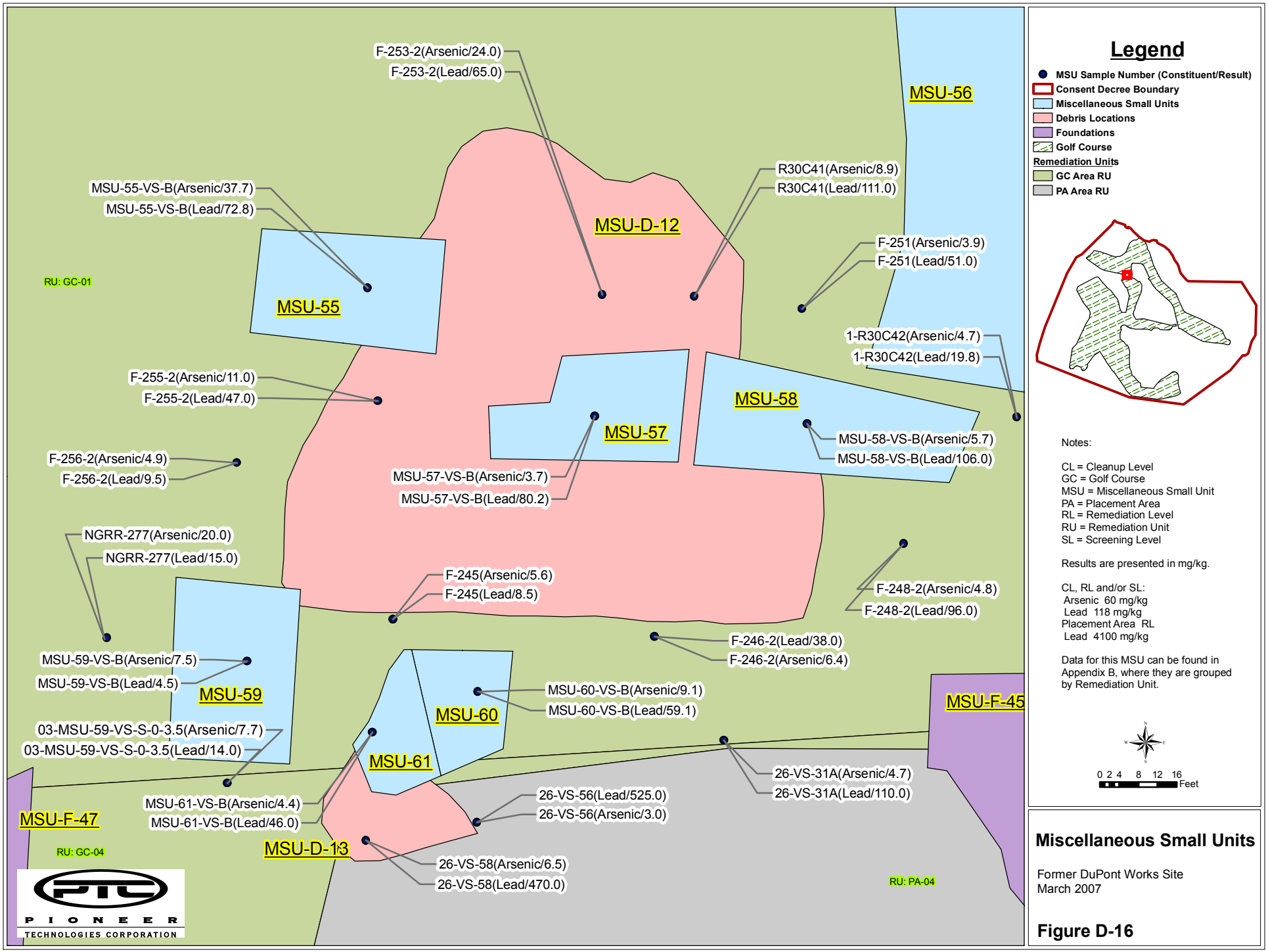
0 2 4 6 8 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-15



Legend

- MSU Sample Number (Constituent/Result)
- Consent Decree Boundary
- Miscellaneous Small Units
- Debris Locations
- Foundations
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg
Placement Area RL
Lead 4100 mg/kg

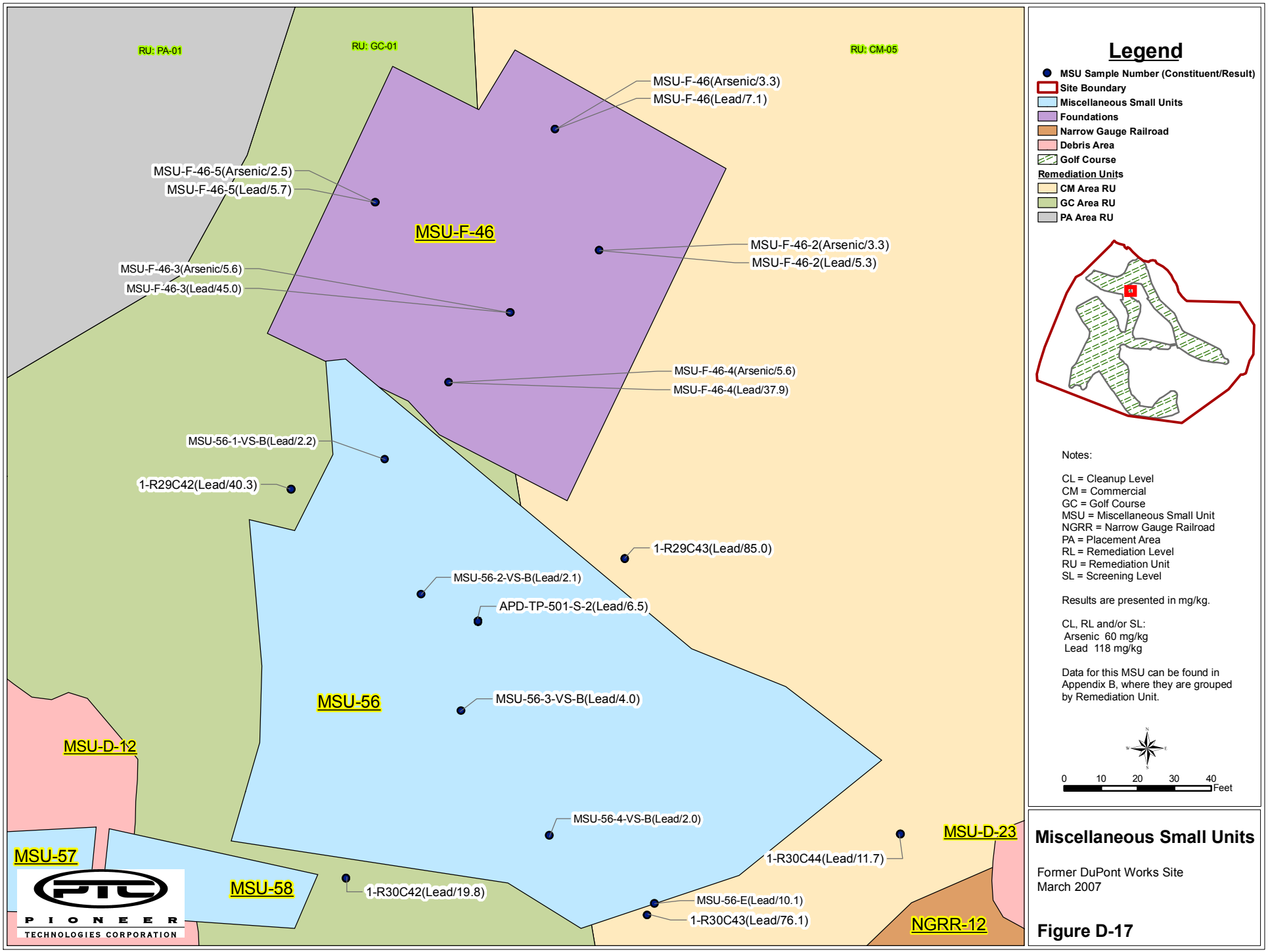
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

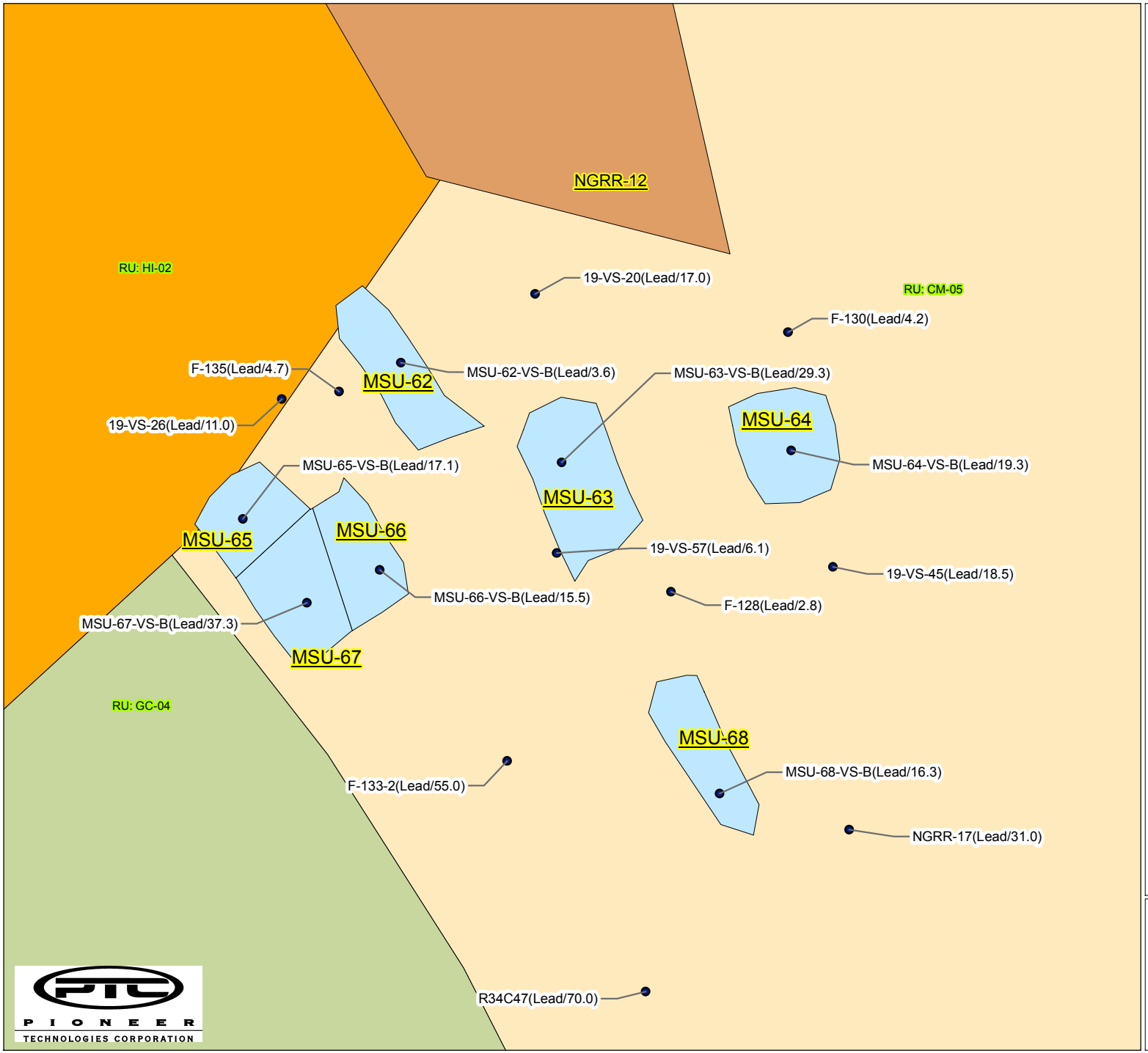
0 2 4 8 12 16
Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-16


RU: PA-01
RU: GC-01
RU: CM-05
MSU-F-46(Arsenic/3.3)
MSU-F-46(Lead/7.1)
MSU-F-46-5(Arsenic/2.5)
MSU-F-46-5(Lead/5.7)
MSU-F-46
MSU-F-46-2(Arsenic/3.3)
MSU-F-46-2(Lead/5.3)
MSU-F-46-3(Arsenic/5.6)
MSU-F-46-3(Lead/45.0)
MSU-F-46-4(Arsenic/5.6)
MSU-F-46-4(Lead/37.9)
MSU-56-1-VS-B(Lead/2.2)
1-R29C42(Lead/40.3)
1-R29C43(Lead/85.0)
MSU-56-2-VS-B(Lead/2.1)
APD-TP-501-S-2(Lead/6.5)
MSU-56
MSU-56-3-VS-B(Lead/4.0)
MSU-D-12
MSU-56-4-VS-B(Lead/2.0)
MSU-D-23
MSU-57
MSU-58
1-R30C44(Lead/11.7)
1-R30C42(Lead/19.8)
MSU-56-E(Lead/10.1)
1-R30C43(Lead/76.1)
NGRR-12
PIONEER
TECHNOLOGIES CORPORATION
Legend
MSU Sample Number (Constituent/Result)
Site Boundary
Miscellaneous Small Units
Foundations
Narrow Gauge Railroad
Debris Area
Golf Course
Remediation Units
CM Area RU
GC Area RU
PA Area RU
Notes:
CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
Results are presented in mg/kg.
CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.
0 10 20 30 40
Feet
Miscellaneous Small Units
Former DuPont Works Site
March 2007
Figure D-17

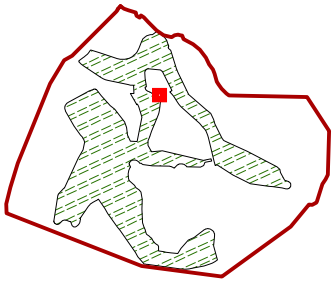


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- HI Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
HI = Historical
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

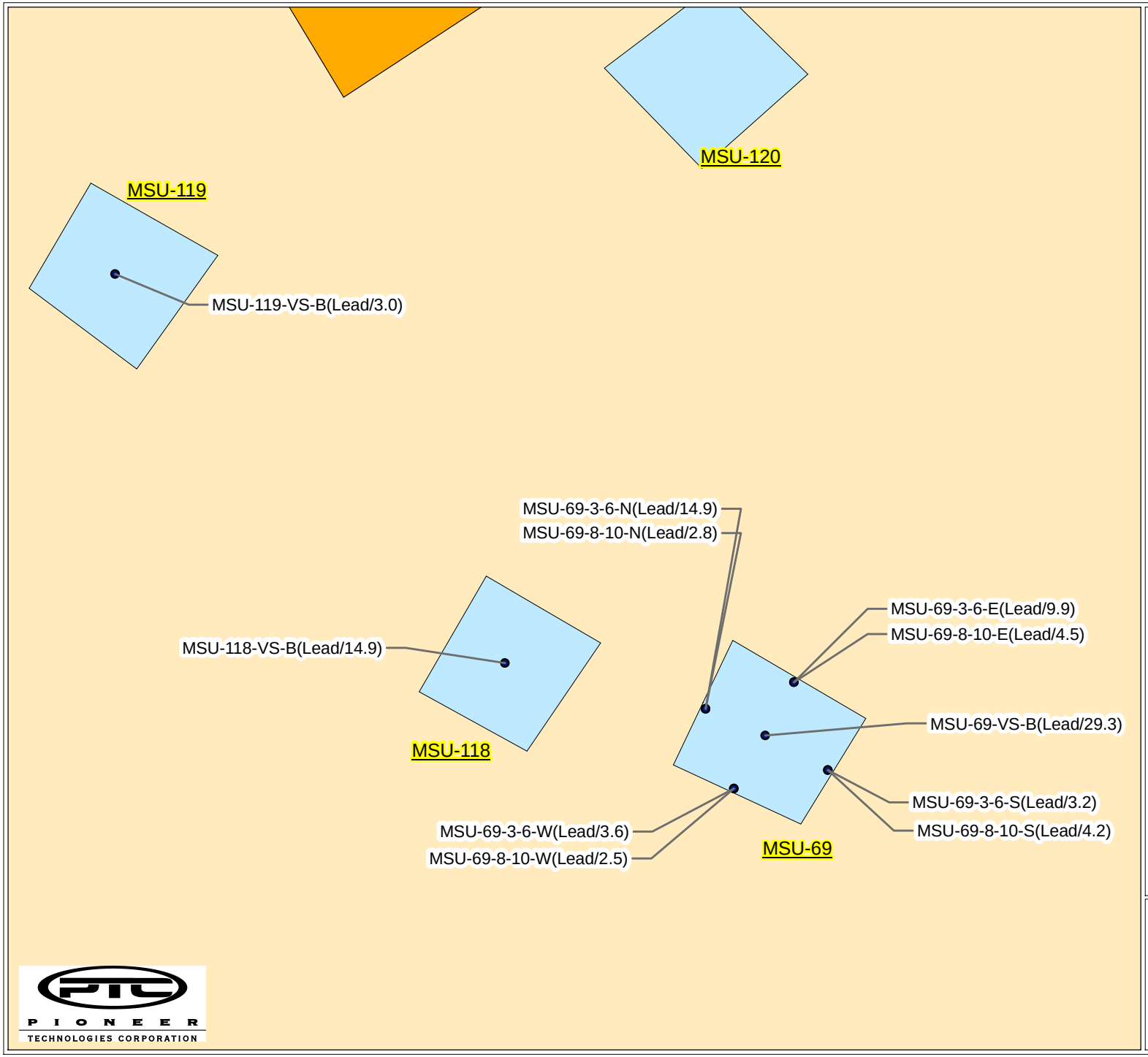
0 5 10 15 20 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-18

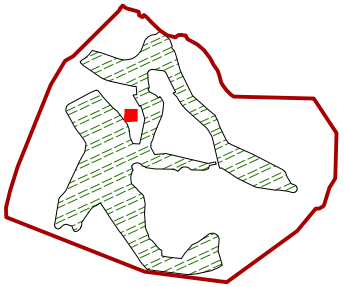


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU
- HI Area RU



Notes:

CL = Cleanup Level
CM = Commercial
HI = Historical
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

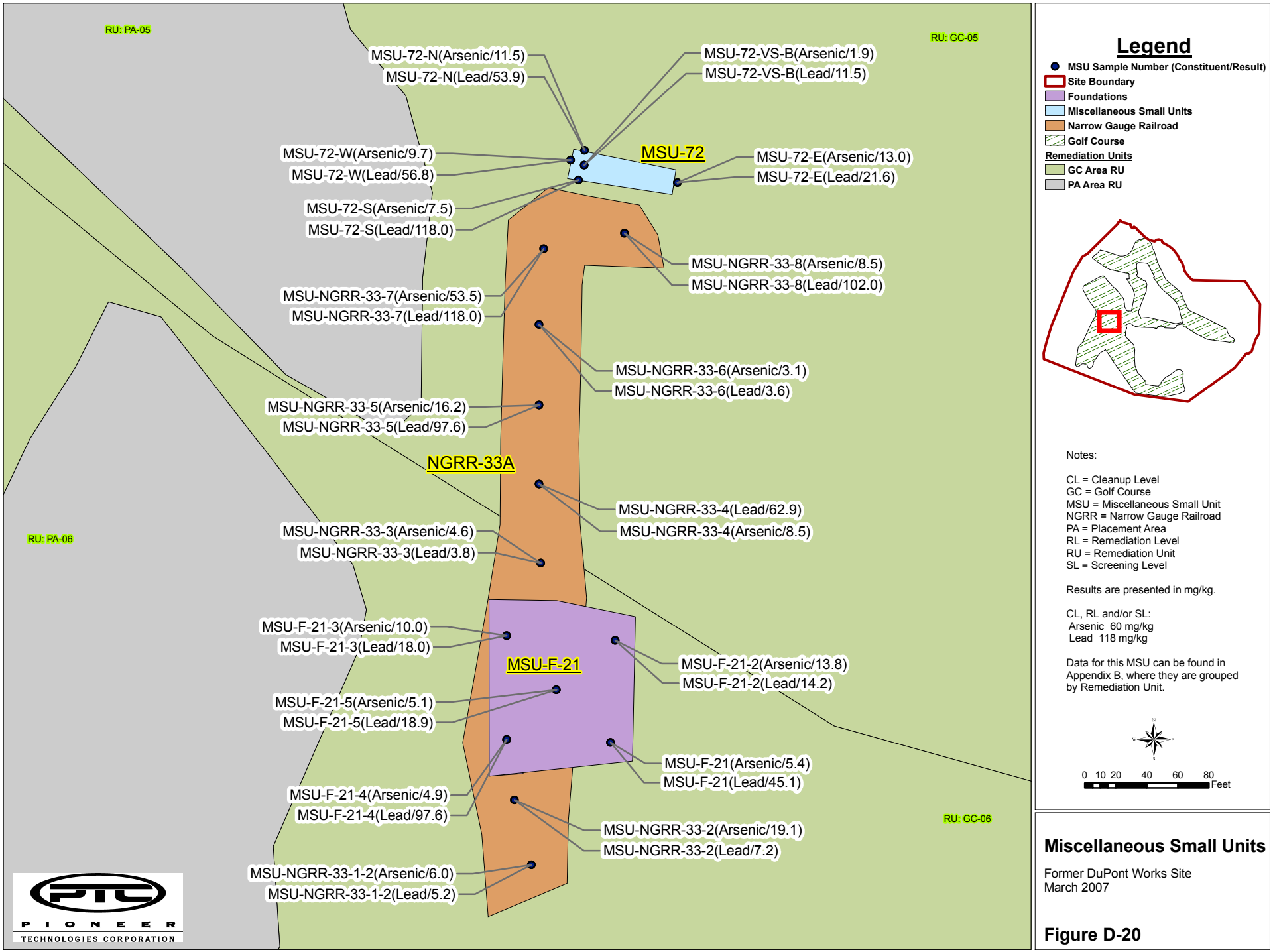
0 3 6 12 18 24 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-19



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

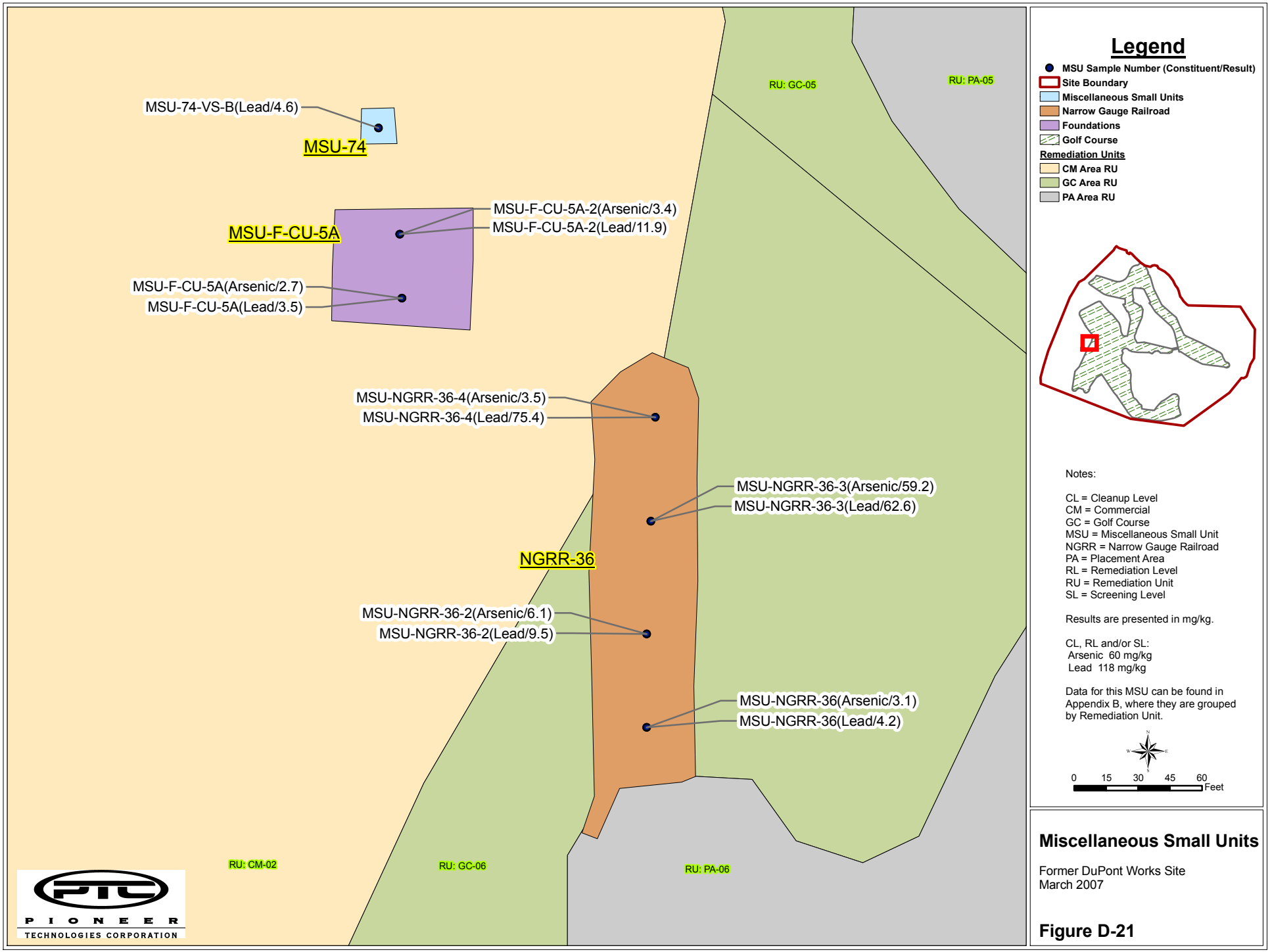
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 10 20 40 60 80 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

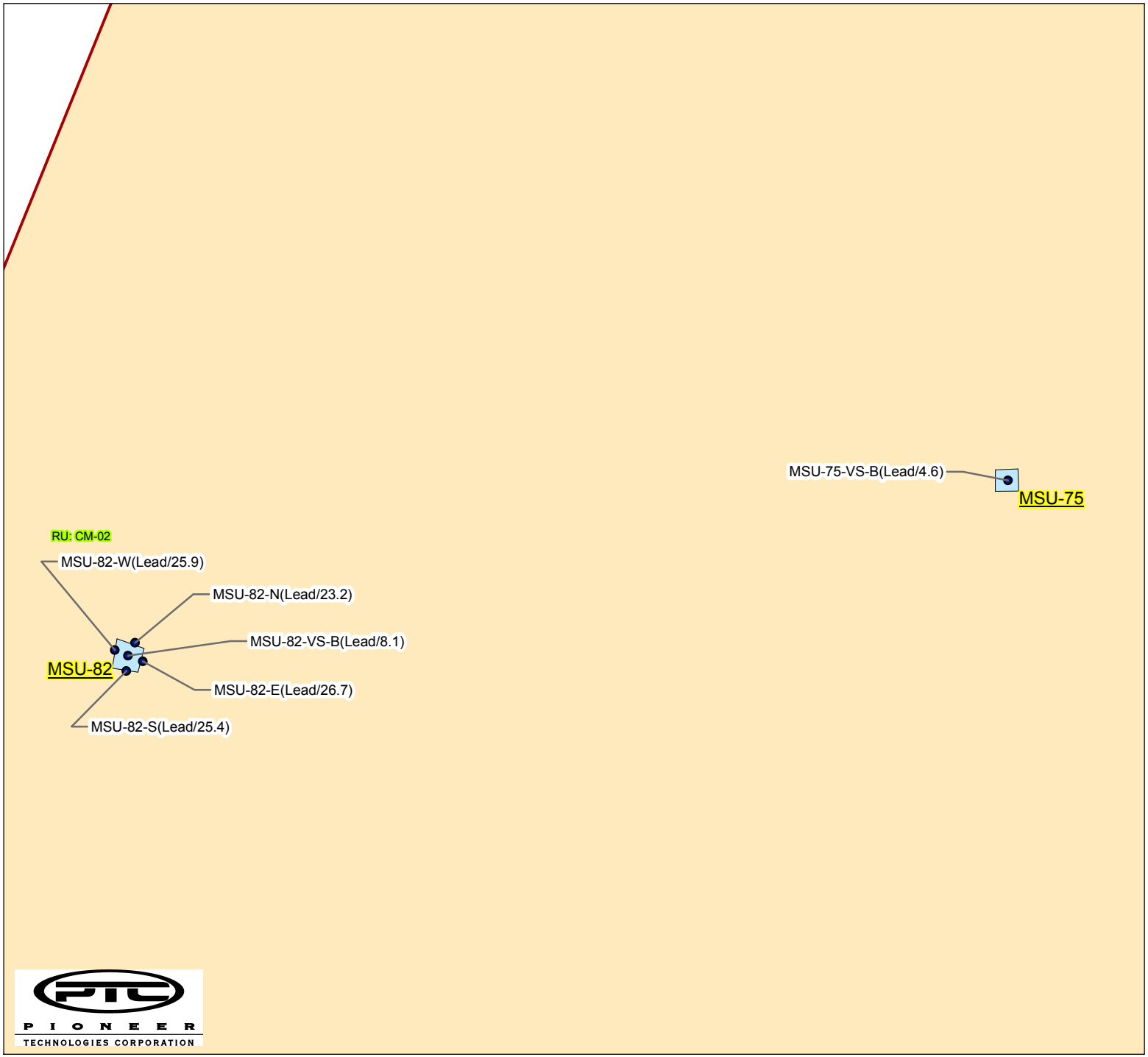
Figure D-20



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-21

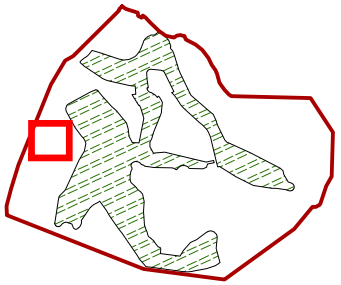


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

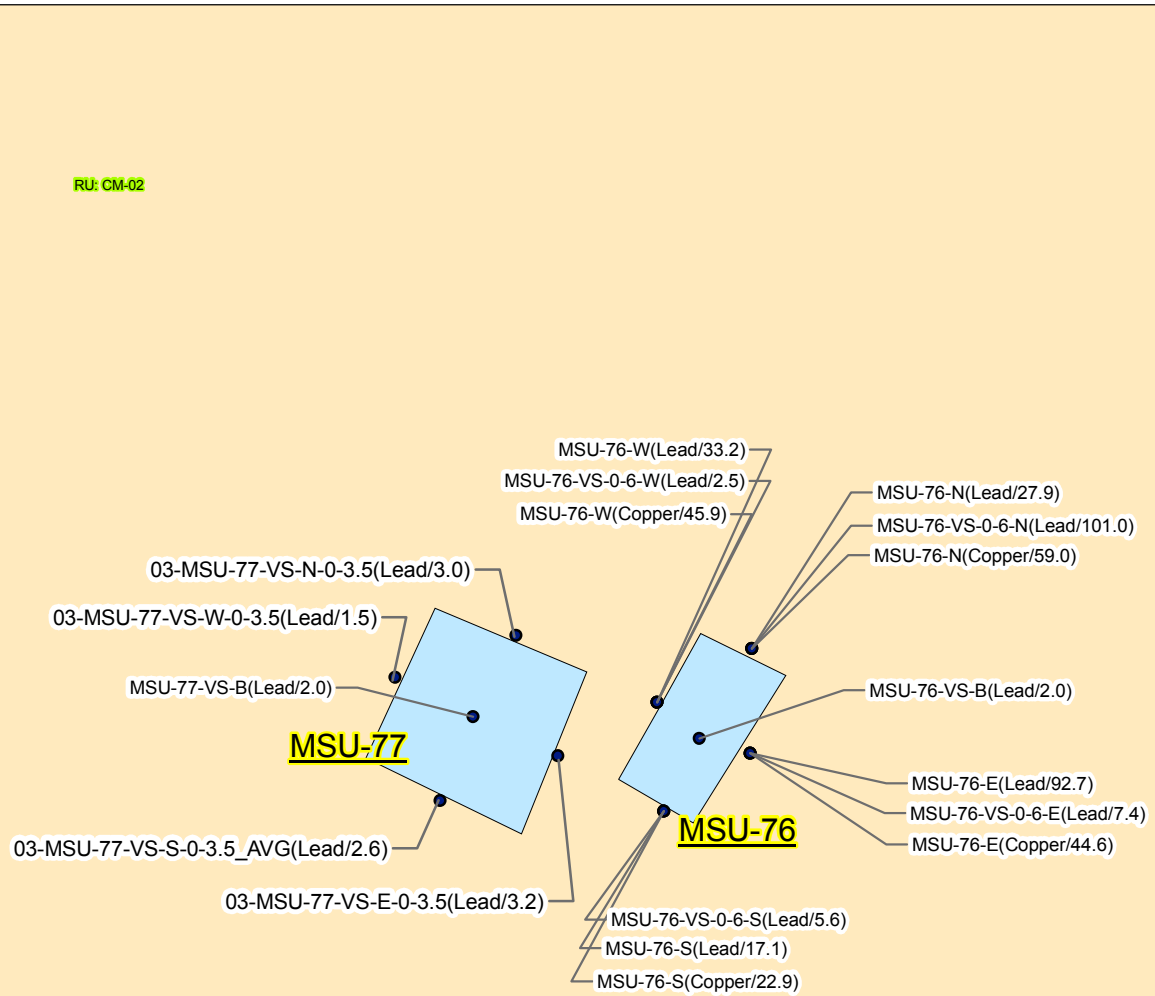
0 12.525 50 75 100 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-22

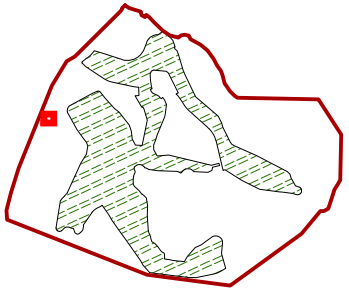


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Copper 263 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

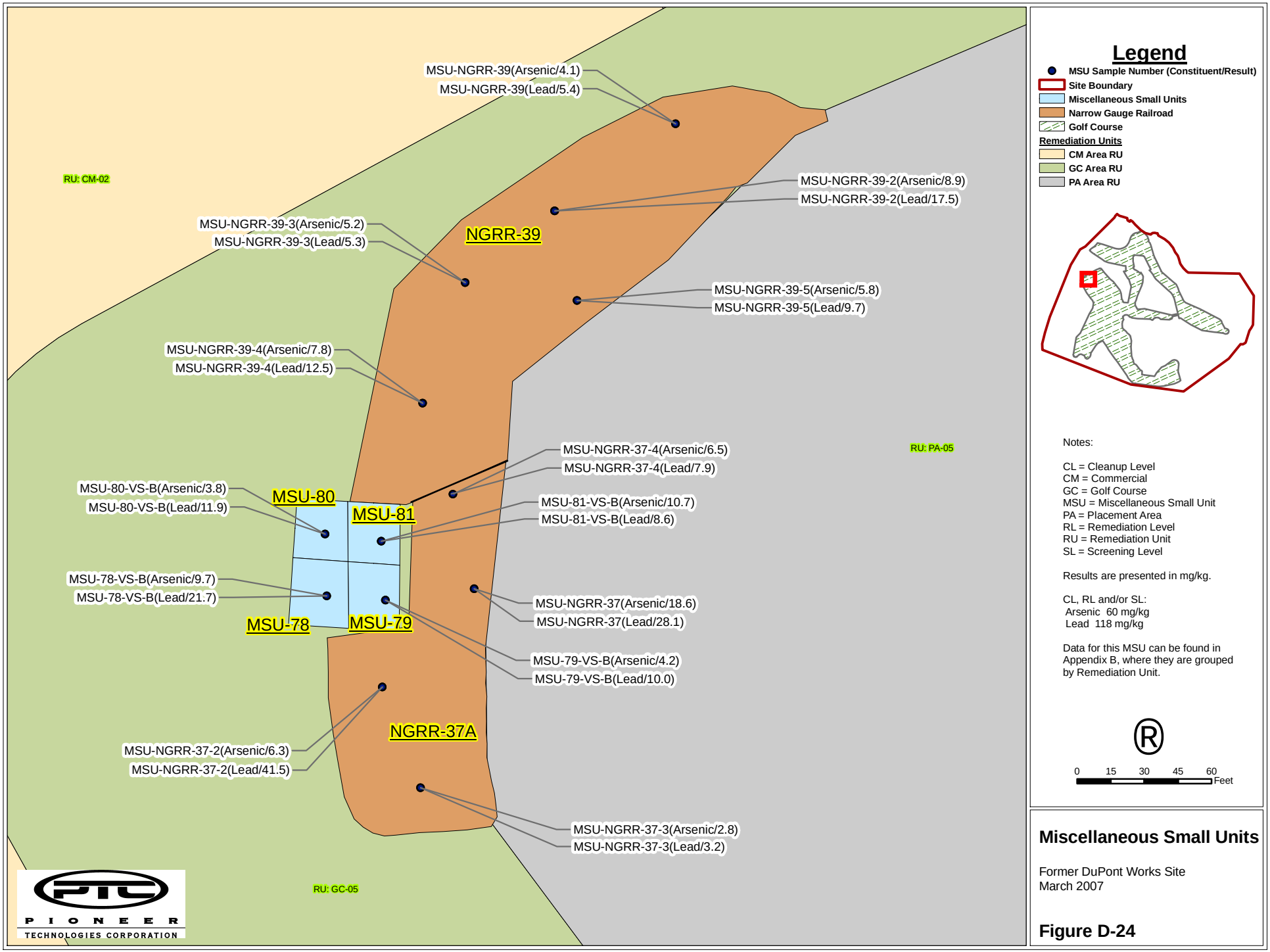
0 5 10 20 30 40 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-23



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

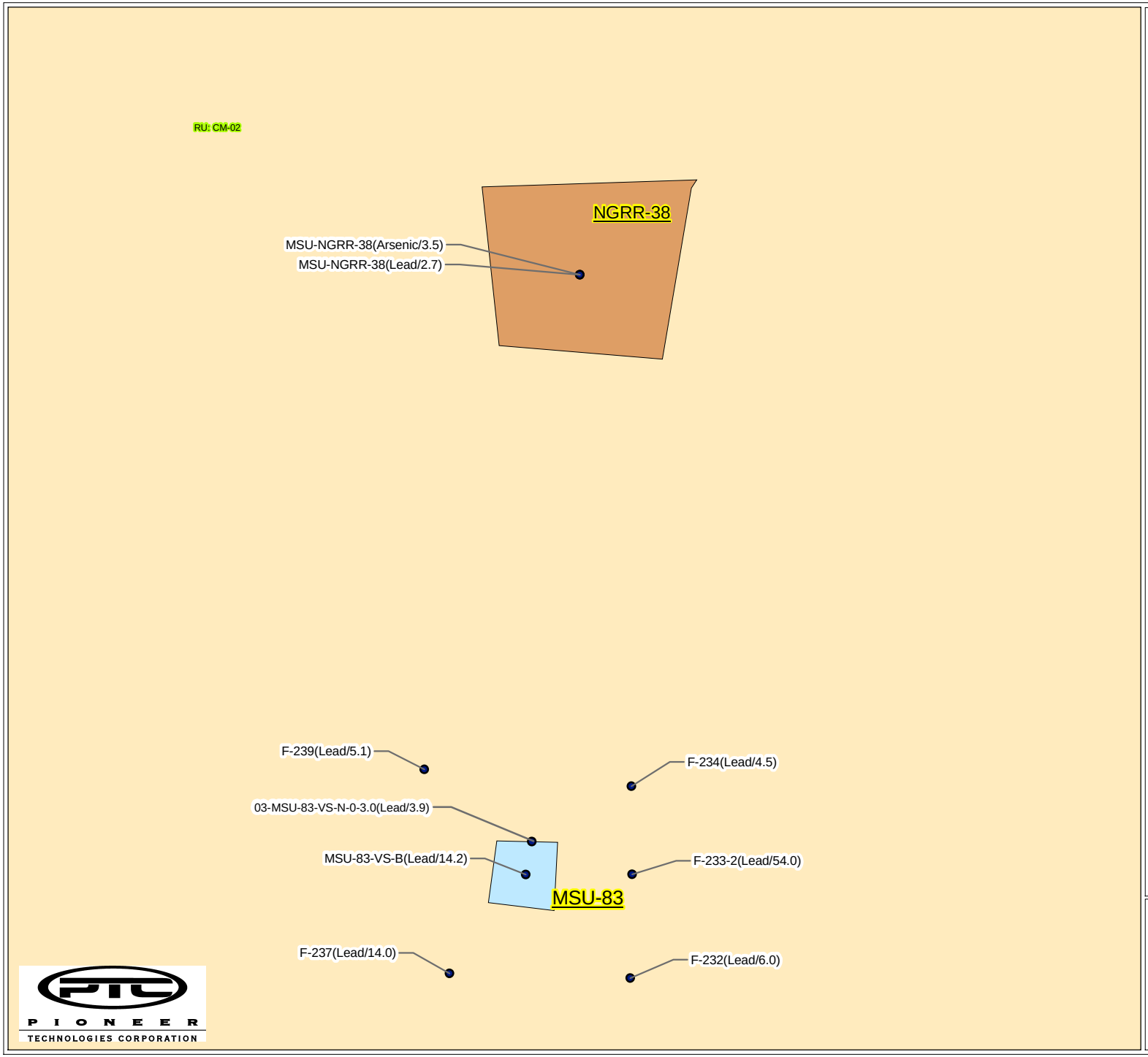
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 15 30 45 60 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-24



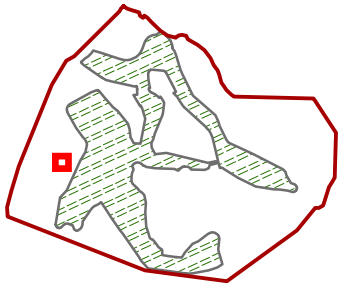
PIONEER TECHNOLOGIES CORPORATION

Legend

- MSU Sample Number (Constituent/Result)
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Site Boundary
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

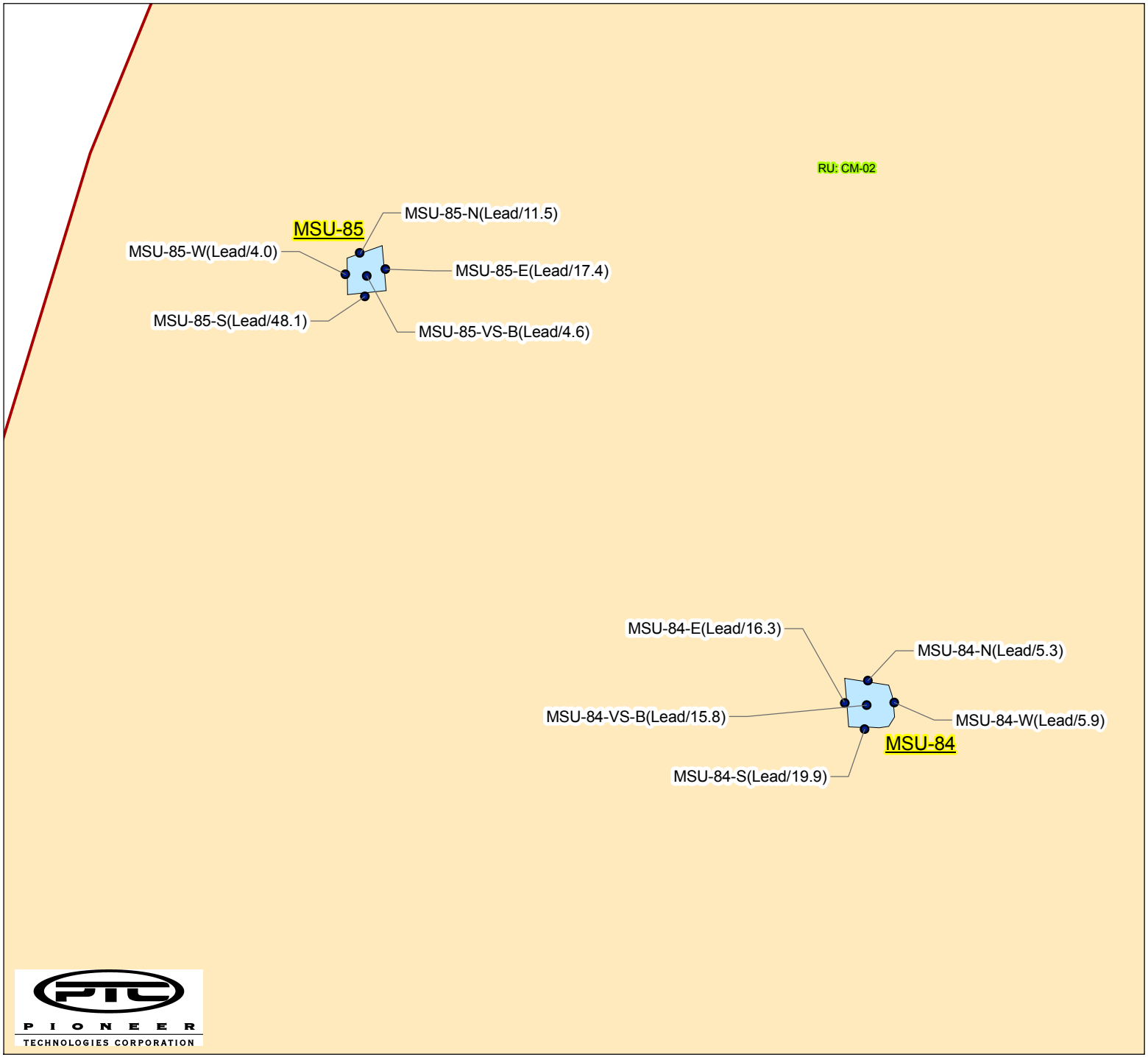
®

0 5 10 20 30 40 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-25

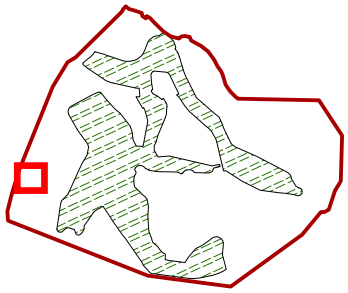


Legend

- MSU Sample Number (Constituent/Result)
- Miscellaneous Small Units
- Site Boundary
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

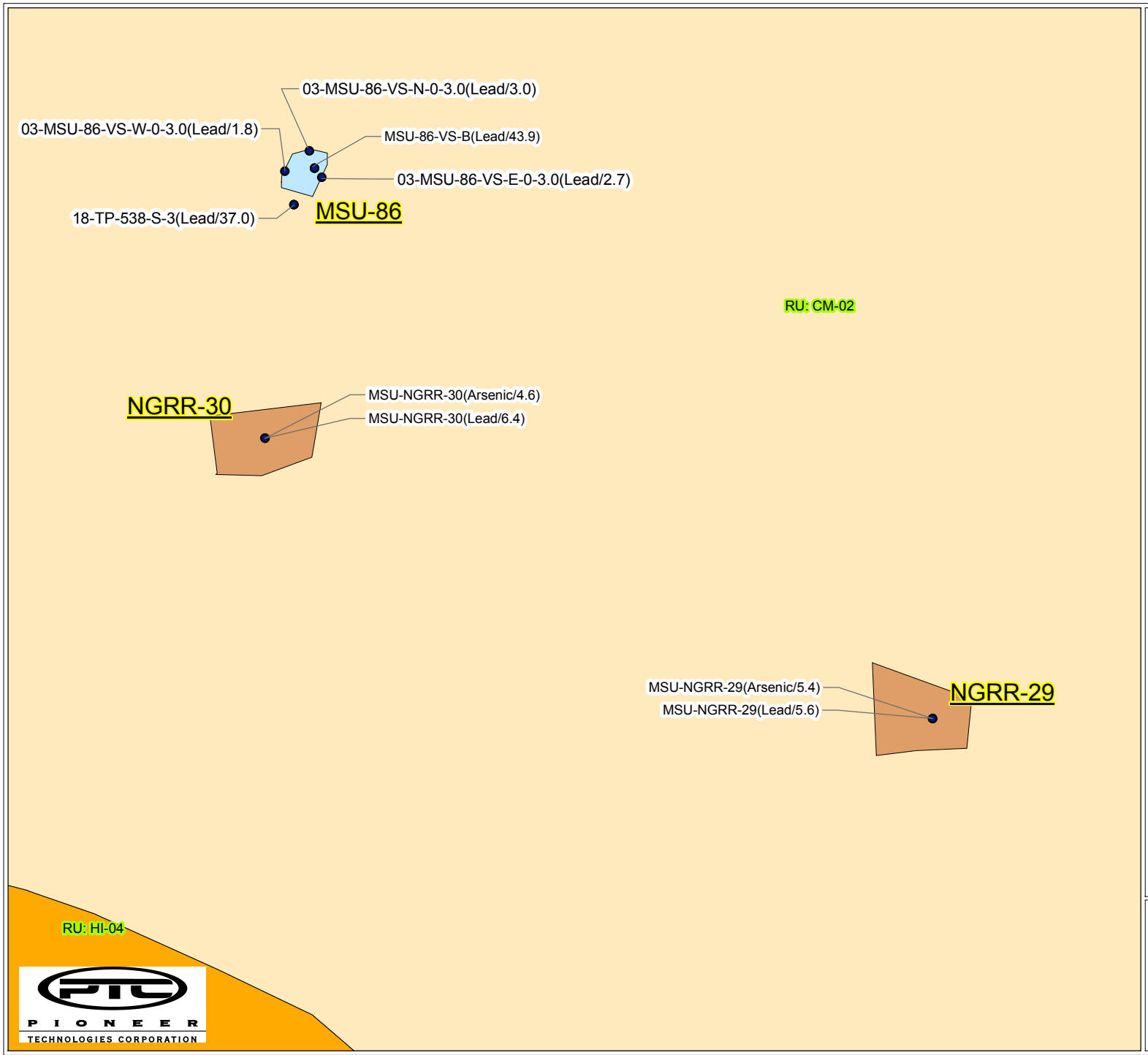
0 10 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-26

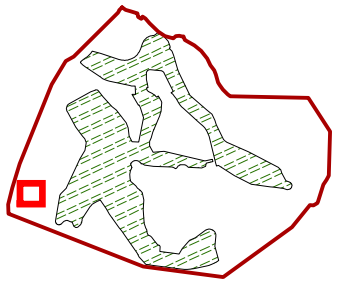


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- HI Area RU



Notes:

CL = Cleanup Level
CM = Commercial
HI = Historical
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

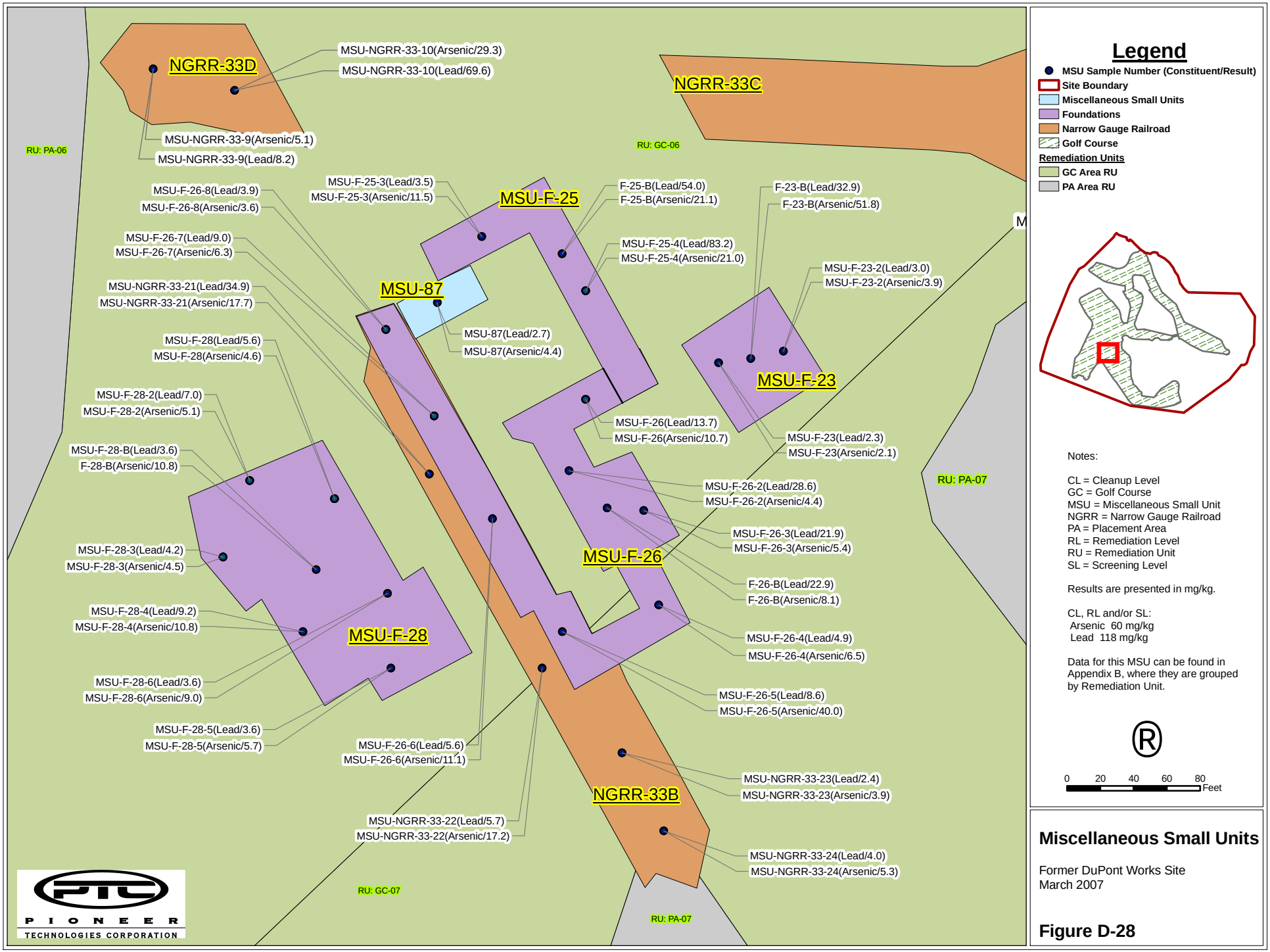
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-27



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

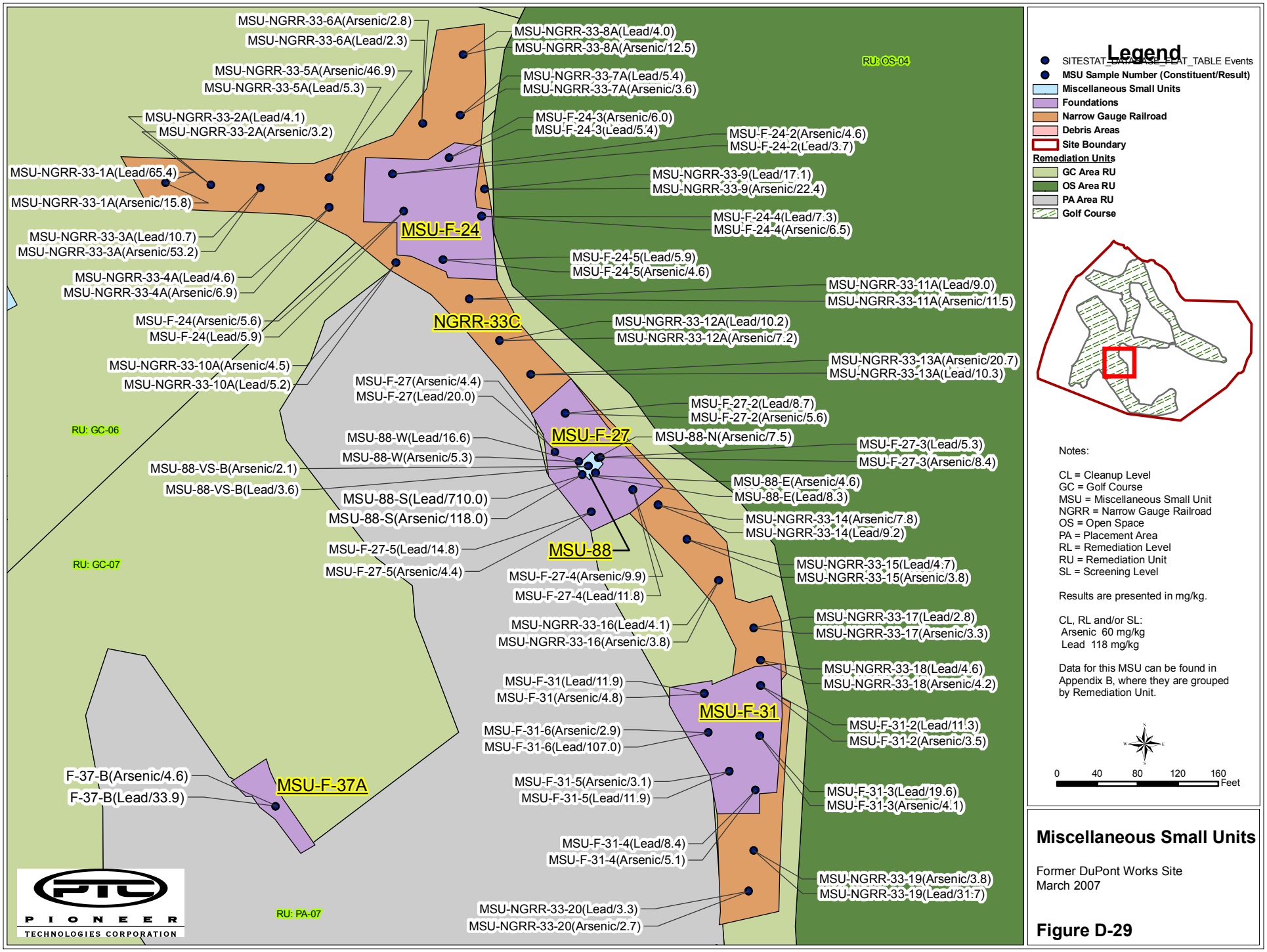
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 20 40 60 80 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

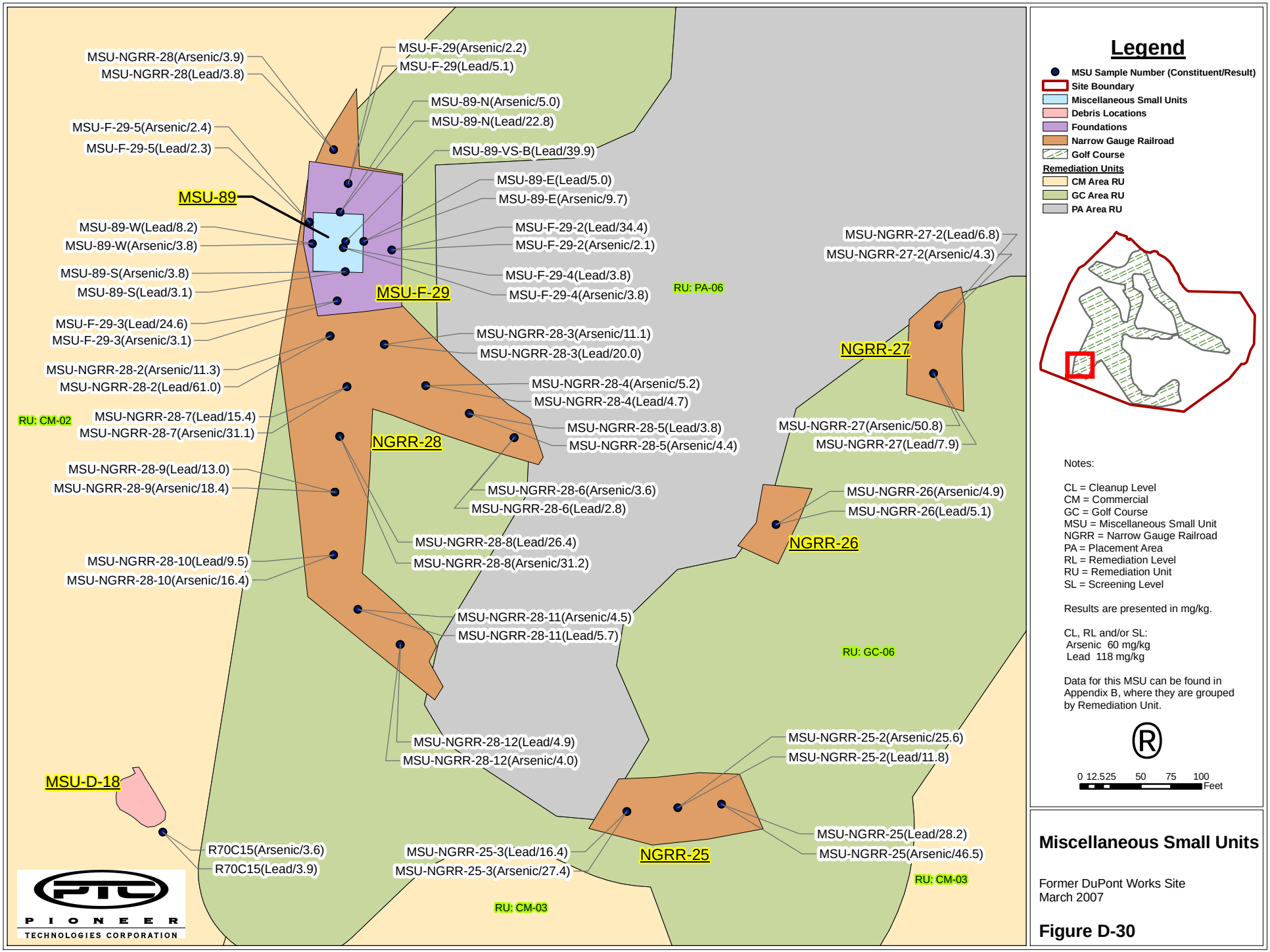
Figure D-28



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-29



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Debris Locations
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

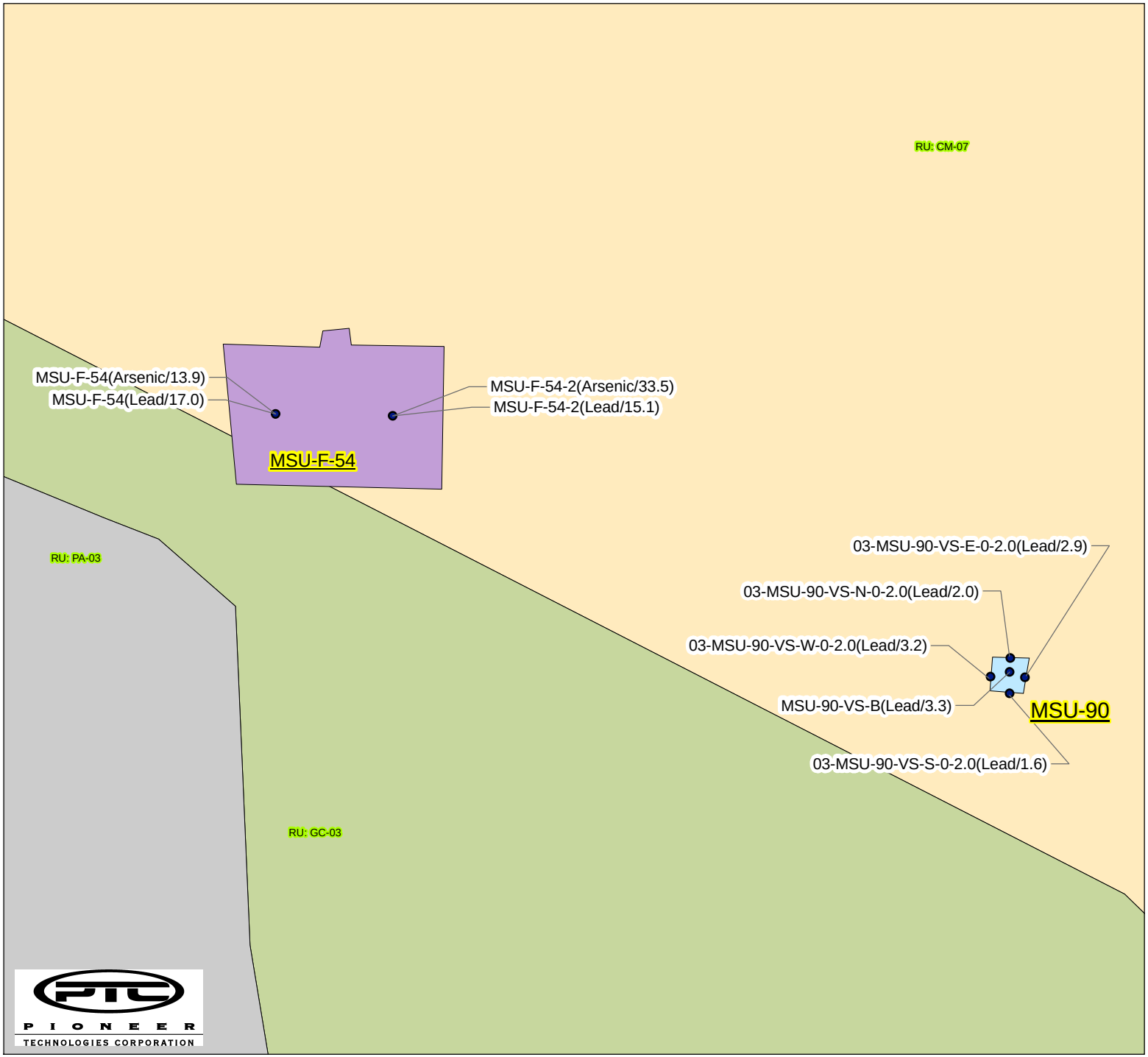
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 12.525 50 75 100 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-30

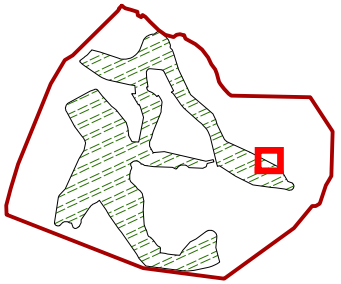


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

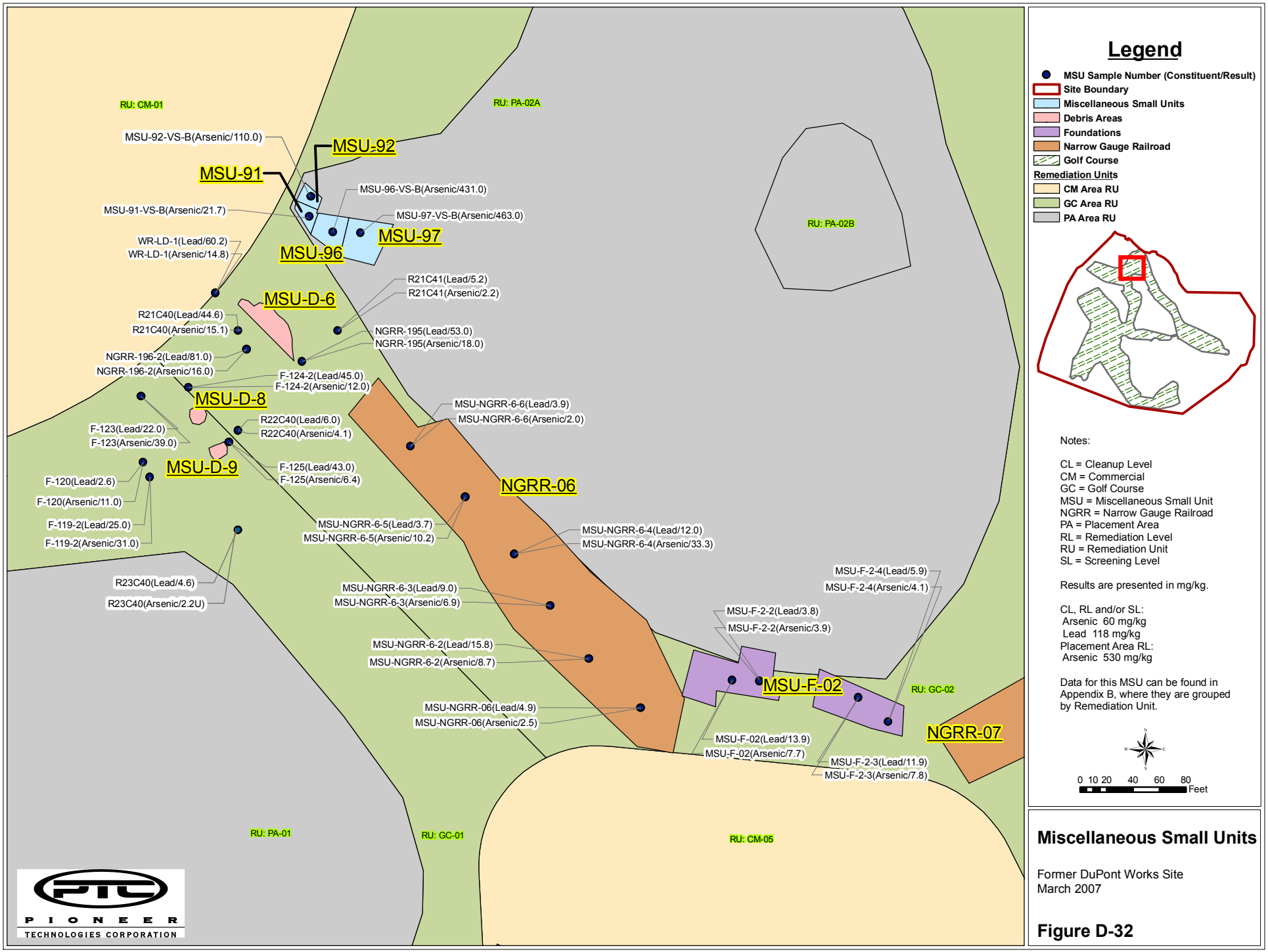
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-31



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Debris Areas
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg
Placement Area RL:
Arsenic 530 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

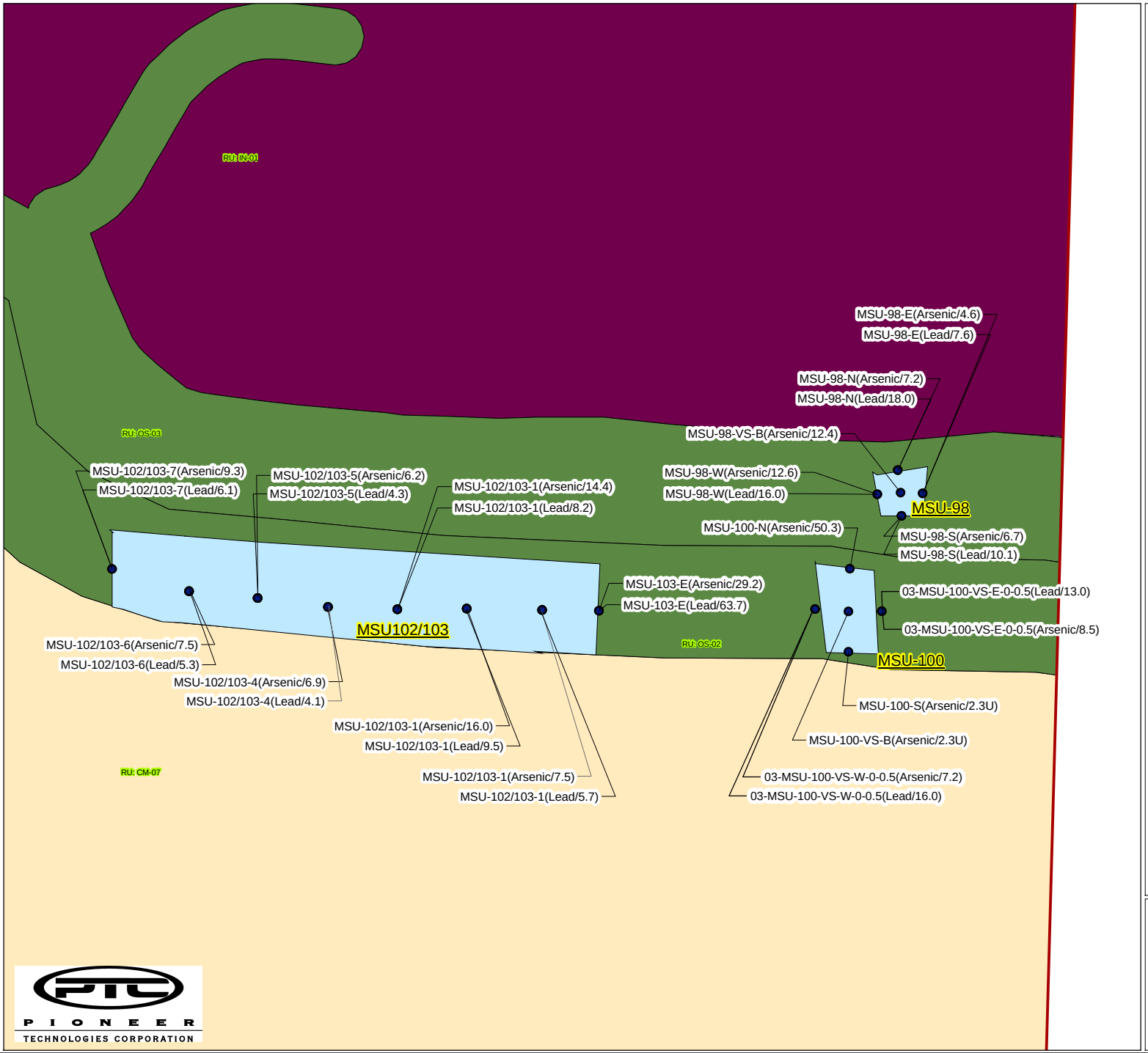
0 10 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-32

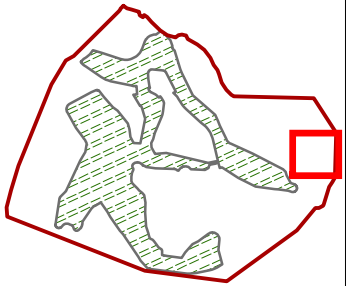


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU
- IN Area RU
- OS Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
IN = Industrial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 32 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

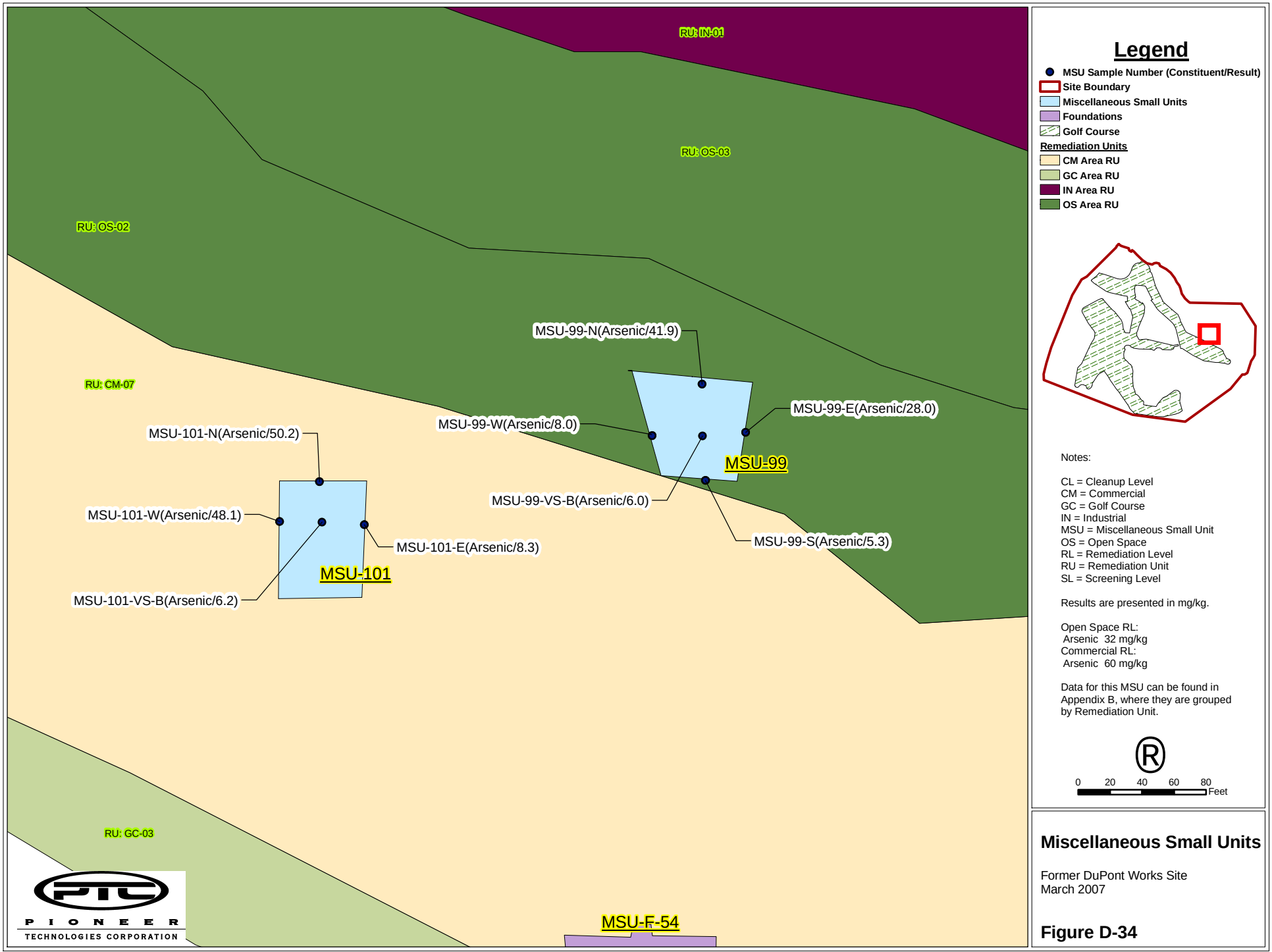
0 30 60 90 120 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

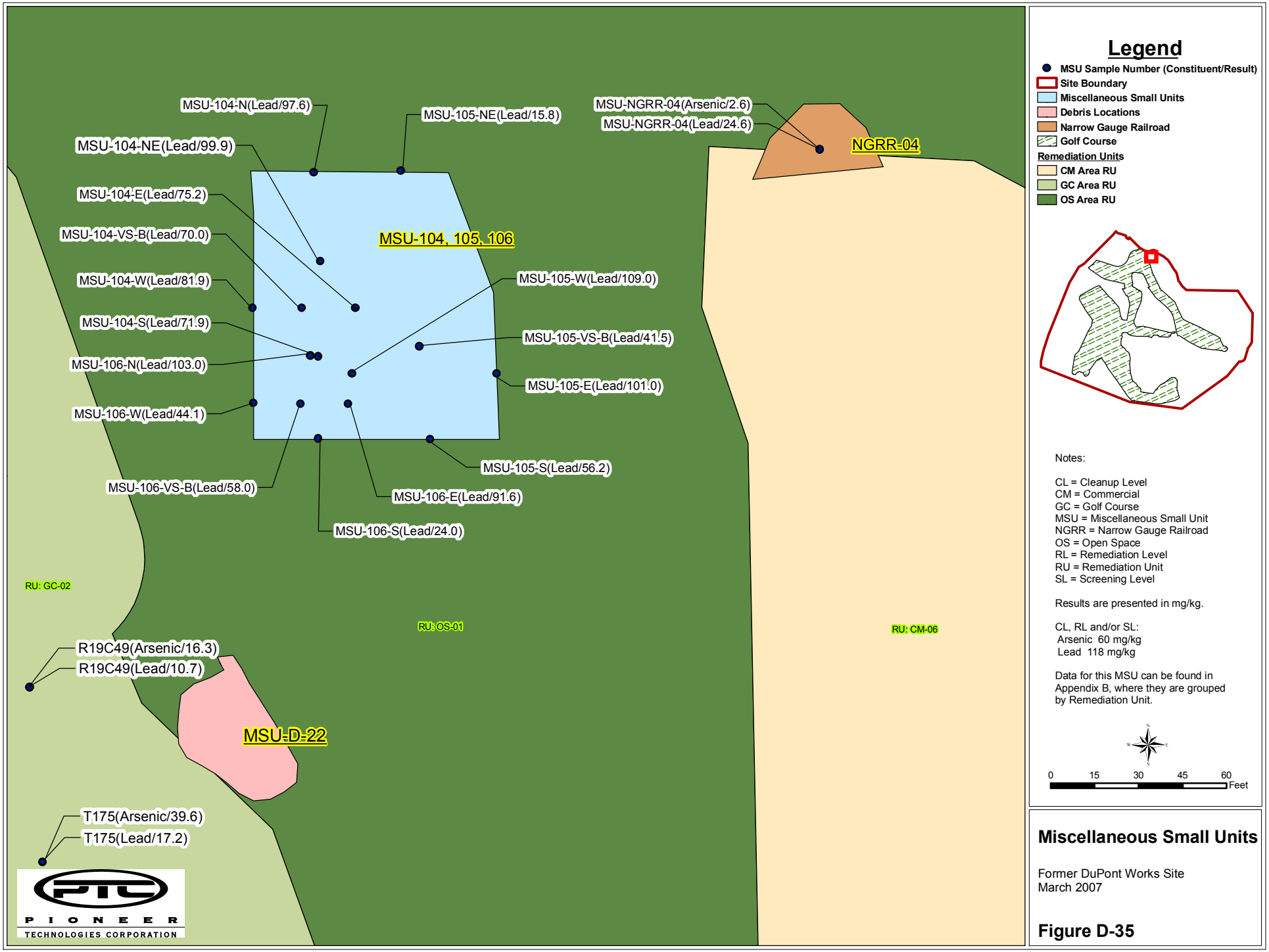
Figure D-33



Miscellaneous Small Units

Former DuPont Works Site
March 2007

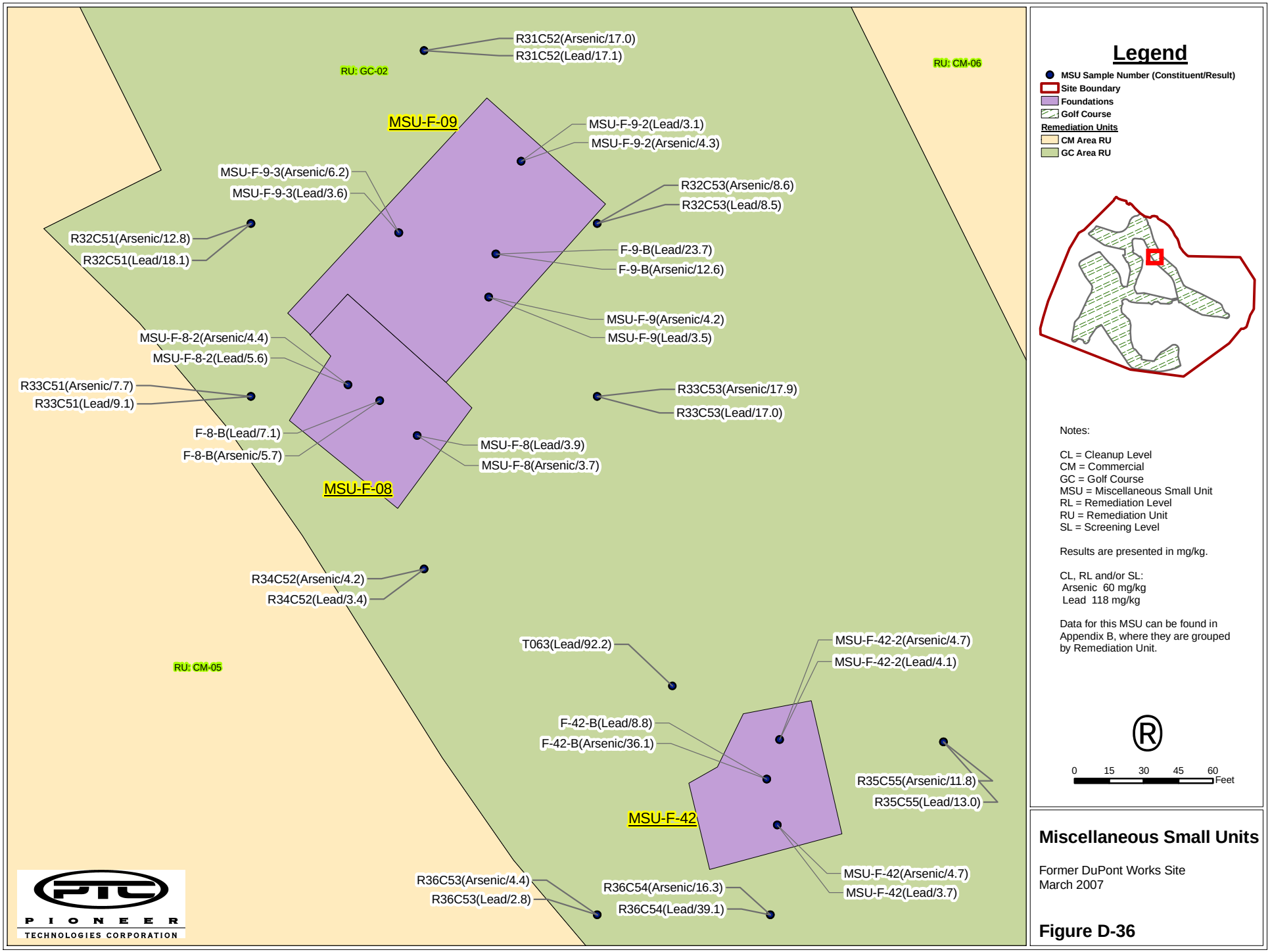
Figure D-34



Miscellaneous Small Units

Former DuPont Works Site
March 2007

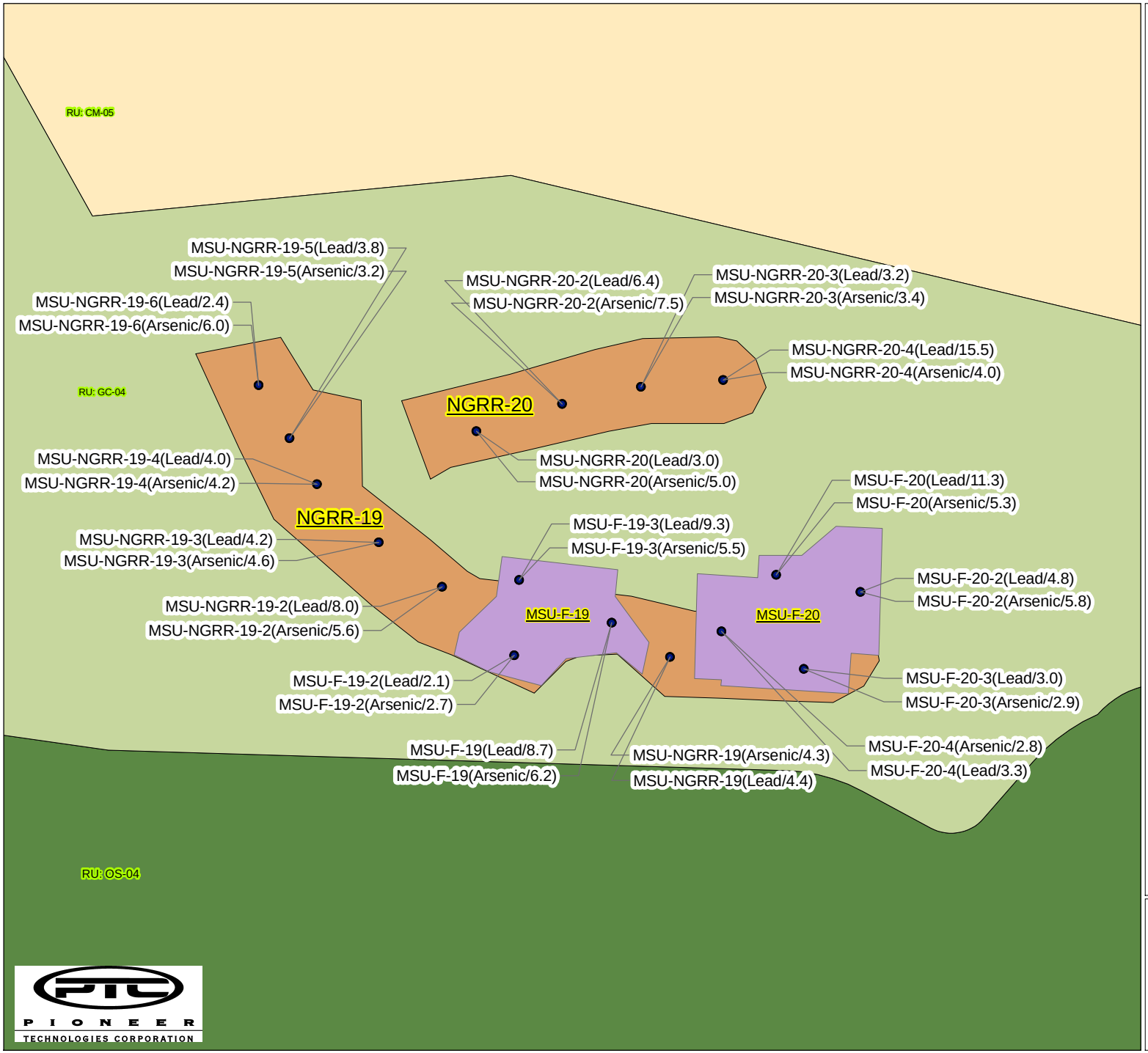
Figure D-35



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-36

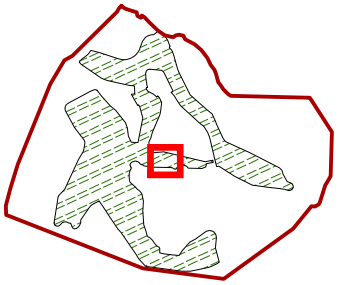


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- OS Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Rail Road
OS = Open Space
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 10 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

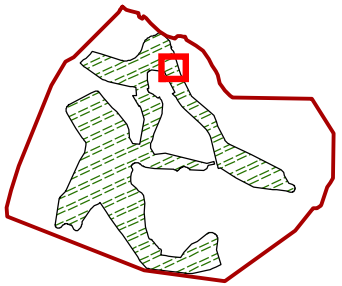
Figure D-37

Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- OS Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
OS = Open Space
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

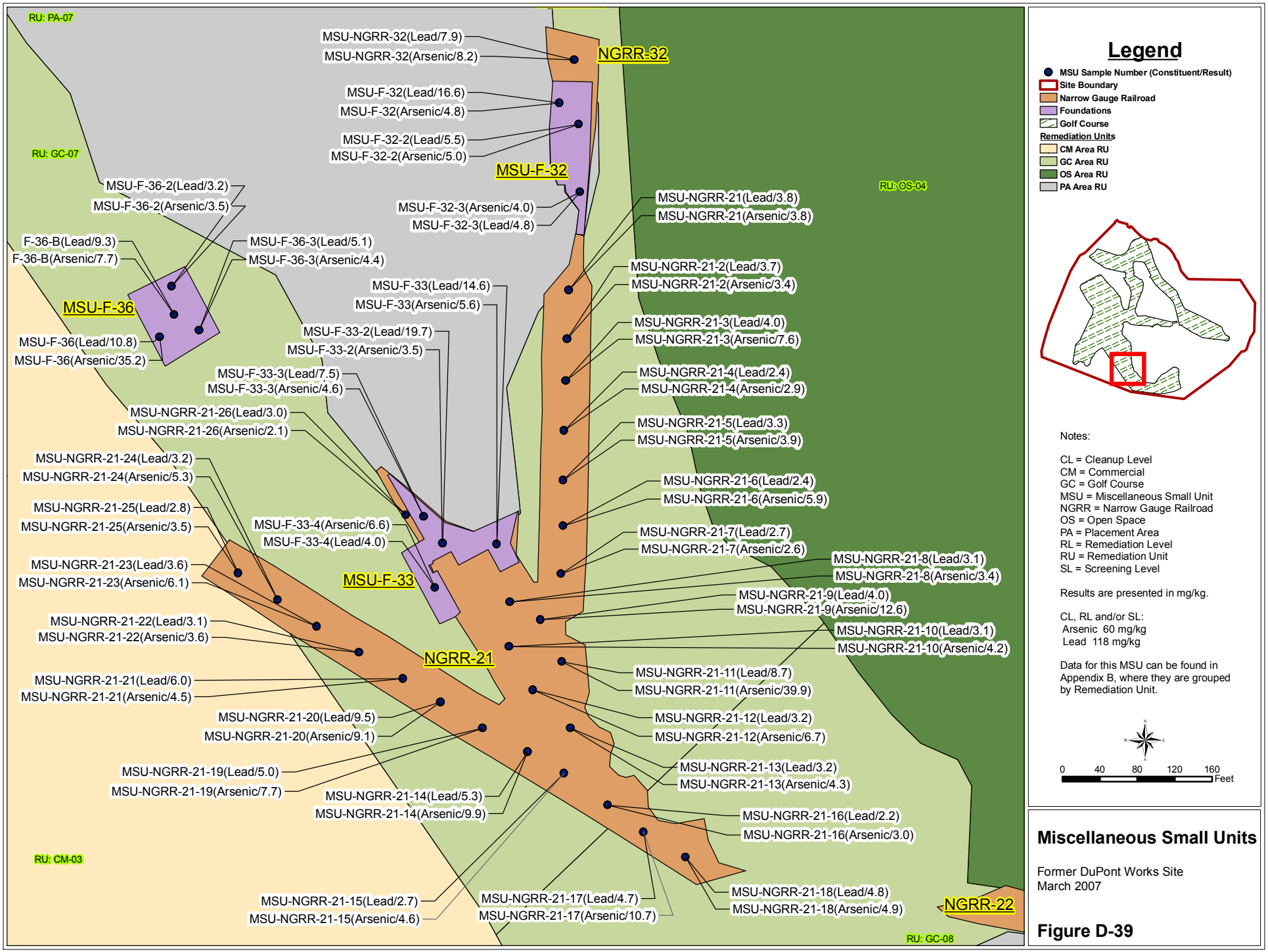
0 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

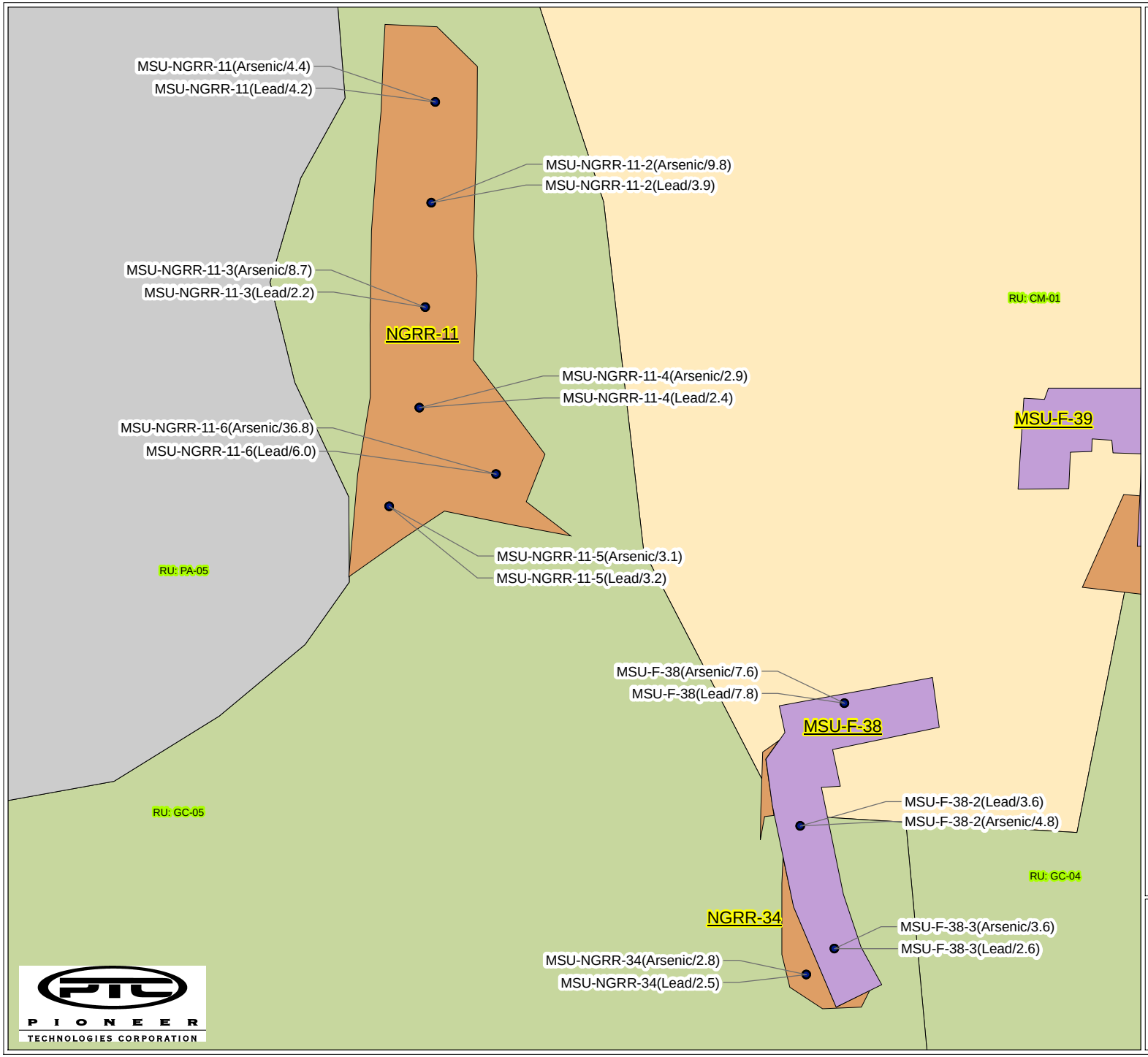
Figure D-38



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-39

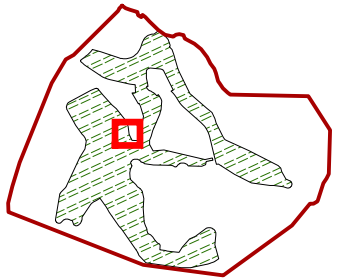


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
IN = Industrial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

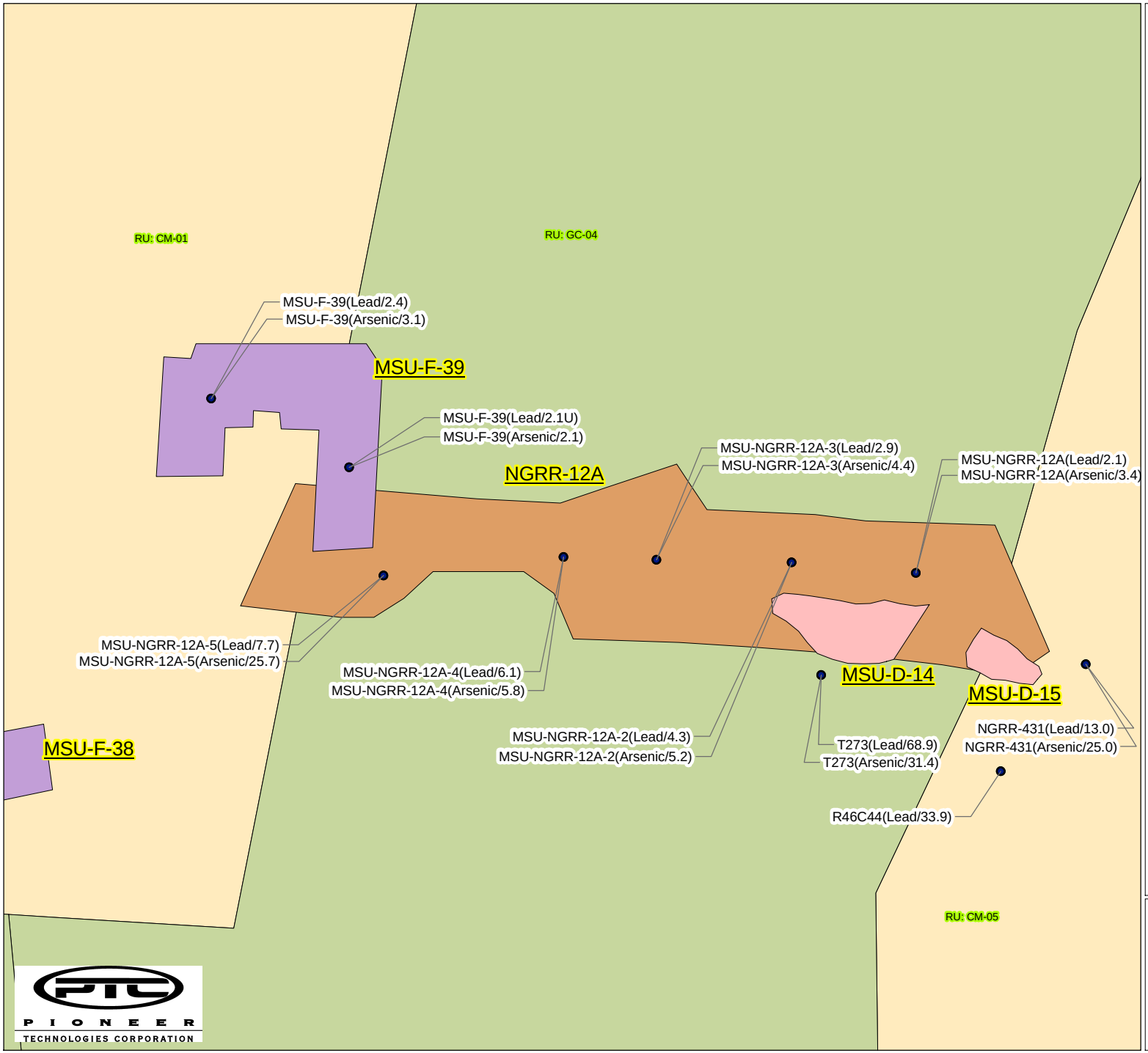
0 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-40

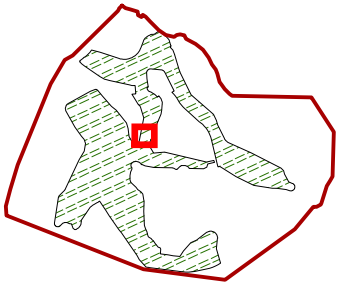


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Debris Locations
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

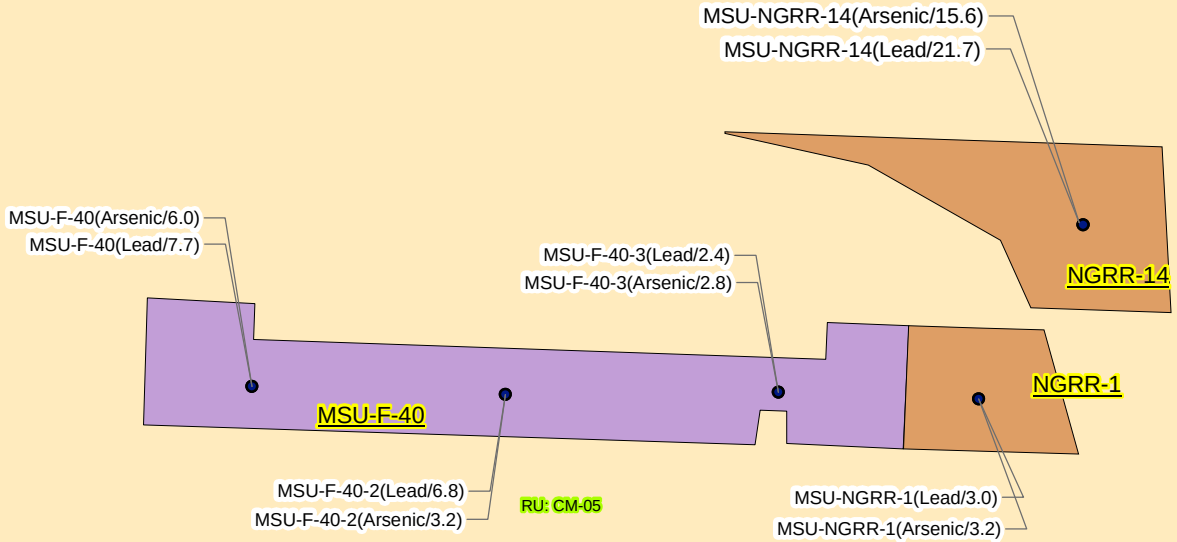
0 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-41

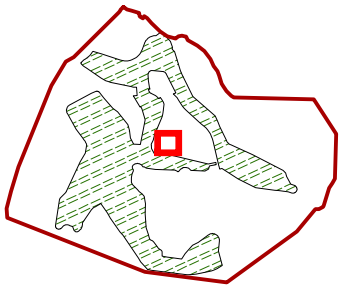


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

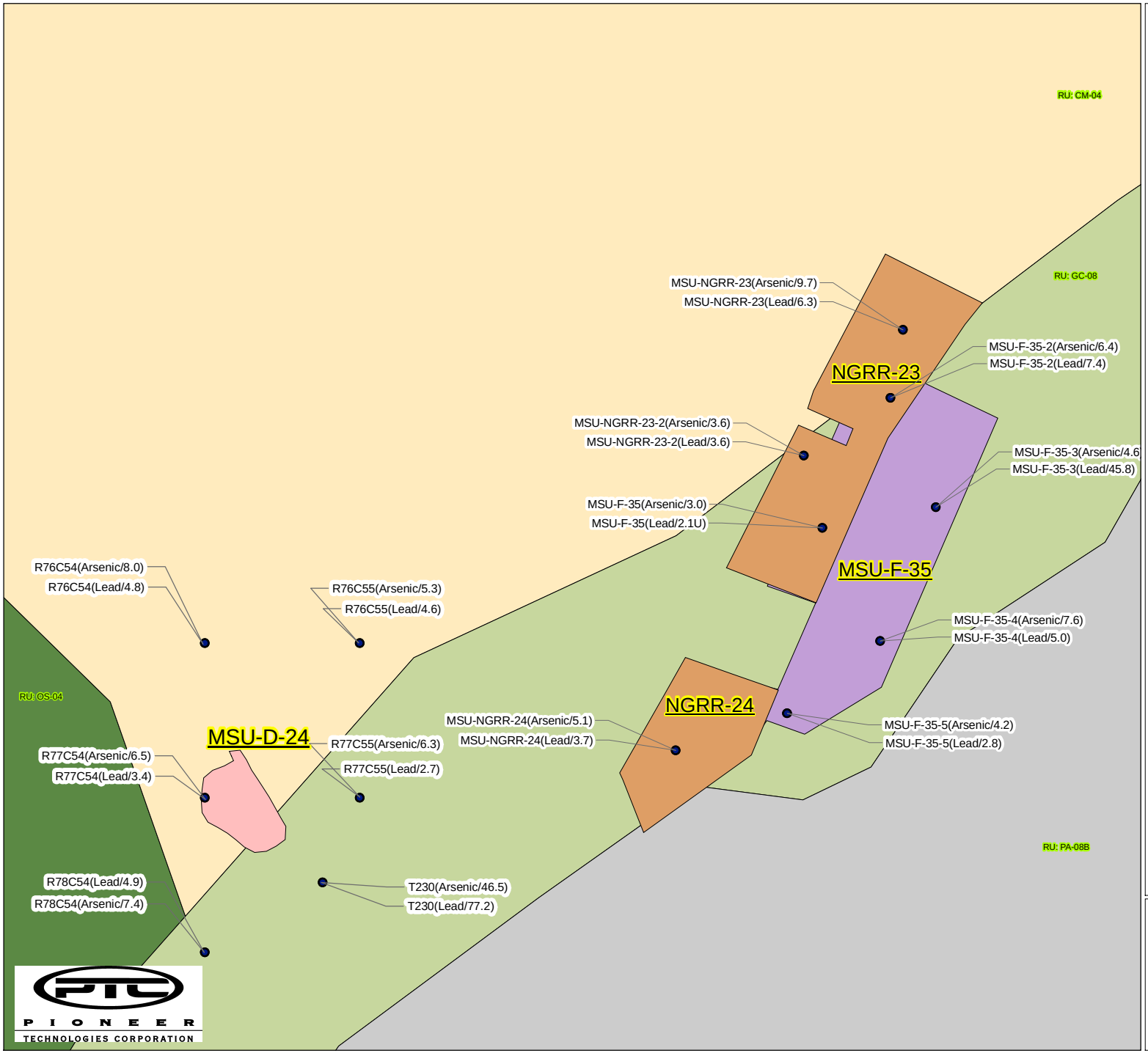
0 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-42

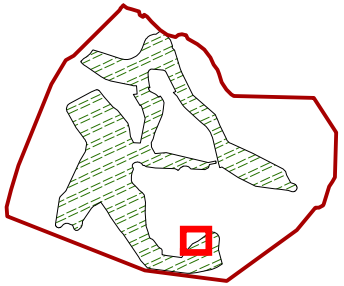


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Former Foundations
- Narrow Gauge Railroad
- Debris Locations
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- OS Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
OS = Open Space
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

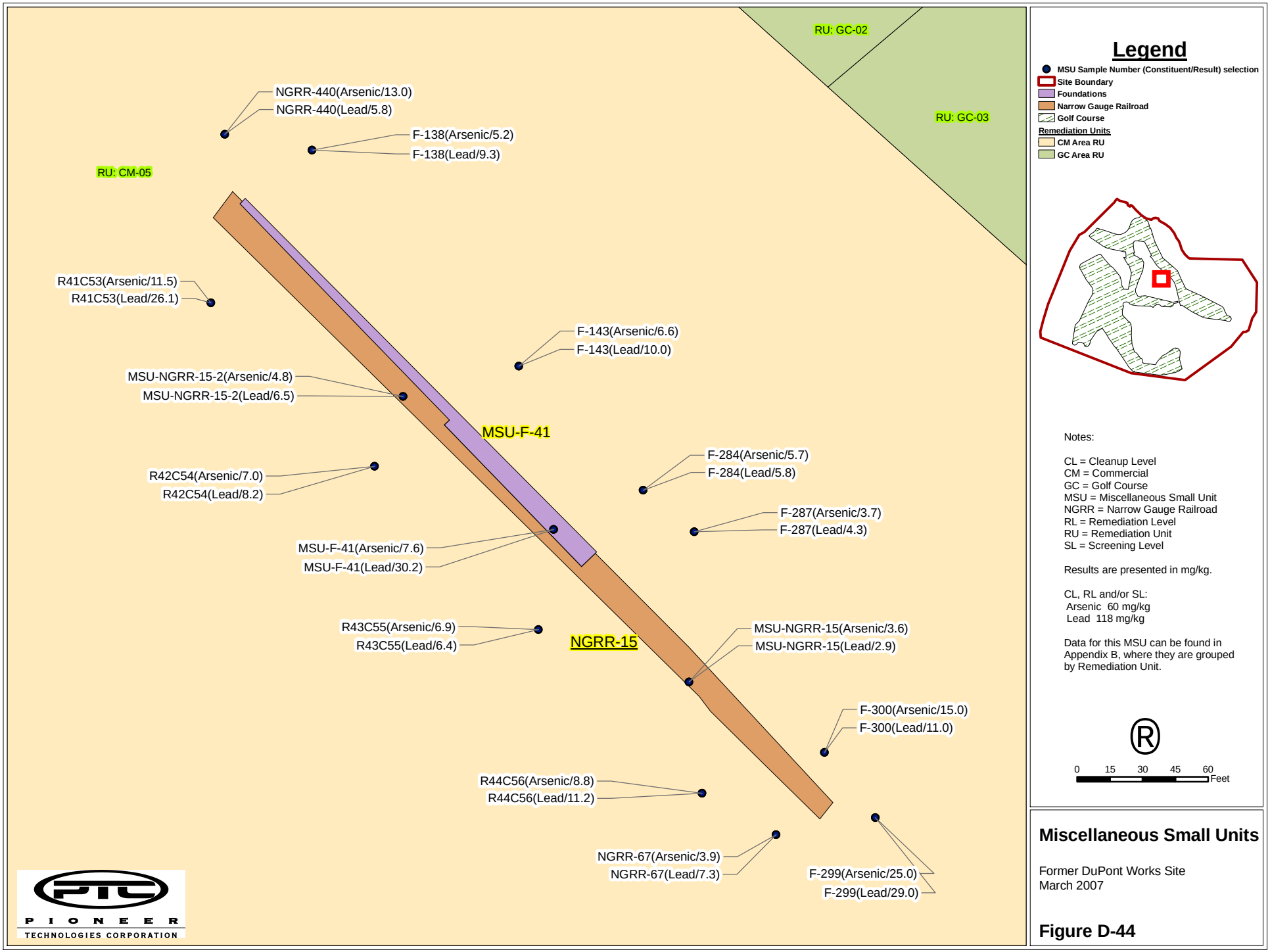
0 10 20 40 60 80 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-43



Legend

- MSU Sample Number (Constituent/Result) selection
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

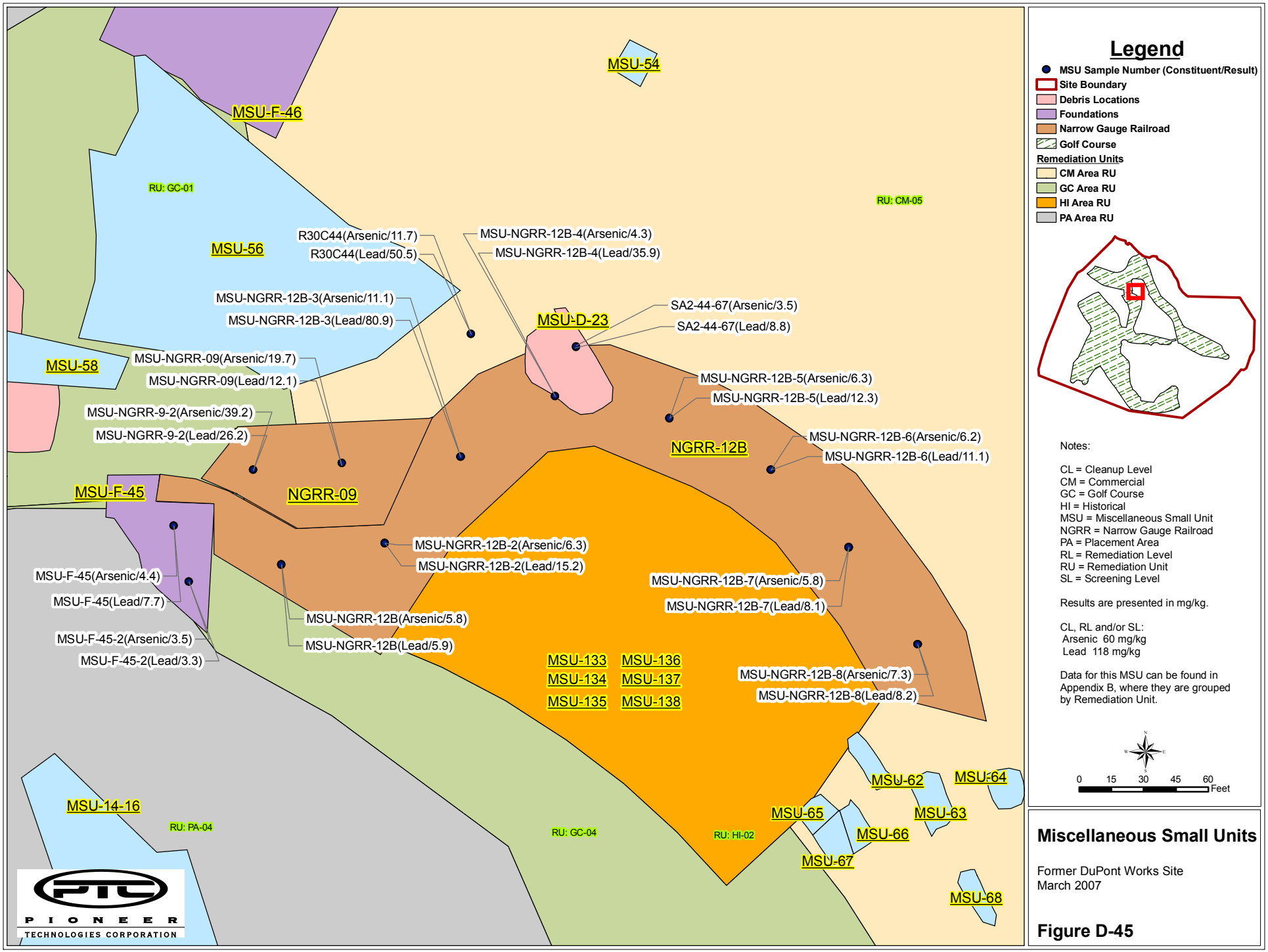
0 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-44



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Debris Locations
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- HI Area RU
- PA Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
HI = Historical
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

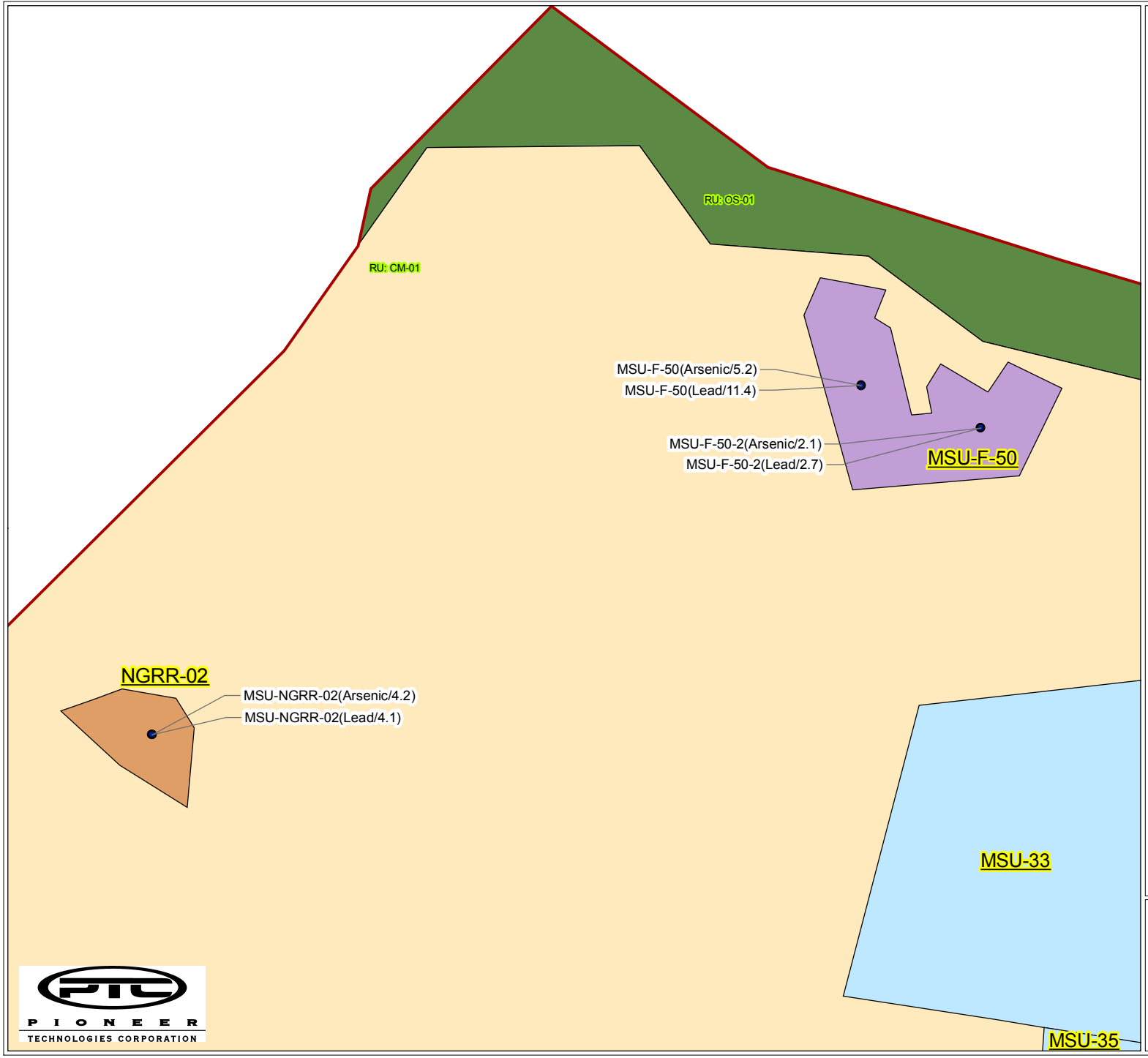
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 15 30 45 60 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-45

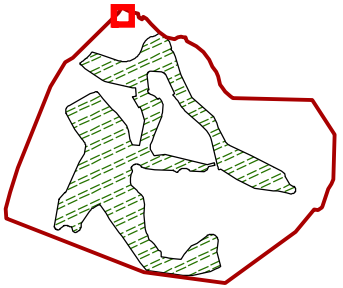


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- OS Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
OS = Open Space
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

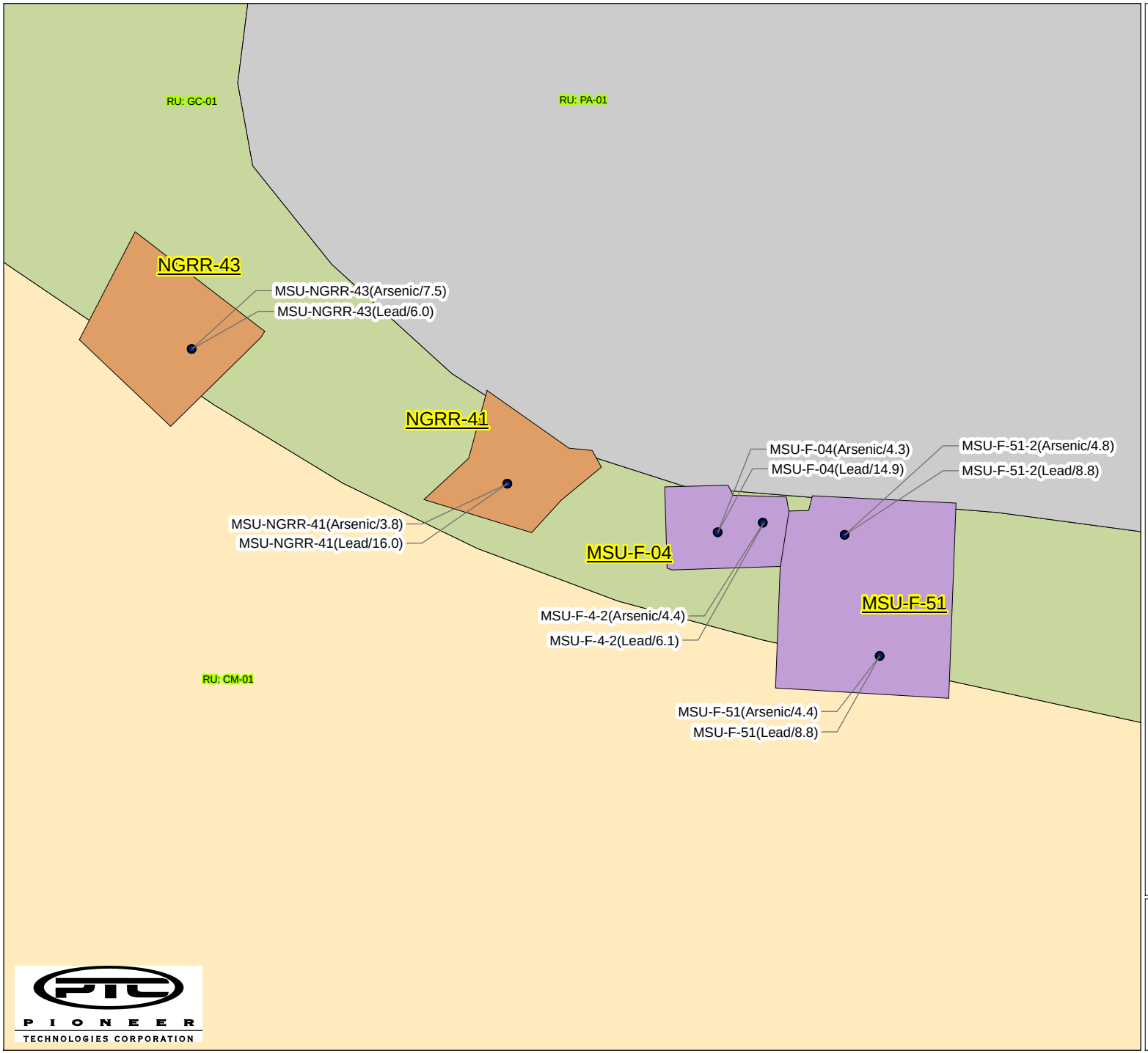
0 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-46

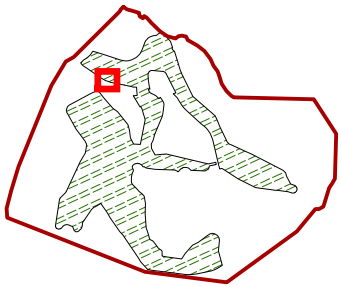


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

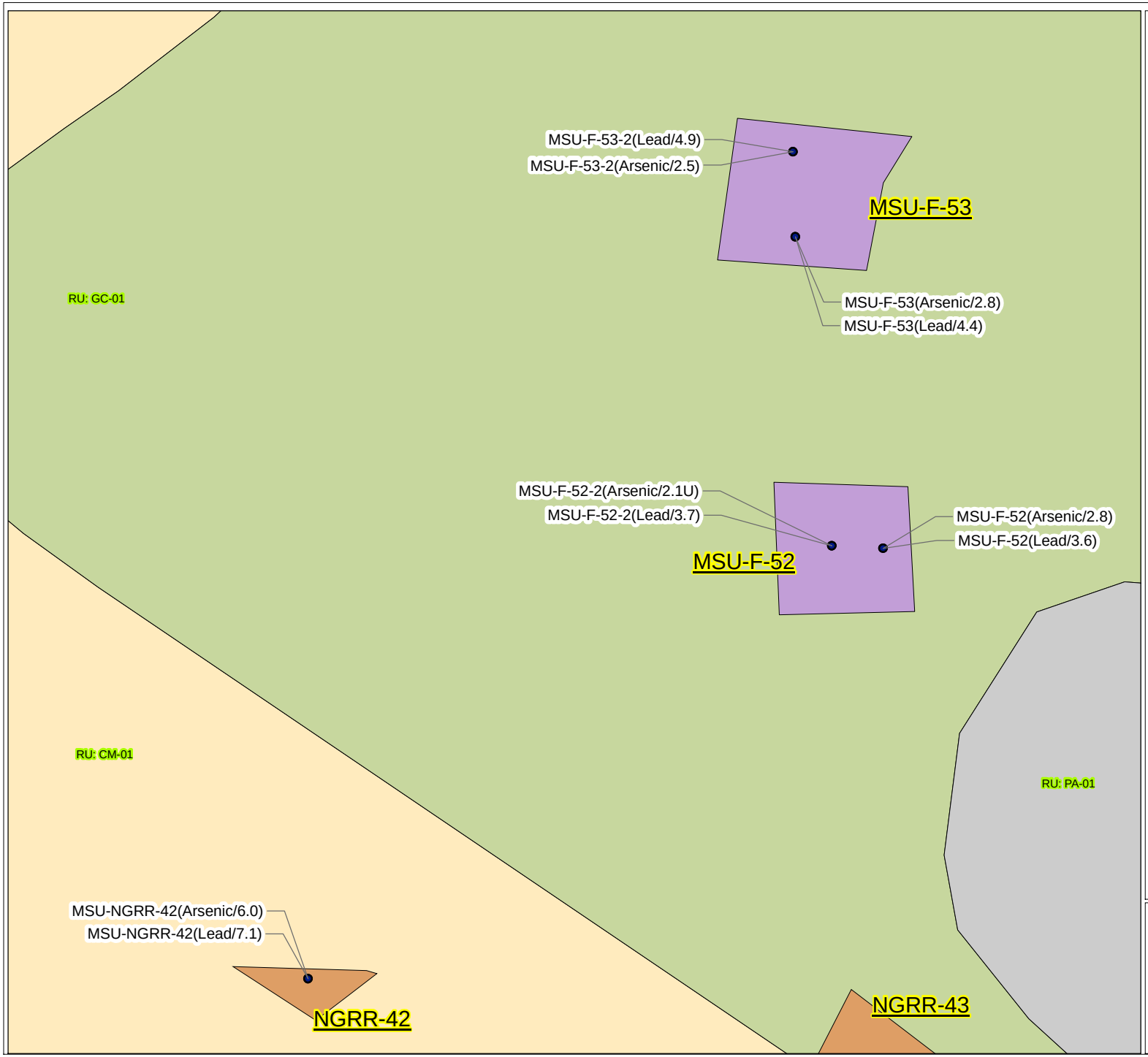
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-47

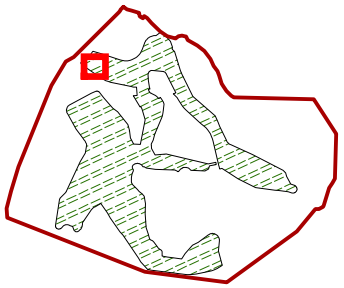


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

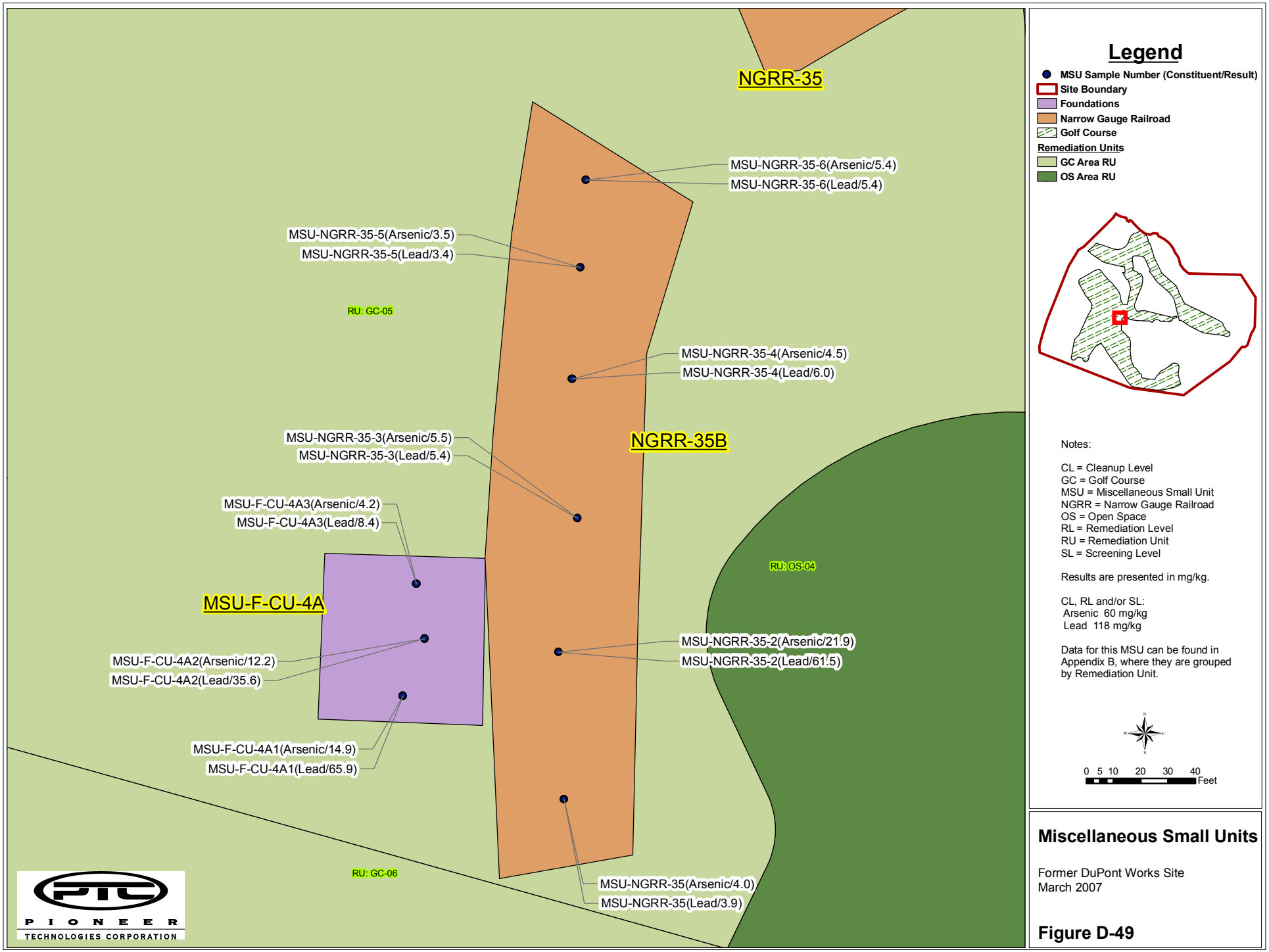
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 15 30 45 60 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

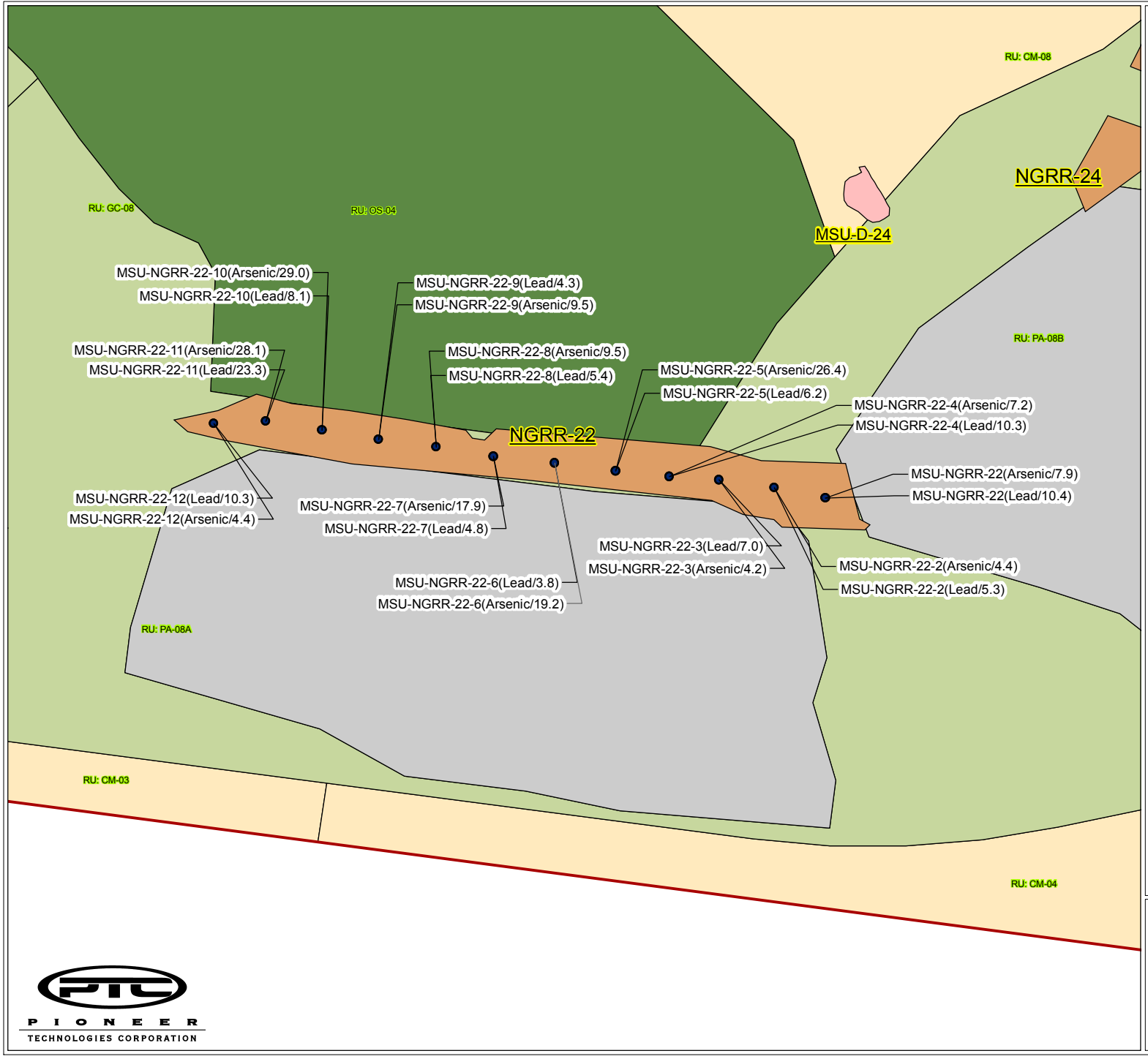
Figure D-48



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-49

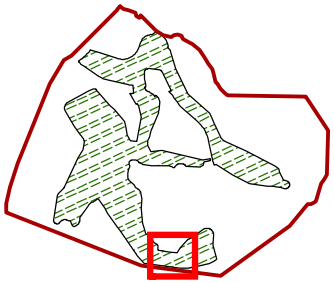


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Debris Locations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- OS Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
OS = Open Space
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

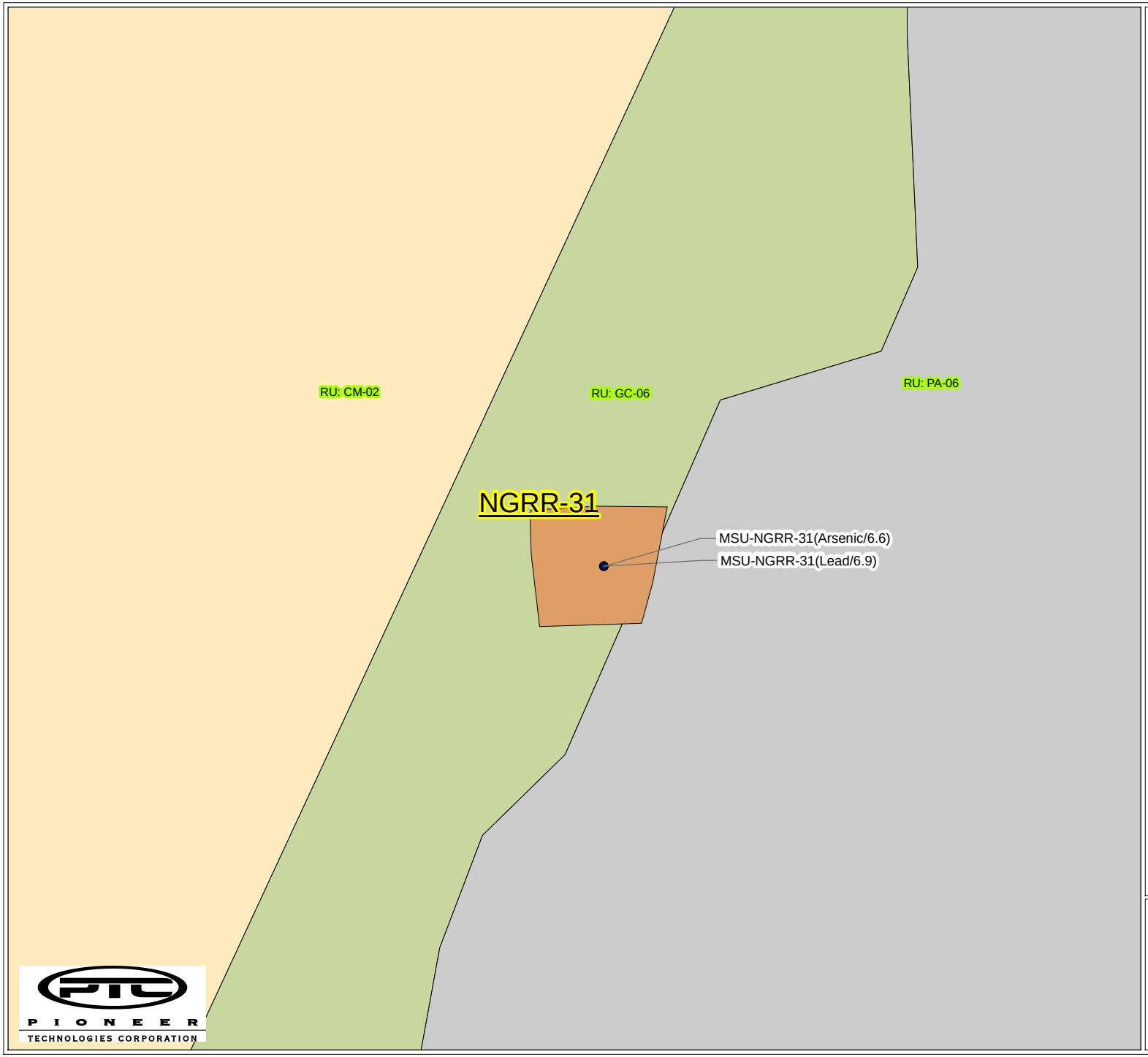
0 30 60 90 120 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-50

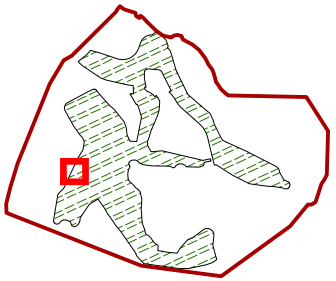


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

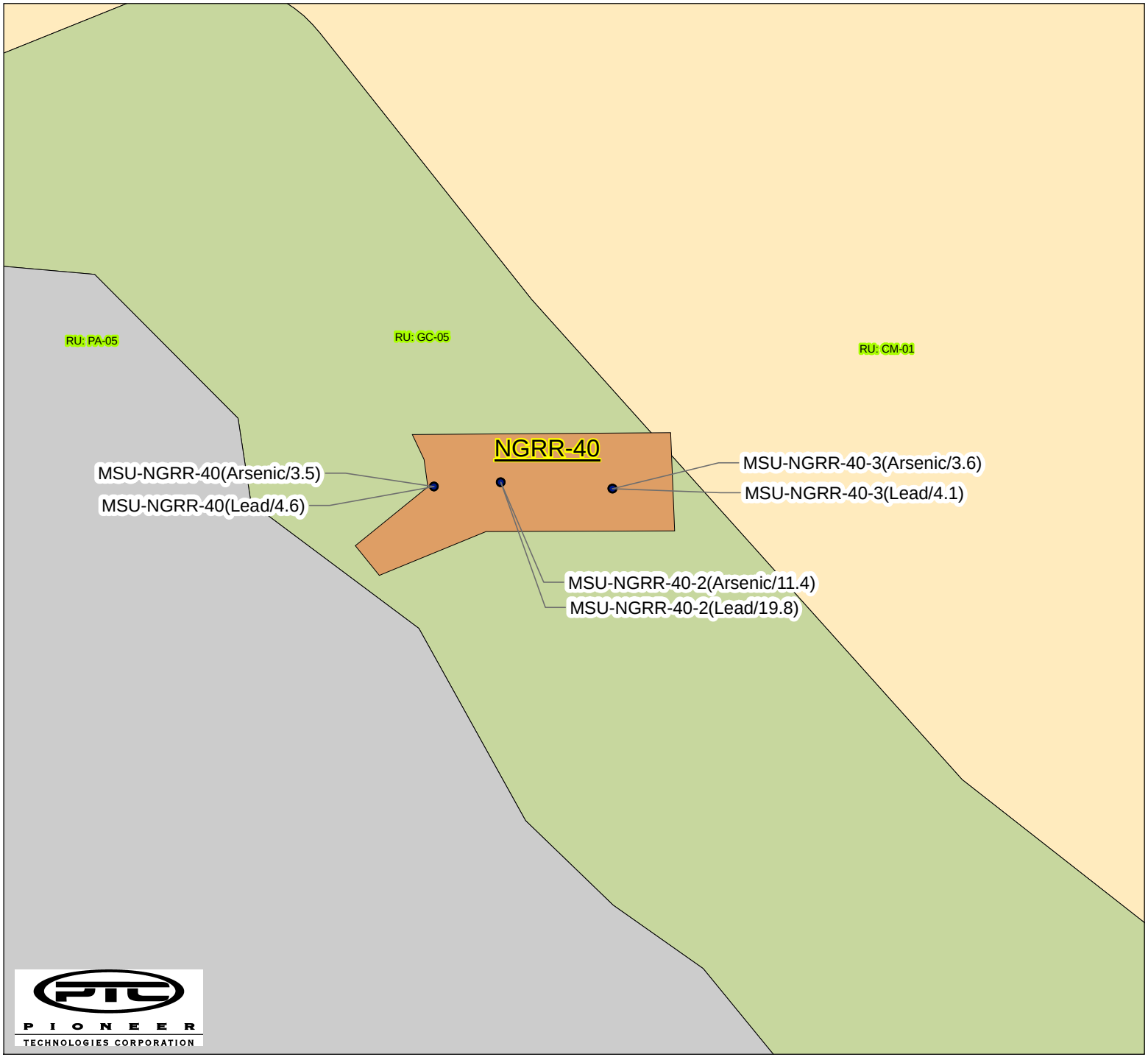
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-51

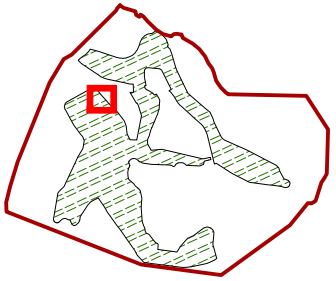


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

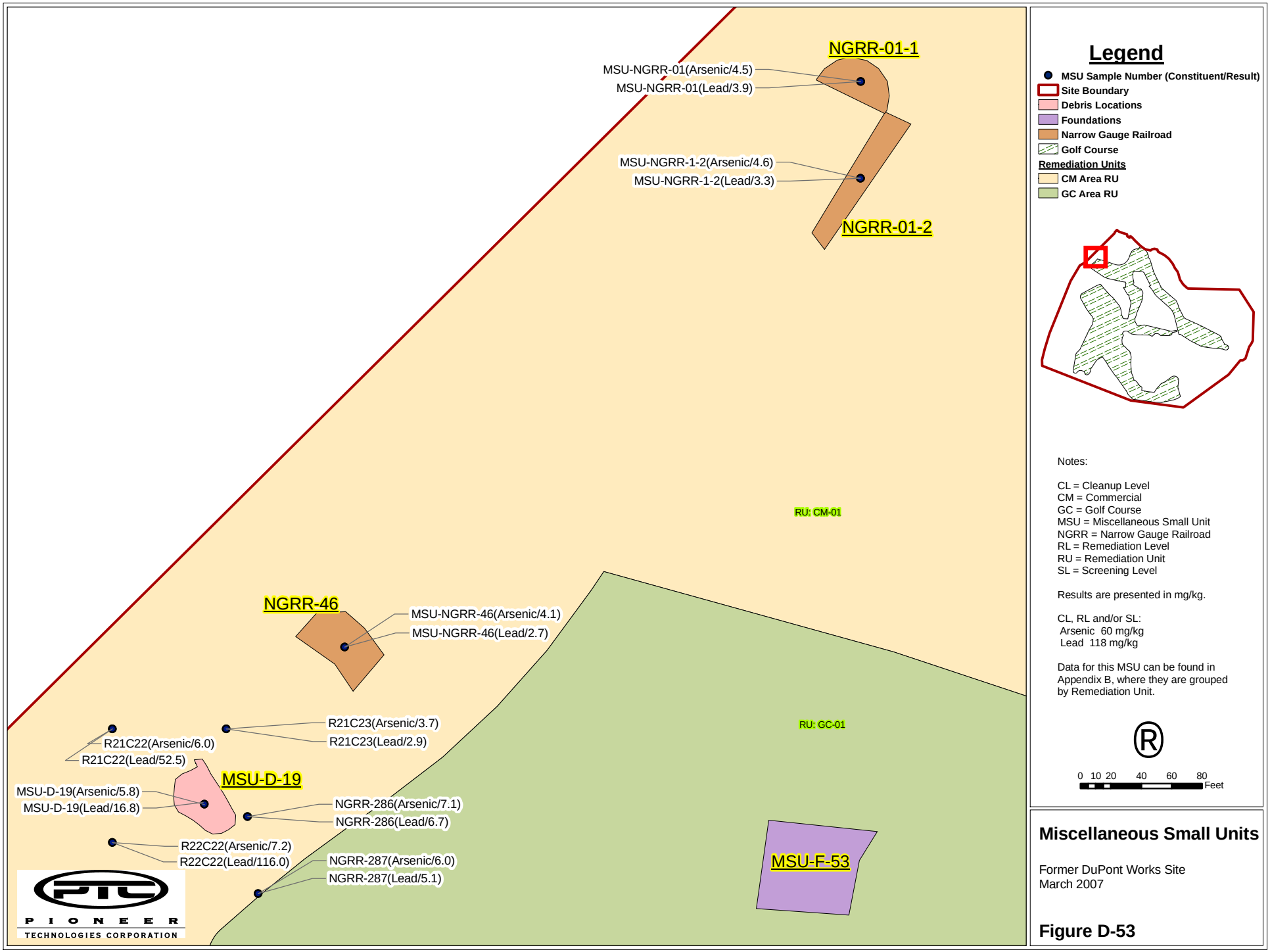
0 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-52



Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Debris Locations
- Foundations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU

Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

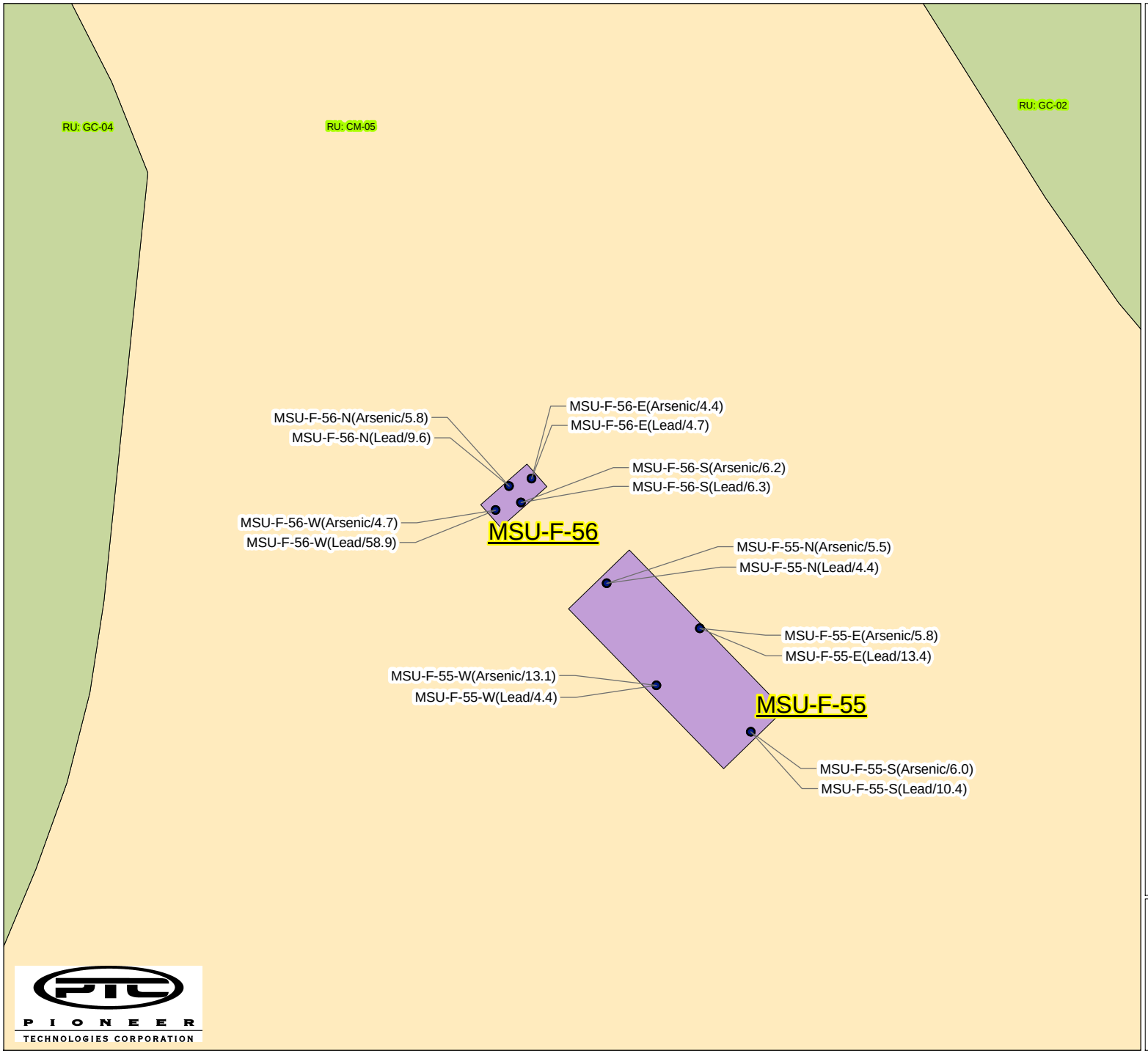
®

0 10 20 40 60 80
Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-53

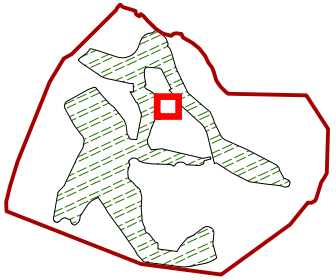


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

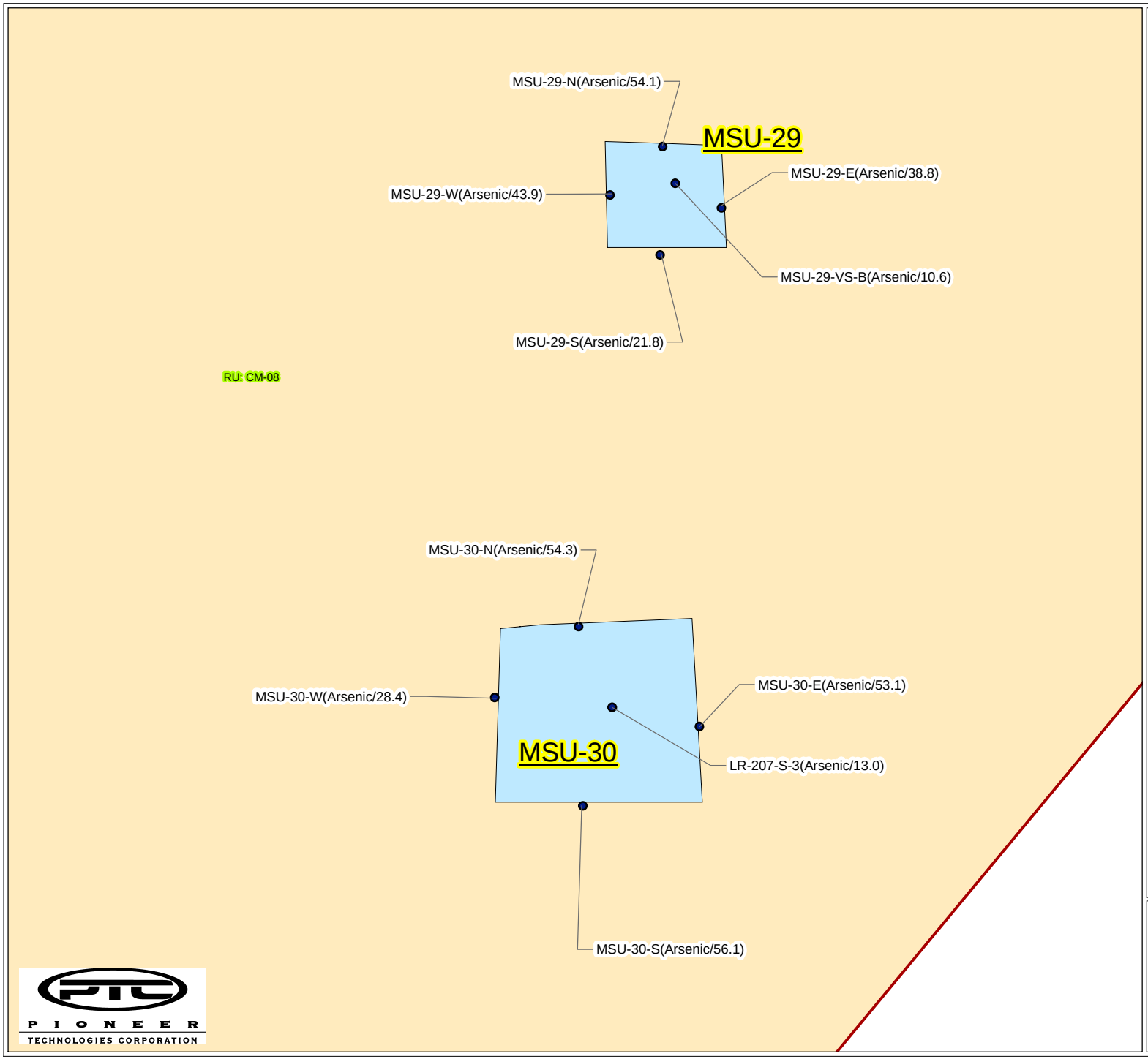
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-54

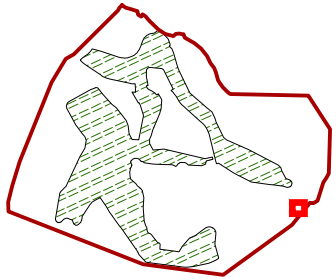


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- CM Area RU



Notes:

CL = Cleanup Level
CM = Commercial
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

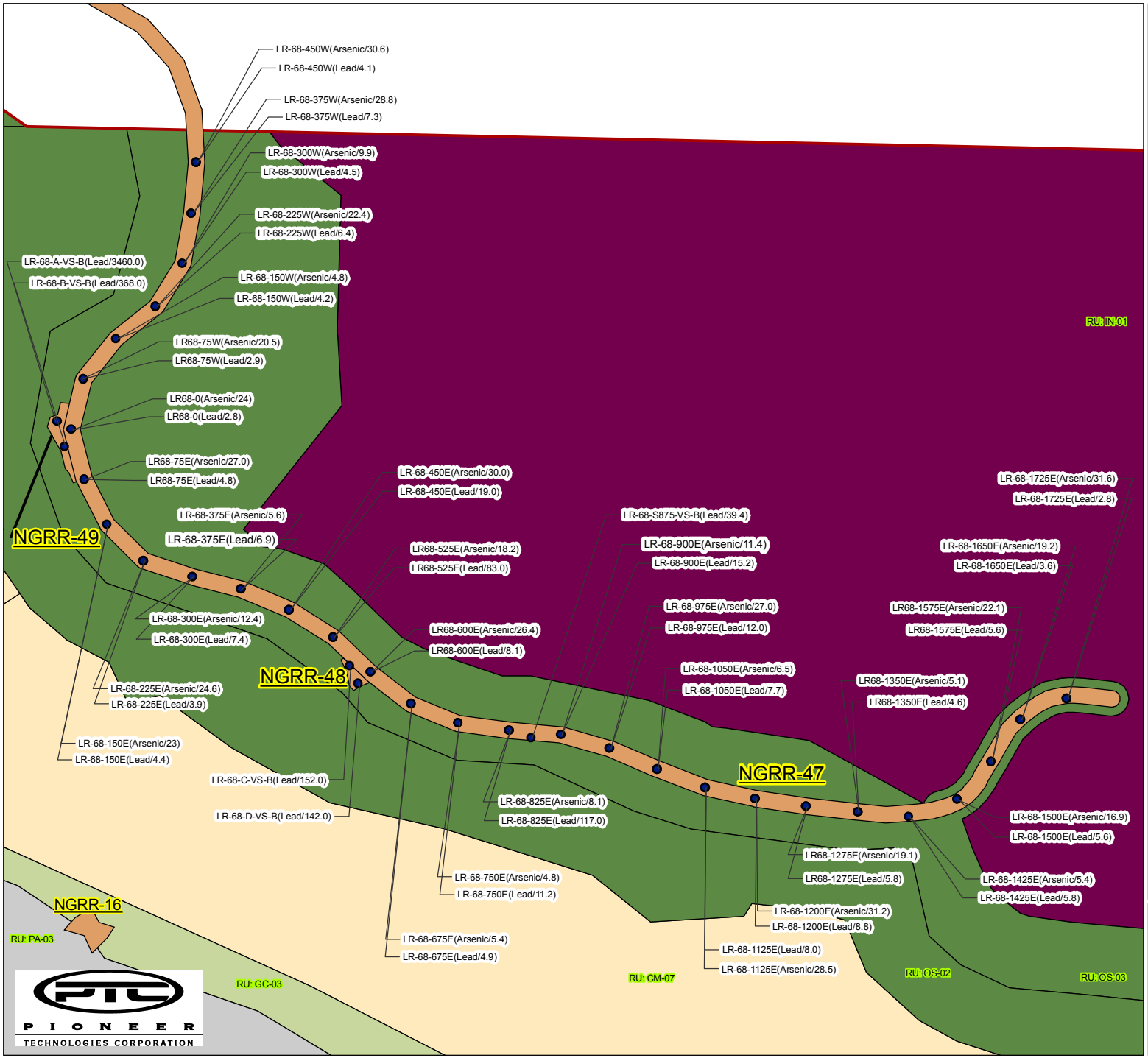
0 10 20 30 40 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-55

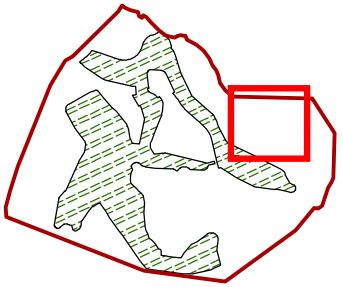


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU
- IN Area RU
- OS Area RU
- PA Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
IN = Industrial
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
OS = Open Space
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 32 mg/kg
Lead 118 mg/kg

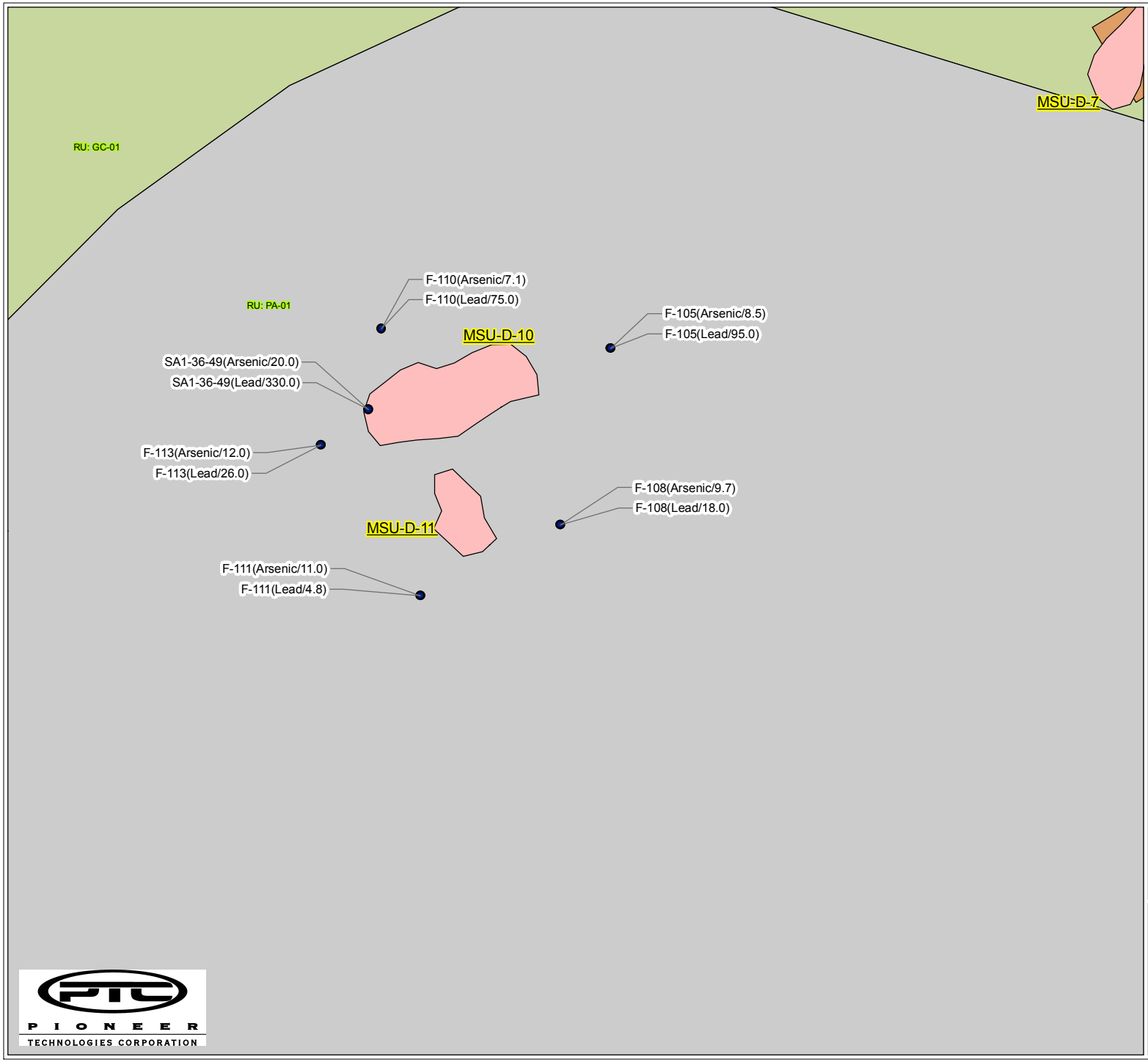
Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

0 50 100 150 200 Feet

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-56

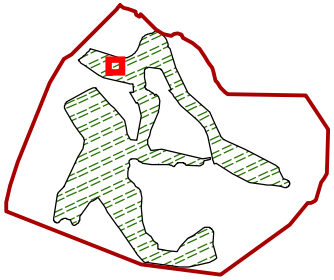


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Debris Locations
- Narrow Gauge Railroad
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU



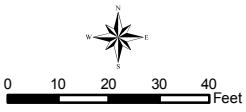
Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 530 mg/kg
Lead 4,100 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

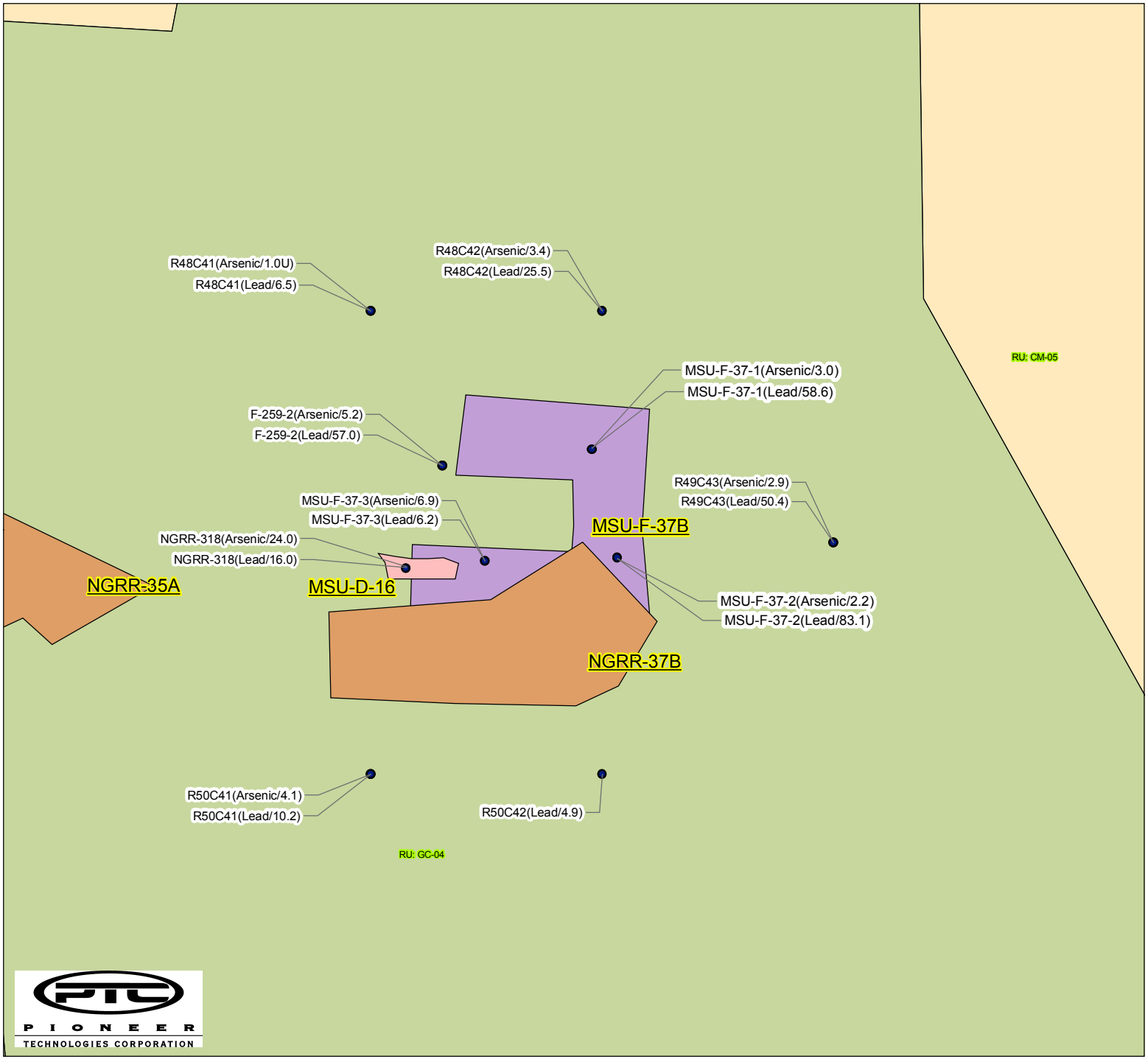


PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-57

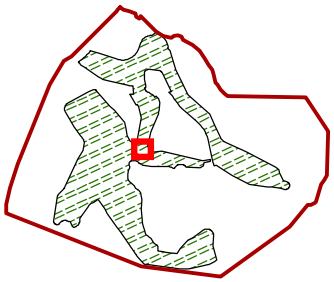


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Foundations
- Narrow Gauge Railroad
- Debris Locations
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level
U = Nondetect (Constituent was not detected above the reporting limit.)

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

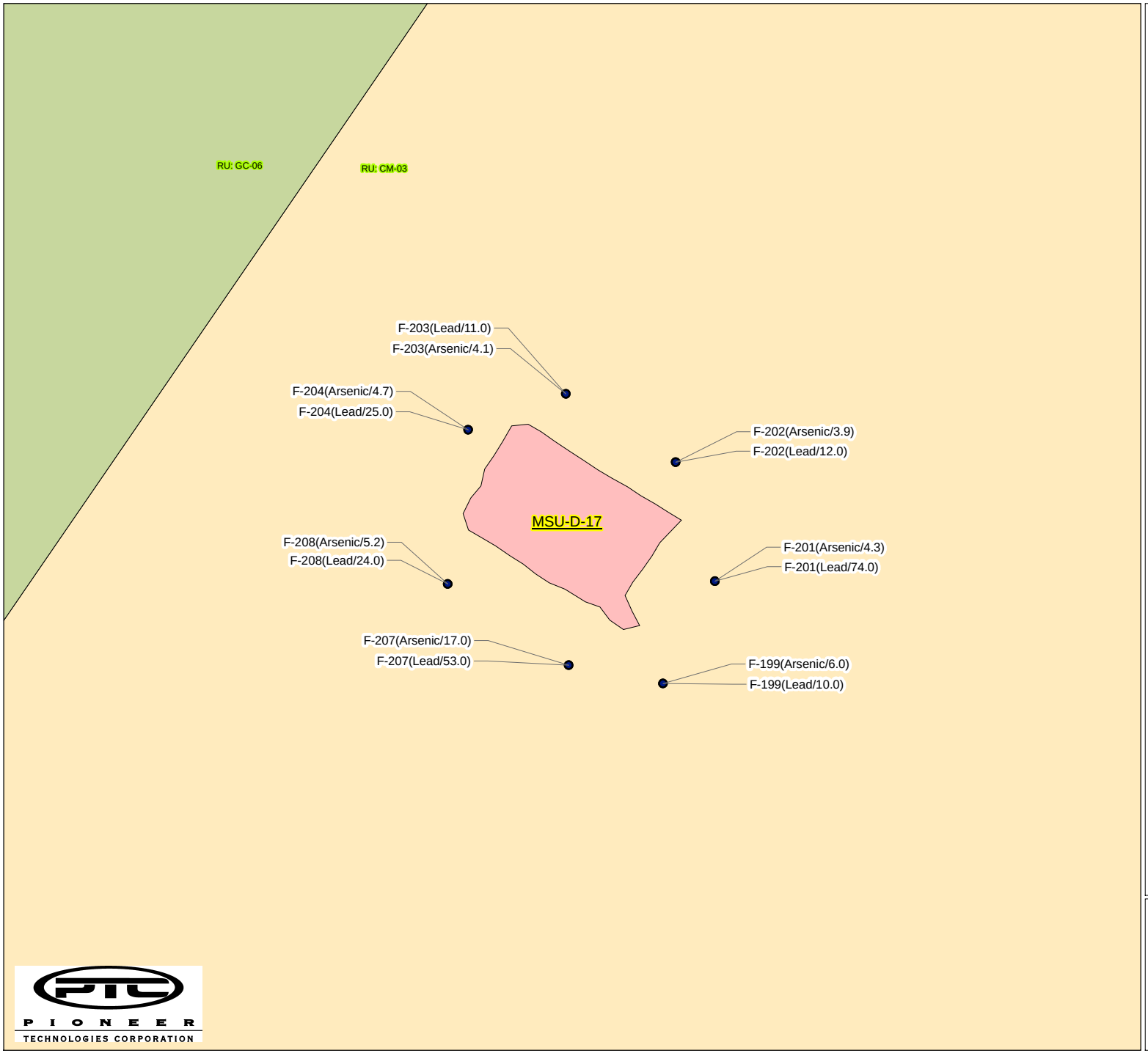
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-58

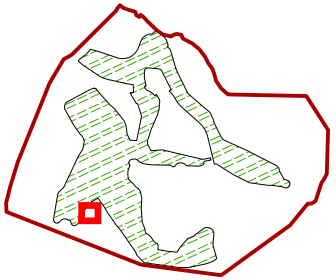


Legend

- MSU Sample Number (Constituent/Result)
- Site Boundary
- Debris Locations
- Golf Course

Remediation Units

- CM Area RU
- GC Area RU



Notes:

CL = Cleanup Level
CM = Commercial
GC = Golf Course
MSU = Miscellaneous Small Unit
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Arsenic 60 mg/kg
Lead 118 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

®

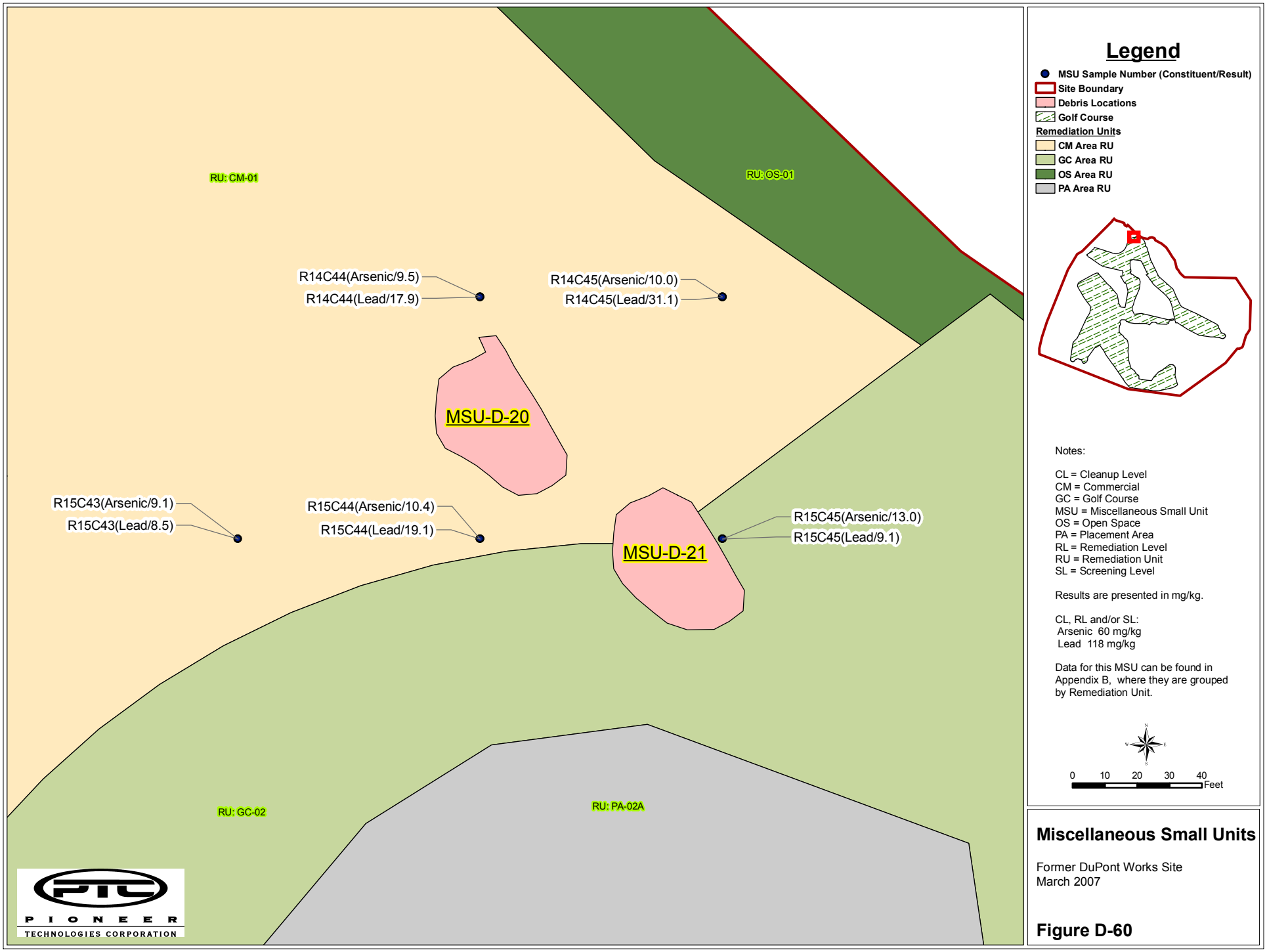
0 7.5 15 30 45 60 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

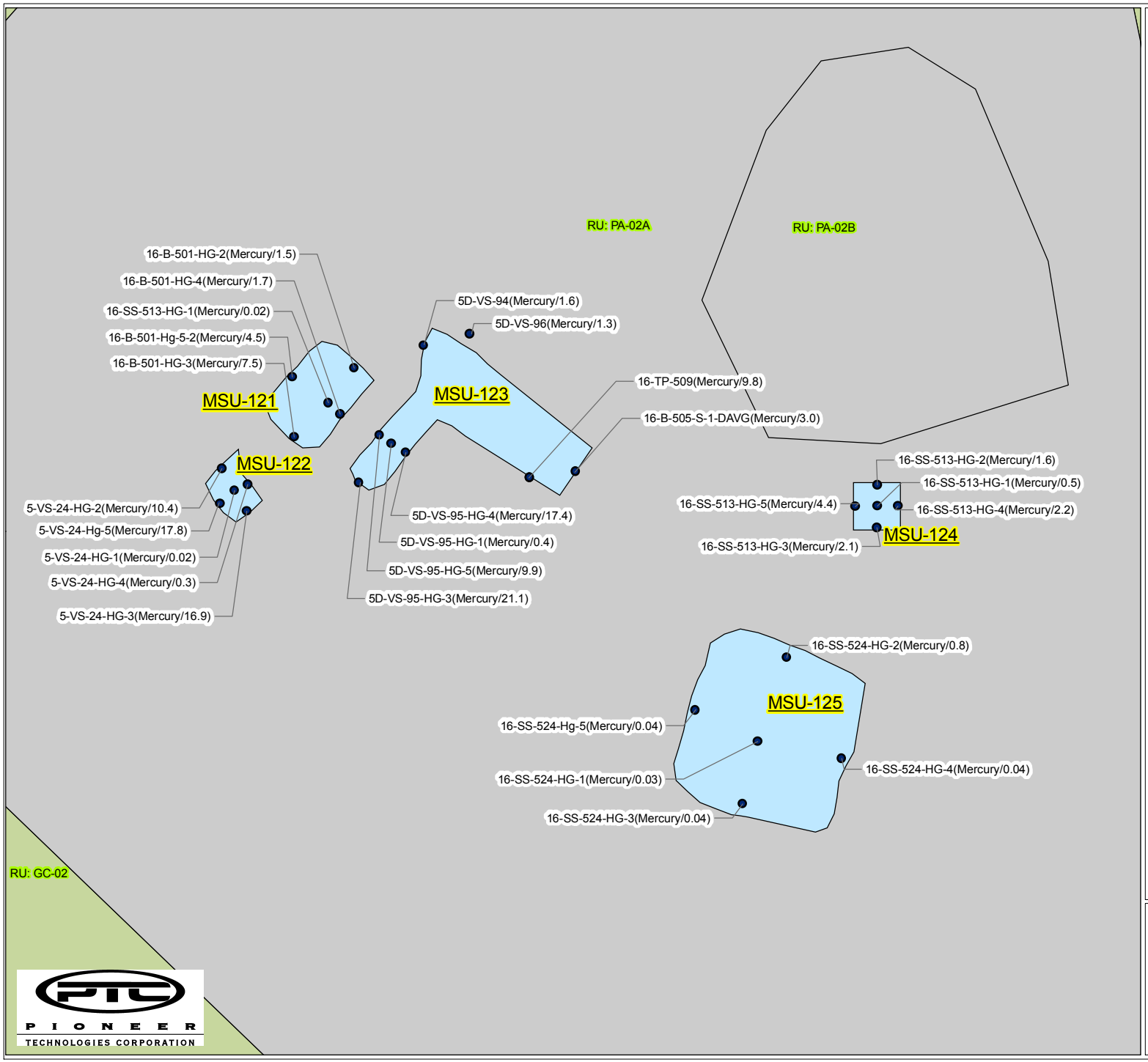
Figure D-59



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-60

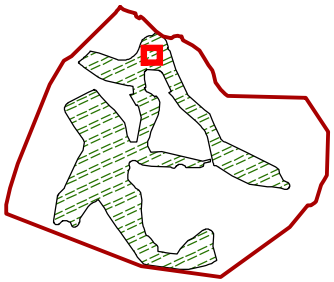


Legend

- MSU Sample Number(Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Mercury 24 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

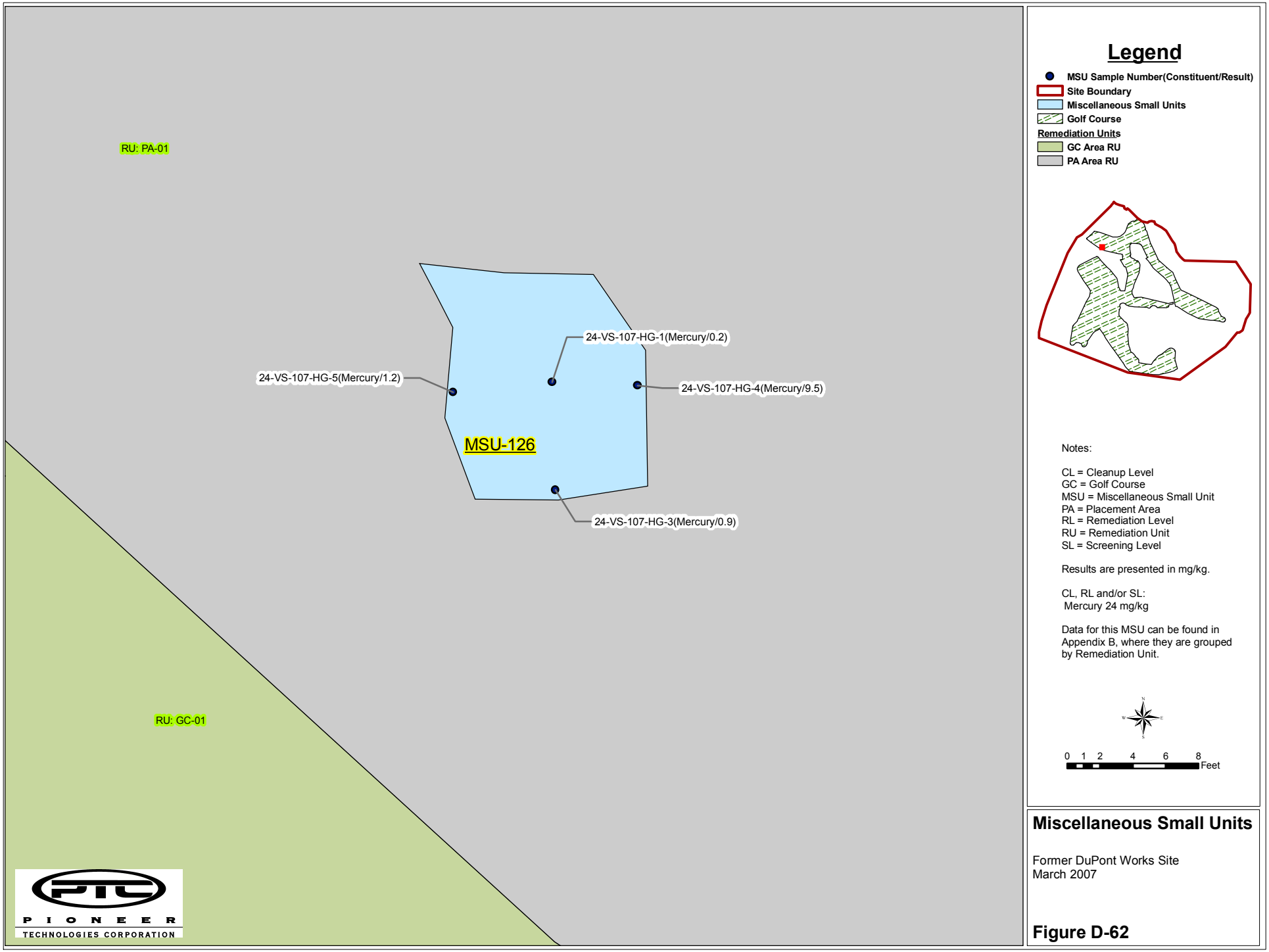
0 4.5 9 18 27 36 Feet

PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

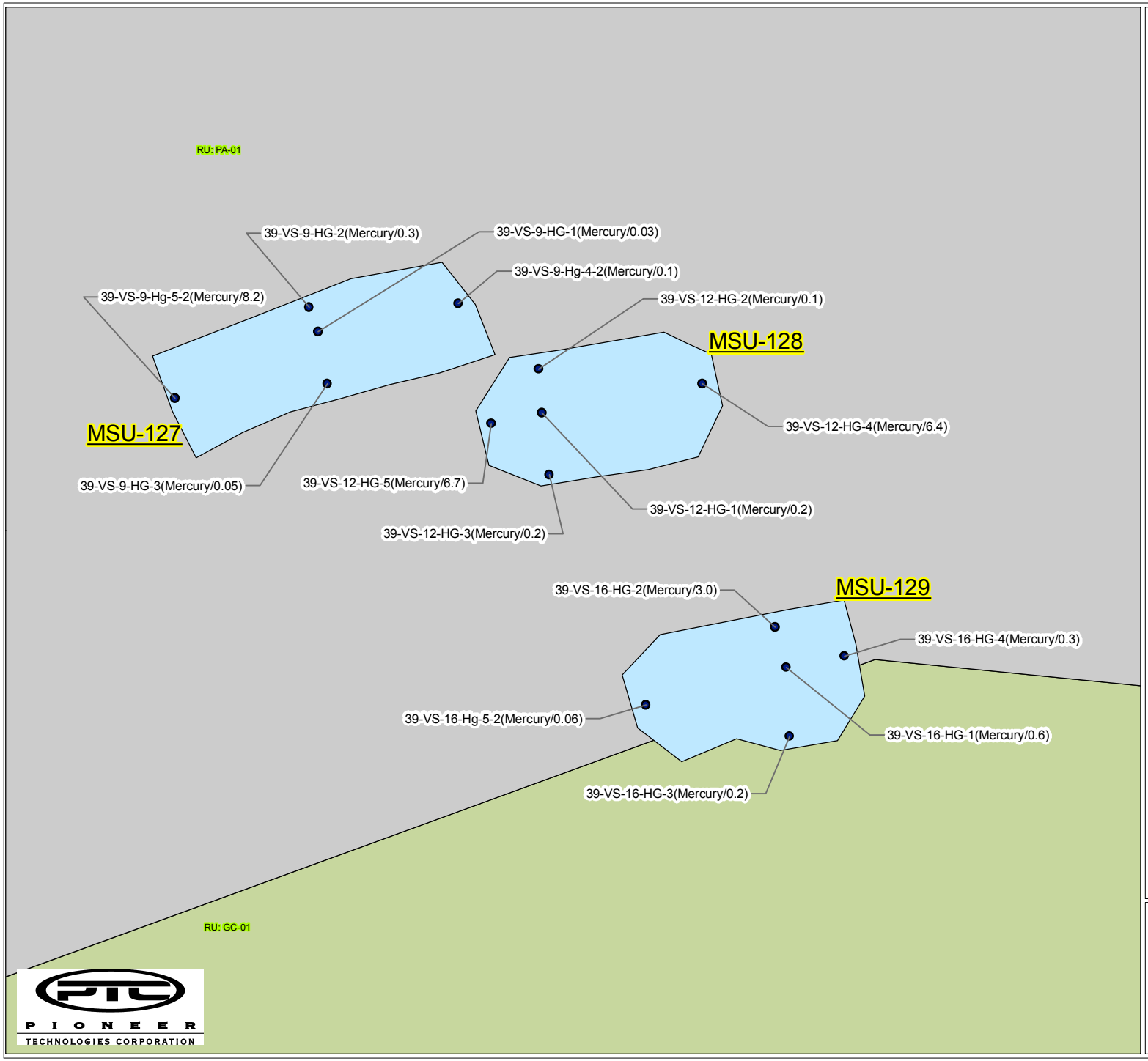
Figure D-61



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-62

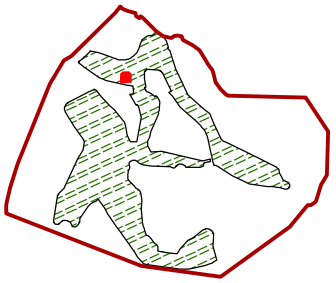


Legend

- MSU Sample Number(Constituent/Result)
- Site Boundary
- Miscellaneous Small Units
- Golf Course

Remediation Units

- GC Area RU
- PA Area RU



Notes:

CL = Cleanup Level
GC = Golf Course
MSU = Miscellaneous Small Unit
PA = Placement Area
RL = Remediation Level
RU = Remediation Unit
SL = Screening Level

Results are presented in mg/kg.

CL, RL and/or SL:
Mercury 24 mg/kg

Data for this MSU can be found in Appendix B, where they are grouped by Remediation Unit.

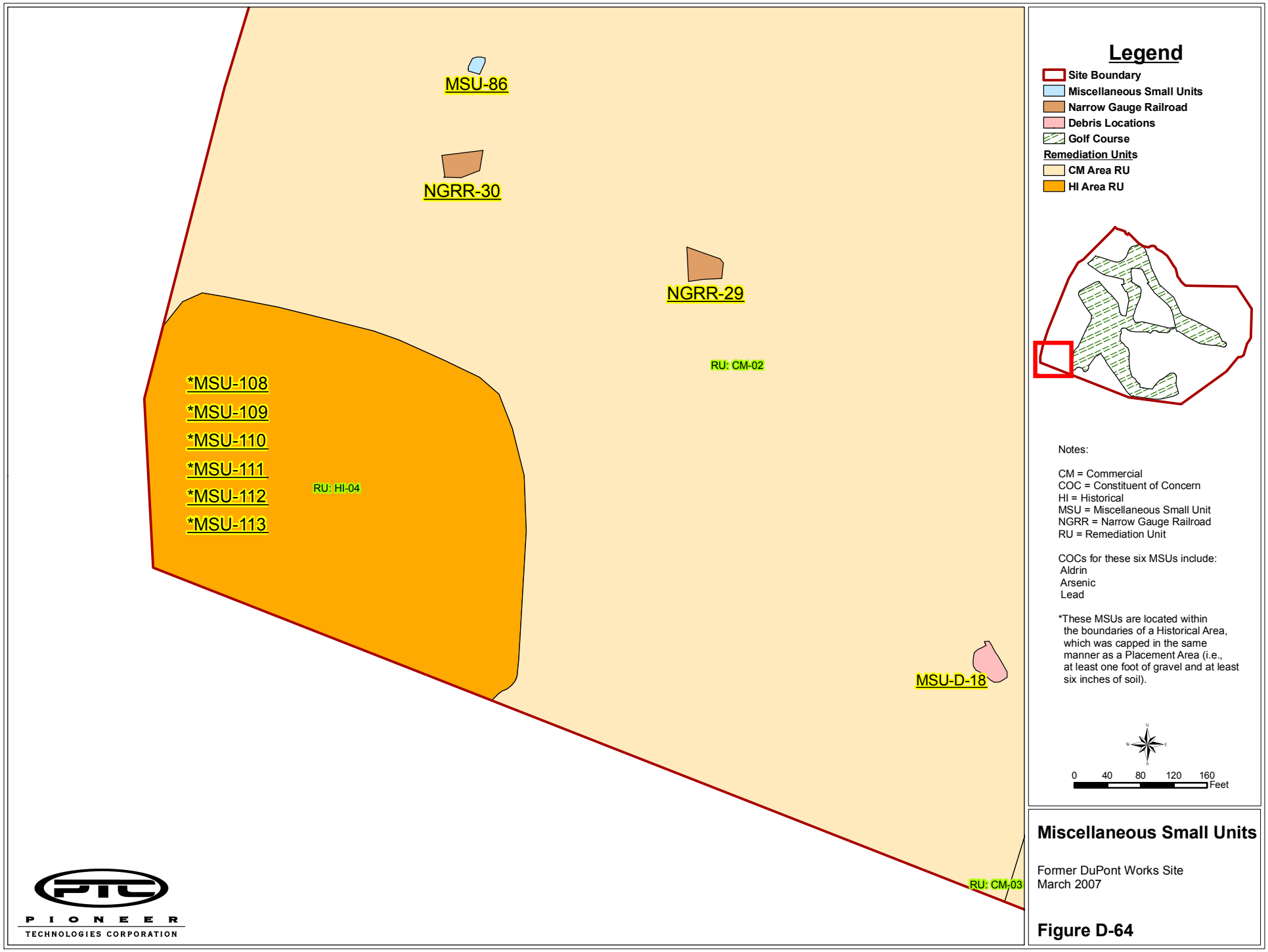
0 4 8 12 16 Feet

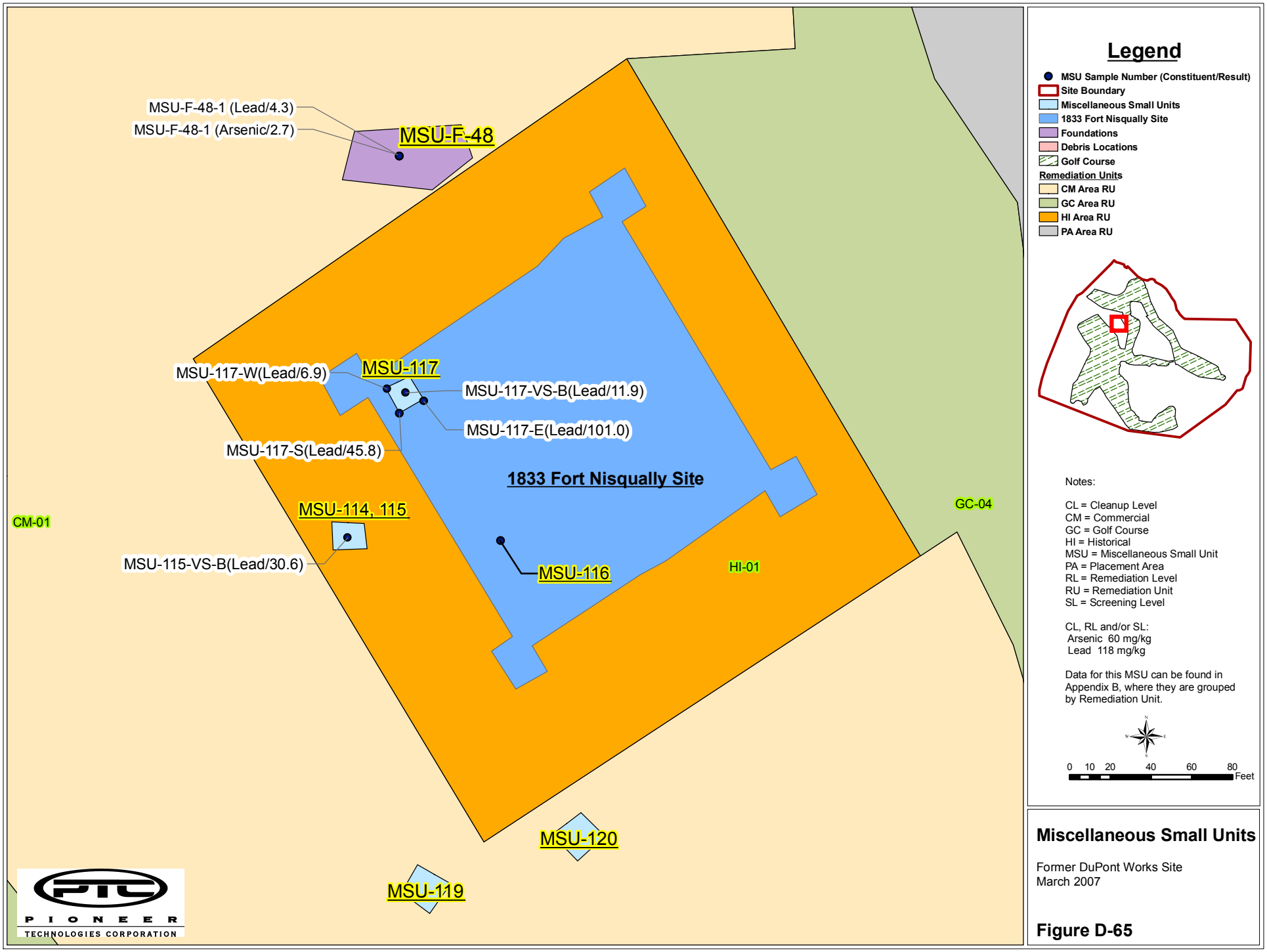
PIONEER TECHNOLOGIES CORPORATION

Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-63

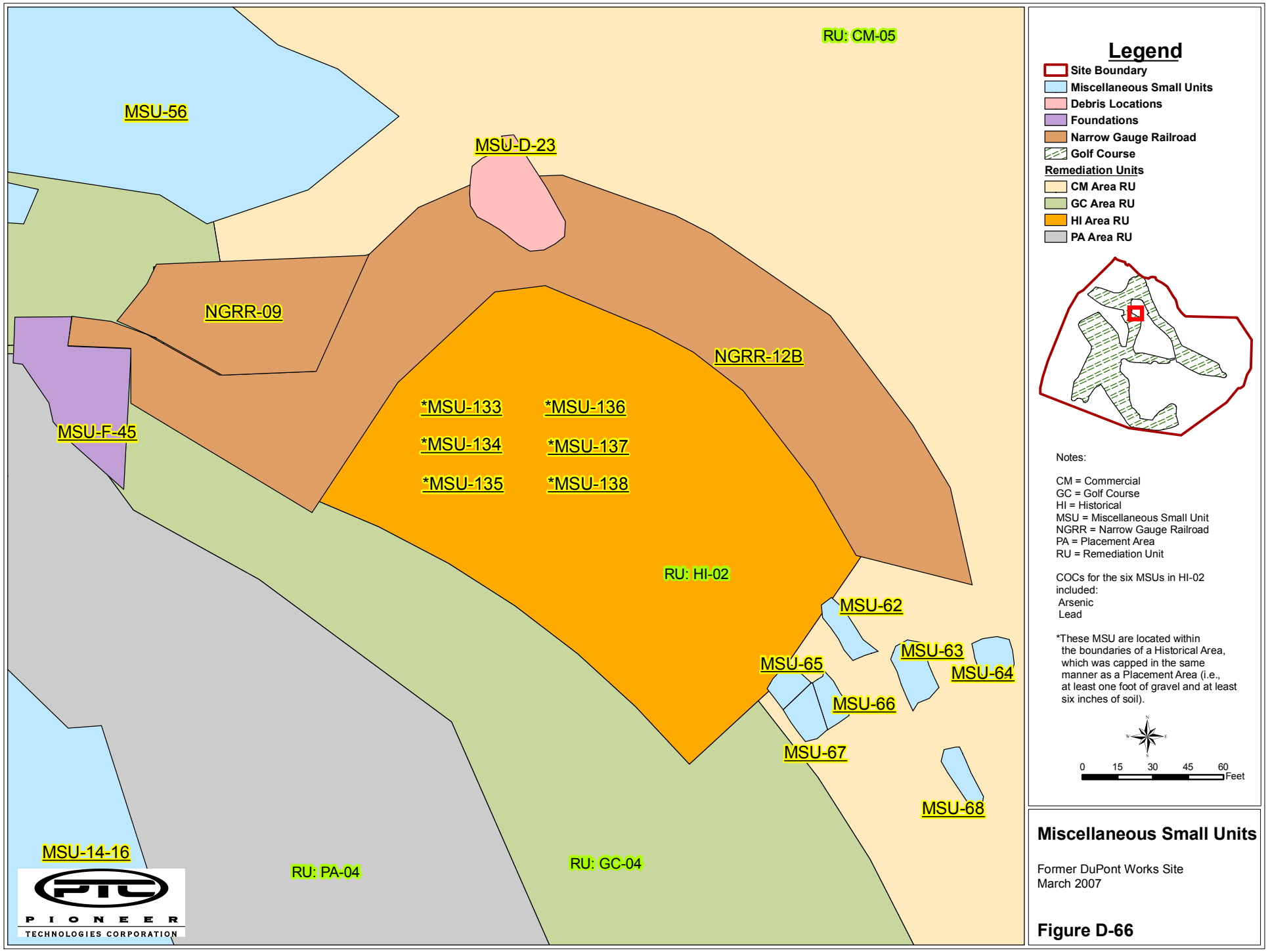

MSU-86
NGRR-30
NGRR-29
RU: CM-02
*MSU-108
*MSU-109
*MSU-110
*MSU-111
*MSU-112
*MSU-113
RU: HI-04
MSU-D-18
RU: CM-03
Legend
Site Boundary
Miscellaneous Small Units
Narrow Gauge Railroad
Debris Locations
Golf Course
Remediation Units
CM Area RU
HI Area RU
Notes:
CM = Commercial
COC = Constituent of Concern
HI = Historical
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
RU = Remediation Unit
COCs for these six MSUs include:
Aldrin
Arsenic
Lead
*These MSUs are located within the boundaries of a Historical Area, which was capped in the same manner as a Placement Area (i.e., at least one foot of gravel and at least six inches of soil).
0 40 80 120 160
Feet
PIONEER
TECHNOLOGIES CORPORATION
Miscellaneous Small Units
Former DuPont Works Site
March 2007
Figure D-64



Miscellaneous Small Units

Former DuPont Works Site
March 2007

Figure D-65


RU: CM-05
MSU-56
MSU-D-23
NGRR-09
NGRR-12B
*MSU-133
*MSU-136
*MSU-134
*MSU-137
*MSU-135
*MSU-138
MSU-F-45
RU: HI-02
MSU-62
MSU-63
MSU-64
MSU-65
MSU-66
MSU-67
MSU-68
MSU-14-16
RU: PA-04
RU: GC-04
PIONEER
TECHNOLOGIES CORPORATION
Legend
Site Boundary
Miscellaneous Small Units
Debris Locations
Foundations
Narrow Gauge Railroad
Golf Course
Remediation Units
CM Area RU
GC Area RU
HI Area RU
PA Area RU
Notes:
CM = Commercial
GC = Golf Course
HI = Historical
MSU = Miscellaneous Small Unit
NGRR = Narrow Gauge Railroad
PA = Placement Area
RU = Remediation Unit
COCs for the six MSUs in HI-02 included:
Arsenic
Lead
*These MSU are located within the boundaries of a Historical Area, which was capped in the same manner as a Placement Area (i.e., at least one foot of gravel and at least six inches of soil).
0
15
30
45
60
Feet
Miscellaneous Small Units
Former DuPont Works Site
March 2007
Figure D-66

APPENDIX E

TREE ROOT ZONE REMEDIATION PROGRAM

E.1 Introduction

This appendix presents the results of the Tree Root Zone Remediation Program conducted to retain trees in the Golf Course and Commercial areas. The tree root zone remediation program was focused on trees located in the Commercial Areas which could provide a buffer around the Site perimeter, and on trees in the Golf Course Areas that were chosen to remain for aesthetic reasons. The Tree Root Zone Remediation program was conducted in response to public comment obtained as part of the Site Environmental Impact Statement (EIS). Members of the public asked the Project Team and the Washington State Department of Ecology (Ecology) to determine areas of the property could be left in their natural condition.

This remedial action involved sampling soil within tree drip lines (i.e., the approximate horizontal distance of the outstretched limbs and roots) for arsenic and lead. In instances where the soil arsenic or lead cleanup standards were exceeded, one foot of soil was carefully removed within the drip line of the tree, soil samples were collected, and the excavation was immediately filled with clean topsoil. If the confirmation sample results exceeded the cleanup standards, additional rounds of excavation and confirmation sampling were undertaken until the cleanup standards were achieved.

The data presented in this report were collected between April 2 and April 29, 2003. All data were collected according to the 2001 Site Characterization Program: Areas for Additional Sampling Work Plan (PIONEER and WSNW, 2001).

E.2 Summary of Field Activities

The Tree Root Zone Remediation program was accomplished in the following steps:

1. The trees identified for preservation within the commercial and golf course remediation unit (RU) areas were assigned a unique number and a tag was attached to the tree.
2. The location of each tree was recorded using a Global Positioning System (GPS). A total of 334 trees were sampled. Tree locations are shown in Figure E-1.
3. The drip line, the approximate horizontal distance of the outstretched limbs and roots, was estimated for each tree. The drip line approximates the spread of the tree root and identifies the area where only limited soil removal can be done without damaging the tree.
4. One composite sample was collected around the base of each tree or groups of trees to characterize the soil concentrations of arsenic and lead. The number of sample points necessary for the composite sample was determined based on the drip line size of the individual tree. Trees with a drip line of 1,500 sq ft or less had a 3-point composite soil sample, those with a drip line between 1,500 and 2,500 sq. ft. had a 4-point composite soil sample, and those with a drip line greater than 2,500 sq. ft. had a 5-point composite soil sample. Trees with drip lines that covered more than 6,000 sq. ft. were divided into a north and south region, and a 5-point composite soil sample was taken in each region. Trees that had overlapping drip lines were grouped together and the number of points needed for the composite sample was determined by the combined square

footage of the drip lines. Drip lines and diameters were verified when sampling took place and were corrected if needed.

5. Trees with surrounding soil concentrations of arsenic and lead that were below the cleanup standards were tagged to ensure that they would be saved (273 of the 334 trees were designated as clean after the first round of soil sampling, and did not require remediation). Trees with surrounding soil concentrations that were above the cleanup standards were identified for removal of one foot of soil (61 trees required an initial round of soil remediation). The excavation activities consisted of careful removal of one foot of soil around the base of the tree, out to the drip line. Following soil removal, another composite soil sample was collected, and the remediated area was covered with one foot of clean topsoil to protect the tree roots, pending results of the soil analysis.
6. Trees with surrounding soil concentrations of arsenic and lead that were below cleanup standards were tagged to be saved (60 of the 61 remediated trees were identified as clean). The remaining tree required one more round of excavation. After this second round of excavation, the soil concentrations of arsenic and lead met the remediation levels.

E.3 Sampling Results

Soil sampling results from the tree root zone remediation program are shown in Table E.1. As shown in this table, following remediation all arsenic and lead soil concentrations were below the cleanup standards of 60 mg/kg and 118 mg/kg, respectively.

Reference

PIONEER Technologies Corporation and West Shore Corporation, N.W. 2001. Work Plan, 2001 Site Characterization Program: Areas for Additional Sampling. March 9, 2001.

Table E.1: Tree Remediation Soil Sampling Results

Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T001,002	GC-02	1	33.1		72.8	
T003	GC-02	1	54.3		80.1	
T005,006,007	GC-02	1	51.2		81.9	
T011	GC-02	2	3.19		5.58	
T012	GC-02	1	42.6		117	
T013,014,015	GC-02	1	48.8		106	
T016,017,018N	GC-02	1	55.2		88.4	
T016,017,018S	GC-02	1	47.5		87	
T019,020	GC-02	1	39.4		52.5	
T021,022	GC-02	1	36.2		75.2	
T022B,023	GC-02	1	37.8		48	
T024N	GC-02	1	38.7		79.5	
T024S	GC-02	1	28.7		53.1	
T025	GC-03	1	31.2		49.1	
T026	GC-03	1	27		47.6	
T027	GC-03	1	54.3		90.5	
T028,029	GC-03	1	35.3		64.3	
T030,031	GC-03	1			86.1	
T032	GC-03	1	32.2		51.9	
T033	GC-03	1	39.4		72.6	
T034	GC-03	1	35		48.4	
T035	GC-03	1	37.1		58.3	
T036,037,042,043	GC-03	1	40			
T038	GC-03	1	16		28.8	
T039	GC-03	1	51		61	
T040	GC-03	1			89.4	
T040	GC-03	2	3.91			
T041	GC-03	1	34.25		61.9	
T044	GC-03	1	32.1		36.6	
T046	GC-03	1	19.4		39.9	
T047	GC-03	1	55.5		77.3	
T048	GC-03	1	34.2		105	
T049	GC-02	1	26.6		42.9	
T050,051,052	GC-02	1	50.1		76	
T056	GC-02	2	5.99			
T056,057,058	GC-02	1			28.7	
T061,062	GC-02	1	59.2			
T061,062	GC-02	2			77	
T063	GC-02	1			92.2	
T063	GC-02	2	42.5			

Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T064	GC-02	2	8.66		8.85	
T065	GC-05	1	51.9		69.5	
T066,067	CM-01	1	43.3		55.4	
T068	CM-01	1	55.4		47.5	
T069	CM-01	1	46.1		64	
T070	GC-05	1	50.9			
T071	GC-05	1	30.2		33.7	
T072	GC-05	1			95.3	
T073,074	GC-05	1	59.3			
T073,074	GC-05	2			10.5	
T-075	GC-05	1	49.5		65	
T076	GC-05	1			54.3	
T076	GC-05	2	2.56			
T077	GC-05	1	43.7			
T078	GC-05	1			61.8	
T079	GC-05	1	27.2		64.9	
T080,081	GC-05	1	37.6		55.2	
T082,083	GC-05	1	18.4		29.1	
T084	GC-04	1			116	
T085N	GC-04	1	52.7		109	
T085S	GC-04	1	49.6		115	
T088	GC-04	1	59.2		99.9	
T089	GC-04	1			81.5	
T089	GC-04	2	9.07			
T090	GC-04	1	45.8		90.3	
T091	GC-04	1			99.4	
T092	GC-04	1	56.6		76.5	
T093	GC-04	1	44.9		53.1	
T094	GC-04	1			70.4	
T094	GC-04	2	18			
T096	GC-04	1	36.8		75.9	
T096,097	GC-04	1	38.7		66.2	
T098	GC-04	1	36.7		42.7	
T099	GC-04	1	30.7		44.6	
T100	GC-04	1	49.6		88.6	
T101,102	GC-04	1	47.6		88.8	
T103	GC-04	1	50.7		105	
T105,106,107	GC-04	1	30.8		82.6	
T108	GC-04	1	53		103	
T108,109	GC-08	1			60.95	
T109,110	GC-04	1	46.4		66	
T-111	GC-04	2	2.15	U	5.035	

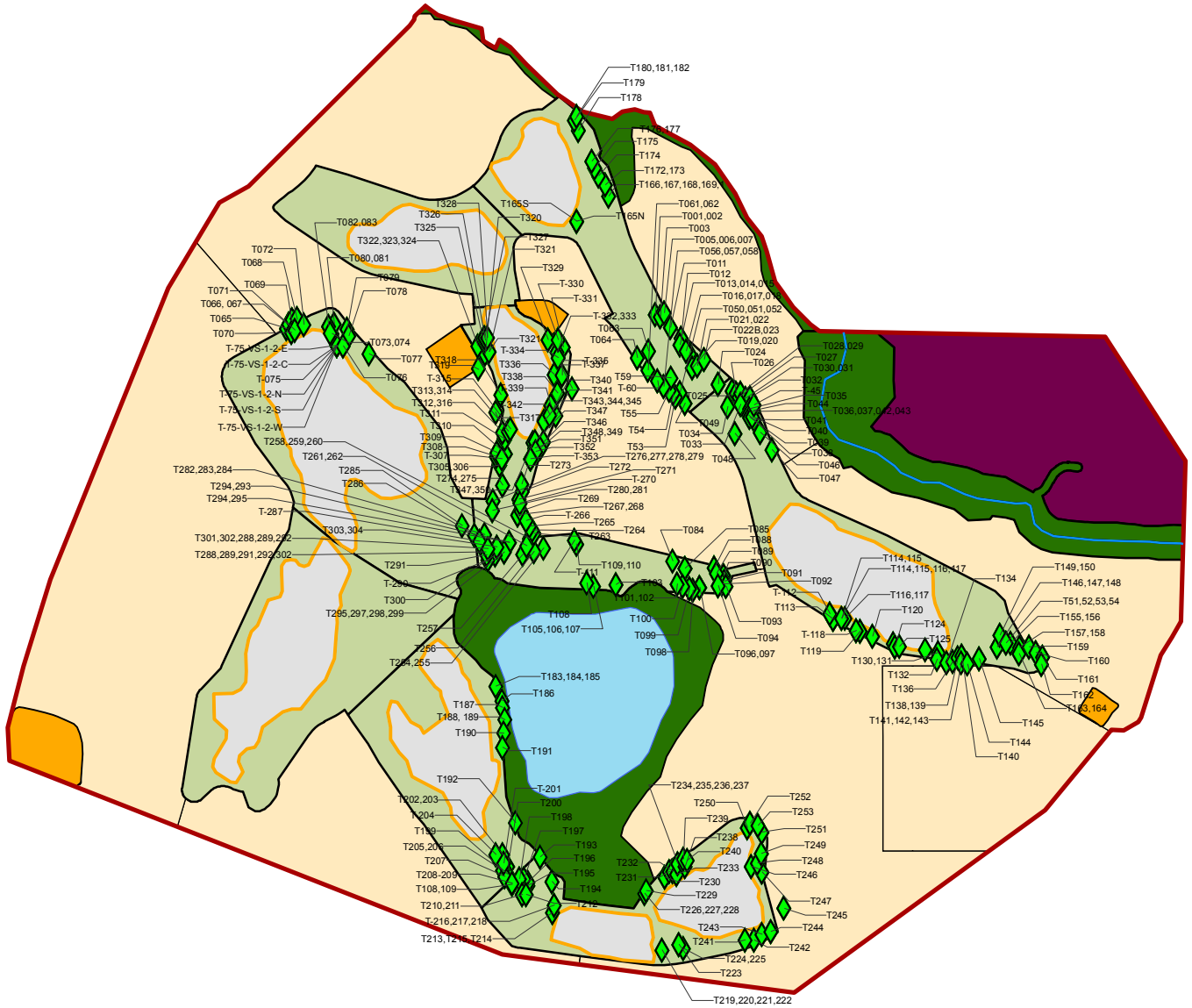
Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T-112	GC-03	1	43.1			
T-112	GC-03	2			7.23	
T113	GC-03	1	44.8		75.5	
T114,115	GC-03	1	52.65			
T114-115-116-117	GC-03	2			13.7	
T116,117	GC-03	1	50.1			
T-118	GC-03	2	3.85		5.31	
T119	GC-03	1	59.4		106	
T120	GC-03	1	57.6		113	
T123	GC-03	1	54			
T124	GC-03	1	36.2		61.9	
T125	GC-03	1	36.7			
T128	GC-03	1			111	
T130,131	GC-03	1			88.05	
T132	GC-03	1			49	
T134	CM-04	1			117	
T136	GC-03	1			110	
T138,139	GC-03	1			50.2	
T140	GC-03	1	23.8		39	
T141,142,143	GC-03	1			103.5	
T144	CM-04	1			94.5	
T145	GC-03	1	35.9		66.9	
T146,147,148	GC-03	1	33.2		81.5	
T149,150	GC-03	1	26.3		47.5	
T155,156	GC-03	1	45.5			
T157,158	GC-03	1	42.5			
T159	GC-03	1	32.65		59.9	
T160	GC-03	1	44.2		91.9	
T161	GC-03	1	41.5		86.6	
T162	GC-03	1	49.1		78	
T163,164	GC-03	1	41		93.6	
T165N	GC-02	1	19.9		25.2	
T165S	GC-02	1	31.4		51.8	
T166,167,168,169,1	GC-02	1	36.4		30.7	
T172,173	GC-02	1	40.95		33.2	
T174	GC-02	1	32.3		23.7	
T175	GC-02	1	39.6		17.2	
T176,177	GC-02	1	29		25.1	
T178	GC-02	1	41		101	
T179	GC-02	1	31		116	
T180,181,182	GC-02	1	32.7		111	
T183,184,185	GC-07	1			93.4	

Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T186	GC-07	1	34.1		45.1	
T187	GC-07	1	16.1		24.2	
T188,189	OS-04	1	21.5			
T190	OS-04	1			62.6	
T191	GC-07	1	56.2		90.3	
T192	OS-04	1	10.2		42.1	
T193	GC-08	1	43.2		31.9	
T194	GC-08	1	44.8		80.1	
T195	GC-08	1	46.7		42.9	
T196	GC-08	1	32		47	
T197	GC-08	1	28.2		52.3	
T198	GC-08	1	28.6		47.3	
T199	GC-07	1	50		99.6	
T200	GC-07	1	27.4		40	
T-201	GC-07	1			68.7	
T-201	GC-07	2	8.69			
T202,203	GC-07	1	35.8		50	
T-204	GC-07	1			32.2	
T-204	GC-07	2	18.3			
T205,206	GC-07	1	56.6		43.5	
T207	GC-07	1	33.8		17.2	
T208-209	GC-08	2	7.68			
T210,211	GC-08	1	15.7		12.4	
T212	GC-08	1	18.8		18.9	
T213,T215,T214	GC-08	1	21.7		38.5	
T216,217,218	GC-08	1			29.9	
T-216-217-218	GC-08	2	12.2			
T219,220,221,222	GC-08	1	40.8		93.4	
T223	GC-08	1	6.23		4.57	
T224,225	GC-08	1			35.3	
T224-225	GC-08	2	11.8			
T226,227,228	GC-08	1	28.4		69.3	
T229	GC-08	1	16		20.8	
T230	GC-08	1	46.5		77.2	
T231	GC-08	1	25.9		45.3	
T232	GC-08	1	47.1		46.1	
T233	GC-08	1	28.6		36	
T234,235,236,237	GC-08	1	25.4		29.8	
T238	GC-08	1	33.2		43.8	
T239	GC-08	1	39.6		64.6	
T240	GC-08	1			53.3	
T241	GC-08	1			90.1	

Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T241	GC-08	2	2.18	U		
T242	GC-08	1	45.1		53.7	
T243	GC-08	1	14.8		22	
T244	GC-08	1	8.5		18	
T245	CM-04	1	26.3		53.3	
T246	GC-08	1	26.7		45.2	
T247	GC-08	1	50.9		65.1	
T248	GC-08	1	16.3		20.9	
T249	GC-08	1	19.9		31.6	
T250	GC-08	1	40.4		62.5	
T251	GC-08	1	25.5		34	
T252	GC-08	1	25.7		50.1	
T253	GC-08	1	22.6		27.8	
T254,255	GC-04	1			47.5	
T256	GC-04	1	40.3		86	
T257	GC-04	1	26.5		76.3	
T258,259,260	GC-04	1	43.4		103	
T261,262	GC-04	1	28.2			
T263	GC-04	1	35.6		40.7	
T264	GC-04	1			47.7	
T265	GC-04	1	56.5		85.3	
T-266	GC-04	1			80.9	
T-266	GC-04	2	2.92			
T267,268	GC-04	1	28		69	
T269	GC-04	1			36.7	
T270	GC-04	1			94.2	
T-270	GC-04	2	10.7			
T271	GC-04	1	43.8		65.5	
T272	GC-04	1	38.8		58.4	
T273	GC-04	1	31.4		68.9	
T274,275	GC-04	1	48.3		72.5	
T276,277,278,279	GC-04	1	24.4		38.4	
T280,281	GC-04	1	39		101	
T282,283,284	GC-04	1	25.8		70.9	
T285	GC-05	1	24.6			
T286	GC-05	1	25.7		62	
T-287	GC-04	1	40.95			
T-287	GC-04	2			36	
T288,289,291,292,3	GC-04	1	46.8			
T-290	GC-04	1	38.3			
T-290	GC-04	2			39.4	
T291	GC-04	2			12.2	

Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T294,293	GC-04	1	25.2			
T294,295	GC-04	1	50.1		102	
T295,297,298,299	GC-04	1	29.8		94.2	
T300	GC-04	1	32.7		62.3	
T301,302,288,289,2	GC-04	2	11.6		17.3	
T303,304	GC-04	1	44.2		78.5	
T305,306	GC-04	1	43.6		56.9	
T-307	GC-04	1			76.9	
T-307	GC-04	2	2.4	U		
T308	GC-04	1	31.45		50.5	
T309	GC-04	1	41.9		75.4	
T310	GC-04	1	52.6		61.4	
T311	GC-04	1	49		68.6	
T312,316	GC-04	1	35.2		53	
T313,314,315	GC-04	1			85	
T313/314	GC-04	2	14.8			
T-315	GC-04	2	2	U		
T317	CM-01	1	14		32.5	
T318	GC-04	1	23.5		52.7	
T319	HI-01	1	15.5		37.2	
T320	GC-04	1	41.6		50.2	
T321	GC-04	1	45.7		99.7	
T322,323,324	GC-04	1	39.1		55.3	
T325	GC-04	2	4.11		5.65	
T326	GC-04	2	4.69		5.58	
T327	GC-04	2	13.1		18.6	
T328	GC-04	2	11.5		14.5	
T329	GC-04	1			75.3	
T329	GC-04	2	18.3			
T-330	GC-04	3	2.16	U	25.9	
T330-VS-1-2-E	GC-04	2			5.4	
T330-VS-1-2-N	GC-04	2			4.26	
T330-VS-1-2-S	GC-04	2			13.1	
T330-VS-1-2-W	GC-04	2			13.7	
T-331	GC-04	1	49.9			
T-331	GC-04	2			43	
T332,333	GC-04	1			91.7	
T-332/333	GC-04	2	12.3			
T-334	GC-04	2	50.4		46.4	
T-335	GC-04	1			98.7	
T-335	GC-04	2	15.4			
T336	GC-04	1	45.9		66.1	

Tree ID	Remediation Unit	Sample Round	Arsenic Results (mg/kg)	Arsenic Qualifier	Lead Results (mg/kg)	Lead Qualifier
T337	CM-05	1			73.3	
T338	GC-04	1	22.5		46.7	
T-339	GC-04	2	35.8		10.8	
T340	GC-04	1	57.7		67.1	
T341	GC-04	1			89.8	
T-342	GC-04	2	56.8		18.8	
T343,344,345	GC-04	1	52.45		93.05	
T346	GC-04	1			96.6	
T347	GC-04	2	37.9			
T347,350	GC-04	1			88	
T348,349	GC-04	1			67.8	
T-349	GC-04	2	23.9			
T351	GC-04	1			49.1	
T352	GC-04	1			63.5	
T352	GC-04	2	19.75			
T-353	GC-04	1			78.7	
T-353	GC-04	2	13.1		17.7	
T-45	GC-03	1	59.9			
T-45	GC-03	2			5.18	
T51,52,53,54	GC-03	1	36.7		50.8	
T53	GC-02	1	53.5		97.8	
T54	GC-02	1	35.1		45.7	
T55	GC-02	1			54.8	
T59	GC-02	1			42.2	
T-60	GC-02	1			89	
T-60	GC-02	2	6.31			
T-75-VS-1-2-C	GC-05	1	3.86			
T-75-VS-1-2-E	GC-05	1	5.59			
T-75-VS-1-2-N	GC-05	1	5.53			
T-75-VS-1-2-S	GC-05	1	12.7			
T-75-VS-1-2-W	GC-05	1	15.6			



Legend

- Tree Locations
- Sequalitchew Creek
- Site Boundary
- Old Fort Lake
- Golf Course Placement Areas

Remediation Unit Areas

- Commercial
- Golf Course
- Historical
- Industrial
- Open Space

Notes

The number associated with each tree represents the tree and sample number.

Location of Tree Remediation

Former DuPont Works Site
March 2007

Figure E-1

PIONEER TECHNOLOGIES CORPORATION

APPENDIX F

PLACEMENT AREAS, ECOLOGICAL CAP, HUMAN HEALTH CAP AND GOLF COURSE CONSTRUCTION DOCUMENTATION

APPENDIX F FIGURE INDEX

F.1—Grade Verification Report for Placement Areas, June 10, 2004	
Figure	**Title**
EXH-PA-1A	Legal Description for Placement Area 1A
EXH-PA-1A-Internal	Legal Description for Placement Area 1A Internal
EXH-PA-1B	Legal Description for Placement Area 1B
EXH-PA-2	Legal Description for Placement Area 2
EXH-PA-3A	Legal Description for Placement Area 3A
EXH-PA-3B	Legal Description for Placement Area 3B
EXH-PA-4	Legal Description for Placement Area 4
EXH-PA-5	Legal Description for Placement Area 5
EXH-PA-6	Legal Description for Placement Area 6
EXH-PA-7	Legal Description for Placement Area 7
F.2—Placement Area Ecological Cap As-Built Drawings	
Figure	**Title**
F-2.1	Golf Course Placement Area 01 Ecological Cap
F-2.2A	Golf Course Placement Area 02A Ecological Cap
F-2.2B	Golf Course Placement Area 02B Ecological Cap
F-2.3	Golf Course Placement Area 03 Ecological Cap
F-2.4	Golf Course Placement Area 04 Ecological Cap
F-2.5	Golf Course Placement Area 05 Ecological Cap
F-2.6	Golf Course Placement Area 06 Ecological Cap
F-2.7	Golf Course Placement Area 07 Ecological Cap
F-2.8A	Golf Course Placement Area 08A Ecological Cap
F-2.8B	Golf Course Placement Area 08B Ecological Cap
F.3—Placement Area Human Health (Total) Cap As-Built Drawings	
Figure	**Title**
F-3.1	Golf Course Placement Area 01 Total Cap
F-3.2A	Golf Course Placement Area 02A Total Cap
F-3.2B	Golf Course Placement Area 02B Total Cap
F-3.3	Golf Course Placement Area 03 Total Cap
F-3.4	Golf Course Placement Area 04 Total Cap

F-3.5	Golf Course Placement Area 05 Total Cap
F-3.6	Golf Course Placement Area 06 Total Cap
F-3.7	Golf Course Placement Area 07 Total Cap
F-3.8A	Golf Course Placement Area 08A Total Cap
F-3.8B	Golf Course Placement Area 08B Total Cap
F.4—Asmundson Golf Course Construction Drawings	
Figure	**Title**
I1 of I7	Irrigation Plan – Holes 1 & 9
I2 of I7	Irrigation Plan – Holes 2, 3, 4 & 5
I3 of I7	Irrigation Plan – Holes 6, 7 & 8
I4 of I7	Irrigation Plan – Holes 10 & 13
I5 of I7	Irrigation Plan – Holes 11 & 12
I6 of I7	Irrigation Plan – Holes 14, 15 & 16
I7 of I7	Irrigation Plan – Holes 17, 18 & Practice Range
D1 of D7	Drainage Plan – Holes 1 & 9
D2 of D7	Drainage Plan – Holes 2, 3, 4, & 5
D3 of D7	Drainage Plan – Holes 6, 7 & 8
D4 of D7	Drainage Plan – Holes 10 & 13
D5 of D7	Drainage Plan – Holes 11 & 12
D6 of D7	Drainage Plan – Holes 14, 15 & 16
D7 of D7	Drainage Plan – Holes 17, 18 & Practice Range
1 of 2	Grassing Plan – Front 9
2 of 2	Grassing Plan – Back 9
L1 of L8	Planting Plan
L2 of L8	Planting Plan
L3 of L8	Planting Plan
L4 of L8	Planting Plan
L5 of L8	Planting Plan
L6 of L8	Planting Plan
L7 of L8	Planting Plan
L8 of L8	Planting Plan

NORTHWEST LANDING

DUPONT CONSENT DECREE AREA

Placement Areas at DuPont Works Site

Revised – February 28, 2005

Prepared for

Weyerhaeuser Company
33940 Weyerhaeuser Way South
Federal Way, Washington 98001
(253) 924-2345

Submitted by

ESM Consulting Engineers, LLC
720 South 348th St.
Federal Way, WA 98003

253.838.6113 tel
253.838.7104 fax

www.esmcivil.com

June 10, 2004 Job No. 129-044-004-0800

GRADE VERIFICATION REPORT FOR PLACEMENT AREAS AT DUPONT WORKS SITE

BACKGROUND

ESM Consulting Engineers has been retained by the Weyerhaeuser Company to measure the final shape of the top of contaminated soils placement areas. Measurement of the outer edge of the placement areas and the preparation of corresponding legal descriptions is also included in the scope of work.

ESM is receiving direction from West Shore Corporation NW and Pioneer Technologies while performing these tasks.

EQUIPMENT AND METHODS

Real Time Kinematic (RTK) data collection using a dual frequency Global Positioning System (GPS) was utilized during this process. The rover unit was mounted to an ATV. The rover GPS unit was set to record measurements for every ten (10) feet of travel. Transects were spaced approximately 25 feet apart to generate a grid spacing measuring approximately 10' x 25'. The edges of the placement areas were also measured utilizing RTK GPS.

DURATION

Work for this project was performed February through May, 2004.

PRODUCTS:

Topography Exhibits – A contour map with a one-foot contour interval as generated from GPS survey points for each placement area is provided herein.
Legal Descriptions – A metes and bounds legal description of each placement area based upon each surveyed placement area boundary is provided herein.
Legal Description Exhibits – A graphic exhibit depicting the general location of each placement area is provided herein.

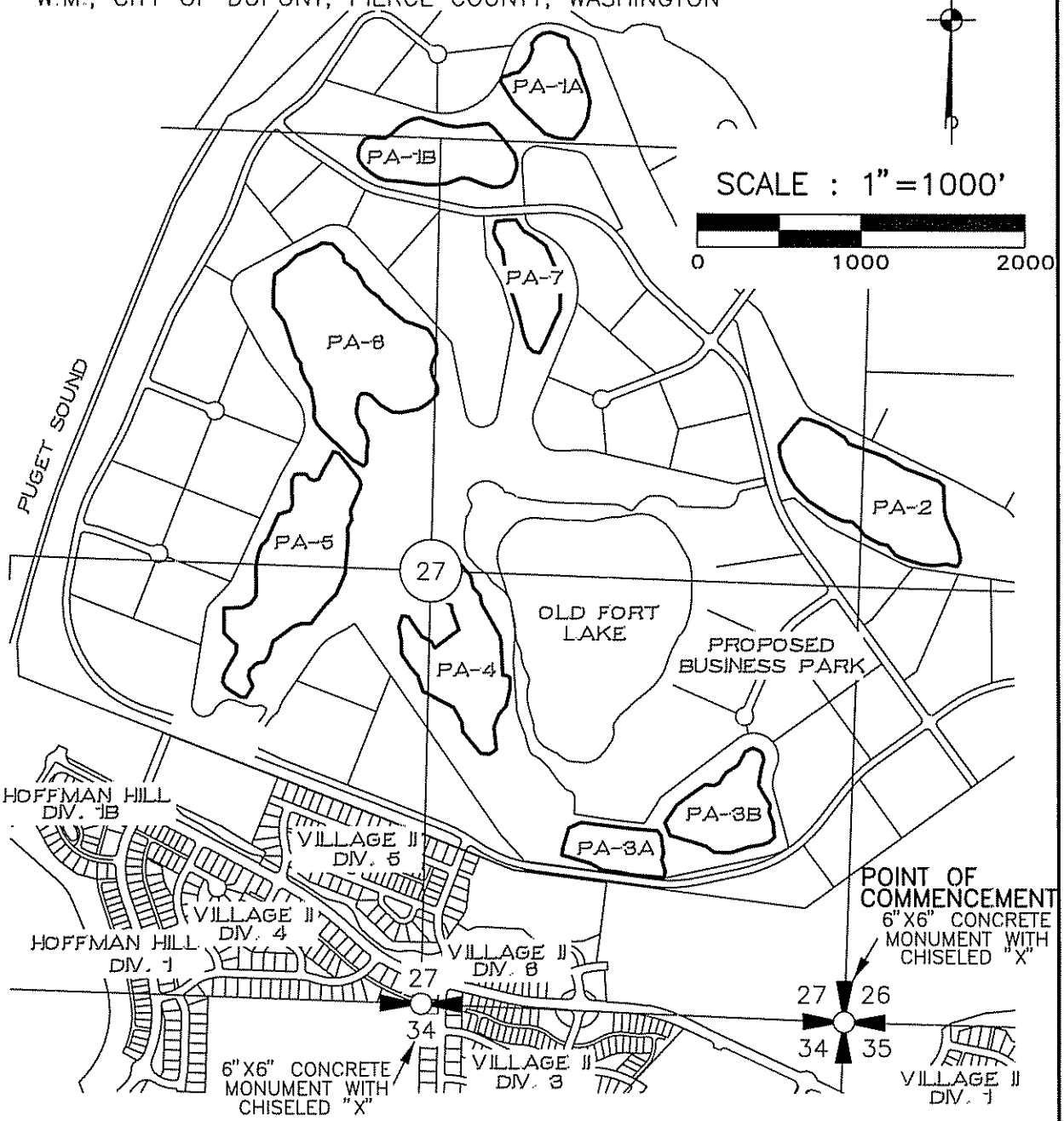
i:\esm-jobs\129\44\004\documents\129044-5.doc

720 South 348th Street
Federal Way WA 98003
Tel (253) 838 6113
Fax (253) 838 7104
www esmcivil com
Tacoma (253) 927 0619
Seattle (206) 623 5911
Bremerton (360) 792 3375

EXHIBIT KEY

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREAS

A PORTION OF SECTIONS 22, 26 AND 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-COVER
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 1A

That portion of the southeast quarter of Section 22, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 5278.39 feet to the north quarter corner thereof;

THENCE continuing N 01°23'53" E, 357.73 feet;

THENCE S 88°36'07" E, 357.88 feet to the TRUE POINT OF BEGINNING;

THENCE S 32°21'53" E, 64.68 feet;

THENCE S 34°01'10" E, 14.64 feet;

THENCE S 31°33'43" E, 49.83 feet;

THENCE S 32°22'06" E, 37.25 feet;

THENCE S 46°05'59" E, 257.76 feet;

THENCE S 70°25'00" E, 80.77 feet;

THENCE S 83°37'16" E, 30.13 feet;

THENCE S 86°07'15" E, 67.80 feet;

THENCE N 39°19'22" E, 92.41 feet;

THENCE N 23°08'53" E, 67.79 feet;

THENCE N 08°36'08" E, 102.51 feet;

THENCE N 12°53'41" W, 57.04 feet;

THENCE N 20°48'25" W, 119.95 feet;

THENCE N 11°36'35" W, 56.09 feet;

THENCE N 24°09'58" W, 50.46 feet;

THENCE N 32°40'09" W, 78.62 feet;

THENCE N 08°19'14" W, 48.36 feet;

THENCE N 69°41'56" W, 106.08 feet;

THENCE S 82°30'51" W, 48.75 feet;

THENCE S 57°55'53" W, 45.94 feet;

THENCE S 40°00'49" W, 50.51 feet;

THENCE S 08°28'51" E, 39.90 feet;

THENCE S 21°43'19" W, 75.81 feet;

THENCE S 41°31'52" W, 86.72 feet;

THENCE S 79°36'40" W, 37.00 feet;

THENCE S 65°33'22" W, 32.98 feet;

THENCE S 75°30'55" W, 37.59 feet;

THENCE S 21°28'09" W, 28.31 feet to the TRUE POINT OF BEGINNING.

Containing 5.1 acres, more or less.

See attached Exhibit "PA-1A".

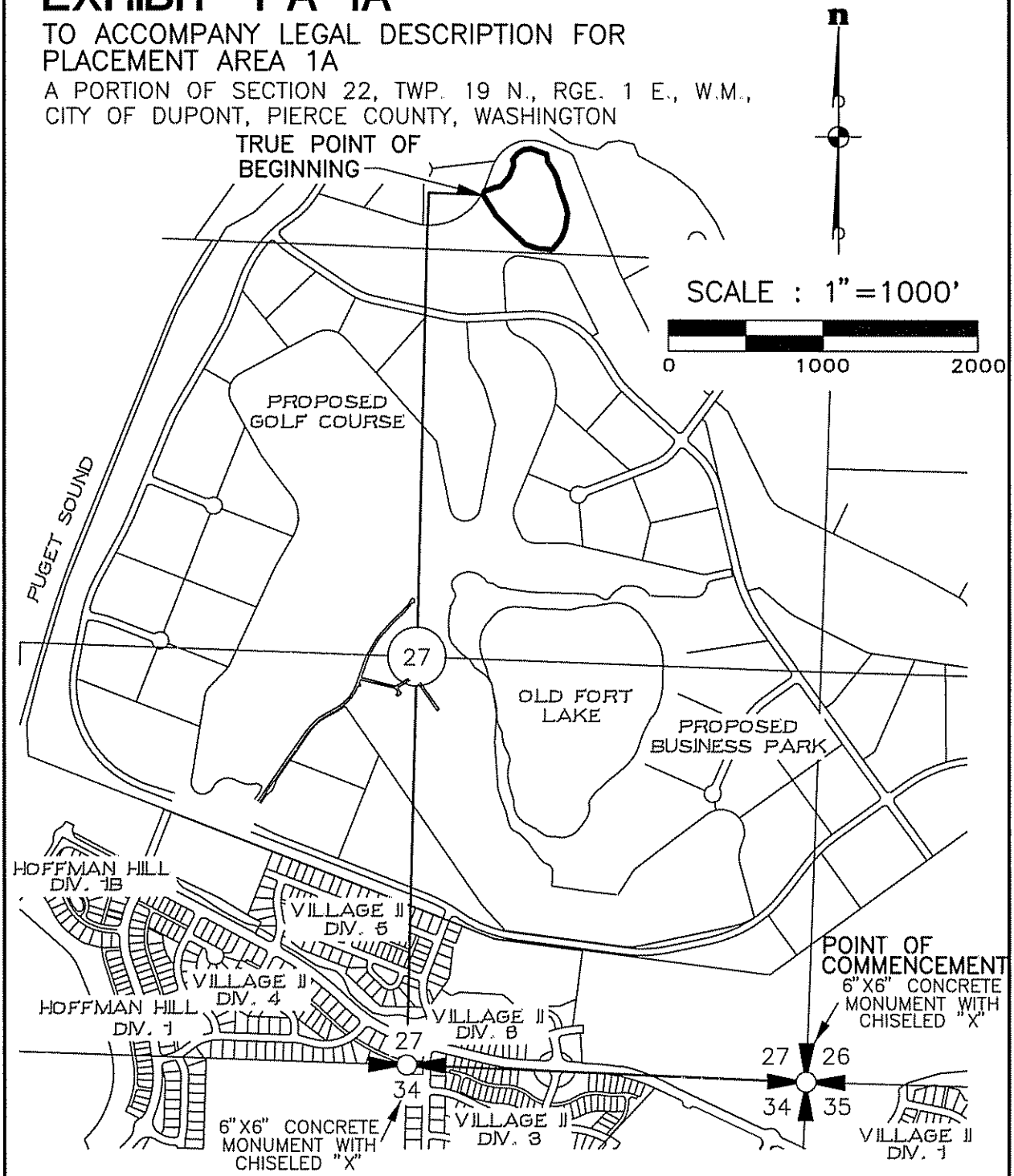
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 1A.doc

EXHIBIT "PA-1A"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 1A

A PORTION OF SECTION 22, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-1A
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-0800
January 24, 2005

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 1A INTERNAL

That portion of the southeast quarter of Section 22, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 5278.39 feet to the north quarter corner thereof;

THENCE continuing N 01°23'53" E, 306.43 feet;

THENCE S 88°36'07" E, 730.52 feet to the TRUE POINT OF BEGINNING;

THENCE S 86°53'46" E, 35.77 feet;

THENCE N 72°42'03" E, 62.65 feet;

THENCE N 09°14'09" W, 40.02 feet;

THENCE N 22°46'46" W, 59.72 feet;

THENCE N 58°29'51" W, 25.25 feet;

THENCE S 81°07'32" W, 28.06 feet;

THENCE S 38°35'07" W, 28.27 feet;

THENCE S 20°43'56" W, 57.90 feet;

THENCE S 25°58'50" E, 48.80 feet to the TRUE POINT OF BEGINNING.

Containing 0.24 acres, more or less.

See attached Exhibit "PA-1A-INTERNAL".

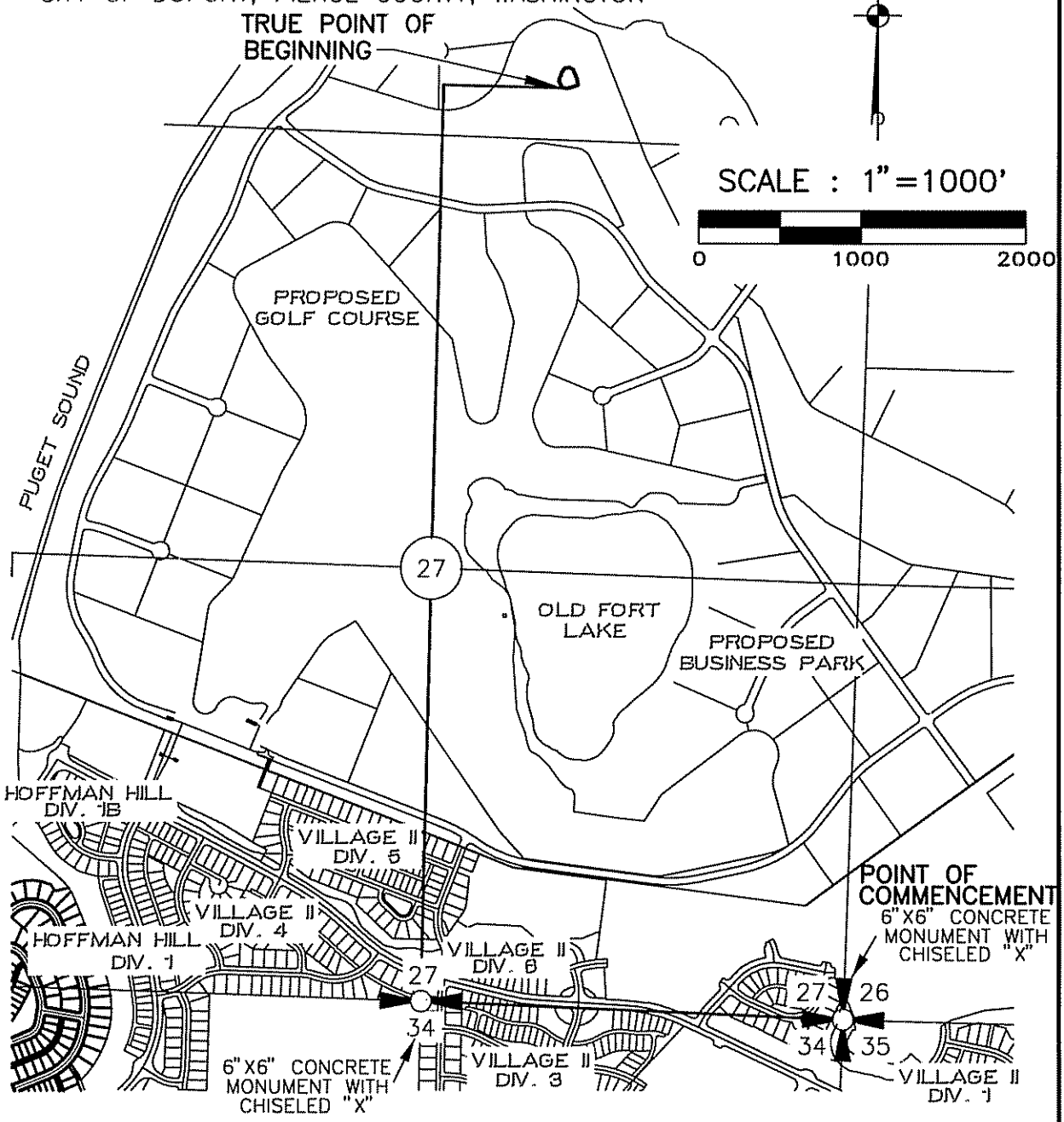
Written by: J.P.C.
Checked by: D.W.A.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 1A INTERNAL.doc

EXHIBIT "PA-1A-INTERNAL"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 1A INTERNAL

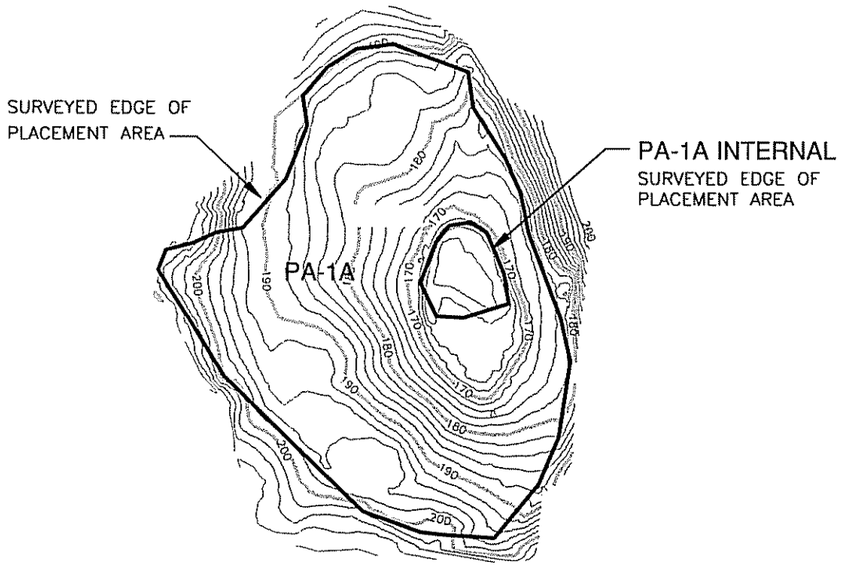
A PORTION OF SECTION 22, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

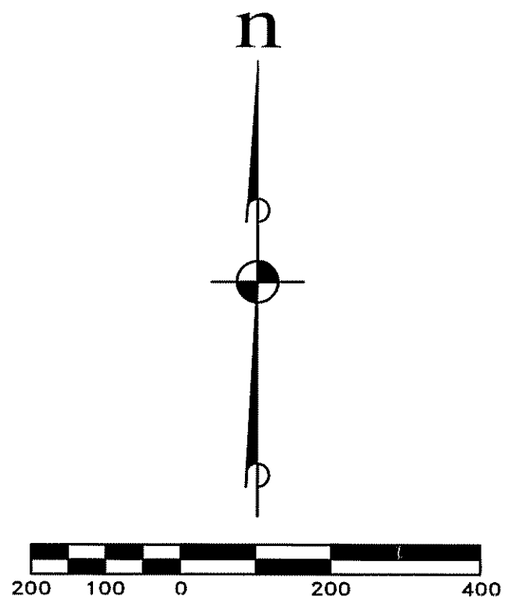


ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-1A
DATE : 01-24-05
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104
NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 24, 2004.

2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.

3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 1A" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 1A

DRAWING: 129/44/004/PLOTS/EDH-PA-1A.DWG

ESM CONSULTING ENGINEERS LLC
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-8144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004 | DATE: 02-25-05
DRAWN: JPC | SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 1B

Those portions of the southwest quarter and of the southeast quarter of Section 22, and of the northwest quarter and of the northeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 4997.37 feet to the TRUE POINT OF BEGINNING;

THENCE N 84°13'35" E, 41.78 feet;

THENCE N 69°56'47" E, 99.33 feet;

THENCE S 84°18'17" E, 45.14 feet;

THENCE S 68°10'12" E, 103.67 feet;

THENCE S 75°43'08" E, 53.41 feet;

THENCE N 87°09'22" E, 60.09 feet;

THENCE N 59°25'42" E, 58.61 feet;

THENCE N 28°50'30" E, 37.20 feet;

THENCE N 17°59'19" E, 54.29 feet;

THENCE N 00°52'51" E, 32.16 feet;

THENCE N 15°30'22" W, 57.12 feet;

THENCE N 36°06'24" W, 75.99 feet;

THENCE N 40°00'52" W, 129.25 feet;

THENCE N 56°02'00" W, 44.01 feet;

THENCE S 83°41'48" W, 184.29 feet;

THENCE N 82°23'08" W, 80.75 feet;

THENCE N 72°57'58" W, 153.76 feet;

THENCE S 78°52'41" W, 48.13 feet;

THENCE S 65°13'05" W, 53.46 feet;

THENCE S 54°10'56" W, 57.23 feet;

THENCE S 44°53'11"W, 48.90 feet;

THENCE S 57°46'31" W, 51.03 feet;

THENCE N 85°32'16" W, 88.70 feet;

THENCE S 71°05'35" W, 38.23 feet;

THENCE S 32°23'44" W, 59.09 feet;

THENCE S 07°09'00" W, 50.40 feet;

THENCE S 10°15'40" E, 31.27 feet;

THENCE S 38°37'25" E, 46.73 feet;

THENCE S 47°37'42" E, 60.24 feet;

THENCE S 56°53'37" E, 51.28 feet;

THENCE S 72°14'37" E, 46.67 feet;

THENCE S 85°20'13" E, 115.12 feet;

THENCE S 82°24'28" E, 129.68 feet;

THENCE N 89°01'41" E, 79.55 feet;

THENCE N 84°13'35" E, 9.35 feet to the TRUE POINT OF BEGINNING.

Containing 6.96 acres, more or less.

See attached Exhibit "PA-1B".

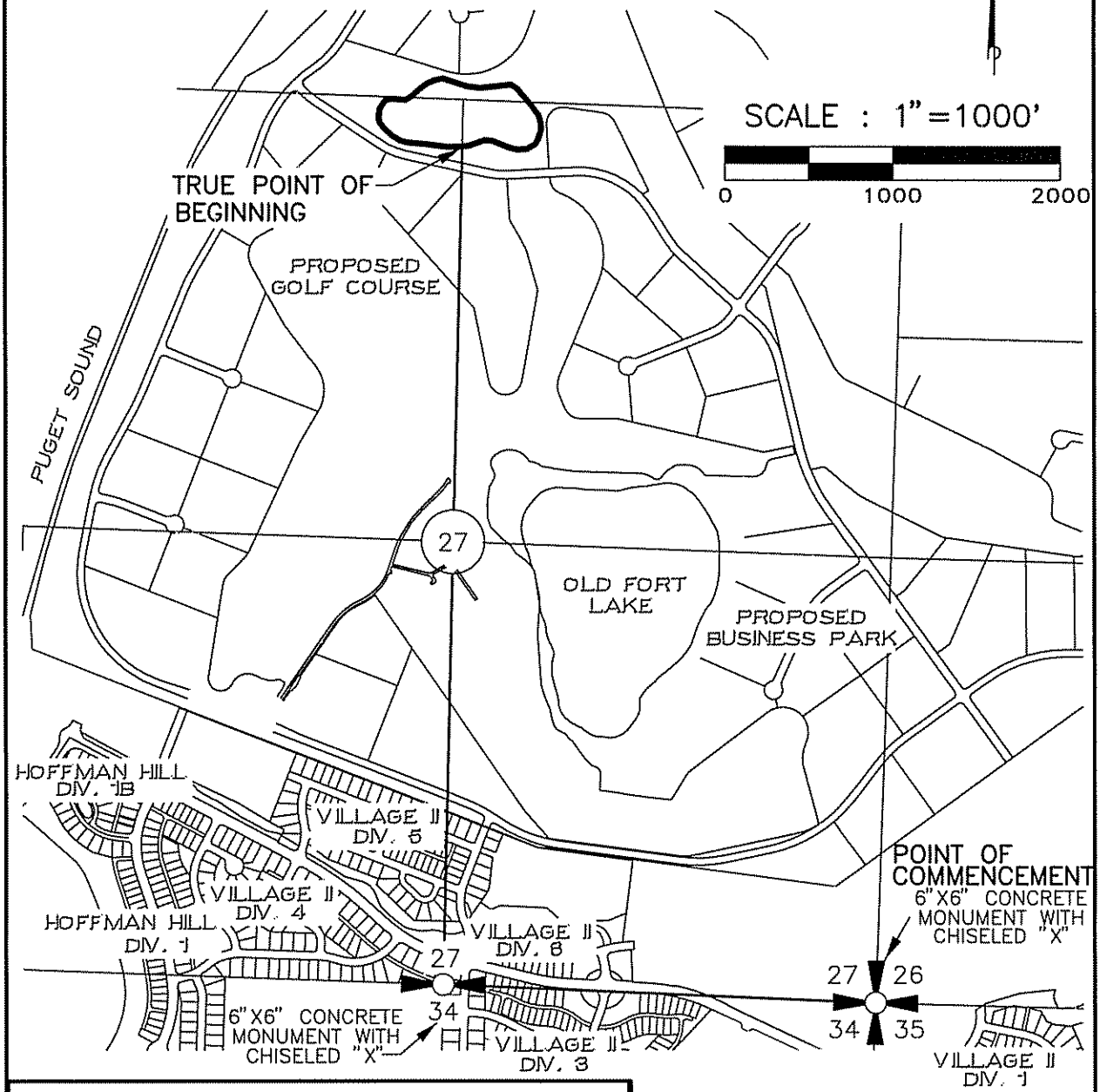
Written by: J.P.C.
Checked by: D.W.A.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 1B.doc

EXHIBIT "PA-1B"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 1B

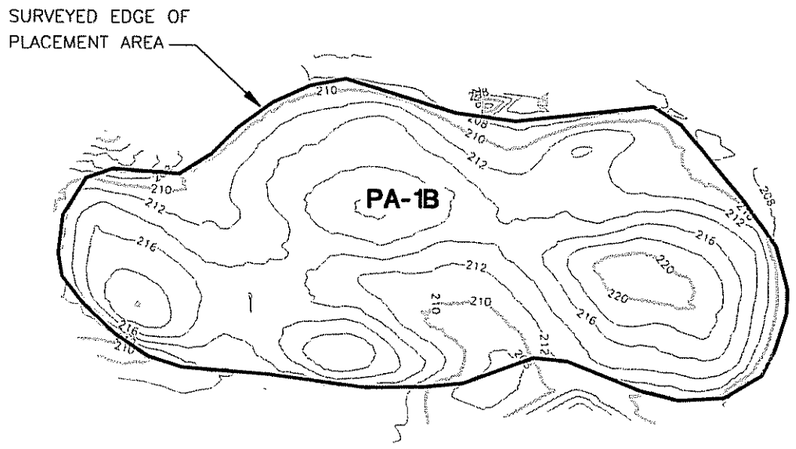
A PORTION OF SECTIONS 22 AND 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

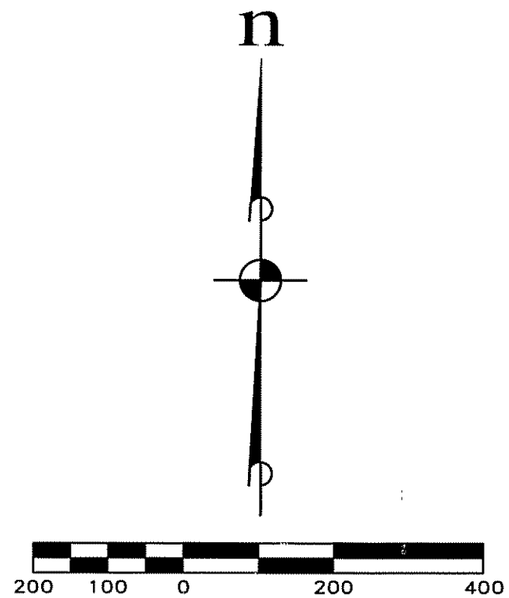


ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-1B
DATE : 05-27-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHWEST QUARTER AND OF THE SOUTHEAST QUARTER OF SECTION 22, AND OF THE NORTHEAST QUARTER AND OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1 SURVEY DATE: MAR. 25, 2004.

2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.

3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 1B" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 1B

CONSULTING ENGINEERS LLC
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

JOB NO.: 128-044-004
DRAWN: JPC
DATE: 6-02-04
SHEET 1 OF 1

DRAWING: EXH-PA-1B.DWG

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION FOR PLACEMENT AREA 2

That portion of the northwest quarter of Section 26 and of the northeast quarter of Section 27, Township 19 North, Range 1 East, W.M., in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 50°51'29" E, 4229.67 feet to the TRUE POINT OF BEGINNING;

THENCE N 30°20'51" E, 33.37 feet;

THENCE N 01°23'41" E, 33.14 feet;

THENCE N 10°13'15" W, 81.49 feet;

THENCE N 27°51'53" W, 36.42 feet;

THENCE N 27°36'54" W, 46.35 feet;

THENCE N 22°59'07" W, 82.15 feet;

THENCE N 09°16'12" W, 55.28 feet;

THENCE N 02°27'55" W, 146.27 feet;

THENCE N 67°34'49" W, 72.05 feet;

THENCE N 48°40'50" W, 43.99 feet;

THENCE N 68°55'10" W, 25.17 feet;

THENCE N 69°52'37" W, 119.86 feet;

THENCE N 58°56'40" W, 139.57 feet;

THENCE N 70°49'15" W, 235.48 feet;

THENCE N 35°09'57" W, 47.19 feet;

THENCE N 56°03'49" W, 119.28 feet;

THENCE N 69°10'55" W, 120.92 feet;

THENCE N 84°48'31" W, 54.17 feet;

THENCE S 42°26'38" W, 55.94 feet;

THENCE S 37°52'22" W, 153.88 feet;

THENCE S 05°12'17" E, 69.87 feet;

THENCE S 17°20'36" E, 90.27 feet;

THENCE S 32°12'06" E, 126.24 feet;

THENCE S 44°36'38" E, 101.11 feet;

THENCE S 56°19'01" E, 162.36 feet;

THENCE S 65°34'42" E, 91.46 feet;

THENCE S 84°51'30" E, 53.04 feet;

THENCE S 49°41'44" E, 60.71 feet;

THENCE S 34°15'32" E, 49.63 feet;

THENCE S 60°47'23" E, 108.77 feet;

THENCE S 78°33'24" E, 49.92 feet;

THENCE S 38°06'05" E, 72.41 feet;

THENCE S 64°20'56" E, 39.49 feet;

THENCE S 72°28'14" E, 141.44 feet;

THENCE S 84°20'08" E, 67.83 feet;

THENCE N 82°09'29" E, 76.78 feet;

THENCE S 77°19'46" E, 67.65 feet, to the TRUE POINT OF BEGINNING.

Containing 11.84 acres, more or less.

See attached Exhibit "PA-2".

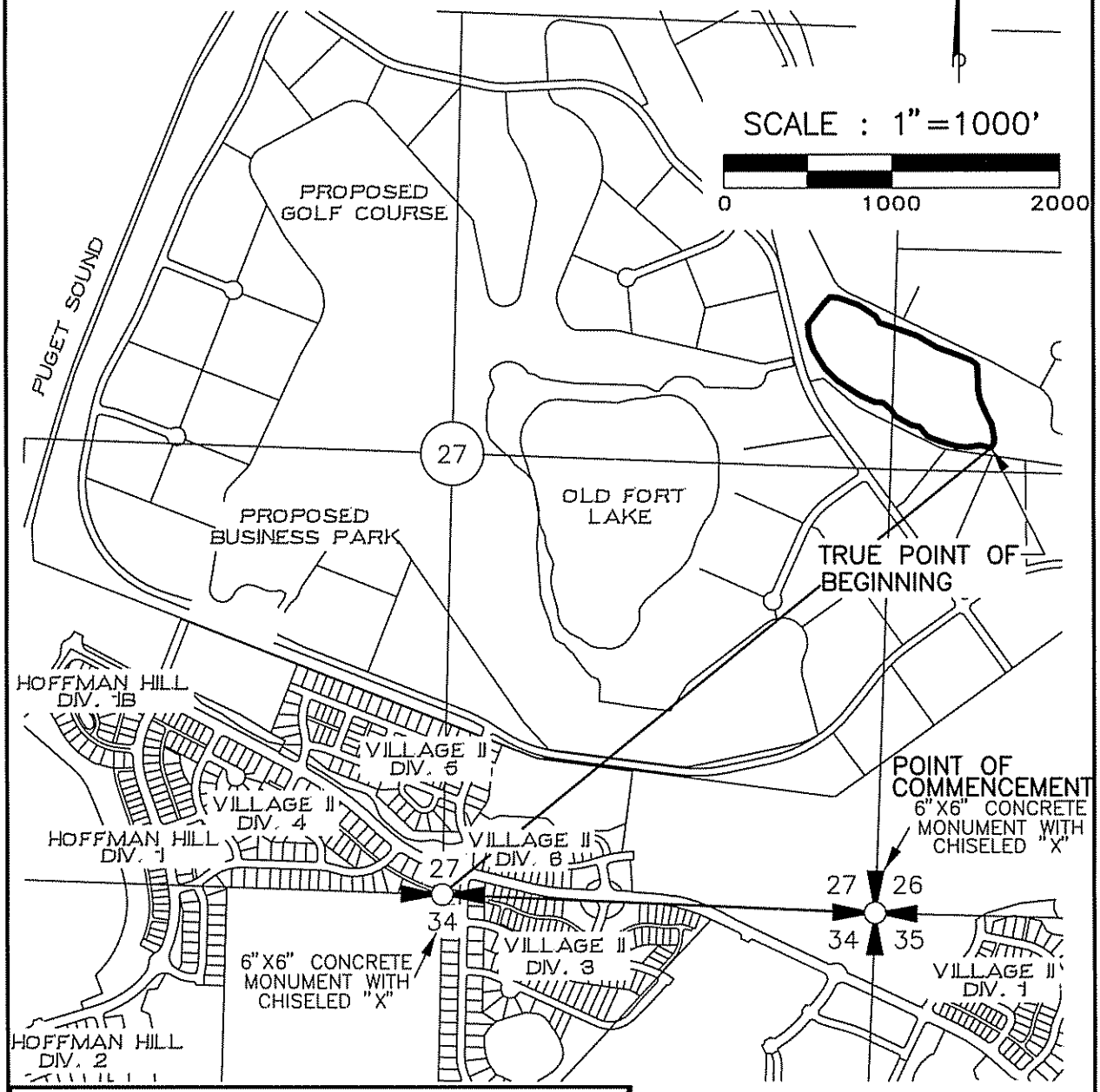
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 2.doc

EXHIBIT "PA-2"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 2

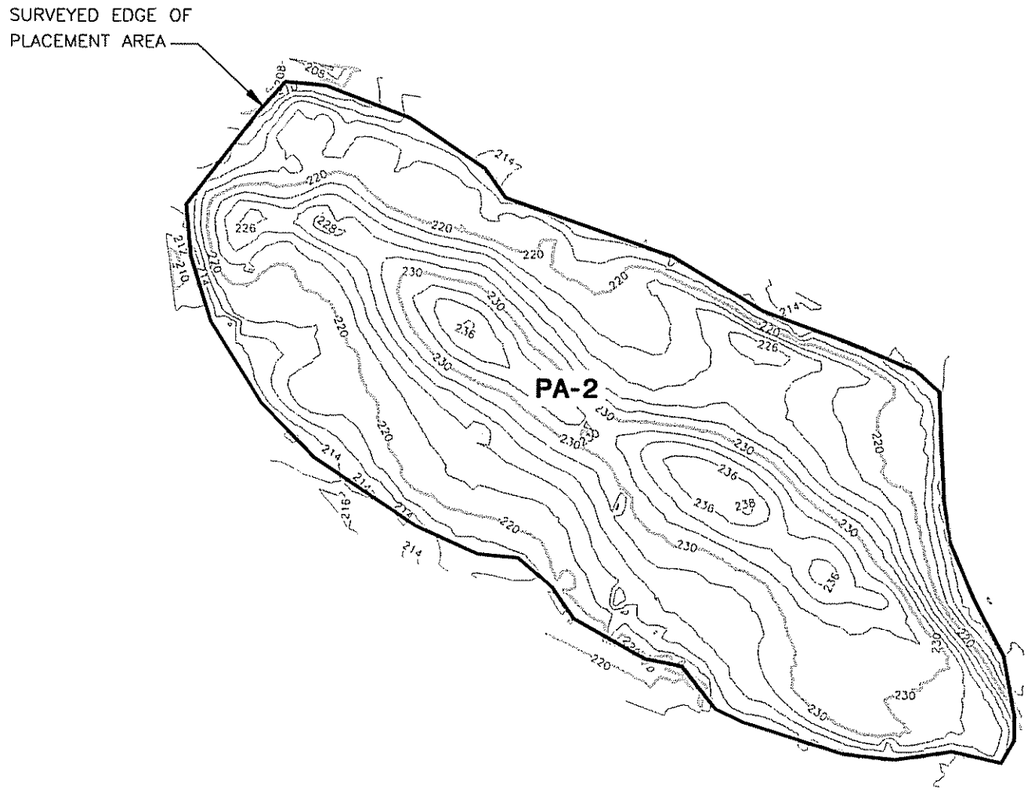
A PORTION OF SECTION 26 AND 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

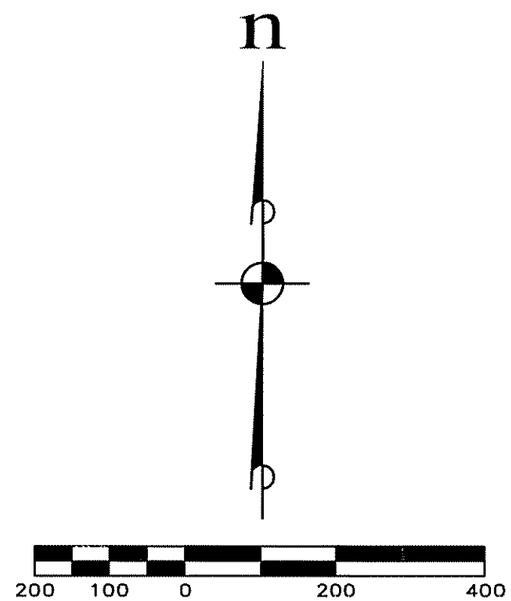


ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-2
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE NORTHWEST QUARTER OF SECTION 26, AND OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104
NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAY 2004.
2. EQUIPMENT USED: TOPCON HIPER LITE DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 2" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 2

CONSULTING ENGINEERS LLC
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO: 129-044-004 | DATE: 6-02-04
DRAWING: EXH-PA-2.DWG | DRAWN: JPC | SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 3A

That portion of the southeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 43°41'39" E, 1255.23 feet to the TRUE POINT OF BEGINNING

THENCE S 73°48'05" E, 179.94 feet;

THENCE S 60°55'57" E, 86.05 feet;

THENCE S 82°56'07" E, 108.08 feet;

THENCE S 78°20'30" E, 85.51 feet;

THENCE S 85°12'50" E, 186.34 feet;

THENCE N 07°24'41" E, 42.77 feet;

THENCE N 16°24'36" W, 71.75 feet;

THENCE N 17°24'41" E, 41.87 feet;

THENCE N 08°54'22" W, 104.79 feet;

THENCE N 37°17'01" W, 38.20 feet;

THENCE N 85°21'26" W, 167.30 feet;

THENCE N 82°53'50" W, 299.54 feet;

THENCE S 65°52'16" W, 85.05 feet;

THENCE S 16°37'17" W, 128.17 feet;

THENCE S 06°54'49" W, 40.27 feet to the TRUE POINT OF BEGINNING.

Containing 3.54 acres, more or less.

See attached Exhibit "PA-3A".

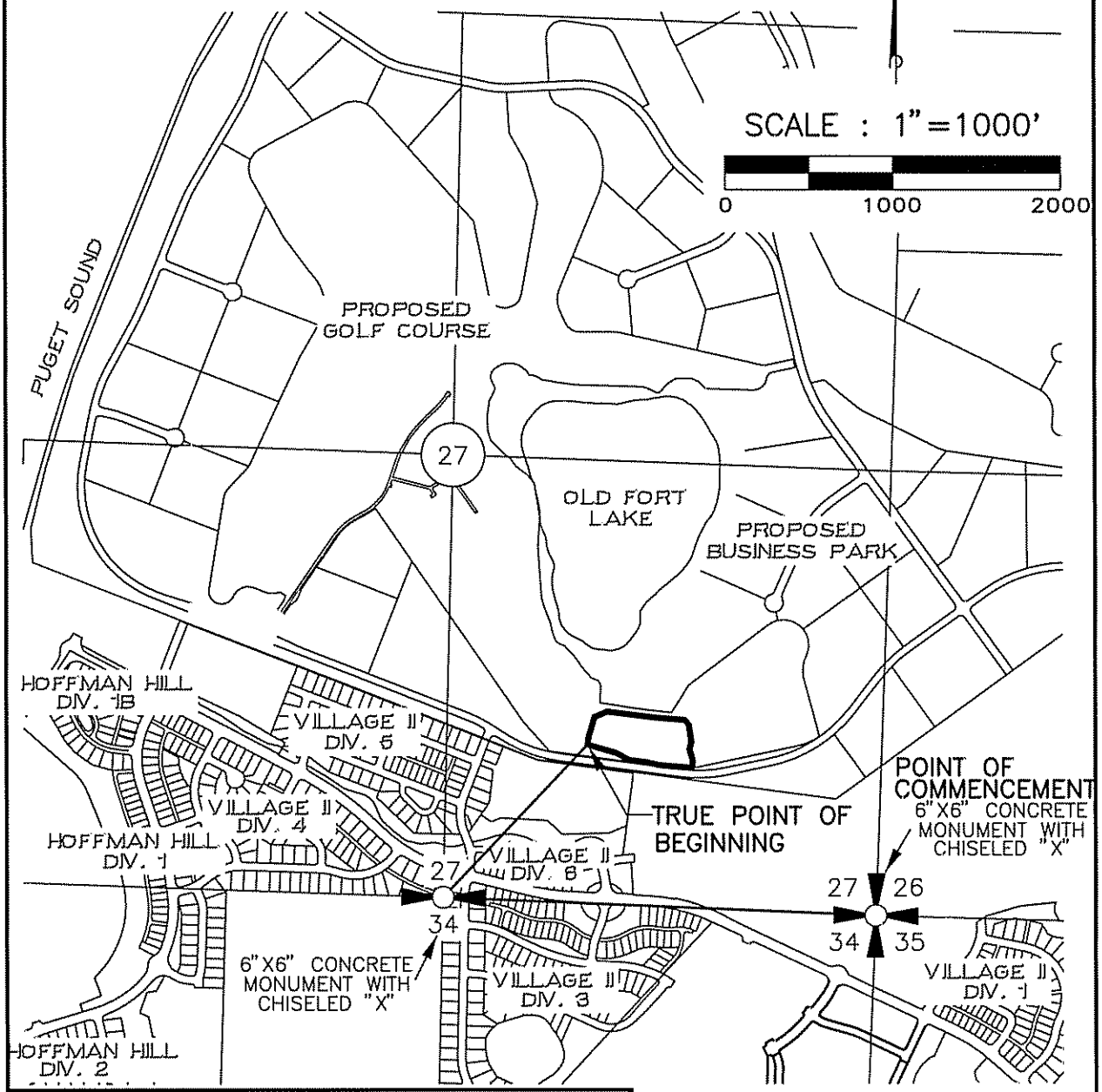
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 3A.doc

EXHIBIT "PA-3A"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 3A

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

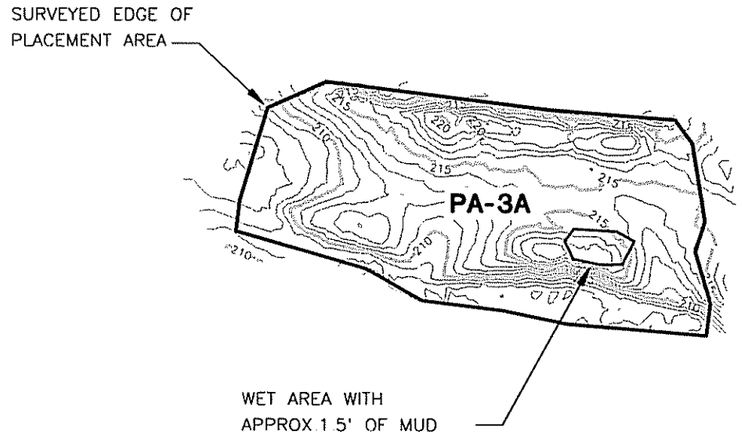
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

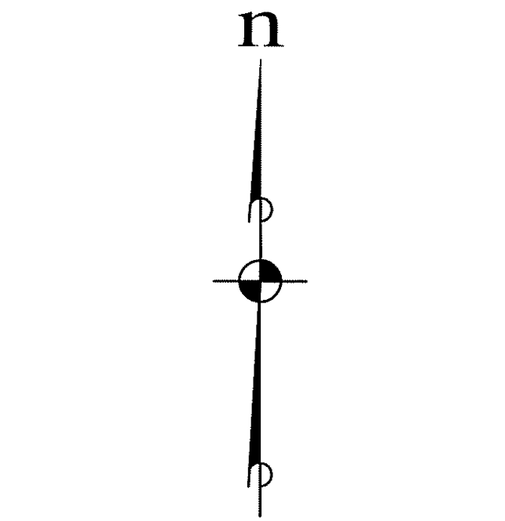
www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-3A
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104
NATIONAL GEODETIC VERTICAL DATUM, 1929

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1 SURVEY DATE: FEB. 25 - MAR 1, 2004.

2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.

3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 3A" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 3A

DRAWING: EXH-PA-3A.DWG

ESM CONSULTING ENGINEERS, LLC
11714 No. Creek Parkway N. Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO.: 129-044-004 | DATE: 6-02-04
DRAWN: JPC | SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 3B

That portion of the southeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 56°03'25" E, 1840.75 feet to the TRUE POINT OF BEGINNING;

THENCE S 73°33'46" E, 78.77 feet;

THENCE S 73°28'31" E, 79.01 feet;

THENCE S 71°41'07" E, 74.65 feet;

THENCE S 51°54'59" E, 54.30 feet;

THENCE S 06°13'56" W, 1.08 feet;

THENCE S 88°33'53" E, 106.93 feet;

THENCE N 71°43'22" E, 112.33 feet;

THENCE N 80°57'21" E, 88.51 feet;

THENCE N 69°21'51" E, 42.46 feet;

THENCE N 44°58'07" E, 44.09 feet;

THENCE N 05°04'48" W, 91.48 feet;

THENCE N 22°10'15" W, 64.86 feet;

THENCE N 10°12'26" E, 44.14 feet;

THENCE N 30°24'41" W, 140.38 feet;

THENCE N 08°33'47" E, 95.37 feet;

THENCE N 16°47'53" E, 66.02 feet;

THENCE N 16°52'26" W, 42.18 feet;

THENCE N 49°50'43" W, 18.22 feet;

THENCE N 66°08'24" W, 46.22 feet;

THENCE S 63°04'04" W, 49.52 feet;

THENCE S 29°36'18" W, 94.14 feet;

THENCE S 56°46'47" W, 85.39 feet;

THENCE S 33°58'07" W, 75.17 feet;

THENCE S 64°11'08" W, 36.64 feet;

THENCE N 82°31'00" W, 51.96 feet;

THENCE S 54°38'22" W, 93.68 feet;

THENCE S 53°26'14" W, 120.64 feet;

THENCE S 34°11'38" W, 130.15 feet;

THENCE S 20°44'31" E, 82.90 feet to the TRUE POINT OF BEGINNING.

Containing 5.68 acres, more or less.

See attached Exhibit "PA-3B".

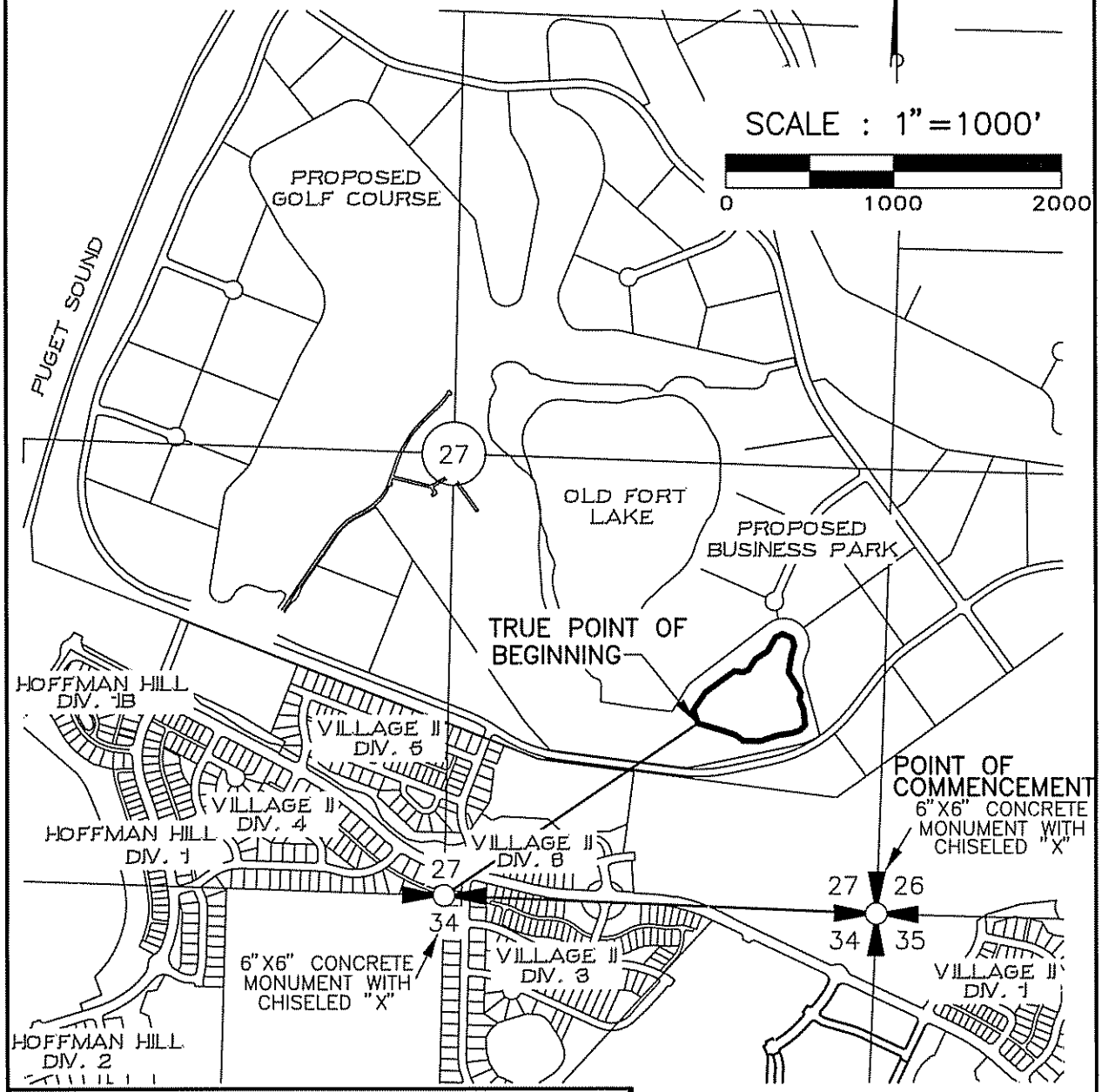
Written by: J.P.C.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 3B.doc

EXHIBIT "PA-3B"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 3B

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

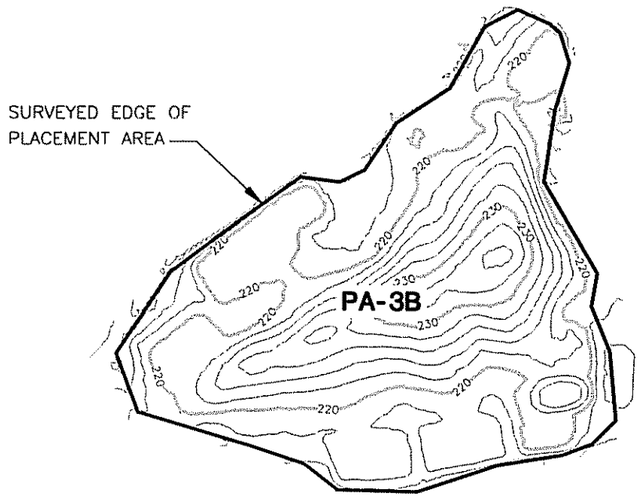
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

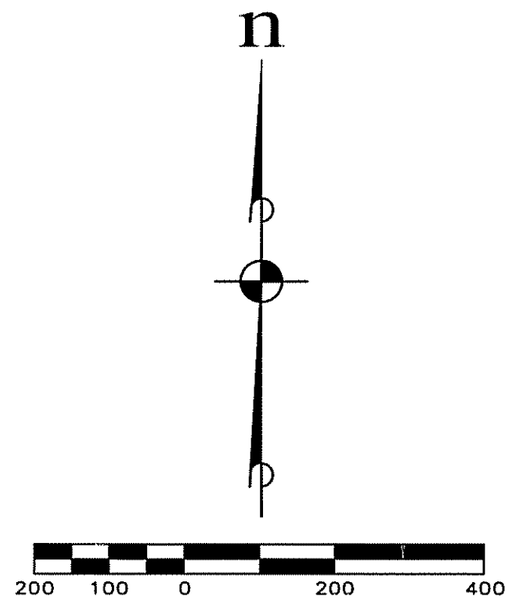
www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-3B
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 22, 2004.

2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.

3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 3B" BY ESM

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 3B

DRAWING: EXH-PA-3B.DWG

CONSULTING ENGINEERS LLC
ESM
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004 | DATE: 6-02-04
DRAWN: JPC | SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 4

Those portions of the southwest quarter and of the southeast quarter and of the northeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 1890.27 feet to the TRUE POINT OF BEGINNING;

THENCE S 62°13'38" E, 178.24 feet;

THENCE S 28°47'34" E, 103.21 feet;

THENCE S 06°00'53" E, 57.16 feet;

THENCE S 39°22'29" E, 172.09 feet;

THENCE S 85°14'29" E, 56.79 feet;

THENCE N 52°45'43" E, 50.50 feet;

THENCE N 06°17'42" W, 47.12 feet;

THENCE N 06°13'04" W, 87.97 feet;

THENCE N 22°37'08" E, 88.08 feet;

THENCE N 40°21'56" E, 62.22 feet;

THENCE N 13°38'20" E, 103.10 feet;

THENCE N 00°30'51" W, 74.94 feet;

THENCE N 57°32'56" W, 27.34 feet;

THENCE S 88°52'16" W, 20.10 feet;

THENCE N 02°49'47" W, 202.79 feet;

THENCE N 11°41'13" W, 35.06 feet;

THENCE N 29°30'29" W, 227.04 feet;

THENCE N 10°41'20" W, 50.58 feet;

THENCE N 40°04'38" W, 65.54 feet;

THENCE N 13°17'43" W, 69.80 feet;

THENCE N 41°09'14" W, 135.73 feet;

THENCE N 53°36'41" W, 56.92 feet;

THENCE S 52°41'50" W, 86.68 feet;

THENCE S 19°36'43" W, 42.74 feet;

THENCE S 31°51'38" W, 57.59 feet;

THENCE S 12°33'34" E, 30.24 feet;

THENCE S 37°21'56" E, 146.88 feet;

THENCE S 52°22'02" E, 45.21 feet;

THENCE S 04°38'39" E, 31.76 feet;

THENCE S 20°49'15" E, 121.65 feet;

THENCE S 52°50'58" W, 185.77 feet;

THENCE N 30°41'39" W, 46.14 feet;

THENCE N 63°03'08" W, 63.13 feet;

THENCE N 34°37'07" W, 145.76 feet;

THENCE N 79°13'46" W, 37.91 feet;

THENCE S 18°26'09" W, 70.06 feet;

THENCE S 10°47'51" E, 92.62 feet;

THENCE S 00°07'47" E, 74.10 feet;

THENCE S 33°52'37" E, 95.34 feet;

THENCE S 40°46'52" E, 70.82 feet;

THENCE S 18°22'08" E, 100.05 feet;

THENCE S 62°13'38" E, 34.35 feet to the TRUE POINT OF BEGINNING.

Containing: 9.13 acres, more or less.

See attached Exhibit "PA-4".

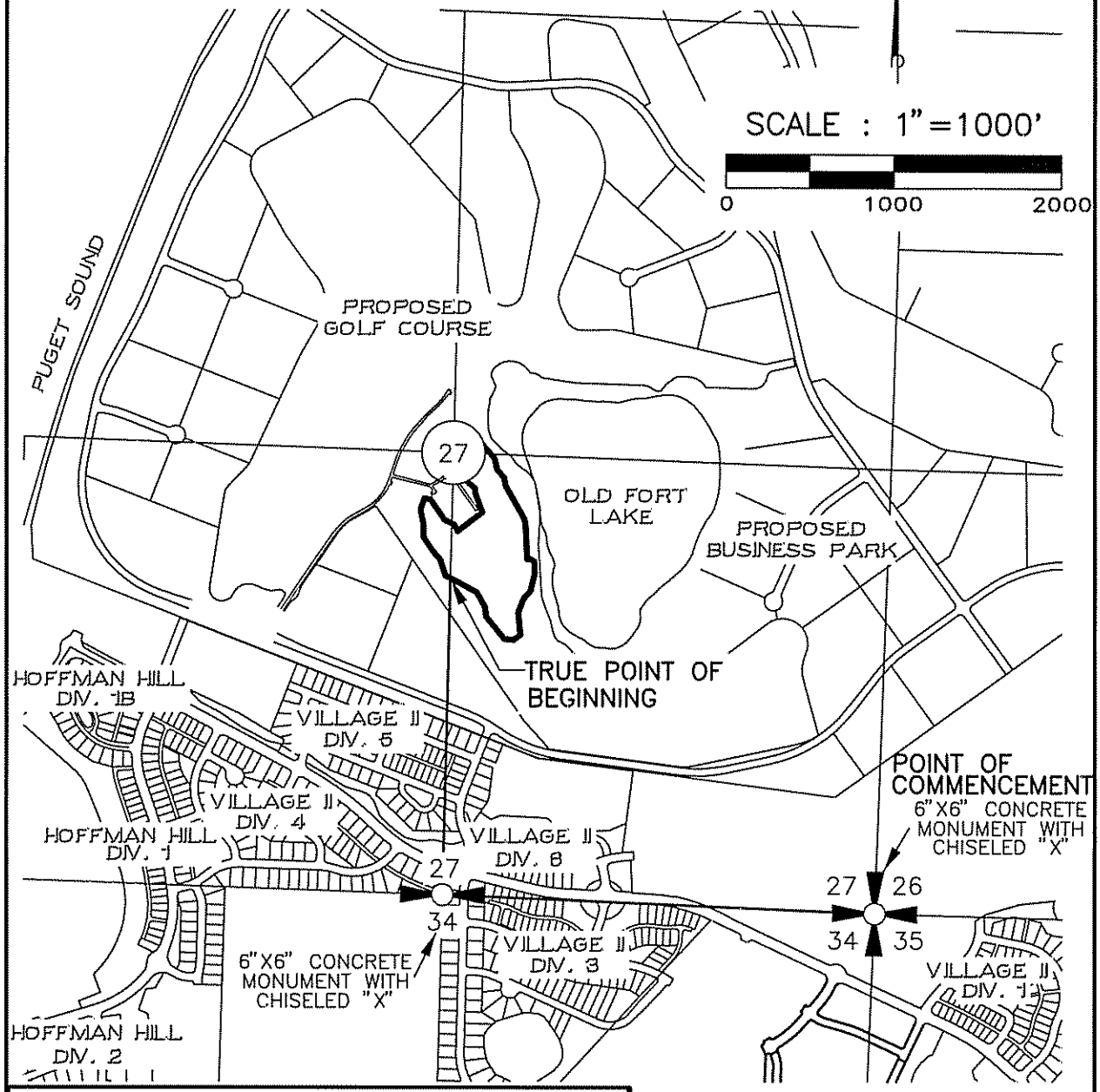
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 4.doc

EXHIBIT "PA-4"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 4

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

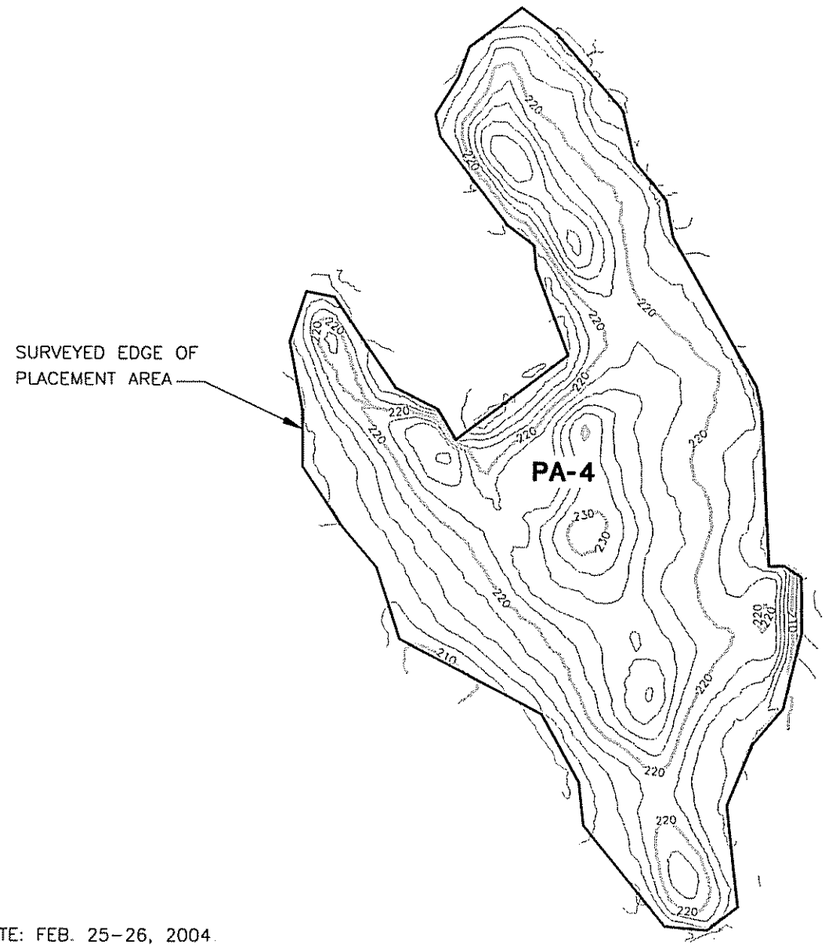
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

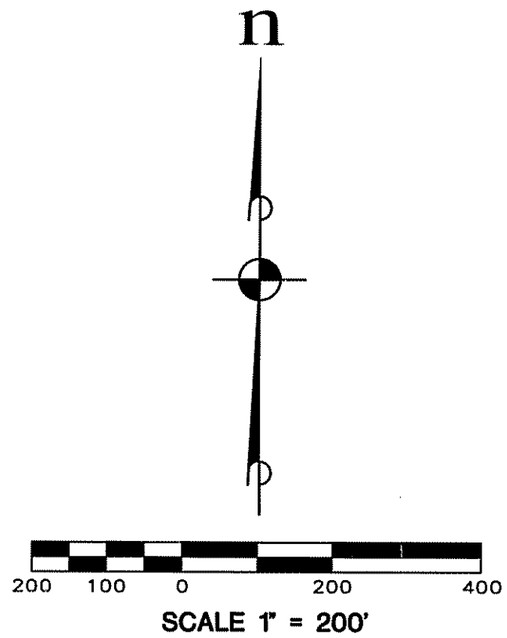
www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-4
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHWEST QUARTER AND OF THE SOUTHEAST QUARTER AND OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: FEB. 25-26, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 4" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 4

CONSULTING ENGINEERS LLC
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004 | DATE: 6-02-04
DRAWN: JPC | SHEET 1 OF 1
DRAWING: ESM-PA-4.DWG

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 5

Those portions of the southwest quarter and of the northwest quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 29°31'59" W, 2147.37 feet to the TRUE POINT OF BEGINNING;

THENCE N 31°32'00" E, 77.79 feet;

THENCE N 23°35'03" W, 66.87 feet;

THENCE N 09°15'44" E, 36.65 feet;

THENCE N 45°45'40" E, 61.98 feet;

THENCE N 78°06'03" E, 48.84 feet;

THENCE N 36°20'39" E, 44.00 feet;

THENCE N 15°18'13" E, 90.90 feet;

THENCE N 53°50'05" E, 108.06 feet;

THENCE N 52°25'31" E, 43.55 feet;

THENCE N 70°58'51" E, 58.24 feet;

THENCE N 89°48'16" E, 56.30 feet;

THENCE N 37°23'45" E, 143.98 feet;

THENCE N 44°56'43" E, 90.16 feet;

THENCE N 23°11'16" E, 132.84 feet;

THENCE N 05°09'11" E, 152.33 feet;

THENCE N 04°11'06" E, 77.30 feet;

THENCE N 03°57'53" W, 49.57 feet;

THENCE N 26°46'10" E, 57.22 feet;

THENCE N 07°11'58" W, 58.25 feet;

THENCE N 23°31'24" E, 145.89 feet;

THENCE N 10°48'25" E, 26.39 feet;

THENCE N 16°53'17" W, 30.42 feet;

THENCE N 37°21'34" W, 87.86 feet;

THENCE N 37°56'39" W, 114.48 feet;

THENCE N 73°56'19" W, 35.17 feet;

THENCE S 26°37'27" W, 47.34 feet;

THENCE S 32°28'16" W, 54.79 feet;

THENCE S 25°24'03" W, 83.41 feet;

THENCE S 64°41'07" W, 29.28 feet;

THENCE N 71°46'36" W, 32.87 feet;

THENCE N 35°38'28" W, 35.58 feet;

THENCE N 86°53'56" W, 32.40 feet;

THENCE S 83°32'52" W, 34.39 feet;

THENCE S 31°06'15" W, 39.19 feet;

THENCE S 00°01'34" E, 50.52 feet;

THENCE S 02°32'32" E, 101.38 feet;

THENCE S 23°22'07" W, 39.76 feet;

THENCE S 73°04'32" W, 72.97 feet;

THENCE S 23°21'32" W, 76.20 feet;

THENCE S 23°48'35" W, 92.17 feet;

THENCE S 45°41'57" W, 50.20 feet;

THENCE S 20°42'36" W, 52.26 feet;

THENCE S 10°14'32" W, 86.16 feet;

THENCE S 01°44'54" E, 112.40 feet;

THENCE S 04°01'02" W, 65.13 feet;

THENCE S 34°44'54" W, 53.37 feet;

THENCE S 65°51'15" W, 54.35 feet;

THENCE S 87°08'08" W, 114.71 feet;

THENCE S 00°41'00" E, 152.05 feet;

THENCE S 46°59'53" E, 104.12 feet;

THENCE S 02°33'25" W, 49.57 feet;

THENCE S 30°56'59" W, 141.63 feet;

THENCE S 12°46'25" W, 53.31 feet;

THENCE S 30°55'41" E, 38.88 feet;

THENCE S 56°36'23" E, 106.61 feet;

THENCE S 84°55'31" E, 35.69 feet to the TRUE POINT OF BEGINNING.

Containing 12.47 acres, more or less.

See attached Exhibit "PA-5".

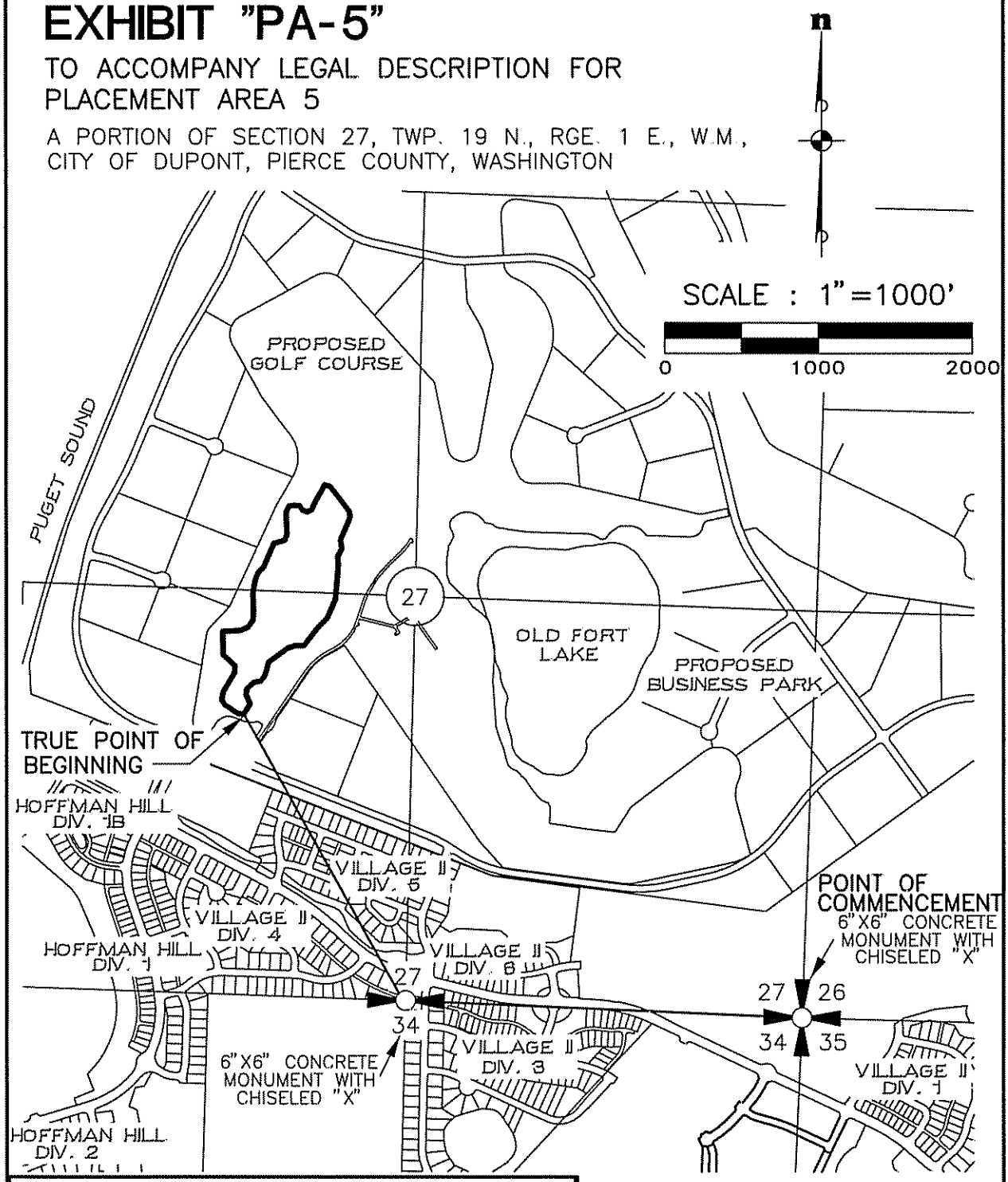
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 5.doc

EXHIBIT "PA-5"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 5

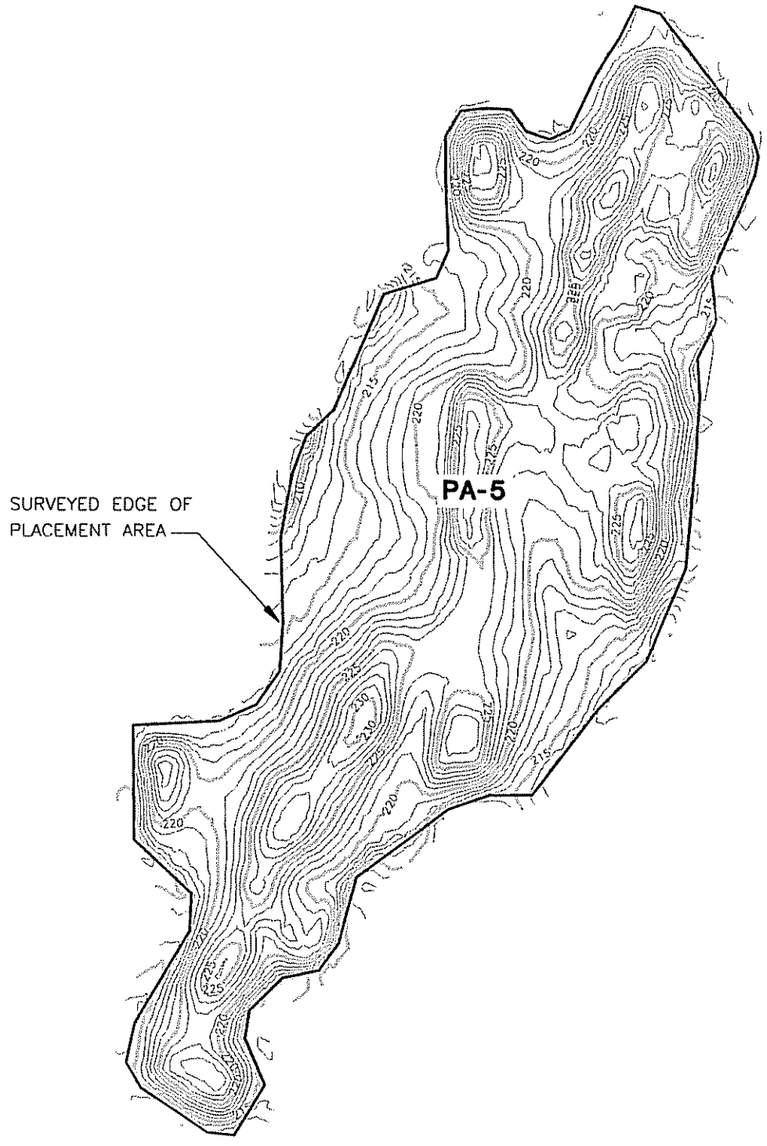
A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-5
DATE : 06-02-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHWEST QUARTER AND OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.



n

200 100 0 200 400

SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: FEB. 24-25, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 5" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 5

CONSULTING ENGINEERS LLC
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004 | DATE: 6-02-04
DRAWN: JPC | SHEET 1 OF 1
DRAWING: ESM-PA-5.DWG

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 6

That portion of the northeast quarter and of the northwest quarter of Section 27, Township 19 North, Range 1 East, W.M., in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 3703.57 feet to the TRUE POINT OF BEGINNING;

THENCE N 35°17'01" E, 25.89 feet;

THENCE N 00°18'10" W, 42.41 feet;

THENCE N 25°19'22" W, 62.99 feet;

THENCE N 13°41'45" W, 51.31 feet;

THENCE N 16°18'43" E, 53.95 feet;

THENCE N 29°00'51" E, 45.53 feet;

THENCE N 04°32'31" W, 60.35 feet;

THENCE N 26°01'02" W, 52.47 feet;

THENCE N 36°26'46" W, 51.07 feet;

THENCE N 69°32'53" W, 94.89 feet;

THENCE N 72°51'07" W, 53.24 feet;

THENCE N 49°51'30" W, 162.19 feet;

THENCE N 39°17'32" W, 53.96 feet;

THENCE N 54°48'42" W, 51.17 feet;

THENCE N 45°58'40" W, 56.64 feet;

THENCE N 29°00'03" W, 102.24 feet;

THENCE N 53°08'50" W, 97.61 feet;

THENCE N 08°41'14" W, 39.89 feet;

THENCE N 44°50'13" W, 94.45 feet;

THENCE N 85°00'39" W, 58.52 feet;

THENCE S 57°59'22" W, 54.30 feet;

THENCE S 66°56'06" W, 114.14 feet;

THENCE S 46°05'18" W, 95.87 feet;

THENCE S 53°31'16" W, 87.02 feet;

THENCE S 04°53'05" W, 103.61 feet;

THENCE S 00°38'08" E, 93.44 feet;

THENCE S 36°39'50" E, 111.54 feet;

THENCE S 17°45'53" E, 220.59 feet;

THENCE S 38°17'29" E, 53.26 feet;

THENCE S 02°51'47" E, 44.02 feet;

THENCE S 23°12'40" E, 58.08 feet;

THENCE S 10°43'06" E, 114.33 feet;

THENCE S 02°57'04" W, 66.79 feet;

THENCE S 26°43'41" E, 41.56 feet;

THENCE S 37°17'12" E, 51.98 feet;

THENCE S 46°25'12" E, 154.43 feet;

THENCE S 44°19'04" E, 100.28 feet;

THENCE S 60°12'58" E, 77.73 feet;

THENCE N 45°36'45" E, 27.64 feet;

THENCE N 00°40'07" E, 81.92 feet;

THENCE N 06°31'17" E, 55.46 feet;

THENCE N 15°27'09" W, 64.61 feet;

THENCE N 39°40'50" W, 55.76 feet;

THENCE N 15°22'37" W, 69.84 feet;

THENCE N 08°44'27" E, 87.17 feet;

THENCE N 34°59'45" E, 29.17 feet;

THENCE N 81°56'35" E, 31.18 feet;

THENCE S 66°57'54" E, 35.45 feet;

THENCE S 43°43'32" E, 75.65 feet;

THENCE S 58°38'35" E, 86.48 feet;

THENCE S 87°12'25" E, 55.24 feet;

THENCE N 79°43'30" E, 106.52 feet;

THENCE N 58°11'12" E, 61.61 feet;

THENCE N 50°06'43" E, 55.49 feet;

THENCE N 35°17'01" E, 12.12 feet to the TRUE POINT OF BEGINNING.

Containing: 16.6 acres, more or less.

See attached Exhibit "PA-6".

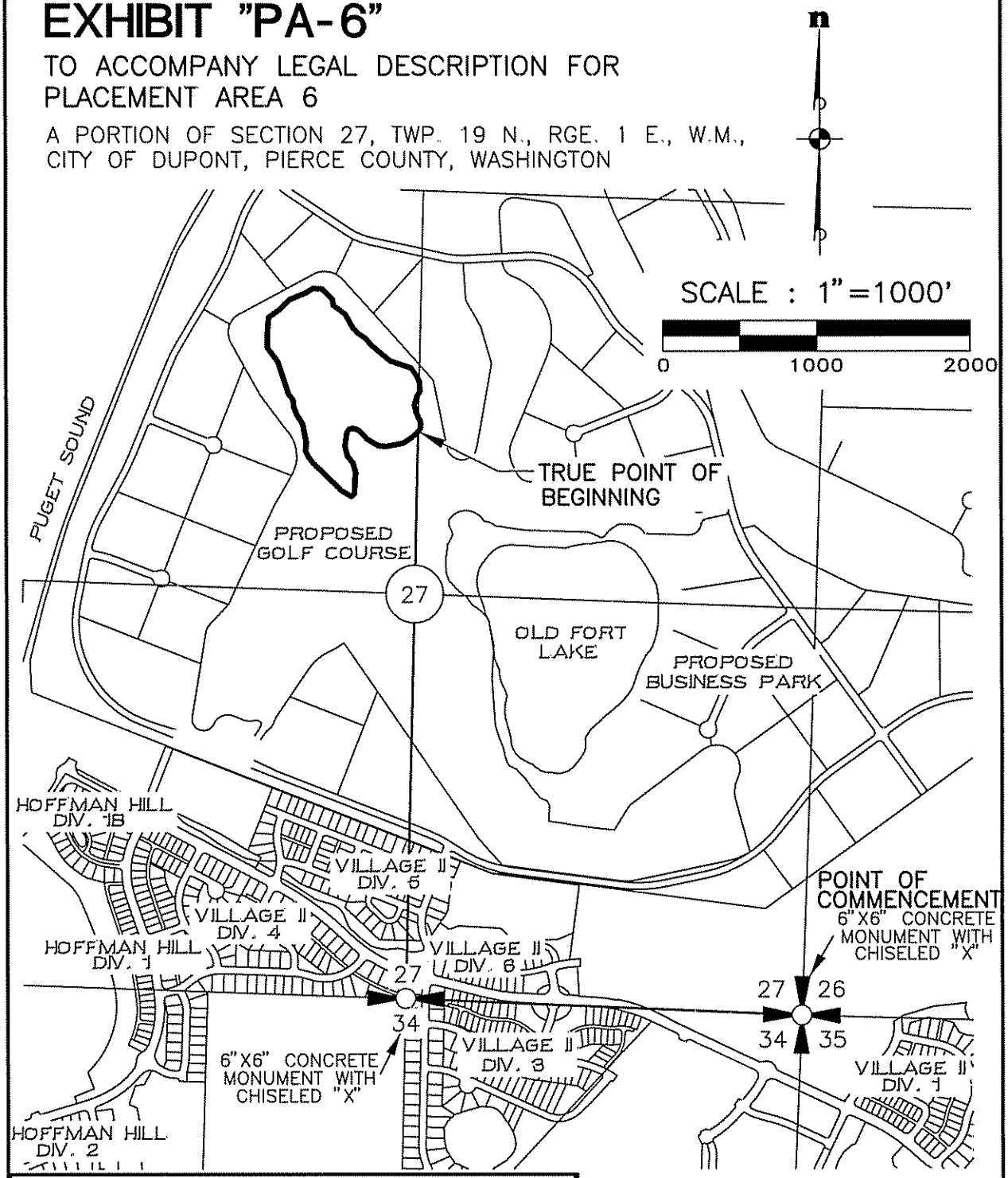
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 6.doc

EXHIBIT "PA-6"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 6

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-6
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE NORTHEAST QUARTER AND OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

n

200 100 0 200 400

SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: APRIL 1, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 6" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 6

DRAWING: EXH-PA-6.DWG

ESM CONSULTING ENGINEERS, LLC
11714 No. Creek Parkway N. Suite 101 Bothell, WA 98011
FEDERAL WAY (253) 838-6113 BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004 | DATE: 6-02-04
DRAWN: JPC | SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

EXHIBIT "A"

LEGAL DESCRIPTION FOR PLACEMENT AREA 7

That portion of the northeast quarter Section 27, Township 19 North, Range 1 East, Willamette Meridian., in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 3986.79 feet;

THENCE S 88°36'07" E, 637.27 feet to the TRUE POINT OF BEGINNING;

THENCE N 30°12'00" E, 66.61 feet;

THENCE N 23°34'40" E, 164.84 feet;

THENCE N 27°48'04" E, 52.37 feet;

THENCE N 01°07'45" E, 193.19 feet;

THENCE N 23°41'28" W, 221.27 feet;

THENCE N 53°27'00" W, 101.80 feet;

THENCE N 61°09'44" W, 61.16 feet;

THENCE N 36°23'18" W, 82.59 feet;

THENCE N 89°49'36" W, 43.66 feet;

THENCE S 82°56'41" W, 78.86 feet;

THENCE S 13°47'53" W, 66.23 feet;

THENCE S 17°58'08" E, 50.58 feet;

THENCE S 33°45'48" E, 72.97 feet;

THENCE S 07°09'41" E, 159.32 feet;

THENCE S 14°04'25" E, 73.65 feet;

THENCE S 29°06'44" E, 49.57 feet;

THENCE S 17°21'33" E, 138.77 feet;

THENCE S 12°32'43" E, 122.80 feet;

THENCE S 22°37'29" E, 70.56 feet;

THENCE S 50°25'28" E, 41.83 feet;

THENCE S 78°22'12" E, 38.59 feet, to the TRUE POINT OF BEGINNING.

Containing 4.38 acres, more or less.

See attached Exhibit "PA-7".

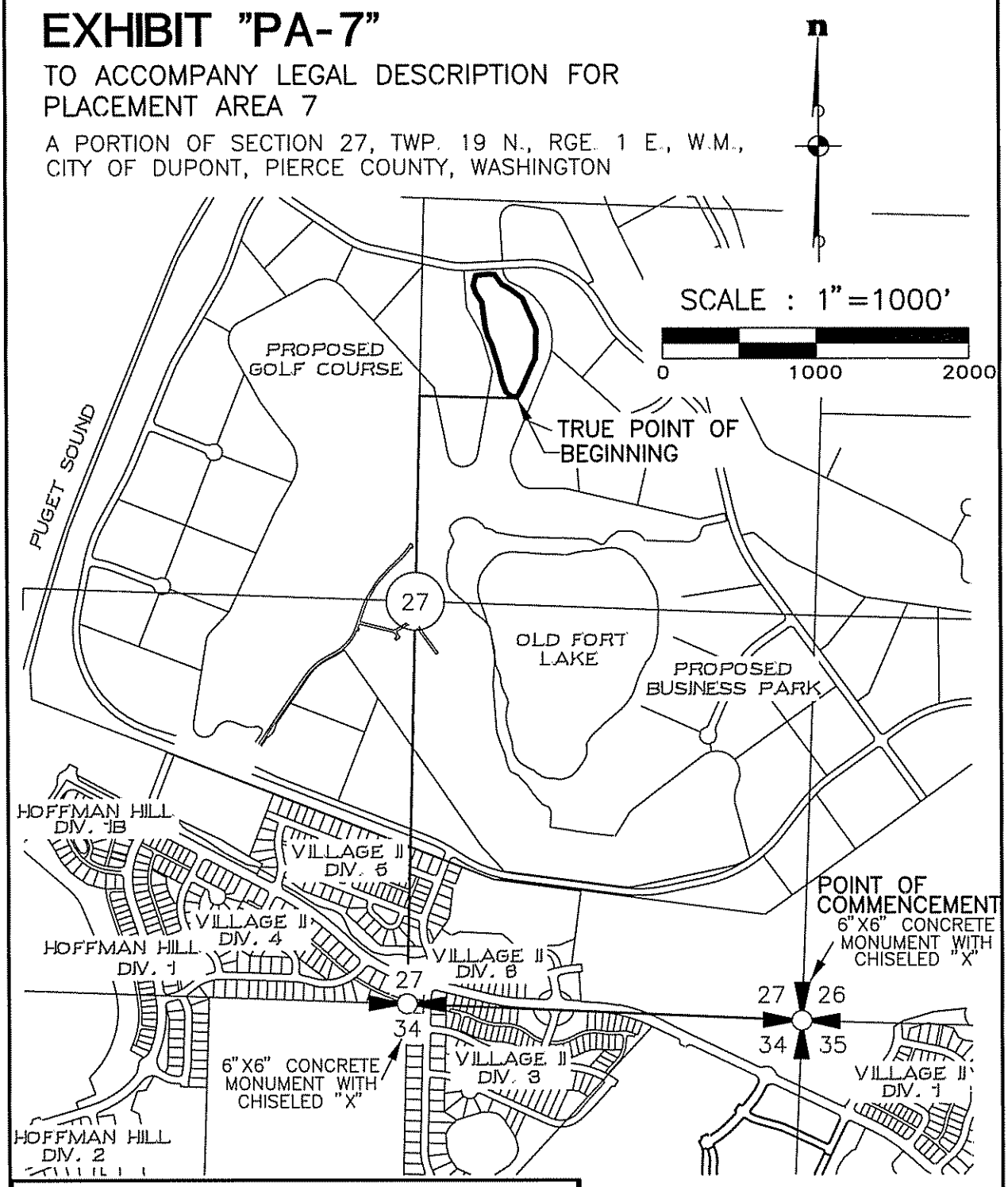
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 7.doc

EXHIBIT "PA-7"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 7

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

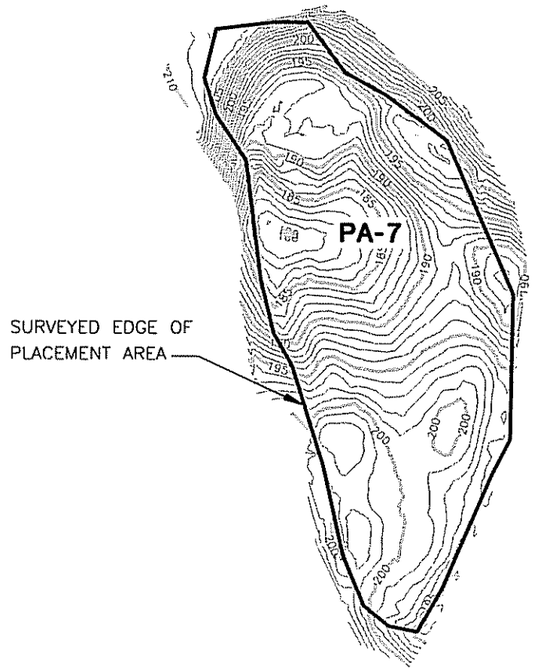
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

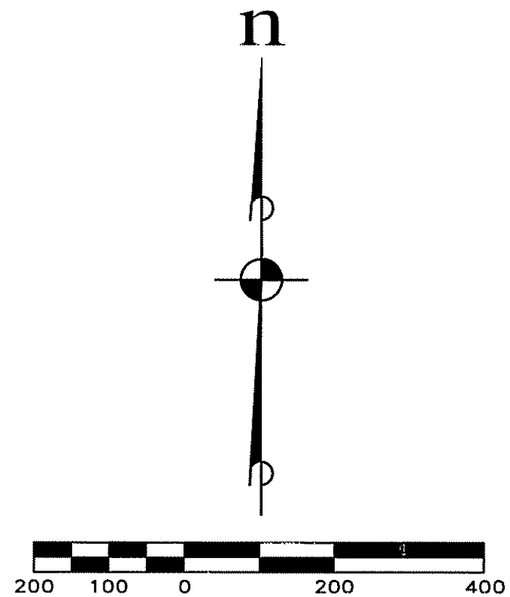
www.esmcivil.com

Civil Engineering | Public Works
Land Surveying | Project Management
Land Planning | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-7
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 1-4, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 1A" BY ESM

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 7

CONSULTING ENGINEERS, LLC
ESM
11714 No. Creek Parkway N.
Suite 101
Bothell, WA 98011
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

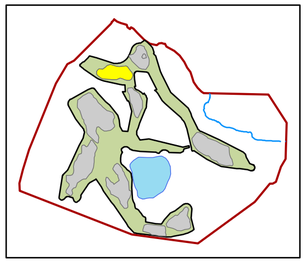
JOB NO. 123-044-004 | DATE: 6-02-04
DRAWN: JPC | SHEET 1 OF 1
DRAWING: EXH-PA-7.DWG

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 35 70 140
Feet

PIONEER
TECHNOLOGIES CORPORATION

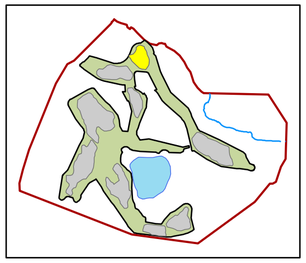
Golf Course
Placement Area 01
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.1

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 25 50 100
Feet

PIONEER
TECHNOLOGIES CORPORATION

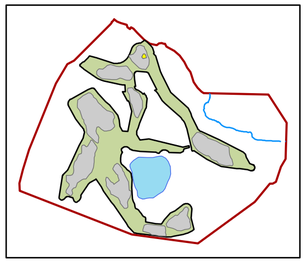
Golf Course
Placement Area 02A
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.2A

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 25 50 100
Feet

PIONEER
TECHNOLOGIES CORPORATION

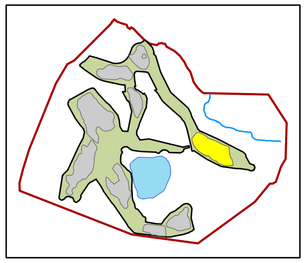
Golf Course
Placement Area 02B
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.2B

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth selection

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches

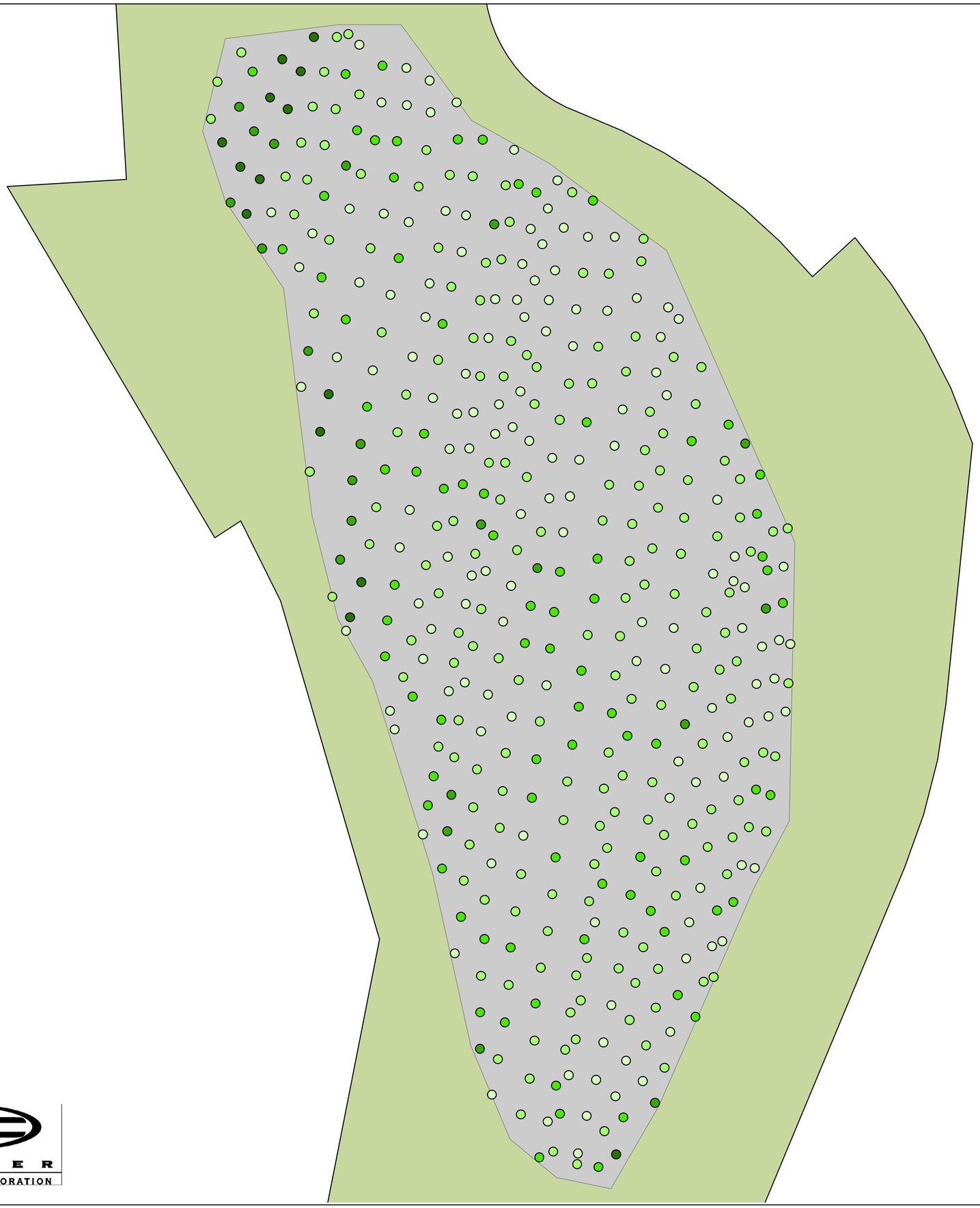


N
W E
S

0 35 70 140
Feet

PIONEER
TECHNOLOGIES CORPORATION

Golf Course
Placement Area 03
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.3

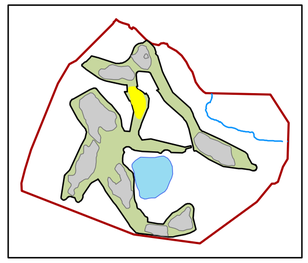


Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 30 60 120
Feet

PIONEER TECHNOLOGIES CORPORATION

Golf Course
Placement Area 04
Ecological Cap

Former DuPont Works Site
March 2007

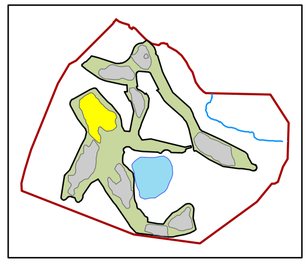
Figure F-2.4

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 50 100 200 Feet

PIONEER TECHNOLOGIES CORPORATION

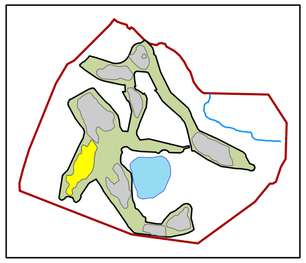
Golf Course
Placement Area 05
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.5

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 60 120 240
Feet

PIONEER
TECHNOLOGIES CORPORATION

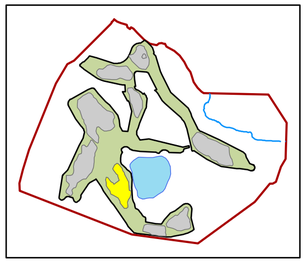
Golf Course
Placement Area 06
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.6

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 50 100 200
Feet

PIONEER
TECHNOLOGIES CORPORATION

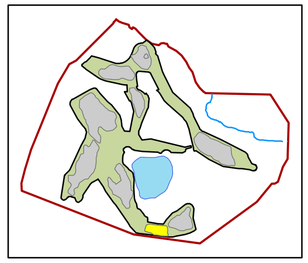
Golf Course
Placement Area 07
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.7

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 25 50 100 Feet

PIONEER TECHNOLOGIES CORPORATION

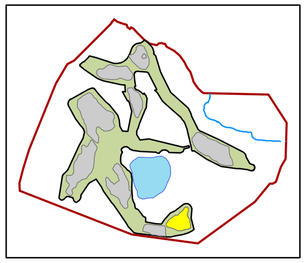
Golf Course
Placement Area 08A
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.8A

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Ecological Cap Depth

- < 12 Inches
- 12 - 15 Inches
- 15 - 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- > 24 Inches



N
W E
S

0 25 50 100 Feet

PIONEER TECHNOLOGIES CORPORATION

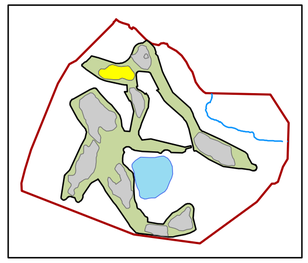
Golf Course
Placement Area 08B
Ecological Cap
Former DuPont Works Site
March 2007
Figure F-2.8B

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 35 70 140
Feet

PIONEER
TECHNOLOGIES CORPORATION

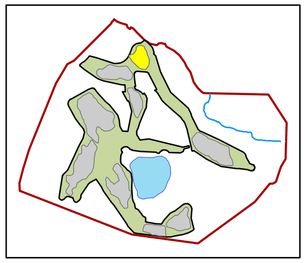
Golf Course
Placement Area 01
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.1

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 25 50 100 Feet

PIONEER TECHNOLOGIES CORPORATION

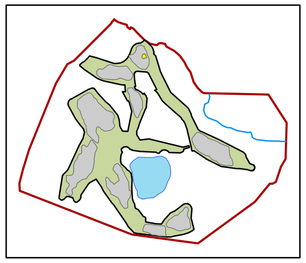
Golf Course
Placement Area 02A
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.2A

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 25 50 100
Feet

PIONEER TECHNOLOGIES CORPORATION

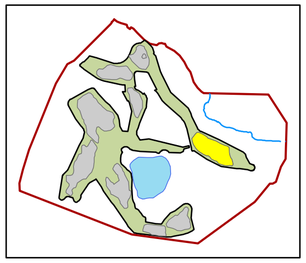
Golf Course
Placement Area 02B
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.2B

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 37.5 75 150
Feet

PIONEER
TECHNOLOGIES CORPORATION

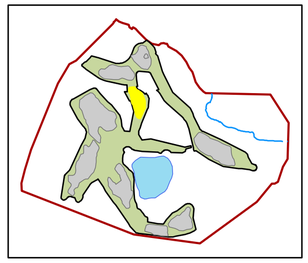
Golf Course
Placement Area 03
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.3

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 35 70 140 Feet

PIONEER TECHNOLOGIES CORPORATION

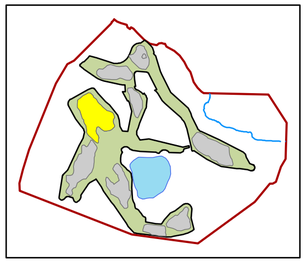
Golf Course
Placement Area 04
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.4

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 50 100 200 Feet

PIONEER TECHNOLOGIES CORPORATION

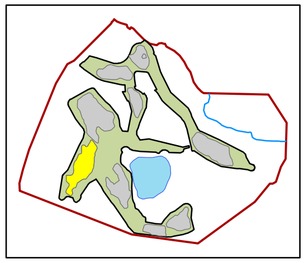
Golf Course
Placement Area 05
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.5

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 62.5 125 250 Feet

PIONEER TECHNOLOGIES CORPORATION

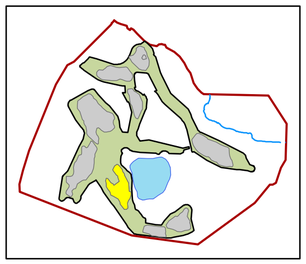
Golf Course
Placement Area 06
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.6

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 50 100 200 Feet

PIONEER TECHNOLOGIES CORPORATION

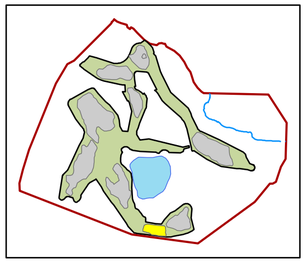
Golf Course
Placement Area 07
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.7

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 25 50 100 Feet

PIONEER TECHNOLOGIES CORPORATION

Golf Course
Placement Area 08A
Total Cap

Former DuPont Works Site
March 2007

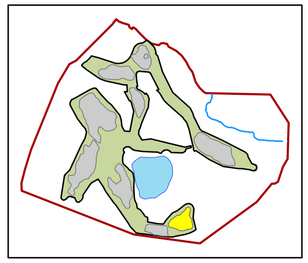
Figure F-3.8A

Legend

- Golf Course Placement Area
- Golf Course Boundary
- Consent Decree Boundary

Total Cap Depth

- < 18 Inches
- 18 - 21 Inches
- 21 - 24 Inches
- 24 - 27 Inches
- 27 - 30 Inches
- > 30 Inches



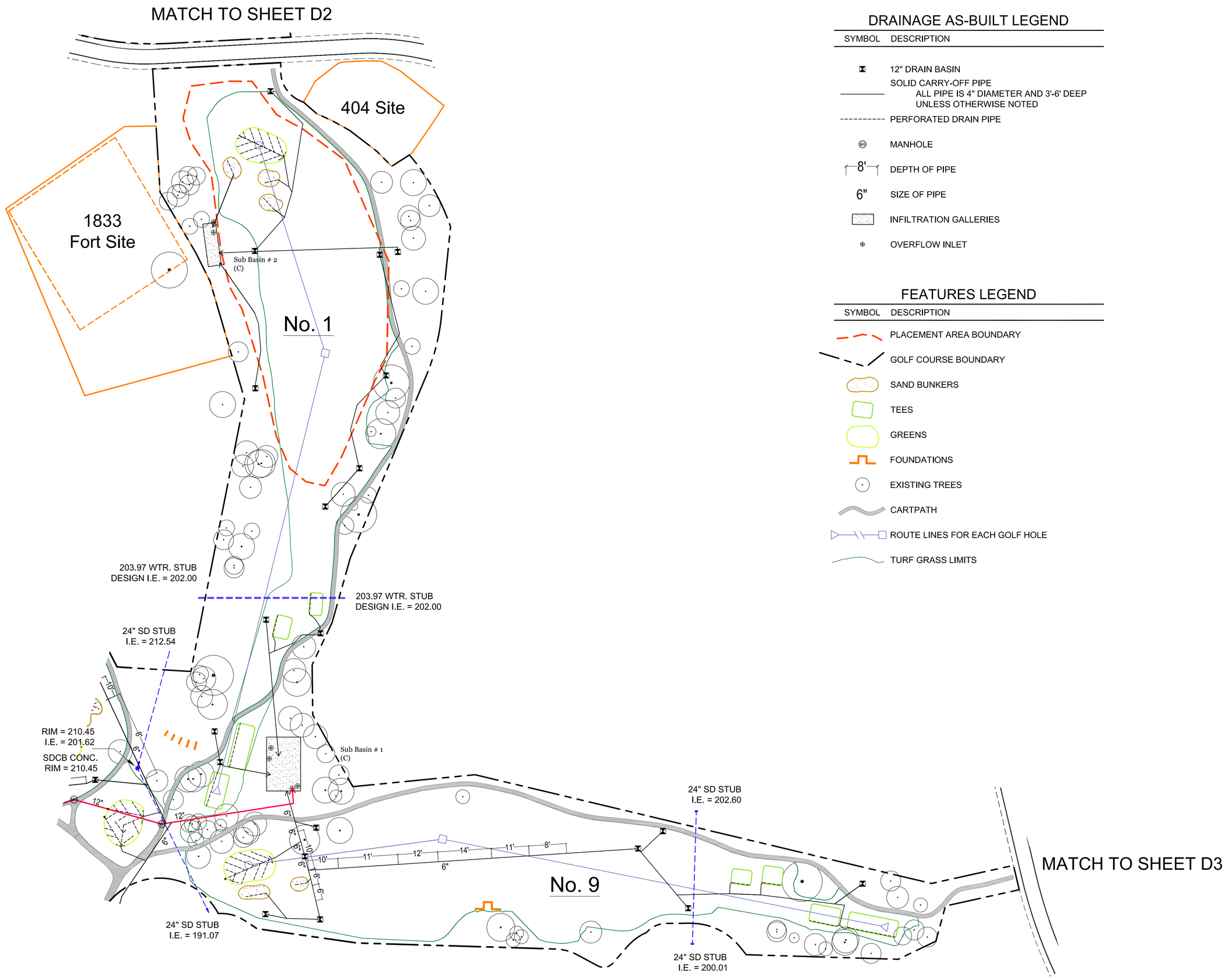
Note: The total cap is defined as the ecological + human health cap

N
W E
S

0 25 50 100 Feet

PIONEER TECHNOLOGIES CORPORATION

Golf Course
Placement Area 08B
Total Cap
Former DuPont Works Site
March 2007
Figure F-3.8B



DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

As-Built Drainage Plan Holes 1 & 9

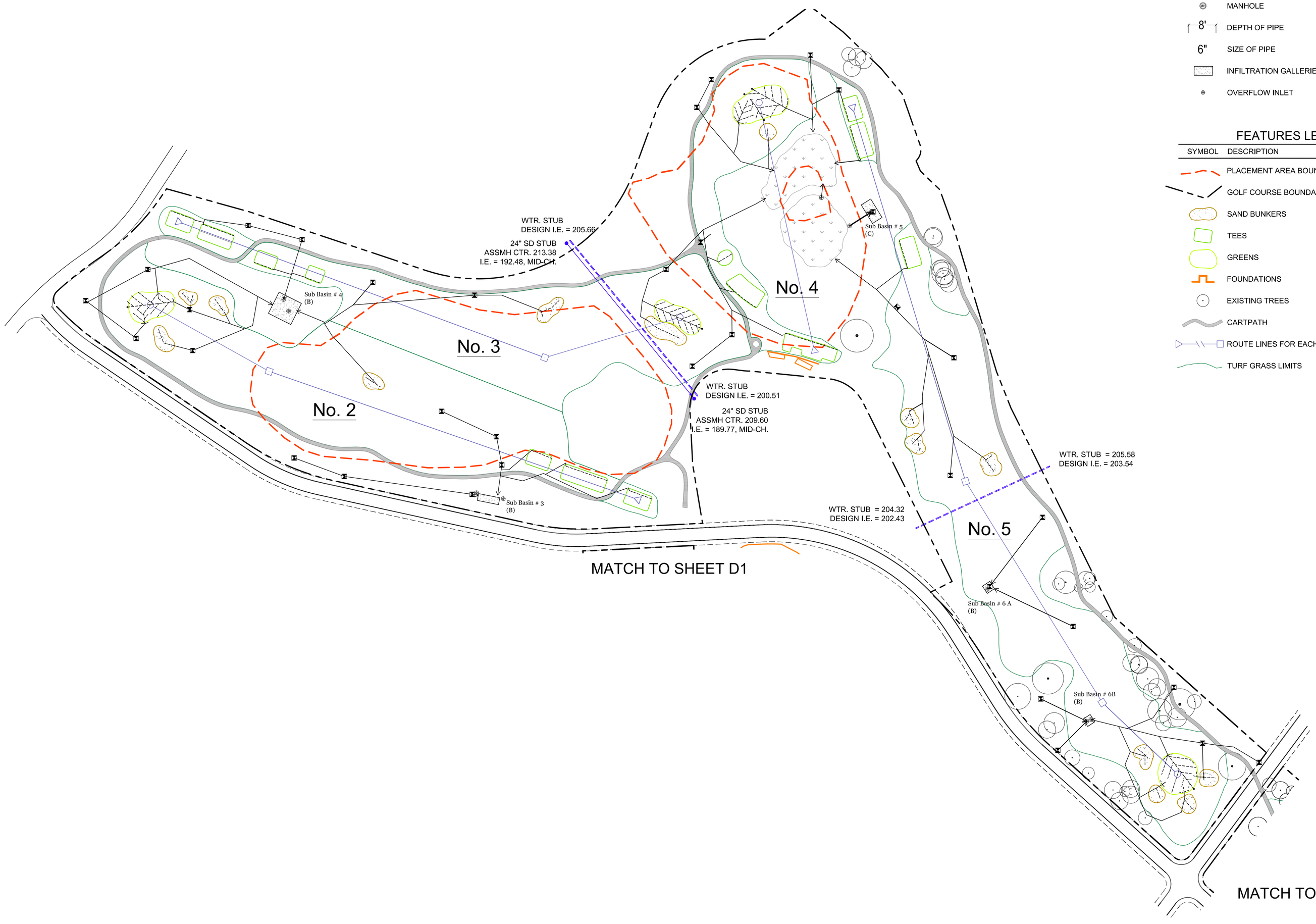
Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
D1 of D7



DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

As-Built Drainage Plan Holes 2,3,4 & 5

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
D2 of D7

Construction Record Drawing

DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

As-Built Drainage Plan Holes 6,7 & 8

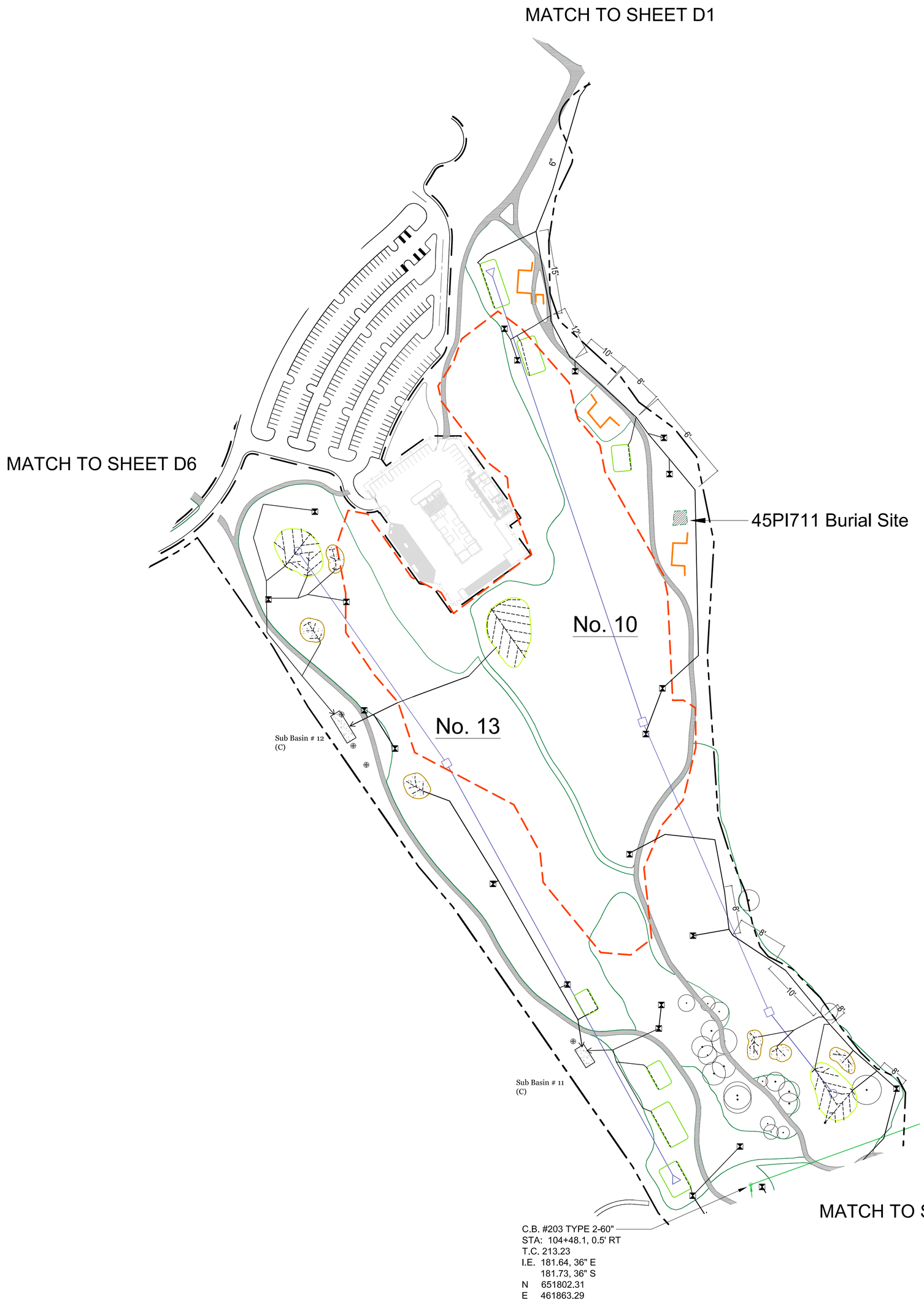
Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
D3 of D7



DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

As-Built Drainage Plan Holes 10 & 13

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

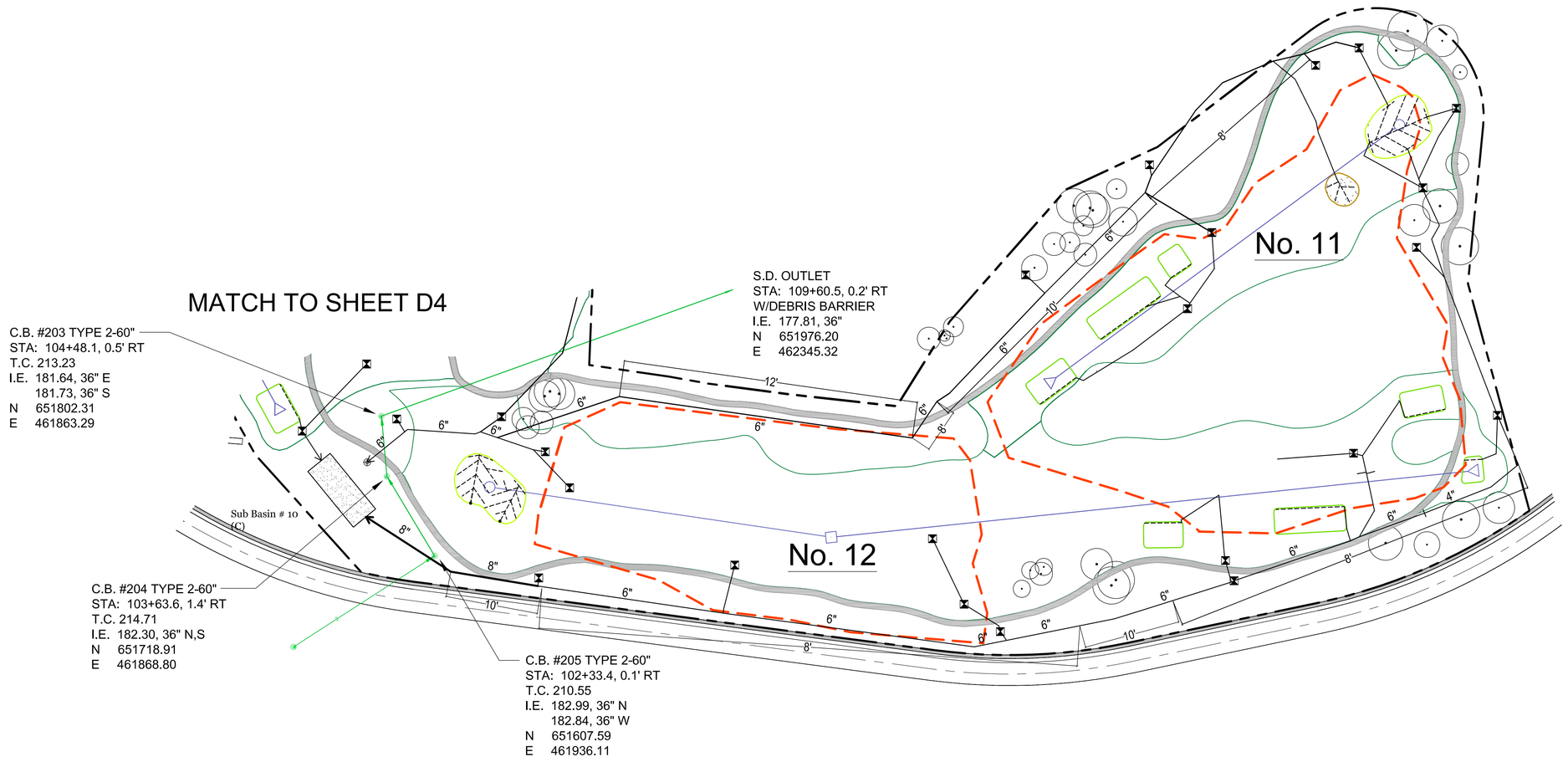
DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
D4 of D7

Construction Record Drawing



DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

As-Built Drainage Plan Holes 11 & 12

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

As-Built Drainage Plan Holes 14,15 & 16

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet D6 of D7

DRAINAGE AS-BUILT LEGEND

SYMBOL	DESCRIPTION
	12" DRAIN BASIN
	SOLID CARRY-OFF PIPE ALL PIPE IS 4" DIAMETER AND 3'-6' DEEP UNLESS OTHERWISE NOTED
	PERFORATED DRAIN PIPE
	MANHOLE
8'	DEPTH OF PIPE
6"	SIZE OF PIPE
	INFILTRATION GALLERIES
	OVERFLOW INLET

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

As-Built Drainage Plan Holes 17,18 & Practice Range

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
D7 of D7

Area Take-offs by Hole

Hole #	Greens	Tees - square feet				Bunkers	Turf Limits
	square ft.	champion	back	middle	forward	square ft.	acres
1	5,498	2,499	3,219	1,419	1,149	3,556	5.28
2	6,029	2,139	3,759		1,959	5,883	5.22
3	4,945	2,139	2,859	1,579	1,259	5,611	5.25
4	8,092	4,322		3,433	1,064	1,156	5.26
5	6,950	1,959	2,859		2,499	10,802	5.10
6	6,454	1,419	1,779		2,779	4,661	5.28
7	5,536	2,499	3,579		2,139	3,829	5.27
8	4,995	2,679	2,679		863	6,265	5.27
9	5,664	3,379	2,139	1,419	1,179	2,297	5.30
Sub-total	**54,163**	**23,034**	**22,872**	**7,850**	**14,890**	**44,060**	**47.23**
10	6,510	2,859	2,499		1,679	3,790	5.08
11	5,998	2,319	3,759		1,275	1,606	5.33
12	6,308	1,004	2,139	3,579	1,959		5.33
13	6,088	2,379	3,179	1,479	1,329	4,954	5.23
14	5,843	1,599	2,499		1,279	1,941	5.37
15	6,246	1,959	2,499	1,959	2,499	4,240	5.23
16	5,401	1,959	4,059		2,059	1,501	5.33
17	7,225	3,219	4,119		1,579	3,521	5.22
18	7,064	1,419	3,219	1,419	1,779	9,746	5.11
Sub-total	**56,683**	**18,716**	**27,971**	**8,436**	**15,437**	**31,299**	**47.23**
Practice	15,885	43,947	9,045			9,353	3.57
Total	**140,055**	**85,697**	**59,888**	**16,286**	**30,327**	**84,712**	**98.03**

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

Dupont Golf Course Scorecard

Hole	Champion	Pro	Back	Middle	Forward
1	445	421	406	330	313
2	405	405	369	352	323
3	408	385	372	336	297
4	198	188	149	141	122
5	579	561	547	467	455
6	208	208	184	161	150
7	435	390	374	344	334
8	568	555	532	520	477
9	431	414	390	351	331
Out	3,677	3,527	3,323	3,002	2,802
10	566	551	514	502	433
11	201	201	162	145	122
12	460	442	391	374	315
13	464	439	426	403	339
14	195	195	161	150	118
15	441	417	405	370	309
16	558	520	510	500	465
17	401	386	335	316	281
18	470	452	437	377	346
In	3,756	3,603	3,341	3,137	2,728
Total	7,433	7,130	6,664	6,139	5,530

Construction Record Drawing

Construction Record Drawing
Grassing Plan
Back Nine

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: November 14, 2005
Scale: 1"=150.0'
Job Number: 204

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

Area Take-offs by Hole

Hole #	Greens	Tees - square feet				Bunkers	Turf Limits
	square ft.	champion	back	middle	forward	square ft.	acres
1	5,498	2,499	3,219	1,419	1,149	3,556	5.28
2	6,029	2,139	3,759		1,959	5,883	5.22
3	4,945	2,139	2,859	1,579	1,259	5,611	5.25
4	8,092	4,322		3,433	1,064	1,156	5.26
5	6,950	1,959	2,859		2,499	10,802	5.10
6	6,454	1,419	1,779		2,779	4,661	5.28
7	5,536	2,499	3,579		2,139	3,829	5.27
8	4,995	2,679	2,679		863	6,265	5.27
9	5,664	3,379	2,139	1,419	1,179	2,297	5.30
Sub-total	**54,163**	**23,034**	**22,872**	**7,850**	**14,890**	**44,060**	**47.23**
10	6,510	2,859	2,499		1,679	3,790	5.08
11	5,998	2,319	3,759		1,275	1,606	5.33
12	6,308	1,004	2,139	3,579	1,959		5.33
13	6,088	2,379	3,179	1,479	1,329	4,954	5.23
14	5,843	1,599	2,499		1,279	1,941	5.37
15	6,246	1,959	2,499	1,959	2,499	4,246	5.23
16	5,401	1,959	4,059		2,059	1,501	5.33
17	7,225	3,219	4,119		1,579	3,521	5.22
18	7,064	1,419	3,219	1,419	1,779	9,746	5.11
Sub-total	**56,883**	**18,716**	**27,971**	**8,436**	**15,437**	**31,289**	**47.23**
Practice	15,885	43,947	9,045			9,353	3.57
Total	**140,055**	**85,697**	**59,888**	**16,286**	**30,327**	**84,712**	**98.03**

Dupont Golf Course Scorecard

Hole	Champion	Pro	Back	Middle	Forward
1	445	421	409	330	313
2	405	405	369	352	323
3	408	385	372	336	297
4	198	198	149	141	122
5	579	561	547	457	456
6	208	208	184	161	150
7	435	390	374	344	334
8	568	555	532	520	477
9	431	414	390	351	331
Out	3,677	3,527	3,323	3,002	2,803
10	566	551	514	502	433
11	201	201	162	145	122
12	460	442	391	374	315
13	464	439	426	403	339
14	195	195	161	150	118
15	441	417	405	370	309
16	568	520	510	500	466
17	401	388	335	316	281
18	470	452	437	377	346
In	3,756	3,603	3,341	3,137	2,728
Total	7,433	7,130	6,664	6,139	5,530

Construction Record Drawing

Grassing Plan

Front Nine

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: November 14, 2005
Scale: 1"=150.0'
Job Number: 204

Construction Record Drawing

Landscaping Quantities for Holes 11 & 12

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.11.1	1.59	65%		40%	180.00		40%	360.00		20%	300.00
L.11.2	0.23	65%		40%	26.00		40%	52.00		20%	43.00
L.11.3	0.18	65%		40%	21.00		40%	41.00		20%	34.00
L.11.4	0.13	65%		40%	15.00		40%	30.00		20%	25.00
L.12.1	1.34	65%		40%	152.00		40%	303.00		20%	253.00
L.12.2	0.41	65%		40%	46.00		40%	92.00		20%	77.00
L.12.3	0.11	65%		40%	12.00		40%	24.00		20%	20.00
Sub Total	3.97				452.00			902.00			752.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.11.1	0.31	35%		40%	19.00		40%	38.00		20%	32.00
R.11.2	0.08	35%		40%	5.00		40%	10.00		20%	9.00
R.12.1	0.30	35%		40%	19.00		40%	37.00		20%	31.00
R.12.2	0.29	35%		40%	18.00		40%	36.00		20%	30.00
R.12.3	0.15	35%		40%	10.00		40%	19.00		20%	16.00
Sub Total	1.12				71.00			140.00			118.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.11.1	2.04	35%		0%	-		100%	624.00		0%	-
P.12.1	0.10	35%		0%	-		100%	32.00		0%	-
P.12.2	0.34	35%		0%	-		100%	106.00		0%	-
P.12.3	0.58	35%		0%	-		100%	178.00		0%	-
Sub Total	3.08				-			940.00			-

Wetland Areas

Index	Area (AC)	% Coverage @maturity 80%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
W.12.1	0.22	80%		40%	31.00		40%	61.00		20%	51.00
W.12.2	0.06	80%		40%	9.00		40%	17.00		20%	14.00
Sub Total	0.27				40.00			78.00			65.00

Tree Quantity for Sheet 1

Symbol	Scientific Name	Common Name	Quantity
AM	Acer macrophyllum	Big Leaf Maple	22
CJ	Cercidiphyllum japonicum	Katsura Tree	19
CI	Crataegus crus-galli 'Inermis'	Thornless Cockspur Hawthorn	9
CL	Crataegus x lavallei	Lavalle Hawethorn	26
MI	*Malus Red Jewel*		3
PN	Pinus nigra	Austrian Pine	11
PY	Prunus yedoensis	Yoshino Cherry	21
DF	Pseudotsuga menziesii	Douglas Fir	45
RP	Robinia pseudoacacia 'Lacy Lady'	Twisty Baby Locust	11
C	Thuja plicata	Western Red Cedar	44
	Totals		211

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: CMS
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

Sheet
L1 of L8

Tree Quantity for Sheet 2

Symbol	Scientific Name	Common Name	Quantity
AG	Acer griseum	Paperbark Maple	12
AM	Acer macrophyllum	Big Leaf Maple	5
AP	*Acer platanoides Parkway*		5
CJ	Cercidiphyllum japonicum	Katsura Tree	28
CI	Crataegus crus-galli 'Inermis'	Thornless Cockspur Hawthorn	7
MI	*Malus Red Jewel*		26
PN	Pinus nigra	Austrian Pine	16
PS	Prunus subhirtella 'Autumnalis Rosea'	Autumn Flowering Cherry	6
DF	Pseudotsuga menziesii	Douglas Fir	40
QC	Quercus coccinea	Scarlet Oak	12
QR	Quercus rubra	Red Oak	6
RP	Robinia pseudoacacia 'Lacy Lady'	Twisty Baby Locust	13
TR	*Tilia Redmond*		15
C	Thuja plicata	Western Red Cedar	7
	Totals		198

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

Landscaping Quantities for Holes 10 & 13

Foundation Areas

Index	Area (AC)	% Coverage @maturity 100%	Large Shrubs: Plant Coverage 70 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
F.10.1	0.03	100%		40%	9.00		40%	13.00		20%	11.00
F.10.2	0.14	100%		40%	36.00		40%	50.00		20%	41.00
F.10.3	0.12	100%		40%	30.00		40%	42.00		20%	35.00
Sub Total	0.29				75.00			105.00			87.00

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.10.1	0.10	65%		40%	11.00		40%	22.00		20%	19.00
L.10.2	0.63	65%		40%	72.00		40%	143.00		20%	120.00
L.10.3	0.08	65%		40%	8.00		40%	15.00		20%	12.00
L.13.1	0.65	65%		40%	74.00		40%	148.00		20%	123.00
L.13.2	0.33	65%		40%	38.00		40%	75.00		20%	63.00
L.13.3	0.07	65%		40%	9.00		40%	17.00		20%	14.00
L.13.4	0.08	65%		40%	10.00		40%	19.00		20%	16.00
Sub Total	1.92				222.00			439.00			367.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.10.1	0.29	35%		40%	18.00		40%	36.00		20%	30.00
R.10.2	0.04	35%		40%	3.00		40%	6.00		20%	5.00
R.10.3	0.07	35%		40%	5.00		40%	10.00		20%	8.00
R.10.4	0.28	35%		40%	18.00		40%	35.00		20%	29.00
R.13.1	0.09	35%		40%	6.00		40%	11.00		20%	10.00
R.13.2	0.06	35%		40%	4.00		40%	8.00		20%	7.00
R.13.3	0.62	35%		40%	39.00		40%	77.00		20%	64.00
Sub Total	1.47				93.00			183.00			153.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.10.1	1.10	35%		0%	-		100%	336.00		0%	-
P.10.2	0.21	35%		0%	-		100%	64.00		0%	-
P.13.1	0.59	35%		0%	-		100%	180.00		0%	-
Sub Total	1.90				-			580.00			-

Wetland Areas

Index	Area (AC)	% Coverage @maturity 80%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
W.13.1	0.23	80%		40%	33.00		40%	65.00		20%	54.00
Sub Total	0.23				33.00			65.00			54.00

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: CMS
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

Sheet
L2 of L8

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

Tree Quantity for Sheet 3

Symbol	Scientific Name	Common Name	Quantity
AG	Acer griseum	Paperbark Maple	9
CJ	Cercidiphyllum japonicum	Katsura Tree	9
CC	*Cornus Celestial*		17
MI	*Malus Red Jewel*		5
PN	Pinus nigra	Austrian Pine	22
PS	Prunus subhirtella 'Autumnalis Rosea'	Autumn Flowering Cherry	9
PY	Prunus yedoensis	Yoshino Cherry	10
DF	Pseudotsuga menziesii	Douglas Fir	48
QR	Quercus rubra	Red Oak	15
RP	Robinia pseudoacacia 'Lacy Lady'	Twisty Baby Locust	19
SP	Salix 'Prairie Cascade'	Prairie Cascade Weeping Willow	3
C	Thuja plicata	Western Red Cedar	43
	Totals		209

Landscaping Quantities for Holes 14,15 & 16

Foundation Areas

Index	Area (AC)	% Coverage @maturity 100%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
F.16.1	0.26	100%		40%	45.00		40%	90.00		20%	75.00
Sub Total	0.26				45.00			90.00			75.00

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.14.1	0.37	65%		40%	43.00		40%	85.00		20%	71.00
L.15.1	0.43	65%		40%	50.00		40%	99.00		20%	83.00
L.16.1	0.90	65%		40%	103.00		40%	205.00		20%	171.00
Sub Total	1.71				196.00			389.00			325.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.14.1	0.12	35%		40%	8.00		40%	15.00		20%	12.00
R.14.2	0.15	35%		40%	10.00		40%	19.00		20%	16.00
R.15.1	0.08	35%		40%	6.00		40%	11.00		20%	9.00
R.16.2	1.32	35%		40%	81.00		40%	161.00		20%	135.00
Sub Total	1.67				105.00			206.00			172.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.15.1	0.31	35%		0%	-		100%	96.00		0%	-
P.15.2	0.46	35%		0%	-		100%	140.00		0%	-
P.15.3	0.55	35%		0%	-		100%	170.00		0%	-
P.15.4	0.33	35%		0%	-		100%	101.00		0%	-
Sub Total	1.66				-			507.00			-

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: CMS
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

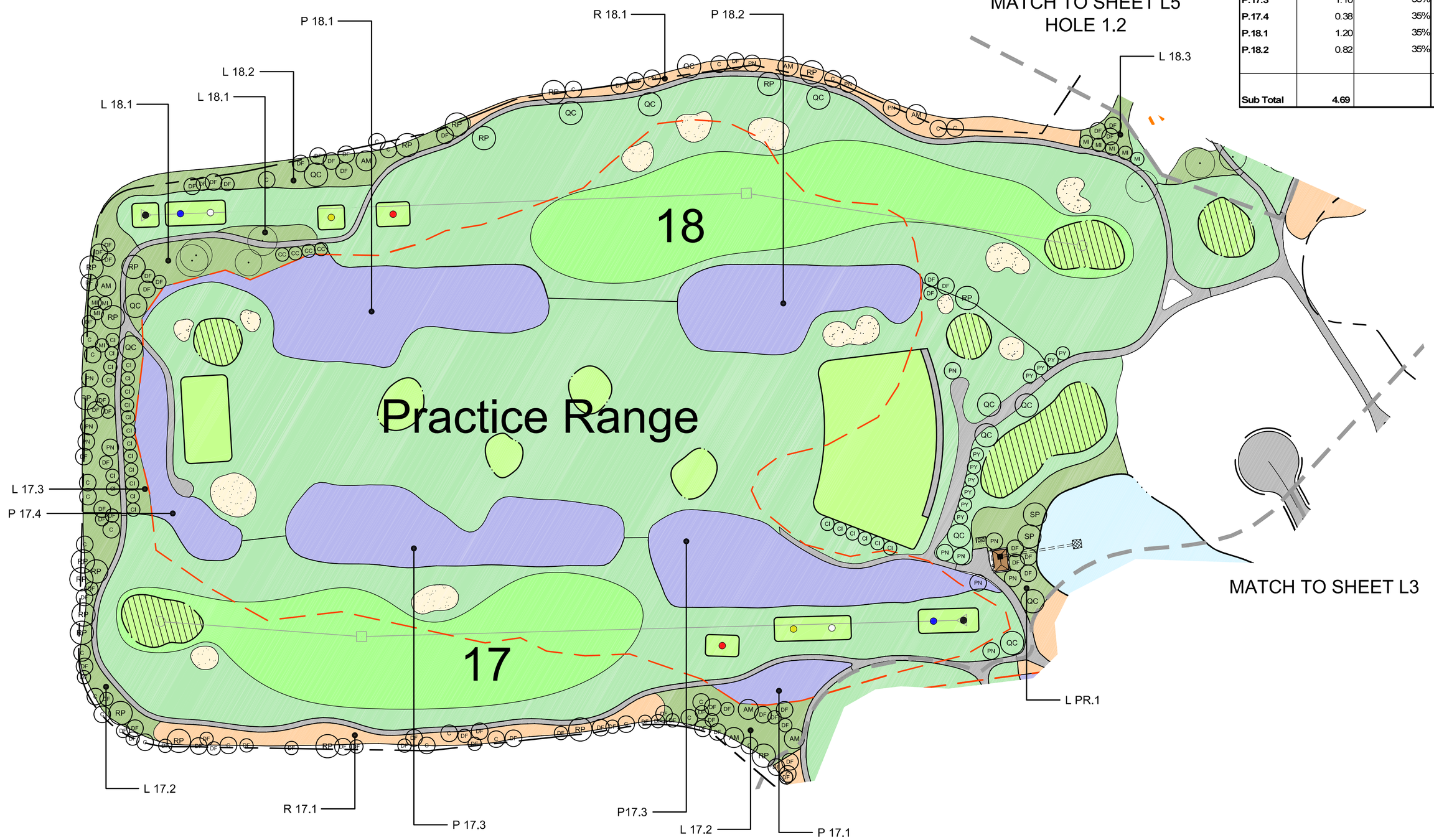
Sheet
L3 of L8

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE



Landscaping Quantities for Holes 17, 18 & Practice Range

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.17.1	0.32	65%		40%	37.00		40%	74.00		20%	61.00
L.17.2	0.26	65%		40%	30.00		40%	59.00		20%	50.00
L.17.3	0.17	65%		40%	20.00		40%	39.00		20%	32.00
L.18.1	0.42	65%		40%	48.00		40%	95.00		20%	79.00
L.18.2	0.96	65%		40%	109.00		40%	217.00		20%	181.00
L.18.3	0.08	65%		40%	10.00		40%	19.00		20%	16.00
L.PR.1	0.38	65%		40%	43.00		40%	86.00		20%	72.00
Sub Total	2.58				297.00			589.00			491.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.17.1	0.40	35%		40%	25.00		40%	49.00		20%	41.00
R.18.1	0.40	35%		40%	25.00		40%	50.00		20%	42.00
Sub Total	0.80				50.00			99.00			83.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.17.1	0.19	35%		0%	-		100%	58.00		0%	-
P.17.2	1.00	35%		0%	-		100%	305.00		0%	-
P.17.3	1.10	35%		0%	-		100%	336.00		0%	-
P.17.4	0.38	35%		0%	-		100%	116.00		0%	-
P.18.1	1.20	35%		0%	-		100%	367.00		0%	-
P.18.2	0.82	35%		0%	-		100%	251.00		0%	-
Sub Total	4.69				-			1,433.00			-

Tree Quantity for Sheet 4

Symbol	Scientific Name	Common Name	Quantity
AM	Acer macrophyllum	Big Leaf Maple	7
CC	*Cornus Celestial*		4
CI	Crataegus crus-galli 'inermis'	Thornless Cockspur Hawthorn	24
MI	*Malus Red Jewel*		9
PN	Pinus nigra	Austrian Pine	16
PY	Prunus yedoensis	Yoshino Cherry	10
DF	Pseudotsuga menziesii	Douglas Fir	77
QC	Quercus coccinea	Scarlet Oak	13
RP	Robinia pseudoacacia 'Lacy Lady'	Twisty Baby Locust	21
SP	Salix 'Prairie Cascade'	Prairie Cascade Weeping Willow	2
C	Thuja plicata	Western Red Cedar	26
	Totals		209

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: CMS
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

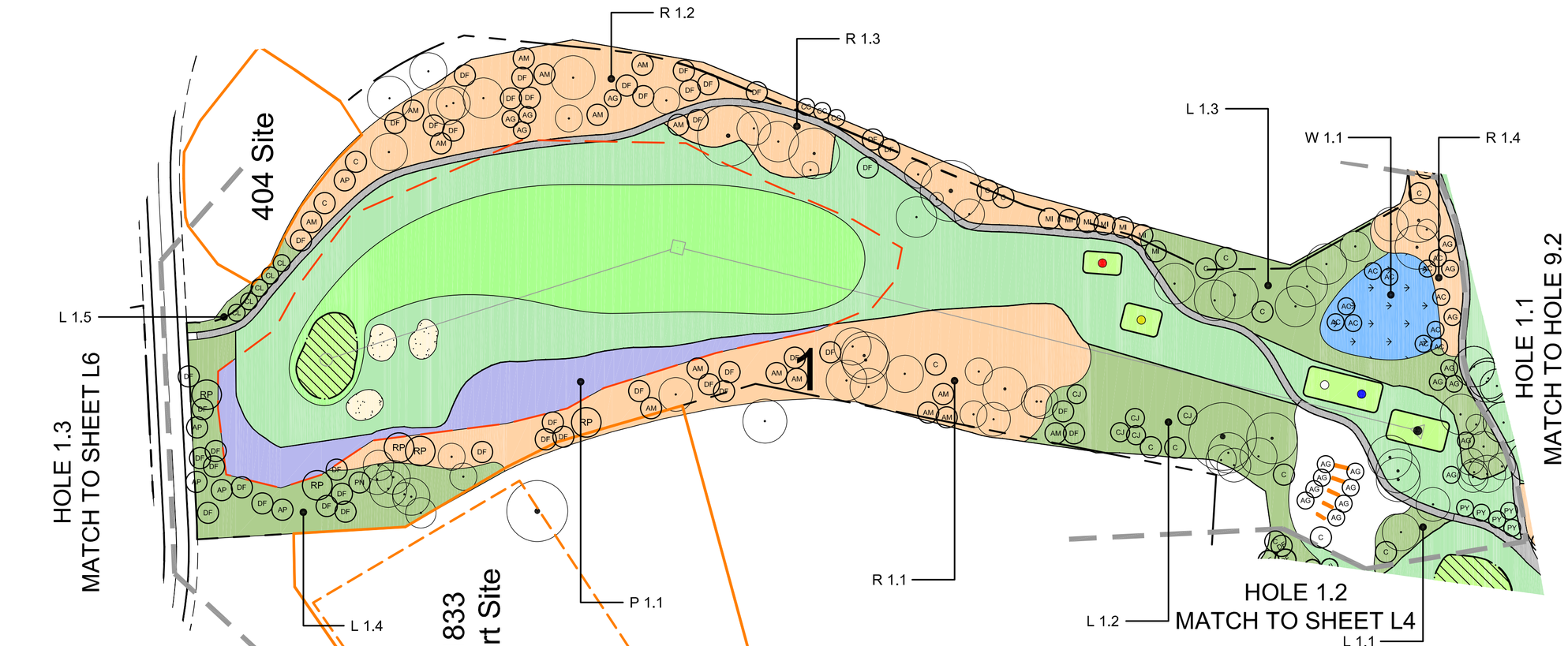
Sheet
L4 of L8

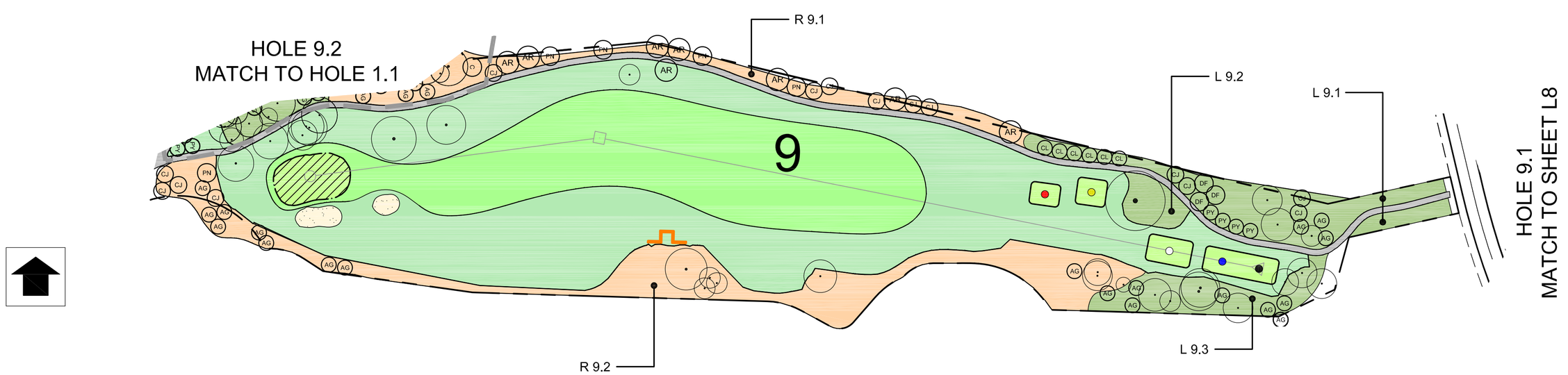
GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE





Landscaping Quantities for Holes 1 & 9

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.1.1	0.08	65%		40%	10.00		40%	19.00		20%	16.00
L.1.2	0.72	65%		40%	82.00		40%	164.00		20%	137.00
L.1.3	0.73	65%		40%	84.00		40%	167.00		20%	139.00
L.1.4	0.64	65%		40%	73.00		40%	146.00		20%	122.00
L.1.5	0.07	65%		40%	9.00		40%	17.00		20%	14.00
L.9.1	0.55	65%		40%	63.00		40%	126.00		20%	105.00
L.9.2	0.11	65%		40%	12.00		40%	24.00		20%	20.00
L.9.3	0.30	65%		40%	34.00		40%	68.00		20%	57.00
Sub Total	3.21				367.00			731.00			610.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.1.1	1.55	35%		40%	95.00		40%	189.00		20%	158.00
R.1.2	1.33	35%		40%	82.00		40%	163.00		20%	136.00
R.1.3	0.23	35%		40%	14.00		40%	28.00		20%	24.00
R.1.4	0.23	35%		40%	15.00		40%	29.00		20%	24.00
R.9.1	0.27	35%		40%	17.00		40%	34.00		20%	28.00
R.9.2	1.04	35%		40%	64.00		40%	128.00		20%	106.00
Sub Total	4.65				287.00			571.00			476.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.1.1	0.60	35%		0%	-		100%	182.00		0%	-
Sub Total	0.60				-			182.00			-

Wetland Areas

Index	Area (AC)	% Coverage @maturity 80%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
W.1.1	0.31	80%		40%	44.00		40%	88.00		20%	73.00
Sub Total	0.31				44.00			88.00			73.00

Tree Quantity for Sheet 5

Symbol	Scientific Name	Common Name	Quantity
AC	Acer circinatum	Vine Maple	11
AG	Acer griseum	Paperbark Maple	39
AM	Acer macrophyllum	Big Leaf Maple	16
AP	*Acer platanoides Parkway*		6
CJ	Cercidiphyllum japonicum	Katsura Tree	19
CC	*Cornus Celestial*		3
CL	Crataegus x lavallei	Lavalle Hawethorn	11
MI	*Malus Red Jewel*		7
PN	Pinus nigra	Austrian Pine	6
PY	Prunus yedoensis	Yoshino Cherry	9
DF	Pseudotsuga menziesii	Douglas Fir	45
AR	*Acer rubrum Red Sunset*		8
RP	Robinia pseudoacacia 'Lacy Lady'	Twisty Baby Locust	5
C	Thuja plicata	Western Red Cedar	15
	Totals		200

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: CMS
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

Landscaping Quantities for Holes 2, 3, & 4

Foundation Areas

Index	Area (AC)	% Coverage @maturity 100%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
F.4.1	0.19	100%		40%	34.00		40%	67.00		20%	56.00
Sub Total	0.19				34.00			67.00			56.00

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.2.1	0.33	65%		40%	37.00		40%	74.00		20%	62.00
L.2.2	0.52	65%		40%	60.00		40%	119.00		20%	99.00
L.3.1	0.60	65%		40%	69.00		40%	137.00		20%	114.00
L.4.1	0.32	65%		40%	37.00		40%	74.00		20%	62.00
L.5.1	0.85	65%		40%	97.00		40%	194.00		20%	162.00
L.5.2	1.29	65%		40%	146.00		40%	292.00		20%	244.00
L.5.3	0.19	65%		40%	22.00		40%	44.00		20%	37.00
Sub Total	4.11				468.00			934.00			780.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.2.1	1.38	35%		40%	85.00		40%	169.00		20%	141.00
R.3.1	1.02	35%		40%	63.00		40%	125.00		20%	105.00
R.3.2	0.79	35%		40%	49.00		40%	97.00		20%	81.00
R.4.1	0.37	35%		40%	23.00		40%	45.00		20%	38.00
Sub Total	3.56				220.00			436.00			365.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.2.1	0.10	35%		0%	-		100%	31.00		0%	-
P.3.1	1.13	35%		0%	-		100%	346.00		0%	-
P.4.1	0.43	35%		0%	-		100%	133.00		0%	-
P.4.2	1.82	35%		0%	-		100%	555.00		0%	-
Sub Total	3.49				-			1,065.00			-

Wetland Areas

Index	Area (AC)	% Coverage @maturity 80%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
W.4.1	0.42	80%		40%	58.00		40%	116.00		20%	97.00
W.4.2	0.40										
Sub Total	0.81				58.00			116.00			97.00

Tree Quantity for Sheet 6

Symbol	Scientific Name	Common Name	Quantity
AC	Acer circinatum	Vine Maple	11
CC	*Cornus Celestial*		9
PN	Pinus nigra	Austrian Pine	4
PS	Prunus subhirtella 'Autumnalis Rosea'	Autumn Flowering Cherry	24
DF	Pseudotsuga menziesii	Douglas Fir	82
AR	*Acer rubrum Red Sunset*		34
QR	Quercus rubra	Red Oak	2
SP	Salix 'Prairie Cascade'	Prairie Cascade Weeping Willow	3
TR	*Tilia Redmond*		5
C	Thuja plicata	Western Red Cedar	27
	Totals		201

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
C	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by:
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

Sheet
L6 of L8

Landscaping Quantities for Holes 5 & 6

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.5.4	0.17	65%		40%	20.00		40%	39.00		20%	32.00
L.5.5	0.07	65%		40%	8.00		40%	15.00		20%	13.00
L.5.6	0.08	65%		40%	10.00		40%	19.00		20%	16.00
L.6.1	0.37	65%		40%	42.00		40%	84.00		20%	70.00
L.6.2	0.27	65%		40%	31.00		40%	61.00		20%	51.00
L.6.3	0.14	65%		40%	16.00		40%	31.00		20%	26.00
L.6.4	0.15	65%		40%	17.00		40%	34.00		20%	28.00
Sub Total	1.24				144.00			283.00			236.00

Revegetation Areas

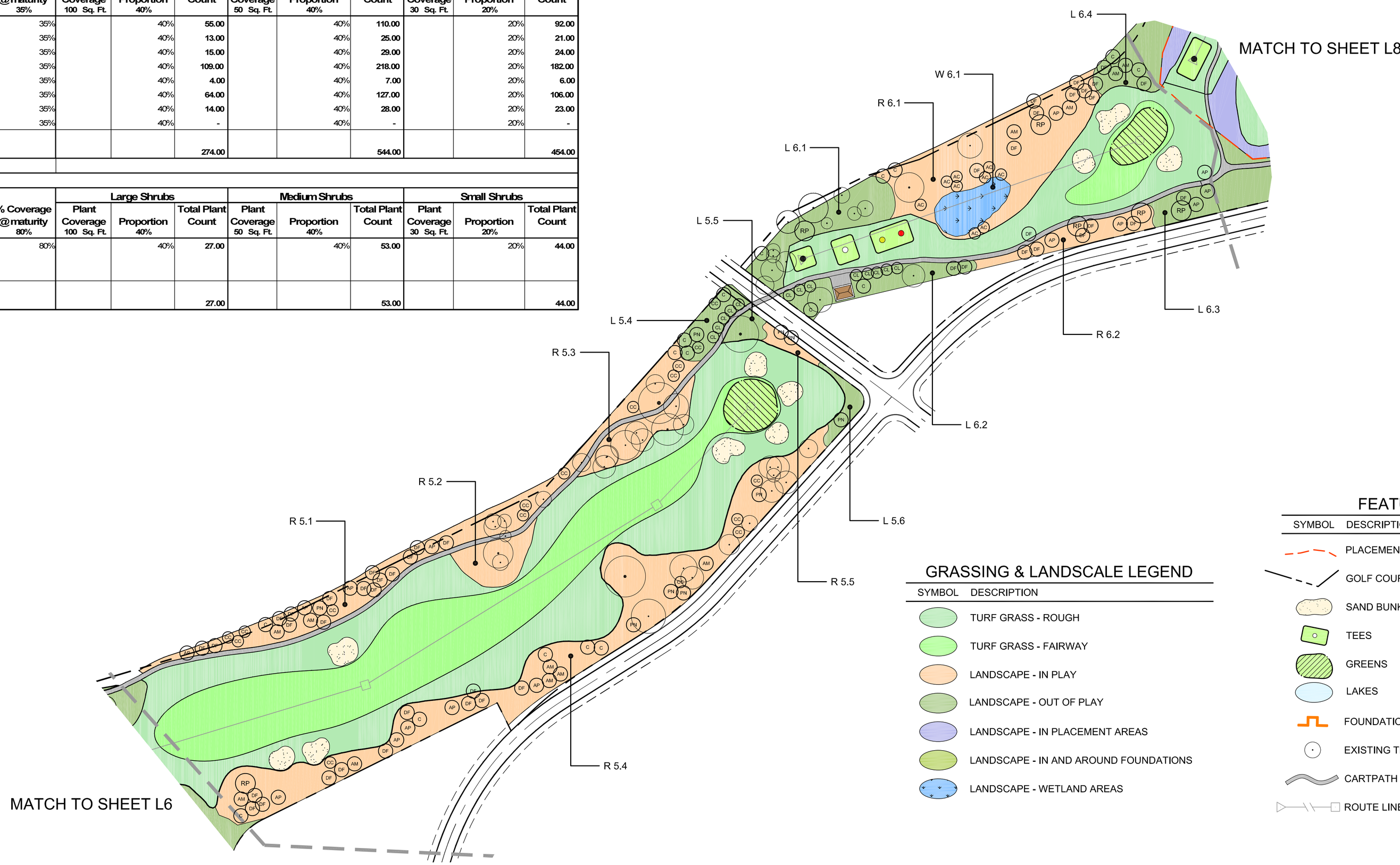
Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.5.1	0.90	35%		40%	55.00		40%	110.00		20%	92.00
R.5.2	0.20	35%		40%	13.00		40%	25.00		20%	21.00
R.5.3	0.23	35%		40%	15.00		40%	29.00		20%	24.00
R.5.4	1.78	35%		40%	109.00		40%	218.00		20%	182.00
R.5.5	0.05	35%		40%	4.00		40%	7.00		20%	6.00
R.6.1	1.04	35%		40%	64.00		40%	127.00		20%	106.00
R.6.2	0.23	35%		40%	14.00		40%	28.00		20%	23.00
		35%		40%	-		40%	-		20%	-
Sub Total	4.42				274.00			544.00			454.00

Wetland Areas

Index	Area (AC)	% Coverage @maturity 80%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
W.6.1	0.19	80%		40%	27.00		40%	53.00		20%	44.00
Sub Total	0.19				27.00			53.00			44.00

Tree Quantity for Sheet 7

Symbol	Scientific Name	Common Name	Quantity
AC	Acer circinatum	Vine Maple	9
AM	Acer macrophyllum	Big Leaf Maple	12
AP	*Acer platanoides Parkway*		14
CC	*Cornus Celestial*		17
CL	Crataegus x lavallei	Lavalle Hawethorn	13
PN	Pinus nigra	Austrian Pine	9
DF	Pseudotsuga menziesii	Douglas Fir	46
RP	Robinia pseudoacacia 'Lacy Lady'	Twisty Baby Locust	6
C	Thuja plicata	Western Red Cedar	17
	Totals		143



GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: MD
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

Sheet
L7 of L8

Tree Quantity for Sheet 8

Symbol	Scientific Name	Common Name	Quantity
AC	Acer circinatum	Vine Maple	5
AM	Acer macrophyllum	Big Leaf Maple	13
CI	Crataegus crus-galli 'Inermis'	Thornless Cockspur Hawthorn	10
PN	Pinus nigra	Austrian Pine	16
PS	Prunus subhirtella 'Autumnalis Rosea'	Autumn Flowering Cherry	11
DF	Pseudotsuga menziesii	Douglas Fir	67
AR	*Acer rubrum Red Sunset*		8
QR	Quercus rubra	Red Oak	2
SP	Salix 'Prairie Cascade'	Prairie Cascade Weeping Willow	2
C	Thuja plicata	Western Red Cedar	21
	Totals		155

Landscaping Quantities for Holes 7 & 8

Landscape Areas

Index	Area (AC)	% Coverage @maturity 65%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
L.7.1	0.57	65%		40%	66.00		40%	131.00		20%	109.00
L.8.1	0.10	65%		40%	12.00		40%	24.00		20%	20.00
L.8.2	0.45	65%		40%	51.00		40%	102.00		20%	85.00
L.8.3	0.56	65%		40%	64.00		40%	127.00		20%	106.00
L.8.4	0.29	65%		40%	33.00		40%	66.00		20%	55.00
L.8.5	0.32	65%		40%	37.00		40%	73.00		20%	61.00
L.8.6	0.05	65%		40%	6.00		40%	11.00		20%	10.00
Sub Total	2.34				269.00			534.00			446.00

Revegetation Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 40%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 40%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 20%	Small Shrubs: Total Plant Count
R.7.1	0.60	35%		40%	37.00		40%	74.00		20%	62.00
R.7.2	0.58	35%		40%	36.00		40%	72.00		20%	60.00
R.8.1	0.84	35%		40%	52.00		40%	103.00		20%	86.00
Sub Total	2.02				125.00			249.00			208.00

Placement Areas

Index	Area (AC)	% Coverage @maturity 35%	Large Shrubs: Plant Coverage 100 Sq. Ft.	Large Shrubs: Proportion 0%	Large Shrubs: Total Plant Count	Medium Shrubs: Plant Coverage 50 Sq. Ft.	Medium Shrubs: Proportion 100%	Medium Shrubs: Total Plant Count	Small Shrubs: Plant Coverage 30 Sq. Ft.	Small Shrubs: Proportion 0%	Small Shrubs: Total Plant Count
P.7.1	0.18	35%		0%	-		100%	55.00		0%	-
P.8.1	1.55	35%		0%	-		100%	473.00		0%	-
P.8.2	0.04	35%		0%	-		100%	13.00		0%	-
P.8.3	1.22	35%		0%	-		100%	371.00		0%	-
Sub Total	2.98				-			912.00			-

GRASSING & LANDSCALE LEGEND

SYMBOL	DESCRIPTION
	TURF GRASS - ROUGH
	TURF GRASS - FAIRWAY
	LANDSCAPE - IN PLAY
	LANDSCAPE - OUT OF PLAY
	LANDSCAPE - IN PLACEMENT AREAS
	LANDSCAPE - IN AND AROUND FOUNDATIONS
	LANDSCAPE - WETLAND AREAS

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	LAKES
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE

Golf Course Planting Plan

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

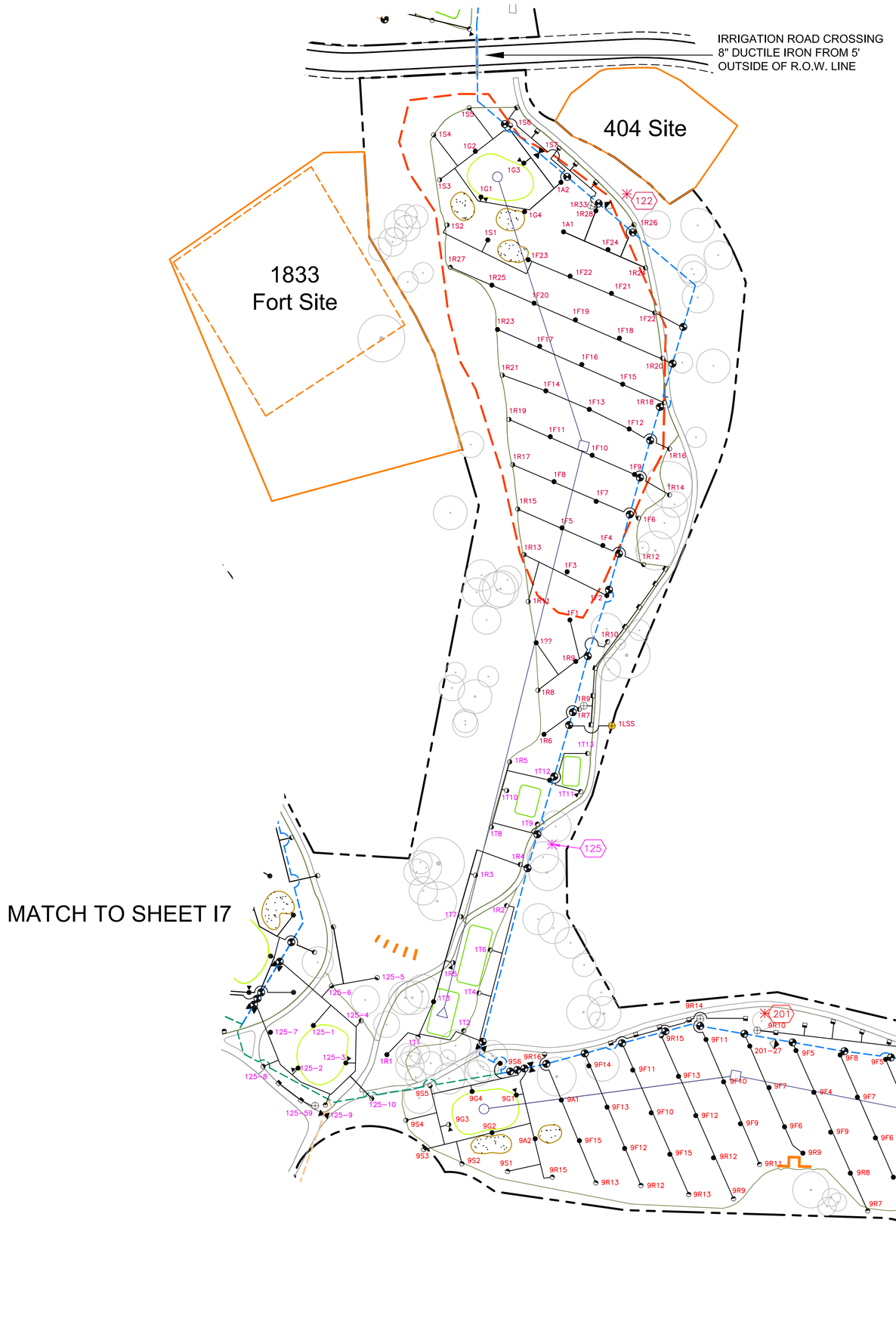
DuPont Works

Revisions/Date:

Design by: MSA
Drawn by: MD
Checked by:
Date: Jan. 5th, 2006
Scale: 1" = 100'
Job Number: 204

Sheet
L8 of L8

MATCH TO SHEET I2



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◨	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
XXX	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◕	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

RainBird As-Built
Irrigation Plan
Mechanical & Programming
Holes 1 & 9

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

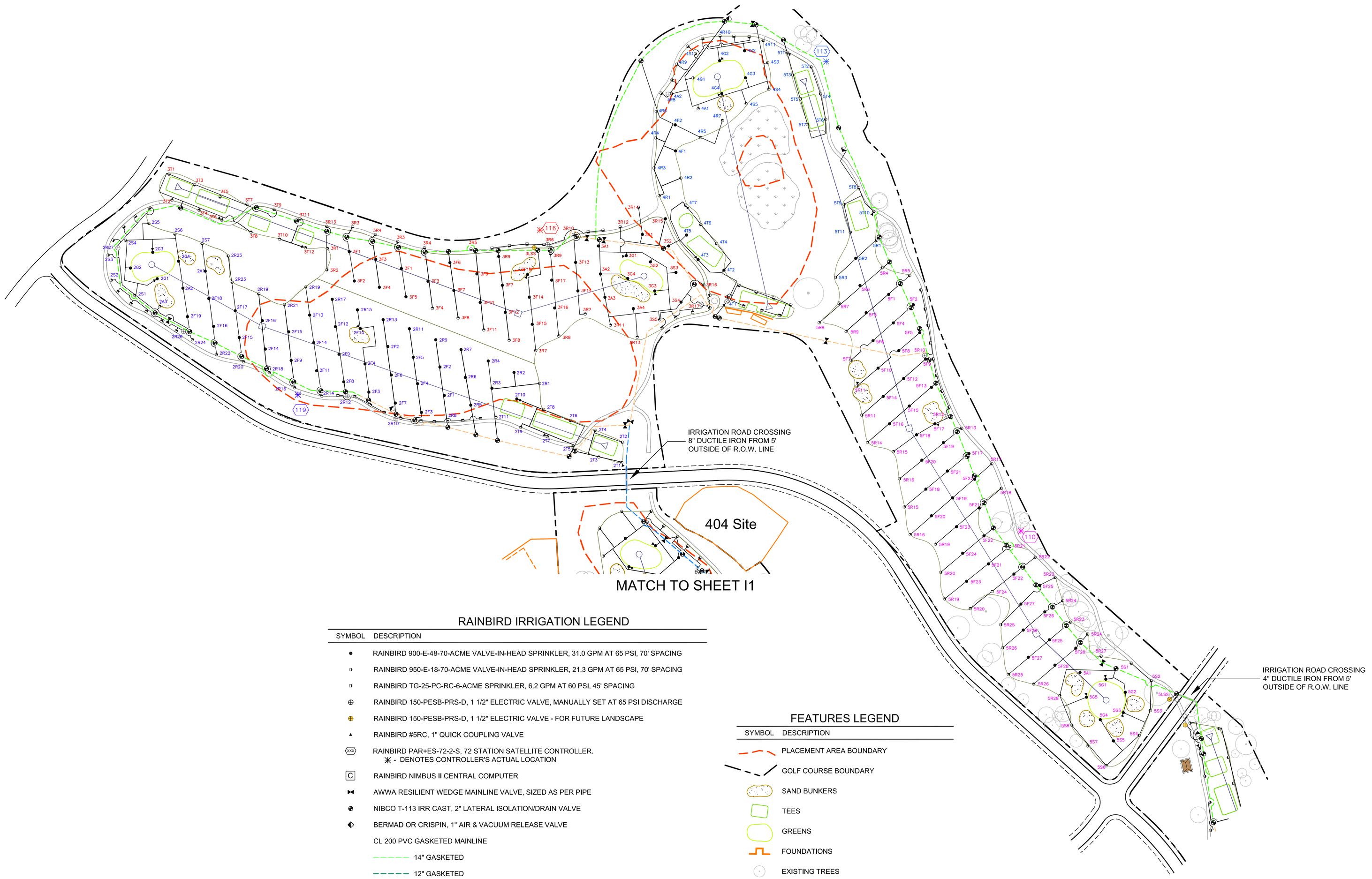
DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I1 of I7

Construction Record Drawing



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◨	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
⟨XXX⟩	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◕	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

RainBird As-Built
Irrigation Plan
Mechanical & Programming
Holes 2,3,4 & 5

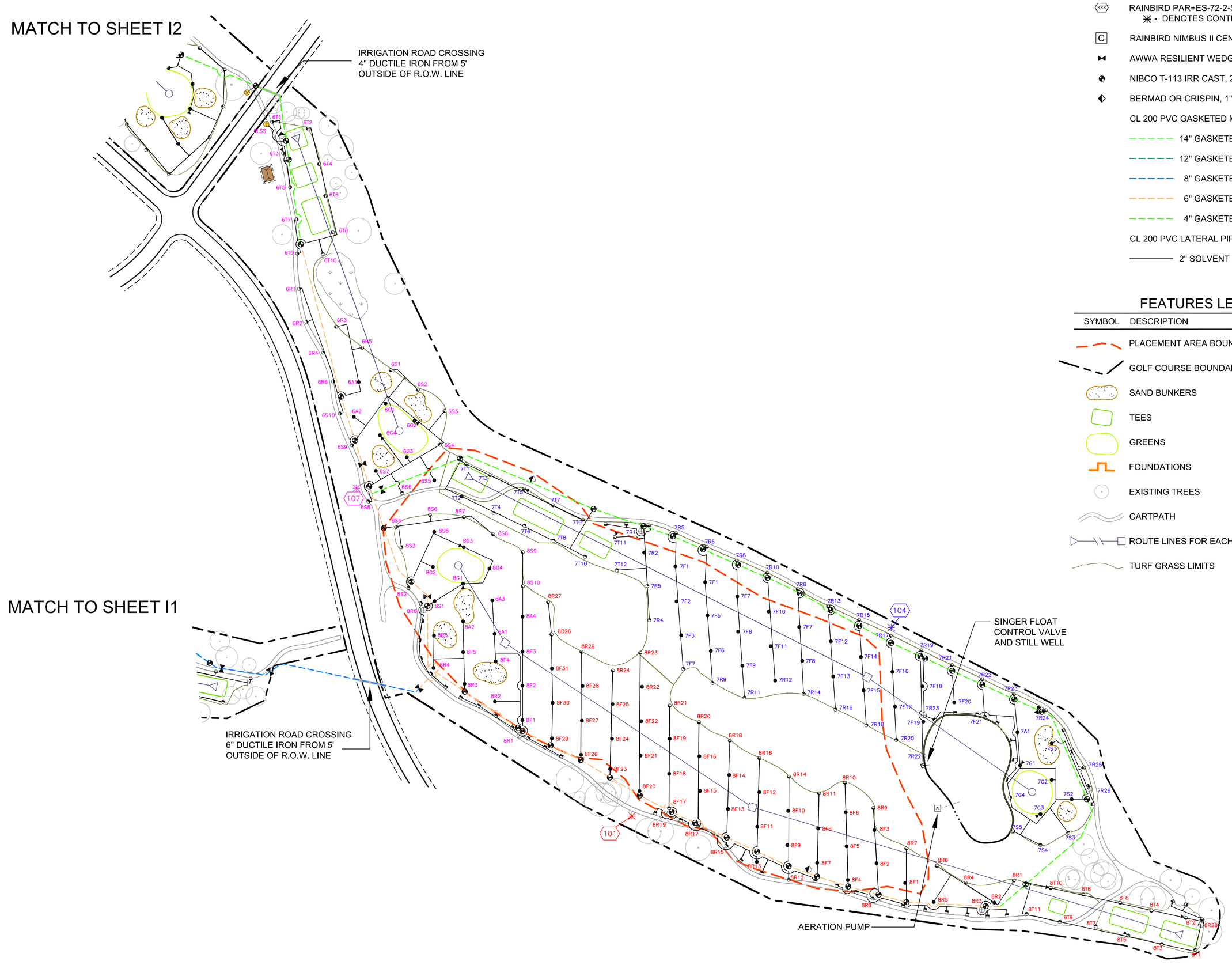
Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I2 of I7



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◨	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
XXX	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◕	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

RainBird As-Built Irrigation Plan Mechanical & Programming Holes 6,7 & 8

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

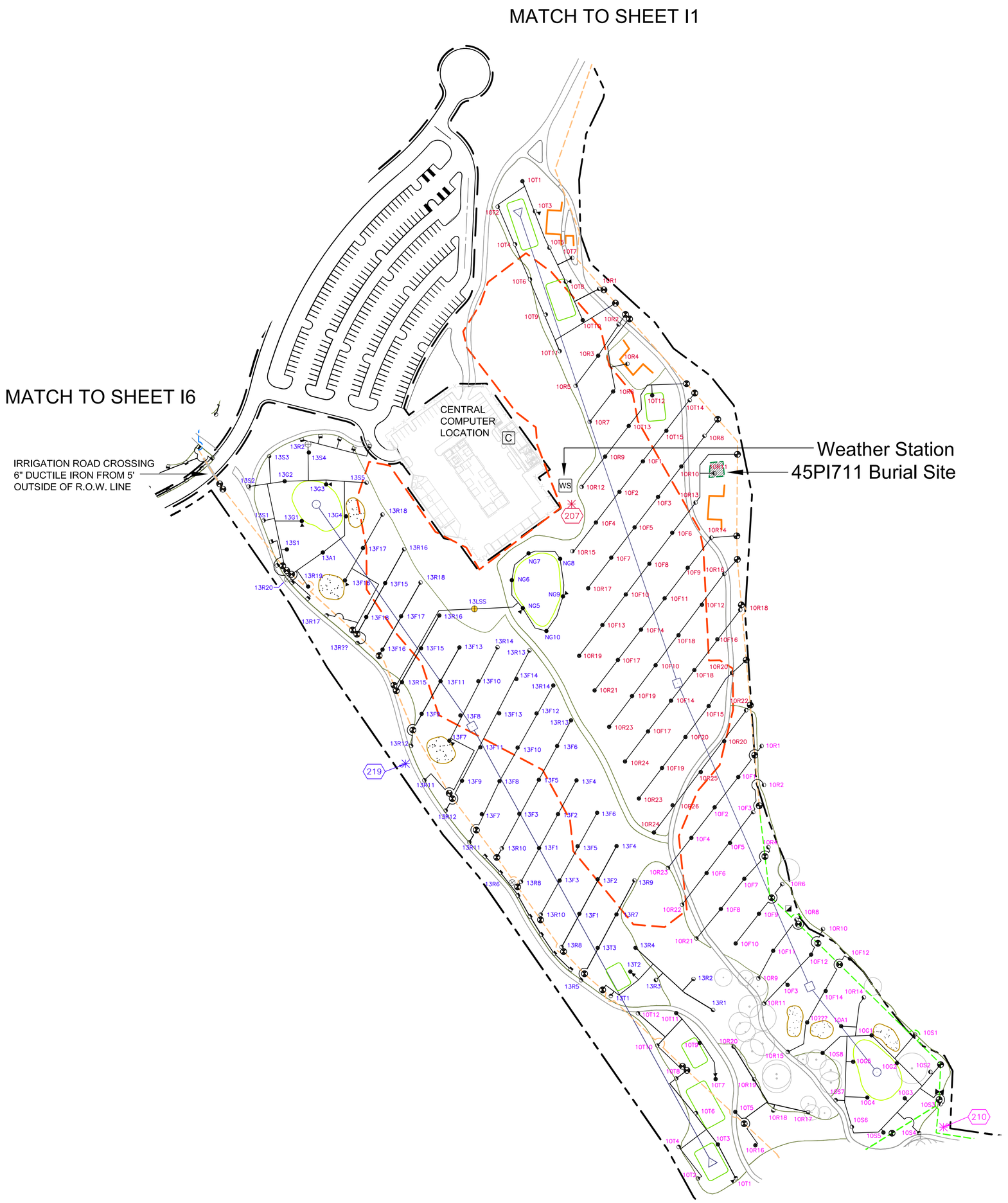
DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I3 of I7

Construction Record Drawing



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◨	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
XXX	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◓	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

RainBird As-Built
Irrigation Plan
Mechanical & Programming
Holes 10 & 13

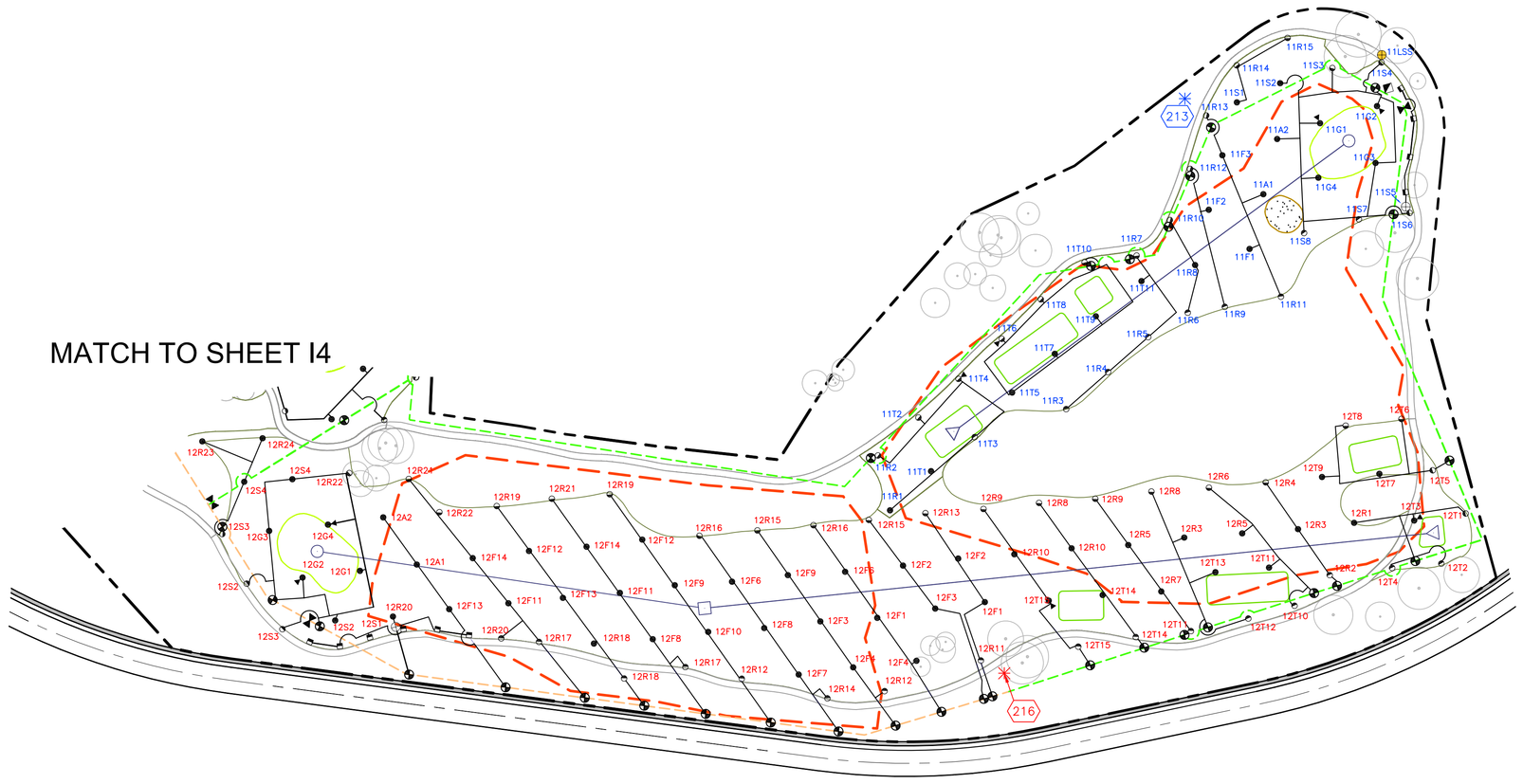
Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I4 of I7



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◨	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
XXX	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◕	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

RainBird As-Built
Irrigation Plan
Mechanical & Programming
Holes 11 & 12

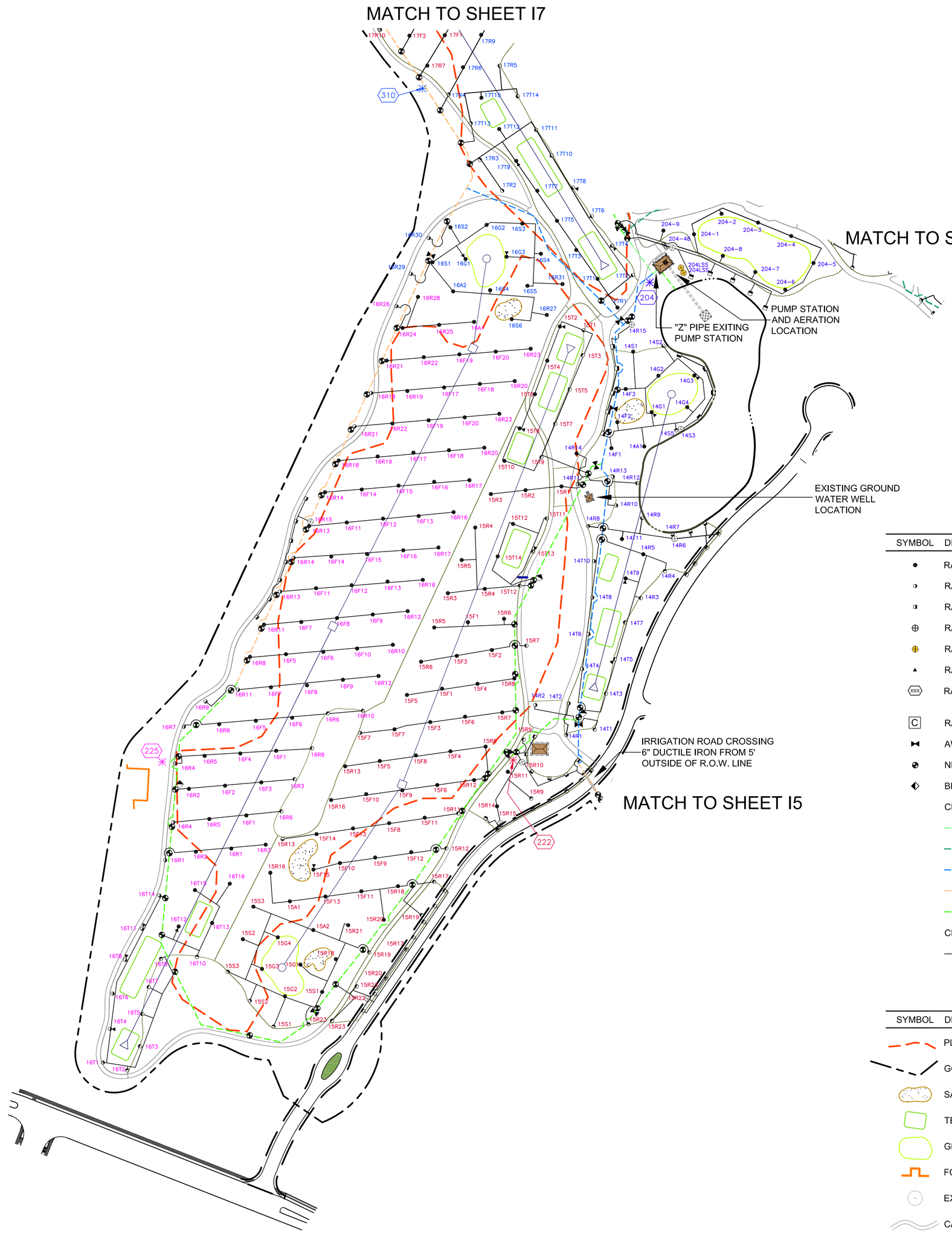
Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I5 of I7



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
XXX	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◉	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

RainBird As-Built Irrigation Plan Mechanical & Programming Holes 14,15 & 16

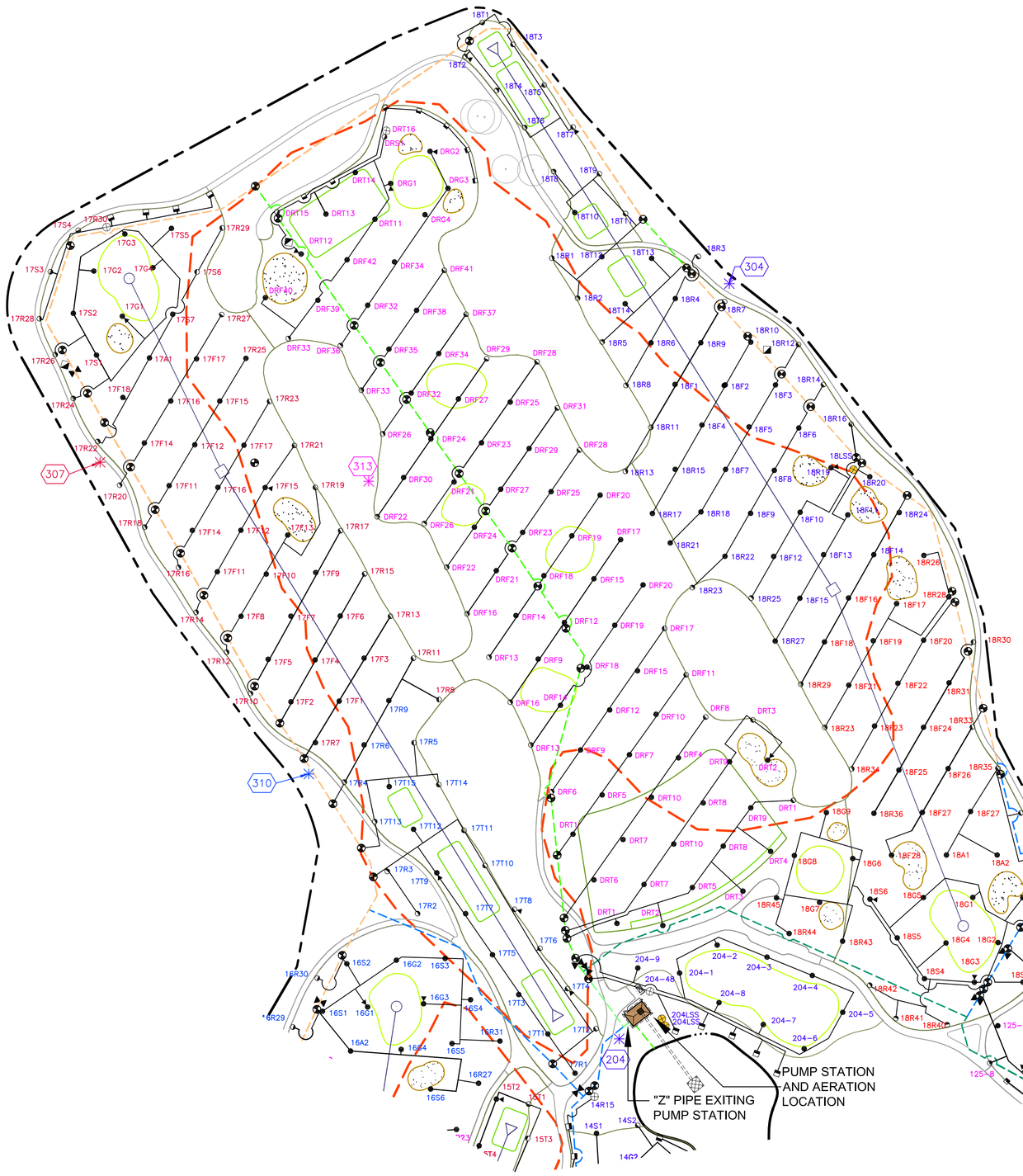
Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I6 of I7



RAINBIRD IRRIGATION LEGEND

SYMBOL	DESCRIPTION
●	RAINBIRD 900-E-48-70-ACME VALVE-IN-HEAD SPRINKLER, 31.0 GPM AT 65 PSI, 70' SPACING
◑	RAINBIRD 950-E-18-70-ACME VALVE-IN-HEAD SPRINKLER, 21.3 GPM AT 65 PSI, 70' SPACING
◨	RAINBIRD TG-25-PC-RC-6-ACME SPRINKLER, 6.2 GPM AT 60 PSI, 45' SPACING
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE, MANUALLY SET AT 65 PSI DISCHARGE
⊕	RAINBIRD 150-PESB-PRS-D, 1 1/2" ELECTRIC VALVE - FOR FUTURE LANDSCAPE
▲	RAINBIRD #5RC, 1" QUICK COUPLING VALVE
XXX	RAINBIRD PAR+ES-72-2-S, 72 STATION SATELLITE CONTROLLER. ✳ - DENOTES CONTROLLER'S ACTUAL LOCATION
C	RAINBIRD NIMBUS II CENTRAL COMPUTER
⋈	AWWA RESILIENT WEDGE MAINLINE VALVE, SIZED AS PER PIPE
◕	NIBCO T-113 IRR CAST, 2" LATERAL ISOLATION/DRAIN VALVE
◆	BERMAD OR CRISPIN, 1" AIR & VACUUM RELEASE VALVE
	CL 200 PVC GASKETED MAINLINE
	14" GASKETED
	12" GASKETED
	8" GASKETED
	6" GASKETED
	4" GASKETED
	CL 200 PVC LATERAL PIPING
	2" SOLVENT WELD

FEATURES LEGEND

SYMBOL	DESCRIPTION
	PLACEMENT AREA BOUNDARY
	GOLF COURSE BOUNDARY
	SAND BUNKERS
	TEES
	GREENS
	FOUNDATIONS
	EXISTING TREES
	CARTPATH
	ROUTE LINES FOR EACH GOLF HOLE
	TURF GRASS LIMITS

Construction Record Drawing

RainBird As-Built
Irrigation Plan
Mechanical & Programming
Holes 17,18 & Practice Range

Asmundson & Company, Inc.
7377 E. Doubletree Ranch Road, Suite 180
Scottsdale, Arizona 85258
p:480.596.9012 f:480.596.0153 e-mail: golf@asmundsongolf.com

DuPont Works
Golf Course

Revisions/Date:

Design by: MSA
Drawn by: BSM
Checked by:
Date: December 7th, 2005
Scale: 1"=100.0'
Job Number: 204

Sheet
I7 of I7

APPENDIX G

HEALTH AND SAFETY AIR MONITORING REPORTS

TABLE OF CONTENTS

G.1 – ICA 2001 AIR MONITORING REPORT.PDF (AVAILABLE ON CD)

Interim Source Removal Actions: Air Monitoring Report, January 17, 2002

G.2 – PERSONAL AIR MONITORING REPORT - 2002.PDF (AVAILABLE ON CD)

Personal Air Monitoring Report – 2002, March 2003

G.3 – PERSONAL AIR MONITORING REPORT - 2003.PDF (AVAILABLE ON CD)

Personal Air Monitoring Report – 2003, January 2004

G.4 – 2002 PM 10 FINAL REPORT AND PICTURES (AVAILABLE ON CD)

Air Monitoring Report – PM_{10} 2002, March 2003

(Weyco PM10 Final Report3_25_03.pdf)

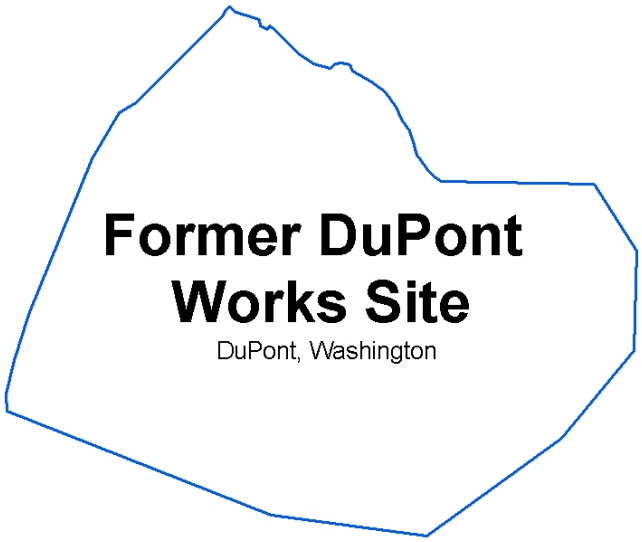
G.5 – 2003 PM 10 FINAL REPORT AND PICTURES (AVAILABLE ON CD)

Air Monitoring Report – PM_{10} 2003, January 2004

(Weyco PM10 Final Report 2003.pdf)

Interim Source Removal Actions: Air Monitoring Report

At the



Prepared for:

The Weyerhaeuser Company and E.I. duPont de Nemours and Company

Prepared by:

PIONEER Technologies Corporation
West Shore Corporation, NW

January 17, 2002

Table of Contents

1 Introduction 1
2 Summary of Activities 1
2.1 Action Level Calculations: 1
2.2 Personal Air Monitoring 1
2.2 Real Time Air Monitoring 1
3 Results 2
3.1 Personal Air Monitoring Results 2
3.2 Real Time Air Monitoring Results 2
Appendix A – Real Time Air Monitoring Results A-1

List of Tables

Table 1 – Personal Air Sample Results 3
Table 2 – Derivation of Site-specific Action Levels for 8-hour Time Weighted Exposures 4
Table 3 – Real-Time Air Monitoring Results 5

1 Introduction

Workspace air monitoring is an essential part of the Health and Safety Program at the former DuPont Works Site in DuPont, Washington. Such a program was implemented during the 2001 interim source removal actions taken to excavate arsenic and lead contaminated soil around building foundations and along former narrow gauge railroad (NGRR) track beds. The monitoring program was established to assess airborne arsenic and lead concentrations as dust. During this program concentrations of lead and arsenic may have been present at levels up to 4,100 mg/kg and 530 mg/kg, respectively.

To ensure that workers were not exposed to elevated levels of these contaminants, the following air monitoring plan was prepared and implemented during excavation activities. This plan included provisions for both personal air monitoring and real-time air monitoring. Personal air samples were taken in the breathing zone of workers assumed to have the highest potential exposure, and real-time air samples were taken in areas adjacent to workers, where airborne particulate levels were assumed to be highest. The workers were informed of the results of the air monitoring at daily health and safety meetings.

2 Summary of Activities

The results of the personal air monitoring and real-time air monitoring conducted during the interim source removal action are presented below.

2.1 Action Level Calculations:

To develop conservative action levels lead and arsenic concentration levels 10,000 mg/kg for lead and 1,000 mg/kg for arsenic where selected to be used in all calculations. These concentrations are at least two times the expected highest concentration in the soil to be excavated. These concentrations were combined with the 8-hour time-weighted-average (TWA) permissible exposure levels (PEL) to determine site-specific airborne dust action levels. PELs are the highest average concentrations a worker may be exposed to for a 40-hour workweek without experiencing any adverse health effects.

2.2 Personal Air Monitoring

Personal air samples were collected during the first week of excavation activities. Five individuals (see Table 1) expected to receive the highest exposure, were monitored during an entire work shift. The samples were analyzed for arsenic and lead by AT Labs, Pleasanton, CA, an American Industrial Hygiene Association (AIHA)-accredited laboratory, using the Occupational Safety and Health Administration (OSHA) Method 125. AIHA-accredited laboratories are preferred because these laboratories participate in extensive quality control and quality assurance procedures that are monitored by OSHA. The results of this analysis are presented in Table 1.

2.2 Real Time Air Monitoring

Real time air monitoring was conducted using a mini-ram (personalDataRAM™, model pDR-1000AN, Monitoring Instruments for the Environment, Inc.) in order to ensure that that the PELs for arsenic and lead would not be exceeded. The use of the mini-ram was initiated during the first week of field activities. The frequency of sampling was determined based on the readings, changes in work patterns, or changes in soil conditions that could potentially result in increased dust emissions.

Using the calculations presented in Table 2 the mini-ram concentration that would result in exposure to lead at the PEL was 5.0 mg/m^3 (assuming a soil concentration of 10,000 mg/kg lead). This level was also protective for exposure to arsenic. To provide an additional margin of safety continued measurements above 2.5 mg/m^3 (one half of the PEL) were set as the action level for upgrading Personal Protective Equipment (PPE) to Level C. Air measurements were recorded as one-minute averages, daily averages (corresponding to the logging period of the instrument), and short-term exposure levels (STELs), which are 15-minute average concentrations. Daily average concentrations were the values compared to the 2.5 mg/m^3 action level.

3 Results

3.1 Personal Air Monitoring Results

As shown in Table 1, arsenic and lead were not detected in any of the samples above the sample detection limits which ranged from 0.2 ug/m^3 to 0.5 ug/m^3. This detection limit is well below the Washington Industrial Safety and Health Administration (WISHA) PEL of 500 ug/m^3 for arsenic and 50 ug/m^3 for lead. These samples were collected in an area of the site with reported soil concentrations ranging from 60 to 300 mg/kg for arsenic and 2,100 to 4,100 mg/kg for lead. Since no airborne arsenic and lead particulate was detected in this area of high concentrations further sampling was discontinued.

3.2 Real Time Air Monitoring Results

During periods of heavy equipment operation and other times of maximum soil disturbance, continuous particulate readings were taken adjacent to the person assumed to have the maximum exposure. This person was chosen as the ground worker who directed the excavator operator. The excavator operator was not chosen for daily monitoring, because this person works inside a closed cab equipped with a high efficiency particulate arresting (HEPA) filter. A summary of the real-time air monitoring results is presented in Table 3. As shown in this table, at no time were air concentrations above the 2.5 mg/m^3 action level (maximum of 1.312 mg/$m^{3)}$. As a result of this data monitoring was reduced to once a month, or during periods of visible dust. All of the real-time sampling results are presented in Appendix A.

Table 1 – Personal Air Sample Results

Worker Activity	Sample Number	Date Sampled	Arsenic (ug/m^3)[a]	Lead (mg/m^3)[b]
Excavator Operator	2001018718	6/6/2001	<0.2	<0.2
Ground person next to excavator	2001018719	6/6/2001	<0.2	<0.2
Excavator Operator	2001018720	6/6/2001	<0.2	<0.2
Truck Driver	2001018721	6/7/2001	<0.5	<0.5
Truck Driver	2001018722	6/6/2001	<0.3	<0.3

[a] The 8-hour time weighted average PEL for arsenic is 500 ug/m^3

[b] The 8-hour time weighted average PEL for lead is 50 ug/m^3

Table 2 – Derivation of Site-specific Action Levels for 8-hour Time Weighted Exposures

Action Level Concentration in Air (mg/m^3) = $\frac{\text{Occupational exposure limit (mg/m3) x 1,000,000 (mg/kg)}}{\text{Soil concentration (mg/kg) x safety factor}}$		
Parameter	**Value**	**Units**
Site-specific particulate Action Level for lead	2.5	mg/m^3
Occupational exposure Limit for lead (8-hour TWA)	0.05	mg/m^3
Current Maximum lead concentration in soil on site	10,000	mg/kg
Safety Factor	2	
Conversion Factor	1,000,000	mg/kg
Site-specific particulate Action Level for arsenic	250	mg/m^3
Occupational exposure Limit for arsenic (8-hour TWA)	0.5	mg/m^3
Current Maximum arsenic concentration in soil on site	1,000	mg/kg
Safety Factor	2	
Conversion Factor	1,000,000	mg/kg

Table 3 – Real-Time Air Monitoring Results

Date	Average Concentration (mg/m^3)[a]	Maximum Short-Term Exposure Limit Concentration (mg/m^3)[b]
28-Jun-01	0.068	0.706
10-Jul-01	0.275	1.312
12-Jul-01	0.14	0.269
12-Jul-01[c]	0	0
17-Jul-01	0.419	1.149
17-Jul-01	0.036	0.25
18-Jul-01	0.331	0.893
18-Jul-01	0.101	0.511
19-Jul-01	0.356	0.876
19-Jul-01	0.228	0.682
23-Jul-01	0.42	0.773
23-Jul-01	0.261	0.66
24-Jul-01	0.248	0.677
24-Jul-01	0.332	0.908
25-Jul-01	0.177	0.397
26-Jul-01	0.185	0.583
26-Jul-01	0.166	1.074
30-Jul-01	0.228	0.637
31-Jul-01	0.33	0.668
01-Aug-01	0.254	0.569
13-Aug-01	0.498	1.38
13-Aug-01	0.388	0.838
14-Aug-01	0.311	1.115
15-Aug-01	0.299	1.113
16-Aug-01	0.4	0.76
16-Aug-01	0.435	0.806
16-Aug-01	0.495	0.536
20-Aug-01	0.488	1.248
20-Aug-01	0.469	0.835

[a]Concentration is the average respirable particulate concentration measured during the logging period of the miniram.
[b]Concentration is the maximum 15-minute average concentration measured during the logging period of the miniram. There is no WISHA 15-minute STEL for arsenic or lead.
[c]Worker was inside the cab of an excavator.

Appendix A – Real Time Air Monitoring Results

A copy of all real time air monitoring data is presented in this appendix. This data was logged on a miniram portable respirable dust monitors. The data is presented in chronological order, as identified in Table 2. Note the site-specific 8-hour TWA is 2.5 mg/m^3 and zero values are instances where the measured concentration was less than 0.001 mg/m^3.

June 28, 2001

pDR-1000 S/N: 00000
User ID: DuPont Site #1
Tag Number: 01
Number of logged points: 58
Start time and date: 10:07:08 28-Jun
Elapsed time: 09:40:00
Logging period (sec): 600
Calibration Factor (%): 100
Max Display Concentration: 4.980 mg/m³
Time at maximum: 15:47:43 Jun 28
Max STEL Concentration: 0.706 mg/m³
Time at max STEL: 16:01:08 Jun 28
Overall Avg Conc: 0.068 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	28-Jun	10:17:08	0.076	33	28-Jun	15:37:08	0.031
2	28-Jun	10:27:08	0.04	34	28-Jun	15:47:08	0.533
3	28-Jun	10:37:08	0.021	35	28-Jun	15:57:08	0.351
4	28-Jun	10:47:08	0.021	36	28-Jun	16:07:08	0.326
5	28-Jun	10:57:08	0.028	37	28-Jun	16:17:08	0.137
6	28-Jun	11:07:08	0.028	38	28-Jun	16:27:08	0.075
7	28-Jun	11:17:08	0.021	39	28-Jun	16:37:08	0.025
8	28-Jun	11:27:08	0.049	40	28-Jun	16:47:08	0.028
9	28-Jun	11:37:08	0.02	41	28-Jun	16:57:08	0.025
10	28-Jun	11:47:08	0.022	42	28-Jun	17:07:08	0.024
11	28-Jun	11:57:08	0.018	43	28-Jun	17:17:08	0.025
12	28-Jun	12:07:08	0.019	44	28-Jun	17:27:08	0.026
13	28-Jun	12:17:08	0.027	45	28-Jun	17:37:08	0.025
14	28-Jun	12:27:08	0.02	46	28-Jun	17:47:08	0.033
15	28-Jun	12:37:08	0.019	47	28-Jun	17:57:08	0.025
16	28-Jun	12:47:08	0.018	48	28-Jun	18:07:08	0.029
17	28-Jun	12:57:08	0.027	49	28-Jun	18:17:08	0.029
18	28-Jun	13:07:08	0.04	50	28-Jun	18:27:08	0.022
19	28-Jun	13:17:08	0.051	51	28-Jun	18:37:08	0.029
20	28-Jun	13:27:08	0.037	52	28-Jun	18:47:08	0.034
21	28-Jun	13:37:08	0.027	53	28-Jun	18:57:08	0.034
22	28-Jun	13:47:08	0.029	54	28-Jun	19:07:08	0.029
23	28-Jun	13:57:08	0.054	55	28-Jun	19:17:08	0.038
24	28-Jun	14:07:08	0.023	56	28-Jun	19:27:08	0.024
25	28-Jun	14:17:08	0.019	57	28-Jun	19:37:08	0.022
26	28-Jun	14:27:08	0.021	58	28-Jun	19:47:08	0.051
27	28-Jun	14:37:08	0.824				
28	28-Jun	14:47:08	0.214				
29	28-Jun	14:57:08	0.02				
30	28-Jun	15:07:08	0.022				
31	28-Jun	15:17:08	0.018				
32	28-Jun	15:27:08	0.03				

July 10, 2001

pDR-1000 S/N: 00000
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 53
Start time and date: 10:13:44 10-Jul
Elapsed time: 08:50:00
Logging period (sec): 600
Calibration Factor (%): 100
Max Display Concentration: 7.839 mg/m³
Time at maximum: 16:17:59 Jul 10
Max STEL Concentration: 1.312 mg/m³
Time at max STEL: 16:20:14 Jul 10
Overall Avg Conc: 0.275 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	10-Jul	10:23:44	0.108	32	10-Jul	15:33:44	0.056
2	10-Jul	10:33:44	0.226	33	10-Jul	15:43:44	0.256
3	10-Jul	10:43:44	0.133	34	10-Jul	15:53:44	0.318
4	10-Jul	10:53:44	0.072	35	10-Jul	16:03:44	0.32
5	10-Jul	11:03:44	0.058	36	10-Jul	16:13:44	0.744
6	10-Jul	11:13:44	0.033	37	10-Jul	16:23:44	1.399
7	10-Jul	11:23:44	0.096	38	10-Jul	16:33:44	0.476
8	10-Jul	11:33:44	0.456	39	10-Jul	16:43:44	0.41
9	10-Jul	11:43:44	0.13	40	10-Jul	16:53:44	0.494
10	10-Jul	11:53:44	0.364	41	10-Jul	17:03:44	0.289
11	10-Jul	12:03:44	0.274	42	10-Jul	17:13:44	0.283
12	10-Jul	12:13:44	0.335	43	10-Jul	17:23:44	0.193
13	10-Jul	12:23:44	0.321	44	10-Jul	17:33:44	0.218
14	10-Jul	12:33:44	0.083	45	10-Jul	17:43:44	0.447
15	10-Jul	12:43:44	0.203	46	10-Jul	17:53:44	0.284
16	10-Jul	12:53:44	0.14	47	10-Jul	18:03:44	0.332
17	10-Jul	13:03:44	0.241	48	10-Jul	18:13:44	0.328
18	10-Jul	13:13:44	0.393	49	10-Jul	18:23:44	0.34
19	10-Jul	13:23:44	0.17	50	10-Jul	18:33:44	0.328
20	10-Jul	13:33:44	0.297	51	10-Jul	18:43:44	0.295
21	10-Jul	13:43:44	0.393	52	10-Jul	18:53:44	0.231
22	10-Jul	13:53:44	0.178	53	10-Jul	19:03:44	0.447
23	10-Jul	14:03:44	0.226				
24	10-Jul	14:13:44	0.276				
25	10-Jul	14:23:44	0.316				
26	10-Jul	14:33:44	0.203				
27	10-Jul	14:43:44	0.079				
28	10-Jul	14:53:44	0.073				
29	10-Jul	15:03:44	0.062				
30	10-Jul	15:13:44	0.063				
31	10-Jul	15:23:44	0.058				

July 12, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 1973
Start time and date: 07:46:25 12-Jul
Elapsed time: 05:28:50
Logging period (sec): 10 (changed to 60 minute average for presentation in table below)
Calibration Factor (%): 100
Max Display Concentration: 0.006 mg/m³
Time at maximum: 07:46:33 Jul 12
Max STEL Concentration: 0.000 mg/m³
Time at max STEL: 07:46:25 Jul 12
Overall Avg Conc: 0.000 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	12-Jul	07:47:25	0.001833	34	12-Jul	08:20:25	0
2	12-Jul	07:48:25	0.001333	35	12-Jul	08:21:25	0
3	12-Jul	07:49:25	0.001667	36	12-Jul	08:22:25	0
4	12-Jul	07:50:25	0.0025	37	12-Jul	08:23:25	0
5	12-Jul	07:51:25	0.000333	38	12-Jul	08:24:25	0
6	12-Jul	07:52:25	0	39	12-Jul	08:25:25	0
7	12-Jul	07:53:25	0.001833	40	12-Jul	08:26:25	0.000333
8	12-Jul	07:54:25	0.000167	41	12-Jul	08:27:25	0
9	12-Jul	07:55:25	0	42	12-Jul	08:28:25	0
10	12-Jul	07:56:25	0.001	43	12-Jul	08:29:25	0
11	12-Jul	07:57:25	0	44	12-Jul	08:30:25	0
12	12-Jul	07:58:25	0	45	12-Jul	08:31:25	0.0005
13	12-Jul	07:59:25	0	46	12-Jul	08:32:25	0
14	12-Jul	08:00:25	0	47	12-Jul	08:33:25	0
15	12-Jul	08:01:25	0.0005	48	12-Jul	08:34:25	0
16	12-Jul	08:02:25	0	49	12-Jul	08:35:25	0
17	12-Jul	08:03:25	0.001167	50	12-Jul	08:36:25	0
18	12-Jul	08:04:25	0	51	12-Jul	08:37:25	0.001333
19	12-Jul	08:05:25	0	52	12-Jul	08:38:25	0
20	12-Jul	08:06:25	0	53	12-Jul	08:39:25	0
21	12-Jul	08:07:25	0	54	12-Jul	08:40:25	0
22	12-Jul	08:08:25	0	55	12-Jul	08:41:25	0.004833
23	12-Jul	08:09:25	0	56	12-Jul	08:42:25	0.001667
24	12-Jul	08:10:25	0	57	12-Jul	08:43:25	0
25	12-Jul	08:11:25	0	58	12-Jul	08:44:25	0.0005
26	12-Jul	08:12:25	0	59	12-Jul	08:45:25	0
27	12-Jul	08:13:25	0	60	12-Jul	08:46:25	0
28	12-Jul	08:14:25	0	61	12-Jul	08:47:25	0
29	12-Jul	08:15:25	0	62	12-Jul	08:48:25	0
30	12-Jul	08:16:25	0	63	12-Jul	08:49:25	0
31	12-Jul	08:17:25	0	64	12-Jul	08:50:25	0
32	12-Jul	08:18:25	0	65	12-Jul	08:51:25	0

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
33	12-Jul	08:19:25	0	66	12-Jul	08:52:25	0
67	12-Jul	08:53:25	0.000167	113	12-Jul	09:39:25	0
68	12-Jul	08:54:25	0	114	12-Jul	09:40:25	0
69	12-Jul	08:55:25	0	115	12-Jul	09:41:25	0
70	12-Jul	08:56:25	0	116	12-Jul	09:42:25	0
71	12-Jul	08:57:25	0	117	12-Jul	09:43:25	0
72	12-Jul	08:58:25	0	118	12-Jul	09:44:25	0
73	12-Jul	08:59:25	0	119	12-Jul	09:45:25	0
74	12-Jul	09:00:25	0	120	12-Jul	09:46:25	0
75	12-Jul	09:01:25	0	121	12-Jul	09:47:25	0
76	12-Jul	09:02:25	0	122	12-Jul	09:48:25	0
77	12-Jul	09:03:25	0	123	12-Jul	09:49:25	0
78	12-Jul	09:04:25	0	124	12-Jul	09:50:25	0
79	12-Jul	09:05:25	0	125	12-Jul	09:51:25	0
80	12-Jul	09:06:25	0	126	12-Jul	09:52:25	0
81	12-Jul	09:07:25	0	127	12-Jul	09:53:25	0
82	12-Jul	09:08:25	0	128	12-Jul	09:54:25	0
83	12-Jul	09:09:25	0	129	12-Jul	09:55:25	0
84	12-Jul	09:10:25	0.002167	130	12-Jul	09:56:25	0
85	12-Jul	09:11:25	0	131	12-Jul	09:57:25	0
86	12-Jul	09:12:25	0	132	12-Jul	09:58:25	0.002333
87	12-Jul	09:13:25	0	133	12-Jul	09:59:25	0
88	12-Jul	09:14:25	0	134	12-Jul	10:00:25	0
89	12-Jul	09:15:25	0	135	12-Jul	10:01:25	0
90	12-Jul	09:16:25	0	136	12-Jul	10:02:25	0
91	12-Jul	09:17:25	0	137	12-Jul	10:03:25	0
92	12-Jul	09:18:25	0	138	12-Jul	10:04:25	0.000833
93	12-Jul	09:19:25	0	139	12-Jul	10:05:25	0
94	12-Jul	09:20:25	0.002167	140	12-Jul	10:06:25	0
95	12-Jul	09:21:25	0	141	12-Jul	10:07:25	0.003
96	12-Jul	09:22:25	0	142	12-Jul	10:08:25	0
97	12-Jul	09:23:25	0.000667	143	12-Jul	10:09:25	0
98	12-Jul	09:24:25	0	144	12-Jul	10:10:25	0.007167
99	12-Jul	09:25:25	0	145	12-Jul	10:11:25	0
100	12-Jul	09:26:25	0	146	12-Jul	10:12:25	0.0005
101	12-Jul	09:27:25	0.000167	147	12-Jul	10:13:25	0.001667
102	12-Jul	09:28:25	0	148	12-Jul	10:14:25	0.005667
103	12-Jul	09:29:25	0	149	12-Jul	10:15:25	0.001167
104	12-Jul	09:30:25	0.002167	150	12-Jul	10:16:25	0
105	12-Jul	09:31:25	0	151	12-Jul	10:17:25	0.005167
106	12-Jul	09:32:25	0	152	12-Jul	10:18:25	0
107	12-Jul	09:33:25	0	153	12-Jul	10:19:25	0.004833
108	12-Jul	09:34:25	0	154	12-Jul	10:20:25	0.008
109	12-Jul	09:35:25	0	155	12-Jul	10:21:25	0.002667
110	12-Jul	09:36:25	0	156	12-Jul	10:22:25	0
111	12-Jul	09:37:25	0	157	12-Jul	10:23:25	0

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
112	12-Jul	09:38:25	0	158	12-Jul	10:24:25	0
159	12-Jul	10:25:25	0	205	12-Jul	11:11:25	0
160	12-Jul	10:26:25	0	206	12-Jul	11:12:25	0
161	12-Jul	10:27:25	0	207	12-Jul	11:13:25	0
162	12-Jul	10:28:25	0	208	12-Jul	11:14:25	0
163	12-Jul	10:29:25	0.003	209	12-Jul	11:15:25	0
164	12-Jul	10:30:25	0	210	12-Jul	11:16:25	0
165	12-Jul	10:31:25	0	211	12-Jul	11:17:25	0
166	12-Jul	10:32:25	0	212	12-Jul	11:18:25	0
167	12-Jul	10:33:25	0	213	12-Jul	11:19:25	0
168	12-Jul	10:34:25	0	214	12-Jul	11:20:25	0
169	12-Jul	10:35:25	0	215	12-Jul	11:21:25	0
170	12-Jul	10:36:25	0	216	12-Jul	11:22:25	0
171	12-Jul	10:37:25	0	217	12-Jul	11:23:25	0
172	12-Jul	10:38:25	0	218	12-Jul	11:24:25	0
173	12-Jul	10:39:25	0	219	12-Jul	11:25:25	0
174	12-Jul	10:40:25	0.006167	220	12-Jul	11:26:25	0
175	12-Jul	10:41:25	0	221	12-Jul	11:27:25	0
176	12-Jul	10:42:25	0.000167	222	12-Jul	11:28:25	0
177	12-Jul	10:43:25	0.000667	223	12-Jul	11:29:25	0
178	12-Jul	10:44:25	0	224	12-Jul	11:30:25	0
179	12-Jul	10:45:25	0	225	12-Jul	11:31:25	0
180	12-Jul	10:46:25	0.0015	226	12-Jul	11:32:25	0
181	12-Jul	10:47:25	0	227	12-Jul	11:33:25	0
182	12-Jul	10:48:25	0	228	12-Jul	11:34:25	0
183	12-Jul	10:49:25	0	229	12-Jul	11:35:25	0
184	12-Jul	10:50:25	0	230	12-Jul	11:36:25	0
185	12-Jul	10:51:25	0.0015	231	12-Jul	11:37:25	0
186	12-Jul	10:52:25	0	232	12-Jul	11:38:25	0
187	12-Jul	10:53:25	0	233	12-Jul	11:39:25	0
188	12-Jul	10:54:25	0	234	12-Jul	11:40:25	0
189	12-Jul	10:55:25	0	235	12-Jul	11:41:25	0
190	12-Jul	10:56:25	0	236	12-Jul	11:42:25	0
191	12-Jul	10:57:25	0.001	237	12-Jul	11:43:25	0
192	12-Jul	10:58:25	0	238	12-Jul	11:44:25	0.006
193	12-Jul	10:59:25	0	239	12-Jul	11:45:25	0.001167
194	12-Jul	11:00:25	0	240	12-Jul	11:46:25	0
195	12-Jul	11:01:25	0	241	12-Jul	11:47:25	0.017333
196	12-Jul	11:02:25	0.000167	242	12-Jul	11:48:25	0.001
197	12-Jul	11:03:25	0	243	12-Jul	11:49:25	0
198	12-Jul	11:04:25	0	244	12-Jul	11:50:25	0
199	12-Jul	11:05:25	0	245	12-Jul	11:51:25	0
200	12-Jul	11:06:25	0	246	12-Jul	11:52:25	0
201	12-Jul	11:07:25	0	247	12-Jul	11:53:25	0.000333
202	12-Jul	11:08:25	0.0005	248	12-Jul	11:54:25	0
203	12-Jul	11:09:25	0	249	12-Jul	11:55:25	0

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
204	12-Jul	11:10:25	0	296	12-Jul	12:42:25	0
251	12-Jul	11:57:25	0.001167	297	12-Jul	12:43:25	0.0145
252	12-Jul	11:58:25	0.001333	298	12-Jul	12:44:25	0.002667
253	12-Jul	11:59:25	0.005667	299	12-Jul	12:45:25	0
254	12-Jul	12:00:25	0.003167	300	12-Jul	12:46:25	0.001167
255	12-Jul	12:01:25	0	301	12-Jul	12:47:25	0
256	12-Jul	12:02:25	0.0055	302	12-Jul	12:48:25	0.007167
257	12-Jul	12:03:25	0.018833	303	12-Jul	12:49:25	0.003
258	12-Jul	12:04:25	0.008667	304	12-Jul	12:50:25	0
259	12-Jul	12:05:25	0.0005	305	12-Jul	12:51:25	0.008333
260	12-Jul	12:06:25	0.003167	306	12-Jul	12:52:25	0
261	12-Jul	12:07:25	0.013667	307	12-Jul	12:53:25	0.0025
262	12-Jul	12:08:25	0.001333	308	12-Jul	12:54:25	0
263	12-Jul	12:09:25	0.000333	309	12-Jul	12:55:25	0.000167
264	12-Jul	12:10:25	0	310	12-Jul	12:56:25	0
265	12-Jul	12:11:25	0	311	12-Jul	12:57:25	0
266	12-Jul	12:12:25	0	312	12-Jul	12:58:25	0
267	12-Jul	12:13:25	0.0085	313	12-Jul	12:59:25	0
268	12-Jul	12:14:25	0	314	12-Jul	13:00:25	0
269	12-Jul	12:15:25	0.000333	315	12-Jul	13:01:25	0
270	12-Jul	12:16:25	0	316	12-Jul	13:02:25	0
271	12-Jul	12:17:25	0.005833	317	12-Jul	13:03:25	0
272	12-Jul	12:18:25	0.000167	318	12-Jul	13:04:25	0
273	12-Jul	12:19:25	0	319	12-Jul	13:05:25	0
274	12-Jul	12:20:25	0	320	12-Jul	13:06:25	0
275	12-Jul	12:21:25	0	321	12-Jul	13:07:25	0.000667
276	12-Jul	12:22:25	0	322	12-Jul	13:08:25	0
277	12-Jul	12:23:25	0	323	12-Jul	13:09:25	0
278	12-Jul	12:24:25	0	324	12-Jul	13:10:25	0
279	12-Jul	12:25:25	0	325	12-Jul	13:11:25	0
280	12-Jul	12:26:25	0.008333	326	12-Jul	13:12:25	0
281	12-Jul	12:27:25	0.000333	327	12-Jul	13:13:25	0
282	12-Jul	12:28:25	0	328	12-Jul	13:14:25	0
283	12-Jul	12:29:25	0				
284	12-Jul	12:30:25	0.002667				
285	12-Jul	12:31:25	0.009833				
286	12-Jul	12:32:25	0.003167				
287	12-Jul	12:33:25	0.0015				
288	12-Jul	12:34:25	0.0025				
289	12-Jul	12:35:25	0				
290	12-Jul	12:36:25	0				
291	12-Jul	12:37:25	0				
292	12-Jul	12:38:25	0				
293	12-Jul	12:39:25	0.000167				
294	12-Jul	12:40:25	0				
295	12-Jul	12:41:25	0				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 03
Number of logged points: 863
Start time and date: 07:23:00 12-Jul
Elapsed time: 07:11:30
Logging period (sec): 30 (changed to 60 minute average for presentation in table below)
Calibration Factor (%): 100
Max Display Concentration: 1.109 mg/m³
Time at maximum: 13:29:50 Jul 12
Max STEL Concentration: 0.269 mg/m³
Time at max STEL: 07:42:00 Jul 12
Overall Avg Conc: 0.140 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	12-Jul	07:24:00	0.186	35	12-Jul	07:58:00	0.1215
2	12-Jul	07:25:00	0.1945	36	12-Jul	07:59:00	0.1195
3	12-Jul	07:26:00	0.124	37	12-Jul	08:00:00	0.119
4	12-Jul	07:27:00	0.1285	38	12-Jul	08:01:00	0.1215
5	12-Jul	07:28:00	0.3825	39	12-Jul	08:02:00	0.12
6	12-Jul	07:29:00	0.407	40	12-Jul	08:03:00	0.1215
7	12-Jul	07:30:00	0.738	41	12-Jul	08:04:00	0.131
8	12-Jul	07:31:00	0.281	42	12-Jul	08:05:00	0.1245
9	12-Jul	07:32:00	0.2035	43	12-Jul	08:06:00	0.1245
10	12-Jul	07:33:00	0.121	44	12-Jul	08:07:00	0.1655
11	12-Jul	07:34:00	0.1345	45	12-Jul	08:08:00	0.1455
12	12-Jul	07:35:00	0.166	46	12-Jul	08:09:00	0.162
13	12-Jul	07:36:00	0.1605	47	12-Jul	08:10:00	0.1155
14	12-Jul	07:37:00	0.2205	48	12-Jul	08:11:00	0.197
15	12-Jul	07:38:00	0.193	49	12-Jul	08:12:00	0.1205
16	12-Jul	07:39:00	0.2435	50	12-Jul	08:13:00	0.121
17	12-Jul	07:40:00	0.3595	51	12-Jul	08:14:00	0.124
18	12-Jul	07:41:00	0.2295	52	12-Jul	08:15:00	0.1125
19	12-Jul	07:42:00	0.1895	53	12-Jul	08:16:00	0.12
20	12-Jul	07:43:00	0.1525	54	12-Jul	08:17:00	0.123
21	12-Jul	07:44:00	0.14	55	12-Jul	08:18:00	0.1435
22	12-Jul	07:45:00	0.139	56	12-Jul	08:19:00	0.1245
23	12-Jul	07:46:00	0.2125	57	12-Jul	08:20:00	0.1195
24	12-Jul	07:47:00	0.179	58	12-Jul	08:21:00	0.117
25	12-Jul	07:48:00	0.147	59	12-Jul	08:22:00	0.12
26	12-Jul	07:49:00	0.158	60	12-Jul	08:23:00	0.125
27	12-Jul	07:50:00	0.2165	61	12-Jul	08:24:00	0.1185
28	12-Jul	07:51:00	0.328	62	12-Jul	08:25:00	0.12
29	12-Jul	07:52:00	0.118	63	12-Jul	08:26:00	0.1195
30	12-Jul	07:53:00	0.1225	64	12-Jul	08:27:00	0.123
31	12-Jul	07:54:00	0.1205	65	12-Jul	08:28:00	0.1245
32	12-Jul	07:55:00	0.12	66	12-Jul	08:29:00	0.1525
33	12-Jul	07:56:00	0.1255	67	12-Jul	08:30:00	0.119
34	12-Jul	07:57:00	0.13	68	12-Jul	08:31:00	0.1175

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
69	12-Jul	08:32:00	0.1175	115	12-Jul	09:18:00	0.11
70	12-Jul	08:33:00	0.1155	116	12-Jul	09:19:00	0.1125
71	12-Jul	08:34:00	0.121	117	12-Jul	09:20:00	0.1155
72	12-Jul	08:35:00	0.1215	118	12-Jul	09:21:00	0.115
73	12-Jul	08:36:00	0.1155	119	12-Jul	09:22:00	0.111
74	12-Jul	08:37:00	0.119	120	12-Jul	09:23:00	0.124
75	12-Jul	08:38:00	0.124	121	12-Jul	09:24:00	0.1115
76	12-Jul	08:39:00	0.1175	122	12-Jul	09:25:00	0.1115
77	12-Jul	08:40:00	0.12	123	12-Jul	09:26:00	0.1165
78	12-Jul	08:41:00	0.117	124	12-Jul	09:27:00	0.225
79	12-Jul	08:42:00	0.1165	125	12-Jul	09:28:00	0.13
80	12-Jul	08:43:00	0.12	126	12-Jul	09:29:00	0.1195
81	12-Jul	08:44:00	0.1175	127	12-Jul	09:30:00	0.1195
82	12-Jul	08:45:00	0.1205	128	12-Jul	09:31:00	0.121
83	12-Jul	08:46:00	0.1185	129	12-Jul	09:32:00	0.114
84	12-Jul	08:47:00	0.119	130	12-Jul	09:33:00	0.114
85	12-Jul	08:48:00	0.1175	131	12-Jul	09:34:00	0.142
86	12-Jul	08:49:00	0.141	132	12-Jul	09:35:00	0.1165
87	12-Jul	08:50:00	0.1395	133	12-Jul	09:36:00	0.1325
88	12-Jul	08:51:00	0.1465	134	12-Jul	09:37:00	0.113
89	12-Jul	08:52:00	0.137	135	12-Jul	09:38:00	0.114
90	12-Jul	08:53:00	0.2765	136	12-Jul	09:39:00	0.1135
91	12-Jul	08:54:00	0.1175	137	12-Jul	09:40:00	0.114
92	12-Jul	08:55:00	0.118	138	12-Jul	09:41:00	0.113
93	12-Jul	08:56:00	0.269	139	12-Jul	09:42:00	0.113
94	12-Jul	08:57:00	0.12	140	12-Jul	09:43:00	0.1135
95	12-Jul	08:58:00	0.1165	141	12-Jul	09:44:00	0.115
96	12-Jul	08:59:00	0.1205	142	12-Jul	09:45:00	0.114
97	12-Jul	09:00:00	0.2275	143	12-Jul	09:46:00	0.1125
98	12-Jul	09:01:00	0.181	144	12-Jul	09:47:00	0.1125
99	12-Jul	09:02:00	0.124	145	12-Jul	09:48:00	0.11
100	12-Jul	09:03:00	0.1145	146	12-Jul	09:49:00	0.1135
101	12-Jul	09:04:00	0.1325	147	12-Jul	09:50:00	0.113
102	12-Jul	09:05:00	0.1115	148	12-Jul	09:51:00	0.112
103	12-Jul	09:06:00	0.1115	149	12-Jul	09:52:00	0.1115
104	12-Jul	09:07:00	0.11	150	12-Jul	09:53:00	0.113
105	12-Jul	09:08:00	0.1095	151	12-Jul	09:54:00	0.112
106	12-Jul	09:09:00	0.112	152	12-Jul	09:55:00	0.112
107	12-Jul	09:10:00	0.112	153	12-Jul	09:56:00	0.1135
108	12-Jul	09:11:00	0.11	154	12-Jul	09:57:00	0.1135
109	12-Jul	09:12:00	0.1195	155	12-Jul	09:58:00	0.114
110	12-Jul	09:13:00	0.112	156	12-Jul	09:59:00	0.1145
111	12-Jul	09:14:00	0.113	157	12-Jul	10:00:00	0.1125
112	12-Jul	09:15:00	0.112	158	12-Jul	10:01:00	0.114
113	12-Jul	09:16:00	0.112	159	12-Jul	10:02:00	0.1125
114	12-Jul	09:17:00	0.111	160	12-Jul	10:03:00	0.114

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
161	12-Jul	10:04:00	0.112	207	12-Jul	10:50:00	0.1125
162	12-Jul	10:05:00	0.112	208	12-Jul	10:51:00	0.1115
163	12-Jul	10:06:00	0.114	209	12-Jul	10:52:00	0.1125
164	12-Jul	10:07:00	0.1115	210	12-Jul	10:53:00	0.1125
165	12-Jul	10:08:00	0.1125	211	12-Jul	10:54:00	0.1675
166	12-Jul	10:09:00	0.115	212	12-Jul	10:55:00	0.1185
167	12-Jul	10:10:00	0.1135	213	12-Jul	10:56:00	0.123
168	12-Jul	10:11:00	0.1145	214	12-Jul	10:57:00	0.112
169	12-Jul	10:12:00	0.1145	215	12-Jul	10:58:00	0.1095
170	12-Jul	10:13:00	0.111	216	12-Jul	10:59:00	0.174
171	12-Jul	10:14:00	0.1165	217	12-Jul	11:00:00	0.1445
172	12-Jul	10:15:00	0.112	218	12-Jul	11:01:00	0.1515
173	12-Jul	10:16:00	0.1145	219	12-Jul	11:02:00	0.1235
174	12-Jul	10:17:00	0.1135	220	12-Jul	11:03:00	0.121
175	12-Jul	10:18:00	0.173	221	12-Jul	11:04:00	0.1105
176	12-Jul	10:19:00	0.1425	222	12-Jul	11:05:00	0.1705
177	12-Jul	10:20:00	0.128	223	12-Jul	11:06:00	0.388
178	12-Jul	10:21:00	0.122	224	12-Jul	11:07:00	0.276
179	12-Jul	10:22:00	0.111	225	12-Jul	11:08:00	0.13
180	12-Jul	10:23:00	0.2605	226	12-Jul	11:09:00	0.1115
181	12-Jul	10:24:00	0.4945	227	12-Jul	11:10:00	0.2545
182	12-Jul	10:25:00	0.2525	228	12-Jul	11:11:00	0.1105
183	12-Jul	10:26:00	0.1175	229	12-Jul	11:12:00	0.115
184	12-Jul	10:27:00	0.111	230	12-Jul	11:13:00	0.1185
185	12-Jul	10:28:00	0.1185	231	12-Jul	11:14:00	0.109
186	12-Jul	10:29:00	0.118	232	12-Jul	11:15:00	0.1075
187	12-Jul	10:30:00	0.1185	233	12-Jul	11:16:00	0.109
188	12-Jul	10:31:00	0.1795	234	12-Jul	11:17:00	0.213
189	12-Jul	10:32:00	0.112	235	12-Jul	11:18:00	0.1155
190	12-Jul	10:33:00	0.112	236	12-Jul	11:19:00	0.116
191	12-Jul	10:34:00	0.1095	237	12-Jul	11:20:00	0.1155
192	12-Jul	10:35:00	0.1135	238	12-Jul	11:21:00	0.116
193	12-Jul	10:36:00	0.1115	239	12-Jul	11:22:00	0.114
194	12-Jul	10:37:00	0.1405	240	12-Jul	11:23:00	0.115
195	12-Jul	10:38:00	0.142	241	12-Jul	11:24:00	0.113
196	12-Jul	10:39:00	0.1555	242	12-Jul	11:25:00	0.115
197	12-Jul	10:40:00	0.1165	243	12-Jul	11:26:00	0.113
198	12-Jul	10:41:00	0.116	244	12-Jul	11:27:00	0.115
199	12-Jul	10:42:00	0.1155	245	12-Jul	11:28:00	0.1505
200	12-Jul	10:43:00	0.1115	246	12-Jul	11:29:00	0.115
201	12-Jul	10:44:00	0.1175	247	12-Jul	11:30:00	0.1125
202	12-Jul	10:45:00	0.116	248	12-Jul	11:31:00	0.114
203	12-Jul	10:46:00	0.117	249	12-Jul	11:32:00	0.379
204	12-Jul	10:47:00	0.118	250	12-Jul	11:33:00	0.114
205	12-Jul	10:48:00	0.1115	251	12-Jul	11:34:00	0.1145
206	12-Jul	10:49:00	0.112	252	12-Jul	11:35:00	0.1145

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
253	12-Jul	11:36:00	0.117	299	12-Jul	12:22:00	0.1165
254	12-Jul	11:37:00	0.1165	300	12-Jul	12:23:00	0.1165
255	12-Jul	11:38:00	0.1155	301	12-Jul	12:24:00	0.1175
256	12-Jul	11:39:00	0.117	302	12-Jul	12:25:00	0.116
257	12-Jul	11:40:00	0.1165	303	12-Jul	12:26:00	0.1175
258	12-Jul	11:41:00	0.117	304	12-Jul	12:27:00	0.118
259	12-Jul	11:42:00	0.1155	305	12-Jul	12:28:00	0.1155
260	12-Jul	11:43:00	0.1275	306	12-Jul	12:29:00	0.1155
261	12-Jul	11:44:00	0.123	307	12-Jul	12:30:00	0.116
262	12-Jul	11:45:00	0.1435	308	12-Jul	12:31:00	0.1165
263	12-Jul	11:46:00	0.124	309	12-Jul	12:32:00	0.1175
264	12-Jul	11:47:00	0.1425	310	12-Jul	12:33:00	0.1175
265	12-Jul	11:48:00	0.1285	311	12-Jul	12:34:00	0.1175
266	12-Jul	11:49:00	0.134	312	12-Jul	12:35:00	0.118
267	12-Jul	11:50:00	0.1395	313	12-Jul	12:36:00	0.118
268	12-Jul	11:51:00	0.1175	314	12-Jul	12:37:00	0.116
269	12-Jul	11:52:00	0.1175	315	12-Jul	12:38:00	0.116
270	12-Jul	11:53:00	0.1205	316	12-Jul	12:39:00	0.122
271	12-Jul	11:54:00	0.1195	317	12-Jul	12:40:00	0.1295
272	12-Jul	11:55:00	0.116	318	12-Jul	12:41:00	0.117
273	12-Jul	11:56:00	0.1165	319	12-Jul	12:42:00	0.12
274	12-Jul	11:57:00	0.1165	320	12-Jul	12:43:00	0.1355
275	12-Jul	11:58:00	0.117	321	12-Jul	12:44:00	0.145
276	12-Jul	11:59:00	0.1165	322	12-Jul	12:45:00	0.161
277	12-Jul	12:00:00	0.117	323	12-Jul	12:46:00	0.246
278	12-Jul	12:01:00	0.117	324	12-Jul	12:47:00	0.1395
279	12-Jul	12:02:00	0.117	325	12-Jul	12:48:00	0.123
280	12-Jul	12:03:00	0.1165	326	12-Jul	12:49:00	0.119
281	12-Jul	12:04:00	0.1165	327	12-Jul	12:50:00	0.128
282	12-Jul	12:05:00	0.1165	328	12-Jul	12:51:00	0.117
283	12-Jul	12:06:00	0.1215	329	12-Jul	12:52:00	0.1175
284	12-Jul	12:07:00	0.115	330	12-Jul	12:53:00	0.1245
285	12-Jul	12:08:00	0.1165	331	12-Jul	12:54:00	0.126
286	12-Jul	12:09:00	0.1145	332	12-Jul	12:55:00	0.1145
287	12-Jul	12:10:00	0.116	333	12-Jul	12:56:00	0.1465
288	12-Jul	12:11:00	0.1155	334	12-Jul	12:57:00	0.209
289	12-Jul	12:12:00	0.114	335	12-Jul	12:58:00	0.1225
290	12-Jul	12:13:00	0.1175	336	12-Jul	12:59:00	0.1245
291	12-Jul	12:14:00	0.113	337	12-Jul	13:00:00	0.118
292	12-Jul	12:15:00	0.115	338	12-Jul	13:01:00	0.1135
293	12-Jul	12:16:00	0.115	339	12-Jul	13:02:00	0.117
294	12-Jul	12:17:00	0.1175	340	12-Jul	13:03:00	0.237
295	12-Jul	12:18:00	0.1175	341	12-Jul	13:04:00	0.124
296	12-Jul	12:19:00	0.115	342	12-Jul	13:05:00	0.114
297	12-Jul	12:20:00	0.116	343	12-Jul	13:06:00	0.113
298	12-Jul	12:21:00	0.1155	344	12-Jul	13:07:00	0.114

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
345	12-Jul	13:08:00	0.118	391	12-Jul	13:54:00	0.115
346	12-Jul	13:09:00	0.115	392	12-Jul	13:55:00	0.1165
347	12-Jul	13:10:00	0.1325	393	12-Jul	13:56:00	0.114
348	12-Jul	13:11:00	0.163	394	12-Jul	13:57:00	0.116
349	12-Jul	13:12:00	0.1155	395	12-Jul	13:58:00	0.117
350	12-Jul	13:13:00	0.126	396	12-Jul	13:59:00	0.2945
351	12-Jul	13:14:00	0.114	397	12-Jul	14:00:00	0.135
352	12-Jul	13:15:00	0.117	398	12-Jul	14:01:00	0.212
353	12-Jul	13:16:00	0.12	399	12-Jul	14:02:00	0.148
354	12-Jul	13:17:00	0.1485	400	12-Jul	14:03:00	0.123
355	12-Jul	13:18:00	0.127	401	12-Jul	14:04:00	0.118
356	12-Jul	13:19:00	0.117	402	12-Jul	14:05:00	0.12
357	12-Jul	13:20:00	0.1325	403	12-Jul	14:06:00	0.1205
358	12-Jul	13:21:00	0.115	404	12-Jul	14:07:00	0.121
359	12-Jul	13:22:00	0.1125	405	12-Jul	14:08:00	0.122
360	12-Jul	13:23:00	0.1125	406	12-Jul	14:09:00	0.1205
361	12-Jul	13:24:00	0.114	407	12-Jul	14:10:00	0.1275
362	12-Jul	13:25:00	0.114	408	12-Jul	14:11:00	0.128
363	12-Jul	13:26:00	0.157	409	12-Jul	14:12:00	0.123
364	12-Jul	13:27:00	0.2825	410	12-Jul	14:13:00	0.124
365	12-Jul	13:28:00	0.1285	411	12-Jul	14:14:00	0.129
366	12-Jul	13:29:00	0.3385	412	12-Jul	14:15:00	0.1205
367	12-Jul	13:30:00	0.898	413	12-Jul	14:16:00	0.119
368	12-Jul	13:31:00	0.121	414	12-Jul	14:17:00	0.1265
369	12-Jul	13:32:00	0.131	415	12-Jul	14:18:00	0.122
370	12-Jul	13:33:00	0.1775	416	12-Jul	14:19:00	0.121
371	12-Jul	13:34:00	0.1295	417	12-Jul	14:20:00	0.133
372	12-Jul	13:35:00	0.1475	418	12-Jul	14:21:00	0.119
373	12-Jul	13:36:00	0.138	419	12-Jul	14:22:00	0.1185
374	12-Jul	13:37:00	0.1635	420	12-Jul	14:23:00	0.118
375	12-Jul	13:38:00	0.2565	421	12-Jul	14:24:00	0.1185
376	12-Jul	13:39:00	0.1255	422	12-Jul	14:25:00	0.161
377	12-Jul	13:40:00	0.1485	423	12-Jul	14:26:00	0.139
378	12-Jul	13:41:00	0.1575	424	12-Jul	14:27:00	0.1605
379	12-Jul	13:42:00	0.1435	425	12-Jul	14:28:00	0.1345
380	12-Jul	13:43:00	0.358	426	12-Jul	14:29:00	0.193
381	12-Jul	13:44:00	0.1605	427	12-Jul	14:30:00	0.122
382	12-Jul	13:45:00	0.129	428	12-Jul	14:31:00	0.162
383	12-Jul	13:46:00	0.1225	429	12-Jul	14:32:00	0.1705
384	12-Jul	13:47:00	0.121	430	12-Jul	14:33:00	0.307
385	12-Jul	13:48:00	0.12	431	12-Jul	14:34:00	0.5215
386	12-Jul	13:49:00	0.1185				
387	12-Jul	13:50:00	0.114				
388	12-Jul	13:51:00	0.1155				
389	12-Jul	13:52:00	0.1165				
390	12-Jul	13:53:00	0.115				

July 17, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 03
Number of logged points: 3122
Start time and date: 08:38:51 17-Jul
Elapsed time: 08:40:20
Logging period (sec): 10 (changed to 60 minute average for presentation in table below)
Calibration Factor (%): 100
Max Display Concentration: 2.140 mg/m³
Time at maximum: 15:34:38 Jul 17
Max STEL Concentration: 0.250 mg/m³
Time at max STEL: 15:48:22 Jul 17
Overall Avg Conc: 0.036 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	17-Jul	08:39:51	0	33	17-Jul	09:11:51	0.0085
2	17-Jul	08:40:51	0	34	17-Jul	09:12:51	0.02
3	17-Jul	08:41:51	0	35	17-Jul	09:13:51	0.0185
4	17-Jul	08:42:51	0	36	17-Jul	09:14:51	0.094
5	17-Jul	08:43:51	0	37	17-Jul	09:15:51	0.078
6	17-Jul	08:44:51	0	38	17-Jul	09:16:51	0.159
7	17-Jul	08:45:51	0	39	17-Jul	09:17:51	0.066
8	17-Jul	08:46:51	0.0135	40	17-Jul	09:18:51	0.1605
9	17-Jul	08:47:51	0.21	41	17-Jul	09:19:51	0.2015
10	17-Jul	08:48:51	0.1745	42	17-Jul	09:20:51	0.1035
11	17-Jul	08:49:51	0.0155	43	17-Jul	09:21:51	0.025
12	17-Jul	08:50:51	0	44	17-Jul	09:22:51	0.0295
13	17-Jul	08:51:51	0	45	17-Jul	09:23:51	0.013
14	17-Jul	08:52:51	0.022	46	17-Jul	09:24:51	0.0285
15	17-Jul	08:53:51	0.0315	47	17-Jul	09:25:51	0.0005
16	17-Jul	08:54:51	0.0005	48	17-Jul	09:26:51	0
17	17-Jul	08:55:51	0.0155	49	17-Jul	09:27:51	0.0605
18	17-Jul	08:56:51	0.0135	50	17-Jul	09:28:51	0.0725
19	17-Jul	08:57:51	0	51	17-Jul	09:29:51	0.001
20	17-Jul	08:58:51	0	52	17-Jul	09:30:51	0.006
21	17-Jul	08:59:51	0	53	17-Jul	09:31:51	0
22	17-Jul	09:00:51	0	54	17-Jul	09:32:51	0.025
23	17-Jul	09:01:51	0.0135	55	17-Jul	09:33:51	0.01
24	17-Jul	09:02:51	0.0795	56	17-Jul	09:34:51	0.003
25	17-Jul	09:03:51	0.049	57	17-Jul	09:35:51	0.0045
26	17-Jul	09:04:51	0.505	58	17-Jul	09:36:51	0.01
27	17-Jul	09:05:51	0.1105	59	17-Jul	09:37:51	0.12
28	17-Jul	09:06:51	0.05	60	17-Jul	09:38:51	0.021
29	17-Jul	09:07:51	0.047	61	17-Jul	09:39:51	0.0315
30	17-Jul	09:08:51	0.0495	62	17-Jul	09:40:51	0.055
31	17-Jul	09:09:51	0.019	63	17-Jul	09:41:51	0.005
32	17-Jul	09:10:51	0.003	64	17-Jul	09:42:51	0.0095

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
65	17-Jul	09:43:51	0	111	17-Jul	10:29:51	0
66	17-Jul	09:44:51	0.0595	112	17-Jul	10:30:51	0
67	17-Jul	09:45:51	0.025	113	17-Jul	10:31:51	0.0325
68	17-Jul	09:46:51	0	114	17-Jul	10:32:51	0.007
69	17-Jul	09:47:51	0	115	17-Jul	10:33:51	0
70	17-Jul	09:48:51	0	116	17-Jul	10:34:51	0.003
71	17-Jul	09:49:51	0.035	117	17-Jul	10:35:51	0
72	17-Jul	09:50:51	0.0125	118	17-Jul	10:36:51	0
73	17-Jul	09:51:51	0.0005	119	17-Jul	10:37:51	0.0025
74	17-Jul	09:52:51	0.002	120	17-Jul	10:38:51	0.01
75	17-Jul	09:53:51	0.0085	121	17-Jul	10:39:51	0.089
76	17-Jul	09:54:51	0	122	17-Jul	10:40:51	0.0285
77	17-Jul	09:55:51	0	123	17-Jul	10:41:51	0
78	17-Jul	09:56:51	0	124	17-Jul	10:42:51	0.4195
79	17-Jul	09:57:51	0.0125	125	17-Jul	10:43:51	0.09
80	17-Jul	09:58:51	0.024	126	17-Jul	10:44:51	0.0575
81	17-Jul	09:59:51	0.084	127	17-Jul	10:45:51	0.052
82	17-Jul	10:00:51	0	128	17-Jul	10:46:51	0.043
83	17-Jul	10:01:51	0	129	17-Jul	10:47:51	0.1
84	17-Jul	10:02:51	0.0565	130	17-Jul	10:48:51	0.1445
85	17-Jul	10:03:51	0.3095	131	17-Jul	10:49:51	0.0245
86	17-Jul	10:04:51	0.0445	132	17-Jul	10:50:51	0.159
87	17-Jul	10:05:51	0.261	133	17-Jul	10:51:51	0.2665
88	17-Jul	10:06:51	0.077	134	17-Jul	10:52:51	0.024
89	17-Jul	10:07:51	0.0475	135	17-Jul	10:53:51	0
90	17-Jul	10:08:51	0.057	136	17-Jul	10:54:51	0.377
91	17-Jul	10:09:51	0.2145	137	17-Jul	10:55:51	0.0755
92	17-Jul	10:10:51	0.5715	138	17-Jul	10:56:51	0.0175
93	17-Jul	10:11:51	0.723	139	17-Jul	10:57:51	0.5735
94	17-Jul	10:12:51	0.078	140	17-Jul	10:58:51	0.21
95	17-Jul	10:13:51	0.1435	141	17-Jul	10:59:51	0.071
96	17-Jul	10:14:51	0.097	142	17-Jul	11:00:51	0.1125
97	17-Jul	10:15:51	0.8575	143	17-Jul	11:01:51	0.035
98	17-Jul	10:16:51	0.8525	144	17-Jul	11:02:51	0.004
99	17-Jul	10:17:51	0.002	145	17-Jul	11:03:51	0.0005
100	17-Jul	10:18:51	0.023	146	17-Jul	11:04:51	0.0145
101	17-Jul	10:19:51	0.002	147	17-Jul	11:05:51	0.06
102	17-Jul	10:20:51	0	148	17-Jul	11:06:51	0.0265
103	17-Jul	10:21:51	0	149	17-Jul	11:07:51	0.051
104	17-Jul	10:22:51	0	150	17-Jul	11:08:51	0.1025
105	17-Jul	10:23:51	0.003	151	17-Jul	11:09:51	0.0005
106	17-Jul	10:24:51	0.002	152	17-Jul	11:10:51	0.34
107	17-Jul	10:25:51	0.016	153	17-Jul	11:11:51	0.0015
108	17-Jul	10:26:51	0	154	17-Jul	11:12:51	0
109	17-Jul	10:27:51	0.0015	155	17-Jul	11:13:51	0.003
110	17-Jul	10:28:51	0.0015	156	17-Jul	11:14:51	0

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
157	17-Jul	11:15:51	0.0245	203	17-Jul	12:01:51	0
158	17-Jul	11:16:51	0.0035	204	17-Jul	12:02:51	0.0005
159	17-Jul	11:17:51	0	205	17-Jul	12:03:51	0
160	17-Jul	11:18:51	0	206	17-Jul	12:04:51	0
161	17-Jul	11:19:51	0	207	17-Jul	12:05:51	0
162	17-Jul	11:20:51	0	208	17-Jul	12:06:51	0
163	17-Jul	11:21:51	0	209	17-Jul	12:07:51	0
164	17-Jul	11:22:51	0	210	17-Jul	12:08:51	0
165	17-Jul	11:23:51	0	211	17-Jul	12:09:51	0
166	17-Jul	11:24:51	0	212	17-Jul	12:10:51	0
167	17-Jul	11:25:51	0	213	17-Jul	12:11:51	0
168	17-Jul	11:26:51	0.007	214	17-Jul	12:12:51	0
169	17-Jul	11:27:51	0.0055	215	17-Jul	12:13:51	0
170	17-Jul	11:28:51	0.0515	216	17-Jul	12:14:51	0
171	17-Jul	11:29:51	0.012	217	17-Jul	12:15:51	0
172	17-Jul	11:30:51	0	218	17-Jul	12:16:51	0.0325
173	17-Jul	11:31:51	0.008	219	17-Jul	12:17:51	0.0695
174	17-Jul	11:32:51	0.004	220	17-Jul	12:18:51	0
175	17-Jul	11:33:51	0.0405	221	17-Jul	12:19:51	0
176	17-Jul	11:34:51	0.006	222	17-Jul	12:20:51	0
177	17-Jul	11:35:51	0	223	17-Jul	12:21:51	0
178	17-Jul	11:36:51	0	224	17-Jul	12:22:51	0
179	17-Jul	11:37:51	0.0005	225	17-Jul	12:23:51	0
180	17-Jul	11:38:51	0.0005	226	17-Jul	12:24:51	0
181	17-Jul	11:39:51	0.0135	227	17-Jul	12:25:51	0
182	17-Jul	11:40:51	0.0315	228	17-Jul	12:26:51	0
183	17-Jul	11:41:51	0.107	229	17-Jul	12:27:51	0
184	17-Jul	11:42:51	0.239	230	17-Jul	12:28:51	0
185	17-Jul	11:43:51	0.6165	231	17-Jul	12:29:51	0
186	17-Jul	11:44:51	0.359	232	17-Jul	12:30:51	0
187	17-Jul	11:45:51	0.5565	233	17-Jul	12:31:51	0
188	17-Jul	11:46:51	0.015	234	17-Jul	12:32:51	0
189	17-Jul	11:47:51	0.069	235	17-Jul	12:33:51	0.084
190	17-Jul	11:48:51	0.1575	236	17-Jul	12:34:51	0.254
191	17-Jul	11:49:51	0.008	237	17-Jul	12:35:51	0.2465
192	17-Jul	11:50:51	0.0455	238	17-Jul	12:36:51	0.186
193	17-Jul	11:51:51	0.0485	239	17-Jul	12:37:51	0.1315
194	17-Jul	11:52:51	0.008	240	17-Jul	12:38:51	0.0665
195	17-Jul	11:53:51	0.229	241	17-Jul	12:39:51	0.059
196	17-Jul	11:54:51	0.034	242	17-Jul	12:40:51	0.004
197	17-Jul	11:55:51	0.01	243	17-Jul	12:41:51	0.0115
198	17-Jul	11:56:51	0	244	17-Jul	12:42:51	0.0205
199	17-Jul	11:57:51	0	245	17-Jul	12:43:51	0.0135
200	17-Jul	11:58:51	0	246	17-Jul	12:44:51	0.0395
201	17-Jul	11:59:51	0	247	17-Jul	12:45:51	3.264
202	17-Jul	12:00:51	0	248	17-Jul	12:46:51	0.364

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
249	17-Jul	12:47:51	0.0635	295	17-Jul	13:33:51	0.0115
250	17-Jul	12:48:51	0.0065	296	17-Jul	13:34:51	0
251	17-Jul	12:49:51	0.0985	297	17-Jul	13:35:51	0
252	17-Jul	12:50:51	0.0055	298	17-Jul	13:36:51	0.019
253	17-Jul	12:51:51	0	299	17-Jul	13:37:51	0.007
254	17-Jul	12:52:51	0.0005	300	17-Jul	13:38:51	0.028
255	17-Jul	12:53:51	0	301	17-Jul	13:39:51	0
256	17-Jul	12:54:51	0.234	302	17-Jul	13:40:51	0.033
257	17-Jul	12:55:51	0.0525	303	17-Jul	13:41:51	0
258	17-Jul	12:56:51	0.0125	304	17-Jul	13:42:51	0
259	17-Jul	12:57:51	0.0245	305	17-Jul	13:43:51	0.2095
260	17-Jul	12:58:51	0.0325	306	17-Jul	13:44:51	0
261	17-Jul	12:59:51	0.1165	307	17-Jul	13:45:51	0
262	17-Jul	13:00:51	0.191	308	17-Jul	13:46:51	0
263	17-Jul	13:01:51	0.35	309	17-Jul	13:47:51	0
264	17-Jul	13:02:51	0.1315	310	17-Jul	13:48:51	0
265	17-Jul	13:03:51	0.001	311	17-Jul	13:49:51	0.348
266	17-Jul	13:04:51	0.005	312	17-Jul	13:50:51	0.0855
267	17-Jul	13:05:51	0.022	313	17-Jul	13:51:51	0.179
268	17-Jul	13:06:51	0.004	314	17-Jul	13:52:51	0
269	17-Jul	13:07:51	0.067	315	17-Jul	13:53:51	0.0365
270	17-Jul	13:08:51	0.017	316	17-Jul	13:54:51	0
271	17-Jul	13:09:51	0.041	317	17-Jul	13:55:51	0
272	17-Jul	13:10:51	0.062	318	17-Jul	13:56:51	0.0985
273	17-Jul	13:11:51	0.0705	319	17-Jul	13:57:51	0
274	17-Jul	13:12:51	0	320	17-Jul	13:58:51	0
275	17-Jul	13:13:51	0.001	321	17-Jul	13:59:51	0
276	17-Jul	13:14:51	0	322	17-Jul	14:00:51	0.0015
277	17-Jul	13:15:51	0	323	17-Jul	14:01:51	0.0105
278	17-Jul	13:16:51	0.017	324	17-Jul	14:02:51	0
279	17-Jul	13:17:51	0.024	325	17-Jul	14:03:51	0
280	17-Jul	13:18:51	0.009	326	17-Jul	14:04:51	0.001
281	17-Jul	13:19:51	0	327	17-Jul	14:05:51	0.0185
282	17-Jul	13:20:51	0	328	17-Jul	14:06:51	0
283	17-Jul	13:21:51	0.0005	329	17-Jul	14:07:51	0
284	17-Jul	13:22:51	0	330	17-Jul	14:08:51	0.094
285	17-Jul	13:23:51	0	331	17-Jul	14:09:51	0.2335
286	17-Jul	13:24:51	0	332	17-Jul	14:10:51	0.0225
287	17-Jul	13:25:51	0	333	17-Jul	14:11:51	0.0165
288	17-Jul	13:26:51	0	334	17-Jul	14:12:51	0.005
289	17-Jul	13:27:51	0.002	335	17-Jul	14:13:51	0
290	17-Jul	13:28:51	0.0345	336	17-Jul	14:14:51	0
291	17-Jul	13:29:51	0.0145	337	17-Jul	14:15:51	0.0425
292	17-Jul	13:30:51	0.03	338	17-Jul	14:16:51	0.0285
293	17-Jul	13:31:51	0	339	17-Jul	14:17:51	0.035
294	17-Jul	13:32:51	0	340	17-Jul	14:18:51	0.015

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
341	17-Jul	14:19:51	0.019	387	17-Jul	15:05:51	0.004
342	17-Jul	14:20:51	0.0005	388	17-Jul	15:06:51	0
343	17-Jul	14:21:51	0.013	389	17-Jul	15:07:51	0.2445
344	17-Jul	14:22:51	0.0215	390	17-Jul	15:08:51	0.152
345	17-Jul	14:23:51	0.02	391	17-Jul	15:09:51	0
346	17-Jul	14:24:51	0	392	17-Jul	15:10:51	0.0005
347	17-Jul	14:25:51	0	393	17-Jul	15:11:51	0.0275
348	17-Jul	14:26:51	0	394	17-Jul	15:12:51	0.2845
349	17-Jul	14:27:51	0.0815	395	17-Jul	15:13:51	0.0175
350	17-Jul	14:28:51	0.177	396	17-Jul	15:14:51	0
351	17-Jul	14:29:51	0.0195	397	17-Jul	15:15:51	0
352	17-Jul	14:30:51	0.006	398	17-Jul	15:16:51	0.0005
353	17-Jul	14:31:51	0.0095	399	17-Jul	15:17:51	0
354	17-Jul	14:32:51	0.003	400	17-Jul	15:18:51	0
355	17-Jul	14:33:51	0.0095	401	17-Jul	15:19:51	0
356	17-Jul	14:34:51	0.0035	402	17-Jul	15:20:51	0
357	17-Jul	14:35:51	0.0365	403	17-Jul	15:21:51	0.045
358	17-Jul	14:36:51	0.007	404	17-Jul	15:22:51	0.01
359	17-Jul	14:37:51	0	405	17-Jul	15:23:51	0.005
360	17-Jul	14:38:51	0.002	406	17-Jul	15:24:51	0
361	17-Jul	14:39:51	0.0495	407	17-Jul	15:25:51	0
362	17-Jul	14:40:51	0	408	17-Jul	15:26:51	0.0035
363	17-Jul	14:41:51	0	409	17-Jul	15:27:51	0.003
364	17-Jul	14:42:51	0.0325	410	17-Jul	15:28:51	0.1525
365	17-Jul	14:43:51	0	411	17-Jul	15:29:51	0
366	17-Jul	14:44:51	0	412	17-Jul	15:30:51	0
367	17-Jul	14:45:51	0.0015	413	17-Jul	15:31:51	0
368	17-Jul	14:46:51	0.0085	414	17-Jul	15:32:51	0.011
369	17-Jul	14:47:51	0	415	17-Jul	15:33:51	2.0005
370	17-Jul	14:48:51	0	416	17-Jul	15:34:51	2.775
371	17-Jul	14:49:51	0	417	17-Jul	15:35:51	0.078
372	17-Jul	14:50:51	0.0815	418	17-Jul	15:36:51	0.1475
373	17-Jul	14:51:51	0.003	419	17-Jul	15:37:51	0.324
374	17-Jul	14:52:51	0.0005	420	17-Jul	15:38:51	0.1815
375	17-Jul	14:53:51	0.0025	421	17-Jul	15:39:51	0.789
376	17-Jul	14:54:51	0.0125	422	17-Jul	15:40:51	0.1165
377	17-Jul	14:55:51	0.0175	423	17-Jul	15:41:51	0.048
378	17-Jul	14:56:51	0.001	424	17-Jul	15:42:51	0.0575
379	17-Jul	14:57:51	0.001	425	17-Jul	15:43:51	0.006
380	17-Jul	14:58:51	0	426	17-Jul	15:44:51	0
381	17-Jul	14:59:51	0.002	427	17-Jul	15:45:51	0
382	17-Jul	15:00:51	0.6485	428	17-Jul	15:46:51	0
383	17-Jul	15:01:51	0	429	17-Jul	15:47:51	0
384	17-Jul	15:02:51	0.068	430	17-Jul	15:48:51	0.049
385	17-Jul	15:03:51	0.0415	431	17-Jul	15:49:51	0.0025
386	17-Jul	15:04:51	0.031	432	17-Jul	15:50:51	0

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
433	17-Jul	15:51:51	0.458	479	17-Jul	16:37:51	0
434	17-Jul	15:52:51	1.554	480	17-Jul	16:38:51	0.1845
435	17-Jul	15:53:51	0.08	481	17-Jul	16:39:51	0.1845
436	17-Jul	15:54:51	0.0705	482	17-Jul	16:40:51	0.013
437	17-Jul	15:55:51	0.021	483	17-Jul	16:41:51	0.055
438	17-Jul	15:56:51	0	484	17-Jul	16:42:51	0.016
439	17-Jul	15:57:51	0.0645	485	17-Jul	16:43:51	0.005
440	17-Jul	15:58:51	0.002	486	17-Jul	16:44:51	0.0045
441	17-Jul	15:59:51	0.0005	487	17-Jul	16:45:51	0.018
442	17-Jul	16:00:51	0	488	17-Jul	16:46:51	0.3935
443	17-Jul	16:01:51	0.0075	489	17-Jul	16:47:51	0.0095
444	17-Jul	16:02:51	0.019	490	17-Jul	16:48:51	0.017
445	17-Jul	16:03:51	0	491	17-Jul	16:49:51	0.1285
446	17-Jul	16:04:51	0	492	17-Jul	16:50:51	0.004
447	17-Jul	16:05:51	0	493	17-Jul	16:51:51	0.061
448	17-Jul	16:06:51	0.1595	494	17-Jul	16:52:51	0.0235
449	17-Jul	16:07:51	0.073	495	17-Jul	16:53:51	0.004
450	17-Jul	16:08:51	0.0225	496	17-Jul	16:54:51	0.0385
451	17-Jul	16:09:51	0.027	497	17-Jul	16:55:51	0.001
452	17-Jul	16:10:51	0	498	17-Jul	16:56:51	0.0105
453	17-Jul	16:11:51	0.0025	499	17-Jul	16:57:51	0.004
454	17-Jul	16:12:51	0.003	500	17-Jul	16:58:51	0.003
455	17-Jul	16:13:51	0.0165	501	17-Jul	16:59:51	0.086
456	17-Jul	16:14:51	0	502	17-Jul	17:00:51	0.1195
457	17-Jul	16:15:51	0	503	17-Jul	17:01:51	0.073
458	17-Jul	16:16:51	0.044	504	17-Jul	17:02:51	0.002
459	17-Jul	16:17:51	0.02	505	17-Jul	17:03:51	0.2085
460	17-Jul	16:18:51	0	506	17-Jul	17:04:51	0.065
461	17-Jul	16:19:51	0.0005	507	17-Jul	17:05:51	0.4265
462	17-Jul	16:20:51	0.0185	508	17-Jul	17:06:51	0.26
463	17-Jul	16:21:51	0.014	509	17-Jul	17:07:51	0.0525
464	17-Jul	16:22:51	0.0155	510	17-Jul	17:08:51	0.0905
465	17-Jul	16:23:51	0	511	17-Jul	17:09:51	0.016
466	17-Jul	16:24:51	0	512	17-Jul	17:10:51	0.009
467	17-Jul	16:25:51	0.001	513	17-Jul	17:11:51	0.025
468	17-Jul	16:26:51	0	514	17-Jul	17:12:51	0.068
469	17-Jul	16:27:51	0	515	17-Jul	17:13:51	0.0455
470	17-Jul	16:28:51	0	516	17-Jul	17:14:51	0.0205
471	17-Jul	16:29:51	0.0145	517	17-Jul	17:15:51	0.007
472	17-Jul	16:30:51	0.0275	518	17-Jul	17:16:51	0.015
473	17-Jul	16:31:51	0.024	519	17-Jul	17:17:51	0.0065
474	17-Jul	16:32:51	0	520	17-Jul	17:18:51	0
475	17-Jul	16:33:51	0				
476	17-Jul	16:34:51	0.0015				
477	17-Jul	16:35:51	0.0225				
478	17-Jul	16:36:51	0.016				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 04
Number of logged points: 1042
Start time and date: 08:37:24 17-Jul
Elapsed time: 08:41:00
Logging period (sec): 30 (changed to 60 minute average for presentation in table below)
Calibration Factor (%): 100
Max Display Concentration: 7.182 mg/m³
Time at maximum: 14:37:48 Jul 17
Max STEL Concentration: 1.149 mg/m³
Time at max STEL: 09:31:24 Jul 17
Overall Avg Conc: 0.419 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	17-Jul	08:38:24	0.1205	34	17-Jul	09:11:24	0.5325
2	17-Jul	08:39:24	0.124	35	17-Jul	09:12:24	0.116
3	17-Jul	08:40:24	0.1165	36	17-Jul	09:13:24	0.1135
4	17-Jul	08:41:24	0.1105	37	17-Jul	09:14:24	0.1135
5	17-Jul	08:42:24	0.1105	38	17-Jul	09:15:24	0.1135
6	17-Jul	08:43:24	0.1165	39	17-Jul	09:16:24	0.52
7	17-Jul	08:44:24	0.115	40	17-Jul	09:17:24	0.346
8	17-Jul	08:45:24	0.139	41	17-Jul	09:18:24	4.5245
9	17-Jul	08:46:24	0.1345	42	17-Jul	09:19:24	0.7055
10	17-Jul	08:47:24	0.258	43	17-Jul	09:20:24	0.2255
11	17-Jul	08:48:24	0.34	44	17-Jul	09:21:24	0.2135
12	17-Jul	08:49:24	0.1305	45	17-Jul	09:22:24	0.2305
13	17-Jul	08:50:24	0.1435	46	17-Jul	09:23:24	6.8225
14	17-Jul	08:51:24	0.4305	47	17-Jul	09:24:24	0.563
15	17-Jul	08:52:24	0.771	48	17-Jul	09:25:24	0.457
16	17-Jul	08:53:24	0.2025	49	17-Jul	09:26:24	0.21
17	17-Jul	08:54:24	0.251	50	17-Jul	09:27:24	0.87
18	17-Jul	08:55:24	0.151	51	17-Jul	09:28:24	0.299
19	17-Jul	08:56:24	0.5855	52	17-Jul	09:29:24	0.338
20	17-Jul	08:57:24	0.1915	53	17-Jul	09:30:24	0.19
21	17-Jul	08:58:24	0.1335	54	17-Jul	09:31:24	1.238
22	17-Jul	08:59:24	0.114	55	17-Jul	09:32:24	0.248
23	17-Jul	09:00:24	0.1935	56	17-Jul	09:33:24	0.1785
24	17-Jul	09:01:24	0.154	57	17-Jul	09:34:24	0.6405
25	17-Jul	09:02:24	0.159	58	17-Jul	09:35:24	1.4135
26	17-Jul	09:03:24	0.1345	59	17-Jul	09:36:24	0.5505
27	17-Jul	09:04:24	0.12	60	17-Jul	09:37:24	0.431
28	17-Jul	09:05:24	0.1305	61	17-Jul	09:38:24	0.38
29	17-Jul	09:06:24	0.1385	62	17-Jul	09:39:24	1.25
30	17-Jul	09:07:24	0.1305	63	17-Jul	09:40:24	0.3985
31	17-Jul	09:08:24	0.1355	64	17-Jul	09:41:24	0.148
32	17-Jul	09:09:24	0.3885	65	17-Jul	09:42:24	1.408
33	17-Jul	09:10:24	0.6255	66	17-Jul	09:43:24	0.5825

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	17-Jul	09:44:24	0.1615	113	17-Jul	10:30:24	0.8045
68	17-Jul	09:45:24	0.7855	114	17-Jul	10:31:24	0.2115
69	17-Jul	09:46:24	0.6545	115	17-Jul	10:32:24	0.1785
70	17-Jul	09:47:24	0.278	116	17-Jul	10:33:24	0.198
71	17-Jul	09:48:24	0.1405	117	17-Jul	10:34:24	0.302
72	17-Jul	09:49:24	0.2335	118	17-Jul	10:35:24	0.6985
73	17-Jul	09:50:24	0.152	119	17-Jul	10:36:24	0.2185
74	17-Jul	09:51:24	0.3275	120	17-Jul	10:37:24	0.2235
75	17-Jul	09:52:24	1.593	121	17-Jul	10:38:24	0.1845
76	17-Jul	09:53:24	0.831	122	17-Jul	10:39:24	0.2875
77	17-Jul	09:54:24	0.6075	123	17-Jul	10:40:24	0.1435
78	17-Jul	09:55:24	0.4155	124	17-Jul	10:41:24	0.312
79	17-Jul	09:56:24	0.2385	125	17-Jul	10:42:24	0.3645
80	17-Jul	09:57:24	0.281	126	17-Jul	10:43:24	0.221
81	17-Jul	09:58:24	2.2995	127	17-Jul	10:44:24	0.2595
82	17-Jul	09:59:24	0.6015	128	17-Jul	10:45:24	0.4305
83	17-Jul	10:00:24	0.5025	129	17-Jul	10:46:24	0.374
84	17-Jul	10:01:24	0.529	130	17-Jul	10:47:24	1.3545
85	17-Jul	10:02:24	0.3215	131	17-Jul	10:48:24	0.303
86	17-Jul	10:03:24	0.3605	132	17-Jul	10:49:24	0.354
87	17-Jul	10:04:24	0.384	133	17-Jul	10:50:24	0.1545
88	17-Jul	10:05:24	0.719	134	17-Jul	10:51:24	0.415
89	17-Jul	10:06:24	0.8435	135	17-Jul	10:52:24	0.2915
90	17-Jul	10:07:24	0.4335	136	17-Jul	10:53:24	0.2875
91	17-Jul	10:08:24	0.342	137	17-Jul	10:54:24	0.2315
92	17-Jul	10:09:24	1.1085	138	17-Jul	10:55:24	0.2165
93	17-Jul	10:10:24	1.224	139	17-Jul	10:56:24	0.2005
94	17-Jul	10:11:24	2.179	140	17-Jul	10:57:24	0.398
95	17-Jul	10:12:24	0.4055	141	17-Jul	10:58:24	0.312
96	17-Jul	10:13:24	0.6155	142	17-Jul	10:59:24	0.3115
97	17-Jul	10:14:24	0.726	143	17-Jul	11:00:24	1.4785
98	17-Jul	10:15:24	0.3025	144	17-Jul	11:01:24	0.2595
99	17-Jul	10:16:24	0.404	145	17-Jul	11:02:24	0.4185
100	17-Jul	10:17:24	0.4245	146	17-Jul	11:03:24	0.417
101	17-Jul	10:18:24	0.196	147	17-Jul	11:04:24	0.176
102	17-Jul	10:19:24	0.2225	148	17-Jul	11:05:24	0.189
103	17-Jul	10:20:24	0.726	149	17-Jul	11:06:24	0.5115
104	17-Jul	10:21:24	0.7975	150	17-Jul	11:07:24	0.633
105	17-Jul	10:22:24	0.186	151	17-Jul	11:08:24	0.476
106	17-Jul	10:23:24	0.189	152	17-Jul	11:09:24	0.5635
107	17-Jul	10:24:24	0.4275	153	17-Jul	11:10:24	0.182
108	17-Jul	10:25:24	0.167	154	17-Jul	11:11:24	0.1885
109	17-Jul	10:26:24	0.4135	155	17-Jul	11:12:24	0.203
110	17-Jul	10:27:24	0.3715	156	17-Jul	11:13:24	0.1855
111	17-Jul	10:28:24	0.4115	157	17-Jul	11:14:24	0.6255
112	17-Jul	10:29:24	0.365	158	17-Jul	11:15:24	0.922

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
159	17-Jul	11:16:24	0.2325	205	17-Jul	12:02:24	0.141
160	17-Jul	11:17:24	0.322	206	17-Jul	12:03:24	0.145
161	17-Jul	11:18:24	0.1965	207	17-Jul	12:04:24	0.1425
162	17-Jul	11:19:24	0.1715	208	17-Jul	12:05:24	0.1415
163	17-Jul	11:20:24	0.3335	209	17-Jul	12:06:24	0.153
164	17-Jul	11:21:24	0.45	210	17-Jul	12:07:24	0.142
165	17-Jul	11:22:24	0.345	211	17-Jul	12:08:24	0.145
166	17-Jul	11:23:24	0.361	212	17-Jul	12:09:24	0.144
167	17-Jul	11:24:24	0.318	213	17-Jul	12:10:24	0.147
168	17-Jul	11:25:24	0.3795	214	17-Jul	12:11:24	0.1425
169	17-Jul	11:26:24	0.344	215	17-Jul	12:12:24	0.142
170	17-Jul	11:27:24	0.2645	216	17-Jul	12:13:24	0.1415
171	17-Jul	11:28:24	0.267	217	17-Jul	12:14:24	0.141
172	17-Jul	11:29:24	0.1855	218	17-Jul	12:15:24	0.145
173	17-Jul	11:30:24	0.2805	219	17-Jul	12:16:24	0.141
174	17-Jul	11:31:24	0.2705	220	17-Jul	12:17:24	0.197
175	17-Jul	11:32:24	0.1795	221	17-Jul	12:18:24	0.144
176	17-Jul	11:33:24	0.2575	222	17-Jul	12:19:24	0.144
177	17-Jul	11:34:24	0.2415	223	17-Jul	12:20:24	0.141
178	17-Jul	11:35:24	0.3495	224	17-Jul	12:21:24	0.1595
179	17-Jul	11:36:24	0.295	225	17-Jul	12:22:24	0.141
180	17-Jul	11:37:24	0.255	226	17-Jul	12:23:24	0.141
181	17-Jul	11:38:24	0.2815	227	17-Jul	12:24:24	0.14
182	17-Jul	11:39:24	0.5155	228	17-Jul	12:25:24	0.1425
183	17-Jul	11:40:24	0.603	229	17-Jul	12:26:24	0.1415
184	17-Jul	11:41:24	2.5555	230	17-Jul	12:27:24	0.1425
185	17-Jul	11:42:24	0.8065	231	17-Jul	12:28:24	0.151
186	17-Jul	11:43:24	5.66	232	17-Jul	12:29:24	0.141
187	17-Jul	11:44:24	0.3925	233	17-Jul	12:30:24	0.143
188	17-Jul	11:45:24	0.2855	234	17-Jul	12:31:24	0.1415
189	17-Jul	11:46:24	0.29	235	17-Jul	12:32:24	0.1605
190	17-Jul	11:47:24	0.2765	236	17-Jul	12:33:24	0.1415
191	17-Jul	11:48:24	0.316	237	17-Jul	12:34:24	0.3105
192	17-Jul	11:49:24	0.3335	238	17-Jul	12:35:24	0.226
193	17-Jul	11:50:24	0.167	239	17-Jul	12:36:24	0.4295
194	17-Jul	11:51:24	0.1655	240	17-Jul	12:37:24	0.457
195	17-Jul	11:52:24	0.412	241	17-Jul	12:38:24	0.227
196	17-Jul	11:53:24	0.1635	242	17-Jul	12:39:24	0.19
197	17-Jul	11:54:24	0.177	243	17-Jul	12:40:24	0.147
198	17-Jul	11:55:24	0.1925	244	17-Jul	12:41:24	0.1855
199	17-Jul	11:56:24	0.2015	245	17-Jul	12:42:24	0.1555
200	17-Jul	11:57:24	0.1465	246	17-Jul	12:43:24	1.782
201	17-Jul	11:58:24	0.141	247	17-Jul	12:44:24	0.2945
202	17-Jul	11:59:24	0.1415	248	17-Jul	12:45:24	0.31
203	17-Jul	12:00:24	0.1415	249	17-Jul	12:46:24	0.532
204	17-Jul	12:01:24	0.1425	250	17-Jul	12:47:24	0.288

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
251	17-Jul	12:48:24	0.268	297	17-Jul	13:34:24	0.6295
252	17-Jul	12:49:24	0.4855	298	17-Jul	13:35:24	0.738
253	17-Jul	12:50:24	0.1845	299	17-Jul	13:36:24	0.9845
254	17-Jul	12:51:24	0.448	300	17-Jul	13:37:24	0.24
255	17-Jul	12:52:24	0.637	301	17-Jul	13:38:24	0.2975
256	17-Jul	12:53:24	0.555	302	17-Jul	13:39:24	0.256
257	17-Jul	12:54:24	0.4205	303	17-Jul	13:40:24	0.5125
258	17-Jul	12:55:24	0.28	304	17-Jul	13:41:24	0.6175
259	17-Jul	12:56:24	1.2335	305	17-Jul	13:42:24	0.229
260	17-Jul	12:57:24	0.517	306	17-Jul	13:43:24	0.158
261	17-Jul	12:58:24	0.3105	307	17-Jul	13:44:24	0.366
262	17-Jul	12:59:24	0.3325	308	17-Jul	13:45:24	0.1935
263	17-Jul	13:00:24	0.454	309	17-Jul	13:46:24	0.171
264	17-Jul	13:01:24	0.2595	310	17-Jul	13:47:24	0.4155
265	17-Jul	13:02:24	0.859	311	17-Jul	13:48:24	0.67
266	17-Jul	13:03:24	0.317	312	17-Jul	13:49:24	0.519
267	17-Jul	13:04:24	1.2365	313	17-Jul	13:50:24	0.457
268	17-Jul	13:05:24	0.6615	314	17-Jul	13:51:24	0.705
269	17-Jul	13:06:24	0.3015	315	17-Jul	13:52:24	0.8775
270	17-Jul	13:07:24	0.4155	316	17-Jul	13:53:24	0.96
271	17-Jul	13:08:24	0.18	317	17-Jul	13:54:24	0.1705
272	17-Jul	13:09:24	0.216	318	17-Jul	13:55:24	0.294
273	17-Jul	13:10:24	0.234	319	17-Jul	13:56:24	0.2945
274	17-Jul	13:11:24	0.4125	320	17-Jul	13:57:24	0.278
275	17-Jul	13:12:24	0.314	321	17-Jul	13:58:24	0.374
276	17-Jul	13:13:24	0.336	322	17-Jul	13:59:24	0.341
277	17-Jul	13:14:24	0.2695	323	17-Jul	14:00:24	0.1835
278	17-Jul	13:15:24	0.383	324	17-Jul	14:01:24	0.2305
279	17-Jul	13:16:24	0.3175	325	17-Jul	14:02:24	0.314
280	17-Jul	13:17:24	0.5755	326	17-Jul	14:03:24	0.196
281	17-Jul	13:18:24	0.385	327	17-Jul	14:04:24	0.1825
282	17-Jul	13:19:24	0.4125	328	17-Jul	14:05:24	0.1705
283	17-Jul	13:20:24	1.1785	329	17-Jul	14:06:24	0.151
284	17-Jul	13:21:24	0.3435	330	17-Jul	14:07:24	0.157
285	17-Jul	13:22:24	0.247	331	17-Jul	14:08:24	0.2325
286	17-Jul	13:23:24	0.206	332	17-Jul	14:09:24	0.2925
287	17-Jul	13:24:24	0.355	333	17-Jul	14:10:24	0.941
288	17-Jul	13:25:24	0.4005	334	17-Jul	14:11:24	0.754
289	17-Jul	13:26:24	0.4685	335	17-Jul	14:12:24	0.3995
290	17-Jul	13:27:24	0.5125	336	17-Jul	14:13:24	0.4455
291	17-Jul	13:28:24	2.105	337	17-Jul	14:14:24	1.5155
292	17-Jul	13:29:24	0.31	338	17-Jul	14:15:24	0.8075
293	17-Jul	13:30:24	1.1145	339	17-Jul	14:16:24	0.2045
294	17-Jul	13:31:24	1.023	340	17-Jul	14:17:24	0.1485
295	17-Jul	13:32:24	0.3945	341	17-Jul	14:18:24	0.185
296	17-Jul	13:33:24	0.285	342	17-Jul	14:19:24	0.176

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
343	17-Jul	14:20:24	0.1715	389	17-Jul	15:06:24	0.196
344	17-Jul	14:21:24	0.379	390	17-Jul	15:07:24	0.196
345	17-Jul	14:22:24	0.282	391	17-Jul	15:08:24	1.12
346	17-Jul	14:23:24	0.156	392	17-Jul	15:09:24	0.2275
347	17-Jul	14:24:24	0.151	393	17-Jul	15:10:24	0.1615
348	17-Jul	14:25:24	0.1585	394	17-Jul	15:11:24	0.162
349	17-Jul	14:26:24	0.151	395	17-Jul	15:12:24	0.3245
350	17-Jul	14:27:24	0.1505	396	17-Jul	15:13:24	0.177
351	17-Jul	14:28:24	0.158	397	17-Jul	15:14:24	0.1565
352	17-Jul	14:29:24	0.1955	398	17-Jul	15:15:24	0.166
353	17-Jul	14:30:24	0.198	399	17-Jul	15:16:24	0.157
354	17-Jul	14:31:24	0.1505	400	17-Jul	15:17:24	0.1645
355	17-Jul	14:32:24	0.15	401	17-Jul	15:18:24	0.165
356	17-Jul	14:33:24	0.1925	402	17-Jul	15:19:24	0.156
357	17-Jul	14:34:24	1.3845	403	17-Jul	15:20:24	0.2035
358	17-Jul	14:35:24	0.209	404	17-Jul	15:21:24	0.75
359	17-Jul	14:36:24	0.1655	405	17-Jul	15:22:24	0.3065
360	17-Jul	14:37:24	6.895	406	17-Jul	15:23:24	0.176
361	17-Jul	14:38:24	0.5345	407	17-Jul	15:24:24	0.1725
362	17-Jul	14:39:24	0.156	408	17-Jul	15:25:24	0.2035
363	17-Jul	14:40:24	0.152	409	17-Jul	15:26:24	0.241
364	17-Jul	14:41:24	0.1535	410	17-Jul	15:27:24	0.239
365	17-Jul	14:42:24	0.1545	411	17-Jul	15:28:24	0.175
366	17-Jul	14:43:24	0.151	412	17-Jul	15:29:24	0.233
367	17-Jul	14:44:24	0.152	413	17-Jul	15:30:24	0.249
368	17-Jul	14:45:24	0.1565	414	17-Jul	15:31:24	0.1585
369	17-Jul	14:46:24	0.168	415	17-Jul	15:32:24	0.1795
370	17-Jul	14:47:24	0.155	416	17-Jul	15:33:24	0.205
371	17-Jul	14:48:24	0.152	417	17-Jul	15:34:24	0.1745
372	17-Jul	14:49:24	0.1545	418	17-Jul	15:35:24	0.3975
373	17-Jul	14:50:24	0.1555	419	17-Jul	15:36:24	0.2635
374	17-Jul	14:51:24	0.1565	420	17-Jul	15:37:24	0.175
375	17-Jul	14:52:24	0.1545	421	17-Jul	15:38:24	0.159
376	17-Jul	14:53:24	0.224	422	17-Jul	15:39:24	0.674
377	17-Jul	14:54:24	0.256	423	17-Jul	15:40:24	0.8175
378	17-Jul	14:55:24	0.328	424	17-Jul	15:41:24	0.2615
379	17-Jul	14:56:24	0.267	425	17-Jul	15:42:24	0.3455
380	17-Jul	14:57:24	0.217	426	17-Jul	15:43:24	0.553
381	17-Jul	14:58:24	1.952	427	17-Jul	15:44:24	0.7515
382	17-Jul	14:59:24	0.2715	428	17-Jul	15:45:24	0.2645
383	17-Jul	15:00:24	0.1865	429	17-Jul	15:46:24	0.9285
384	17-Jul	15:01:24	0.318	430	17-Jul	15:47:24	0.6625
385	17-Jul	15:02:24	0.3125	431	17-Jul	15:48:24	0.313
386	17-Jul	15:03:24	0.226	432	17-Jul	15:49:24	1.4535
387	17-Jul	15:04:24	0.307	433	17-Jul	15:50:24	0.459
388	17-Jul	15:05:24	0.283	434	17-Jul	15:51:24	1.363

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
435	17-Jul	15:52:24	0.5715	481	17-Jul	16:38:24	0.185
436	17-Jul	15:53:24	0.4005	482	17-Jul	16:39:24	0.1795
437	17-Jul	15:54:24	0.3885	483	17-Jul	16:40:24	0.215
438	17-Jul	15:55:24	0.296	484	17-Jul	16:41:24	0.166
439	17-Jul	15:56:24	0.2345	485	17-Jul	16:42:24	0.1675
440	17-Jul	15:57:24	0.527	486	17-Jul	16:43:24	0.1745
441	17-Jul	15:58:24	0.515	487	17-Jul	16:44:24	0.179
442	17-Jul	15:59:24	0.2565	488	17-Jul	16:45:24	0.218
443	17-Jul	16:00:24	0.511	489	17-Jul	16:46:24	0.1855
444	17-Jul	16:01:24	0.407	490	17-Jul	16:47:24	0.2625
445	17-Jul	16:02:24	0.278	491	17-Jul	16:48:24	0.2355
446	17-Jul	16:03:24	0.266	492	17-Jul	16:49:24	0.232
447	17-Jul	16:04:24	0.259	493	17-Jul	16:50:24	0.185
448	17-Jul	16:05:24	0.1795	494	17-Jul	16:51:24	0.1845
449	17-Jul	16:06:24	0.1735	495	17-Jul	16:52:24	0.543
450	17-Jul	16:07:24	0.1775	496	17-Jul	16:53:24	0.566
451	17-Jul	16:08:24	0.163	497	17-Jul	16:54:24	0.551
452	17-Jul	16:09:24	0.177	498	17-Jul	16:55:24	0.638
453	17-Jul	16:10:24	0.1715	499	17-Jul	16:56:24	0.443
454	17-Jul	16:11:24	0.164	500	17-Jul	16:57:24	0.498
455	17-Jul	16:12:24	0.161	501	17-Jul	16:58:24	0.4745
456	17-Jul	16:13:24	0.1855	502	17-Jul	16:59:24	1.134
457	17-Jul	16:14:24	0.191	503	17-Jul	17:00:24	0.603
458	17-Jul	16:15:24	0.17	504	17-Jul	17:01:24	0.412
459	17-Jul	16:16:24	0.16	505	17-Jul	17:02:24	1.255
460	17-Jul	16:17:24	0.159	506	17-Jul	17:03:24	0.4195
461	17-Jul	16:18:24	0.1825	507	17-Jul	17:04:24	0.367
462	17-Jul	16:19:24	0.1775	508	17-Jul	17:05:24	0.4765
463	17-Jul	16:20:24	0.163	509	17-Jul	17:06:24	0.661
464	17-Jul	16:21:24	0.161	510	17-Jul	17:07:24	0.9215
465	17-Jul	16:22:24	0.1695	511	17-Jul	17:08:24	1.3755
466	17-Jul	16:23:24	0.166	512	17-Jul	17:09:24	2.8545
467	17-Jul	16:24:24	0.157	513	17-Jul	17:10:24	1.9665
468	17-Jul	16:25:24	0.1805	514	17-Jul	17:11:24	0.2395
469	17-Jul	16:26:24	0.182	515	17-Jul	17:12:24	0.4375
470	17-Jul	16:27:24	0.1735	516	17-Jul	17:13:24	0.2475
471	17-Jul	16:28:24	0.1635	517	17-Jul	17:14:24	0.1795
472	17-Jul	16:29:24	0.1655	518	17-Jul	17:15:24	0.1635
473	17-Jul	16:30:24	0.2315	519	17-Jul	17:16:24	0.168
474	17-Jul	16:31:24	0.2205	520	17-Jul	17:17:24	0.176
475	17-Jul	16:32:24	0.19	521	17-Jul	17:18:24	0.182
476	17-Jul	16:33:24	0.177				
477	17-Jul	16:34:24	0.171				
478	17-Jul	16:35:24	0.1905				
479	17-Jul	16:36:24	0.1835				
480	17-Jul	16:37:24	0.1905				

July 18, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #2
Tag Number: 01
Number of logged points: 591
Start time and date: 07:27:17 18-Jul
Elapsed time: 09:51:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 3.553 mg/m³
Time at maximum: 16:56:43 Jul 18
Max STEL Concentration: 0.511 mg/m³
Time at max STEL: 17:05:48 Jul 18
Overall Avg Conc: 0.101 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	18-Jul	07:28:17	0.006	32	18-Jul	07:59:17	0.033
2	18-Jul	07:29:17	0.007	33	18-Jul	08:00:17	0.07
3	18-Jul	07:30:17	0	34	18-Jul	08:01:17	0.243
4	18-Jul	07:31:17	0.001	35	18-Jul	08:02:17	0.078
5	18-Jul	07:32:17	0.059	36	18-Jul	08:03:17	0.073
6	18-Jul	07:33:17	0.002	37	18-Jul	08:04:17	0.095
7	18-Jul	07:34:17	0.04	38	18-Jul	08:05:17	0.122
8	18-Jul	07:35:17	0.087	39	18-Jul	08:06:17	0.02
9	18-Jul	07:36:17	0.077	40	18-Jul	08:07:17	0.032
10	18-Jul	07:37:17	0.061	41	18-Jul	08:08:17	0.053
11	18-Jul	07:38:17	0.182	42	18-Jul	08:09:17	0.016
12	18-Jul	07:39:17	0.037	43	18-Jul	08:10:17	0.046
13	18-Jul	07:40:17	0.254	44	18-Jul	08:11:17	0.008
14	18-Jul	07:41:17	0.717	45	18-Jul	08:12:17	0.005
15	18-Jul	07:42:17	0.41	46	18-Jul	08:13:17	0.005
16	18-Jul	07:43:17	0.211	47	18-Jul	08:14:17	0.003
17	18-Jul	07:44:17	0.095	48	18-Jul	08:15:17	0.092
18	18-Jul	07:45:17	0.022	49	18-Jul	08:16:17	0.053
19	18-Jul	07:46:17	0.108	50	18-Jul	08:17:17	0.071
20	18-Jul	07:47:17	0.022	51	18-Jul	08:18:17	0.146
21	18-Jul	07:48:17	0.027	52	18-Jul	08:19:17	0.017
22	18-Jul	07:49:17	0.161	53	18-Jul	08:20:17	0.033
23	18-Jul	07:50:17	0.041	54	18-Jul	08:21:17	0.006
24	18-Jul	07:51:17	0.051	55	18-Jul	08:22:17	0.293
25	18-Jul	07:52:17	0.07	56	18-Jul	08:23:17	0.165
26	18-Jul	07:53:17	0.299	57	18-Jul	08:24:17	0.039
27	18-Jul	07:54:17	0.133	58	18-Jul	08:25:17	0.046
28	18-Jul	07:55:17	0.097	59	18-Jul	08:26:17	0.101
29	18-Jul	07:56:17	0.038	60	18-Jul	08:27:17	0.017
30	18-Jul	07:57:17	0.262	61	18-Jul	08:28:17	0.016
31	18-Jul	07:58:17	0.077	62	18-Jul	08:29:17	0.081

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	18-Jul	08:30:17	0.02	109	18-Jul	09:16:17	0.04
64	18-Jul	08:31:17	0.126	110	18-Jul	09:17:17	0.178
65	18-Jul	08:32:17	0.443	111	18-Jul	09:18:17	0.218
66	18-Jul	08:33:17	0.194	112	18-Jul	09:19:17	0.752
67	18-Jul	08:34:17	0.011	113	18-Jul	09:20:17	0.258
68	18-Jul	08:35:17	0.016	114	18-Jul	09:21:17	0.111
69	18-Jul	08:36:17	0.031	115	18-Jul	09:22:17	0.308
70	18-Jul	08:37:17	0.004	116	18-Jul	09:23:17	0.544
71	18-Jul	08:38:17	0	117	18-Jul	09:24:17	0.048
72	18-Jul	08:39:17	0.003	118	18-Jul	09:25:17	0.063
73	18-Jul	08:40:17	0.003	119	18-Jul	09:26:17	0.145
74	18-Jul	08:41:17	0.004	120	18-Jul	09:27:17	0.17
75	18-Jul	08:42:17	0.065	121	18-Jul	09:28:17	0.138
76	18-Jul	08:43:17	0.204	122	18-Jul	09:29:17	0.075
77	18-Jul	08:44:17	0.045	123	18-Jul	09:30:17	0.284
78	18-Jul	08:45:17	0.016	124	18-Jul	09:31:17	0.434
79	18-Jul	08:46:17	0.034	125	18-Jul	09:32:17	0.188
80	18-Jul	08:47:17	0.057	126	18-Jul	09:33:17	0.133
81	18-Jul	08:48:17	0.208	127	18-Jul	09:34:17	0.19
82	18-Jul	08:49:17	0.099	128	18-Jul	09:35:17	0.675
83	18-Jul	08:50:17	0.06	129	18-Jul	09:36:17	0.149
84	18-Jul	08:51:17	0.035	130	18-Jul	09:37:17	0.056
85	18-Jul	08:52:17	0.11	131	18-Jul	09:38:17	0.041
86	18-Jul	08:53:17	0.097	132	18-Jul	09:39:17	0.004
87	18-Jul	08:54:17	0.015	133	18-Jul	09:40:17	0.076
88	18-Jul	08:55:17	0.068	134	18-Jul	09:41:17	0.025
89	18-Jul	08:56:17	0.026	135	18-Jul	09:42:17	0.013
90	18-Jul	08:57:17	0.175	136	18-Jul	09:43:17	0
91	18-Jul	08:58:17	0.066	137	18-Jul	09:44:17	0.141
92	18-Jul	08:59:17	0.027	138	18-Jul	09:45:17	0.611
93	18-Jul	09:00:17	0	139	18-Jul	09:46:17	0
94	18-Jul	09:01:17	0	140	18-Jul	09:47:17	0.119
95	18-Jul	09:02:17	0.003	141	18-Jul	09:48:17	0.318
96	18-Jul	09:03:17	0.006	142	18-Jul	09:49:17	0.239
97	18-Jul	09:04:17	0.003	143	18-Jul	09:50:17	0.092
98	18-Jul	09:05:17	0.034	144	18-Jul	09:51:17	0
99	18-Jul	09:06:17	0	145	18-Jul	09:52:17	0.009
100	18-Jul	09:07:17	0.279	146	18-Jul	09:53:17	0.016
101	18-Jul	09:08:17	0.207	147	18-Jul	09:54:17	0.027
102	18-Jul	09:09:17	0.104	148	18-Jul	09:55:17	0
103	18-Jul	09:10:17	0.058	149	18-Jul	09:56:17	0.067
104	18-Jul	09:11:17	0.073	150	18-Jul	09:57:17	0.024
105	18-Jul	09:12:17	0.148	151	18-Jul	09:58:17	0.147
106	18-Jul	09:13:17	0.175	152	18-Jul	09:59:17	0.036
107	18-Jul	09:14:17	0.008	153	18-Jul	10:00:17	0.027
108	18-Jul	09:15:17	0.02	154	18-Jul	10:01:17	0.125

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
155	18-Jul	10:02:17	0	201	18-Jul	10:48:17	0.015
156	18-Jul	10:03:17	0.001	202	18-Jul	10:49:17	0.02
157	18-Jul	10:04:17	0	203	18-Jul	10:50:17	0.056
158	18-Jul	10:05:17	0.011	204	18-Jul	10:51:17	0.098
159	18-Jul	10:06:17	0.179	205	18-Jul	10:52:17	0.035
160	18-Jul	10:07:17	0.015	206	18-Jul	10:53:17	0.034
161	18-Jul	10:08:17	0.036	207	18-Jul	10:54:17	0.116
162	18-Jul	10:09:17	0.128	208	18-Jul	10:55:17	0.054
163	18-Jul	10:10:17	0.359	209	18-Jul	10:56:17	0.134
164	18-Jul	10:11:17	0.125	210	18-Jul	10:57:17	0.061
165	18-Jul	10:12:17	0.316	211	18-Jul	10:58:17	0.137
166	18-Jul	10:13:17	0.069	212	18-Jul	10:59:17	0.036
167	18-Jul	10:14:17	0.071	213	18-Jul	11:00:17	0.07
168	18-Jul	10:15:17	0.044	214	18-Jul	11:01:17	0.058
169	18-Jul	10:16:17	0.079	215	18-Jul	11:02:17	0.033
170	18-Jul	10:17:17	0.033	216	18-Jul	11:03:17	0.013
171	18-Jul	10:18:17	0.043	217	18-Jul	11:04:17	0.027
172	18-Jul	10:19:17	0.204	218	18-Jul	11:05:17	0
173	18-Jul	10:20:17	0.174	219	18-Jul	11:06:17	0.074
174	18-Jul	10:21:17	0.118	220	18-Jul	11:07:17	0.038
175	18-Jul	10:22:17	0.151	221	18-Jul	11:08:17	0
176	18-Jul	10:23:17	0.511	222	18-Jul	11:09:17	0.003
177	18-Jul	10:24:17	0.092	223	18-Jul	11:10:17	0.006
178	18-Jul	10:25:17	0.065	224	18-Jul	11:11:17	0.001
179	18-Jul	10:26:17	0	225	18-Jul	11:12:17	0.063
180	18-Jul	10:27:17	0	226	18-Jul	11:13:17	0.005
181	18-Jul	10:28:17	0.014	227	18-Jul	11:14:17	0.02
182	18-Jul	10:29:17	0.077	228	18-Jul	11:15:17	0.099
183	18-Jul	10:30:17	0.176	229	18-Jul	11:16:17	0.068
184	18-Jul	10:31:17	0.02	230	18-Jul	11:17:17	0.178
185	18-Jul	10:32:17	0	231	18-Jul	11:18:17	0.069
186	18-Jul	10:33:17	0	232	18-Jul	11:19:17	0.039
187	18-Jul	10:34:17	0.009	233	18-Jul	11:20:17	0.089
188	18-Jul	10:35:17	0.065	234	18-Jul	11:21:17	0.104
189	18-Jul	10:36:17	0.072	235	18-Jul	11:22:17	0.066
190	18-Jul	10:37:17	0.06	236	18-Jul	11:23:17	0.005
191	18-Jul	10:38:17	0.205	237	18-Jul	11:24:17	0.007
192	18-Jul	10:39:17	0.22	238	18-Jul	11:25:17	0.038
193	18-Jul	10:40:17	0.339	239	18-Jul	11:26:17	0.004
194	18-Jul	10:41:17	0.12	240	18-Jul	11:27:17	0.038
195	18-Jul	10:42:17	0.048	241	18-Jul	11:28:17	0.044
196	18-Jul	10:43:17	0.429	242	18-Jul	11:29:17	0.05
197	18-Jul	10:44:17	0.09	243	18-Jul	11:30:17	0.044
198	18-Jul	10:45:17	0.056	244	18-Jul	11:31:17	0.008
199	18-Jul	10:46:17	0.081	245	18-Jul	11:32:17	0.027
200	18-Jul	10:47:17	0.033	246	18-Jul	11:33:17	0.008

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
247	18-Jul	11:34:17	0.04	293	18-Jul	12:20:17	0
248	18-Jul	11:35:17	0.07	294	18-Jul	12:21:17	0
249	18-Jul	11:36:17	0.05	295	18-Jul	12:22:17	0
250	18-Jul	11:37:17	0.001	296	18-Jul	12:23:17	0
251	18-Jul	11:38:17	0	297	18-Jul	12:24:17	0
252	18-Jul	11:39:17	0.011	298	18-Jul	12:25:17	0
253	18-Jul	11:40:17	0.314	299	18-Jul	12:26:17	0
254	18-Jul	11:41:17	0.185	300	18-Jul	12:27:17	0
255	18-Jul	11:42:17	0.046	301	18-Jul	12:28:17	0
256	18-Jul	11:43:17	0.01	302	18-Jul	12:29:17	0
257	18-Jul	11:44:17	0.039	303	18-Jul	12:30:17	0
258	18-Jul	11:45:17	0.026	304	18-Jul	12:31:17	0.003
259	18-Jul	11:46:17	0.049	305	18-Jul	12:32:17	0.028
260	18-Jul	11:47:17	0.067	306	18-Jul	12:33:17	0.035
261	18-Jul	11:48:17	0.035	307	18-Jul	12:34:17	0.089
262	18-Jul	11:49:17	0.031	308	18-Jul	12:35:17	0.056
263	18-Jul	11:50:17	0.008	309	18-Jul	12:36:17	0.295
264	18-Jul	11:51:17	0.097	310	18-Jul	12:37:17	0.3
265	18-Jul	11:52:17	0.159	311	18-Jul	12:38:17	0.414
266	18-Jul	11:53:17	0.002	312	18-Jul	12:39:17	0.191
267	18-Jul	11:54:17	0	313	18-Jul	12:40:17	0.158
268	18-Jul	11:55:17	0	314	18-Jul	12:41:17	0.235
269	18-Jul	11:56:17	0.001	315	18-Jul	12:42:17	0.126
270	18-Jul	11:57:17	0.024	316	18-Jul	12:43:17	0.004
271	18-Jul	11:58:17	0	317	18-Jul	12:44:17	0.17
272	18-Jul	11:59:17	0	318	18-Jul	12:45:17	0.027
273	18-Jul	12:00:17	0	319	18-Jul	12:46:17	0.237
274	18-Jul	12:01:17	0	320	18-Jul	12:47:17	0.293
275	18-Jul	12:02:17	0	321	18-Jul	12:48:17	0.369
276	18-Jul	12:03:17	0	322	18-Jul	12:49:17	0.129
277	18-Jul	12:04:17	0	323	18-Jul	12:50:17	0.172
278	18-Jul	12:05:17	0	324	18-Jul	12:51:17	0.001
279	18-Jul	12:06:17	0	325	18-Jul	12:52:17	0.313
280	18-Jul	12:07:17	0	326	18-Jul	12:53:17	0.143
281	18-Jul	12:08:17	0	327	18-Jul	12:54:17	0.417
282	18-Jul	12:09:17	0	328	18-Jul	12:55:17	0.032
283	18-Jul	12:10:17	0	329	18-Jul	12:56:17	0.122
284	18-Jul	12:11:17	0	330	18-Jul	12:57:17	0.592
285	18-Jul	12:12:17	0	331	18-Jul	12:58:17	0.154
286	18-Jul	12:13:17	0	332	18-Jul	12:59:17	1.546
287	18-Jul	12:14:17	0	333	18-Jul	13:00:17	0.59
288	18-Jul	12:15:17	0	334	18-Jul	13:01:17	0.026
289	18-Jul	12:16:17	0	335	18-Jul	13:02:17	0.074
290	18-Jul	12:17:17	0	336	18-Jul	13:03:17	0.013
291	18-Jul	12:18:17	0	337	18-Jul	13:04:17	0.058
292	18-Jul	12:19:17	0	338	18-Jul	13:05:17	0.001

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
339	18-Jul	13:06:17	0.083	385	18-Jul	13:52:17	0.007
340	18-Jul	13:07:17	0.042	386	18-Jul	13:53:17	0.001
341	18-Jul	13:08:17	0.016	387	18-Jul	13:54:17	0.009
342	18-Jul	13:09:17	0.324	388	18-Jul	13:55:17	0.07
343	18-Jul	13:10:17	0.09	389	18-Jul	13:56:17	0.338
344	18-Jul	13:11:17	0.088	390	18-Jul	13:57:17	0.217
345	18-Jul	13:12:17	0.106	391	18-Jul	13:58:17	0
346	18-Jul	13:13:17	0.145	392	18-Jul	13:59:17	0.067
347	18-Jul	13:14:17	0.031	393	18-Jul	14:00:17	0.153
348	18-Jul	13:15:17	0.047	394	18-Jul	14:01:17	0.158
349	18-Jul	13:16:17	0.193	395	18-Jul	14:02:17	0
350	18-Jul	13:17:17	0.462	396	18-Jul	14:03:17	0.033
351	18-Jul	13:18:17	0.02	397	18-Jul	14:04:17	0.022
352	18-Jul	13:19:17	0.039	398	18-Jul	14:05:17	0.133
353	18-Jul	13:20:17	0.041	399	18-Jul	14:06:17	0.088
354	18-Jul	13:21:17	0.072	400	18-Jul	14:07:17	0.085
355	18-Jul	13:22:17	0.152	401	18-Jul	14:08:17	0.065
356	18-Jul	13:23:17	3.398	402	18-Jul	14:09:17	0.019
357	18-Jul	13:24:17	0.331	403	18-Jul	14:10:17	0.04
358	18-Jul	13:25:17	0.291	404	18-Jul	14:11:17	0.023
359	18-Jul	13:26:17	0.134	405	18-Jul	14:12:17	0.092
360	18-Jul	13:27:17	0.1	406	18-Jul	14:13:17	0.029
361	18-Jul	13:28:17	0.166	407	18-Jul	14:14:17	0.092
362	18-Jul	13:29:17	0.008	408	18-Jul	14:15:17	0.075
363	18-Jul	13:30:17	0.379	409	18-Jul	14:16:17	0.096
364	18-Jul	13:31:17	0.224	410	18-Jul	14:17:17	0.035
365	18-Jul	13:32:17	0.077	411	18-Jul	14:18:17	0.065
366	18-Jul	13:33:17	0.115	412	18-Jul	14:19:17	0.251
367	18-Jul	13:34:17	0.131	413	18-Jul	14:20:17	0.292
368	18-Jul	13:35:17	0.168	414	18-Jul	14:21:17	0.033
369	18-Jul	13:36:17	0.123	415	18-Jul	14:22:17	0.04
370	18-Jul	13:37:17	0.083	416	18-Jul	14:23:17	0.03
371	18-Jul	13:38:17	0.065	417	18-Jul	14:24:17	0.144
372	18-Jul	13:39:17	0.147	418	18-Jul	14:25:17	0.068
373	18-Jul	13:40:17	0.023	419	18-Jul	14:26:17	0.316
374	18-Jul	13:41:17	0.071	420	18-Jul	14:27:17	0.188
375	18-Jul	13:42:17	0.082	421	18-Jul	14:28:17	0.005
376	18-Jul	13:43:17	0.075	422	18-Jul	14:29:17	0.282
377	18-Jul	13:44:17	0	423	18-Jul	14:30:17	0.042
378	18-Jul	13:45:17	0.001	424	18-Jul	14:31:17	0.054
379	18-Jul	13:46:17	0	425	18-Jul	14:32:17	0.012
380	18-Jul	13:47:17	0.019	426	18-Jul	14:33:17	0.024
381	18-Jul	13:48:17	0	427	18-Jul	14:34:17	0.213
382	18-Jul	13:49:17	0.014	428	18-Jul	14:35:17	0.006
383	18-Jul	13:50:17	0	429	18-Jul	14:36:17	0.006
384	18-Jul	13:51:17	0.006	430	18-Jul	14:37:17	0.009

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
431	18-Jul	14:38:17	0.015	477	18-Jul	15:24:17	0.126
432	18-Jul	14:39:17	0.004	478	18-Jul	15:25:17	0.133
433	18-Jul	14:40:17	0.063	479	18-Jul	15:26:17	0.086
434	18-Jul	14:41:17	0.009	480	18-Jul	15:27:17	0.162
435	18-Jul	14:42:17	0.003	481	18-Jul	15:28:17	0.069
436	18-Jul	14:43:17	0	482	18-Jul	15:29:17	0.095
437	18-Jul	14:44:17	0.054	483	18-Jul	15:30:17	0.129
438	18-Jul	14:45:17	0.014	484	18-Jul	15:31:17	0.062
439	18-Jul	14:46:17	0.067	485	18-Jul	15:32:17	0.031
440	18-Jul	14:47:17	0.001	486	18-Jul	15:33:17	0.096
441	18-Jul	14:48:17	0.019	487	18-Jul	15:34:17	0.033
442	18-Jul	14:49:17	0.032	488	18-Jul	15:35:17	0.022
443	18-Jul	14:50:17	0.096	489	18-Jul	15:36:17	0.098
444	18-Jul	14:51:17	0.087	490	18-Jul	15:37:17	0.049
445	18-Jul	14:52:17	0.028	491	18-Jul	15:38:17	0.028
446	18-Jul	14:53:17	0.133	492	18-Jul	15:39:17	0.02
447	18-Jul	14:54:17	0.008	493	18-Jul	15:40:17	0.001
448	18-Jul	14:55:17	0.106	494	18-Jul	15:41:17	0.516
449	18-Jul	14:56:17	0.032	495	18-Jul	15:42:17	0.213
450	18-Jul	14:57:17	0.001	496	18-Jul	15:43:17	0.05
451	18-Jul	14:58:17	0.019	497	18-Jul	15:44:17	0.032
452	18-Jul	14:59:17	0.006	498	18-Jul	15:45:17	0.04
453	18-Jul	15:00:17	0.553	499	18-Jul	15:46:17	0.023
454	18-Jul	15:01:17	0.015	500	18-Jul	15:47:17	0.162
455	18-Jul	15:02:17	0.001	501	18-Jul	15:48:17	0.101
456	18-Jul	15:03:17	0.031	502	18-Jul	15:49:17	0.136
457	18-Jul	15:04:17	0	503	18-Jul	15:50:17	0.095
458	18-Jul	15:05:17	0.005	504	18-Jul	15:51:17	0.214
459	18-Jul	15:06:17	0.011	505	18-Jul	15:52:17	0.013
460	18-Jul	15:07:17	0	506	18-Jul	15:53:17	0.058
461	18-Jul	15:08:17	0.022	507	18-Jul	15:54:17	0
462	18-Jul	15:09:17	0.846	508	18-Jul	15:55:17	0.018
463	18-Jul	15:10:17	0.584	509	18-Jul	15:56:17	0.209
464	18-Jul	15:11:17	0.296	510	18-Jul	15:57:17	0.102
465	18-Jul	15:12:17	0.081	511	18-Jul	15:58:17	0.427
466	18-Jul	15:13:17	0.013	512	18-Jul	15:59:17	0.052
467	18-Jul	15:14:17	0.037	513	18-Jul	16:00:17	0.015
468	18-Jul	15:15:17	0.015	514	18-Jul	16:01:17	0.562
469	18-Jul	15:16:17	0.096	515	18-Jul	16:02:17	0.526
470	18-Jul	15:17:17	0.157	516	18-Jul	16:03:17	0.556
471	18-Jul	15:18:17	0.3	517	18-Jul	16:04:17	0.081
472	18-Jul	15:19:17	0.043	518	18-Jul	16:05:17	0.018
473	18-Jul	15:20:17	0.117	519	18-Jul	16:06:17	0.022
474	18-Jul	15:21:17	0.816	520	18-Jul	16:07:17	0.079
475	18-Jul	15:22:17	0.007	521	18-Jul	16:08:17	0.117
476	18-Jul	15:23:17	0.167	522	18-Jul	16:09:17	0.045

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
523	18-Jul	16:10:17	0.127	569	18-Jul	16:56:17	3.504
524	18-Jul	16:11:17	0.005	570	18-Jul	16:57:17	0.127
525	18-Jul	16:12:17	0	571	18-Jul	16:58:17	0.129
526	18-Jul	16:13:17	0.013	572	18-Jul	16:59:17	0.421
527	18-Jul	16:14:17	0.008	573	18-Jul	17:00:17	0.568
528	18-Jul	16:15:17	0.021	574	18-Jul	17:01:17	0.382
529	18-Jul	16:16:17	0.088	575	18-Jul	17:02:17	0.258
530	18-Jul	16:17:17	0.013	576	18-Jul	17:03:17	0.051
531	18-Jul	16:18:17	0.082	577	18-Jul	17:04:17	0.516
532	18-Jul	16:19:17	0.2	578	18-Jul	17:05:17	0.084
533	18-Jul	16:20:17	0.188	579	18-Jul	17:06:17	0.157
534	18-Jul	16:21:17	0.038	580	18-Jul	17:07:17	0.005
535	18-Jul	16:22:17	0	581	18-Jul	17:08:17	0
536	18-Jul	16:23:17	0	582	18-Jul	17:09:17	0.055
537	18-Jul	16:24:17	0.074	583	18-Jul	17:10:17	0.034
538	18-Jul	16:25:17	0.054	584	18-Jul	17:11:17	0.082
539	18-Jul	16:26:17	0.017	585	18-Jul	17:12:17	0.131
540	18-Jul	16:27:17	0.098	586	18-Jul	17:13:17	0.09
541	18-Jul	16:28:17	0.146	587	18-Jul	17:14:17	0.092
542	18-Jul	16:29:17	0.192	588	18-Jul	17:15:17	0.014
543	18-Jul	16:30:17	0.582	589	18-Jul	17:16:17	0.002
544	18-Jul	16:31:17	0.41	590	18-Jul	17:17:17	0.001
545	18-Jul	16:32:17	0.213	591	18-Jul	17:18:17	0
546	18-Jul	16:33:17	0.215				
547	18-Jul	16:34:17	1.042				
548	18-Jul	16:35:17	0.006				
549	18-Jul	16:36:17	0.004				
550	18-Jul	16:37:17	0.117				
551	18-Jul	16:38:17	0.182				
552	18-Jul	16:39:17	0.205				
553	18-Jul	16:40:17	0.229				
554	18-Jul	16:41:17	0.052				
555	18-Jul	16:42:17	0.112				
556	18-Jul	16:43:17	0.009				
557	18-Jul	16:44:17	0.07				
558	18-Jul	16:45:17	0.011				
559	18-Jul	16:46:17	0				
560	18-Jul	16:47:17	0.004				
561	18-Jul	16:48:17	0.022				
562	18-Jul	16:49:17	0.03				
563	18-Jul	16:50:17	0.037				
564	18-Jul	16:51:17	0.014				
565	18-Jul	16:52:17	0.043				
566	18-Jul	16:53:17	0.835				
567	18-Jul	16:54:17	0.508				
568	18-Jul	16:55:17	0.14				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 05
Number of logged points: 585
Start time and date: 07:29:25 18-Jul
Elapsed time: 09:45:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.522 mg/m³
Time at maximum: 11:28:45 Jul 18
Max STEL Concentration: 0.893 mg/m³
Time at max STEL: 11:41:55 Jul 18
Overall Avg Conc: 0.331 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	18-Jul	07:30:25	0.183	33	18-Jul	08:02:25	0.167
2	18-Jul	07:31:25	0.174	34	18-Jul	08:03:25	0.168
3	18-Jul	07:32:25	0.232	35	18-Jul	08:04:25	0.165
4	18-Jul	07:33:25	0.211	36	18-Jul	08:05:25	0.195
5	18-Jul	07:34:25	0.171	37	18-Jul	08:06:25	0.184
6	18-Jul	07:35:25	0.254	38	18-Jul	08:07:25	0.164
7	18-Jul	07:36:25	0.364	39	18-Jul	08:08:25	0.161
8	18-Jul	07:37:25	0.251	40	18-Jul	08:09:25	0.163
9	18-Jul	07:38:25	0.245	41	18-Jul	08:10:25	0.824
10	18-Jul	07:39:25	0.263	42	18-Jul	08:11:25	0.524
11	18-Jul	07:40:25	0.273	43	18-Jul	08:12:25	0.287
12	18-Jul	07:41:25	0.261	44	18-Jul	08:13:25	0.87
13	18-Jul	07:42:25	0.251	45	18-Jul	08:14:25	0.337
14	18-Jul	07:43:25	0.338	46	18-Jul	08:15:25	0.227
15	18-Jul	07:44:25	0.752	47	18-Jul	08:16:25	0.216
16	18-Jul	07:45:25	0.739	48	18-Jul	08:17:25	0.261
17	18-Jul	07:46:25	0.657	49	18-Jul	08:18:25	0.192
18	18-Jul	07:47:25	0.383	50	18-Jul	08:19:25	0.259
19	18-Jul	07:48:25	0.224	51	18-Jul	08:20:25	0.191
20	18-Jul	07:49:25	0.374	52	18-Jul	08:21:25	0.184
21	18-Jul	07:50:25	0.538	53	18-Jul	08:22:25	0.277
22	18-Jul	07:51:25	0.385	54	18-Jul	08:23:25	0.337
23	18-Jul	07:52:25	0.775	55	18-Jul	08:24:25	0.272
24	18-Jul	07:53:25	1.841	56	18-Jul	08:25:25	0.188
25	18-Jul	07:54:25	0.224	57	18-Jul	08:26:25	0.235
26	18-Jul	07:55:25	0.215	58	18-Jul	08:27:25	0.565
27	18-Jul	07:56:25	0.187	59	18-Jul	08:28:25	0.471
28	18-Jul	07:57:25	0.167	60	18-Jul	08:29:25	0.346
29	18-Jul	07:58:25	0.166	61	18-Jul	08:30:25	0.337
30	18-Jul	07:59:25	0.166	62	18-Jul	08:31:25	0.415
31	18-Jul	08:00:25	0.175	63	18-Jul	08:32:25	0.439
32	18-Jul	08:01:25	0.166	64	18-Jul	08:33:25	0.36
65	18-Jul	08:34:25	0.372	111	18-Jul	09:20:25	1.471

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
66	18-Jul	08:35:25	0.319	112	18-Jul	09:21:25	1.207
67	18-Jul	08:36:25	0.8	113	18-Jul	09:22:25	0.527
68	18-Jul	08:37:25	0.389	114	18-Jul	09:23:25	0.348
69	18-Jul	08:38:25	0.23	115	18-Jul	09:24:25	0.959
70	18-Jul	08:39:25	0.257	116	18-Jul	09:25:25	0.768
71	18-Jul	08:40:25	0.585	117	18-Jul	09:26:25	0.487
72	18-Jul	08:41:25	0.323	118	18-Jul	09:27:25	0.571
73	18-Jul	08:42:25	0.454	119	18-Jul	09:28:25	0.255
74	18-Jul	08:43:25	1.309	120	18-Jul	09:29:25	0.416
75	18-Jul	08:44:25	0.249	121	18-Jul	09:30:25	0.494
76	18-Jul	08:45:25	0.389	122	18-Jul	09:31:25	0.419
77	18-Jul	08:46:25	1.886	123	18-Jul	09:32:25	0.225
78	18-Jul	08:47:25	0.309	124	18-Jul	09:33:25	0.464
79	18-Jul	08:48:25	0.324	125	18-Jul	09:34:25	0.295
80	18-Jul	08:49:25	0.198	126	18-Jul	09:35:25	0.284
81	18-Jul	08:50:25	0.187	127	18-Jul	09:36:25	0.227
82	18-Jul	08:51:25	0.258	128	18-Jul	09:37:25	0.734
83	18-Jul	08:52:25	0.645	129	18-Jul	09:38:25	0.285
84	18-Jul	08:53:25	0.396	130	18-Jul	09:39:25	0.287
85	18-Jul	08:54:25	0.555	131	18-Jul	09:40:25	0.275
86	18-Jul	08:55:25	0.338	132	18-Jul	09:41:25	0.354
87	18-Jul	08:56:25	0.39	133	18-Jul	09:42:25	0.277
88	18-Jul	08:57:25	0.257	134	18-Jul	09:43:25	0.186
89	18-Jul	08:58:25	0.219	135	18-Jul	09:44:25	0.185
90	18-Jul	08:59:25	0.481	136	18-Jul	09:45:25	0.236
91	18-Jul	09:00:25	0.78	137	18-Jul	09:46:25	0.261
92	18-Jul	09:01:25	0.527	138	18-Jul	09:47:25	0.294
93	18-Jul	09:02:25	0.262	139	18-Jul	09:48:25	0.349
94	18-Jul	09:03:25	0.696	140	18-Jul	09:49:25	0.324
95	18-Jul	09:04:25	0.614	141	18-Jul	09:50:25	0.284
96	18-Jul	09:05:25	2.043	142	18-Jul	09:51:25	0.786
97	18-Jul	09:06:25	1.823	143	18-Jul	09:52:25	1.542
98	18-Jul	09:07:25	0.78	144	18-Jul	09:53:25	0.238
99	18-Jul	09:08:25	0.424	145	18-Jul	09:54:25	0.425
100	18-Jul	09:09:25	0.657	146	18-Jul	09:55:25	0.29
101	18-Jul	09:10:25	0.448	147	18-Jul	09:56:25	1.417
102	18-Jul	09:11:25	0.317	148	18-Jul	09:57:25	0.514
103	18-Jul	09:12:25	0.343	149	18-Jul	09:58:25	0.591
104	18-Jul	09:13:25	0.841	150	18-Jul	09:59:25	0.594
105	18-Jul	09:14:25	0.49	151	18-Jul	10:00:25	0.385
106	18-Jul	09:15:25	0.528	152	18-Jul	10:01:25	0.384
107	18-Jul	09:16:25	0.196	153	18-Jul	10:02:25	0.275
108	18-Jul	09:17:25	0.227	154	18-Jul	10:03:25	0.483
109	18-Jul	09:18:25	0.614	155	18-Jul	10:04:25	0.309
110	18-Jul	09:19:25	0.261	156	18-Jul	10:05:25	0.292
157	18-Jul	10:06:25	0.486	203	18-Jul	10:52:25	0.269

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
158	18-Jul	10:07:25	0.225	204	18-Jul	10:53:25	0.375
159	18-Jul	10:08:25	0.237	205	18-Jul	10:54:25	0.309
160	18-Jul	10:09:25	0.27	206	18-Jul	10:55:25	0.25
161	18-Jul	10:10:25	0.282	207	18-Jul	10:56:25	0.59
162	18-Jul	10:11:25	0.608	208	18-Jul	10:57:25	0.354
163	18-Jul	10:12:25	0.445	209	18-Jul	10:58:25	0.219
164	18-Jul	10:13:25	0.316	210	18-Jul	10:59:25	0.226
165	18-Jul	10:14:25	0.9	211	18-Jul	11:00:25	0.222
166	18-Jul	10:15:25	0.339	212	18-Jul	11:01:25	0.22
167	18-Jul	10:16:25	0.36	213	18-Jul	11:02:25	0.214
168	18-Jul	10:17:25	0.214	214	18-Jul	11:03:25	0.215
169	18-Jul	10:18:25	0.22	215	18-Jul	11:04:25	0.202
170	18-Jul	10:19:25	0.403	216	18-Jul	11:05:25	0.203
171	18-Jul	10:20:25	0.261	217	18-Jul	11:06:25	0.237
172	18-Jul	10:21:25	0.332	218	18-Jul	11:07:25	0.209
173	18-Jul	10:22:25	0.496	219	18-Jul	11:08:25	0.227
174	18-Jul	10:23:25	0.45	220	18-Jul	11:09:25	0.201
175	18-Jul	10:24:25	0.273	221	18-Jul	11:10:25	0.187
176	18-Jul	10:25:25	0.843	222	18-Jul	11:11:25	0.396
177	18-Jul	10:26:25	0.214	223	18-Jul	11:12:25	0.263
178	18-Jul	10:27:25	0.296	224	18-Jul	11:13:25	0.318
179	18-Jul	10:28:25	0.479	225	18-Jul	11:14:25	0.382
180	18-Jul	10:29:25	0.472	226	18-Jul	11:15:25	0.251
181	18-Jul	10:30:25	0.726	227	18-Jul	11:16:25	0.269
182	18-Jul	10:31:25	0.413	228	18-Jul	11:17:25	0.251
183	18-Jul	10:32:25	0.423	229	18-Jul	11:18:25	0.468
184	18-Jul	10:33:25	0.327	230	18-Jul	11:19:25	0.19
185	18-Jul	10:34:25	0.336	231	18-Jul	11:20:25	0.194
186	18-Jul	10:35:25	0.329	232	18-Jul	11:21:25	0.189
187	18-Jul	10:36:25	0.292	233	18-Jul	11:22:25	0.191
188	18-Jul	10:37:25	0.36	234	18-Jul	11:23:25	0.204
189	18-Jul	10:38:25	0.226	235	18-Jul	11:24:25	0.255
190	18-Jul	10:39:25	0.255	236	18-Jul	11:25:25	0.339
191	18-Jul	10:40:25	0.382	237	18-Jul	11:26:25	0.289
192	18-Jul	10:41:25	0.45	238	18-Jul	11:27:25	1.943
193	18-Jul	10:42:25	1.097	239	18-Jul	11:28:25	1.728
194	18-Jul	10:43:25	0.327	240	18-Jul	11:29:25	1.879
195	18-Jul	10:44:25	0.383	241	18-Jul	11:30:25	1.109
196	18-Jul	10:45:25	0.27	242	18-Jul	11:31:25	0.252
197	18-Jul	10:46:25	0.271	243	18-Jul	11:32:25	0.268
198	18-Jul	10:47:25	0.227	244	18-Jul	11:33:25	0.516
199	18-Jul	10:48:25	0.364	245	18-Jul	11:34:25	0.439
200	18-Jul	10:49:25	0.268	246	18-Jul	11:35:25	0.909
201	18-Jul	10:50:25	0.256	247	18-Jul	11:36:25	1.105
202	18-Jul	10:51:25	0.464	248	18-Jul	11:37:25	0.667
249	18-Jul	11:38:25	0.314	295	18-Jul	12:24:25	0.191

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
250	18-Jul	11:39:25	0.428	296	18-Jul	12:25:25	0.195
251	18-Jul	11:40:25	0.544	297	18-Jul	12:26:25	0.191
252	18-Jul	11:41:25	0.964	298	18-Jul	12:27:25	0.19
253	18-Jul	11:42:25	1.803	299	18-Jul	12:28:25	0.191
254	18-Jul	11:43:25	0.344	300	18-Jul	12:29:25	0.192
255	18-Jul	11:44:25	0.335	301	18-Jul	12:30:25	0.19
256	18-Jul	11:45:25	0.251	302	18-Jul	12:31:25	0.193
257	18-Jul	11:46:25	0.442	303	18-Jul	12:32:25	0.231
258	18-Jul	11:47:25	0.816	304	18-Jul	12:33:25	0.303
259	18-Jul	11:48:25	0.41	305	18-Jul	12:34:25	0.313
260	18-Jul	11:49:25	0.22	306	18-Jul	12:35:25	0.312
261	18-Jul	11:50:25	0.196	307	18-Jul	12:36:25	0.265
262	18-Jul	11:51:25	0.204	308	18-Jul	12:37:25	0.217
263	18-Jul	11:52:25	0.215	309	18-Jul	12:38:25	0.33
264	18-Jul	11:53:25	0.245	310	18-Jul	12:39:25	0.4
265	18-Jul	11:54:25	0.207	311	18-Jul	12:40:25	0.245
266	18-Jul	11:55:25	0.207	312	18-Jul	12:41:25	0.251
267	18-Jul	11:56:25	0.237	313	18-Jul	12:42:25	0.985
268	18-Jul	11:57:25	0.278	314	18-Jul	12:43:25	0.363
269	18-Jul	11:58:25	0.198	315	18-Jul	12:44:25	0.235
270	18-Jul	11:59:25	0.193	316	18-Jul	12:45:25	2.277
271	18-Jul	12:00:25	0.191	317	18-Jul	12:46:25	1.066
272	18-Jul	12:01:25	0.191	318	18-Jul	12:47:25	0.693
273	18-Jul	12:02:25	0.194	319	18-Jul	12:48:25	0.554
274	18-Jul	12:03:25	0.193	320	18-Jul	12:49:25	1.256
275	18-Jul	12:04:25	0.191	321	18-Jul	12:50:25	0.393
276	18-Jul	12:05:25	0.19	322	18-Jul	12:51:25	0.371
277	18-Jul	12:06:25	0.193	323	18-Jul	12:52:25	0.337
278	18-Jul	12:07:25	0.192	324	18-Jul	12:53:25	0.432
279	18-Jul	12:08:25	0.193	325	18-Jul	12:54:25	0.24
280	18-Jul	12:09:25	0.192	326	18-Jul	12:55:25	0.196
281	18-Jul	12:10:25	0.196	327	18-Jul	12:56:25	0.327
282	18-Jul	12:11:25	0.194	328	18-Jul	12:57:25	0.873
283	18-Jul	12:12:25	0.19	329	18-Jul	12:58:25	0.248
284	18-Jul	12:13:25	0.19	330	18-Jul	12:59:25	0.21
285	18-Jul	12:14:25	0.192	331	18-Jul	13:00:25	0.278
286	18-Jul	12:15:25	0.19	332	18-Jul	13:01:25	0.202
287	18-Jul	12:16:25	0.19	333	18-Jul	13:02:25	0.181
288	18-Jul	12:17:25	0.192	334	18-Jul	13:03:25	0.18
289	18-Jul	12:18:25	0.191	335	18-Jul	13:04:25	0.181
290	18-Jul	12:19:25	0.191	336	18-Jul	13:05:25	0.18
291	18-Jul	12:20:25	0.193	337	18-Jul	13:06:25	0.179
292	18-Jul	12:21:25	0.19	338	18-Jul	13:07:25	0.18
293	18-Jul	12:22:25	0.191	339	18-Jul	13:08:25	0.178
294	18-Jul	12:23:25	0.191	340	18-Jul	13:09:25	0.178
341	18-Jul	13:10:25	0.179	387	18-Jul	13:56:25	0.177

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
342	18-Jul	13:11:25	0.177	388	18-Jul	13:57:25	0.178
343	18-Jul	13:12:25	0.178	389	18-Jul	13:58:25	0.184
344	18-Jul	13:13:25	0.177	390	18-Jul	13:59:25	0.178
345	18-Jul	13:14:25	0.179	391	18-Jul	14:00:25	0.176
346	18-Jul	13:15:25	0.177	392	18-Jul	14:01:25	0.178
347	18-Jul	13:16:25	0.181	393	18-Jul	14:02:25	0.177
348	18-Jul	13:17:25	0.177	394	18-Jul	14:03:25	0.177
349	18-Jul	13:18:25	0.179	395	18-Jul	14:04:25	0.176
350	18-Jul	13:19:25	0.177	396	18-Jul	14:05:25	0.176
351	18-Jul	13:20:25	0.177	397	18-Jul	14:06:25	0.176
352	18-Jul	13:21:25	0.235	398	18-Jul	14:07:25	0.176
353	18-Jul	13:22:25	0.229	399	18-Jul	14:08:25	0.177
354	18-Jul	13:23:25	0.184	400	18-Jul	14:09:25	0.182
355	18-Jul	13:24:25	0.178	401	18-Jul	14:10:25	0.176
356	18-Jul	13:25:25	0.178	402	18-Jul	14:11:25	0.179
357	18-Jul	13:26:25	0.177	403	18-Jul	14:12:25	0.177
358	18-Jul	13:27:25	0.178	404	18-Jul	14:13:25	0.176
359	18-Jul	13:28:25	0.178	405	18-Jul	14:14:25	0.175
360	18-Jul	13:29:25	0.179	406	18-Jul	14:15:25	0.176
361	18-Jul	13:30:25	0.186	407	18-Jul	14:16:25	0.176
362	18-Jul	13:31:25	0.18	408	18-Jul	14:17:25	0.181
363	18-Jul	13:32:25	0.178	409	18-Jul	14:18:25	0.176
364	18-Jul	13:33:25	0.177	410	18-Jul	14:19:25	0.176
365	18-Jul	13:34:25	0.179	411	18-Jul	14:20:25	0.177
366	18-Jul	13:35:25	0.178	412	18-Jul	14:21:25	0.177
367	18-Jul	13:36:25	0.177	413	18-Jul	14:22:25	0.176
368	18-Jul	13:37:25	0.178	414	18-Jul	14:23:25	0.178
369	18-Jul	13:38:25	0.177	415	18-Jul	14:24:25	0.175
370	18-Jul	13:39:25	0.177	416	18-Jul	14:25:25	0.192
371	18-Jul	13:40:25	0.177	417	18-Jul	14:26:25	0.194
372	18-Jul	13:41:25	0.177	418	18-Jul	14:27:25	0.175
373	18-Jul	13:42:25	0.179	419	18-Jul	14:28:25	0.181
374	18-Jul	13:43:25	0.176	420	18-Jul	14:29:25	0.175
375	18-Jul	13:44:25	0.177	421	18-Jul	14:30:25	0.175
376	18-Jul	13:45:25	0.178	422	18-Jul	14:31:25	0.183
377	18-Jul	13:46:25	0.181	423	18-Jul	14:32:25	0.176
378	18-Jul	13:47:25	0.178	424	18-Jul	14:33:25	0.177
379	18-Jul	13:48:25	0.179	425	18-Jul	14:34:25	0.177
380	18-Jul	13:49:25	0.178	426	18-Jul	14:35:25	0.176
381	18-Jul	13:50:25	0.177	427	18-Jul	14:36:25	0.176
382	18-Jul	13:51:25	0.177	428	18-Jul	14:37:25	0.175
383	18-Jul	13:52:25	0.176	429	18-Jul	14:38:25	0.175
384	18-Jul	13:53:25	0.178	430	18-Jul	14:39:25	0.174
385	18-Jul	13:54:25	0.177	431	18-Jul	14:40:25	0.176
386	18-Jul	13:55:25	0.177	432	18-Jul	14:41:25	0.175
433	18-Jul	14:42:25	0.175	479	18-Jul	15:28:25	0.174

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
434	18-Jul	14:43:25	0.175	480	18-Jul	15:29:25	0.178
435	18-Jul	14:44:25	0.174	481	18-Jul	15:30:25	0.178
436	18-Jul	14:45:25	0.174	482	18-Jul	15:31:25	0.399
437	18-Jul	14:46:25	0.176	483	18-Jul	15:32:25	0.218
438	18-Jul	14:47:25	0.177	484	18-Jul	15:33:25	0.208
439	18-Jul	14:48:25	0.175	485	18-Jul	15:34:25	0.173
440	18-Jul	14:49:25	0.188	486	18-Jul	15:35:25	0.174
441	18-Jul	14:50:25	0.177	487	18-Jul	15:36:25	0.317
442	18-Jul	14:51:25	0.175	488	18-Jul	15:37:25	0.179
443	18-Jul	14:52:25	0.174	489	18-Jul	15:38:25	0.188
444	18-Jul	14:53:25	0.177	490	18-Jul	15:39:25	0.172
445	18-Jul	14:54:25	0.179	491	18-Jul	15:40:25	0.184
446	18-Jul	14:55:25	0.179	492	18-Jul	15:41:25	0.178
447	18-Jul	14:56:25	0.174	493	18-Jul	15:42:25	0.187
448	18-Jul	14:57:25	0.175	494	18-Jul	15:43:25	0.187
449	18-Jul	14:58:25	0.174	495	18-Jul	15:44:25	0.172
450	18-Jul	14:59:25	0.294	496	18-Jul	15:45:25	0.172
451	18-Jul	15:00:25	0.165	497	18-Jul	15:46:25	0.173
452	18-Jul	15:01:25	0.316	498	18-Jul	15:47:25	0.245
453	18-Jul	15:02:25	0.164	499	18-Jul	15:48:25	0.203
454	18-Jul	15:03:25	0.165	500	18-Jul	15:49:25	0.173
455	18-Jul	15:04:25	0.165	501	18-Jul	15:50:25	0.457
456	18-Jul	15:05:25	0.318	502	18-Jul	15:51:25	0.174
457	18-Jul	15:06:25	0.169	503	18-Jul	15:52:25	0.172
458	18-Jul	15:07:25	0.264	504	18-Jul	15:53:25	0.178
459	18-Jul	15:08:25	0.165	505	18-Jul	15:54:25	0.186
460	18-Jul	15:09:25	0.388	506	18-Jul	15:55:25	0.329
461	18-Jul	15:10:25	0.509	507	18-Jul	15:56:25	0.172
462	18-Jul	15:11:25	0.25	508	18-Jul	15:57:25	0.172
463	18-Jul	15:12:25	0.184	509	18-Jul	15:58:25	0.172
464	18-Jul	15:13:25	0.217	510	18-Jul	15:59:25	0.173
465	18-Jul	15:14:25	0.284	511	18-Jul	16:00:25	0.173
466	18-Jul	15:15:25	0.364	512	18-Jul	16:01:25	0.173
467	18-Jul	15:16:25	0.18	513	18-Jul	16:02:25	0.181
468	18-Jul	15:17:25	0.174	514	18-Jul	16:03:25	0.178
469	18-Jul	15:18:25	0.249	515	18-Jul	16:04:25	0.174
470	18-Jul	15:19:25	0.874	516	18-Jul	16:05:25	0.175
471	18-Jul	15:20:25	0.213	517	18-Jul	16:06:25	0.175
472	18-Jul	15:21:25	0.269	518	18-Jul	16:07:25	0.175
473	18-Jul	15:22:25	0.346	519	18-Jul	16:08:25	0.175
474	18-Jul	15:23:25	0.185	520	18-Jul	16:09:25	0.178
475	18-Jul	15:24:25	0.233	521	18-Jul	16:10:25	0.176
476	18-Jul	15:25:25	0.175	522	18-Jul	16:11:25	0.19
477	18-Jul	15:26:25	0.216	523	18-Jul	16:12:25	0.179
478	18-Jul	15:27:25	0.174	524	18-Jul	16:13:25	0.175
525	18-Jul	16:14:25	0.185	571	18-Jul	17:00:25	0.191

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
526	18-Jul	16:15:25	0.175	572	18-Jul	17:01:25	0.185
527	18-Jul	16:16:25	0.177	573	18-Jul	17:02:25	0.187
528	18-Jul	16:17:25	0.176	574	18-Jul	17:03:25	0.193
529	18-Jul	16:18:25	0.177	575	18-Jul	17:04:25	0.189
530	18-Jul	16:19:25	0.175	576	18-Jul	17:05:25	0.183
531	18-Jul	16:20:25	0.177	577	18-Jul	17:06:25	0.227
532	18-Jul	16:21:25	0.199	578	18-Jul	17:07:25	0.299
533	18-Jul	16:22:25	0.177	579	18-Jul	17:08:25	0.239
534	18-Jul	16:23:25	0.22	580	18-Jul	17:09:25	0.766
535	18-Jul	16:24:25	0.177	581	18-Jul	17:10:25	0.751
536	18-Jul	16:25:25	0.186	582	18-Jul	17:11:25	0.24
537	18-Jul	16:26:25	0.176	583	18-Jul	17:12:25	0.26
538	18-Jul	16:27:25	0.179	584	18-Jul	17:13:25	0.645
539	18-Jul	16:28:25	0.247	585	18-Jul	17:14:25	0.605
540	18-Jul	16:29:25	0.192				
541	18-Jul	16:30:25	0.194				
542	18-Jul	16:31:25	0.215				
543	18-Jul	16:32:25	0.204				
544	18-Jul	16:33:25	0.177				
545	18-Jul	16:34:25	0.186				
546	18-Jul	16:35:25	0.206				
547	18-Jul	16:36:25	0.193				
548	18-Jul	16:37:25	0.176				
549	18-Jul	16:38:25	0.176				
550	18-Jul	16:39:25	0.178				
551	18-Jul	16:40:25	0.176				
552	18-Jul	16:41:25	0.204				
553	18-Jul	16:42:25	0.186				
554	18-Jul	16:43:25	0.176				
555	18-Jul	16:44:25	0.181				
556	18-Jul	16:45:25	0.29				
557	18-Jul	16:46:25	0.544				
558	18-Jul	16:47:25	0.64				
559	18-Jul	16:48:25	0.378				
560	18-Jul	16:49:25	0.281				
561	18-Jul	16:50:25	0.246				
562	18-Jul	16:51:25	0.969				
563	18-Jul	16:52:25	0.285				
564	18-Jul	16:53:25	0.379				
565	18-Jul	16:54:25	1.043				
566	18-Jul	16:55:25	0.869				
567	18-Jul	16:56:25	0.598				
568	18-Jul	16:57:25	1.002				
569	18-Jul	16:58:25	0.532				
570	18-Jul	16:59:25	0.654				

July 19, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #2
Tag Number: 02
Number of logged points: 555
Start time and date: 07:18:47 19-Jul
Elapsed time: 09:15:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 6.059 mg/m³
Time at maximum: 16:14:19 Jul 19
Max STEL Concentration: 0.682 mg/m³
Time at max STEL: 11:55:17 Jul 19
Overall Avg Conc: 0.228 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	19-Jul	07:19:47	0.037	33	19-Jul	07:51:47	0.195
2	19-Jul	07:20:47	0.057	34	19-Jul	07:52:47	0.022
3	19-Jul	07:21:47	0.03	35	19-Jul	07:53:47	0.041
4	19-Jul	07:22:47	0.009	36	19-Jul	07:54:47	0.029
5	19-Jul	07:23:47	0.116	37	19-Jul	07:55:47	0.233
6	19-Jul	07:24:47	0.071	38	19-Jul	07:56:47	0.203
7	19-Jul	07:25:47	1.601	39	19-Jul	07:57:47	0.05
8	19-Jul	07:26:47	0.331	40	19-Jul	07:58:47	0.026
9	19-Jul	07:27:47	0.23	41	19-Jul	07:59:47	0.014
10	19-Jul	07:28:47	0.198	42	19-Jul	08:00:47	0.019
11	19-Jul	07:29:47	0.116	43	19-Jul	08:01:47	0.017
12	19-Jul	07:30:47	0.547	44	19-Jul	08:02:47	0.01
13	19-Jul	07:31:47	0.258	45	19-Jul	08:03:47	0.003
14	19-Jul	07:32:47	0.306	46	19-Jul	08:04:47	0.029
15	19-Jul	07:33:47	0.837	47	19-Jul	08:05:47	0.025
16	19-Jul	07:34:47	0.14	48	19-Jul	08:06:47	0.002
17	19-Jul	07:35:47	0.056	49	19-Jul	08:07:47	0
18	19-Jul	07:36:47	0.028	50	19-Jul	08:08:47	0.009
19	19-Jul	07:37:47	0.194	51	19-Jul	08:09:47	0.001
20	19-Jul	07:38:47	0.125	52	19-Jul	08:10:47	0.035
21	19-Jul	07:39:47	0.148	53	19-Jul	08:11:47	0.089
22	19-Jul	07:40:47	0.214	54	19-Jul	08:12:47	0.064
23	19-Jul	07:41:47	0.064	55	19-Jul	08:13:47	0.052
24	19-Jul	07:42:47	0.044	56	19-Jul	08:14:47	0.043
25	19-Jul	07:43:47	0.039	57	19-Jul	08:15:47	0.214
26	19-Jul	07:44:47	0.005	58	19-Jul	08:16:47	0.05
27	19-Jul	07:45:47	0.014	59	19-Jul	08:17:47	0
28	19-Jul	07:46:47	0.006	60	19-Jul	08:18:47	0.007
29	19-Jul	07:47:47	0.006	61	19-Jul	08:19:47	0
30	19-Jul	07:48:47	0.001	62	19-Jul	08:20:47	0.001
31	19-Jul	07:49:47	0.001	63	19-Jul	08:21:47	0
32	19-Jul	07:50:47	0.079	64	19-Jul	08:22:47	0.004

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
65	19-Jul	08:23:47	0.054	111	19-Jul	09:09:47	0.058
66	19-Jul	08:24:47	0.009	112	19-Jul	09:10:47	0.02
67	19-Jul	08:25:47	0.007	113	19-Jul	09:11:47	0.244
68	19-Jul	08:26:47	0.017	114	19-Jul	09:12:47	0.247
69	19-Jul	08:27:47	0.216	115	19-Jul	09:13:47	0.033
70	19-Jul	08:28:47	0.17	116	19-Jul	09:14:47	0.605
71	19-Jul	08:29:47	0.154	117	19-Jul	09:15:47	0.36
72	19-Jul	08:30:47	0.32	118	19-Jul	09:16:47	0.53
73	19-Jul	08:31:47	0	119	19-Jul	09:17:47	0.382
74	19-Jul	08:32:47	0	120	19-Jul	09:18:47	0.339
75	19-Jul	08:33:47	0.065	121	19-Jul	09:19:47	0.028
76	19-Jul	08:34:47	0.056	122	19-Jul	09:20:47	0.181
77	19-Jul	08:35:47	0.057	123	19-Jul	09:21:47	0.013
78	19-Jul	08:36:47	0.006	124	19-Jul	09:22:47	0.053
79	19-Jul	08:37:47	0.044	125	19-Jul	09:23:47	0.078
80	19-Jul	08:38:47	0.033	126	19-Jul	09:24:47	0.047
81	19-Jul	08:39:47	0	127	19-Jul	09:25:47	0.189
82	19-Jul	08:40:47	0.013	128	19-Jul	09:26:47	0.039
83	19-Jul	08:41:47	0.012	129	19-Jul	09:27:47	0.181
84	19-Jul	08:42:47	0.02	130	19-Jul	09:28:47	0.022
85	19-Jul	08:43:47	0.265	131	19-Jul	09:29:47	0.019
86	19-Jul	08:44:47	0.171	132	19-Jul	09:30:47	0.139
87	19-Jul	08:45:47	0.007	133	19-Jul	09:31:47	0.074
88	19-Jul	08:46:47	0	134	19-Jul	09:32:47	0.13
89	19-Jul	08:47:47	0.01	135	19-Jul	09:33:47	0.107
90	19-Jul	08:48:47	0.106	136	19-Jul	09:34:47	0.096
91	19-Jul	08:49:47	0	137	19-Jul	09:35:47	0.174
92	19-Jul	08:50:47	0.073	138	19-Jul	09:36:47	0.213
93	19-Jul	08:51:47	0.014	139	19-Jul	09:37:47	0.014
94	19-Jul	08:52:47	0.027	140	19-Jul	09:38:47	0.046
95	19-Jul	08:53:47	0.025	141	19-Jul	09:39:47	0.017
96	19-Jul	08:54:47	0.002	142	19-Jul	09:40:47	0.036
97	19-Jul	08:55:47	0.108	143	19-Jul	09:41:47	0.032
98	19-Jul	08:56:47	0.07	144	19-Jul	09:42:47	0.005
99	19-Jul	08:57:47	0	145	19-Jul	09:43:47	0.001
100	19-Jul	08:58:47	0.041	146	19-Jul	09:44:47	0.031
101	19-Jul	08:59:47	0.022	147	19-Jul	09:45:47	0.067
102	19-Jul	09:00:47	0.074	148	19-Jul	09:46:47	0.082
103	19-Jul	09:01:47	0.034	149	19-Jul	09:47:47	0.362
104	19-Jul	09:02:47	0.169	150	19-Jul	09:48:47	0.07
105	19-Jul	09:03:47	0.747	151	19-Jul	09:49:47	0.047
106	19-Jul	09:04:47	0.335	152	19-Jul	09:50:47	0.093
107	19-Jul	09:05:47	0.208	153	19-Jul	09:51:47	0.086
108	19-Jul	09:06:47	0.038	154	19-Jul	09:52:47	0.006
109	19-Jul	09:07:47	0.089	155	19-Jul	09:53:47	0.304
110	19-Jul	09:08:47	0.021	156	19-Jul	09:54:47	0.015

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
157	19-Jul	09:55:47	0.012	203	19-Jul	10:41:47	0.5
158	19-Jul	09:56:47	0.117	204	19-Jul	10:42:47	0.184
159	19-Jul	09:57:47	0.098	205	19-Jul	10:43:47	0.398
160	19-Jul	09:58:47	0.126	206	19-Jul	10:44:47	0.222
161	19-Jul	09:59:47	0.01	207	19-Jul	10:45:47	0.053
162	19-Jul	10:00:47	0.054	208	19-Jul	10:46:47	0.179
163	19-Jul	10:01:47	0.059	209	19-Jul	10:47:47	0.157
164	19-Jul	10:02:47	0.024	210	19-Jul	10:48:47	0.049
165	19-Jul	10:03:47	0.119	211	19-Jul	10:49:47	0.071
166	19-Jul	10:04:47	0.005	212	19-Jul	10:50:47	0.026
167	19-Jul	10:05:47	0.043	213	19-Jul	10:51:47	0.343
168	19-Jul	10:06:47	0.158	214	19-Jul	10:52:47	0.038
169	19-Jul	10:07:47	0.799	215	19-Jul	10:53:47	0.612
170	19-Jul	10:08:47	0.129	216	19-Jul	10:54:47	0.034
171	19-Jul	10:09:47	0.043	217	19-Jul	10:55:47	0.299
172	19-Jul	10:10:47	0.083	218	19-Jul	10:56:47	0.146
173	19-Jul	10:11:47	0.066	219	19-Jul	10:57:47	0.956
174	19-Jul	10:12:47	0.034	220	19-Jul	10:58:47	0.299
175	19-Jul	10:13:47	0.031	221	19-Jul	10:59:47	0.331
176	19-Jul	10:14:47	0.009	222	19-Jul	11:00:47	0.109
177	19-Jul	10:15:47	0.105	223	19-Jul	11:01:47	0.06
178	19-Jul	10:16:47	0.143	224	19-Jul	11:02:47	0.354
179	19-Jul	10:17:47	0.053	225	19-Jul	11:03:47	0.319
180	19-Jul	10:18:47	0.159	226	19-Jul	11:04:47	0.284
181	19-Jul	10:19:47	0.941	227	19-Jul	11:05:47	0.495
182	19-Jul	10:20:47	0.383	228	19-Jul	11:06:47	0.307
183	19-Jul	10:21:47	0.005	229	19-Jul	11:07:47	0.07
184	19-Jul	10:22:47	0.006	230	19-Jul	11:08:47	0.045
185	19-Jul	10:23:47	0.104	231	19-Jul	11:09:47	3.417
186	19-Jul	10:24:47	0.104	232	19-Jul	11:10:47	0.248
187	19-Jul	10:25:47	0.339	233	19-Jul	11:11:47	0.361
188	19-Jul	10:26:47	0.02	234	19-Jul	11:12:47	0.524
189	19-Jul	10:27:47	0	235	19-Jul	11:13:47	0.461
190	19-Jul	10:28:47	0.298	236	19-Jul	11:14:47	0.085
191	19-Jul	10:29:47	0.149	237	19-Jul	11:15:47	0.051
192	19-Jul	10:30:47	0.158	238	19-Jul	11:16:47	0.012
193	19-Jul	10:31:47	0.519	239	19-Jul	11:17:47	0.028
194	19-Jul	10:32:47	0.413	240	19-Jul	11:18:47	0
195	19-Jul	10:33:47	0.399	241	19-Jul	11:19:47	0.001
196	19-Jul	10:34:47	2.16	242	19-Jul	11:20:47	0
197	19-Jul	10:35:47	0.186	243	19-Jul	11:21:47	0
198	19-Jul	10:36:47	0.277	244	19-Jul	11:22:47	0.004
199	19-Jul	10:37:47	0.144	245	19-Jul	11:23:47	0.351
200	19-Jul	10:38:47	1.108	246	19-Jul	11:24:47	0.153
201	19-Jul	10:39:47	1.09	247	19-Jul	11:25:47	0.324
202	19-Jul	10:40:47	0.669	248	19-Jul	11:26:47	0.194

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
249	19-Jul	11:27:47	0.02	295	19-Jul	12:13:47	0.004
250	19-Jul	11:28:47	0.235	296	19-Jul	12:14:47	0.004
251	19-Jul	11:29:47	0.388	297	19-Jul	12:15:47	0.004
252	19-Jul	11:30:47	0.305	298	19-Jul	12:16:47	0.004
253	19-Jul	11:31:47	0.305	299	19-Jul	12:17:47	0.007
254	19-Jul	11:32:47	0.123	300	19-Jul	12:18:47	0.003
255	19-Jul	11:33:47	0.684	301	19-Jul	12:19:47	0.005
256	19-Jul	11:34:47	0.311	302	19-Jul	12:20:47	0.004
257	19-Jul	11:35:47	0.262	303	19-Jul	12:21:47	0.004
258	19-Jul	11:36:47	0.359	304	19-Jul	12:22:47	0.004
259	19-Jul	11:37:47	0.082	305	19-Jul	12:23:47	0.035
260	19-Jul	11:38:47	0.518	306	19-Jul	12:24:47	0.102
261	19-Jul	11:39:47	0.005	307	19-Jul	12:25:47	0.041
262	19-Jul	11:40:47	0.345	308	19-Jul	12:26:47	0.004
263	19-Jul	11:41:47	0.234	309	19-Jul	12:27:47	0.004
264	19-Jul	11:42:47	0.144	310	19-Jul	12:28:47	0.004
265	19-Jul	11:43:47	0.16	311	19-Jul	12:29:47	0.648
266	19-Jul	11:44:47	0.748	312	19-Jul	12:30:47	0.088
267	19-Jul	11:45:47	0.588	313	19-Jul	12:31:47	0.218
268	19-Jul	11:46:47	0.47	314	19-Jul	12:32:47	0.102
269	19-Jul	11:47:47	0.337	315	19-Jul	12:33:47	0.201
270	19-Jul	11:48:47	0.595	316	19-Jul	12:34:47	0.23
271	19-Jul	11:49:47	0.516	317	19-Jul	12:35:47	0.269
272	19-Jul	11:50:47	2.166	318	19-Jul	12:36:47	0.459
273	19-Jul	11:51:47	0.592	319	19-Jul	12:37:47	0.227
274	19-Jul	11:52:47	0.321	320	19-Jul	12:38:47	0.427
275	19-Jul	11:53:47	0.331	321	19-Jul	12:39:47	0.993
276	19-Jul	11:54:47	2.604	322	19-Jul	12:40:47	0.311
277	19-Jul	11:55:47	0.266	323	19-Jul	12:41:47	0.128
278	19-Jul	11:56:47	0.175	324	19-Jul	12:42:47	0.179
279	19-Jul	11:57:47	0.152	325	19-Jul	12:43:47	0.167
280	19-Jul	11:58:47	0.006	326	19-Jul	12:44:47	0.26
281	19-Jul	11:59:47	0.004	327	19-Jul	12:45:47	1.047
282	19-Jul	12:00:47	0.005	328	19-Jul	12:46:47	0.767
283	19-Jul	12:01:47	0.003	329	19-Jul	12:47:47	1.021
284	19-Jul	12:02:47	0.003	330	19-Jul	12:48:47	0.974
285	19-Jul	12:03:47	0.005	331	19-Jul	12:49:47	0.325
286	19-Jul	12:04:47	0.003	332	19-Jul	12:50:47	0.467
287	19-Jul	12:05:47	0.003	333	19-Jul	12:51:47	0.553
288	19-Jul	12:06:47	0.005	334	19-Jul	12:52:47	0.255
289	19-Jul	12:07:47	0.003	335	19-Jul	12:53:47	0.624
290	19-Jul	12:08:47	0.003	336	19-Jul	12:54:47	0.156
291	19-Jul	12:09:47	0.003	337	19-Jul	12:55:47	0.151
292	19-Jul	12:10:47	0.009	338	19-Jul	12:56:47	0.217
293	19-Jul	12:11:47	0.006	339	19-Jul	12:57:47	0.355
294	19-Jul	12:12:47	0.004	340	19-Jul	12:58:47	0.125

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
341	19-Jul	12:59:47	0.073	387	19-Jul	13:45:47	0.027
342	19-Jul	13:00:47	0.299	388	19-Jul	13:46:47	0.146
343	19-Jul	13:01:47	0.154	389	19-Jul	13:47:47	0.677
344	19-Jul	13:02:47	0.131	390	19-Jul	13:48:47	1.188
345	19-Jul	13:03:47	0.042	391	19-Jul	13:49:47	0.227
346	19-Jul	13:04:47	0.06	392	19-Jul	13:50:47	0.746
347	19-Jul	13:05:47	0.047	393	19-Jul	13:51:47	0.117
348	19-Jul	13:06:47	0.032	394	19-Jul	13:52:47	0.425
349	19-Jul	13:07:47	0.036	395	19-Jul	13:53:47	0.195
350	19-Jul	13:08:47	0.075	396	19-Jul	13:54:47	0.039
351	19-Jul	13:09:47	0.096	397	19-Jul	13:55:47	0.05
352	19-Jul	13:10:47	0.197	398	19-Jul	13:56:47	0.085
353	19-Jul	13:11:47	0.102	399	19-Jul	13:57:47	0.336
354	19-Jul	13:12:47	0.108	400	19-Jul	13:58:47	0.454
355	19-Jul	13:13:47	0.131	401	19-Jul	13:59:47	0.222
356	19-Jul	13:14:47	0.297	402	19-Jul	14:00:47	0.185
357	19-Jul	13:15:47	0.275	403	19-Jul	14:01:47	0.513
358	19-Jul	13:16:47	0.373	404	19-Jul	14:02:47	0.169
359	19-Jul	13:17:47	0.018	405	19-Jul	14:03:47	0.578
360	19-Jul	13:18:47	0.041	406	19-Jul	14:04:47	0.153
361	19-Jul	13:19:47	0.54	407	19-Jul	14:05:47	0.053
362	19-Jul	13:20:47	0.051	408	19-Jul	14:06:47	0.101
363	19-Jul	13:21:47	0.384	409	19-Jul	14:07:47	0.103
364	19-Jul	13:22:47	0.049	410	19-Jul	14:08:47	0.225
365	19-Jul	13:23:47	0.117	411	19-Jul	14:09:47	0.259
366	19-Jul	13:24:47	0.46	412	19-Jul	14:10:47	0.186
367	19-Jul	13:25:47	0.056	413	19-Jul	14:11:47	0.304
368	19-Jul	13:26:47	0.119	414	19-Jul	14:12:47	0.283
369	19-Jul	13:27:47	0.279	415	19-Jul	14:13:47	0.076
370	19-Jul	13:28:47	0.217	416	19-Jul	14:14:47	0.285
371	19-Jul	13:29:47	0.097	417	19-Jul	14:15:47	0.105
372	19-Jul	13:30:47	0.174	418	19-Jul	14:16:47	0.381
373	19-Jul	13:31:47	0.166	419	19-Jul	14:17:47	0.113
374	19-Jul	13:32:47	0.149	420	19-Jul	14:18:47	0.025
375	19-Jul	13:33:47	0.308	421	19-Jul	14:19:47	0.037
376	19-Jul	13:34:47	0.826	422	19-Jul	14:20:47	0.034
377	19-Jul	13:35:47	2.394	423	19-Jul	14:21:47	0.01
378	19-Jul	13:36:47	0.302	424	19-Jul	14:22:47	0.008
379	19-Jul	13:37:47	0.564	425	19-Jul	14:23:47	0.395
380	19-Jul	13:38:47	0.583	426	19-Jul	14:24:47	0.178
381	19-Jul	13:39:47	0.148	427	19-Jul	14:25:47	0.191
382	19-Jul	13:40:47	0.029	428	19-Jul	14:26:47	0.571
383	19-Jul	13:41:47	0.084	429	19-Jul	14:27:47	0.428
384	19-Jul	13:42:47	0.292	430	19-Jul	14:28:47	1.632
385	19-Jul	13:43:47	1.127	431	19-Jul	14:29:47	0.617
386	19-Jul	13:44:47	0.406	432	19-Jul	14:30:47	0.564

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
433	19-Jul	14:31:47	0.278	479	19-Jul	15:17:47	0.188
434	19-Jul	14:32:47	0.44	480	19-Jul	15:18:47	0.108
435	19-Jul	14:33:47	0.724	481	19-Jul	15:19:47	0.078
436	19-Jul	14:34:47	0.076	482	19-Jul	15:20:47	0.082
437	19-Jul	14:35:47	0.361	483	19-Jul	15:21:47	0.07
438	19-Jul	14:36:47	0.379	484	19-Jul	15:22:47	0.271
439	19-Jul	14:37:47	0.268	485	19-Jul	15:23:47	0.088
440	19-Jul	14:38:47	0.152	486	19-Jul	15:24:47	0.019
441	19-Jul	14:39:47	0.421	487	19-Jul	15:25:47	0.025
442	19-Jul	14:40:47	0.772	488	19-Jul	15:26:47	0.037
443	19-Jul	14:41:47	0.244	489	19-Jul	15:27:47	0.195
444	19-Jul	14:42:47	0.354	490	19-Jul	15:28:47	0.12
445	19-Jul	14:43:47	0.244	491	19-Jul	15:29:47	0.064
446	19-Jul	14:44:47	0.687	492	19-Jul	15:30:47	0.085
447	19-Jul	14:45:47	0.338	493	19-Jul	15:31:47	0.328
448	19-Jul	14:46:47	0.093	494	19-Jul	15:32:47	0.088
449	19-Jul	14:47:47	0.329	495	19-Jul	15:33:47	0.166
450	19-Jul	14:48:47	0.142	496	19-Jul	15:34:47	0.163
451	19-Jul	14:49:47	0.741	497	19-Jul	15:35:47	0.022
452	19-Jul	14:50:47	0.263	498	19-Jul	15:36:47	0.023
453	19-Jul	14:51:47	0.05	499	19-Jul	15:37:47	0.055
454	19-Jul	14:52:47	0.217	500	19-Jul	15:38:47	0.281
455	19-Jul	14:53:47	0.301	501	19-Jul	15:39:47	0
456	19-Jul	14:54:47	0.074	502	19-Jul	15:40:47	0
457	19-Jul	14:55:47	0.053	503	19-Jul	15:41:47	0.011
458	19-Jul	14:56:47	0.42	504	19-Jul	15:42:47	0.002
459	19-Jul	14:57:47	0.119	505	19-Jul	15:43:47	0.014
460	19-Jul	14:58:47	0.045	506	19-Jul	15:44:47	0.007
461	19-Jul	14:59:47	0.17	507	19-Jul	15:45:47	0.002
462	19-Jul	15:00:47	0.073	508	19-Jul	15:46:47	0.02
463	19-Jul	15:01:47	0.043	509	19-Jul	15:47:47	0.011
464	19-Jul	15:02:47	0.087	510	19-Jul	15:48:47	0
465	19-Jul	15:03:47	0.006	511	19-Jul	15:49:47	0.044
466	19-Jul	15:04:47	0.015	512	19-Jul	15:50:47	0.058
467	19-Jul	15:05:47	0.054	513	19-Jul	15:51:47	0.011
468	19-Jul	15:06:47	0.04	514	19-Jul	15:52:47	0.115
469	19-Jul	15:07:47	0.402	515	19-Jul	15:53:47	0.012
470	19-Jul	15:08:47	0.201	516	19-Jul	15:54:47	0.044
471	19-Jul	15:09:47	0.113	517	19-Jul	15:55:47	0.093
472	19-Jul	15:10:47	0.103	518	19-Jul	15:56:47	0.02
473	19-Jul	15:11:47	4.96	519	19-Jul	15:57:47	0.577
474	19-Jul	15:12:47	0.151	520	19-Jul	15:58:47	0.564
475	19-Jul	15:13:47	0.392	521	19-Jul	15:59:47	0.004
476	19-Jul	15:14:47	0.205	522	19-Jul	16:00:47	0.014
477	19-Jul	15:15:47	0.259	523	19-Jul	16:01:47	0.034
478	19-Jul	15:16:47	0.061	524	19-Jul	16:02:47	0.033

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
525	19-Jul	16:03:47	0.292				
526	19-Jul	16:04:47	0.122				
527	19-Jul	16:05:47	0.078				
528	19-Jul	16:06:47	0.069				
529	19-Jul	16:07:47	0.096				
530	19-Jul	16:08:47	0.085				
531	19-Jul	16:09:47	0.139				
532	19-Jul	16:10:47	0.126				
533	19-Jul	16:11:47	0.076				
534	19-Jul	16:12:47	0.191				
535	19-Jul	16:13:47	5.49				
536	19-Jul	16:14:47	0.886				
537	19-Jul	16:15:47	0.114				
538	19-Jul	16:16:47	0.05				
539	19-Jul	16:17:47	0.055				
540	19-Jul	16:18:47	0.003				
541	19-Jul	16:19:47	0.023				
542	19-Jul	16:20:47	0.045				
543	19-Jul	16:21:47	0.085				
544	19-Jul	16:22:47	0.034				
545	19-Jul	16:23:47	0.05				
546	19-Jul	16:24:47	0.106				
547	19-Jul	16:25:47	0.605				
548	19-Jul	16:26:47	0.681				
549	19-Jul	16:27:47	1.289				
550	19-Jul	16:28:47	0.841				
551	19-Jul	16:29:47	0.002				
552	19-Jul	16:30:47	0.145				
553	19-Jul	16:31:47	1.424				
554	19-Jul	16:32:47	0.282				
555	19-Jul	16:33:47	0.189				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 06
Number of logged points: 427
Start time and date: 07:20:51 19-Jul
Elapsed time: 07:07:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.809 mg/m³
Time at maximum: 11:16:11 Jul 19
Max STEL Concentration: 0.876 mg/m³
Time at max STEL: 13:10:52 Jul 19
Overall Avg Conc: 0.356 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	19-Jul	07:21:51	0.249	34	19-Jul	07:54:51	0.224
2	19-Jul	07:22:51	0.239	35	19-Jul	07:55:51	0.229
3	19-Jul	07:23:51	0.25	36	19-Jul	07:56:51	0.218
4	19-Jul	07:24:51	0.252	37	19-Jul	07:57:51	0.21
5	19-Jul	07:25:51	0.298	38	19-Jul	07:58:51	0.207
6	19-Jul	07:26:51	0.413	39	19-Jul	07:59:51	0.217
7	19-Jul	07:27:51	0.246	40	19-Jul	08:00:51	0.21
8	19-Jul	07:28:51	0.235	41	19-Jul	08:01:51	0.218
9	19-Jul	07:29:51	0.242	42	19-Jul	08:02:51	0.214
10	19-Jul	07:30:51	0.252	43	19-Jul	08:03:51	0.206
11	19-Jul	07:31:51	0.642	44	19-Jul	08:04:51	0.205
12	19-Jul	07:32:51	0.271	45	19-Jul	08:05:51	0.211
13	19-Jul	07:33:51	0.281	46	19-Jul	08:06:51	0.226
14	19-Jul	07:34:51	0.232	47	19-Jul	08:07:51	0.235
15	19-Jul	07:35:51	1.078	48	19-Jul	08:08:51	0.212
16	19-Jul	07:36:51	1.014	49	19-Jul	08:09:51	0.209
17	19-Jul	07:37:51	0.581	50	19-Jul	08:10:51	0.209
18	19-Jul	07:38:51	0.391	51	19-Jul	08:11:51	0.213
19	19-Jul	07:39:51	0.381	52	19-Jul	08:12:51	0.227
20	19-Jul	07:40:51	0.311	53	19-Jul	08:13:51	0.209
21	19-Jul	07:41:51	0.31	54	19-Jul	08:14:51	0.209
22	19-Jul	07:42:51	0.251	55	19-Jul	08:15:51	0.206
23	19-Jul	07:43:51	0.249	56	19-Jul	08:16:51	0.209
24	19-Jul	07:44:51	0.25	57	19-Jul	08:17:51	0.212
25	19-Jul	07:45:51	0.219	58	19-Jul	08:18:51	0.296
26	19-Jul	07:46:51	0.217	59	19-Jul	08:19:51	0.245
27	19-Jul	07:47:51	0.214	60	19-Jul	08:20:51	0.222
28	19-Jul	07:48:51	0.224	61	19-Jul	08:21:51	0.222
29	19-Jul	07:49:51	0.248	62	19-Jul	08:22:51	0.208
30	19-Jul	07:50:51	0.225	63	19-Jul	08:23:51	0.209
31	19-Jul	07:51:51	0.233	64	19-Jul	08:24:51	0.22
32	19-Jul	07:52:51	0.219	65	19-Jul	08:25:51	0.306
33	19-Jul	07:53:51	0.224	66	19-Jul	08:26:51	0.254

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	19-Jul	08:27:51	0.217	113	19-Jul	09:13:51	0.204
68	19-Jul	08:28:51	0.207	114	19-Jul	09:14:51	0.209
69	19-Jul	08:29:51	0.21	115	19-Jul	09:15:51	0.201
70	19-Jul	08:30:51	0.207	116	19-Jul	09:16:51	0.179
71	19-Jul	08:31:51	0.206	117	19-Jul	09:17:51	0.262
72	19-Jul	08:32:51	0.206	118	19-Jul	09:18:51	0.211
73	19-Jul	08:33:51	0.269	119	19-Jul	09:19:51	0.202
74	19-Jul	08:34:51	0.25	120	19-Jul	09:20:51	0.438
75	19-Jul	08:35:51	0.207	121	19-Jul	09:21:51	0.279
76	19-Jul	08:36:51	0.205	122	19-Jul	09:22:51	0.216
77	19-Jul	08:37:51	0.204	123	19-Jul	09:23:51	0.261
78	19-Jul	08:38:51	0.212	124	19-Jul	09:24:51	0.249
79	19-Jul	08:39:51	0.234	125	19-Jul	09:25:51	0.274
80	19-Jul	08:40:51	0.233	126	19-Jul	09:26:51	0.265
81	19-Jul	08:41:51	0.206	127	19-Jul	09:27:51	0.206
82	19-Jul	08:42:51	0.204	128	19-Jul	09:28:51	0.214
83	19-Jul	08:43:51	0.206	129	19-Jul	09:29:51	0.216
84	19-Jul	08:44:51	0.209	130	19-Jul	09:30:51	0.579
85	19-Jul	08:45:51	0.224	131	19-Jul	09:31:51	0.301
86	19-Jul	08:46:51	0.232	132	19-Jul	09:32:51	0.229
87	19-Jul	08:47:51	0.217	133	19-Jul	09:33:51	0.252
88	19-Jul	08:48:51	0.208	134	19-Jul	09:34:51	0.224
89	19-Jul	08:49:51	0.222	135	19-Jul	09:35:51	0.215
90	19-Jul	08:50:51	0.208	136	19-Jul	09:36:51	0.213
91	19-Jul	08:51:51	0.227	137	19-Jul	09:37:51	0.204
92	19-Jul	08:52:51	0.216	138	19-Jul	09:38:51	0.712
93	19-Jul	08:53:51	0.216	139	19-Jul	09:39:51	0.464
94	19-Jul	08:54:51	0.214	140	19-Jul	09:40:51	0.286
95	19-Jul	08:55:51	0.213	141	19-Jul	09:41:51	0.203
96	19-Jul	08:56:51	0.214	142	19-Jul	09:42:51	0.21
97	19-Jul	08:57:51	0.221	143	19-Jul	09:43:51	0.208
98	19-Jul	08:58:51	0.241	144	19-Jul	09:44:51	0.208
99	19-Jul	08:59:51	0.229	145	19-Jul	09:45:51	0.576
100	19-Jul	09:00:51	0.21	146	19-Jul	09:46:51	0.243
101	19-Jul	09:01:51	0.208	147	19-Jul	09:47:51	0.241
102	19-Jul	09:02:51	0.207	148	19-Jul	09:48:51	0.231
103	19-Jul	09:03:51	0.21	149	19-Jul	09:49:51	0.244
104	19-Jul	09:04:51	0.205	150	19-Jul	09:50:51	0.248
105	19-Jul	09:05:51	0.205	151	19-Jul	09:51:51	0.253
106	19-Jul	09:06:51	0.211	152	19-Jul	09:52:51	0.265
107	19-Jul	09:07:51	0.205	153	19-Jul	09:53:51	0.307
108	19-Jul	09:08:51	0.204	154	19-Jul	09:54:51	0.254
109	19-Jul	09:09:51	0.204	155	19-Jul	09:55:51	0.246
110	19-Jul	09:10:51	0.205	156	19-Jul	09:56:51	0.241
111	19-Jul	09:11:51	0.203	157	19-Jul	09:57:51	0.221
112	19-Jul	09:12:51	0.207	158	19-Jul	09:58:51	0.312

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
159	19-Jul	09:59:51	0.219	205	19-Jul	10:45:51	0.301
160	19-Jul	10:00:51	0.213	206	19-Jul	10:46:51	0.404
161	19-Jul	10:01:51	0.212	207	19-Jul	10:47:51	0.606
162	19-Jul	10:02:51	0.206	208	19-Jul	10:48:51	0.519
163	19-Jul	10:03:51	0.232	209	19-Jul	10:49:51	0.47
164	19-Jul	10:04:51	0.206	210	19-Jul	10:50:51	0.306
165	19-Jul	10:05:51	0.204	211	19-Jul	10:51:51	0.309
166	19-Jul	10:06:51	0.211	212	19-Jul	10:52:51	0.278
167	19-Jul	10:07:51	0.245	213	19-Jul	10:53:51	0.256
168	19-Jul	10:08:51	0.236	214	19-Jul	10:54:51	0.261
169	19-Jul	10:09:51	0.205	215	19-Jul	10:55:51	0.476
170	19-Jul	10:10:51	0.241	216	19-Jul	10:56:51	0.427
171	19-Jul	10:11:51	0.237	217	19-Jul	10:57:51	0.679
172	19-Jul	10:12:51	0.209	218	19-Jul	10:58:51	0.266
173	19-Jul	10:13:51	0.343	219	19-Jul	10:59:51	0.706
174	19-Jul	10:14:51	0.252	220	19-Jul	11:00:51	0.324
175	19-Jul	10:15:51	0.258	221	19-Jul	11:01:51	0.289
176	19-Jul	10:16:51	0.274	222	19-Jul	11:02:51	0.26
177	19-Jul	10:17:51	0.213	223	19-Jul	11:03:51	0.295
178	19-Jul	10:18:51	0.339	224	19-Jul	11:04:51	0.247
179	19-Jul	10:19:51	0.36	225	19-Jul	11:05:51	0.44
180	19-Jul	10:20:51	0.295	226	19-Jul	11:06:51	0.736
181	19-Jul	10:21:51	0.388	227	19-Jul	11:07:51	0.308
182	19-Jul	10:22:51	0.547	228	19-Jul	11:08:51	0.303
183	19-Jul	10:23:51	0.218	229	19-Jul	11:09:51	0.26
184	19-Jul	10:24:51	0.36	230	19-Jul	11:10:51	0.369
185	19-Jul	10:25:51	0.349	231	19-Jul	11:11:51	0.298
186	19-Jul	10:26:51	0.254	232	19-Jul	11:12:51	0.317
187	19-Jul	10:27:51	0.3	233	19-Jul	11:13:51	0.346
188	19-Jul	10:28:51	0.394	234	19-Jul	11:14:51	0.304
189	19-Jul	10:29:51	0.243	235	19-Jul	11:15:51	2.729
190	19-Jul	10:30:51	0.227	236	19-Jul	11:16:51	0.537
191	19-Jul	10:31:51	0.305	237	19-Jul	11:17:51	0.767
192	19-Jul	10:32:51	0.26	238	19-Jul	11:18:51	0.371
193	19-Jul	10:33:51	0.292	239	19-Jul	11:19:51	0.415
194	19-Jul	10:34:51	0.309	240	19-Jul	11:20:51	0.406
195	19-Jul	10:35:51	0.528	241	19-Jul	11:21:51	0.228
196	19-Jul	10:36:51	0.48	242	19-Jul	11:22:51	0.441
197	19-Jul	10:37:51	1.376	243	19-Jul	11:23:51	0.388
198	19-Jul	10:38:51	0.507	244	19-Jul	11:24:51	0.462
199	19-Jul	10:39:51	0.324	245	19-Jul	11:25:51	0.438
200	19-Jul	10:40:51	0.382	246	19-Jul	11:26:51	0.369
201	19-Jul	10:41:51	0.347	247	19-Jul	11:27:51	0.295
202	19-Jul	10:42:51	2.262	248	19-Jul	11:28:51	0.229
203	19-Jul	10:43:51	0.387	249	19-Jul	11:29:51	0.346
204	19-Jul	10:44:51	0.486	250	19-Jul	11:30:51	0.254

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
251	19-Jul	11:31:51	0.507	297	19-Jul	12:17:51	0.202
252	19-Jul	11:32:51	0.225	298	19-Jul	12:18:51	0.203
253	19-Jul	11:33:51	0.224	299	19-Jul	12:19:51	0.204
254	19-Jul	11:34:51	0.29	300	19-Jul	12:20:51	0.202
255	19-Jul	11:35:51	0.229	301	19-Jul	12:21:51	0.203
256	19-Jul	11:36:51	0.378	302	19-Jul	12:22:51	0.203
257	19-Jul	11:37:51	0.795	303	19-Jul	12:23:51	0.219
258	19-Jul	11:38:51	0.662	304	19-Jul	12:24:51	0.289
259	19-Jul	11:39:51	0.236	305	19-Jul	12:25:51	0.272
260	19-Jul	11:40:51	0.257	306	19-Jul	12:26:51	0.208
261	19-Jul	11:41:51	0.337	307	19-Jul	12:27:51	0.202
262	19-Jul	11:42:51	1.109	308	19-Jul	12:28:51	0.202
263	19-Jul	11:43:51	0.352	309	19-Jul	12:29:51	0.228
264	19-Jul	11:44:51	1.805	310	19-Jul	12:30:51	0.232
265	19-Jul	11:45:51	0.413	311	19-Jul	12:31:51	0.398
266	19-Jul	11:46:51	0.412	312	19-Jul	12:32:51	0.321
267	19-Jul	11:47:51	0.214	313	19-Jul	12:33:51	0.49
268	19-Jul	11:48:51	0.432	314	19-Jul	12:34:51	0.389
269	19-Jul	11:49:51	0.264	315	19-Jul	12:35:51	0.319
270	19-Jul	11:50:51	0.206	316	19-Jul	12:36:51	0.431
271	19-Jul	11:51:51	0.225	317	19-Jul	12:37:51	0.566
272	19-Jul	11:52:51	0.212	318	19-Jul	12:38:51	0.408
273	19-Jul	11:53:51	0.226	319	19-Jul	12:39:51	0.349
274	19-Jul	11:54:51	0.211	320	19-Jul	12:40:51	0.447
275	19-Jul	11:55:51	0.271	321	19-Jul	12:41:51	0.517
276	19-Jul	11:56:51	0.341	322	19-Jul	12:42:51	0.325
277	19-Jul	11:57:51	0.293	323	19-Jul	12:43:51	0.386
278	19-Jul	11:58:51	0.213	324	19-Jul	12:44:51	0.404
279	19-Jul	11:59:51	0.203	325	19-Jul	12:45:51	0.474
280	19-Jul	12:00:51	0.205	326	19-Jul	12:46:51	0.299
281	19-Jul	12:01:51	0.202	327	19-Jul	12:47:51	0.394
282	19-Jul	12:02:51	0.204	328	19-Jul	12:48:51	0.635
283	19-Jul	12:03:51	0.204	329	19-Jul	12:49:51	0.7
284	19-Jul	12:04:51	0.204	330	19-Jul	12:50:51	0.491
285	19-Jul	12:05:51	0.203	331	19-Jul	12:51:51	0.317
286	19-Jul	12:06:51	0.204	332	19-Jul	12:52:51	0.384
287	19-Jul	12:07:51	0.202	333	19-Jul	12:53:51	0.216
288	19-Jul	12:08:51	0.202	334	19-Jul	12:54:51	0.208
289	19-Jul	12:09:51	0.203	335	19-Jul	12:55:51	0.482
290	19-Jul	12:10:51	0.209	336	19-Jul	12:56:51	1.081
291	19-Jul	12:11:51	0.204	337	19-Jul	12:57:51	0.354
292	19-Jul	12:12:51	0.204	338	19-Jul	12:58:51	0.44
293	19-Jul	12:13:51	0.203	339	19-Jul	12:59:51	0.535
294	19-Jul	12:14:51	0.216	340	19-Jul	13:00:51	2.137
295	19-Jul	12:15:51	0.203	341	19-Jul	13:01:51	1.743
296	19-Jul	12:16:51	0.204	342	19-Jul	13:02:51	0.264

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
343	19-Jul	13:03:51	0.252	389	19-Jul	13:49:51	0.304
344	19-Jul	13:04:51	1.943	390	19-Jul	13:50:51	0.211
345	19-Jul	13:05:51	0.443	391	19-Jul	13:51:51	0.213
346	19-Jul	13:06:51	0.718	392	19-Jul	13:52:51	0.21
347	19-Jul	13:07:51	0.388	393	19-Jul	13:53:51	0.212
348	19-Jul	13:08:51	0.271	394	19-Jul	13:54:51	0.211
349	19-Jul	13:09:51	1.162	395	19-Jul	13:55:51	0.211
350	19-Jul	13:10:51	1.411	396	19-Jul	13:56:51	2.672
351	19-Jul	13:11:51	0.99	397	19-Jul	13:57:51	0.211
352	19-Jul	13:12:51	0.351	398	19-Jul	13:58:51	0.209
353	19-Jul	13:13:51	0.353	399	19-Jul	13:59:51	0.209
354	19-Jul	13:14:51	0.552	400	19-Jul	14:00:51	0.205
355	19-Jul	13:15:51	0.593	401	19-Jul	14:01:51	0.208
356	19-Jul	13:16:51	0.47	402	19-Jul	14:02:51	0.203
357	19-Jul	13:17:51	0.292	403	19-Jul	14:03:51	0.203
358	19-Jul	13:18:51	0.805	404	19-Jul	14:04:51	0.203
359	19-Jul	13:19:51	1.453	405	19-Jul	14:05:51	0.202
360	19-Jul	13:20:51	1.214	406	19-Jul	14:06:51	0.209
361	19-Jul	13:21:51	1.023	407	19-Jul	14:07:51	0.203
362	19-Jul	13:22:51	0.398	408	19-Jul	14:08:51	0.202
363	19-Jul	13:23:51	0.763	409	19-Jul	14:09:51	0.217
364	19-Jul	13:24:51	0.85	410	19-Jul	14:10:51	0.204
365	19-Jul	13:25:51	0.312	411	19-Jul	14:11:51	0.202
366	19-Jul	13:26:51	0.72	412	19-Jul	14:12:51	0.202
367	19-Jul	13:27:51	0.895	413	19-Jul	14:13:51	0.202
368	19-Jul	13:28:51	0.244	414	19-Jul	14:14:51	0.203
369	19-Jul	13:29:51	0.258	415	19-Jul	14:15:51	0.201
370	19-Jul	13:30:51	0.597	416	19-Jul	14:16:51	0.207
371	19-Jul	13:31:51	0.287	417	19-Jul	14:17:51	0.255
372	19-Jul	13:32:51	0.226	418	19-Jul	14:18:51	0.3
373	19-Jul	13:33:51	0.352	419	19-Jul	14:19:51	0.267
374	19-Jul	13:34:51	0.334	420	19-Jul	14:20:51	0.285
375	19-Jul	13:35:51	0.278	421	19-Jul	14:21:51	0.376
376	19-Jul	13:36:51	0.24	422	19-Jul	14:22:51	0.27
377	19-Jul	13:37:51	0.246	423	19-Jul	14:23:51	0.362
378	19-Jul	13:38:51	0.588	424	19-Jul	14:24:51	1.403
379	19-Jul	13:39:51	0.248	425	19-Jul	14:25:51	0.867
380	19-Jul	13:40:51	0.528	426	19-Jul	14:26:51	0.228
381	19-Jul	13:41:51	0.312	427	19-Jul	14:27:51	0.269
382	19-Jul	13:42:51	0.399				
383	19-Jul	13:43:51	0.217				
384	19-Jul	13:44:51	0.199				
385	19-Jul	13:45:51	0.231				
386	19-Jul	13:46:51	0.366				
387	19-Jul	13:47:51	0.467				
388	19-Jul	13:48:51	0.927				

July 23, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 03
Number of logged points: 159
Start time and date: 07:23:48 23-Jul
Elapsed time: 02:39:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.471 mg/m³
Time at maximum: 07:58:56 Jul 23
Max STEL Concentration: 0.660 mg/m³
Time at max STEL: 08:04:18 Jul 23
Overall Avg Conc: 0.261 mg/m³

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	23-Jul	07:24:48	0.018	32	23-Jul	07:55:48	1.209
2	23-Jul	07:25:48	0.009	33	23-Jul	07:56:48	1.237
3	23-Jul	07:26:48	0.01	34	23-Jul	07:57:48	0.767
4	23-Jul	07:27:48	0.008	35	23-Jul	07:58:48	2.378
5	23-Jul	07:28:48	0.09	36	23-Jul	07:59:48	0.681
6	23-Jul	07:29:48	1.444	37	23-Jul	08:00:48	0.246
7	23-Jul	07:30:48	0.228	38	23-Jul	08:01:48	0.289
8	23-Jul	07:31:48	0.165	39	23-Jul	08:02:48	0.689
9	23-Jul	07:32:48	0.667	40	23-Jul	08:03:48	0.745
10	23-Jul	07:33:48	0.176	41	23-Jul	08:04:48	0.142
11	23-Jul	07:34:48	0.219	42	23-Jul	08:05:48	0.154
12	23-Jul	07:35:48	0.649	43	23-Jul	08:06:48	0.309
13	23-Jul	07:36:48	0.985	44	23-Jul	08:07:48	0.484
14	23-Jul	07:37:48	0.285	45	23-Jul	08:08:48	0.084
15	23-Jul	07:38:48	0.147	46	23-Jul	08:09:48	0.107
16	23-Jul	07:39:48	0.051	47	23-Jul	08:10:48	0.11
17	23-Jul	07:40:48	0.2	48	23-Jul	08:11:48	0.2
18	23-Jul	07:41:48	0.151	49	23-Jul	08:12:48	0.161
19	23-Jul	07:42:48	0.105	50	23-Jul	08:13:48	0.293
20	23-Jul	07:43:48	0.335	51	23-Jul	08:14:48	0.405
21	23-Jul	07:44:48	0.192	52	23-Jul	08:15:48	0.369
22	23-Jul	07:45:48	0.111	53	23-Jul	08:16:48	0.444
23	23-Jul	07:46:48	0.16	54	23-Jul	08:17:48	1.127
24	23-Jul	07:47:48	0.117	55	23-Jul	08:18:48	0.901
25	23-Jul	07:48:48	0.109	56	23-Jul	08:19:48	1.038
26	23-Jul	07:49:48	0.913	57	23-Jul	08:20:48	0.202
27	23-Jul	07:50:48	0.077	58	23-Jul	08:21:48	0.392
28	23-Jul	07:51:48	0.091	59	23-Jul	08:22:48	0.763
29	23-Jul	07:52:48	0.297	60	23-Jul	08:23:48	0.377
30	23-Jul	07:53:48	0.132	61	23-Jul	08:24:48	0.151
31	23-Jul	07:54:48	0.116	62	23-Jul	08:25:48	0.34

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	23-Jul	08:26:48	0.24	109	23-Jul	09:12:48	0.02
64	23-Jul	08:27:48	0.08	110	23-Jul	09:13:48	0.58
65	23-Jul	08:28:48	0.507	111	23-Jul	09:14:48	0.308
66	23-Jul	08:29:48	0.064	112	23-Jul	09:15:48	0.068
67	23-Jul	08:30:48	0.154	113	23-Jul	09:16:48	0.042
68	23-Jul	08:31:48	0.147	114	23-Jul	09:17:48	0.031
69	23-Jul	08:32:48	0.214	115	23-Jul	09:18:48	0.058
70	23-Jul	08:33:48	0.377	116	23-Jul	09:19:48	0.159
71	23-Jul	08:34:48	0.074	117	23-Jul	09:20:48	0.117
72	23-Jul	08:35:48	0.189	118	23-Jul	09:21:48	0.04
73	23-Jul	08:36:48	0.189	119	23-Jul	09:22:48	0.041
74	23-Jul	08:37:48	0.092	120	23-Jul	09:23:48	0.192
75	23-Jul	08:38:48	0.143	121	23-Jul	09:24:48	0.164
76	23-Jul	08:39:48	0.047	122	23-Jul	09:25:48	0.076
77	23-Jul	08:40:48	0.015	123	23-Jul	09:26:48	0.055
78	23-Jul	08:41:48	0.087	124	23-Jul	09:27:48	0.085
79	23-Jul	08:42:48	0.032	125	23-Jul	09:28:48	0.148
80	23-Jul	08:43:48	0.034	126	23-Jul	09:29:48	0.069
81	23-Jul	08:44:48	0.014	127	23-Jul	09:30:48	0.136
82	23-Jul	08:45:48	0.032	128	23-Jul	09:31:48	0.124
83	23-Jul	08:46:48	0.084	129	23-Jul	09:32:48	0.153
84	23-Jul	08:47:48	0.091	130	23-Jul	09:33:48	0.207
85	23-Jul	08:48:48	0.058	131	23-Jul	09:34:48	0.095
86	23-Jul	08:49:48	0.168	132	23-Jul	09:35:48	0.121
87	23-Jul	08:50:48	0.21	133	23-Jul	09:36:48	0.033
88	23-Jul	08:51:48	0.195	134	23-Jul	09:37:48	0.029
89	23-Jul	08:52:48	0.052	135	23-Jul	09:38:48	0.023
90	23-Jul	08:53:48	0.187	136	23-Jul	09:39:48	0.017
91	23-Jul	08:54:48	0.195	137	23-Jul	09:40:48	0.172
92	23-Jul	08:55:48	0.032	138	23-Jul	09:41:48	0.267
93	23-Jul	08:56:48	0.111	139	23-Jul	09:42:48	1.141
94	23-Jul	08:57:48	0.032	140	23-Jul	09:43:48	0.112
95	23-Jul	08:58:48	0.016	141	23-Jul	09:44:48	0.161
96	23-Jul	08:59:48	0.01	142	23-Jul	09:45:48	0.254
97	23-Jul	09:00:48	0.083	143	23-Jul	09:46:48	0.178
98	23-Jul	09:01:48	0.022	144	23-Jul	09:47:48	0.16
99	23-Jul	09:02:48	0.047	145	23-Jul	09:48:48	0.435
100	23-Jul	09:03:48	0.177	146	23-Jul	09:49:48	0.47
101	23-Jul	09:04:48	0.387	147	23-Jul	09:50:48	0.735
102	23-Jul	09:05:48	0.064	148	23-Jul	09:51:48	0.142
103	23-Jul	09:06:48	0.057	149	23-Jul	09:52:48	0.205
104	23-Jul	09:07:48	0.04	150	23-Jul	09:53:48	0.331
105	23-Jul	09:08:48	0.064	151	23-Jul	09:54:48	0.286
106	23-Jul	09:09:48	0.05	152	23-Jul	09:55:48	0.296
107	23-Jul	09:10:48	0.053	153	23-Jul	09:56:48	0.538
108	23-Jul	09:11:48	0.04	154	23-Jul	09:57:48	0.575

Logged Data

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
155	23-Jul	09:58:48	0.448				
156	23-Jul	09:59:48	0.085				
157	23-Jul	10:00:48	0.257				
158	23-Jul	10:01:48	0.252				
159	23-Jul	10:02:48	0.565				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 01
Number of logged points: 592
Start time and date: 07:20:22 23-Jul
Elapsed time: 09:52:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.708 mg/m³
Time at maximum: 11:54:28 Jul 23
Max STEL Concentration: 0.773 mg/m³
Time at max STEL: 11:54:52 Jul 23
Overall Avg Conc: 0.420 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	23-Jul	07:21:22	0.252	28	23-Jul	07:48:22	0.623
2	23-Jul	07:22:22	0.255	29	23-Jul	07:49:22	0.473
3	23-Jul	07:23:22	1.065	30	23-Jul	07:50:22	0.65
4	23-Jul	07:24:22	0.251	31	23-Jul	07:51:22	0.625
5	23-Jul	07:25:22	0.399	32	23-Jul	07:52:22	0.643
6	23-Jul	07:26:22	0.36	33	23-Jul	07:53:22	0.668
7	23-Jul	07:27:22	0.256	34	23-Jul	07:54:22	0.336
8	23-Jul	07:28:22	0.3	35	23-Jul	07:55:22	0.322
9	23-Jul	07:29:22	0.299	36	23-Jul	07:56:22	0.281
10	23-Jul	07:30:22	0.388	37	23-Jul	07:57:22	0.329
11	23-Jul	07:31:22	0.287	38	23-Jul	07:58:22	0.377
12	23-Jul	07:32:22	0.319	39	23-Jul	07:59:22	0.365
13	23-Jul	07:33:22	0.277	40	23-Jul	08:00:22	0.392
14	23-Jul	07:34:22	0.33	41	23-Jul	08:01:22	0.485
15	23-Jul	07:35:22	0.517	42	23-Jul	08:02:22	0.263
16	23-Jul	07:36:22	0.378	43	23-Jul	08:03:22	0.291
17	23-Jul	07:37:22	0.281	44	23-Jul	08:04:22	0.383
18	23-Jul	07:38:22	0.234	45	23-Jul	08:05:22	0.307
19	23-Jul	07:39:22	1.539	46	23-Jul	08:06:22	0.264
20	23-Jul	07:40:22	0.689	47	23-Jul	08:07:22	0.558
21	23-Jul	07:41:22	0.288	48	23-Jul	08:08:22	0.468
22	23-Jul	07:42:22	0.607	49	23-Jul	08:09:22	0.487
23	23-Jul	07:43:22	0.404	50	23-Jul	08:10:22	0.396
24	23-Jul	07:44:22	0.55	51	23-Jul	08:11:22	0.335
25	23-Jul	07:45:22	0.274	52	23-Jul	08:12:22	0.302
26	23-Jul	07:46:22	0.378	53	23-Jul	08:13:22	0.528
27	23-Jul	07:47:22	0.693	54	23-Jul	08:14:22	0.466

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
55	23-Jul	08:15:22	0.588	104	23-Jul	09:04:22	0.301
56	23-Jul	08:16:22	0.455	105	23-Jul	09:05:22	0.291
57	23-Jul	08:17:22	0.468	106	23-Jul	09:06:22	0.257
58	23-Jul	08:18:22	0.329	107	23-Jul	09:07:22	0.289
59	23-Jul	08:19:22	1.187	108	23-Jul	09:08:22	0.383
60	23-Jul	08:20:22	0.26	109	23-Jul	09:09:22	0.239
61	23-Jul	08:21:22	0.28	110	23-Jul	09:10:22	0.238
62	23-Jul	08:22:22	0.372	111	23-Jul	09:11:22	0.359
63	23-Jul	08:23:22	0.419	112	23-Jul	09:12:22	0.28
64	23-Jul	08:24:22	0.518	113	23-Jul	09:13:22	0.243
65	23-Jul	08:25:22	0.37	114	23-Jul	09:14:22	0.331
66	23-Jul	08:26:22	0.335	115	23-Jul	09:15:22	0.391
67	23-Jul	08:27:22	0.275	116	23-Jul	09:16:22	0.32
68	23-Jul	08:28:22	0.31	117	23-Jul	09:17:22	0.307
69	23-Jul	08:29:22	0.375	118	23-Jul	09:18:22	0.35
70	23-Jul	08:30:22	0.435	119	23-Jul	09:19:22	0.295
71	23-Jul	08:31:22	0.484	120	23-Jul	09:20:22	0.304
72	23-Jul	08:32:22	0.563	121	23-Jul	09:21:22	0.245
73	23-Jul	08:33:22	0.501	122	23-Jul	09:22:22	0.234
74	23-Jul	08:34:22	0.423	123	23-Jul	09:23:22	0.303
75	23-Jul	08:35:22	0.488	124	23-Jul	09:24:22	0.282
76	23-Jul	08:36:22	0.288	125	23-Jul	09:25:22	0.271
77	23-Jul	08:37:22	0.311	126	23-Jul	09:26:22	0.322
78	23-Jul	08:38:22	0.56	127	23-Jul	09:27:22	0.245
79	23-Jul	08:39:22	0.359	128	23-Jul	09:28:22	0.261
80	23-Jul	08:40:22	0.304	129	23-Jul	09:29:22	0.317
81	23-Jul	08:41:22	0.68	130	23-Jul	09:30:22	0.376
82	23-Jul	08:42:22	0.399	131	23-Jul	09:31:22	0.239
83	23-Jul	08:43:22	0.554	132	23-Jul	09:32:22	0.272
84	23-Jul	08:44:22	0.351	133	23-Jul	09:33:22	0.244
85	23-Jul	08:45:22	0.281	134	23-Jul	09:34:22	0.36
86	23-Jul	08:46:22	0.459	135	23-Jul	09:35:22	0.3
87	23-Jul	08:47:22	0.264	136	23-Jul	09:36:22	0.358
88	23-Jul	08:48:22	0.261	137	23-Jul	09:37:22	0.423
89	23-Jul	08:49:22	0.357	138	23-Jul	09:38:22	0.42
90	23-Jul	08:50:22	0.274	139	23-Jul	09:39:22	0.422
91	23-Jul	08:51:22	0.24	140	23-Jul	09:40:22	0.341
92	23-Jul	08:52:22	0.535	141	23-Jul	09:41:22	0.28
93	23-Jul	08:53:22	0.671	142	23-Jul	09:42:22	0.386
94	23-Jul	08:54:22	0.402	143	23-Jul	09:43:22	0.291
95	23-Jul	08:55:22	0.699	144	23-Jul	09:44:22	0.818
96	23-Jul	08:56:22	0.429	145	23-Jul	09:45:22	0.289
97	23-Jul	08:57:22	0.349	146	23-Jul	09:46:22	0.336
98	23-Jul	08:58:22	0.666	147	23-Jul	09:47:22	0.354
99	23-Jul	08:59:22	0.389	148	23-Jul	09:48:22	0.567
100	23-Jul	09:00:22	0.545	149	23-Jul	09:49:22	0.708
101	23-Jul	09:01:22	0.483	150	23-Jul	09:50:22	0.338
102	23-Jul	09:02:22	0.292	151	23-Jul	09:51:22	0.573
103	23-Jul	09:03:22	0.292	152	23-Jul	09:52:22	1.133

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
153	23-Jul	09:53:22	0.373	202	23-Jul	10:42:22	0.439
154	23-Jul	09:54:22	0.536	203	23-Jul	10:43:22	0.255
155	23-Jul	09:55:22	0.376	204	23-Jul	10:44:22	0.258
156	23-Jul	09:56:22	0.329	205	23-Jul	10:45:22	0.257
157	23-Jul	09:57:22	0.52	206	23-Jul	10:46:22	0.252
158	23-Jul	09:58:22	0.673	207	23-Jul	10:47:22	0.272
159	23-Jul	09:59:22	0.346	208	23-Jul	10:48:22	0.248
160	23-Jul	10:00:22	1.419	209	23-Jul	10:49:22	0.251
161	23-Jul	10:01:22	0.419	210	23-Jul	10:50:22	0.344
162	23-Jul	10:02:22	0.799	211	23-Jul	10:51:22	0.393
163	23-Jul	10:03:22	0.846	212	23-Jul	10:52:22	0.283
164	23-Jul	10:04:22	0.571	213	23-Jul	10:53:22	0.263
165	23-Jul	10:05:22	0.35	214	23-Jul	10:54:22	0.281
166	23-Jul	10:06:22	0.379	215	23-Jul	10:55:22	0.331
167	23-Jul	10:07:22	0.496	216	23-Jul	10:56:22	0.431
168	23-Jul	10:08:22	0.48	217	23-Jul	10:57:22	0.257
169	23-Jul	10:09:22	0.378	218	23-Jul	10:58:22	0.483
170	23-Jul	10:10:22	0.468	219	23-Jul	10:59:22	0.828
171	23-Jul	10:11:22	0.398	220	23-Jul	11:00:22	0.307
172	23-Jul	10:12:22	0.62	221	23-Jul	11:01:22	0.251
173	23-Jul	10:13:22	0.495	222	23-Jul	11:02:22	0.253
174	23-Jul	10:14:22	0.334	223	23-Jul	11:03:22	0.316
175	23-Jul	10:15:22	0.331	224	23-Jul	11:04:22	0.31
176	23-Jul	10:16:22	0.328	225	23-Jul	11:05:22	0.386
177	23-Jul	10:17:22	0.47	226	23-Jul	11:06:22	0.289
178	23-Jul	10:18:22	0.468	227	23-Jul	11:07:22	0.782
179	23-Jul	10:19:22	0.655	228	23-Jul	11:08:22	0.295
180	23-Jul	10:20:22	0.853	229	23-Jul	11:09:22	0.284
181	23-Jul	10:21:22	0.489	230	23-Jul	11:10:22	0.298
182	23-Jul	10:22:22	0.449	231	23-Jul	11:11:22	0.304
183	23-Jul	10:23:22	0.288	232	23-Jul	11:12:22	0.301
184	23-Jul	10:24:22	0.347	233	23-Jul	11:13:22	0.292
185	23-Jul	10:25:22	0.481	234	23-Jul	11:14:22	0.26
186	23-Jul	10:26:22	0.396	235	23-Jul	11:15:22	1.078
187	23-Jul	10:27:22	0.268	236	23-Jul	11:16:22	0.381
188	23-Jul	10:28:22	0.248	237	23-Jul	11:17:22	0.474
189	23-Jul	10:29:22	0.303	238	23-Jul	11:18:22	0.34
190	23-Jul	10:30:22	0.266	239	23-Jul	11:19:22	0.367
191	23-Jul	10:31:22	0.353	240	23-Jul	11:20:22	0.701
192	23-Jul	10:32:22	0.264	241	23-Jul	11:21:22	0.3
193	23-Jul	10:33:22	0.476	242	23-Jul	11:22:22	0.256
194	23-Jul	10:34:22	0.339	243	23-Jul	11:23:22	0.265
195	23-Jul	10:35:22	0.298	244	23-Jul	11:24:22	0.26
196	23-Jul	10:36:22	0.326	245	23-Jul	11:25:22	0.251
197	23-Jul	10:37:22	0.254	246	23-Jul	11:26:22	0.248
198	23-Jul	10:38:22	0.341	247	23-Jul	11:27:22	0.248
199	23-Jul	10:39:22	0.626	248	23-Jul	11:28:22	0.263
200	23-Jul	10:40:22	0.337	249	23-Jul	11:29:22	0.296
201	23-Jul	10:41:22	0.433	250	23-Jul	11:30:22	0.321

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
251	23-Jul	11:31:22	0.267	300	23-Jul	12:20:22	0.238
252	23-Jul	11:32:22	0.251	301	23-Jul	12:21:22	0.237
253	23-Jul	11:33:22	0.243	302	23-Jul	12:22:22	0.237
254	23-Jul	11:34:22	0.261	303	23-Jul	12:23:22	0.238
255	23-Jul	11:35:22	0.443	304	23-Jul	12:24:22	0.244
256	23-Jul	11:36:22	0.397	305	23-Jul	12:25:22	0.237
257	23-Jul	11:37:22	0.536	306	23-Jul	12:26:22	0.238
258	23-Jul	11:38:22	0.286	307	23-Jul	12:27:22	0.239
259	23-Jul	11:39:22	0.419	308	23-Jul	12:28:22	0.236
260	23-Jul	11:40:22	0.412	309	23-Jul	12:29:22	0.238
261	23-Jul	11:41:22	0.378	310	23-Jul	12:30:22	0.237
262	23-Jul	11:42:22	0.838	311	23-Jul	12:31:22	0.238
263	23-Jul	11:43:22	0.408	312	23-Jul	12:32:22	0.238
264	23-Jul	11:44:22	0.376	313	23-Jul	12:33:22	0.296
265	23-Jul	11:45:22	0.305	314	23-Jul	12:34:22	0.31
266	23-Jul	11:46:22	0.54	315	23-Jul	12:35:22	0.485
267	23-Jul	11:47:22	0.37	316	23-Jul	12:36:22	0.379
268	23-Jul	11:48:22	0.355	317	23-Jul	12:37:22	0.281
269	23-Jul	11:49:22	0.653	318	23-Jul	12:38:22	0.376
270	23-Jul	11:50:22	1.622	319	23-Jul	12:39:22	0.855
271	23-Jul	11:51:22	1.015	320	23-Jul	12:40:22	1.01
272	23-Jul	11:52:22	0.817	321	23-Jul	12:41:22	0.428
273	23-Jul	11:53:22	0.522	322	23-Jul	12:42:22	0.333
274	23-Jul	11:54:22	2.568	323	23-Jul	12:43:22	0.28
275	23-Jul	11:55:22	0.745	324	23-Jul	12:44:22	0.237
276	23-Jul	11:56:22	0.37	325	23-Jul	12:45:22	0.271
277	23-Jul	11:57:22	0.406	326	23-Jul	12:46:22	0.241
278	23-Jul	11:58:22	0.288	327	23-Jul	12:47:22	0.246
279	23-Jul	11:59:22	0.344	328	23-Jul	12:48:22	0.556
280	23-Jul	12:00:22	0.257	329	23-Jul	12:49:22	0.393
281	23-Jul	12:01:22	0.242	330	23-Jul	12:50:22	0.306
282	23-Jul	12:02:22	0.244	331	23-Jul	12:51:22	1.255
283	23-Jul	12:03:22	0.24	332	23-Jul	12:52:22	0.287
284	23-Jul	12:04:22	0.242	333	23-Jul	12:53:22	0.768
285	23-Jul	12:05:22	0.24	334	23-Jul	12:54:22	0.365
286	23-Jul	12:06:22	0.241	335	23-Jul	12:55:22	0.506
287	23-Jul	12:07:22	0.246	336	23-Jul	12:56:22	0.346
288	23-Jul	12:08:22	0.239	337	23-Jul	12:57:22	0.251
289	23-Jul	12:09:22	0.24	338	23-Jul	12:58:22	0.265
290	23-Jul	12:10:22	0.241	339	23-Jul	12:59:22	0.252
291	23-Jul	12:11:22	0.238	340	23-Jul	13:00:22	0.327
292	23-Jul	12:12:22	0.238	341	23-Jul	13:01:22	0.444
293	23-Jul	12:13:22	0.241	342	23-Jul	13:02:22	0.518
294	23-Jul	12:14:22	0.24	343	23-Jul	13:03:22	0.325
295	23-Jul	12:15:22	0.24	344	23-Jul	13:04:22	0.679
296	23-Jul	12:16:22	0.24	345	23-Jul	13:05:22	0.471
297	23-Jul	12:17:22	0.294	346	23-Jul	13:06:22	0.507
298	23-Jul	12:18:22	0.246	347	23-Jul	13:07:22	0.322
299	23-Jul	12:19:22	0.239	348	23-Jul	13:08:22	0.24

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
349	23-Jul	13:09:22	0.253	398	23-Jul	13:58:22	0.241
350	23-Jul	13:10:22	0.245	399	23-Jul	13:59:22	0.328
351	23-Jul	13:11:22	0.314	400	23-Jul	14:00:22	0.967
352	23-Jul	13:12:22	0.302	401	23-Jul	14:01:22	0.823
353	23-Jul	13:13:22	0.429	402	23-Jul	14:02:22	0.486
354	23-Jul	13:14:22	0.68	403	23-Jul	14:03:22	1.139
355	23-Jul	13:15:22	0.259	404	23-Jul	14:04:22	0.535
356	23-Jul	13:16:22	0.26	405	23-Jul	14:05:22	0.581
357	23-Jul	13:17:22	0.29	406	23-Jul	14:06:22	0.452
358	23-Jul	13:18:22	0.864	407	23-Jul	14:07:22	0.569
359	23-Jul	13:19:22	0.585	408	23-Jul	14:08:22	0.38
360	23-Jul	13:20:22	0.455	409	23-Jul	14:09:22	0.53
361	23-Jul	13:21:22	0.245	410	23-Jul	14:10:22	0.422
362	23-Jul	13:22:22	0.245	411	23-Jul	14:11:22	0.296
363	23-Jul	13:23:22	0.357	412	23-Jul	14:12:22	0.257
364	23-Jul	13:24:22	0.321	413	23-Jul	14:13:22	0.55
365	23-Jul	13:25:22	0.328	414	23-Jul	14:14:22	1.124
366	23-Jul	13:26:22	0.448	415	23-Jul	14:15:22	0.44
367	23-Jul	13:27:22	0.284	416	23-Jul	14:16:22	0.294
368	23-Jul	13:28:22	0.304	417	23-Jul	14:17:22	0.425
369	23-Jul	13:29:22	0.329	418	23-Jul	14:18:22	0.296
370	23-Jul	13:30:22	0.505	419	23-Jul	14:19:22	0.313
371	23-Jul	13:31:22	0.378	420	23-Jul	14:20:22	0.463
372	23-Jul	13:32:22	0.521	421	23-Jul	14:21:22	0.307
373	23-Jul	13:33:22	0.582	422	23-Jul	14:22:22	0.375
374	23-Jul	13:34:22	0.246	423	23-Jul	14:23:22	0.383
375	23-Jul	13:35:22	0.382	424	23-Jul	14:24:22	0.654
376	23-Jul	13:36:22	0.273	425	23-Jul	14:25:22	0.376
377	23-Jul	13:37:22	0.374	426	23-Jul	14:26:22	0.343
378	23-Jul	13:38:22	0.344	427	23-Jul	14:27:22	0.48
379	23-Jul	13:39:22	0.431	428	23-Jul	14:28:22	0.554
380	23-Jul	13:40:22	0.278	429	23-Jul	14:29:22	0.66
381	23-Jul	13:41:22	0.563	430	23-Jul	14:30:22	0.458
382	23-Jul	13:42:22	0.512	431	23-Jul	14:31:22	0.721
383	23-Jul	13:43:22	0.463	432	23-Jul	14:32:22	0.416
384	23-Jul	13:44:22	0.245	433	23-Jul	14:33:22	0.77
385	23-Jul	13:45:22	0.259	434	23-Jul	14:34:22	0.462
386	23-Jul	13:46:22	0.272	435	23-Jul	14:35:22	1.175
387	23-Jul	13:47:22	0.581	436	23-Jul	14:36:22	0.806
388	23-Jul	13:48:22	0.268	437	23-Jul	14:37:22	1.076
389	23-Jul	13:49:22	0.249	438	23-Jul	14:38:22	0.336
390	23-Jul	13:50:22	0.248	439	23-Jul	14:39:22	0.314
391	23-Jul	13:51:22	0.566	440	23-Jul	14:40:22	0.328
392	23-Jul	13:52:22	0.298	441	23-Jul	14:41:22	0.276
393	23-Jul	13:53:22	0.258	442	23-Jul	14:42:22	0.319
394	23-Jul	13:54:22	0.259	443	23-Jul	14:43:22	0.26
395	23-Jul	13:55:22	0.304	444	23-Jul	14:44:22	0.242
396	23-Jul	13:56:22	0.246	445	23-Jul	14:45:22	0.328
397	23-Jul	13:57:22	0.253	446	23-Jul	14:46:22	0.399

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
447	23-Jul	14:47:22	0.386	496	23-Jul	15:36:22	0.263
448	23-Jul	14:48:22	0.25	497	23-Jul	15:37:22	0.259
449	23-Jul	14:49:22	0.303	498	23-Jul	15:38:22	0.698
450	23-Jul	14:50:22	0.369	499	23-Jul	15:39:22	0.938
451	23-Jul	14:51:22	0.411	500	23-Jul	15:40:22	0.544
452	23-Jul	14:52:22	0.248	501	23-Jul	15:41:22	0.265
453	23-Jul	14:53:22	0.268	502	23-Jul	15:42:22	0.359
454	23-Jul	14:54:22	0.371	503	23-Jul	15:43:22	0.295
455	23-Jul	14:55:22	0.36	504	23-Jul	15:44:22	0.273
456	23-Jul	14:56:22	0.661	505	23-Jul	15:45:22	0.273
457	23-Jul	14:57:22	0.926	506	23-Jul	15:46:22	0.293
458	23-Jul	14:58:22	0.808	507	23-Jul	15:47:22	0.263
459	23-Jul	14:59:22	0.503	508	23-Jul	15:48:22	0.478
460	23-Jul	15:00:22	0.419	509	23-Jul	15:49:22	0.248
461	23-Jul	15:01:22	0.244	510	23-Jul	15:50:22	0.6
462	23-Jul	15:02:22	0.259	511	23-Jul	15:51:22	0.408
463	23-Jul	15:03:22	0.258	512	23-Jul	15:52:22	0.379
464	23-Jul	15:04:22	0.61	513	23-Jul	15:53:22	1.121
465	23-Jul	15:05:22	0.404	514	23-Jul	15:54:22	0.504
466	23-Jul	15:06:22	1.087	515	23-Jul	15:55:22	0.512
467	23-Jul	15:07:22	0.555	516	23-Jul	15:56:22	0.265
468	23-Jul	15:08:22	0.327	517	23-Jul	15:57:22	0.455
469	23-Jul	15:09:22	0.553	518	23-Jul	15:58:22	0.508
470	23-Jul	15:10:22	0.495	519	23-Jul	15:59:22	0.286
471	23-Jul	15:11:22	0.387	520	23-Jul	16:00:22	0.344
472	23-Jul	15:12:22	0.259	521	23-Jul	16:01:22	0.38
473	23-Jul	15:13:22	0.265	522	23-Jul	16:02:22	0.314
474	23-Jul	15:14:22	0.245	523	23-Jul	16:03:22	0.317
475	23-Jul	15:15:22	0.245	524	23-Jul	16:04:22	0.244
476	23-Jul	15:16:22	0.548	525	23-Jul	16:05:22	0.237
477	23-Jul	15:17:22	0.607	526	23-Jul	16:06:22	0.342
478	23-Jul	15:18:22	0.258	527	23-Jul	16:07:22	0.248
479	23-Jul	15:19:22	0.428	528	23-Jul	16:08:22	0.28
480	23-Jul	15:20:22	0.282	529	23-Jul	16:09:22	0.287
481	23-Jul	15:21:22	0.301	530	23-Jul	16:10:22	0.265
482	23-Jul	15:22:22	0.252	531	23-Jul	16:11:22	0.26
483	23-Jul	15:23:22	0.262	532	23-Jul	16:12:22	0.385
484	23-Jul	15:24:22	0.258	533	23-Jul	16:13:22	0.321
485	23-Jul	15:25:22	0.415	534	23-Jul	16:14:22	0.303
486	23-Jul	15:26:22	0.927	535	23-Jul	16:15:22	0.254
487	23-Jul	15:27:22	0.744	536	23-Jul	16:16:22	0.261
488	23-Jul	15:28:22	0.912	537	23-Jul	16:17:22	0.272
489	23-Jul	15:29:22	0.675	538	23-Jul	16:18:22	0.306
490	23-Jul	15:30:22	0.358	539	23-Jul	16:19:22	0.281
491	23-Jul	15:31:22	0.237	540	23-Jul	16:20:22	0.279
492	23-Jul	15:32:22	0.458	541	23-Jul	16:21:22	0.253
493	23-Jul	15:33:22	0.266	542	23-Jul	16:22:22	0.25
494	23-Jul	15:34:22	0.273	543	23-Jul	16:23:22	0.253
495	23-Jul	15:35:22	0.306	544	23-Jul	16:24:22	0.29

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
545	23-Jul	16:25:22	0.26				
546	23-Jul	16:26:22	0.295				
547	23-Jul	16:27:22	0.332				
548	23-Jul	16:28:22	0.628				
549	23-Jul	16:29:22	0.589				
550	23-Jul	16:30:22	0.354				
551	23-Jul	16:31:22	0.334				
552	23-Jul	16:32:22	0.269				
553	23-Jul	16:33:22	0.388				
554	23-Jul	16:34:22	1.069				
555	23-Jul	16:35:22	0.93				
556	23-Jul	16:36:22	1.827				
557	23-Jul	16:37:22	0.689				
558	23-Jul	16:38:22	0.868				
559	23-Jul	16:39:22	0.255				
560	23-Jul	16:40:22	0.684				
561	23-Jul	16:41:22	0.778				
562	23-Jul	16:42:22	0.952				
563	23-Jul	16:43:22	0.288				
564	23-Jul	16:44:22	0.261				
565	23-Jul	16:45:22	0.592				
566	23-Jul	16:46:22	0.475				
567	23-Jul	16:47:22	0.438				
568	23-Jul	16:48:22	0.64				
569	23-Jul	16:49:22	0.861				
570	23-Jul	16:50:22	0.351				
571	23-Jul	16:51:22	0.341				
572	23-Jul	16:52:22	0.364				
573	23-Jul	16:53:22	0.405				
574	23-Jul	16:54:22	0.378				
575	23-Jul	16:55:22	0.61				
576	23-Jul	16:56:22	0.743				
577	23-Jul	16:57:22	0.42				
578	23-Jul	16:58:22	0.398				
579	23-Jul	16:59:22	0.629				
580	23-Jul	17:00:22	0.389				
581	23-Jul	17:01:22	0.263				
582	23-Jul	17:02:22	0.274				
583	23-Jul	17:03:22	1.424				
584	23-Jul	17:04:22	0.473				
585	23-Jul	17:05:22	0.421				
586	23-Jul	17:06:22	0.42				
587	23-Jul	17:07:22	0.453				
588	23-Jul	17:08:22	0.422				
589	23-Jul	17:09:22	0.422				
590	23-Jul	17:10:22	0.374				
591	23-Jul	17:11:22	0.352				
592	23-Jul	17:12:22	0.319				

July 24, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 04
Number of logged points: 586
Start time and date: 07:20:14 24-Jul
Elapsed time: 09:46:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 5.732 mg/m³
Time at maximum: 07:37:49 Jul 24
Max STEL Concentration: 0.677 mg/m³
Time at max STEL: 07:41:15 Jul 24
Overall Avg Conc: 0.248 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	24-Jul	07:21:14	0.133	36	24-Jul	07:56:14	1.304
2	24-Jul	07:22:14	0.09	37	24-Jul	07:57:14	0.085
3	24-Jul	07:23:14	0.227	38	24-Jul	07:58:14	0.038
4	24-Jul	07:24:14	0.184	39	24-Jul	07:59:14	0.139
5	24-Jul	07:25:14	0.192	40	24-Jul	08:00:14	0.057
6	24-Jul	07:26:14	0.22	41	24-Jul	08:01:14	0.03
7	24-Jul	07:27:14	0.158	42	24-Jul	08:02:14	0.111
8	24-Jul	07:28:14	0.412	43	24-Jul	08:03:14	0.114
9	24-Jul	07:29:14	0.186	44	24-Jul	08:04:14	0.093
10	24-Jul	07:30:14	0.105	45	24-Jul	08:05:14	0.12
11	24-Jul	07:31:14	0.12	46	24-Jul	08:06:14	0.087
12	24-Jul	07:32:14	0.126	47	24-Jul	08:07:14	0.028
13	24-Jul	07:33:14	0.301	48	24-Jul	08:08:14	0.215
14	24-Jul	07:34:14	0.344	49	24-Jul	08:09:14	0.173
15	24-Jul	07:35:14	0.38	50	24-Jul	08:10:14	0.09
16	24-Jul	07:36:14	0.328	51	24-Jul	08:11:14	0.245
17	24-Jul	07:37:14	2.583	52	24-Jul	08:12:14	0.344
18	24-Jul	07:38:14	3.662	53	24-Jul	08:13:14	0.214
19	24-Jul	07:39:14	0.308	54	24-Jul	08:14:14	0.325
20	24-Jul	07:40:14	0.733	55	24-Jul	08:15:14	0.134
21	24-Jul	07:41:14	0.407	56	24-Jul	08:16:14	0.103
22	24-Jul	07:42:14	0.141	57	24-Jul	08:17:14	0.109
23	24-Jul	07:43:14	0.344	58	24-Jul	08:18:14	0.294
24	24-Jul	07:44:14	0.138	59	24-Jul	08:19:14	0.17
25	24-Jul	07:45:14	0.131	60	24-Jul	08:20:14	0.232
26	24-Jul	07:46:14	0.148	61	24-Jul	08:21:14	0.107
27	24-Jul	07:47:14	0.04	62	24-Jul	08:22:14	0.187
28	24-Jul	07:48:14	0.023	63	24-Jul	08:23:14	0.181
29	24-Jul	07:49:14	0.094	64	24-Jul	08:24:14	0.202
30	24-Jul	07:50:14	0.101	65	24-Jul	08:25:14	0.605
31	24-Jul	07:51:14	0.185	66	24-Jul	08:26:14	0.178
32	24-Jul	07:52:14	0.429	67	24-Jul	08:27:14	0.304
33	24-Jul	07:53:14	0.579	68	24-Jul	08:28:14	0.129
34	24-Jul	07:54:14	0.741	69	24-Jul	08:29:14	0.167
35	24-Jul	07:55:14	2.797	70	24-Jul	08:30:14	0.083

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
71	24-Jul	08:31:14	0.2	120	24-Jul	09:20:14	0.114
72	24-Jul	08:32:14	0.106	121	24-Jul	09:21:14	0.113
73	24-Jul	08:33:14	0.027	122	24-Jul	09:22:14	0.021
74	24-Jul	08:34:14	0.066	123	24-Jul	09:23:14	0.124
75	24-Jul	08:35:14	0.057	124	24-Jul	09:24:14	0.13
76	24-Jul	08:36:14	0.019	125	24-Jul	09:25:14	0.022
77	24-Jul	08:37:14	0.039	126	24-Jul	09:26:14	0.058
78	24-Jul	08:38:14	0.078	127	24-Jul	09:27:14	0.432
79	24-Jul	08:39:14	0.03	128	24-Jul	09:28:14	0.94
80	24-Jul	08:40:14	0.063	129	24-Jul	09:29:14	0.1
81	24-Jul	08:41:14	0.036	130	24-Jul	09:30:14	0.027
82	24-Jul	08:42:14	0.21	131	24-Jul	09:31:14	0.096
83	24-Jul	08:43:14	0.103	132	24-Jul	09:32:14	0.119
84	24-Jul	08:44:14	0.047	133	24-Jul	09:33:14	0.044
85	24-Jul	08:45:14	0.267	134	24-Jul	09:34:14	0.142
86	24-Jul	08:46:14	0.06	135	24-Jul	09:35:14	0.026
87	24-Jul	08:47:14	0.049	136	24-Jul	09:36:14	0.174
88	24-Jul	08:48:14	0.054	137	24-Jul	09:37:14	0.161
89	24-Jul	08:49:14	0.032	138	24-Jul	09:38:14	0.128
90	24-Jul	08:50:14	0.207	139	24-Jul	09:39:14	0.124
91	24-Jul	08:51:14	0.17	140	24-Jul	09:40:14	1.508
92	24-Jul	08:52:14	0.076	141	24-Jul	09:41:14	0.114
93	24-Jul	08:53:14	0.061	142	24-Jul	09:42:14	0.523
94	24-Jul	08:54:14	0.023	143	24-Jul	09:43:14	0.202
95	24-Jul	08:55:14	0.027	144	24-Jul	09:44:14	0.682
96	24-Jul	08:56:14	0.022	145	24-Jul	09:45:14	0.225
97	24-Jul	08:57:14	0.16	146	24-Jul	09:46:14	0.29
98	24-Jul	08:58:14	0.051	147	24-Jul	09:47:14	0.493
99	24-Jul	08:59:14	0.036	148	24-Jul	09:48:14	0.43
100	24-Jul	09:00:14	0.033	149	24-Jul	09:49:14	0.097
101	24-Jul	09:01:14	0.046	150	24-Jul	09:50:14	0.039
102	24-Jul	09:02:14	0.239	151	24-Jul	09:51:14	0.174
103	24-Jul	09:03:14	0.067	152	24-Jul	09:52:14	0.063
104	24-Jul	09:04:14	0.048	153	24-Jul	09:53:14	0.055
105	24-Jul	09:05:14	0.054	154	24-Jul	09:54:14	0.136
106	24-Jul	09:06:14	0.024	155	24-Jul	09:55:14	0.046
107	24-Jul	09:07:14	0.036	156	24-Jul	09:56:14	0.038
108	24-Jul	09:08:14	0.032	157	24-Jul	09:57:14	0.053
109	24-Jul	09:09:14	0.156	158	24-Jul	09:58:14	0.081
110	24-Jul	09:10:14	0.059	159	24-Jul	09:59:14	0.072
111	24-Jul	09:11:14	0.063	160	24-Jul	10:00:14	0.249
112	24-Jul	09:12:14	0.151	161	24-Jul	10:01:14	0.027
113	24-Jul	09:13:14	0.205	162	24-Jul	10:02:14	0.026
114	24-Jul	09:14:14	0.291	163	24-Jul	10:03:14	0.036
115	24-Jul	09:15:14	0.127	164	24-Jul	10:04:14	0.04
116	24-Jul	09:16:14	0.133	165	24-Jul	10:05:14	0.092
117	24-Jul	09:17:14	0.031	166	24-Jul	10:06:14	0.136
118	24-Jul	09:18:14	0.087	167	24-Jul	10:07:14	0.129
119	24-Jul	09:19:14	0.051	168	24-Jul	10:08:14	0.076

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
169	24-Jul	10:09:14	0.104	218	24-Jul	10:58:14	0.209
170	24-Jul	10:10:14	0.12	219	24-Jul	10:59:14	0.19
171	24-Jul	10:11:14	0.044	220	24-Jul	11:00:14	0.08
172	24-Jul	10:12:14	0.184	221	24-Jul	11:01:14	0.233
173	24-Jul	10:13:14	0.154	222	24-Jul	11:02:14	0.2
174	24-Jul	10:14:14	0.312	223	24-Jul	11:03:14	0.079
175	24-Jul	10:15:14	0.153	224	24-Jul	11:04:14	0.074
176	24-Jul	10:16:14	0.066	225	24-Jul	11:05:14	0.086
177	24-Jul	10:17:14	0.043	226	24-Jul	11:06:14	1.344
178	24-Jul	10:18:14	0.042	227	24-Jul	11:07:14	1.673
179	24-Jul	10:19:14	0.145	228	24-Jul	11:08:14	0.66
180	24-Jul	10:20:14	0.063	229	24-Jul	11:09:14	0.101
181	24-Jul	10:21:14	0.041	230	24-Jul	11:10:14	0.022
182	24-Jul	10:22:14	0.091	231	24-Jul	11:11:14	0.125
183	24-Jul	10:23:14	0.17	232	24-Jul	11:12:14	0.13
184	24-Jul	10:24:14	0.058	233	24-Jul	11:13:14	0.31
185	24-Jul	10:25:14	0.105	234	24-Jul	11:14:14	0.34
186	24-Jul	10:26:14	0.034	235	24-Jul	11:15:14	0.043
187	24-Jul	10:27:14	0.095	236	24-Jul	11:16:14	0.518
188	24-Jul	10:28:14	0.23	237	24-Jul	11:17:14	0.189
189	24-Jul	10:29:14	0.035	238	24-Jul	11:18:14	0.07
190	24-Jul	10:30:14	0.025	239	24-Jul	11:19:14	0.582
191	24-Jul	10:31:14	0.02	240	24-Jul	11:20:14	0.105
192	24-Jul	10:32:14	0.055	241	24-Jul	11:21:14	0.355
193	24-Jul	10:33:14	0.021	242	24-Jul	11:22:14	0.058
194	24-Jul	10:34:14	0.094	243	24-Jul	11:23:14	0.124
195	24-Jul	10:35:14	0.03	244	24-Jul	11:24:14	0.399
196	24-Jul	10:36:14	0.17	245	24-Jul	11:25:14	0.03
197	24-Jul	10:37:14	0.119	246	24-Jul	11:26:14	0.285
198	24-Jul	10:38:14	0.085	247	24-Jul	11:27:14	0.412
199	24-Jul	10:39:14	0.03	248	24-Jul	11:28:14	0.072
200	24-Jul	10:40:14	0.031	249	24-Jul	11:29:14	0.07
201	24-Jul	10:41:14	0.041	250	24-Jul	11:30:14	0.474
202	24-Jul	10:42:14	0.091	251	24-Jul	11:31:14	0.365
203	24-Jul	10:43:14	0.473	252	24-Jul	11:32:14	0.462
204	24-Jul	10:44:14	0.472	253	24-Jul	11:33:14	1.023
205	24-Jul	10:45:14	0.164	254	24-Jul	11:34:14	0.722
206	24-Jul	10:46:14	0.11	255	24-Jul	11:35:14	0.233
207	24-Jul	10:47:14	0.136	256	24-Jul	11:36:14	0.067
208	24-Jul	10:48:14	0.038	257	24-Jul	11:37:14	0.035
209	24-Jul	10:49:14	0.187	258	24-Jul	11:38:14	0.021
210	24-Jul	10:50:14	0.174	259	24-Jul	11:39:14	0.077
211	24-Jul	10:51:14	0.274	260	24-Jul	11:40:14	0.348
212	24-Jul	10:52:14	0.641	261	24-Jul	11:41:14	0.645
213	24-Jul	10:53:14	0.02	262	24-Jul	11:42:14	0.968
214	24-Jul	10:54:14	0.113	263	24-Jul	11:43:14	0.281
215	24-Jul	10:55:14	0.232	264	24-Jul	11:44:14	0.462
216	24-Jul	10:56:14	0.248	265	24-Jul	11:45:14	0.237
217	24-Jul	10:57:14	0.069	266	24-Jul	11:46:14	0.28

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
267	24-Jul	11:47:14	0.297	316	24-Jul	12:36:14	0.227
268	24-Jul	11:48:14	0.123	317	24-Jul	12:37:14	0.248
269	24-Jul	11:49:14	0.341	318	24-Jul	12:38:14	0.233
270	24-Jul	11:50:14	0.715	319	24-Jul	12:39:14	0.277
271	24-Jul	11:51:14	0.217	320	24-Jul	12:40:14	0.111
272	24-Jul	11:52:14	0.114	321	24-Jul	12:41:14	0.078
273	24-Jul	11:53:14	0.476	322	24-Jul	12:42:14	0.274
274	24-Jul	11:54:14	0.054	323	24-Jul	12:43:14	0.324
275	24-Jul	11:55:14	0.029	324	24-Jul	12:44:14	0.574
276	24-Jul	11:56:14	0.029	325	24-Jul	12:45:14	0.38
277	24-Jul	11:57:14	0.029	326	24-Jul	12:46:14	0.746
278	24-Jul	11:58:14	0.031	327	24-Jul	12:47:14	0.064
279	24-Jul	11:59:14	0.031	328	24-Jul	12:48:14	0.146
280	24-Jul	12:00:14	0.065	329	24-Jul	12:49:14	0.104
281	24-Jul	12:01:14	0.058	330	24-Jul	12:50:14	0.109
282	24-Jul	12:02:14	0.031	331	24-Jul	12:51:14	0.365
283	24-Jul	12:03:14	0.033	332	24-Jul	12:52:14	0.247
284	24-Jul	12:04:14	0.031	333	24-Jul	12:53:14	0.193
285	24-Jul	12:05:14	0.028	334	24-Jul	12:54:14	0.117
286	24-Jul	12:06:14	0.03	335	24-Jul	12:55:14	0.078
287	24-Jul	12:07:14	0.028	336	24-Jul	12:56:14	0.207
288	24-Jul	12:08:14	0.031	337	24-Jul	12:57:14	0.267
289	24-Jul	12:09:14	0.028	338	24-Jul	12:58:14	1.081
290	24-Jul	12:10:14	0.026	339	24-Jul	12:59:14	0.169
291	24-Jul	12:11:14	0.029	340	24-Jul	13:00:14	0.135
292	24-Jul	12:12:14	0.031	341	24-Jul	13:01:14	1.572
293	24-Jul	12:13:14	0.029	342	24-Jul	13:02:14	0.144
294	24-Jul	12:14:14	0.033	343	24-Jul	13:03:14	0.063
295	24-Jul	12:15:14	0.027	344	24-Jul	13:04:14	0.285
296	24-Jul	12:16:14	0.029	345	24-Jul	13:05:14	0.247
297	24-Jul	12:17:14	0.026	346	24-Jul	13:06:14	0.776
298	24-Jul	12:18:14	0.028	347	24-Jul	13:07:14	0.176
299	24-Jul	12:19:14	0.026	348	24-Jul	13:08:14	0.303
300	24-Jul	12:20:14	0.025	349	24-Jul	13:09:14	0.243
301	24-Jul	12:21:14	0.025	350	24-Jul	13:10:14	1.273
302	24-Jul	12:22:14	0.026	351	24-Jul	13:11:14	0.161
303	24-Jul	12:23:14	0.025	352	24-Jul	13:12:14	0.096
304	24-Jul	12:24:14	0.025	353	24-Jul	13:13:14	0.225
305	24-Jul	12:25:14	0.033	354	24-Jul	13:14:14	0.877
306	24-Jul	12:26:14	0.027	355	24-Jul	13:15:14	0.477
307	24-Jul	12:27:14	0.032	356	24-Jul	13:16:14	0.169
308	24-Jul	12:28:14	0.027	357	24-Jul	13:17:14	0.319
309	24-Jul	12:29:14	0.029	358	24-Jul	13:18:14	0.107
310	24-Jul	12:30:14	0.026	359	24-Jul	13:19:14	0.627
311	24-Jul	12:31:14	0.179	360	24-Jul	13:20:14	0.438
312	24-Jul	12:32:14	0.148	361	24-Jul	13:21:14	0.206
313	24-Jul	12:33:14	0.209	362	24-Jul	13:22:14	0.148
314	24-Jul	12:34:14	0.15	363	24-Jul	13:23:14	0.313
315	24-Jul	12:35:14	0.151	364	24-Jul	13:24:14	0.077

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
365	24-Jul	13:25:14	0.064	414	24-Jul	14:14:14	0.11
366	24-Jul	13:26:14	0.511	415	24-Jul	14:15:14	0.191
367	24-Jul	13:27:14	0.262	416	24-Jul	14:16:14	0.047
368	24-Jul	13:28:14	0.085	417	24-Jul	14:17:14	0.044
369	24-Jul	13:29:14	0.238	418	24-Jul	14:18:14	0.857
370	24-Jul	13:30:14	0.23	419	24-Jul	14:19:14	0.158
371	24-Jul	13:31:14	1.927	420	24-Jul	14:20:14	0.059
372	24-Jul	13:32:14	0.077	421	24-Jul	14:21:14	0.046
373	24-Jul	13:33:14	0.073	422	24-Jul	14:22:14	0.08
374	24-Jul	13:34:14	0.137	423	24-Jul	14:23:14	0.193
375	24-Jul	13:35:14	0.138	424	24-Jul	14:24:14	0.559
376	24-Jul	13:36:14	0.066	425	24-Jul	14:25:14	0.112
377	24-Jul	13:37:14	0.172	426	24-Jul	14:26:14	1.265
378	24-Jul	13:38:14	0.409	427	24-Jul	14:27:14	2.496
379	24-Jul	13:39:14	0.43	428	24-Jul	14:28:14	0.133
380	24-Jul	13:40:14	0.196	429	24-Jul	14:29:14	0.14
381	24-Jul	13:41:14	0.243	430	24-Jul	14:30:14	0.026
382	24-Jul	13:42:14	0.054	431	24-Jul	14:31:14	0.026
383	24-Jul	13:43:14	0.081	432	24-Jul	14:32:14	0.025
384	24-Jul	13:44:14	0.216	433	24-Jul	14:33:14	0.025
385	24-Jul	13:45:14	0.176	434	24-Jul	14:34:14	0.025
386	24-Jul	13:46:14	0.263	435	24-Jul	14:35:14	0.025
387	24-Jul	13:47:14	0.137	436	24-Jul	14:36:14	0.025
388	24-Jul	13:48:14	0.151	437	24-Jul	14:37:14	0.047
389	24-Jul	13:49:14	0.267	438	24-Jul	14:38:14	0.026
390	24-Jul	13:50:14	0.167	439	24-Jul	14:39:14	0.025
391	24-Jul	13:51:14	0.177	440	24-Jul	14:40:14	0.025
392	24-Jul	13:52:14	0.137	441	24-Jul	14:41:14	0.025
393	24-Jul	13:53:14	0.084	442	24-Jul	14:42:14	0.028
394	24-Jul	13:54:14	0.093	443	24-Jul	14:43:14	0.114
395	24-Jul	13:55:14	0.149	444	24-Jul	14:44:14	0.031
396	24-Jul	13:56:14	0.114	445	24-Jul	14:45:14	0.041
397	24-Jul	13:57:14	0.408	446	24-Jul	14:46:14	0.042
398	24-Jul	13:58:14	0.047	447	24-Jul	14:47:14	0.039
399	24-Jul	13:59:14	0.04	448	24-Jul	14:48:14	0.039
400	24-Jul	14:00:14	0.039	449	24-Jul	14:49:14	0.059
401	24-Jul	14:01:14	0.029	450	24-Jul	14:50:14	0.028
402	24-Jul	14:02:14	0.074	451	24-Jul	14:51:14	0.024
403	24-Jul	14:03:14	0.237	452	24-Jul	14:52:14	0.125
404	24-Jul	14:04:14	0.223	453	24-Jul	14:53:14	0.258
405	24-Jul	14:05:14	0.24	454	24-Jul	14:54:14	3.338
406	24-Jul	14:06:14	0.072	455	24-Jul	14:55:14	0.226
407	24-Jul	14:07:14	0.071	456	24-Jul	14:56:14	0.091
408	24-Jul	14:08:14	0.057	457	24-Jul	14:57:14	0.141
409	24-Jul	14:09:14	0.031	458	24-Jul	14:58:14	0.423
410	24-Jul	14:10:14	0.026	459	24-Jul	14:59:14	0.187
411	24-Jul	14:11:14	0.025	460	24-Jul	15:00:14	0.427
412	24-Jul	14:12:14	0.026	461	24-Jul	15:01:14	0.197
413	24-Jul	14:13:14	0.027	462	24-Jul	15:02:14	0.66

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
463	24-Jul	15:03:14	0.156	512	24-Jul	15:52:14	0.461
464	24-Jul	15:04:14	0.176	513	24-Jul	15:53:14	0.324
465	24-Jul	15:05:14	0.431	514	24-Jul	15:54:14	0.143
466	24-Jul	15:06:14	0.577	515	24-Jul	15:55:14	0.059
467	24-Jul	15:07:14	0.49	516	24-Jul	15:56:14	0.115
468	24-Jul	15:08:14	0.202	517	24-Jul	15:57:14	0.451
469	24-Jul	15:09:14	0.146	518	24-Jul	15:58:14	0.344
470	24-Jul	15:10:14	1.084	519	24-Jul	15:59:14	0.175
471	24-Jul	15:11:14	0.994	520	24-Jul	16:00:14	0.06
472	24-Jul	15:12:14	0.461	521	24-Jul	16:01:14	0.076
473	24-Jul	15:13:14	0.287	522	24-Jul	16:02:14	0.056
474	24-Jul	15:14:14	0.402	523	24-Jul	16:03:14	0.05
475	24-Jul	15:15:14	0.232	524	24-Jul	16:04:14	0.101
476	24-Jul	15:16:14	1.129	525	24-Jul	16:05:14	0.06
477	24-Jul	15:17:14	0.191	526	24-Jul	16:06:14	0.11
478	24-Jul	15:18:14	0.06	527	24-Jul	16:07:14	0.271
479	24-Jul	15:19:14	0.055	528	24-Jul	16:08:14	0.446
480	24-Jul	15:20:14	0.092	529	24-Jul	16:09:14	0.214
481	24-Jul	15:21:14	0.072	530	24-Jul	16:10:14	1.979
482	24-Jul	15:22:14	0.42	531	24-Jul	16:11:14	0.113
483	24-Jul	15:23:14	0.123	532	24-Jul	16:12:14	0.106
484	24-Jul	15:24:14	0.122	533	24-Jul	16:13:14	0.266
485	24-Jul	15:25:14	0.329	534	24-Jul	16:14:14	0.416
486	24-Jul	15:26:14	0.177	535	24-Jul	16:15:14	0.384
487	24-Jul	15:27:14	0.542	536	24-Jul	16:16:14	0.438
488	24-Jul	15:28:14	0.06	537	24-Jul	16:17:14	0.095
489	24-Jul	15:29:14	0.047	538	24-Jul	16:18:14	0.17
490	24-Jul	15:30:14	0.075	539	24-Jul	16:19:14	0.208
491	24-Jul	15:31:14	0.103	540	24-Jul	16:20:14	0.183
492	24-Jul	15:32:14	0.22	541	24-Jul	16:21:14	0.179
493	24-Jul	15:33:14	0.118	542	24-Jul	16:22:14	0.125
494	24-Jul	15:34:14	0.205	543	24-Jul	16:23:14	0.22
495	24-Jul	15:35:14	0.106	544	24-Jul	16:24:14	0.188
496	24-Jul	15:36:14	0.298	545	24-Jul	16:25:14	0.19
497	24-Jul	15:37:14	0.462	546	24-Jul	16:26:14	0.145
498	24-Jul	15:38:14	0.251	547	24-Jul	16:27:14	0.083
499	24-Jul	15:39:14	0.208	548	24-Jul	16:28:14	0.211
500	24-Jul	15:40:14	0.848	549	24-Jul	16:29:14	0.082
501	24-Jul	15:41:14	0.392	550	24-Jul	16:30:14	0.146
502	24-Jul	15:42:14	0.275	551	24-Jul	16:31:14	0.23
503	24-Jul	15:43:14	0.704	552	24-Jul	16:32:14	0.297
504	24-Jul	15:44:14	0.334	553	24-Jul	16:33:14	0.196
505	24-Jul	15:45:14	0.362	554	24-Jul	16:34:14	1.142
506	24-Jul	15:46:14	0.353	555	24-Jul	16:35:14	0.107
507	24-Jul	15:47:14	0.314	556	24-Jul	16:36:14	0.133
508	24-Jul	15:48:14	0.181	557	24-Jul	16:37:14	0.127
509	24-Jul	15:49:14	0.207	558	24-Jul	16:38:14	0.734
510	24-Jul	15:50:14	0.475	559	24-Jul	16:39:14	0.317
511	24-Jul	15:51:14	0.559	560	24-Jul	16:40:14	0.416

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
561	24-Jul	16:41:14	0.572				
562	24-Jul	16:42:14	0.253				
563	24-Jul	16:43:14	1.509				
564	24-Jul	16:44:14	1.601				
565	24-Jul	16:45:14	0.229				
566	24-Jul	16:46:14	0.323				
567	24-Jul	16:47:14	0.046				
568	24-Jul	16:48:14	0.397				
569	24-Jul	16:49:14	0.561				
570	24-Jul	16:50:14	0.461				
571	24-Jul	16:51:14	0.116				
572	24-Jul	16:52:14	0.196				
573	24-Jul	16:53:14	0.139				
574	24-Jul	16:54:14	0.422				
575	24-Jul	16:55:14	0.313				
576	24-Jul	16:56:14	0.131				
577	24-Jul	16:57:14	0.152				
578	24-Jul	16:58:14	0.102				
579	24-Jul	16:59:14	0.354				
580	24-Jul	17:00:14	0.453				
581	24-Jul	17:01:14	0.54				
582	24-Jul	17:02:14	0.303				
583	24-Jul	17:03:14	0.171				
584	24-Jul	17:04:14	0.096				
585	24-Jul	17:05:14	0.269				
586	24-Jul	17:06:14	3.512				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 02
Number of logged points: 586
Start time and date: 07:19:41 24-Jul
Elapsed time: 09:46:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 6.313 mg/m³
Time at maximum: 16:45:09 Jul 24
Max STEL Concentration: 0.908 mg/m³
Time at max STEL: 16:01:42 Jul 24
Overall Avg Conc: 0.332 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	24-Jul	07:20:41	0.354	37	24-Jul	07:56:41	0.245
2	24-Jul	07:21:41	0.287	38	24-Jul	07:57:41	0.301
3	24-Jul	07:22:41	0.261	39	24-Jul	07:58:41	0.246
4	24-Jul	07:23:41	0.845	40	24-Jul	07:59:41	0.247
5	24-Jul	07:24:41	0.36	41	24-Jul	08:00:41	0.247
6	24-Jul	07:25:41	0.264	42	24-Jul	08:01:41	0.246
7	24-Jul	07:26:41	0.279	43	24-Jul	08:02:41	0.246
8	24-Jul	07:27:41	0.408	44	24-Jul	08:03:41	0.25
9	24-Jul	07:28:41	0.567	45	24-Jul	08:04:41	0.248
10	24-Jul	07:29:41	0.352	46	24-Jul	08:05:41	0.25
11	24-Jul	07:30:41	0.485	47	24-Jul	08:06:41	0.248
12	24-Jul	07:31:41	0.296	48	24-Jul	08:07:41	0.249
13	24-Jul	07:32:41	0.314	49	24-Jul	08:08:41	0.247
14	24-Jul	07:33:41	0.345	50	24-Jul	08:09:41	0.248
15	24-Jul	07:34:41	0.316	51	24-Jul	08:10:41	0.25
16	24-Jul	07:35:41	0.288	52	24-Jul	08:11:41	0.247
17	24-Jul	07:36:41	0.301	53	24-Jul	08:12:41	0.247
18	24-Jul	07:37:41	0.296	54	24-Jul	08:13:41	0.276
19	24-Jul	07:38:41	0.294	55	24-Jul	08:14:41	0.318
20	24-Jul	07:39:41	0.292	56	24-Jul	08:15:41	0.259
21	24-Jul	07:40:41	0.284	57	24-Jul	08:16:41	0.249
22	24-Jul	07:41:41	0.269	58	24-Jul	08:17:41	0.252
23	24-Jul	07:42:41	0.273	59	24-Jul	08:18:41	0.253
24	24-Jul	07:43:41	0.413	60	24-Jul	08:19:41	0.252
25	24-Jul	07:44:41	0.287	61	24-Jul	08:20:41	0.252
26	24-Jul	07:45:41	0.272	62	24-Jul	08:21:41	0.252
27	24-Jul	07:46:41	0.25	63	24-Jul	08:22:41	0.252
28	24-Jul	07:47:41	0.248	64	24-Jul	08:23:41	0.252
29	24-Jul	07:48:41	0.248	65	24-Jul	08:24:41	0.251
30	24-Jul	07:49:41	0.313	66	24-Jul	08:25:41	0.251
31	24-Jul	07:50:41	0.254	67	24-Jul	08:26:41	0.252
32	24-Jul	07:51:41	0.246	68	24-Jul	08:27:41	0.249
33	24-Jul	07:52:41	0.248	69	24-Jul	08:28:41	0.251
34	24-Jul	07:53:41	0.25	70	24-Jul	08:29:41	0.253
35	24-Jul	07:54:41	0.244	71	24-Jul	08:30:41	0.252
36	24-Jul	07:55:41	0.245	72	24-Jul	08:31:41	0.251

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
73	24-Jul	08:32:41	0.25	122	24-Jul	09:21:41	0.252
74	24-Jul	08:33:41	0.251	123	24-Jul	09:22:41	0.256
75	24-Jul	08:34:41	0.254	124	24-Jul	09:23:41	0.254
76	24-Jul	08:35:41	0.25	125	24-Jul	09:24:41	0.255
77	24-Jul	08:36:41	0.254	126	24-Jul	09:25:41	0.255
78	24-Jul	08:37:41	0.251	127	24-Jul	09:26:41	0.255
79	24-Jul	08:38:41	0.253	128	24-Jul	09:27:41	0.254
80	24-Jul	08:39:41	0.251	129	24-Jul	09:28:41	0.254
81	24-Jul	08:40:41	0.252	130	24-Jul	09:29:41	0.254
82	24-Jul	08:41:41	0.254	131	24-Jul	09:30:41	0.254
83	24-Jul	08:42:41	0.251	132	24-Jul	09:31:41	0.254
84	24-Jul	08:43:41	0.251	133	24-Jul	09:32:41	0.256
85	24-Jul	08:44:41	0.252	134	24-Jul	09:33:41	0.255
86	24-Jul	08:45:41	0.256	135	24-Jul	09:34:41	0.255
87	24-Jul	08:46:41	0.263	136	24-Jul	09:35:41	0.255
88	24-Jul	08:47:41	0.253	137	24-Jul	09:36:41	0.255
89	24-Jul	08:48:41	0.253	138	24-Jul	09:37:41	0.256
90	24-Jul	08:49:41	0.254	139	24-Jul	09:38:41	0.255
91	24-Jul	08:50:41	0.251	140	24-Jul	09:39:41	0.257
92	24-Jul	08:51:41	0.256	141	24-Jul	09:40:41	0.255
93	24-Jul	08:52:41	0.252	142	24-Jul	09:41:41	0.257
94	24-Jul	08:53:41	0.259	143	24-Jul	09:42:41	0.261
95	24-Jul	08:54:41	0.253	144	24-Jul	09:43:41	0.257
96	24-Jul	08:55:41	0.257	145	24-Jul	09:44:41	0.256
97	24-Jul	08:56:41	0.253	146	24-Jul	09:45:41	0.257
98	24-Jul	08:57:41	0.254	147	24-Jul	09:46:41	0.256
99	24-Jul	08:58:41	0.253	148	24-Jul	09:47:41	0.26
100	24-Jul	08:59:41	0.253	149	24-Jul	09:48:41	0.26
101	24-Jul	09:00:41	0.253	150	24-Jul	09:49:41	0.266
102	24-Jul	09:01:41	0.254	151	24-Jul	09:50:41	0.449
103	24-Jul	09:02:41	0.259	152	24-Jul	09:51:41	0.262
104	24-Jul	09:03:41	0.253	153	24-Jul	09:52:41	0.258
105	24-Jul	09:04:41	0.252	154	24-Jul	09:53:41	0.261
106	24-Jul	09:05:41	0.254	155	24-Jul	09:54:41	0.322
107	24-Jul	09:06:41	0.252	156	24-Jul	09:55:41	0.522
108	24-Jul	09:07:41	0.253	157	24-Jul	09:56:41	0.264
109	24-Jul	09:08:41	0.254	158	24-Jul	09:57:41	0.257
110	24-Jul	09:09:41	0.254	159	24-Jul	09:58:41	0.257
111	24-Jul	09:10:41	0.254	160	24-Jul	09:59:41	0.258
112	24-Jul	09:11:41	0.253	161	24-Jul	10:00:41	0.257
113	24-Jul	09:12:41	0.255	162	24-Jul	10:01:41	0.258
114	24-Jul	09:13:41	0.254	163	24-Jul	10:02:41	0.449
115	24-Jul	09:14:41	0.254	164	24-Jul	10:03:41	0.403
116	24-Jul	09:15:41	0.253	165	24-Jul	10:04:41	0.305
117	24-Jul	09:16:41	0.254	166	24-Jul	10:05:41	0.26
118	24-Jul	09:17:41	0.253	167	24-Jul	10:06:41	0.258
119	24-Jul	09:18:41	0.253	168	24-Jul	10:07:41	0.257
120	24-Jul	09:19:41	0.252	169	24-Jul	10:08:41	0.258
121	24-Jul	09:20:41	0.252	170	24-Jul	10:09:41	0.256

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
171	24-Jul	10:10:41	0.257	220	24-Jul	10:59:41	0.447
172	24-Jul	10:11:41	0.257	221	24-Jul	11:00:41	0.311
173	24-Jul	10:12:41	0.258	222	24-Jul	11:01:41	0.269
174	24-Jul	10:13:41	0.259	223	24-Jul	11:02:41	0.26
175	24-Jul	10:14:41	0.258	224	24-Jul	11:03:41	0.263
176	24-Jul	10:15:41	0.259	225	24-Jul	11:04:41	0.348
177	24-Jul	10:16:41	0.257	226	24-Jul	11:05:41	0.259
178	24-Jul	10:17:41	0.274	227	24-Jul	11:06:41	0.258
179	24-Jul	10:18:41	0.268	228	24-Jul	11:07:41	0.259
180	24-Jul	10:19:41	0.263	229	24-Jul	11:08:41	0.258
181	24-Jul	10:20:41	0.258	230	24-Jul	11:09:41	0.263
182	24-Jul	10:21:41	0.257	231	24-Jul	11:10:41	0.259
183	24-Jul	10:22:41	0.26	232	24-Jul	11:11:41	0.258
184	24-Jul	10:23:41	0.257	233	24-Jul	11:12:41	0.265
185	24-Jul	10:24:41	0.256	234	24-Jul	11:13:41	0.275
186	24-Jul	10:25:41	0.26	235	24-Jul	11:14:41	0.293
187	24-Jul	10:26:41	0.257	236	24-Jul	11:15:41	0.301
188	24-Jul	10:27:41	0.256	237	24-Jul	11:16:41	0.263
189	24-Jul	10:28:41	0.256	238	24-Jul	11:17:41	0.26
190	24-Jul	10:29:41	0.257	239	24-Jul	11:18:41	0.512
191	24-Jul	10:30:41	0.259	240	24-Jul	11:19:41	0.896
192	24-Jul	10:31:41	0.258	241	24-Jul	11:20:41	0.621
193	24-Jul	10:32:41	0.258	242	24-Jul	11:21:41	0.74
194	24-Jul	10:33:41	0.259	243	24-Jul	11:22:41	0.442
195	24-Jul	10:34:41	0.257	244	24-Jul	11:23:41	0.295
196	24-Jul	10:35:41	0.258	245	24-Jul	11:24:41	0.368
197	24-Jul	10:36:41	0.259	246	24-Jul	11:25:41	0.272
198	24-Jul	10:37:41	0.257	247	24-Jul	11:26:41	0.258
199	24-Jul	10:38:41	0.257	248	24-Jul	11:27:41	0.257
200	24-Jul	10:39:41	0.258	249	24-Jul	11:28:41	0.256
201	24-Jul	10:40:41	0.26	250	24-Jul	11:29:41	0.308
202	24-Jul	10:41:41	0.258	251	24-Jul	11:30:41	0.29
203	24-Jul	10:42:41	0.283	252	24-Jul	11:31:41	0.294
204	24-Jul	10:43:41	0.31	253	24-Jul	11:32:41	0.273
205	24-Jul	10:44:41	0.433	254	24-Jul	11:33:41	0.269
206	24-Jul	10:45:41	1.296	255	24-Jul	11:34:41	0.257
207	24-Jul	10:46:41	1.295	256	24-Jul	11:35:41	0.255
208	24-Jul	10:47:41	0.356	257	24-Jul	11:36:41	0.259
209	24-Jul	10:48:41	0.305	258	24-Jul	11:37:41	0.259
210	24-Jul	10:49:41	0.353	259	24-Jul	11:38:41	0.259
211	24-Jul	10:50:41	0.359	260	24-Jul	11:39:41	0.256
212	24-Jul	10:51:41	0.356	261	24-Jul	11:40:41	0.258
213	24-Jul	10:52:41	0.373	262	24-Jul	11:41:41	0.257
214	24-Jul	10:53:41	1.106	263	24-Jul	11:42:41	0.26
215	24-Jul	10:54:41	1.007	264	24-Jul	11:43:41	0.26
216	24-Jul	10:55:41	0.489	265	24-Jul	11:44:41	0.256
217	24-Jul	10:56:41	0.306	266	24-Jul	11:45:41	0.258
218	24-Jul	10:57:41	0.29	267	24-Jul	11:46:41	0.255
219	24-Jul	10:58:41	0.481	268	24-Jul	11:47:41	0.256

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
269	24-Jul	11:48:41	0.257	318	24-Jul	12:37:41	0.252
270	24-Jul	11:49:41	0.256	319	24-Jul	12:38:41	0.253
271	24-Jul	11:50:41	0.257	320	24-Jul	12:39:41	0.252
272	24-Jul	11:51:41	0.257	321	24-Jul	12:40:41	0.252
273	24-Jul	11:52:41	0.26	322	24-Jul	12:41:41	0.253
274	24-Jul	11:53:41	0.255	323	24-Jul	12:42:41	0.253
275	24-Jul	11:54:41	0.258	324	24-Jul	12:43:41	0.251
276	24-Jul	11:55:41	0.26	325	24-Jul	12:44:41	0.25
277	24-Jul	11:56:41	0.258	326	24-Jul	12:45:41	0.251
278	24-Jul	11:57:41	0.257	327	24-Jul	12:46:41	0.25
279	24-Jul	11:58:41	0.258	328	24-Jul	12:47:41	0.25
280	24-Jul	11:59:41	0.254	329	24-Jul	12:48:41	0.252
281	24-Jul	12:00:41	0.257	330	24-Jul	12:49:41	0.253
282	24-Jul	12:01:41	0.255	331	24-Jul	12:50:41	0.251
283	24-Jul	12:02:41	0.255	332	24-Jul	12:51:41	0.406
284	24-Jul	12:03:41	0.253	333	24-Jul	12:52:41	0.252
285	24-Jul	12:04:41	0.254	334	24-Jul	12:53:41	0.251
286	24-Jul	12:05:41	0.258	335	24-Jul	12:54:41	0.254
287	24-Jul	12:06:41	0.253	336	24-Jul	12:55:41	0.253
288	24-Jul	12:07:41	0.253	337	24-Jul	12:56:41	0.255
289	24-Jul	12:08:41	0.251	338	24-Jul	12:57:41	0.253
290	24-Jul	12:09:41	0.253	339	24-Jul	12:58:41	0.254
291	24-Jul	12:10:41	0.252	340	24-Jul	12:59:41	0.251
292	24-Jul	12:11:41	0.253	341	24-Jul	13:00:41	0.258
293	24-Jul	12:12:41	0.248	342	24-Jul	13:01:41	0.253
294	24-Jul	12:13:41	0.249	343	24-Jul	13:02:41	0.252
295	24-Jul	12:14:41	0.251	344	24-Jul	13:03:41	0.252
296	24-Jul	12:15:41	0.251	345	24-Jul	13:04:41	0.255
297	24-Jul	12:16:41	0.252	346	24-Jul	13:05:41	0.256
298	24-Jul	12:17:41	0.251	347	24-Jul	13:06:41	0.258
299	24-Jul	12:18:41	0.251	348	24-Jul	13:07:41	0.264
300	24-Jul	12:19:41	0.254	349	24-Jul	13:08:41	0.251
301	24-Jul	12:20:41	0.25	350	24-Jul	13:09:41	0.251
302	24-Jul	12:21:41	0.25	351	24-Jul	13:10:41	0.256
303	24-Jul	12:22:41	0.25	352	24-Jul	13:11:41	0.26
304	24-Jul	12:23:41	0.251	353	24-Jul	13:12:41	0.252
305	24-Jul	12:24:41	0.251	354	24-Jul	13:13:41	0.252
306	24-Jul	12:25:41	0.252	355	24-Jul	13:14:41	0.253
307	24-Jul	12:26:41	0.251	356	24-Jul	13:15:41	0.255
308	24-Jul	12:27:41	0.254	357	24-Jul	13:16:41	0.25
309	24-Jul	12:28:41	0.253	358	24-Jul	13:17:41	0.251
310	24-Jul	12:29:41	0.253	359	24-Jul	13:18:41	0.258
311	24-Jul	12:30:41	0.25	360	24-Jul	13:19:41	0.254
312	24-Jul	12:31:41	0.251	361	24-Jul	13:20:41	0.255
313	24-Jul	12:32:41	0.252	362	24-Jul	13:21:41	0.251
314	24-Jul	12:33:41	0.252	363	24-Jul	13:22:41	0.252
315	24-Jul	12:34:41	0.25	364	24-Jul	13:23:41	0.251
316	24-Jul	12:35:41	0.255	365	24-Jul	13:24:41	0.249
317	24-Jul	12:36:41	0.252	366	24-Jul	13:25:41	0.25

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
367	24-Jul	13:26:41	0.255	416	24-Jul	14:15:41	0.247
368	24-Jul	13:27:41	0.25	417	24-Jul	14:16:41	0.247
369	24-Jul	13:28:41	0.25	418	24-Jul	14:17:41	0.248
370	24-Jul	13:29:41	0.25	419	24-Jul	14:18:41	0.245
371	24-Jul	13:30:41	0.271	420	24-Jul	14:19:41	0.263
372	24-Jul	13:31:41	0.252	421	24-Jul	14:20:41	0.419
373	24-Jul	13:32:41	0.25	422	24-Jul	14:21:41	0.394
374	24-Jul	13:33:41	0.251	423	24-Jul	14:22:41	0.276
375	24-Jul	13:34:41	0.251	424	24-Jul	14:23:41	0.302
376	24-Jul	13:35:41	0.252	425	24-Jul	14:24:41	0.268
377	24-Jul	13:36:41	0.25	426	24-Jul	14:25:41	0.251
378	24-Jul	13:37:41	0.251	427	24-Jul	14:26:41	0.25
379	24-Jul	13:38:41	0.255	428	24-Jul	14:27:41	0.246
380	24-Jul	13:39:41	0.251	429	24-Jul	14:28:41	0.247
381	24-Jul	13:40:41	0.249	430	24-Jul	14:29:41	0.248
382	24-Jul	13:41:41	0.25	431	24-Jul	14:30:41	0.255
383	24-Jul	13:42:41	0.25	432	24-Jul	14:31:41	0.458
384	24-Jul	13:43:41	0.252	433	24-Jul	14:32:41	0.28
385	24-Jul	13:44:41	0.251	434	24-Jul	14:33:41	0.283
386	24-Jul	13:45:41	0.251	435	24-Jul	14:34:41	0.253
387	24-Jul	13:46:41	0.252	436	24-Jul	14:35:41	0.25
388	24-Jul	13:47:41	0.252	437	24-Jul	14:36:41	0.295
389	24-Jul	13:48:41	0.253	438	24-Jul	14:37:41	0.25
390	24-Jul	13:49:41	0.251	439	24-Jul	14:38:41	0.251
391	24-Jul	13:50:41	0.41	440	24-Jul	14:39:41	0.272
392	24-Jul	13:51:41	0.516	441	24-Jul	14:40:41	0.278
393	24-Jul	13:52:41	0.312	442	24-Jul	14:41:41	0.247
394	24-Jul	13:53:41	0.266	443	24-Jul	14:42:41	0.249
395	24-Jul	13:54:41	0.252	444	24-Jul	14:43:41	0.248
396	24-Jul	13:55:41	0.25	445	24-Jul	14:44:41	0.249
397	24-Jul	13:56:41	0.255	446	24-Jul	14:45:41	0.253
398	24-Jul	13:57:41	0.249	447	24-Jul	14:46:41	0.257
399	24-Jul	13:58:41	0.267	448	24-Jul	14:47:41	0.251
400	24-Jul	13:59:41	0.318	449	24-Jul	14:48:41	0.26
401	24-Jul	14:00:41	0.251	450	24-Jul	14:49:41	0.248
402	24-Jul	14:01:41	0.254	451	24-Jul	14:50:41	0.263
403	24-Jul	14:02:41	0.317	452	24-Jul	14:51:41	0.302
404	24-Jul	14:03:41	0.25	453	24-Jul	14:52:41	0.271
405	24-Jul	14:04:41	0.247	454	24-Jul	14:53:41	0.262
406	24-Jul	14:05:41	0.299	455	24-Jul	14:54:41	0.298
407	24-Jul	14:06:41	0.268	456	24-Jul	14:55:41	0.337
408	24-Jul	14:07:41	0.251	457	24-Jul	14:56:41	0.344
409	24-Jul	14:08:41	0.247	458	24-Jul	14:57:41	0.266
410	24-Jul	14:09:41	0.248	459	24-Jul	14:58:41	0.289
411	24-Jul	14:10:41	0.249	460	24-Jul	14:59:41	0.252
412	24-Jul	14:11:41	0.248	461	24-Jul	15:00:41	0.293
413	24-Jul	14:12:41	0.247	462	24-Jul	15:01:41	0.365
414	24-Jul	14:13:41	0.266	463	24-Jul	15:02:41	0.254
415	24-Jul	14:14:41	0.248	464	24-Jul	15:03:41	0.263

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
465	24-Jul	15:04:41	0.248	514	24-Jul	15:53:41	2.902
466	24-Jul	15:05:41	0.247	515	24-Jul	15:54:41	0.292
467	24-Jul	15:06:41	0.248	516	24-Jul	15:55:41	0.255
468	24-Jul	15:07:41	0.248	517	24-Jul	15:56:41	0.892
469	24-Jul	15:08:41	0.256	518	24-Jul	15:57:41	0.656
470	24-Jul	15:09:41	0.25	519	24-Jul	15:58:41	0.734
471	24-Jul	15:10:41	0.25	520	24-Jul	15:59:41	0.706
472	24-Jul	15:11:41	0.248	521	24-Jul	16:00:41	1.165
473	24-Jul	15:12:41	0.249	522	24-Jul	16:01:41	0.459
474	24-Jul	15:13:41	0.25	523	24-Jul	16:02:41	0.578
475	24-Jul	15:14:41	0.247	524	24-Jul	16:03:41	1.297
476	24-Jul	15:15:41	0.249	525	24-Jul	16:04:41	0.911
477	24-Jul	15:16:41	0.25	526	24-Jul	16:05:41	0.318
478	24-Jul	15:17:41	0.397	527	24-Jul	16:06:41	0.327
479	24-Jul	15:18:41	0.351	528	24-Jul	16:07:41	0.329
480	24-Jul	15:19:41	0.293	529	24-Jul	16:08:41	0.324
481	24-Jul	15:20:41	0.39	530	24-Jul	16:09:41	0.315
482	24-Jul	15:21:41	0.261	531	24-Jul	16:10:41	0.308
483	24-Jul	15:22:41	0.285	532	24-Jul	16:11:41	0.425
484	24-Jul	15:23:41	0.68	533	24-Jul	16:12:41	0.32
485	24-Jul	15:24:41	0.335	534	24-Jul	16:13:41	1.788
486	24-Jul	15:25:41	0.43	535	24-Jul	16:14:41	0.262
487	24-Jul	15:26:41	0.253	536	24-Jul	16:15:41	0.288
488	24-Jul	15:27:41	0.262	537	24-Jul	16:16:41	0.326
489	24-Jul	15:28:41	0.282	538	24-Jul	16:17:41	0.729
490	24-Jul	15:29:41	0.334	539	24-Jul	16:18:41	0.585
491	24-Jul	15:30:41	0.287	540	24-Jul	16:19:41	1.289
492	24-Jul	15:31:41	0.278	541	24-Jul	16:20:41	0.833
493	24-Jul	15:32:41	0.477	542	24-Jul	16:21:41	0.797
494	24-Jul	15:33:41	0.27	543	24-Jul	16:22:41	0.418
495	24-Jul	15:34:41	0.259	544	24-Jul	16:23:41	0.322
496	24-Jul	15:35:41	0.409	545	24-Jul	16:24:41	0.311
497	24-Jul	15:36:41	0.612	546	24-Jul	16:25:41	0.3
498	24-Jul	15:37:41	0.525	547	24-Jul	16:26:41	0.317
499	24-Jul	15:38:41	0.363	548	24-Jul	16:27:41	0.271
500	24-Jul	15:39:41	0.303	549	24-Jul	16:28:41	0.292
501	24-Jul	15:40:41	0.296	550	24-Jul	16:29:41	0.308
502	24-Jul	15:41:41	0.327	551	24-Jul	16:30:41	0.264
503	24-Jul	15:42:41	0.372	552	24-Jul	16:31:41	0.266
504	24-Jul	15:43:41	0.341	553	24-Jul	16:32:41	0.277
505	24-Jul	15:44:41	0.315	554	24-Jul	16:33:41	0.324
506	24-Jul	15:45:41	0.308	555	24-Jul	16:34:41	0.263
507	24-Jul	15:46:41	0.288	556	24-Jul	16:35:41	0.263
508	24-Jul	15:47:41	0.749	557	24-Jul	16:36:41	0.275
509	24-Jul	15:48:41	1.271	558	24-Jul	16:37:41	0.336
510	24-Jul	15:49:41	1.763	559	24-Jul	16:38:41	0.386
511	24-Jul	15:50:41	0.755	560	24-Jul	16:39:41	2.193
512	24-Jul	15:51:41	0.264	561	24-Jul	16:40:41	0.407
513	24-Jul	15:52:41	0.759	562	24-Jul	16:41:41	0.292

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
563	24-Jul	16:42:41	0.284				
564	24-Jul	16:43:41	0.27				
565	24-Jul	16:44:41	6.22				
566	24-Jul	16:45:41	0.356				
567	24-Jul	16:46:41	0.349				
568	24-Jul	16:47:41	0.284				
569	24-Jul	16:48:41	0.263				
570	24-Jul	16:49:41	0.263				
571	24-Jul	16:50:41	0.271				
572	24-Jul	16:51:41	0.267				
573	24-Jul	16:52:41	0.27				
574	24-Jul	16:53:41	0.394				
575	24-Jul	16:54:41	0.313				
576	24-Jul	16:55:41	0.261				
577	24-Jul	16:56:41	0.26				
578	24-Jul	16:57:41	0.265				
579	24-Jul	16:58:41	0.633				
580	24-Jul	16:59:41	0.911				
581	24-Jul	17:00:41	0.268				
582	24-Jul	17:01:41	0.262				
583	24-Jul	17:02:41	0.266				
584	24-Jul	17:03:41	0.428				
585	24-Jul	17:04:41	1.384				
586	24-Jul	17:05:41	0.669				

July 25, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 05
Number of logged points: 142
Start time and date: 06:50:45 25-Jul
Elapsed time: 02:22:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.779 mg/m³
Time at maximum: 07:18:43 Jul 25
Max STEL Concentration: 0.397 mg/m³
Time at max STEL: 07:29:45 Jul 25
Overall Avg Conc: 0.177 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	25-Jul	06:51:45	0.079	34	25-Jul	07:24:45	0.202
2	25-Jul	06:52:45	0.065	35	25-Jul	07:25:45	0.261
3	25-Jul	06:53:45	0.074	36	25-Jul	07:26:45	0.309
4	25-Jul	06:54:45	0.1	37	25-Jul	07:27:45	0.103
5	25-Jul	06:55:45	0.055	38	25-Jul	07:28:45	0.118
6	25-Jul	06:56:45	0.059	39	25-Jul	07:29:45	0.148
7	25-Jul	06:57:45	0.075	40	25-Jul	07:30:45	0.091
8	25-Jul	06:58:45	0.075	41	25-Jul	07:31:45	0.073
9	25-Jul	06:59:45	0.09	42	25-Jul	07:32:45	0.156
10	25-Jul	07:00:45	0.095	43	25-Jul	07:33:45	0.097
11	25-Jul	07:01:45	0.069	44	25-Jul	07:34:45	0.108
12	25-Jul	07:02:45	0.068	45	25-Jul	07:35:45	0.152
13	25-Jul	07:03:45	0.059	46	25-Jul	07:36:45	0.257
14	25-Jul	07:04:45	0.064	47	25-Jul	07:37:45	0.063
15	25-Jul	07:05:45	0.056	48	25-Jul	07:38:45	0.116
16	25-Jul	07:06:45	0.062	49	25-Jul	07:39:45	0.072
17	25-Jul	07:07:45	0.058	50	25-Jul	07:40:45	0.127
18	25-Jul	07:08:45	0.055	51	25-Jul	07:41:45	0.065
19	25-Jul	07:09:45	0.064	52	25-Jul	07:42:45	0.066
20	25-Jul	07:10:45	0.053	53	25-Jul	07:43:45	0.098
21	25-Jul	07:11:45	0.084	54	25-Jul	07:44:45	0.102
22	25-Jul	07:12:45	0.095	55	25-Jul	07:45:45	0.078
23	25-Jul	07:13:45	0.083	56	25-Jul	07:46:45	0.068
24	25-Jul	07:14:45	0.08	57	25-Jul	07:47:45	0.114
25	25-Jul	07:15:45	0.481	58	25-Jul	07:48:45	0.142
26	25-Jul	07:16:45	0.076	59	25-Jul	07:49:45	0.226
27	25-Jul	07:17:45	0.612	60	25-Jul	07:50:45	0.294
28	25-Jul	07:18:45	2.257	61	25-Jul	07:51:45	0.137
29	25-Jul	07:19:45	0.517	62	25-Jul	07:52:45	0.097
30	25-Jul	07:20:45	0.442	63	25-Jul	07:53:45	0.109
31	25-Jul	07:21:45	0.125	64	25-Jul	07:54:45	0.112
32	25-Jul	07:22:45	0.148	65	25-Jul	07:55:45	0.091
33	25-Jul	07:23:45	0.156	66	25-Jul	07:56:45	0.07

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	25-Jul	07:57:45	0.104	116	25-Jul	08:46:45	0.119
68	25-Jul	07:58:45	0.112	117	25-Jul	08:47:45	0.171
69	25-Jul	07:59:45	0.136	118	25-Jul	08:48:45	0.068
70	25-Jul	08:00:45	0.114	119	25-Jul	08:49:45	0.11
71	25-Jul	08:01:45	0.249	120	25-Jul	08:50:45	0.077
72	25-Jul	08:02:45	0.169	121	25-Jul	08:51:45	0.111
73	25-Jul	08:03:45	0.177	122	25-Jul	08:52:45	0.534
74	25-Jul	08:04:45	0.148	123	25-Jul	08:53:45	0.29
75	25-Jul	08:05:45	0.51	124	25-Jul	08:54:45	0.077
76	25-Jul	08:06:45	0.365	125	25-Jul	08:55:45	0.277
77	25-Jul	08:07:45	0.176	126	25-Jul	08:56:45	0.268
78	25-Jul	08:08:45	0.185	127	25-Jul	08:57:45	0.139
79	25-Jul	08:09:45	0.152	128	25-Jul	08:58:45	0.116
80	25-Jul	08:10:45	0.145	129	25-Jul	08:59:45	0.082
81	25-Jul	08:11:45	0.183	130	25-Jul	09:00:45	0.146
82	25-Jul	08:12:45	0.163	131	25-Jul	09:01:45	0.083
83	25-Jul	08:13:45	0.1	132	25-Jul	09:02:45	0.095
84	25-Jul	08:14:45	0.089	133	25-Jul	09:03:45	0.081
85	25-Jul	08:15:45	0.099	134	25-Jul	09:04:45	0.119
86	25-Jul	08:16:45	0.42	135	25-Jul	09:05:45	0.219
87	25-Jul	08:17:45	0.182	136	25-Jul	09:06:45	0.242
88	25-Jul	08:18:45	0.727	137	25-Jul	09:07:45	0.158
89	25-Jul	08:19:45	0.123	138	25-Jul	09:08:45	0.41
90	25-Jul	08:20:45	0.127	139	25-Jul	09:09:45	0.408
91	25-Jul	08:21:45	0.078	140	25-Jul	09:10:45	0.31
92	25-Jul	08:22:45	0.072	141	25-Jul	09:11:45	0.91
93	25-Jul	08:23:45	0.146	142	25-Jul	09:12:45	0.272
94	25-Jul	08:24:45	0.085				
95	25-Jul	08:25:45	0.089				
96	25-Jul	08:26:45	0.062				
97	25-Jul	08:27:45	0.06				
98	25-Jul	08:28:45	0.076				
99	25-Jul	08:29:45	0.087				
100	25-Jul	08:30:45	0.124				
101	25-Jul	08:31:45	0.061				
102	25-Jul	08:32:45	0.074				
103	25-Jul	08:33:45	0.335				
104	25-Jul	08:34:45	0.362				
105	25-Jul	08:35:45	0.219				
106	25-Jul	08:36:45	0.31				
107	25-Jul	08:37:45	0.215				
108	25-Jul	08:38:45	0.076				
109	25-Jul	08:39:45	0.079				
110	25-Jul	08:40:45	0.119				
111	25-Jul	08:41:45	0.125				
112	25-Jul	08:42:45	0.069				
113	25-Jul	08:43:45	0.078				
114	25-Jul	08:44:45	0.093				
115	25-Jul	08:45:45	0.097				

July 26, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 06
Number of logged points: 582
Start time and date: 07:21:28 26-Jul
Elapsed time: 09:42:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 3.411 mg/m³
Time at maximum: 07:34:47 Jul 26
Max STEL Concentration: 0.583 mg/m³
Time at max STEL: 07:42:28 Jul 26
Overall Avg Conc: 0.185 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	26-Jul	07:22:28	0.134	34	26-Jul	07:55:28	0.365
2	26-Jul	07:23:28	0.278	35	26-Jul	07:56:28	0.959
3	26-Jul	07:24:28	0.115	36	26-Jul	07:57:28	0.146
4	26-Jul	07:25:28	0.198	37	26-Jul	07:58:28	0.14
5	26-Jul	07:26:28	0.101	38	26-Jul	07:59:28	0.098
6	26-Jul	07:27:28	0.119	39	26-Jul	08:00:28	0.32
7	26-Jul	07:28:28	0.37	40	26-Jul	08:01:28	0.378
8	26-Jul	07:29:28	0.32	41	26-Jul	08:02:28	0.299
9	26-Jul	07:30:28	0.411	42	26-Jul	08:03:28	0.231
10	26-Jul	07:31:28	0.385	43	26-Jul	08:04:28	0.424
11	26-Jul	07:32:28	0.391	44	26-Jul	08:05:28	0.187
12	26-Jul	07:33:28	0.257	45	26-Jul	08:06:28	0.092
13	26-Jul	07:34:28	3.374	46	26-Jul	08:07:28	0.09
14	26-Jul	07:35:28	0.319	47	26-Jul	08:08:28	0.203
15	26-Jul	07:36:28	0.203	48	26-Jul	08:09:28	0.308
16	26-Jul	07:37:28	0.087	49	26-Jul	08:10:28	0.285
17	26-Jul	07:38:28	0.762	50	26-Jul	08:11:28	0.148
18	26-Jul	07:39:28	0.132	51	26-Jul	08:12:28	0.273
19	26-Jul	07:40:28	1.272	52	26-Jul	08:13:28	0.933
20	26-Jul	07:41:28	0.108	53	26-Jul	08:14:28	0.817
21	26-Jul	07:42:28	0.347	54	26-Jul	08:15:28	1.079
22	26-Jul	07:43:28	0.06	55	26-Jul	08:16:28	0.666
23	26-Jul	07:44:28	0.202	56	26-Jul	08:17:28	0.259
24	26-Jul	07:45:28	0.11	57	26-Jul	08:18:28	0.595
25	26-Jul	07:46:28	0.082	58	26-Jul	08:19:28	0.605
26	26-Jul	07:47:28	0.13	59	26-Jul	08:20:28	0.129
27	26-Jul	07:48:28	0.938	60	26-Jul	08:21:28	0.18
28	26-Jul	07:49:28	0.391	61	26-Jul	08:22:28	0.08
29	26-Jul	07:50:28	0.234	62	26-Jul	08:23:28	0.074
30	26-Jul	07:51:28	0.199	63	26-Jul	08:24:28	0.076
31	26-Jul	07:52:28	0.154	64	26-Jul	08:25:28	0.126
32	26-Jul	07:53:28	0.187	65	26-Jul	08:26:28	0.114
33	26-Jul	07:54:28	0.683	66	26-Jul	08:27:28	0.071

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	26-Jul	08:28:28	0.142	116	26-Jul	09:17:28	0.068
68	26-Jul	08:29:28	0.538	117	26-Jul	09:18:28	0.128
69	26-Jul	08:30:28	0.161	118	26-Jul	09:19:28	0.419
70	26-Jul	08:31:28	0.089	119	26-Jul	09:20:28	0.303
71	26-Jul	08:32:28	0.112	120	26-Jul	09:21:28	0.086
72	26-Jul	08:33:28	0.224	121	26-Jul	09:22:28	0.508
73	26-Jul	08:34:28	0.07	122	26-Jul	09:23:28	0.124
74	26-Jul	08:35:28	0.072	123	26-Jul	09:24:28	0.081
75	26-Jul	08:36:28	0.084	124	26-Jul	09:25:28	0.106
76	26-Jul	08:37:28	0.857	125	26-Jul	09:26:28	0.143
77	26-Jul	08:38:28	0.125	126	26-Jul	09:27:28	0.126
78	26-Jul	08:39:28	0.137	127	26-Jul	09:28:28	0.142
79	26-Jul	08:40:28	0.192	128	26-Jul	09:29:28	0.097
80	26-Jul	08:41:28	0.085	129	26-Jul	09:30:28	0.068
81	26-Jul	08:42:28	0.085	130	26-Jul	09:31:28	0.068
82	26-Jul	08:43:28	0.097	131	26-Jul	09:32:28	1.248
83	26-Jul	08:44:28	1.182	132	26-Jul	09:33:28	0.125
84	26-Jul	08:45:28	0.143	133	26-Jul	09:34:28	0.245
85	26-Jul	08:46:28	0.391	134	26-Jul	09:35:28	0.197
86	26-Jul	08:47:28	1.232	135	26-Jul	09:36:28	0.228
87	26-Jul	08:48:28	0.285	136	26-Jul	09:37:28	0.069
88	26-Jul	08:49:28	0.094	137	26-Jul	09:38:28	0.086
89	26-Jul	08:50:28	0.067	138	26-Jul	09:39:28	0.149
90	26-Jul	08:51:28	0.222	139	26-Jul	09:40:28	0.088
91	26-Jul	08:52:28	0.175	140	26-Jul	09:41:28	0.084
92	26-Jul	08:53:28	0.2	141	26-Jul	09:42:28	0.099
93	26-Jul	08:54:28	0.121	142	26-Jul	09:43:28	0.373
94	26-Jul	08:55:28	0.108	143	26-Jul	09:44:28	0.079
95	26-Jul	08:56:28	0.121	144	26-Jul	09:45:28	0.092
96	26-Jul	08:57:28	0.083	145	26-Jul	09:46:28	0.087
97	26-Jul	08:58:28	0.103	146	26-Jul	09:47:28	0.191
98	26-Jul	08:59:28	0.503	147	26-Jul	09:48:28	0.163
99	26-Jul	09:00:28	0.183	148	26-Jul	09:49:28	0.143
100	26-Jul	09:01:28	0.159	149	26-Jul	09:50:28	0.086
101	26-Jul	09:02:28	0.106	150	26-Jul	09:51:28	0.066
102	26-Jul	09:03:28	0.075	151	26-Jul	09:52:28	0.064
103	26-Jul	09:04:28	0.123	152	26-Jul	09:53:28	0.161
104	26-Jul	09:05:28	0.07	153	26-Jul	09:54:28	0.193
105	26-Jul	09:06:28	0.136	154	26-Jul	09:55:28	0.063
106	26-Jul	09:07:28	0.118	155	26-Jul	09:56:28	0.154
107	26-Jul	09:08:28	0.112	156	26-Jul	09:57:28	0.09
108	26-Jul	09:09:28	0.111	157	26-Jul	09:58:28	0.184
109	26-Jul	09:10:28	0.082	158	26-Jul	09:59:28	0.083
110	26-Jul	09:11:28	0.105	159	26-Jul	10:00:28	0.081
111	26-Jul	09:12:28	0.081	160	26-Jul	10:01:28	0.093
112	26-Jul	09:13:28	0.077	161	26-Jul	10:02:28	0.079
113	26-Jul	09:14:28	0.093	162	26-Jul	10:03:28	0.129
114	26-Jul	09:15:28	0.151	163	26-Jul	10:04:28	0.086
115	26-Jul	09:16:28	0.135	164	26-Jul	10:05:28	0.07

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	26-Jul	10:06:28	0.065	214	26-Jul	10:55:28	0.135
166	26-Jul	10:07:28	0.068	215	26-Jul	10:56:28	0.097
167	26-Jul	10:08:28	0.172	216	26-Jul	10:57:28	0.107
168	26-Jul	10:09:28	0.129	217	26-Jul	10:58:28	0.124
169	26-Jul	10:10:28	0.197	218	26-Jul	10:59:28	0.105
170	26-Jul	10:11:28	0.296	219	26-Jul	11:00:28	0.067
171	26-Jul	10:12:28	0.324	220	26-Jul	11:01:28	0.085
172	26-Jul	10:13:28	0.155	221	26-Jul	11:02:28	0.072
173	26-Jul	10:14:28	0.159	222	26-Jul	11:03:28	0.134
174	26-Jul	10:15:28	0.117	223	26-Jul	11:04:28	0.148
175	26-Jul	10:16:28	0.252	224	26-Jul	11:05:28	0.183
176	26-Jul	10:17:28	0.124	225	26-Jul	11:06:28	0.117
177	26-Jul	10:18:28	0.159	226	26-Jul	11:07:28	0.078
178	26-Jul	10:19:28	0.058	227	26-Jul	11:08:28	0.084
179	26-Jul	10:20:28	0.062	228	26-Jul	11:09:28	0.135
180	26-Jul	10:21:28	0.057	229	26-Jul	11:10:28	0.181
181	26-Jul	10:22:28	0.116	230	26-Jul	11:11:28	0.09
182	26-Jul	10:23:28	0.133	231	26-Jul	11:12:28	0.069
183	26-Jul	10:24:28	0.091	232	26-Jul	11:13:28	0.097
184	26-Jul	10:25:28	0.19	233	26-Jul	11:14:28	0.198
185	26-Jul	10:26:28	0.265	234	26-Jul	11:15:28	0.093
186	26-Jul	10:27:28	0.107	235	26-Jul	11:16:28	0.149
187	26-Jul	10:28:28	0.18	236	26-Jul	11:17:28	0.155
188	26-Jul	10:29:28	0.179	237	26-Jul	11:18:28	0.111
189	26-Jul	10:30:28	0.132	238	26-Jul	11:19:28	0.069
190	26-Jul	10:31:28	0.383	239	26-Jul	11:20:28	0.073
191	26-Jul	10:32:28	0.42	240	26-Jul	11:21:28	0.13
192	26-Jul	10:33:28	0.305	241	26-Jul	11:22:28	0.077
193	26-Jul	10:34:28	0.115	242	26-Jul	11:23:28	0.086
194	26-Jul	10:35:28	0.111	243	26-Jul	11:24:28	0.08
195	26-Jul	10:36:28	0.082	244	26-Jul	11:25:28	0.065
196	26-Jul	10:37:28	0.203	245	26-Jul	11:26:28	0.098
197	26-Jul	10:38:28	0.117	246	26-Jul	11:27:28	0.126
198	26-Jul	10:39:28	0.085	247	26-Jul	11:28:28	0.075
199	26-Jul	10:40:28	0.06	248	26-Jul	11:29:28	0.072
200	26-Jul	10:41:28	0.093	249	26-Jul	11:30:28	0.064
201	26-Jul	10:42:28	0.091	250	26-Jul	11:31:28	0.153
202	26-Jul	10:43:28	0.175	251	26-Jul	11:32:28	0.088
203	26-Jul	10:44:28	0.071	252	26-Jul	11:33:28	0.062
204	26-Jul	10:45:28	0.078	253	26-Jul	11:34:28	0.076
205	26-Jul	10:46:28	0.077	254	26-Jul	11:35:28	0.071
206	26-Jul	10:47:28	0.068	255	26-Jul	11:36:28	0.102
207	26-Jul	10:48:28	0.12	256	26-Jul	11:37:28	0.08
208	26-Jul	10:49:28	0.103	257	26-Jul	11:38:28	0.077
209	26-Jul	10:50:28	0.102	258	26-Jul	11:39:28	0.104
210	26-Jul	10:51:28	0.063	259	26-Jul	11:40:28	0.078
211	26-Jul	10:52:28	0.14	260	26-Jul	11:41:28	0.105
212	26-Jul	10:53:28	0.246	261	26-Jul	11:42:28	0.076
213	26-Jul	10:54:28	0.315	262	26-Jul	11:43:28	0.221

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	26-Jul	11:44:28	0.085	312	26-Jul	12:33:28	0.059
264	26-Jul	11:45:28	0.062	313	26-Jul	12:34:28	0.114
265	26-Jul	11:46:28	0.124	314	26-Jul	12:35:28	0.213
266	26-Jul	11:47:28	0.118	315	26-Jul	12:36:28	0.185
267	26-Jul	11:48:28	0.215	316	26-Jul	12:37:28	0.55
268	26-Jul	11:49:28	0.144	317	26-Jul	12:38:28	0.154
269	26-Jul	11:50:28	0.106	318	26-Jul	12:39:28	0.525
270	26-Jul	11:51:28	0.127	319	26-Jul	12:40:28	0.223
271	26-Jul	11:52:28	0.077	320	26-Jul	12:41:28	0.943
272	26-Jul	11:53:28	1.288	321	26-Jul	12:42:28	0.249
273	26-Jul	11:54:28	0.119	322	26-Jul	12:43:28	0.585
274	26-Jul	11:55:28	0.071	323	26-Jul	12:44:28	0.293
275	26-Jul	11:56:28	0.066	324	26-Jul	12:45:28	0.235
276	26-Jul	11:57:28	0.25	325	26-Jul	12:46:28	0.146
277	26-Jul	11:58:28	0.104	326	26-Jul	12:47:28	0.122
278	26-Jul	11:59:28	0.083	327	26-Jul	12:48:28	0.095
279	26-Jul	12:00:28	0.058	328	26-Jul	12:49:28	0.068
280	26-Jul	12:01:28	0.06	329	26-Jul	12:50:28	0.055
281	26-Jul	12:02:28	0.058	330	26-Jul	12:51:28	0.45
282	26-Jul	12:03:28	0.058	331	26-Jul	12:52:28	0.086
283	26-Jul	12:04:28	0.061	332	26-Jul	12:53:28	0.056
284	26-Jul	12:05:28	0.057	333	26-Jul	12:54:28	0.127
285	26-Jul	12:06:28	0.058	334	26-Jul	12:55:28	0.067
286	26-Jul	12:07:28	0.057	335	26-Jul	12:56:28	0.095
287	26-Jul	12:08:28	0.057	336	26-Jul	12:57:28	0.066
288	26-Jul	12:09:28	0.06	337	26-Jul	12:58:28	0.062
289	26-Jul	12:10:28	0.057	338	26-Jul	12:59:28	0.08
290	26-Jul	12:11:28	0.059	339	26-Jul	13:00:28	0.262
291	26-Jul	12:12:28	0.057	340	26-Jul	13:01:28	0.122
292	26-Jul	12:13:28	0.066	341	26-Jul	13:02:28	0.08
293	26-Jul	12:14:28	0.058	342	26-Jul	13:03:28	0.093
294	26-Jul	12:15:28	0.057	343	26-Jul	13:04:28	0.075
295	26-Jul	12:16:28	0.056	344	26-Jul	13:05:28	0.111
296	26-Jul	12:17:28	0.057	345	26-Jul	13:06:28	0.093
297	26-Jul	12:18:28	0.058	346	26-Jul	13:07:28	0.086
298	26-Jul	12:19:28	0.055	347	26-Jul	13:08:28	0.132
299	26-Jul	12:20:28	0.06	348	26-Jul	13:09:28	0.094
300	26-Jul	12:21:28	0.058	349	26-Jul	13:10:28	0.083
301	26-Jul	12:22:28	0.06	350	26-Jul	13:11:28	0.083
302	26-Jul	12:23:28	0.059	351	26-Jul	13:12:28	0.096
303	26-Jul	12:24:28	0.056	352	26-Jul	13:13:28	0.068
304	26-Jul	12:25:28	0.057	353	26-Jul	13:14:28	0.063
305	26-Jul	12:26:28	0.056	354	26-Jul	13:15:28	0.136
306	26-Jul	12:27:28	0.056	355	26-Jul	13:16:28	0.101
307	26-Jul	12:28:28	0.058	356	26-Jul	13:17:28	0.07
308	26-Jul	12:29:28	0.058	357	26-Jul	13:18:28	0.123
309	26-Jul	12:30:28	0.058	358	26-Jul	13:19:28	0.257
310	26-Jul	12:31:28	0.056	359	26-Jul	13:20:28	0.112
311	26-Jul	12:32:28	0.056	360	26-Jul	13:21:28	0.078

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
361	26-Jul	13:22:28	0.058	410	26-Jul	14:11:28	0.088
362	26-Jul	13:23:28	0.085	411	26-Jul	14:12:28	0.092
363	26-Jul	13:24:28	0.077	412	26-Jul	14:13:28	0.143
364	26-Jul	13:25:28	0.065	413	26-Jul	14:14:28	0.226
365	26-Jul	13:26:28	0.15	414	26-Jul	14:15:28	0.059
366	26-Jul	13:27:28	0.084	415	26-Jul	14:16:28	0.136
367	26-Jul	13:28:28	0.07	416	26-Jul	14:17:28	0.154
368	26-Jul	13:29:28	0.06	417	26-Jul	14:18:28	0.787
369	26-Jul	13:30:28	0.206	418	26-Jul	14:19:28	0.083
370	26-Jul	13:31:28	0.188	419	26-Jul	14:20:28	0.076
371	26-Jul	13:32:28	0.09	420	26-Jul	14:21:28	0.104
372	26-Jul	13:33:28	0.101	421	26-Jul	14:22:28	0.156
373	26-Jul	13:34:28	0.182	422	26-Jul	14:23:28	0.22
374	26-Jul	13:35:28	0.061	423	26-Jul	14:24:28	0.401
375	26-Jul	13:36:28	0.058	424	26-Jul	14:25:28	0.428
376	26-Jul	13:37:28	0.069	425	26-Jul	14:26:28	0.077
377	26-Jul	13:38:28	0.204	426	26-Jul	14:27:28	0.136
378	26-Jul	13:39:28	0.123	427	26-Jul	14:28:28	0.278
379	26-Jul	13:40:28	0.101	428	26-Jul	14:29:28	0.171
380	26-Jul	13:41:28	0.088	429	26-Jul	14:30:28	0.125
381	26-Jul	13:42:28	0.064	430	26-Jul	14:31:28	0.342
382	26-Jul	13:43:28	0.058	431	26-Jul	14:32:28	0.198
383	26-Jul	13:44:28	0.064	432	26-Jul	14:33:28	0.223
384	26-Jul	13:45:28	0.058	433	26-Jul	14:34:28	0.106
385	26-Jul	13:46:28	0.061	434	26-Jul	14:35:28	0.158
386	26-Jul	13:47:28	0.089	435	26-Jul	14:36:28	0.064
387	26-Jul	13:48:28	0.101	436	26-Jul	14:37:28	0.159
388	26-Jul	13:49:28	0.18	437	26-Jul	14:38:28	0.09
389	26-Jul	13:50:28	0.087	438	26-Jul	14:39:28	0.449
390	26-Jul	13:51:28	1.836	439	26-Jul	14:40:28	0.087
391	26-Jul	13:52:28	0.113	440	26-Jul	14:41:28	0.411
392	26-Jul	13:53:28	0.081	441	26-Jul	14:42:28	0.154
393	26-Jul	13:54:28	0.066	442	26-Jul	14:43:28	0.287
394	26-Jul	13:55:28	0.098	443	26-Jul	14:44:28	0.323
395	26-Jul	13:56:28	0.077	444	26-Jul	14:45:28	0.197
396	26-Jul	13:57:28	0.07	445	26-Jul	14:46:28	0.09
397	26-Jul	13:58:28	0.089	446	26-Jul	14:47:28	0.078
398	26-Jul	13:59:28	0.101	447	26-Jul	14:48:28	0.322
399	26-Jul	14:00:28	0.085	448	26-Jul	14:49:28	0.101
400	26-Jul	14:01:28	0.432	449	26-Jul	14:50:28	0.085
401	26-Jul	14:02:28	0.153	450	26-Jul	14:51:28	0.164
402	26-Jul	14:03:28	0.573	451	26-Jul	14:52:28	0.228
403	26-Jul	14:04:28	0.111	452	26-Jul	14:53:28	0.145
404	26-Jul	14:05:28	0.06	453	26-Jul	14:54:28	0.061
405	26-Jul	14:06:28	0.071	454	26-Jul	14:55:28	0.069
406	26-Jul	14:07:28	0.065	455	26-Jul	14:56:28	0.181
407	26-Jul	14:08:28	0.075	456	26-Jul	14:57:28	0.059
408	26-Jul	14:09:28	0.059	457	26-Jul	14:58:28	0.058
409	26-Jul	14:10:28	0.098	458	26-Jul	14:59:28	0.058

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
459	26-Jul	15:00:28	0.068	508	26-Jul	15:49:28	0.07
460	26-Jul	15:01:28	0.065	509	26-Jul	15:50:28	0.083
461	26-Jul	15:02:28	0.085	510	26-Jul	15:51:28	0.211
462	26-Jul	15:03:28	0.085	511	26-Jul	15:52:28	0.176
463	26-Jul	15:04:28	0.061	512	26-Jul	15:53:28	0.262
464	26-Jul	15:05:28	0.066	513	26-Jul	15:54:28	0.211
465	26-Jul	15:06:28	0.072	514	26-Jul	15:55:28	0.109
466	26-Jul	15:07:28	0.26	515	26-Jul	15:56:28	0.283
467	26-Jul	15:08:28	0.1	516	26-Jul	15:57:28	0.089
468	26-Jul	15:09:28	0.065	517	26-Jul	15:58:28	0.274
469	26-Jul	15:10:28	0.168	518	26-Jul	15:59:28	0.109
470	26-Jul	15:11:28	0.14	519	26-Jul	16:00:28	0.211
471	26-Jul	15:12:28	0.097	520	26-Jul	16:01:28	0.231
472	26-Jul	15:13:28	0.094	521	26-Jul	16:02:28	0.145
473	26-Jul	15:14:28	0.325	522	26-Jul	16:03:28	0.145
474	26-Jul	15:15:28	0.053	523	26-Jul	16:04:28	0.212
475	26-Jul	15:16:28	0.079	524	26-Jul	16:05:28	0.341
476	26-Jul	15:17:28	0.054	525	26-Jul	16:06:28	0.178
477	26-Jul	15:18:28	0.056	526	26-Jul	16:07:28	0.256
478	26-Jul	15:19:28	0.088	527	26-Jul	16:08:28	0.37
479	26-Jul	15:20:28	0.164	528	26-Jul	16:09:28	0.138
480	26-Jul	15:21:28	0.099	529	26-Jul	16:10:28	0.139
481	26-Jul	15:22:28	0.143	530	26-Jul	16:11:28	0.235
482	26-Jul	15:23:28	0.08	531	26-Jul	16:12:28	0.127
483	26-Jul	15:24:28	0.068	532	26-Jul	16:13:28	0.331
484	26-Jul	15:25:28	0.123	533	26-Jul	16:14:28	1.372
485	26-Jul	15:26:28	0.164	534	26-Jul	16:15:28	0.316
486	26-Jul	15:27:28	0.06	535	26-Jul	16:16:28	0.394
487	26-Jul	15:28:28	0.069	536	26-Jul	16:17:28	0.321
488	26-Jul	15:29:28	0.058	537	26-Jul	16:18:28	0.455
489	26-Jul	15:30:28	0.125	538	26-Jul	16:19:28	0.159
490	26-Jul	15:31:28	0.209	539	26-Jul	16:20:28	0.093
491	26-Jul	15:32:28	0.171	540	26-Jul	16:21:28	0.111
492	26-Jul	15:33:28	0.1	541	26-Jul	16:22:28	0.175
493	26-Jul	15:34:28	0.18	542	26-Jul	16:23:28	0.353
494	26-Jul	15:35:28	0.156	543	26-Jul	16:24:28	0.125
495	26-Jul	15:36:28	0.118	544	26-Jul	16:25:28	0.066
496	26-Jul	15:37:28	0.063	545	26-Jul	16:26:28	0.343
497	26-Jul	15:38:28	0.063	546	26-Jul	16:27:28	0.151
498	26-Jul	15:39:28	0.081	547	26-Jul	16:28:28	0.14
499	26-Jul	15:40:28	0.125	548	26-Jul	16:29:28	0.179
500	26-Jul	15:41:28	0.072	549	26-Jul	16:30:28	0.117
501	26-Jul	15:42:28	0.073	550	26-Jul	16:31:28	0.089
502	26-Jul	15:43:28	0.064	551	26-Jul	16:32:28	0.09
503	26-Jul	15:44:28	0.083	552	26-Jul	16:33:28	0.253
504	26-Jul	15:45:28	0.073	553	26-Jul	16:34:28	0.145
505	26-Jul	15:46:28	0.067	554	26-Jul	16:35:28	0.062
506	26-Jul	15:47:28	0.065	555	26-Jul	16:36:28	0.142
507	26-Jul	15:48:28	0.445	556	26-Jul	16:37:28	0.377

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
557	26-Jul	16:38:28	0.555				
558	26-Jul	16:39:28	0.202				
559	26-Jul	16:40:28	0.063				
560	26-Jul	16:41:28	0.747				
561	26-Jul	16:42:28	0.117				
562	26-Jul	16:43:28	0.069				
563	26-Jul	16:44:28	0.114				
564	26-Jul	16:45:28	0.202				
565	26-Jul	16:46:28	0.433				
566	26-Jul	16:47:28	0.188				
567	26-Jul	16:48:28	0.137				
568	26-Jul	16:49:28	0.074				
569	26-Jul	16:50:28	0.12				
570	26-Jul	16:51:28	0.158				
571	26-Jul	16:52:28	0.384				
572	26-Jul	16:53:28	0.093				
573	26-Jul	16:54:28	0.643				
574	26-Jul	16:55:28	0.351				
575	26-Jul	16:56:28	0.345				
576	26-Jul	16:57:28	0.676				
577	26-Jul	16:58:28	0.155				
578	26-Jul	16:59:28	0.313				
579	26-Jul	17:00:28	0.406				
580	26-Jul	17:01:28	0.316				
581	26-Jul	17:02:28	0.116				
582	26-Jul	17:03:28	0.088				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 03
Number of logged points: 589
Start time and date: 07:20:26 26-Jul
Elapsed time: 09:49:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 6.558 mg/m³
Time at maximum: 13:02:33 Jul 26
Max STEL Concentration: 1.074 mg/m³
Time at max STEL: 10:06:56 Jul 26
Overall Avg Conc: 0.166 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	26-Jul	07:21:26	0.005	37	26-Jul	07:57:26	0
2	26-Jul	07:22:26	0.036	38	26-Jul	07:58:26	0
3	26-Jul	07:23:26	0.013	39	26-Jul	07:59:26	0.001
4	26-Jul	07:24:26	0.004	40	26-Jul	08:00:26	0
5	26-Jul	07:25:26	0.001	41	26-Jul	08:01:26	0
6	26-Jul	07:26:26	0	42	26-Jul	08:02:26	0
7	26-Jul	07:27:26	0.017	43	26-Jul	08:03:26	0
8	26-Jul	07:28:26	0.014	44	26-Jul	08:04:26	0
9	26-Jul	07:29:26	0.001	45	26-Jul	08:05:26	0
10	26-Jul	07:30:26	0.001	46	26-Jul	08:06:26	0
11	26-Jul	07:31:26	0.001	47	26-Jul	08:07:26	0.013
12	26-Jul	07:32:26	0	48	26-Jul	08:08:26	0.077
13	26-Jul	07:33:26	0.007	49	26-Jul	08:09:26	0.011
14	26-Jul	07:34:26	0.003	50	26-Jul	08:10:26	0.03
15	26-Jul	07:35:26	0.01	51	26-Jul	08:11:26	0.017
16	26-Jul	07:36:26	0.019	52	26-Jul	08:12:26	0
17	26-Jul	07:37:26	0	53	26-Jul	08:13:26	0
18	26-Jul	07:38:26	0.233	54	26-Jul	08:14:26	0
19	26-Jul	07:39:26	0.062	55	26-Jul	08:15:26	0.014
20	26-Jul	07:40:26	0.056	56	26-Jul	08:16:26	0
21	26-Jul	07:41:26	0.012	57	26-Jul	08:17:26	0.011
22	26-Jul	07:42:26	0.001	58	26-Jul	08:18:26	0.103
23	26-Jul	07:43:26	0	59	26-Jul	08:19:26	0.105
24	26-Jul	07:44:26	0	60	26-Jul	08:20:26	0.129
25	26-Jul	07:45:26	0	61	26-Jul	08:21:26	0.129
26	26-Jul	07:46:26	0.004	62	26-Jul	08:22:26	0.131
27	26-Jul	07:47:26	0.012	63	26-Jul	08:23:26	0.073
28	26-Jul	07:48:26	0.006	64	26-Jul	08:24:26	0.059
29	26-Jul	07:49:26	0.008	65	26-Jul	08:25:26	0.028
30	26-Jul	07:50:26	0.002	66	26-Jul	08:26:26	0.029
31	26-Jul	07:51:26	0.001	67	26-Jul	08:27:26	0.025
32	26-Jul	07:52:26	0	68	26-Jul	08:28:26	0.008
33	26-Jul	07:53:26	0	69	26-Jul	08:29:26	0.042
34	26-Jul	07:54:26	0	70	26-Jul	08:30:26	0.022
35	26-Jul	07:55:26	0.025	71	26-Jul	08:31:26	0.06
36	26-Jul	07:56:26	0.007	72	26-Jul	08:32:26	0.024

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
73	26-Jul	08:33:26	0	122	26-Jul	09:22:26	0.038
74	26-Jul	08:34:26	0.001	123	26-Jul	09:23:26	0
75	26-Jul	08:35:26	0	124	26-Jul	09:24:26	0.009
76	26-Jul	08:36:26	0.023	125	26-Jul	09:25:26	0.018
77	26-Jul	08:37:26	0	126	26-Jul	09:26:26	0
78	26-Jul	08:38:26	0.004	127	26-Jul	09:27:26	0.007
79	26-Jul	08:39:26	0.075	128	26-Jul	09:28:26	0.068
80	26-Jul	08:40:26	0.051	129	26-Jul	09:29:26	0.075
81	26-Jul	08:41:26	0.659	130	26-Jul	09:30:26	0.017
82	26-Jul	08:42:26	0.026	131	26-Jul	09:31:26	0.297
83	26-Jul	08:43:26	0.269	132	26-Jul	09:32:26	0.275
84	26-Jul	08:44:26	0.092	133	26-Jul	09:33:26	0.577
85	26-Jul	08:45:26	0.052	134	26-Jul	09:34:26	0.615
86	26-Jul	08:46:26	0.013	135	26-Jul	09:35:26	0.094
87	26-Jul	08:47:26	0.007	136	26-Jul	09:36:26	0.198
88	26-Jul	08:48:26	0.015	137	26-Jul	09:37:26	0.298
89	26-Jul	08:49:26	0.046	138	26-Jul	09:38:26	0.128
90	26-Jul	08:50:26	0.068	139	26-Jul	09:39:26	0.118
91	26-Jul	08:51:26	0.104	140	26-Jul	09:40:26	0.429
92	26-Jul	08:52:26	0.042	141	26-Jul	09:41:26	3.871
93	26-Jul	08:53:26	0.023	142	26-Jul	09:42:26	3.932
94	26-Jul	08:54:26	0.008	143	26-Jul	09:43:26	1.77
95	26-Jul	08:55:26	0.015	144	26-Jul	09:44:26	0.989
96	26-Jul	08:56:26	0.017	145	26-Jul	09:45:26	0.376
97	26-Jul	08:57:26	0.008	146	26-Jul	09:46:26	0.028
98	26-Jul	08:58:26	0	147	26-Jul	09:47:26	0.006
99	26-Jul	08:59:26	0.002	148	26-Jul	09:48:26	0.011
100	26-Jul	09:00:26	0	149	26-Jul	09:49:26	0
101	26-Jul	09:01:26	0	150	26-Jul	09:50:26	0.01
102	26-Jul	09:02:26	0	151	26-Jul	09:51:26	0.153
103	26-Jul	09:03:26	0	152	26-Jul	09:52:26	0.315
104	26-Jul	09:04:26	0	153	26-Jul	09:53:26	2.087
105	26-Jul	09:05:26	0	154	26-Jul	09:54:26	1.195
106	26-Jul	09:06:26	0	155	26-Jul	09:55:26	0.477
107	26-Jul	09:07:26	0.007	156	26-Jul	09:56:26	0.303
108	26-Jul	09:08:26	0.248	157	26-Jul	09:57:26	0.222
109	26-Jul	09:09:26	2.079	158	26-Jul	09:58:26	4.33
110	26-Jul	09:10:26	1.036	159	26-Jul	09:59:26	2.243
111	26-Jul	09:11:26	0.232	160	26-Jul	10:00:26	0.879
112	26-Jul	09:12:26	0.417	161	26-Jul	10:01:26	0.282
113	26-Jul	09:13:26	0.148	162	26-Jul	10:02:26	1.258
114	26-Jul	09:14:26	0.872	163	26-Jul	10:03:26	0.813
115	26-Jul	09:15:26	0.276	164	26-Jul	10:04:26	0.614
116	26-Jul	09:16:26	0.309	165	26-Jul	10:05:26	0.409
117	26-Jul	09:17:26	0.125	166	26-Jul	10:06:26	0.297
118	26-Jul	09:18:26	0.118	167	26-Jul	10:07:26	0.433
119	26-Jul	09:19:26	0.123	168	26-Jul	10:08:26	0.067
120	26-Jul	09:20:26	0.027	169	26-Jul	10:09:26	0.557
121	26-Jul	09:21:26	0.031	170	26-Jul	10:10:26	0

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
171	26-Jul	10:11:26	0.287	220	26-Jul	11:00:26	0.03
172	26-Jul	10:12:26	0.186	221	26-Jul	11:01:26	0.019
173	26-Jul	10:13:26	0.001	222	26-Jul	11:02:26	0.056
174	26-Jul	10:14:26	0	223	26-Jul	11:03:26	0
175	26-Jul	10:15:26	0	224	26-Jul	11:04:26	0.004
176	26-Jul	10:16:26	0	225	26-Jul	11:05:26	0.166
177	26-Jul	10:17:26	0	226	26-Jul	11:06:26	0.002
178	26-Jul	10:18:26	0	227	26-Jul	11:07:26	0.028
179	26-Jul	10:19:26	0.002	228	26-Jul	11:08:26	0
180	26-Jul	10:20:26	0	229	26-Jul	11:09:26	0
181	26-Jul	10:21:26	0.004	230	26-Jul	11:10:26	0
182	26-Jul	10:22:26	0.006	231	26-Jul	11:11:26	0.123
183	26-Jul	10:23:26	0	232	26-Jul	11:12:26	0
184	26-Jul	10:24:26	0	233	26-Jul	11:13:26	0
185	26-Jul	10:25:26	0	234	26-Jul	11:14:26	0.037
186	26-Jul	10:26:26	0.228	235	26-Jul	11:15:26	0
187	26-Jul	10:27:26	0.037	236	26-Jul	11:16:26	0.004
188	26-Jul	10:28:26	0.002	237	26-Jul	11:17:26	0.001
189	26-Jul	10:29:26	0.025	238	26-Jul	11:18:26	0.002
190	26-Jul	10:30:26	0	239	26-Jul	11:19:26	0.003
191	26-Jul	10:31:26	4.14	240	26-Jul	11:20:26	0.013
192	26-Jul	10:32:26	0.161	241	26-Jul	11:21:26	0.004
193	26-Jul	10:33:26	0.171	242	26-Jul	11:22:26	0
194	26-Jul	10:34:26	0.07	243	26-Jul	11:23:26	0.001
195	26-Jul	10:35:26	0.002	244	26-Jul	11:24:26	0
196	26-Jul	10:36:26	0	245	26-Jul	11:25:26	0.003
197	26-Jul	10:37:26	0	246	26-Jul	11:26:26	0
198	26-Jul	10:38:26	0.012	247	26-Jul	11:27:26	0.001
199	26-Jul	10:39:26	0.001	248	26-Jul	11:28:26	0.123
200	26-Jul	10:40:26	0.001	249	26-Jul	11:29:26	0.044
201	26-Jul	10:41:26	0.001	250	26-Jul	11:30:26	0.533
202	26-Jul	10:42:26	0	251	26-Jul	11:31:26	0.082
203	26-Jul	10:43:26	0.011	252	26-Jul	11:32:26	0.054
204	26-Jul	10:44:26	0.004	253	26-Jul	11:33:26	0.119
205	26-Jul	10:45:26	0.027	254	26-Jul	11:34:26	0.215
206	26-Jul	10:46:26	0.101	255	26-Jul	11:35:26	0.272
207	26-Jul	10:47:26	0.144	256	26-Jul	11:36:26	0.501
208	26-Jul	10:48:26	0	257	26-Jul	11:37:26	0.627
209	26-Jul	10:49:26	0.002	258	26-Jul	11:38:26	0.033
210	26-Jul	10:50:26	0	259	26-Jul	11:39:26	0.356
211	26-Jul	10:51:26	0	260	26-Jul	11:40:26	0.786
212	26-Jul	10:52:26	0	261	26-Jul	11:41:26	0.063
213	26-Jul	10:53:26	0	262	26-Jul	11:42:26	0.23
214	26-Jul	10:54:26	0	263	26-Jul	11:43:26	0.864
215	26-Jul	10:55:26	0.001	264	26-Jul	11:44:26	3.927
216	26-Jul	10:56:26	0.001	265	26-Jul	11:45:26	0.792
217	26-Jul	10:57:26	0.003	266	26-Jul	11:46:26	1.702
218	26-Jul	10:58:26	0.227	267	26-Jul	11:47:26	0.052
219	26-Jul	10:59:26	0.008	268	26-Jul	11:48:26	0.004

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
269	26-Jul	11:49:26	0.003	318	26-Jul	12:38:26	0.01
270	26-Jul	11:50:26	0.001	319	26-Jul	12:39:26	0.018
271	26-Jul	11:51:26	0.012	320	26-Jul	12:40:26	0.089
272	26-Jul	11:52:26	0.002	321	26-Jul	12:41:26	0.527
273	26-Jul	11:53:26	0.041	322	26-Jul	12:42:26	0.151
274	26-Jul	11:54:26	0.043	323	26-Jul	12:43:26	0.447
275	26-Jul	11:55:26	0.063	324	26-Jul	12:44:26	0.713
276	26-Jul	11:56:26	0.001	325	26-Jul	12:45:26	0.742
277	26-Jul	11:57:26	0.037	326	26-Jul	12:46:26	1.228
278	26-Jul	11:58:26	0.122	327	26-Jul	12:47:26	2.117
279	26-Jul	11:59:26	0.017	328	26-Jul	12:48:26	0.222
280	26-Jul	12:00:26	0.007	329	26-Jul	12:49:26	0.269
281	26-Jul	12:01:26	0.003	330	26-Jul	12:50:26	0.088
282	26-Jul	12:02:26	0	331	26-Jul	12:51:26	0.043
283	26-Jul	12:03:26	0	332	26-Jul	12:52:26	0.008
284	26-Jul	12:04:26	0	333	26-Jul	12:53:26	0.006
285	26-Jul	12:05:26	0	334	26-Jul	12:54:26	0.012
286	26-Jul	12:06:26	0	335	26-Jul	12:55:26	0.013
287	26-Jul	12:07:26	0	336	26-Jul	12:56:26	0.016
288	26-Jul	12:08:26	0	337	26-Jul	12:57:26	0.016
289	26-Jul	12:09:26	0	338	26-Jul	12:58:26	0.024
290	26-Jul	12:10:26	0	339	26-Jul	12:59:26	0.053
291	26-Jul	12:11:26	0	340	26-Jul	13:00:26	0.01
292	26-Jul	12:12:26	0	341	26-Jul	13:01:26	0.004
293	26-Jul	12:13:26	0	342	26-Jul	13:02:26	6.56
294	26-Jul	12:14:26	0	343	26-Jul	13:03:26	0.001
295	26-Jul	12:15:26	0	344	26-Jul	13:04:26	0.003
296	26-Jul	12:16:26	0	345	26-Jul	13:05:26	0.019
297	26-Jul	12:17:26	0	346	26-Jul	13:06:26	0.041
298	26-Jul	12:18:26	0.002	347	26-Jul	13:07:26	0.037
299	26-Jul	12:19:26	0.003	348	26-Jul	13:08:26	0.048
300	26-Jul	12:20:26	0	349	26-Jul	13:09:26	0.834
301	26-Jul	12:21:26	0.001	350	26-Jul	13:10:26	0.032
302	26-Jul	12:22:26	0.002	351	26-Jul	13:11:26	0.004
303	26-Jul	12:23:26	0	352	26-Jul	13:12:26	0.063
304	26-Jul	12:24:26	0	353	26-Jul	13:13:26	0.046
305	26-Jul	12:25:26	0.001	354	26-Jul	13:14:26	0.005
306	26-Jul	12:26:26	0	355	26-Jul	13:15:26	0
307	26-Jul	12:27:26	0	356	26-Jul	13:16:26	0
308	26-Jul	12:28:26	0	357	26-Jul	13:17:26	0
309	26-Jul	12:29:26	0	358	26-Jul	13:18:26	0.024
310	26-Jul	12:30:26	0.002	359	26-Jul	13:19:26	0.005
311	26-Jul	12:31:26	0	360	26-Jul	13:20:26	0.154
312	26-Jul	12:32:26	0	361	26-Jul	13:21:26	1.779
313	26-Jul	12:33:26	0	362	26-Jul	13:22:26	0.753
314	26-Jul	12:34:26	0.017	363	26-Jul	13:23:26	0.342
315	26-Jul	12:35:26	0.095	364	26-Jul	13:24:26	0.109
316	26-Jul	12:36:26	0.176	365	26-Jul	13:25:26	0.644
317	26-Jul	12:37:26	0.124	366	26-Jul	13:26:26	0.779

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
367	26-Jul	13:27:26	0.544	416	26-Jul	14:16:26	0.025
368	26-Jul	13:28:26	0.007	417	26-Jul	14:17:26	0.014
369	26-Jul	13:29:26	0.104	418	26-Jul	14:18:26	0
370	26-Jul	13:30:26	0.045	419	26-Jul	14:19:26	0
371	26-Jul	13:31:26	0.004	420	26-Jul	14:20:26	0.341
372	26-Jul	13:32:26	0.014	421	26-Jul	14:21:26	0.001
373	26-Jul	13:33:26	0.105	422	26-Jul	14:22:26	0.091
374	26-Jul	13:34:26	0.101	423	26-Jul	14:23:26	0.547
375	26-Jul	13:35:26	0.132	424	26-Jul	14:24:26	0.021
376	26-Jul	13:36:26	0.087	425	26-Jul	14:25:26	0.216
377	26-Jul	13:37:26	0.101	426	26-Jul	14:26:26	0.008
378	26-Jul	13:38:26	0.057	427	26-Jul	14:27:26	0
379	26-Jul	13:39:26	0.143	428	26-Jul	14:28:26	0
380	26-Jul	13:40:26	0.263	429	26-Jul	14:29:26	0
381	26-Jul	13:41:26	0.124	430	26-Jul	14:30:26	0.001
382	26-Jul	13:42:26	0.081	431	26-Jul	14:31:26	0
383	26-Jul	13:43:26	0.086	432	26-Jul	14:32:26	0
384	26-Jul	13:44:26	0.173	433	26-Jul	14:33:26	0
385	26-Jul	13:45:26	0.131	434	26-Jul	14:34:26	0
386	26-Jul	13:46:26	0.042	435	26-Jul	14:35:26	0
387	26-Jul	13:47:26	0.313	436	26-Jul	14:36:26	0
388	26-Jul	13:48:26	0.259	437	26-Jul	14:37:26	0
389	26-Jul	13:49:26	0.157	438	26-Jul	14:38:26	0
390	26-Jul	13:50:26	0.319	439	26-Jul	14:39:26	0
391	26-Jul	13:51:26	0.115	440	26-Jul	14:40:26	0
392	26-Jul	13:52:26	0.134	441	26-Jul	14:41:26	0
393	26-Jul	13:53:26	1.796	442	26-Jul	14:42:26	0
394	26-Jul	13:54:26	0.039	443	26-Jul	14:43:26	0
395	26-Jul	13:55:26	0.773	444	26-Jul	14:44:26	0
396	26-Jul	13:56:26	0.474	445	26-Jul	14:45:26	0
397	26-Jul	13:57:26	0.085	446	26-Jul	14:46:26	0
398	26-Jul	13:58:26	0.283	447	26-Jul	14:47:26	0.006
399	26-Jul	13:59:26	0.145	448	26-Jul	14:48:26	0
400	26-Jul	14:00:26	0.171	449	26-Jul	14:49:26	0
401	26-Jul	14:01:26	0.143	450	26-Jul	14:50:26	0
402	26-Jul	14:02:26	0.079	451	26-Jul	14:51:26	0
403	26-Jul	14:03:26	0.137	452	26-Jul	14:52:26	0
404	26-Jul	14:04:26	0.232	453	26-Jul	14:53:26	0
405	26-Jul	14:05:26	1.006	454	26-Jul	14:54:26	0
406	26-Jul	14:06:26	0.298	455	26-Jul	14:55:26	0
407	26-Jul	14:07:26	0.032	456	26-Jul	14:56:26	0.078
408	26-Jul	14:08:26	0.087	457	26-Jul	14:57:26	0.183
409	26-Jul	14:09:26	0.261	458	26-Jul	14:58:26	0.154
410	26-Jul	14:10:26	0.124	459	26-Jul	14:59:26	0.004
411	26-Jul	14:11:26	0.163	460	26-Jul	15:00:26	0.025
412	26-Jul	14:12:26	0.069	461	26-Jul	15:01:26	0.05
413	26-Jul	14:13:26	0.195	462	26-Jul	15:02:26	0.021
414	26-Jul	14:14:26	0.208	463	26-Jul	15:03:26	0.001
415	26-Jul	14:15:26	0.167	464	26-Jul	15:04:26	0

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
465	26-Jul	15:05:26	0	514	26-Jul	15:54:26	0.151
466	26-Jul	15:06:26	0	515	26-Jul	15:55:26	0.121
467	26-Jul	15:07:26	0	516	26-Jul	15:56:26	0.093
468	26-Jul	15:08:26	0.013	517	26-Jul	15:57:26	0.229
469	26-Jul	15:09:26	0.015	518	26-Jul	15:58:26	0.018
470	26-Jul	15:10:26	0.013	519	26-Jul	15:59:26	0.342
471	26-Jul	15:11:26	0	520	26-Jul	16:00:26	0.015
472	26-Jul	15:12:26	0	521	26-Jul	16:01:26	0.025
473	26-Jul	15:13:26	0.19	522	26-Jul	16:02:26	0.12
474	26-Jul	15:14:26	0.004	523	26-Jul	16:03:26	0.037
475	26-Jul	15:15:26	0.001	524	26-Jul	16:04:26	0.104
476	26-Jul	15:16:26	0	525	26-Jul	16:05:26	0.893
477	26-Jul	15:17:26	0	526	26-Jul	16:06:26	0.17
478	26-Jul	15:18:26	0	527	26-Jul	16:07:26	0.328
479	26-Jul	15:19:26	0.008	528	26-Jul	16:08:26	0.182
480	26-Jul	15:20:26	0.011	529	26-Jul	16:09:26	0.052
481	26-Jul	15:21:26	0.001	530	26-Jul	16:10:26	0.07
482	26-Jul	15:22:26	0	531	26-Jul	16:11:26	0.381
483	26-Jul	15:23:26	0.199	532	26-Jul	16:12:26	0.436
484	26-Jul	15:24:26	0	533	26-Jul	16:13:26	0.138
485	26-Jul	15:25:26	0	534	26-Jul	16:14:26	0.063
486	26-Jul	15:26:26	0	535	26-Jul	16:15:26	0.014
487	26-Jul	15:27:26	0.069	536	26-Jul	16:16:26	0.182
488	26-Jul	15:28:26	0	537	26-Jul	16:17:26	0.014
489	26-Jul	15:29:26	0	538	26-Jul	16:18:26	0.088
490	26-Jul	15:30:26	0.213	539	26-Jul	16:19:26	0.56
491	26-Jul	15:31:26	0.039	540	26-Jul	16:20:26	0.215
492	26-Jul	15:32:26	0	541	26-Jul	16:21:26	0.026
493	26-Jul	15:33:26	0.101	542	26-Jul	16:22:26	0
494	26-Jul	15:34:26	0.339	543	26-Jul	16:23:26	0
495	26-Jul	15:35:26	0.031	544	26-Jul	16:24:26	0
496	26-Jul	15:36:26	0.3	545	26-Jul	16:25:26	0
497	26-Jul	15:37:26	0	546	26-Jul	16:26:26	0
498	26-Jul	15:38:26	0	547	26-Jul	16:27:26	0
499	26-Jul	15:39:26	0.001	548	26-Jul	16:28:26	0
500	26-Jul	15:40:26	0	549	26-Jul	16:29:26	0
501	26-Jul	15:41:26	0	550	26-Jul	16:30:26	0
502	26-Jul	15:42:26	0	551	26-Jul	16:31:26	0.188
503	26-Jul	15:43:26	0	552	26-Jul	16:32:26	0.276
504	26-Jul	15:44:26	0	553	26-Jul	16:33:26	0.086
505	26-Jul	15:45:26	0	554	26-Jul	16:34:26	0.348
506	26-Jul	15:46:26	0.039	555	26-Jul	16:35:26	0.029
507	26-Jul	15:47:26	0.108	556	26-Jul	16:36:26	0.023
508	26-Jul	15:48:26	0.383	557	26-Jul	16:37:26	0.001
509	26-Jul	15:49:26	0.427	558	26-Jul	16:38:26	0.013
510	26-Jul	15:50:26	0	559	26-Jul	16:39:26	0.001
511	26-Jul	15:51:26	0.031	560	26-Jul	16:40:26	0.054
512	26-Jul	15:52:26	0.151	561	26-Jul	16:41:26	0.004
513	26-Jul	15:53:26	0	562	26-Jul	16:42:26	0.001

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
563	26-Jul	16:43:26	0.072				
564	26-Jul	16:44:26	0.004				
565	26-Jul	16:45:26	0.33				
566	26-Jul	16:46:26	0.053				
567	26-Jul	16:47:26	0.033				
568	26-Jul	16:48:26	0.033				
569	26-Jul	16:49:26	0.035				
570	26-Jul	16:50:26	0.053				
571	26-Jul	16:51:26	0.033				
572	26-Jul	16:52:26	0.186				
573	26-Jul	16:53:26	0.043				
574	26-Jul	16:54:26	0.015				
575	26-Jul	16:55:26	0.013				
576	26-Jul	16:56:26	0.04				
577	26-Jul	16:57:26	0.021				
578	26-Jul	16:58:26	0.018				
579	26-Jul	16:59:26	0.032				
580	26-Jul	17:00:26	0.327				
581	26-Jul	17:01:26	0.068				
582	26-Jul	17:02:26	0.017				
583	26-Jul	17:03:26	0.257				
584	26-Jul	17:04:26	0.733				
585	26-Jul	17:05:26	0.687				
586	26-Jul	17:06:26	0.19				
587	26-Jul	17:07:26	0.12				
588	26-Jul	17:08:26	0.101				
589	26-Jul	17:09:26	0.156				

July 30, 2001

pDR-1000
User ID: DuPont Site #1
Tag Number: 07
Number of logged points: 581
Start time and date: 07:17:20 30-Jul
Elapsed time: 09:41:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 4.307 mg/m³
Time at maximum: 10:37:04 Jul 30
Max STEL Concentration: 0.637 mg/m³
Time at max STEL: 15:20:51 Jul 30
Overall Avg Conc: 0.228 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	30-Jul	07:18:20	0.126	34	30-Jul	07:51:20	0.076
2	30-Jul	07:19:20	0.09	35	30-Jul	07:52:20	0.101
3	30-Jul	07:20:20	0.115	36	30-Jul	07:53:20	0.075
4	30-Jul	07:21:20	0.133	37	30-Jul	07:54:20	0.087
5	30-Jul	07:22:20	0.144	38	30-Jul	07:55:20	0.14
6	30-Jul	07:23:20	0.239	39	30-Jul	07:56:20	0.113
7	30-Jul	07:24:20	0.166	40	30-Jul	07:57:20	0.102
8	30-Jul	07:25:20	0.32	41	30-Jul	07:58:20	0.096
9	30-Jul	07:26:20	0.138	42	30-Jul	07:59:20	0.212
10	30-Jul	07:27:20	0.133	43	30-Jul	08:00:20	0.119
11	30-Jul	07:28:20	0.177	44	30-Jul	08:01:20	0.799
12	30-Jul	07:29:20	2.131	45	30-Jul	08:02:20	0.327
13	30-Jul	07:30:20	0.136	46	30-Jul	08:03:20	0.189
14	30-Jul	07:31:20	0.081	47	30-Jul	08:04:20	0.095
15	30-Jul	07:32:20	0.737	48	30-Jul	08:05:20	0.076
16	30-Jul	07:33:20	0.245	49	30-Jul	08:06:20	0.141
17	30-Jul	07:34:20	0.557	50	30-Jul	08:07:20	0.244
18	30-Jul	07:35:20	0.584	51	30-Jul	08:08:20	0.156
19	30-Jul	07:36:20	0.495	52	30-Jul	08:09:20	0.546
20	30-Jul	07:37:20	0.403	53	30-Jul	08:10:20	0.221
21	30-Jul	07:38:20	0.404	54	30-Jul	08:11:20	0.237
22	30-Jul	07:39:20	0.171	55	30-Jul	08:12:20	0.083
23	30-Jul	07:40:20	0.167	56	30-Jul	08:13:20	0.063
24	30-Jul	07:41:20	0.125	57	30-Jul	08:14:20	0.066
25	30-Jul	07:42:20	0.15	58	30-Jul	08:15:20	0.092
26	30-Jul	07:43:20	0.123	59	30-Jul	08:16:20	0.1
27	30-Jul	07:44:20	0.088	60	30-Jul	08:17:20	0.096
28	30-Jul	07:45:20	0.092	61	30-Jul	08:18:20	0.067
29	30-Jul	07:46:20	0.139	62	30-Jul	08:19:20	0.065
30	30-Jul	07:47:20	0.111	63	30-Jul	08:20:20	0.092
31	30-Jul	07:48:20	0.099	64	30-Jul	08:21:20	0.236
32	30-Jul	07:49:20	0.074	65	30-Jul	08:22:20	0.257
33	30-Jul	07:50:20	0.082	66	30-Jul	08:23:20	0.11

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	30-Jul	08:24:20	0.15	116	30-Jul	09:13:20	0.079
68	30-Jul	08:25:20	0.072	117	30-Jul	09:14:20	0.11
69	30-Jul	08:26:20	0.136	118	30-Jul	09:15:20	0.158
70	30-Jul	08:27:20	0.191	119	30-Jul	09:16:20	0.105
71	30-Jul	08:28:20	0.241	120	30-Jul	09:17:20	0.072
72	30-Jul	08:29:20	0.625	121	30-Jul	09:18:20	0.061
73	30-Jul	08:30:20	0.137	122	30-Jul	09:19:20	0.112
74	30-Jul	08:31:20	0.829	123	30-Jul	09:20:20	0.161
75	30-Jul	08:32:20	0.206	124	30-Jul	09:21:20	0.067
76	30-Jul	08:33:20	0.094	125	30-Jul	09:22:20	0.066
77	30-Jul	08:34:20	0.225	126	30-Jul	09:23:20	0.062
78	30-Jul	08:35:20	0.175	127	30-Jul	09:24:20	0.07
79	30-Jul	08:36:20	0.573	128	30-Jul	09:25:20	0.065
80	30-Jul	08:37:20	0.236	129	30-Jul	09:26:20	0.06
81	30-Jul	08:38:20	0.246	130	30-Jul	09:27:20	0.065
82	30-Jul	08:39:20	0.268	131	30-Jul	09:28:20	0.104
83	30-Jul	08:40:20	0.297	132	30-Jul	09:29:20	0.086
84	30-Jul	08:41:20	0.21	133	30-Jul	09:30:20	0.061
85	30-Jul	08:42:20	0.113	134	30-Jul	09:31:20	0.068
86	30-Jul	08:43:20	0.084	135	30-Jul	09:32:20	0.072
87	30-Jul	08:44:20	0.097	136	30-Jul	09:33:20	0.111
88	30-Jul	08:45:20	0.116	137	30-Jul	09:34:20	0.079
89	30-Jul	08:46:20	0.246	138	30-Jul	09:35:20	0.104
90	30-Jul	08:47:20	0.082	139	30-Jul	09:36:20	0.07
91	30-Jul	08:48:20	0.277	140	30-Jul	09:37:20	0.092
92	30-Jul	08:49:20	0.135	141	30-Jul	09:38:20	0.108
93	30-Jul	08:50:20	0.182	142	30-Jul	09:39:20	0.095
94	30-Jul	08:51:20	0.118	143	30-Jul	09:40:20	0.164
95	30-Jul	08:52:20	0.113	144	30-Jul	09:41:20	0.286
96	30-Jul	08:53:20	0.089	145	30-Jul	09:42:20	0.14
97	30-Jul	08:54:20	0.063	146	30-Jul	09:43:20	0.123
98	30-Jul	08:55:20	0.078	147	30-Jul	09:44:20	0.349
99	30-Jul	08:56:20	0.07	148	30-Jul	09:45:20	0.083
100	30-Jul	08:57:20	0.103	149	30-Jul	09:46:20	0.109
101	30-Jul	08:58:20	0.08	150	30-Jul	09:47:20	0.228
102	30-Jul	08:59:20	0.058	151	30-Jul	09:48:20	0.085
103	30-Jul	09:00:20	0.114	152	30-Jul	09:49:20	0.194
104	30-Jul	09:01:20	0.068	153	30-Jul	09:50:20	0.13
105	30-Jul	09:02:20	0.072	154	30-Jul	09:51:20	0.113
106	30-Jul	09:03:20	0.085	155	30-Jul	09:52:20	0.141
107	30-Jul	09:04:20	0.084	156	30-Jul	09:53:20	0.082
108	30-Jul	09:05:20	0.173	157	30-Jul	09:54:20	0.606
109	30-Jul	09:06:20	0.1	158	30-Jul	09:55:20	0.225
110	30-Jul	09:07:20	0.076	159	30-Jul	09:56:20	0.078
111	30-Jul	09:08:20	0.121	160	30-Jul	09:57:20	0.348
112	30-Jul	09:09:20	0.136	161	30-Jul	09:58:20	0.324
113	30-Jul	09:10:20	0.179	162	30-Jul	09:59:20	0.072
114	30-Jul	09:11:20	0.156	163	30-Jul	10:00:20	1.273
115	30-Jul	09:12:20	0.098	164	30-Jul	10:01:20	0.346

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	30-Jul	10:02:20	0.19	214	30-Jul	10:51:20	0.153
166	30-Jul	10:03:20	0.1	215	30-Jul	10:52:20	0.088
167	30-Jul	10:04:20	0.156	216	30-Jul	10:53:20	0.26
168	30-Jul	10:05:20	0.086	217	30-Jul	10:54:20	0.229
169	30-Jul	10:06:20	0.082	218	30-Jul	10:55:20	0.087
170	30-Jul	10:07:20	0.136	219	30-Jul	10:56:20	0.059
171	30-Jul	10:08:20	0.105	220	30-Jul	10:57:20	0.101
172	30-Jul	10:09:20	0.175	221	30-Jul	10:58:20	0.089
173	30-Jul	10:10:20	0.06	222	30-Jul	10:59:20	0.085
174	30-Jul	10:11:20	0.082	223	30-Jul	11:00:20	0.065
175	30-Jul	10:12:20	0.536	224	30-Jul	11:01:20	0.063
176	30-Jul	10:13:20	0.507	225	30-Jul	11:02:20	0.161
177	30-Jul	10:14:20	0.16	226	30-Jul	11:03:20	0.132
178	30-Jul	10:15:20	0.198	227	30-Jul	11:04:20	0.072
179	30-Jul	10:16:20	0.085	228	30-Jul	11:05:20	0.064
180	30-Jul	10:17:20	0.063	229	30-Jul	11:06:20	0.083
181	30-Jul	10:18:20	0.062	230	30-Jul	11:07:20	0.152
182	30-Jul	10:19:20	0.062	231	30-Jul	11:08:20	0.14
183	30-Jul	10:20:20	0.063	232	30-Jul	11:09:20	0.063
184	30-Jul	10:21:20	0.057	233	30-Jul	11:10:20	0.063
185	30-Jul	10:22:20	0.061	234	30-Jul	11:11:20	0.064
186	30-Jul	10:23:20	0.073	235	30-Jul	11:12:20	0.076
187	30-Jul	10:24:20	0.072	236	30-Jul	11:13:20	0.068
188	30-Jul	10:25:20	0.055	237	30-Jul	11:14:20	0.061
189	30-Jul	10:26:20	0.06	238	30-Jul	11:15:20	0.121
190	30-Jul	10:27:20	0.055	239	30-Jul	11:16:20	0.071
191	30-Jul	10:28:20	0.058	240	30-Jul	11:17:20	0.148
192	30-Jul	10:29:20	0.093	241	30-Jul	11:18:20	0.167
193	30-Jul	10:30:20	0.06	242	30-Jul	11:19:20	0.223
194	30-Jul	10:31:20	0.131	243	30-Jul	11:20:20	0.14
195	30-Jul	10:32:20	0.146	244	30-Jul	11:21:20	0.125
196	30-Jul	10:33:20	0.646	245	30-Jul	11:22:20	0.169
197	30-Jul	10:34:20	0.229	246	30-Jul	11:23:20	0.243
198	30-Jul	10:35:20	0.302	247	30-Jul	11:24:20	0.103
199	30-Jul	10:36:20	3.17	248	30-Jul	11:25:20	0.313
200	30-Jul	10:37:20	1.316	249	30-Jul	11:26:20	0.228
201	30-Jul	10:38:20	0.175	250	30-Jul	11:27:20	0.083
202	30-Jul	10:39:20	0.096	251	30-Jul	11:28:20	0.061
203	30-Jul	10:40:20	0.104	252	30-Jul	11:29:20	0.27
204	30-Jul	10:41:20	0.102	253	30-Jul	11:30:20	1.091
205	30-Jul	10:42:20	0.144	254	30-Jul	11:31:20	0.195
206	30-Jul	10:43:20	0.072	255	30-Jul	11:32:20	0.191
207	30-Jul	10:44:20	0.084	256	30-Jul	11:33:20	0.253
208	30-Jul	10:45:20	0.103	257	30-Jul	11:34:20	0.158
209	30-Jul	10:46:20	0.327	258	30-Jul	11:35:20	0.113
210	30-Jul	10:47:20	0.175	259	30-Jul	11:36:20	0.071
211	30-Jul	10:48:20	0.128	260	30-Jul	11:37:20	0.093
212	30-Jul	10:49:20	0.07	261	30-Jul	11:38:20	0.06
213	30-Jul	10:50:20	0.08	262	30-Jul	11:39:20	0.063

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	30-Jul	11:40:20	0.065	312	30-Jul	12:29:20	0.06
264	30-Jul	11:41:20	0.061	313	30-Jul	12:30:20	0.06
265	30-Jul	11:42:20	0.082	314	30-Jul	12:31:20	0.059
266	30-Jul	11:43:20	0.071	315	30-Jul	12:32:20	0.122
267	30-Jul	11:44:20	0.168	316	30-Jul	12:33:20	0.119
268	30-Jul	11:45:20	0.64	317	30-Jul	12:34:20	0.157
269	30-Jul	11:46:20	0.363	318	30-Jul	12:35:20	0.255
270	30-Jul	11:47:20	0.154	319	30-Jul	12:36:20	0.238
271	30-Jul	11:48:20	0.399	320	30-Jul	12:37:20	0.165
272	30-Jul	11:49:20	0.509	321	30-Jul	12:38:20	0.281
273	30-Jul	11:50:20	0.616	322	30-Jul	12:39:20	0.288
274	30-Jul	11:51:20	0.597	323	30-Jul	12:40:20	1.234
275	30-Jul	11:52:20	0.224	324	30-Jul	12:41:20	0.159
276	30-Jul	11:53:20	0.78	325	30-Jul	12:42:20	0.084
277	30-Jul	11:54:20	0.091	326	30-Jul	12:43:20	1.496
278	30-Jul	11:55:20	0.088	327	30-Jul	12:44:20	0.102
279	30-Jul	11:56:20	0.081	328	30-Jul	12:45:20	0.076
280	30-Jul	11:57:20	0.075	329	30-Jul	12:46:20	0.138
281	30-Jul	11:58:20	0.073	330	30-Jul	12:47:20	0.122
282	30-Jul	11:59:20	0.064	331	30-Jul	12:48:20	0.236
283	30-Jul	12:00:20	0.06	332	30-Jul	12:49:20	0.142
284	30-Jul	12:01:20	0.06	333	30-Jul	12:50:20	0.121
285	30-Jul	12:02:20	0.06	334	30-Jul	12:51:20	0.247
286	30-Jul	12:03:20	0.062	335	30-Jul	12:52:20	0.175
287	30-Jul	12:04:20	0.059	336	30-Jul	12:53:20	0.278
288	30-Jul	12:05:20	0.06	337	30-Jul	12:54:20	0.142
289	30-Jul	12:06:20	0.059	338	30-Jul	12:55:20	0.183
290	30-Jul	12:07:20	0.059	339	30-Jul	12:56:20	0.292
291	30-Jul	12:08:20	0.06	340	30-Jul	12:57:20	0.184
292	30-Jul	12:09:20	0.06	341	30-Jul	12:58:20	0.115
293	30-Jul	12:10:20	0.062	342	30-Jul	12:59:20	0.188
294	30-Jul	12:11:20	0.06	343	30-Jul	13:00:20	0.241
295	30-Jul	12:12:20	0.06	344	30-Jul	13:01:20	0.165
296	30-Jul	12:13:20	0.062	345	30-Jul	13:02:20	0.084
297	30-Jul	12:14:20	0.059	346	30-Jul	13:03:20	0.482
298	30-Jul	12:15:20	0.059	347	30-Jul	13:04:20	0.405
299	30-Jul	12:16:20	0.059	348	30-Jul	13:05:20	0.28
300	30-Jul	12:17:20	0.06	349	30-Jul	13:06:20	0.099
301	30-Jul	12:18:20	0.059	350	30-Jul	13:07:20	0.246
302	30-Jul	12:19:20	0.06	351	30-Jul	13:08:20	0.147
303	30-Jul	12:20:20	0.06	352	30-Jul	13:09:20	0.185
304	30-Jul	12:21:20	0.059	353	30-Jul	13:10:20	0.145
305	30-Jul	12:22:20	0.059	354	30-Jul	13:11:20	0.105
306	30-Jul	12:23:20	0.059	355	30-Jul	13:12:20	0.178
307	30-Jul	12:24:20	0.059	356	30-Jul	13:13:20	0.649
308	30-Jul	12:25:20	0.059	357	30-Jul	13:14:20	0.399
309	30-Jul	12:26:20	0.059	358	30-Jul	13:15:20	0.168
310	30-Jul	12:27:20	0.06	359	30-Jul	13:16:20	0.155
311	30-Jul	12:28:20	0.059	360	30-Jul	13:17:20	0.145

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
361	30-Jul	13:18:20	0.158	410	30-Jul	14:07:20	0.075
362	30-Jul	13:19:20	0.129	411	30-Jul	14:08:20	0.099
363	30-Jul	13:20:20	0.114	412	30-Jul	14:09:20	0.098
364	30-Jul	13:21:20	0.115	413	30-Jul	14:10:20	0.09
365	30-Jul	13:22:20	0.063	414	30-Jul	14:11:20	0.089
366	30-Jul	13:23:20	0.1	415	30-Jul	14:12:20	0.063
367	30-Jul	13:24:20	0.102	416	30-Jul	14:13:20	0.075
368	30-Jul	13:25:20	0.083	417	30-Jul	14:14:20	0.069
369	30-Jul	13:26:20	0.423	418	30-Jul	14:15:20	0.09
370	30-Jul	13:27:20	0.077	419	30-Jul	14:16:20	0.214
371	30-Jul	13:28:20	0.095	420	30-Jul	14:17:20	0.209
372	30-Jul	13:29:20	0.097	421	30-Jul	14:18:20	0.191
373	30-Jul	13:30:20	0.121	422	30-Jul	14:19:20	0.072
374	30-Jul	13:31:20	0.273	423	30-Jul	14:20:20	0.062
375	30-Jul	13:32:20	0.123	424	30-Jul	14:21:20	0.069
376	30-Jul	13:33:20	0.078	425	30-Jul	14:22:20	0.317
377	30-Jul	13:34:20	0.109	426	30-Jul	14:23:20	1.108
378	30-Jul	13:35:20	0.089	427	30-Jul	14:24:20	2.577
379	30-Jul	13:36:20	0.125	428	30-Jul	14:25:20	0.154
380	30-Jul	13:37:20	0.837	429	30-Jul	14:26:20	0.1
381	30-Jul	13:38:20	2.659	430	30-Jul	14:27:20	0.093
382	30-Jul	13:39:20	0.293	431	30-Jul	14:28:20	0.385
383	30-Jul	13:40:20	0.203	432	30-Jul	14:29:20	0.159
384	30-Jul	13:41:20	0.413	433	30-Jul	14:30:20	0.102
385	30-Jul	13:42:20	0.253	434	30-Jul	14:31:20	0.203
386	30-Jul	13:43:20	0.3	435	30-Jul	14:32:20	0.724
387	30-Jul	13:44:20	0.233	436	30-Jul	14:33:20	1.766
388	30-Jul	13:45:20	0.162	437	30-Jul	14:34:20	0.943
389	30-Jul	13:46:20	0.446	438	30-Jul	14:35:20	0.173
390	30-Jul	13:47:20	0.166	439	30-Jul	14:36:20	0.181
391	30-Jul	13:48:20	0.645	440	30-Jul	14:37:20	0.078
392	30-Jul	13:49:20	0.121	441	30-Jul	14:38:20	0.063
393	30-Jul	13:50:20	0.223	442	30-Jul	14:39:20	0.092
394	30-Jul	13:51:20	0.346	443	30-Jul	14:40:20	0.154
395	30-Jul	13:52:20	0.418	444	30-Jul	14:41:20	0.104
396	30-Jul	13:53:20	0.107	445	30-Jul	14:42:20	0.123
397	30-Jul	13:54:20	0.174	446	30-Jul	14:43:20	0.098
398	30-Jul	13:55:20	0.091	447	30-Jul	14:44:20	0.07
399	30-Jul	13:56:20	0.129	448	30-Jul	14:45:20	0.46
400	30-Jul	13:57:20	0.138	449	30-Jul	14:46:20	0.259
401	30-Jul	13:58:20	0.778	450	30-Jul	14:47:20	0.354
402	30-Jul	13:59:20	0.319	451	30-Jul	14:48:20	0.146
403	30-Jul	14:00:20	0.072	452	30-Jul	14:49:20	0.195
404	30-Jul	14:01:20	0.072	453	30-Jul	14:50:20	0.121
405	30-Jul	14:02:20	0.162	454	30-Jul	14:51:20	0.203
406	30-Jul	14:03:20	0.07	455	30-Jul	14:52:20	0.088
407	30-Jul	14:04:20	0.158	456	30-Jul	14:53:20	0.079
408	30-Jul	14:05:20	0.82	457	30-Jul	14:54:20	0.07
409	30-Jul	14:06:20	0.325	458	30-Jul	14:55:20	0.072

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
459	30-Jul	14:56:20	0.066	508	30-Jul	15:45:20	0.132
460	30-Jul	14:57:20	0.066	509	30-Jul	15:46:20	0.256
461	30-Jul	14:58:20	0.084	510	30-Jul	15:47:20	0.282
462	30-Jul	14:59:20	0.27	511	30-Jul	15:48:20	0.081
463	30-Jul	15:00:20	0.072	512	30-Jul	15:49:20	2.905
464	30-Jul	15:01:20	0.066	513	30-Jul	15:50:20	0.097
465	30-Jul	15:02:20	0.077	514	30-Jul	15:51:20	0.082
466	30-Jul	15:03:20	0.06	515	30-Jul	15:52:20	0.115
467	30-Jul	15:04:20	0.079	516	30-Jul	15:53:20	0.086
468	30-Jul	15:05:20	0.071	517	30-Jul	15:54:20	0.076
469	30-Jul	15:06:20	0.557	518	30-Jul	15:55:20	0.14
470	30-Jul	15:07:20	0.193	519	30-Jul	15:56:20	0.082
471	30-Jul	15:08:20	2.011	520	30-Jul	15:57:20	0.116
472	30-Jul	15:09:20	0.274	521	30-Jul	15:58:20	0.069
473	30-Jul	15:10:20	0.226	522	30-Jul	15:59:20	0.077
474	30-Jul	15:11:20	1.547	523	30-Jul	16:00:20	0.121
475	30-Jul	15:12:20	0.304	524	30-Jul	16:01:20	0.115
476	30-Jul	15:13:20	0.251	525	30-Jul	16:02:20	0.078
477	30-Jul	15:14:20	0.2	526	30-Jul	16:03:20	0.089
478	30-Jul	15:15:20	0.524	527	30-Jul	16:04:20	0.27
479	30-Jul	15:16:20	0.607	528	30-Jul	16:05:20	0.407
480	30-Jul	15:17:20	0.281	529	30-Jul	16:06:20	0.572
481	30-Jul	15:18:20	0.183	530	30-Jul	16:07:20	0.224
482	30-Jul	15:19:20	1.364	531	30-Jul	16:08:20	0.131
483	30-Jul	15:20:20	1.004	532	30-Jul	16:09:20	0.151
484	30-Jul	15:21:20	0.158	533	30-Jul	16:10:20	0.13
485	30-Jul	15:22:20	0.161	534	30-Jul	16:11:20	0.122
486	30-Jul	15:23:20	0.141	535	30-Jul	16:12:20	0.344
487	30-Jul	15:24:20	0.208	536	30-Jul	16:13:20	0.269
488	30-Jul	15:25:20	0.377	537	30-Jul	16:14:20	0.098
489	30-Jul	15:26:20	0.267	538	30-Jul	16:15:20	0.081
490	30-Jul	15:27:20	0.354	539	30-Jul	16:16:20	0.079
491	30-Jul	15:28:20	0.116	540	30-Jul	16:17:20	0.119
492	30-Jul	15:29:20	0.139	541	30-Jul	16:18:20	0.27
493	30-Jul	15:30:20	0.228	542	30-Jul	16:19:20	0.139
494	30-Jul	15:31:20	0.32	543	30-Jul	16:20:20	0.09
495	30-Jul	15:32:20	0.137	544	30-Jul	16:21:20	0.077
496	30-Jul	15:33:20	0.221	545	30-Jul	16:22:20	0.131
497	30-Jul	15:34:20	0.167	546	30-Jul	16:23:20	0.19
498	30-Jul	15:35:20	0.393	547	30-Jul	16:24:20	0.356
499	30-Jul	15:36:20	0.325	548	30-Jul	16:25:20	0.305
500	30-Jul	15:37:20	0.205	549	30-Jul	16:26:20	0.391
501	30-Jul	15:38:20	0.456	550	30-Jul	16:27:20	0.082
502	30-Jul	15:39:20	0.329	551	30-Jul	16:28:20	0.088
503	30-Jul	15:40:20	0.527	552	30-Jul	16:29:20	0.079
504	30-Jul	15:41:20	0.138	553	30-Jul	16:30:20	0.087
505	30-Jul	15:42:20	0.227	554	30-Jul	16:31:20	1.369
506	30-Jul	15:43:20	0.188	555	30-Jul	16:32:20	0.444
507	30-Jul	15:44:20	0.11	556	30-Jul	16:33:20	0.395

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
557	30-Jul	16:34:20	0.277				
558	30-Jul	16:35:20	0.18				
559	30-Jul	16:36:20	0.7				
560	30-Jul	16:37:20	0.152				
561	30-Jul	16:38:20	0.194				
562	30-Jul	16:39:20	0.327				
563	30-Jul	16:40:20	0.268				
564	30-Jul	16:41:20	0.128				
565	30-Jul	16:42:20	0.125				
566	30-Jul	16:43:20	0.149				
567	30-Jul	16:44:20	0.219				
568	30-Jul	16:45:20	0.188				
569	30-Jul	16:46:20	0.145				
570	30-Jul	16:47:20	0.14				
571	30-Jul	16:48:20	0.251				
572	30-Jul	16:49:20	0.164				
573	30-Jul	16:50:20	0.553				
574	30-Jul	16:51:20	0.078				
575	30-Jul	16:52:20	0.138				
576	30-Jul	16:53:20	0.228				
577	30-Jul	16:54:20	0.097				
578	30-Jul	16:55:20	0.495				
579	30-Jul	16:56:20	0.913				
580	30-Jul	16:57:20	0.585				
581	30-Jul	16:58:20	0.638				

July 31, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 08
Number of logged points: 191
Start time and date: 06:58:10 31-Jul
Elapsed time: 03:11:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.639 mg/m³
Time at maximum: 10:00:43 Jul 31
Max STEL Concentration: 0.668 mg/m³
Time at max STEL: 07:48:10 Jul 31
Overall Avg Conc: 0.330 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	31-Jul	06:59:10	0.101	34	31-Jul	07:32:10	0.263
2	31-Jul	07:00:10	0.095	35	31-Jul	07:33:10	0.155
3	31-Jul	07:01:10	0.096	36	31-Jul	07:34:10	0.771
4	31-Jul	07:02:10	0.109	37	31-Jul	07:35:10	0.98
5	31-Jul	07:03:10	0.094	38	31-Jul	07:36:10	0.861
6	31-Jul	07:04:10	0.094	39	31-Jul	07:37:10	1.454
7	31-Jul	07:05:10	0.083	40	31-Jul	07:38:10	1.184
8	31-Jul	07:06:10	0.086	41	31-Jul	07:39:10	0.627
9	31-Jul	07:07:10	0.079	42	31-Jul	07:40:10	1.19
10	31-Jul	07:08:10	0.08	43	31-Jul	07:41:10	0.557
11	31-Jul	07:09:10	0.076	44	31-Jul	07:42:10	0.419
12	31-Jul	07:10:10	0.076	45	31-Jul	07:43:10	0.255
13	31-Jul	07:11:10	0.084	46	31-Jul	07:44:10	0.269
14	31-Jul	07:12:10	0.085	47	31-Jul	07:45:10	0.344
15	31-Jul	07:13:10	0.084	48	31-Jul	07:46:10	0.42
16	31-Jul	07:14:10	0.079	49	31-Jul	07:47:10	0.459
17	31-Jul	07:15:10	0.076	50	31-Jul	07:48:10	0.229
18	31-Jul	07:16:10	0.111	51	31-Jul	07:49:10	0.74
19	31-Jul	07:17:10	0.151	52	31-Jul	07:50:10	0.802
20	31-Jul	07:18:10	0.134	53	31-Jul	07:51:10	0.311
21	31-Jul	07:19:10	0.101	54	31-Jul	07:52:10	0.668
22	31-Jul	07:20:10	0.082	55	31-Jul	07:53:10	0.118
23	31-Jul	07:21:10	0.218	56	31-Jul	07:54:10	0.123
24	31-Jul	07:22:10	0.238	57	31-Jul	07:55:10	0.173
25	31-Jul	07:23:10	0.101	58	31-Jul	07:56:10	0.656
26	31-Jul	07:24:10	0.199	59	31-Jul	07:57:10	0.595
27	31-Jul	07:25:10	0.304	60	31-Jul	07:58:10	0.177
28	31-Jul	07:26:10	0.32	61	31-Jul	07:59:10	0.167
29	31-Jul	07:27:10	0.198	62	31-Jul	08:00:10	0.391
30	31-Jul	07:28:10	0.195	63	31-Jul	08:01:10	0.563
31	31-Jul	07:29:10	0.324	64	31-Jul	08:02:10	0.841
32	31-Jul	07:30:10	0.314	65	31-Jul	08:03:10	1.121
33	31-Jul	07:31:10	0.554	66	31-Jul	08:04:10	0.177

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	31-Jul	08:05:10	0.654	116	31-Jul	08:54:10	0.24
68	31-Jul	08:06:10	0.496	117	31-Jul	08:55:10	0.179
69	31-Jul	08:07:10	0.525	118	31-Jul	08:56:10	0.11
70	31-Jul	08:08:10	0.474	119	31-Jul	08:57:10	0.369
71	31-Jul	08:09:10	0.133	120	31-Jul	08:58:10	0.556
72	31-Jul	08:10:10	0.27	121	31-Jul	08:59:10	0.866
73	31-Jul	08:11:10	0.168	122	31-Jul	09:00:10	0.239
74	31-Jul	08:12:10	0.132	123	31-Jul	09:01:10	0.612
75	31-Jul	08:13:10	0.09	124	31-Jul	09:02:10	0.24
76	31-Jul	08:14:10	0.093	125	31-Jul	09:03:10	0.221
77	31-Jul	08:15:10	0.286	126	31-Jul	09:04:10	0.36
78	31-Jul	08:16:10	0.447	127	31-Jul	09:05:10	0.122
79	31-Jul	08:17:10	0.167	128	31-Jul	09:06:10	0.297
80	31-Jul	08:18:10	0.143	129	31-Jul	09:07:10	1.172
81	31-Jul	08:19:10	0.236	130	31-Jul	09:08:10	0.272
82	31-Jul	08:20:10	0.618	131	31-Jul	09:09:10	0.474
83	31-Jul	08:21:10	0.178	132	31-Jul	09:10:10	0.189
84	31-Jul	08:22:10	0.118	133	31-Jul	09:11:10	0.157
85	31-Jul	08:23:10	0.147	134	31-Jul	09:12:10	0.284
86	31-Jul	08:24:10	0.159	135	31-Jul	09:13:10	0.259
87	31-Jul	08:25:10	0.302	136	31-Jul	09:14:10	0.252
88	31-Jul	08:26:10	0.121	137	31-Jul	09:15:10	0.718
89	31-Jul	08:27:10	0.144	138	31-Jul	09:16:10	0.627
90	31-Jul	08:28:10	0.146	139	31-Jul	09:17:10	1.82
91	31-Jul	08:29:10	0.1	140	31-Jul	09:18:10	0.124
92	31-Jul	08:30:10	0.454	141	31-Jul	09:19:10	0.336
93	31-Jul	08:31:10	1.063	142	31-Jul	09:20:10	0.143
94	31-Jul	08:32:10	0.399	143	31-Jul	09:21:10	0.246
95	31-Jul	08:33:10	0.097	144	31-Jul	09:22:10	0.104
96	31-Jul	08:34:10	0.098	145	31-Jul	09:23:10	0.999
97	31-Jul	08:35:10	0.093	146	31-Jul	09:24:10	0.405
98	31-Jul	08:36:10	0.1	147	31-Jul	09:25:10	0.572
99	31-Jul	08:37:10	0.086	148	31-Jul	09:26:10	0.242
100	31-Jul	08:38:10	0.088	149	31-Jul	09:27:10	0.361
101	31-Jul	08:39:10	0.152	150	31-Jul	09:28:10	0.203
102	31-Jul	08:40:10	0.104	151	31-Jul	09:29:10	0.096
103	31-Jul	08:41:10	0.098	152	31-Jul	09:30:10	0.096
104	31-Jul	08:42:10	0.101	153	31-Jul	09:31:10	0.089
105	31-Jul	08:43:10	0.187	154	31-Jul	09:32:10	0.111
106	31-Jul	08:44:10	0.136	155	31-Jul	09:33:10	0.148
107	31-Jul	08:45:10	0.176	156	31-Jul	09:34:10	0.519
108	31-Jul	08:46:10	0.107	157	31-Jul	09:35:10	0.13
109	31-Jul	08:47:10	0.143	158	31-Jul	09:36:10	0.853
110	31-Jul	08:48:10	0.105	159	31-Jul	09:37:10	0.472
111	31-Jul	08:49:10	0.112	160	31-Jul	09:38:10	0.262
112	31-Jul	08:50:10	0.133	161	31-Jul	09:39:10	0.148
113	31-Jul	08:51:10	0.187	162	31-Jul	09:40:10	0.629
114	31-Jul	08:52:10	0.523	163	31-Jul	09:41:10	0.313
115	31-Jul	08:53:10	0.312	164	31-Jul	09:42:10	0.285

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	31-Jul	09:43:10	0.098				
166	31-Jul	09:44:10	0.154				
167	31-Jul	09:45:10	0.151				
168	31-Jul	09:46:10	0.337				
169	31-Jul	09:47:10	0.772				
170	31-Jul	09:48:10	0.254				
171	31-Jul	09:49:10	0.136				
172	31-Jul	09:50:10	0.128				
173	31-Jul	09:51:10	0.086				
174	31-Jul	09:52:10	0.095				
175	31-Jul	09:53:10	0.107				
176	31-Jul	09:54:10	0.093				
177	31-Jul	09:55:10	0.215				
178	31-Jul	09:56:10	0.3				
179	31-Jul	09:57:10	0.355				
180	31-Jul	09:58:10	0.216				
181	31-Jul	09:59:10	0.257				
182	31-Jul	10:00:10	0.885				
183	31-Jul	10:01:10	2.371				
184	31-Jul	10:02:10	0.41				
185	31-Jul	10:03:10	0.194				
186	31-Jul	10:04:10	0.23				
187	31-Jul	10:05:10	0.308				
188	31-Jul	10:06:10	0.378				
189	31-Jul	10:07:10	0.268				
190	31-Jul	10:08:10	1.022				
191	31-Jul	10:09:10	0.291				

August 1, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 01
Number of logged points: 270
Start time and date: 07:15:30 01-Aug
Elapsed time: 04:30:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 2.681 mg/m³
Time at maximum: 07:25:19 Aug 01
Max STEL Concentration: 0.569 mg/m³
Time at max STEL: 07:35:00 Aug 01
Overall Avg Conc: 0.254 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	1-Aug	07:16:30	0.111	34	1-Aug	07:49:30	0.2
2	1-Aug	07:17:30	0.264	35	1-Aug	07:50:30	0.162
3	1-Aug	07:18:30	0.312	36	1-Aug	07:51:30	0.159
4	1-Aug	07:19:30	0.217	37	1-Aug	07:52:30	0.366
5	1-Aug	07:20:30	0.226	38	1-Aug	07:53:30	0.179
6	1-Aug	07:21:30	0.279	39	1-Aug	07:54:30	0.226
7	1-Aug	07:22:30	0.474	40	1-Aug	07:55:30	0.239
8	1-Aug	07:23:30	0.334	41	1-Aug	07:56:30	1.216
9	1-Aug	07:24:30	0.929	42	1-Aug	07:57:30	0.181
10	1-Aug	07:25:30	2.036	43	1-Aug	07:58:30	0.245
11	1-Aug	07:26:30	0.704	44	1-Aug	07:59:30	0.255
12	1-Aug	07:27:30	0.288	45	1-Aug	08:00:30	0.202
13	1-Aug	07:28:30	0.302	46	1-Aug	08:01:30	0.258
14	1-Aug	07:29:30	0.562	47	1-Aug	08:02:30	0.269
15	1-Aug	07:30:30	0.563	48	1-Aug	08:03:30	0.118
16	1-Aug	07:31:30	0.483	49	1-Aug	08:04:30	0.152
17	1-Aug	07:32:30	0.383	50	1-Aug	08:05:30	0.17
18	1-Aug	07:33:30	0.409	51	1-Aug	08:06:30	0.14
19	1-Aug	07:34:30	0.51	52	1-Aug	08:07:30	0.138
20	1-Aug	07:35:30	0.244	53	1-Aug	08:08:30	0.137
21	1-Aug	07:36:30	0.146	54	1-Aug	08:09:30	0.201
22	1-Aug	07:37:30	0.164	55	1-Aug	08:10:30	0.301
23	1-Aug	07:38:30	0.155	56	1-Aug	08:11:30	0.162
24	1-Aug	07:39:30	0.151	57	1-Aug	08:12:30	0.133
25	1-Aug	07:40:30	0.117	58	1-Aug	08:13:30	0.131
26	1-Aug	07:41:30	0.11	59	1-Aug	08:14:30	0.25
27	1-Aug	07:42:30	0.133	60	1-Aug	08:15:30	0.184
28	1-Aug	07:43:30	0.115	61	1-Aug	08:16:30	0.188
29	1-Aug	07:44:30	0.161	62	1-Aug	08:17:30	0.167
30	1-Aug	07:45:30	0.247	63	1-Aug	08:18:30	0.127
31	1-Aug	07:46:30	0.159	64	1-Aug	08:19:30	0.15
32	1-Aug	07:47:30	0.13	65	1-Aug	08:20:30	0.186
33	1-Aug	07:48:30	0.218	66	1-Aug	08:21:30	0.278

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	1-Aug	08:22:30	0.147	116	1-Aug	09:11:30	0.22
68	1-Aug	08:23:30	0.123	117	1-Aug	09:12:30	0.155
69	1-Aug	08:24:30	0.116	118	1-Aug	09:13:30	0.155
70	1-Aug	08:25:30	0.139	119	1-Aug	09:14:30	0.336
71	1-Aug	08:26:30	0.102	120	1-Aug	09:15:30	0.212
72	1-Aug	08:27:30	0.114	121	1-Aug	09:16:30	0.153
73	1-Aug	08:28:30	0.109	122	1-Aug	09:17:30	0.177
74	1-Aug	08:29:30	0.125	123	1-Aug	09:18:30	0.274
75	1-Aug	08:30:30	0.123	124	1-Aug	09:19:30	0.321
76	1-Aug	08:31:30	0.126	125	1-Aug	09:20:30	0.271
77	1-Aug	08:32:30	0.114	126	1-Aug	09:21:30	0.205
78	1-Aug	08:33:30	0.171	127	1-Aug	09:22:30	0.903
79	1-Aug	08:34:30	0.489	128	1-Aug	09:23:30	0.833
80	1-Aug	08:35:30	0.236	129	1-Aug	09:24:30	0.208
81	1-Aug	08:36:30	0.241	130	1-Aug	09:25:30	0.275
82	1-Aug	08:37:30	0.129	131	1-Aug	09:26:30	0.228
83	1-Aug	08:38:30	0.14	132	1-Aug	09:27:30	0.223
84	1-Aug	08:39:30	0.276	133	1-Aug	09:28:30	0.305
85	1-Aug	08:40:30	0.185	134	1-Aug	09:29:30	0.159
86	1-Aug	08:41:30	0.202	135	1-Aug	09:30:30	0.116
87	1-Aug	08:42:30	0.175	136	1-Aug	09:31:30	0.127
88	1-Aug	08:43:30	0.156	137	1-Aug	09:32:30	0.318
89	1-Aug	08:44:30	0.182	138	1-Aug	09:33:30	1.022
90	1-Aug	08:45:30	0.207	139	1-Aug	09:34:30	0.112
91	1-Aug	08:46:30	0.247	140	1-Aug	09:35:30	0.144
92	1-Aug	08:47:30	0.189	141	1-Aug	09:36:30	0.459
93	1-Aug	08:48:30	0.231	142	1-Aug	09:37:30	0.202
94	1-Aug	08:49:30	0.23	143	1-Aug	09:38:30	0.215
95	1-Aug	08:50:30	0.157	144	1-Aug	09:39:30	0.324
96	1-Aug	08:51:30	0.297	145	1-Aug	09:40:30	0.587
97	1-Aug	08:52:30	0.272	146	1-Aug	09:41:30	0.616
98	1-Aug	08:53:30	0.53	147	1-Aug	09:42:30	0.587
99	1-Aug	08:54:30	0.274	148	1-Aug	09:43:30	0.569
100	1-Aug	08:55:30	0.182	149	1-Aug	09:44:30	0.208
101	1-Aug	08:56:30	0.253	150	1-Aug	09:45:30	0.213
102	1-Aug	08:57:30	0.332	151	1-Aug	09:46:30	0.572
103	1-Aug	08:58:30	0.15	152	1-Aug	09:47:30	0.373
104	1-Aug	08:59:30	0.506	153	1-Aug	09:48:30	0.287
105	1-Aug	09:00:30	0.223	154	1-Aug	09:49:30	0.123
106	1-Aug	09:01:30	0.173	155	1-Aug	09:50:30	0.173
107	1-Aug	09:02:30	0.385	156	1-Aug	09:51:30	0.363
108	1-Aug	09:03:30	0.163	157	1-Aug	09:52:30	0.403
109	1-Aug	09:04:30	0.148	158	1-Aug	09:53:30	0.372
110	1-Aug	09:05:30	0.359	159	1-Aug	09:54:30	0.286
111	1-Aug	09:06:30	0.184	160	1-Aug	09:55:30	0.125
112	1-Aug	09:07:30	0.215	161	1-Aug	09:56:30	0.103
113	1-Aug	09:08:30	0.329	162	1-Aug	09:57:30	0.277
114	1-Aug	09:09:30	0.168	163	1-Aug	09:58:30	0.145
115	1-Aug	09:10:30	0.226	164	1-Aug	09:59:30	0.732

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	1-Aug	10:00:30	0.204	214	1-Aug	10:49:30	0.098
166	1-Aug	10:01:30	0.266	215	1-Aug	10:50:30	0.113
167	1-Aug	10:02:30	0.112	216	1-Aug	10:51:30	0.104
168	1-Aug	10:03:30	0.785	217	1-Aug	10:52:30	0.11
169	1-Aug	10:04:30	0.105	218	1-Aug	10:53:30	0.106
170	1-Aug	10:05:30	0.262	219	1-Aug	10:54:30	0.102
171	1-Aug	10:06:30	0.882	220	1-Aug	10:55:30	0.099
172	1-Aug	10:07:30	1.2	221	1-Aug	10:56:30	0.101
173	1-Aug	10:08:30	0.129	222	1-Aug	10:57:30	0.293
174	1-Aug	10:09:30	0.107	223	1-Aug	10:58:30	0.201
175	1-Aug	10:10:30	0.132	224	1-Aug	10:59:30	0.129
176	1-Aug	10:11:30	0.129	225	1-Aug	11:00:30	0.098
177	1-Aug	10:12:30	0.176	226	1-Aug	11:01:30	0.098
178	1-Aug	10:13:30	0.156	227	1-Aug	11:02:30	0.428
179	1-Aug	10:14:30	0.598	228	1-Aug	11:03:30	0.589
180	1-Aug	10:15:30	0.205	229	1-Aug	11:04:30	0.103
181	1-Aug	10:16:30	0.113	230	1-Aug	11:05:30	0.1
182	1-Aug	10:17:30	0.119	231	1-Aug	11:06:30	0.103
183	1-Aug	10:18:30	1.242	232	1-Aug	11:07:30	0.1
184	1-Aug	10:19:30	0.376	233	1-Aug	11:08:30	0.1
185	1-Aug	10:20:30	0.619	234	1-Aug	11:09:30	0.129
186	1-Aug	10:21:30	0.13	235	1-Aug	11:10:30	0.139
187	1-Aug	10:22:30	0.37	236	1-Aug	11:11:30	0.183
188	1-Aug	10:23:30	0.129	237	1-Aug	11:12:30	0.146
189	1-Aug	10:24:30	0.108	238	1-Aug	11:13:30	0.115
190	1-Aug	10:25:30	0.262	239	1-Aug	11:14:30	0.1
191	1-Aug	10:26:30	0.127	240	1-Aug	11:15:30	0.28
192	1-Aug	10:27:30	0.211	241	1-Aug	11:16:30	0.147
193	1-Aug	10:28:30	0.195	242	1-Aug	11:17:30	0.132
194	1-Aug	10:29:30	0.476	243	1-Aug	11:18:30	0.124
195	1-Aug	10:30:30	0.199	244	1-Aug	11:19:30	0.098
196	1-Aug	10:31:30	0.565	245	1-Aug	11:20:30	0.097
197	1-Aug	10:32:30	0.142	246	1-Aug	11:21:30	0.115
198	1-Aug	10:33:30	0.205	247	1-Aug	11:22:30	0.149
199	1-Aug	10:34:30	0.143	248	1-Aug	11:23:30	0.098
200	1-Aug	10:35:30	0.113	249	1-Aug	11:24:30	0.188
201	1-Aug	10:36:30	0.114	250	1-Aug	11:25:30	0.111
202	1-Aug	10:37:30	0.226	251	1-Aug	11:26:30	0.102
203	1-Aug	10:38:30	0.195	252	1-Aug	11:27:30	0.197
204	1-Aug	10:39:30	0.101	253	1-Aug	11:28:30	0.165
205	1-Aug	10:40:30	0.109	254	1-Aug	11:29:30	0.108
206	1-Aug	10:41:30	0.1	255	1-Aug	11:30:30	0.114
207	1-Aug	10:42:30	0.103	256	1-Aug	11:31:30	0.1
208	1-Aug	10:43:30	0.108	257	1-Aug	11:32:30	0.118
209	1-Aug	10:44:30	0.156	258	1-Aug	11:33:30	0.098
210	1-Aug	10:45:30	0.122	259	1-Aug	11:34:30	0.12
211	1-Aug	10:46:30	0.439	260	1-Aug	11:35:30	0.121
212	1-Aug	10:47:30	0.1	261	1-Aug	11:36:30	0.5
213	1-Aug	10:48:30	0.097	262	1-Aug	11:37:30	0.167

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	1-Aug	11:38:30	0.301				
264	1-Aug	11:39:30	0.166				
265	1-Aug	11:40:30	0.12				
266	1-Aug	11:41:30	0.218				
267	1-Aug	11:42:30	0.436				
268	1-Aug	11:43:30	0.174				
269	1-Aug	11:44:30	0.177				
270	1-Aug	11:45:30	0.508				

August 13, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 514
Start time and date: 08:34:02 13-Aug
Elapsed time: 08:34:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 3.797 mg/m³
Time at maximum: 15:13:04 Aug 13
Max STEL Concentration: 0.838 mg/m³
Time at max STEL: 15:16:33 Aug 13
Overall Avg Conc: 0.388 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	13-Aug	08:35:02	0.244	34	13-Aug	09:08:02	0.456
2	13-Aug	08:36:02	0.166	35	13-Aug	09:09:02	0.329
3	13-Aug	08:37:02	0.167	36	13-Aug	09:10:02	0.75
4	13-Aug	08:38:02	0.169	37	13-Aug	09:11:02	0.429
5	13-Aug	08:39:02	0.225	38	13-Aug	09:12:02	0.564
6	13-Aug	08:40:02	0.165	39	13-Aug	09:13:02	0.283
7	13-Aug	08:41:02	0.362	40	13-Aug	09:14:02	0.294
8	13-Aug	08:42:02	0.165	41	13-Aug	09:15:02	0.294
9	13-Aug	08:43:02	0.172	42	13-Aug	09:16:02	1.507
10	13-Aug	08:44:02	0.166	43	13-Aug	09:17:02	0.618
11	13-Aug	08:45:02	0.17	44	13-Aug	09:18:02	0.373
12	13-Aug	08:46:02	0.17	45	13-Aug	09:19:02	0.364
13	13-Aug	08:47:02	0.179	46	13-Aug	09:20:02	1.137
14	13-Aug	08:48:02	0.178	47	13-Aug	09:21:02	0.351
15	13-Aug	08:49:02	0.254	48	13-Aug	09:22:02	0.385
16	13-Aug	08:50:02	0.226	49	13-Aug	09:23:02	1.001
17	13-Aug	08:51:02	0.271	50	13-Aug	09:24:02	0.993
18	13-Aug	08:52:02	0.4	51	13-Aug	09:25:02	0.306
19	13-Aug	08:53:02	0.317	52	13-Aug	09:26:02	0.298
20	13-Aug	08:54:02	0.234	53	13-Aug	09:27:02	0.379
21	13-Aug	08:55:02	0.507	54	13-Aug	09:28:02	0.199
22	13-Aug	08:56:02	1.85	55	13-Aug	09:29:02	0.202
23	13-Aug	08:57:02	1.473	56	13-Aug	09:30:02	0.214
24	13-Aug	08:58:02	0.941	57	13-Aug	09:31:02	0.333
25	13-Aug	08:59:02	0.796	58	13-Aug	09:32:02	0.227
26	13-Aug	09:00:02	0.748	59	13-Aug	09:33:02	0.33
27	13-Aug	09:01:02	0.305	60	13-Aug	09:34:02	0.232
28	13-Aug	09:02:02	0.834	61	13-Aug	09:35:02	0.286
29	13-Aug	09:03:02	0.485	62	13-Aug	09:36:02	0.245
30	13-Aug	09:04:02	0.277	63	13-Aug	09:37:02	0.238
31	13-Aug	09:05:02	0.428	64	13-Aug	09:38:02	0.227
32	13-Aug	09:06:02	0.482	65	13-Aug	09:39:02	0.257
33	13-Aug	09:07:02	0.429	66	13-Aug	09:40:02	0.293

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	13-Aug	09:41:02	0.276	116	13-Aug	10:30:02	0.354
68	13-Aug	09:42:02	0.201	117	13-Aug	10:31:02	0.53
69	13-Aug	09:43:02	0.44	118	13-Aug	10:32:02	0.638
70	13-Aug	09:44:02	0.674	119	13-Aug	10:33:02	0.282
71	13-Aug	09:45:02	0.292	120	13-Aug	10:34:02	0.282
72	13-Aug	09:46:02	0.183	121	13-Aug	10:35:02	0.538
73	13-Aug	09:47:02	0.439	122	13-Aug	10:36:02	1.434
74	13-Aug	09:48:02	1.44	123	13-Aug	10:37:02	0.324
75	13-Aug	09:49:02	0.217	124	13-Aug	10:38:02	0.357
76	13-Aug	09:50:02	0.203	125	13-Aug	10:39:02	0.222
77	13-Aug	09:51:02	0.192	126	13-Aug	10:40:02	0.759
78	13-Aug	09:52:02	0.175	127	13-Aug	10:41:02	0.245
79	13-Aug	09:53:02	0.266	128	13-Aug	10:42:02	0.273
80	13-Aug	09:54:02	0.361	129	13-Aug	10:43:02	1.226
81	13-Aug	09:55:02	0.914	130	13-Aug	10:44:02	0.2
82	13-Aug	09:56:02	0.231	131	13-Aug	10:45:02	0.222
83	13-Aug	09:57:02	0.524	132	13-Aug	10:46:02	0.181
84	13-Aug	09:58:02	0.176	133	13-Aug	10:47:02	0.203
85	13-Aug	09:59:02	1.651	134	13-Aug	10:48:02	0.184
86	13-Aug	10:00:02	0.594	135	13-Aug	10:49:02	0.358
87	13-Aug	10:01:02	0.444	136	13-Aug	10:50:02	0.218
88	13-Aug	10:02:02	0.361	137	13-Aug	10:51:02	0.188
89	13-Aug	10:03:02	0.745	138	13-Aug	10:52:02	0.176
90	13-Aug	10:04:02	0.475	139	13-Aug	10:53:02	0.186
91	13-Aug	10:05:02	0.178	140	13-Aug	10:54:02	0.187
92	13-Aug	10:06:02	0.212	141	13-Aug	10:55:02	0.35
93	13-Aug	10:07:02	0.201	142	13-Aug	10:56:02	0.344
94	13-Aug	10:08:02	0.205	143	13-Aug	10:57:02	0.314
95	13-Aug	10:09:02	0.209	144	13-Aug	10:58:02	0.379
96	13-Aug	10:10:02	0.177	145	13-Aug	10:59:02	0.505
97	13-Aug	10:11:02	0.195	146	13-Aug	11:00:02	1.167
98	13-Aug	10:12:02	0.197	147	13-Aug	11:01:02	0.515
99	13-Aug	10:13:02	0.202	148	13-Aug	11:02:02	0.374
100	13-Aug	10:14:02	0.368	149	13-Aug	11:03:02	0.998
101	13-Aug	10:15:02	0.573	150	13-Aug	11:04:02	1.113
102	13-Aug	10:16:02	0.418	151	13-Aug	11:05:02	0.177
103	13-Aug	10:17:02	0.499	152	13-Aug	11:06:02	0.227
104	13-Aug	10:18:02	0.173	153	13-Aug	11:07:02	0.278
105	13-Aug	10:19:02	0.169	154	13-Aug	11:08:02	0.376
106	13-Aug	10:20:02	0.179	155	13-Aug	11:09:02	0.199
107	13-Aug	10:21:02	0.182	156	13-Aug	11:10:02	0.221
108	13-Aug	10:22:02	0.262	157	13-Aug	11:11:02	0.172
109	13-Aug	10:23:02	0.306	158	13-Aug	11:12:02	0.281
110	13-Aug	10:24:02	0.226	159	13-Aug	11:13:02	0.179
111	13-Aug	10:25:02	0.211	160	13-Aug	11:14:02	0.174
112	13-Aug	10:26:02	0.253	161	13-Aug	11:15:02	0.459
113	13-Aug	10:27:02	0.75	162	13-Aug	11:16:02	0.204
114	13-Aug	10:28:02	0.499	163	13-Aug	11:17:02	0.18
115	13-Aug	10:29:02	0.195	164	13-Aug	11:18:02	0.186

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	13-Aug	11:19:02	0.208	214	13-Aug	12:08:02	0.183
166	13-Aug	11:20:02	0.187	215	13-Aug	12:09:02	0.183
167	13-Aug	11:21:02	0.226	216	13-Aug	12:10:02	0.184
168	13-Aug	11:22:02	0.264	217	13-Aug	12:11:02	0.189
169	13-Aug	11:23:02	0.192	218	13-Aug	12:12:02	0.193
170	13-Aug	11:24:02	0.195	219	13-Aug	12:13:02	0.184
171	13-Aug	11:25:02	0.193	220	13-Aug	12:14:02	0.184
172	13-Aug	11:26:02	0.288	221	13-Aug	12:15:02	0.183
173	13-Aug	11:27:02	0.178	222	13-Aug	12:16:02	0.187
174	13-Aug	11:28:02	0.178	223	13-Aug	12:17:02	0.186
175	13-Aug	11:29:02	0.189	224	13-Aug	12:18:02	0.189
176	13-Aug	11:30:02	0.175	225	13-Aug	12:19:02	0.184
177	13-Aug	11:31:02	0.184	226	13-Aug	12:20:02	0.184
178	13-Aug	11:32:02	0.176	227	13-Aug	12:21:02	0.183
179	13-Aug	11:33:02	0.307	228	13-Aug	12:22:02	0.184
180	13-Aug	11:34:02	0.206	229	13-Aug	12:23:02	0.186
181	13-Aug	11:35:02	0.205	230	13-Aug	12:24:02	0.185
182	13-Aug	11:36:02	0.176	231	13-Aug	12:25:02	0.185
183	13-Aug	11:37:02	0.258	232	13-Aug	12:26:02	0.185
184	13-Aug	11:38:02	0.25	233	13-Aug	12:27:02	0.184
185	13-Aug	11:39:02	0.176	234	13-Aug	12:28:02	0.187
186	13-Aug	11:40:02	0.176	235	13-Aug	12:29:02	0.186
187	13-Aug	11:41:02	0.244	236	13-Aug	12:30:02	0.185
188	13-Aug	11:42:02	1.314	237	13-Aug	12:31:02	0.184
189	13-Aug	11:43:02	0.314	238	13-Aug	12:32:02	0.184
190	13-Aug	11:44:02	0.573	239	13-Aug	12:33:02	0.183
191	13-Aug	11:45:02	0.262	240	13-Aug	12:34:02	0.186
192	13-Aug	11:46:02	0.216	241	13-Aug	12:35:02	0.35
193	13-Aug	11:47:02	0.223	242	13-Aug	12:36:02	0.326
194	13-Aug	11:48:02	0.79	243	13-Aug	12:37:02	0.466
195	13-Aug	11:49:02	0.636	244	13-Aug	12:38:02	0.533
196	13-Aug	11:50:02	0.355	245	13-Aug	12:39:02	0.327
197	13-Aug	11:51:02	0.605	246	13-Aug	12:40:02	0.51
198	13-Aug	11:52:02	0.879	247	13-Aug	12:41:02	0.302
199	13-Aug	11:53:02	0.943	248	13-Aug	12:42:02	0.78
200	13-Aug	11:54:02	0.429	249	13-Aug	12:43:02	0.269
201	13-Aug	11:55:02	0.211	250	13-Aug	12:44:02	0.248
202	13-Aug	11:56:02	0.189	251	13-Aug	12:45:02	0.225
203	13-Aug	11:57:02	0.184	252	13-Aug	12:46:02	0.236
204	13-Aug	11:58:02	0.182	253	13-Aug	12:47:02	0.182
205	13-Aug	11:59:02	0.195	254	13-Aug	12:48:02	0.233
206	13-Aug	12:00:02	0.181	255	13-Aug	12:49:02	0.255
207	13-Aug	12:01:02	0.181	256	13-Aug	12:50:02	0.357
208	13-Aug	12:02:02	0.181	257	13-Aug	12:51:02	0.477
209	13-Aug	12:03:02	0.183	258	13-Aug	12:52:02	0.283
210	13-Aug	12:04:02	0.183	259	13-Aug	12:53:02	0.234
211	13-Aug	12:05:02	0.185	260	13-Aug	12:54:02	0.277
212	13-Aug	12:06:02	0.184	261	13-Aug	12:55:02	0.373
213	13-Aug	12:07:02	0.184	262	13-Aug	12:56:02	0.259

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	13-Aug	12:57:02	0.289	312	13-Aug	13:46:02	0.251
264	13-Aug	12:58:02	0.34	313	13-Aug	13:47:02	0.201
265	13-Aug	12:59:02	0.338	314	13-Aug	13:48:02	0.391
266	13-Aug	13:00:02	0.204	315	13-Aug	13:49:02	0.188
267	13-Aug	13:01:02	0.321	316	13-Aug	13:50:02	0.182
268	13-Aug	13:02:02	1.043	317	13-Aug	13:51:02	0.179
269	13-Aug	13:03:02	0.84	318	13-Aug	13:52:02	0.406
270	13-Aug	13:04:02	0.542	319	13-Aug	13:53:02	0.227
271	13-Aug	13:05:02	0.567	320	13-Aug	13:54:02	0.212
272	13-Aug	13:06:02	0.221	321	13-Aug	13:55:02	0.207
273	13-Aug	13:07:02	1.226	322	13-Aug	13:56:02	0.198
274	13-Aug	13:08:02	0.409	323	13-Aug	13:57:02	0.177
275	13-Aug	13:09:02	1.17	324	13-Aug	13:58:02	0.193
276	13-Aug	13:10:02	0.344	325	13-Aug	13:59:02	2.777
277	13-Aug	13:11:02	0.217	326	13-Aug	14:00:02	0.474
278	13-Aug	13:12:02	0.246	327	13-Aug	14:01:02	0.203
279	13-Aug	13:13:02	0.262	328	13-Aug	14:02:02	2.349
280	13-Aug	13:14:02	0.212	329	13-Aug	14:03:02	0.308
281	13-Aug	13:15:02	0.176	330	13-Aug	14:04:02	0.784
282	13-Aug	13:16:02	0.208	331	13-Aug	14:05:02	0.828
283	13-Aug	13:17:02	0.177	332	13-Aug	14:06:02	0.2
284	13-Aug	13:18:02	0.177	333	13-Aug	14:07:02	0.271
285	13-Aug	13:19:02	0.187	334	13-Aug	14:08:02	0.27
286	13-Aug	13:20:02	0.179	335	13-Aug	14:09:02	0.295
287	13-Aug	13:21:02	0.221	336	13-Aug	14:10:02	0.244
288	13-Aug	13:22:02	0.21	337	13-Aug	14:11:02	0.253
289	13-Aug	13:23:02	0.173	338	13-Aug	14:12:02	1.198
290	13-Aug	13:24:02	0.173	339	13-Aug	14:13:02	0.213
291	13-Aug	13:25:02	0.175	340	13-Aug	14:14:02	0.179
292	13-Aug	13:26:02	0.174	341	13-Aug	14:15:02	0.37
293	13-Aug	13:27:02	0.465	342	13-Aug	14:16:02	0.217
294	13-Aug	13:28:02	0.255	343	13-Aug	14:17:02	0.178
295	13-Aug	13:29:02	0.186	344	13-Aug	14:18:02	0.189
296	13-Aug	13:30:02	0.179	345	13-Aug	14:19:02	0.191
297	13-Aug	13:31:02	0.362	346	13-Aug	14:20:02	0.175
298	13-Aug	13:32:02	0.326	347	13-Aug	14:21:02	0.176
299	13-Aug	13:33:02	0.201	348	13-Aug	14:22:02	0.177
300	13-Aug	13:34:02	0.173	349	13-Aug	14:23:02	0.176
301	13-Aug	13:35:02	0.18	350	13-Aug	14:24:02	0.178
302	13-Aug	13:36:02	0.391	351	13-Aug	14:25:02	0.176
303	13-Aug	13:37:02	0.516	352	13-Aug	14:26:02	0.176
304	13-Aug	13:38:02	0.559	353	13-Aug	14:27:02	0.177
305	13-Aug	13:39:02	1.427	354	13-Aug	14:28:02	0.176
306	13-Aug	13:40:02	0.207	355	13-Aug	14:29:02	0.177
307	13-Aug	13:41:02	0.193	356	13-Aug	14:30:02	0.183
308	13-Aug	13:42:02	0.183	357	13-Aug	14:31:02	0.277
309	13-Aug	13:43:02	0.196	358	13-Aug	14:32:02	0.179
310	13-Aug	13:44:02	1.122	359	13-Aug	14:33:02	0.207
311	13-Aug	13:45:02	0.733	360	13-Aug	14:34:02	0.204

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
361	13-Aug	14:35:02	0.188	410	13-Aug	15:24:02	0.705
362	13-Aug	14:36:02	0.178	411	13-Aug	15:25:02	0.445
363	13-Aug	14:37:02	0.179	412	13-Aug	15:26:02	0.445
364	13-Aug	14:38:02	0.205	413	13-Aug	15:27:02	0.245
365	13-Aug	14:39:02	0.182	414	13-Aug	15:28:02	0.204
366	13-Aug	14:40:02	0.219	415	13-Aug	15:29:02	0.299
367	13-Aug	14:41:02	0.632	416	13-Aug	15:30:02	0.369
368	13-Aug	14:42:02	0.206	417	13-Aug	15:31:02	0.35
369	13-Aug	14:43:02	0.282	418	13-Aug	15:32:02	0.303
370	13-Aug	14:44:02	0.177	419	13-Aug	15:33:02	0.367
371	13-Aug	14:45:02	0.216	420	13-Aug	15:34:02	0.271
372	13-Aug	14:46:02	0.188	421	13-Aug	15:35:02	0.233
373	13-Aug	14:47:02	0.179	422	13-Aug	15:36:02	1.944
374	13-Aug	14:48:02	0.177	423	13-Aug	15:37:02	0.526
375	13-Aug	14:49:02	0.182	424	13-Aug	15:38:02	0.462
376	13-Aug	14:50:02	1.975	425	13-Aug	15:39:02	0.389
377	13-Aug	14:51:02	1.053	426	13-Aug	15:40:02	0.482
378	13-Aug	14:52:02	0.186	427	13-Aug	15:41:02	0.899
379	13-Aug	14:53:02	0.377	428	13-Aug	15:42:02	0.251
380	13-Aug	14:54:02	0.228	429	13-Aug	15:43:02	0.339
381	13-Aug	14:55:02	0.183	430	13-Aug	15:44:02	0.356
382	13-Aug	14:56:02	0.344	431	13-Aug	15:45:02	0.229
383	13-Aug	14:57:02	0.193	432	13-Aug	15:46:02	0.184
384	13-Aug	14:58:02	0.405	433	13-Aug	15:47:02	0.43
385	13-Aug	14:59:02	0.392	434	13-Aug	15:48:02	0.34
386	13-Aug	15:00:02	0.233	435	13-Aug	15:49:02	0.376
387	13-Aug	15:01:02	0.192	436	13-Aug	15:50:02	0.391
388	13-Aug	15:02:02	0.21	437	13-Aug	15:51:02	0.487
389	13-Aug	15:03:02	0.481	438	13-Aug	15:52:02	0.37
390	13-Aug	15:04:02	0.2	439	13-Aug	15:53:02	0.303
391	13-Aug	15:05:02	0.493	440	13-Aug	15:54:02	0.242
392	13-Aug	15:06:02	1.27	441	13-Aug	15:55:02	0.271
393	13-Aug	15:07:02	0.929	442	13-Aug	15:56:02	0.204
394	13-Aug	15:08:02	0.51	443	13-Aug	15:57:02	0.225
395	13-Aug	15:09:02	0.662	444	13-Aug	15:58:02	0.189
396	13-Aug	15:10:02	0.54	445	13-Aug	15:59:02	0.693
397	13-Aug	15:11:02	0.246	446	13-Aug	16:00:02	1.131
398	13-Aug	15:12:02	0.699	447	13-Aug	16:01:02	0.317
399	13-Aug	15:13:02	3.788	448	13-Aug	16:02:02	0.188
400	13-Aug	15:14:02	0.484	449	13-Aug	16:03:02	0.188
401	13-Aug	15:15:02	1.152	450	13-Aug	16:04:02	0.238
402	13-Aug	15:16:02	0.827	451	13-Aug	16:05:02	0.186
403	13-Aug	15:17:02	0.26	452	13-Aug	16:06:02	0.249
404	13-Aug	15:18:02	0.236	453	13-Aug	16:07:02	0.255
405	13-Aug	15:19:02	0.376	454	13-Aug	16:08:02	0.917
406	13-Aug	15:20:02	0.489	455	13-Aug	16:09:02	0.417
407	13-Aug	15:21:02	0.45	456	13-Aug	16:10:02	0.507
408	13-Aug	15:22:02	0.25	457	13-Aug	16:11:02	0.358
409	13-Aug	15:23:02	0.39	458	13-Aug	16:12:02	0.274

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
459	13-Aug	16:13:02	0.288	508	13-Aug	17:02:02	0.374
460	13-Aug	16:14:02	0.244	509	13-Aug	17:03:02	0.273
461	13-Aug	16:15:02	0.358	510	13-Aug	17:04:02	0.443
462	13-Aug	16:16:02	1.416	511	13-Aug	17:05:02	0.515
463	13-Aug	16:17:02	0.548	512	13-Aug	17:06:02	1.03
464	13-Aug	16:18:02	0.321	513	13-Aug	17:07:02	0.402
465	13-Aug	16:19:02	0.327	514	13-Aug	17:08:02	0.332
466	13-Aug	16:20:02	0.393				
467	13-Aug	16:21:02	0.203				
468	13-Aug	16:22:02	0.242				
469	13-Aug	16:23:02	0.344				
470	13-Aug	16:24:02	0.466				
471	13-Aug	16:25:02	0.695				
472	13-Aug	16:26:02	0.479				
473	13-Aug	16:27:02	0.878				
474	13-Aug	16:28:02	0.375				
475	13-Aug	16:29:02	0.485				
476	13-Aug	16:30:02	0.364				
477	13-Aug	16:31:02	0.388				
478	13-Aug	16:32:02	0.277				
479	13-Aug	16:33:02	0.253				
480	13-Aug	16:34:02	0.344				
481	13-Aug	16:35:02	0.867				
482	13-Aug	16:36:02	0.414				
483	13-Aug	16:37:02	1.031				
484	13-Aug	16:38:02	0.223				
485	13-Aug	16:39:02	0.232				
486	13-Aug	16:40:02	0.51				
487	13-Aug	16:41:02	0.878				
488	13-Aug	16:42:02	0.288				
489	13-Aug	16:43:02	0.546				
490	13-Aug	16:44:02	0.204				
491	13-Aug	16:45:02	0.297				
492	13-Aug	16:46:02	0.199				
493	13-Aug	16:47:02	0.221				
494	13-Aug	16:48:02	0.542				
495	13-Aug	16:49:02	0.787				
496	13-Aug	16:50:02	0.542				
497	13-Aug	16:51:02	0.382				
498	13-Aug	16:52:02	0.43				
499	13-Aug	16:53:02	0.205				
500	13-Aug	16:54:02	0.19				
501	13-Aug	16:55:02	0.188				
502	13-Aug	16:56:02	0.194				
503	13-Aug	16:57:02	0.576				
504	13-Aug	16:58:02	0.19				
505	13-Aug	16:59:02	0.195				
506	13-Aug	17:00:02	0.389				
507	13-Aug	17:01:02	0.218				

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 01
Number of logged points: 581
Start time and date: 07:39:43 13-Aug
Elapsed time: 09:41:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 7.732 mg/m³
Time at maximum: 13:37:33 Aug 13
Max STEL Concentration: 1.380 mg/m³
Time at max STEL: 15:00:14 Aug 13
Overall Avg Conc: 0.498 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	13-Aug	07:40:43	0.435	36	13-Aug	08:15:43	0.283
2	13-Aug	07:41:43	0.447	37	13-Aug	08:16:43	0.318
3	13-Aug	07:42:43	0.76	38	13-Aug	08:17:43	0.372
4	13-Aug	07:43:43	0.74	39	13-Aug	08:18:43	0.895
5	13-Aug	07:44:43	0.265	40	13-Aug	08:19:43	0.404
6	13-Aug	07:45:43	0.734	41	13-Aug	08:20:43	0.237
7	13-Aug	07:46:43	0.582	42	13-Aug	08:21:43	0.252
8	13-Aug	07:47:43	0.371	43	13-Aug	08:22:43	0.335
9	13-Aug	07:48:43	0.441	44	13-Aug	08:23:43	0.267
10	13-Aug	07:49:43	0.306	45	13-Aug	08:24:43	0.653
11	13-Aug	07:50:43	1.252	46	13-Aug	08:25:43	0.434
12	13-Aug	07:51:43	1.155	47	13-Aug	08:26:43	0.894
13	13-Aug	07:52:43	1.636	48	13-Aug	08:27:43	1.136
14	13-Aug	07:53:43	0.601	49	13-Aug	08:28:43	1.419
15	13-Aug	07:54:43	0.531	50	13-Aug	08:29:43	0.699
16	13-Aug	07:55:43	0.994	51	13-Aug	08:30:43	1.063
17	13-Aug	07:56:43	0.273	52	13-Aug	08:31:43	0.831
18	13-Aug	07:57:43	0.246	53	13-Aug	08:32:43	0.446
19	13-Aug	07:58:43	0.291	54	13-Aug	08:33:43	0.407
20	13-Aug	07:59:43	1.068	55	13-Aug	08:34:43	0.351
21	13-Aug	08:00:43	0.456	56	13-Aug	08:35:43	0.588
22	13-Aug	08:01:43	0.818	57	13-Aug	08:36:43	0.225
23	13-Aug	08:02:43	0.336	58	13-Aug	08:37:43	0.246
24	13-Aug	08:03:43	1.062	59	13-Aug	08:38:43	0.393
25	13-Aug	08:04:43	0.317	60	13-Aug	08:39:43	0.233
26	13-Aug	08:05:43	0.434	61	13-Aug	08:40:43	0.226
27	13-Aug	08:06:43	0.373	62	13-Aug	08:41:43	0.241
28	13-Aug	08:07:43	1.657	63	13-Aug	08:42:43	0.225
29	13-Aug	08:08:43	0.733	64	13-Aug	08:43:43	0.233
30	13-Aug	08:09:43	0.367	65	13-Aug	08:44:43	0.229
31	13-Aug	08:10:43	0.542	66	13-Aug	08:45:43	0.235
32	13-Aug	08:11:43	0.442	67	13-Aug	08:46:43	0.245
33	13-Aug	08:12:43	0.33	68	13-Aug	08:47:43	0.611
34	13-Aug	08:13:43	0.843	69	13-Aug	08:48:43	0.285
35	13-Aug	08:14:43	0.629	70	13-Aug	08:49:43	0.239

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
71	13-Aug	08:50:43	0.227	120	13-Aug	09:39:43	0.35
72	13-Aug	08:51:43	0.236	121	13-Aug	09:40:43	0.3
73	13-Aug	08:52:43	0.272	122	13-Aug	09:41:43	0.305
74	13-Aug	08:53:43	0.226	123	13-Aug	09:42:43	0.254
75	13-Aug	08:54:43	0.225	124	13-Aug	09:43:43	0.231
76	13-Aug	08:55:43	0.232	125	13-Aug	09:44:43	0.233
77	13-Aug	08:56:43	0.242	126	13-Aug	09:45:43	0.233
78	13-Aug	08:57:43	0.239	127	13-Aug	09:46:43	0.231
79	13-Aug	08:58:43	0.239	128	13-Aug	09:47:43	0.26
80	13-Aug	08:59:43	0.237	129	13-Aug	09:48:43	0.265
81	13-Aug	09:00:43	0.239	130	13-Aug	09:49:43	0.235
82	13-Aug	09:01:43	0.237	131	13-Aug	09:50:43	0.237
83	13-Aug	09:02:43	0.24	132	13-Aug	09:51:43	0.251
84	13-Aug	09:03:43	0.24	133	13-Aug	09:52:43	0.236
85	13-Aug	09:04:43	0.237	134	13-Aug	09:53:43	0.284
86	13-Aug	09:05:43	0.235	135	13-Aug	09:54:43	0.232
87	13-Aug	09:06:43	0.263	136	13-Aug	09:55:43	0.233
88	13-Aug	09:07:43	0.358	137	13-Aug	09:56:43	0.339
89	13-Aug	09:08:43	0.331	138	13-Aug	09:57:43	0.256
90	13-Aug	09:09:43	0.452	139	13-Aug	09:58:43	0.234
91	13-Aug	09:10:43	0.375	140	13-Aug	09:59:43	0.23
92	13-Aug	09:11:43	0.387	141	13-Aug	10:00:43	0.234
93	13-Aug	09:12:43	0.275	142	13-Aug	10:01:43	0.23
94	13-Aug	09:13:43	0.251	143	13-Aug	10:02:43	0.228
95	13-Aug	09:14:43	0.253	144	13-Aug	10:03:43	0.235
96	13-Aug	09:15:43	0.235	145	13-Aug	10:04:43	0.23
97	13-Aug	09:16:43	0.241	146	13-Aug	10:05:43	0.23
98	13-Aug	09:17:43	0.271	147	13-Aug	10:06:43	0.231
99	13-Aug	09:18:43	0.255	148	13-Aug	10:07:43	0.23
100	13-Aug	09:19:43	0.27	149	13-Aug	10:08:43	0.224
101	13-Aug	09:20:43	0.26	150	13-Aug	10:09:43	0.228
102	13-Aug	09:21:43	0.25	151	13-Aug	10:10:43	0.226
103	13-Aug	09:22:43	0.246	152	13-Aug	10:11:43	0.225
104	13-Aug	09:23:43	0.25	153	13-Aug	10:12:43	0.224
105	13-Aug	09:24:43	0.24	154	13-Aug	10:13:43	0.226
106	13-Aug	09:25:43	0.24	155	13-Aug	10:14:43	0.225
107	13-Aug	09:26:43	0.249	156	13-Aug	10:15:43	0.223
108	13-Aug	09:27:43	0.288	157	13-Aug	10:16:43	0.228
109	13-Aug	09:28:43	0.263	158	13-Aug	10:17:43	0.226
110	13-Aug	09:29:43	0.238	159	13-Aug	10:18:43	0.228
111	13-Aug	09:30:43	0.245	160	13-Aug	10:19:43	0.227
112	13-Aug	09:31:43	0.383	161	13-Aug	10:20:43	0.23
113	13-Aug	09:32:43	0.465	162	13-Aug	10:21:43	0.226
114	13-Aug	09:33:43	0.251	163	13-Aug	10:22:43	0.228
115	13-Aug	09:34:43	0.237	164	13-Aug	10:23:43	0.229
116	13-Aug	09:35:43	0.228	165	13-Aug	10:24:43	0.23
117	13-Aug	09:36:43	0.325	166	13-Aug	10:25:43	0.231
118	13-Aug	09:37:43	0.333	167	13-Aug	10:26:43	0.236
119	13-Aug	09:38:43	0.239	168	13-Aug	10:27:43	0.229

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
169	13-Aug	10:28:43	0.23	218	13-Aug	11:17:43	0.661
170	13-Aug	10:29:43	0.234	219	13-Aug	11:18:43	0.663
171	13-Aug	10:30:43	0.233	220	13-Aug	11:19:43	1.56
172	13-Aug	10:31:43	0.236	221	13-Aug	11:20:43	0.544
173	13-Aug	10:32:43	0.254	222	13-Aug	11:21:43	0.437
174	13-Aug	10:33:43	0.273	223	13-Aug	11:22:43	0.559
175	13-Aug	10:34:43	0.241	224	13-Aug	11:23:43	0.345
176	13-Aug	10:35:43	0.242	225	13-Aug	11:24:43	0.402
177	13-Aug	10:36:43	0.238	226	13-Aug	11:25:43	0.296
178	13-Aug	10:37:43	0.233	227	13-Aug	11:26:43	0.51
179	13-Aug	10:38:43	0.612	228	13-Aug	11:27:43	0.664
180	13-Aug	10:39:43	1.316	229	13-Aug	11:28:43	0.266
181	13-Aug	10:40:43	0.463	230	13-Aug	11:29:43	0.487
182	13-Aug	10:41:43	0.482	231	13-Aug	11:30:43	1.122
183	13-Aug	10:42:43	0.516	232	13-Aug	11:31:43	0.7
184	13-Aug	10:43:43	0.276	233	13-Aug	11:32:43	1.269
185	13-Aug	10:44:43	0.329	234	13-Aug	11:33:43	0.779
186	13-Aug	10:45:43	0.299	235	13-Aug	11:34:43	0.589
187	13-Aug	10:46:43	0.332	236	13-Aug	11:35:43	0.359
188	13-Aug	10:47:43	0.342	237	13-Aug	11:36:43	0.34
189	13-Aug	10:48:43	0.307	238	13-Aug	11:37:43	0.429
190	13-Aug	10:49:43	0.26	239	13-Aug	11:38:43	0.327
191	13-Aug	10:50:43	0.669	240	13-Aug	11:39:43	0.32
192	13-Aug	10:51:43	0.381	241	13-Aug	11:40:43	0.432
193	13-Aug	10:52:43	0.327	242	13-Aug	11:41:43	0.387
194	13-Aug	10:53:43	0.258	243	13-Aug	11:42:43	0.275
195	13-Aug	10:54:43	0.805	244	13-Aug	11:43:43	0.445
196	13-Aug	10:55:43	0.382	245	13-Aug	11:44:43	0.337
197	13-Aug	10:56:43	0.445	246	13-Aug	11:45:43	0.684
198	13-Aug	10:57:43	0.463	247	13-Aug	11:46:43	0.475
199	13-Aug	10:58:43	0.352	248	13-Aug	11:47:43	0.263
200	13-Aug	10:59:43	0.335	249	13-Aug	11:48:43	0.665
201	13-Aug	11:00:43	0.806	250	13-Aug	11:49:43	0.712
202	13-Aug	11:01:43	0.371	251	13-Aug	11:50:43	0.451
203	13-Aug	11:02:43	0.502	252	13-Aug	11:51:43	0.263
204	13-Aug	11:03:43	0.347	253	13-Aug	11:52:43	0.234
205	13-Aug	11:04:43	0.35	254	13-Aug	11:53:43	0.255
206	13-Aug	11:05:43	0.473	255	13-Aug	11:54:43	0.349
207	13-Aug	11:06:43	0.528	256	13-Aug	11:55:43	0.305
208	13-Aug	11:07:43	0.542	257	13-Aug	11:56:43	0.233
209	13-Aug	11:08:43	0.412	258	13-Aug	11:57:43	0.233
210	13-Aug	11:09:43	0.401	259	13-Aug	11:58:43	0.234
211	13-Aug	11:10:43	0.28	260	13-Aug	11:59:43	0.238
212	13-Aug	11:11:43	0.52	261	13-Aug	12:00:43	0.234
213	13-Aug	11:12:43	0.326	262	13-Aug	12:01:43	0.234
214	13-Aug	11:13:43	0.345	263	13-Aug	12:02:43	0.233
215	13-Aug	11:14:43	0.502	264	13-Aug	12:03:43	0.236
216	13-Aug	11:15:43	0.805	265	13-Aug	12:04:43	0.234
217	13-Aug	11:16:43	0.989	266	13-Aug	12:05:43	0.237

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
267	13-Aug	12:06:43	0.243	316	13-Aug	12:55:43	0.247
268	13-Aug	12:07:43	0.235	317	13-Aug	12:56:43	0.237
269	13-Aug	12:08:43	0.234	318	13-Aug	12:57:43	0.261
270	13-Aug	12:09:43	0.233	319	13-Aug	12:58:43	0.304
271	13-Aug	12:10:43	0.236	320	13-Aug	12:59:43	0.297
272	13-Aug	12:11:43	0.236	321	13-Aug	13:00:43	0.348
273	13-Aug	12:12:43	0.235	322	13-Aug	13:01:43	0.68
274	13-Aug	12:13:43	0.234	323	13-Aug	13:02:43	0.394
275	13-Aug	12:14:43	0.235	324	13-Aug	13:03:43	0.278
276	13-Aug	12:15:43	0.234	325	13-Aug	13:04:43	0.363
277	13-Aug	12:16:43	0.233	326	13-Aug	13:05:43	0.369
278	13-Aug	12:17:43	0.234	327	13-Aug	13:06:43	0.855
279	13-Aug	12:18:43	0.235	328	13-Aug	13:07:43	0.34
280	13-Aug	12:19:43	0.235	329	13-Aug	13:08:43	0.385
281	13-Aug	12:20:43	0.233	330	13-Aug	13:09:43	0.46
282	13-Aug	12:21:43	0.234	331	13-Aug	13:10:43	0.528
283	13-Aug	12:22:43	0.233	332	13-Aug	13:11:43	0.363
284	13-Aug	12:23:43	0.233	333	13-Aug	13:12:43	0.395
285	13-Aug	12:24:43	0.234	334	13-Aug	13:13:43	0.301
286	13-Aug	12:25:43	0.235	335	13-Aug	13:14:43	0.297
287	13-Aug	12:26:43	0.237	336	13-Aug	13:15:43	0.562
288	13-Aug	12:27:43	0.235	337	13-Aug	13:16:43	0.315
289	13-Aug	12:28:43	0.234	338	13-Aug	13:17:43	0.469
290	13-Aug	12:29:43	0.234	339	13-Aug	13:18:43	0.308
291	13-Aug	12:30:43	0.235	340	13-Aug	13:19:43	0.347
292	13-Aug	12:31:43	0.234	341	13-Aug	13:20:43	0.313
293	13-Aug	12:32:43	0.237	342	13-Aug	13:21:43	0.592
294	13-Aug	12:33:43	0.235	343	13-Aug	13:22:43	0.403
295	13-Aug	12:34:43	0.243	344	13-Aug	13:23:43	0.324
296	13-Aug	12:35:43	0.235	345	13-Aug	13:24:43	0.47
297	13-Aug	12:36:43	0.316	346	13-Aug	13:25:43	0.256
298	13-Aug	12:37:43	0.569	347	13-Aug	13:26:43	0.917
299	13-Aug	12:38:43	0.466	348	13-Aug	13:27:43	1.653
300	13-Aug	12:39:43	0.406	349	13-Aug	13:28:43	0.39
301	13-Aug	12:40:43	0.363	350	13-Aug	13:29:43	0.277
302	13-Aug	12:41:43	0.3	351	13-Aug	13:30:43	0.628
303	13-Aug	12:42:43	0.282	352	13-Aug	13:31:43	0.807
304	13-Aug	12:43:43	0.256	353	13-Aug	13:32:43	0.219
305	13-Aug	12:44:43	0.236	354	13-Aug	13:33:43	0.227
306	13-Aug	12:45:43	0.387	355	13-Aug	13:34:43	0.237
307	13-Aug	12:46:43	0.224	356	13-Aug	13:35:43	0.362
308	13-Aug	12:47:43	0.246	357	13-Aug	13:36:43	0.565
309	13-Aug	12:48:43	0.234	358	13-Aug	13:37:43	7.52
310	13-Aug	12:49:43	0.244	359	13-Aug	13:38:43	1.32
311	13-Aug	12:50:43	0.232	360	13-Aug	13:39:43	0.62
312	13-Aug	12:51:43	0.234	361	13-Aug	13:40:43	0.375
313	13-Aug	12:52:43	0.235	362	13-Aug	13:41:43	0.35
314	13-Aug	12:53:43	0.232	363	13-Aug	13:42:43	0.395
315	13-Aug	12:54:43	0.242	364	13-Aug	13:43:43	0.312

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
365	13-Aug	13:44:43	0.333	414	13-Aug	14:33:43	0.253
366	13-Aug	13:45:43	0.232	415	13-Aug	14:34:43	0.36
367	13-Aug	13:46:43	0.343	416	13-Aug	14:35:43	1.221
368	13-Aug	13:47:43	0.253	417	13-Aug	14:36:43	0.392
369	13-Aug	13:48:43	0.271	418	13-Aug	14:37:43	0.271
370	13-Aug	13:49:43	0.372	419	13-Aug	14:38:43	0.319
371	13-Aug	13:50:43	0.267	420	13-Aug	14:39:43	0.603
372	13-Aug	13:51:43	0.404	421	13-Aug	14:40:43	0.317
373	13-Aug	13:52:43	0.309	422	13-Aug	14:41:43	0.614
374	13-Aug	13:53:43	0.248	423	13-Aug	14:42:43	0.975
375	13-Aug	13:54:43	0.284	424	13-Aug	14:43:43	0.242
376	13-Aug	13:55:43	0.334	425	13-Aug	14:44:43	0.362
377	13-Aug	13:56:43	0.247	426	13-Aug	14:45:43	0.881
378	13-Aug	13:57:43	0.311	427	13-Aug	14:46:43	0.389
379	13-Aug	13:58:43	0.41	428	13-Aug	14:47:43	3.029
380	13-Aug	13:59:43	0.243	429	13-Aug	14:48:43	0.97
381	13-Aug	14:00:43	0.622	430	13-Aug	14:49:43	0.346
382	13-Aug	14:01:43	0.258	431	13-Aug	14:50:43	0.247
383	13-Aug	14:02:43	0.245	432	13-Aug	14:51:43	6.72
384	13-Aug	14:03:43	0.368	433	13-Aug	14:52:43	0.254
385	13-Aug	14:04:43	0.303	434	13-Aug	14:53:43	0.523
386	13-Aug	14:05:43	0.64	435	13-Aug	14:54:43	1.638
387	13-Aug	14:06:43	0.275	436	13-Aug	14:55:43	0.909
388	13-Aug	14:07:43	0.258	437	13-Aug	14:56:43	1.132
389	13-Aug	14:08:43	0.4	438	13-Aug	14:57:43	0.519
390	13-Aug	14:09:43	0.425	439	13-Aug	14:58:43	0.808
391	13-Aug	14:10:43	0.415	440	13-Aug	14:59:43	2.186
392	13-Aug	14:11:43	1.002	441	13-Aug	15:00:43	0.623
393	13-Aug	14:12:43	0.245	442	13-Aug	15:01:43	0.294
394	13-Aug	14:13:43	0.297	443	13-Aug	15:02:43	0.633
395	13-Aug	14:14:43	0.282	444	13-Aug	15:03:43	0.805
396	13-Aug	14:15:43	2.852	445	13-Aug	15:04:43	0.3
397	13-Aug	14:16:43	0.608	446	13-Aug	15:05:43	0.512
398	13-Aug	14:17:43	0.346	447	13-Aug	15:06:43	0.396
399	13-Aug	14:18:43	0.305	448	13-Aug	15:07:43	0.367
400	13-Aug	14:19:43	1.136	449	13-Aug	15:08:43	0.24
401	13-Aug	14:20:43	0.612	450	13-Aug	15:09:43	0.229
402	13-Aug	14:21:43	0.288	451	13-Aug	15:10:43	0.33
403	13-Aug	14:22:43	0.99	452	13-Aug	15:11:43	0.422
404	13-Aug	14:23:43	1.084	453	13-Aug	15:12:43	0.825
405	13-Aug	14:24:43	0.467	454	13-Aug	15:13:43	0.385
406	13-Aug	14:25:43	0.342	455	13-Aug	15:14:43	0.528
407	13-Aug	14:26:43	1.309	456	13-Aug	15:15:43	0.639
408	13-Aug	14:27:43	0.581	457	13-Aug	15:16:43	0.701
409	13-Aug	14:28:43	0.547	458	13-Aug	15:17:43	0.351
410	13-Aug	14:29:43	0.328	459	13-Aug	15:18:43	1.243
411	13-Aug	14:30:43	0.555	460	13-Aug	15:19:43	0.381
412	13-Aug	14:31:43	0.367	461	13-Aug	15:20:43	0.434
413	13-Aug	14:32:43	0.364	462	13-Aug	15:21:43	0.727

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
463	13-Aug	15:22:43	0.258	512	13-Aug	16:11:43	0.55
464	13-Aug	15:23:43	2.045	513	13-Aug	16:12:43	0.379
465	13-Aug	15:24:43	0.772	514	13-Aug	16:13:43	0.721
466	13-Aug	15:25:43	1.285	515	13-Aug	16:14:43	0.493
467	13-Aug	15:26:43	0.794	516	13-Aug	16:15:43	1.532
468	13-Aug	15:27:43	0.732	517	13-Aug	16:16:43	0.271
469	13-Aug	15:28:43	0.616	518	13-Aug	16:17:43	0.225
470	13-Aug	15:29:43	0.22	519	13-Aug	16:18:43	0.242
471	13-Aug	15:30:43	0.641	520	13-Aug	16:19:43	0.313
472	13-Aug	15:31:43	0.282	521	13-Aug	16:20:43	0.424
473	13-Aug	15:32:43	0.894	522	13-Aug	16:21:43	0.553
474	13-Aug	15:33:43	1.163	523	13-Aug	16:22:43	0.537
475	13-Aug	15:34:43	1.443	524	13-Aug	16:23:43	0.47
476	13-Aug	15:35:43	1.089	525	13-Aug	16:24:43	0.439
477	13-Aug	15:36:43	0.752	526	13-Aug	16:25:43	0.555
478	13-Aug	15:37:43	0.532	527	13-Aug	16:26:43	0.324
479	13-Aug	15:38:43	0.459	528	13-Aug	16:27:43	0.271
480	13-Aug	15:39:43	0.457	529	13-Aug	16:28:43	1.059
481	13-Aug	15:40:43	0.453	530	13-Aug	16:29:43	0.504
482	13-Aug	15:41:43	0.588	531	13-Aug	16:30:43	1.087
483	13-Aug	15:42:43	1.321	532	13-Aug	16:31:43	0.439
484	13-Aug	15:43:43	0.466	533	13-Aug	16:32:43	0.572
485	13-Aug	15:44:43	0.631	534	13-Aug	16:33:43	0.481
486	13-Aug	15:45:43	1.102	535	13-Aug	16:34:43	0.232
487	13-Aug	15:46:43	0.941	536	13-Aug	16:35:43	0.669
488	13-Aug	15:47:43	1.186	537	13-Aug	16:36:43	0.635
489	13-Aug	15:48:43	0.428	538	13-Aug	16:37:43	0.657
490	13-Aug	15:49:43	0.721	539	13-Aug	16:38:43	1.175
491	13-Aug	15:50:43	1.003	540	13-Aug	16:39:43	0.645
492	13-Aug	15:51:43	1.519	541	13-Aug	16:40:43	0.507
493	13-Aug	15:52:43	0.737	542	13-Aug	16:41:43	0.578
494	13-Aug	15:53:43	0.682	543	13-Aug	16:42:43	0.572
495	13-Aug	15:54:43	0.408	544	13-Aug	16:43:43	0.983
496	13-Aug	15:55:43	0.834	545	13-Aug	16:44:43	0.58
497	13-Aug	15:56:43	0.787	546	13-Aug	16:45:43	0.422
498	13-Aug	15:57:43	0.433	547	13-Aug	16:46:43	0.329
499	13-Aug	15:58:43	0.38	548	13-Aug	16:47:43	0.638
500	13-Aug	15:59:43	0.431	549	13-Aug	16:48:43	0.254
501	13-Aug	16:00:43	0.112	550	13-Aug	16:49:43	0.246
502	13-Aug	16:01:43	2.042	551	13-Aug	16:50:43	0.253
503	13-Aug	16:02:43	0.309	552	13-Aug	16:51:43	0.632
504	13-Aug	16:03:43	0.252	553	13-Aug	16:52:43	0.77
505	13-Aug	16:04:43	0.338	554	13-Aug	16:53:43	0.747
506	13-Aug	16:05:43	0.823	555	13-Aug	16:54:43	0.438
507	13-Aug	16:06:43	0.447	556	13-Aug	16:55:43	0.315
508	13-Aug	16:07:43	0.47	557	13-Aug	16:56:43	2.257
509	13-Aug	16:08:43	0.49	558	13-Aug	16:57:43	0.493
510	13-Aug	16:09:43	0.554	559	13-Aug	16:58:43	0.495
511	13-Aug	16:10:43	0.656	560	13-Aug	16:59:43	1.298

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
561	13-Aug	17:00:43	0.571				
562	13-Aug	17:01:43	1.017				
563	13-Aug	17:02:43	0.568				
564	13-Aug	17:03:43	0.38				
565	13-Aug	17:04:43	3.013				
566	13-Aug	17:05:43	0.504				
567	13-Aug	17:06:43	0.652				
568	13-Aug	17:07:43	0.402				
569	13-Aug	17:08:43	0.381				
570	13-Aug	17:09:43	0.248				
571	13-Aug	17:10:43	0.393				
572	13-Aug	17:11:43	0.617				
573	13-Aug	17:12:43	0.388				
574	13-Aug	17:13:43	0.278				
575	13-Aug	17:14:43	0.281				
576	13-Aug	17:15:43	1.276				
577	13-Aug	17:16:43	0.291				
578	13-Aug	17:17:43	0.493				
579	13-Aug	17:18:43	0.549				
580	13-Aug	17:19:43	0.556				
581	13-Aug	17:20:43	0.395				

August 14, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 03
Number of logged points: 604
Start time and date: 06:54:19 14-Aug
Elapsed time: 10:04:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 7.116 mg/m³
Time at maximum: 14:44:39 Aug 14
Max STEL Concentration: 1.115 mg/m³
Time at max STEL: 14:45:19 Aug 14
Overall Avg Conc: 0.311 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	14-Aug	06:55:19	0.25	34	14-Aug	07:28:19	0.278
2	14-Aug	06:56:19	0.229	35	14-Aug	07:29:19	0.257
3	14-Aug	06:57:19	0.21	36	14-Aug	07:30:19	0.244
4	14-Aug	06:58:19	0.274	37	14-Aug	07:31:19	0.211
5	14-Aug	06:59:19	0.301	38	14-Aug	07:32:19	0.726
6	14-Aug	07:00:19	0.271	39	14-Aug	07:33:19	0.358
7	14-Aug	07:01:19	0.273	40	14-Aug	07:34:19	0.203
8	14-Aug	07:02:19	0.257	41	14-Aug	07:35:19	0.192
9	14-Aug	07:03:19	0.242	42	14-Aug	07:36:19	0.189
10	14-Aug	07:04:19	0.247	43	14-Aug	07:37:19	0.189
11	14-Aug	07:05:19	0.272	44	14-Aug	07:38:19	0.19
12	14-Aug	07:06:19	0.239	45	14-Aug	07:39:19	0.269
13	14-Aug	07:07:19	0.306	46	14-Aug	07:40:19	0.328
14	14-Aug	07:08:19	0.241	47	14-Aug	07:41:19	0.19
15	14-Aug	07:09:19	0.231	48	14-Aug	07:42:19	0.19
16	14-Aug	07:10:19	0.214	49	14-Aug	07:43:19	0.19
17	14-Aug	07:11:19	0.641	50	14-Aug	07:44:19	0.188
18	14-Aug	07:12:19	0.452	51	14-Aug	07:45:19	0.188
19	14-Aug	07:13:19	0.356	52	14-Aug	07:46:19	0.188
20	14-Aug	07:14:19	0.281	53	14-Aug	07:47:19	0.189
21	14-Aug	07:15:19	0.524	54	14-Aug	07:48:19	0.19
22	14-Aug	07:16:19	0.301	55	14-Aug	07:49:19	0.191
23	14-Aug	07:17:19	0.29	56	14-Aug	07:50:19	0.191
24	14-Aug	07:18:19	1.061	57	14-Aug	07:51:19	0.191
25	14-Aug	07:19:19	0.73	58	14-Aug	07:52:19	0.192
26	14-Aug	07:20:19	0.323	59	14-Aug	07:53:19	0.19
27	14-Aug	07:21:19	0.201	60	14-Aug	07:54:19	0.19
28	14-Aug	07:22:19	0.214	61	14-Aug	07:55:19	1.074
29	14-Aug	07:23:19	0.218	62	14-Aug	07:56:19	0.503
30	14-Aug	07:24:19	0.19	63	14-Aug	07:57:19	0.288
31	14-Aug	07:25:19	0.194	64	14-Aug	07:58:19	0.19
32	14-Aug	07:26:19	0.194	65	14-Aug	07:59:19	0.185
33	14-Aug	07:27:19	0.281	66	14-Aug	08:00:19	0.184

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	14-Aug	08:01:19	0.182	116	14-Aug	08:50:19	0.487
68	14-Aug	08:02:19	0.185	117	14-Aug	08:51:19	0.512
69	14-Aug	08:03:19	0.184	118	14-Aug	08:52:19	0.281
70	14-Aug	08:04:19	0.188	119	14-Aug	08:53:19	0.496
71	14-Aug	08:05:19	0.186	120	14-Aug	08:54:19	0.48
72	14-Aug	08:06:19	0.188	121	14-Aug	08:55:19	0.457
73	14-Aug	08:07:19	0.188	122	14-Aug	08:56:19	0.293
74	14-Aug	08:08:19	0.205	123	14-Aug	08:57:19	0.283
75	14-Aug	08:09:19	0.187	124	14-Aug	08:58:19	0.438
76	14-Aug	08:10:19	0.187	125	14-Aug	08:59:19	0.275
77	14-Aug	08:11:19	0.185	126	14-Aug	09:00:19	0.328
78	14-Aug	08:12:19	0.187	127	14-Aug	09:01:19	0.236
79	14-Aug	08:13:19	0.187	128	14-Aug	09:02:19	0.271
80	14-Aug	08:14:19	0.189	129	14-Aug	09:03:19	0.364
81	14-Aug	08:15:19	0.19	130	14-Aug	09:04:19	0.311
82	14-Aug	08:16:19	0.198	131	14-Aug	09:05:19	0.243
83	14-Aug	08:17:19	0.189	132	14-Aug	09:06:19	0.221
84	14-Aug	08:18:19	0.186	133	14-Aug	09:07:19	0.205
85	14-Aug	08:19:19	0.188	134	14-Aug	09:08:19	0.242
86	14-Aug	08:20:19	0.187	135	14-Aug	09:09:19	0.3
87	14-Aug	08:21:19	0.189	136	14-Aug	09:10:19	0.26
88	14-Aug	08:22:19	0.186	137	14-Aug	09:11:19	0.203
89	14-Aug	08:23:19	0.185	138	14-Aug	09:12:19	0.227
90	14-Aug	08:24:19	0.228	139	14-Aug	09:13:19	0.362
91	14-Aug	08:25:19	0.253	140	14-Aug	09:14:19	0.197
92	14-Aug	08:26:19	0.257	141	14-Aug	09:15:19	0.2
93	14-Aug	08:27:19	0.344	142	14-Aug	09:16:19	0.201
94	14-Aug	08:28:19	0.339	143	14-Aug	09:17:19	0.207
95	14-Aug	08:29:19	0.205	144	14-Aug	09:18:19	0.235
96	14-Aug	08:30:19	0.267	145	14-Aug	09:19:19	0.227
97	14-Aug	08:31:19	0.335	146	14-Aug	09:20:19	0.224
98	14-Aug	08:32:19	0.234	147	14-Aug	09:21:19	0.193
99	14-Aug	08:33:19	0.277	148	14-Aug	09:22:19	0.194
100	14-Aug	08:34:19	0.482	149	14-Aug	09:23:19	0.212
101	14-Aug	08:35:19	0.376	150	14-Aug	09:24:19	0.205
102	14-Aug	08:36:19	0.234	151	14-Aug	09:25:19	0.194
103	14-Aug	08:37:19	0.287	152	14-Aug	09:26:19	0.197
104	14-Aug	08:38:19	0.186	153	14-Aug	09:27:19	0.205
105	14-Aug	08:39:19	0.203	154	14-Aug	09:28:19	0.198
106	14-Aug	08:40:19	0.195	155	14-Aug	09:29:19	0.196
107	14-Aug	08:41:19	0.395	156	14-Aug	09:30:19	0.196
108	14-Aug	08:42:19	0.28	157	14-Aug	09:31:19	0.234
109	14-Aug	08:43:19	0.278	158	14-Aug	09:32:19	1.097
110	14-Aug	08:44:19	0.232	159	14-Aug	09:33:19	0.828
111	14-Aug	08:45:19	0.449	160	14-Aug	09:34:19	0.348
112	14-Aug	08:46:19	0.33	161	14-Aug	09:35:19	0.204
113	14-Aug	08:47:19	0.492	162	14-Aug	09:36:19	0.22
114	14-Aug	08:48:19	0.269	163	14-Aug	09:37:19	0.229
115	14-Aug	08:49:19	0.288	164	14-Aug	09:38:19	0.259

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	14-Aug	09:39:19	0.236	214	14-Aug	10:28:19	0.285
166	14-Aug	09:40:19	0.209	215	14-Aug	10:29:19	0.485
167	14-Aug	09:41:19	0.282	216	14-Aug	10:30:19	0.43
168	14-Aug	09:42:19	0.237	217	14-Aug	10:31:19	0.283
169	14-Aug	09:43:19	0.244	218	14-Aug	10:32:19	0.198
170	14-Aug	09:44:19	0.237	219	14-Aug	10:33:19	0.217
171	14-Aug	09:45:19	0.223	220	14-Aug	10:34:19	0.722
172	14-Aug	09:46:19	0.346	221	14-Aug	10:35:19	0.462
173	14-Aug	09:47:19	0.232	222	14-Aug	10:36:19	0.265
174	14-Aug	09:48:19	0.334	223	14-Aug	10:37:19	0.258
175	14-Aug	09:49:19	0.226	224	14-Aug	10:38:19	0.356
176	14-Aug	09:50:19	0.216	225	14-Aug	10:39:19	0.213
177	14-Aug	09:51:19	0.224	226	14-Aug	10:40:19	0.815
178	14-Aug	09:52:19	0.203	227	14-Aug	10:41:19	0.287
179	14-Aug	09:53:19	0.254	228	14-Aug	10:42:19	0.216
180	14-Aug	09:54:19	0.188	229	14-Aug	10:43:19	0.46
181	14-Aug	09:55:19	0.186	230	14-Aug	10:44:19	0.381
182	14-Aug	09:56:19	0.186	231	14-Aug	10:45:19	0.524
183	14-Aug	09:57:19	0.187	232	14-Aug	10:46:19	0.266
184	14-Aug	09:58:19	0.188	233	14-Aug	10:47:19	0.198
185	14-Aug	09:59:19	0.193	234	14-Aug	10:48:19	0.212
186	14-Aug	10:00:19	0.204	235	14-Aug	10:49:19	0.204
187	14-Aug	10:01:19	0.413	236	14-Aug	10:50:19	0.759
188	14-Aug	10:02:19	0.317	237	14-Aug	10:51:19	1.295
189	14-Aug	10:03:19	0.347	238	14-Aug	10:52:19	0.994
190	14-Aug	10:04:19	0.206	239	14-Aug	10:53:19	0.444
191	14-Aug	10:05:19	0.204	240	14-Aug	10:54:19	0.273
192	14-Aug	10:06:19	0.192	241	14-Aug	10:55:19	0.258
193	14-Aug	10:07:19	0.204	242	14-Aug	10:56:19	0.23
194	14-Aug	10:08:19	0.195	243	14-Aug	10:57:19	0.246
195	14-Aug	10:09:19	0.201	244	14-Aug	10:58:19	0.234
196	14-Aug	10:10:19	0.204	245	14-Aug	10:59:19	0.234
197	14-Aug	10:11:19	0.193	246	14-Aug	11:00:19	0.213
198	14-Aug	10:12:19	0.194	247	14-Aug	11:01:19	0.648
199	14-Aug	10:13:19	0.204	248	14-Aug	11:02:19	0.608
200	14-Aug	10:14:19	0.205	249	14-Aug	11:03:19	0.278
201	14-Aug	10:15:19	0.21	250	14-Aug	11:04:19	0.321
202	14-Aug	10:16:19	0.193	251	14-Aug	11:05:19	0.4
203	14-Aug	10:17:19	0.239	252	14-Aug	11:06:19	1.27
204	14-Aug	10:18:19	0.235	253	14-Aug	11:07:19	0.407
205	14-Aug	10:19:19	0.21	254	14-Aug	11:08:19	0.309
206	14-Aug	10:20:19	0.204	255	14-Aug	11:09:19	0.409
207	14-Aug	10:21:19	0.203	256	14-Aug	11:10:19	0.497
208	14-Aug	10:22:19	0.201	257	14-Aug	11:11:19	0.304
209	14-Aug	10:23:19	0.214	258	14-Aug	11:12:19	0.415
210	14-Aug	10:24:19	0.251	259	14-Aug	11:13:19	0.249
211	14-Aug	10:25:19	0.341	260	14-Aug	11:14:19	0.207
212	14-Aug	10:26:19	0.25	261	14-Aug	11:15:19	0.237
213	14-Aug	10:27:19	0.217	262	14-Aug	11:16:19	0.21

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	14-Aug	11:17:19	0.207	312	14-Aug	12:06:19	0.193
264	14-Aug	11:18:19	0.315	313	14-Aug	12:07:19	0.193
265	14-Aug	11:19:19	0.237	314	14-Aug	12:08:19	0.192
266	14-Aug	11:20:19	0.201	315	14-Aug	12:09:19	0.193
267	14-Aug	11:21:19	0.233	316	14-Aug	12:10:19	0.193
268	14-Aug	11:22:19	0.219	317	14-Aug	12:11:19	0.192
269	14-Aug	11:23:19	0.223	318	14-Aug	12:12:19	0.193
270	14-Aug	11:24:19	0.242	319	14-Aug	12:13:19	0.191
271	14-Aug	11:25:19	0.209	320	14-Aug	12:14:19	0.192
272	14-Aug	11:26:19	0.239	321	14-Aug	12:15:19	0.19
273	14-Aug	11:27:19	0.214	322	14-Aug	12:16:19	0.191
274	14-Aug	11:28:19	0.209	323	14-Aug	12:17:19	0.191
275	14-Aug	11:29:19	0.235	324	14-Aug	12:18:19	0.199
276	14-Aug	11:30:19	0.355	325	14-Aug	12:19:19	0.191
277	14-Aug	11:31:19	0.288	326	14-Aug	12:20:19	0.193
278	14-Aug	11:32:19	0.33	327	14-Aug	12:21:19	0.191
279	14-Aug	11:33:19	0.408	328	14-Aug	12:22:19	0.193
280	14-Aug	11:34:19	0.201	329	14-Aug	12:23:19	0.19
281	14-Aug	11:35:19	0.21	330	14-Aug	12:24:19	0.193
282	14-Aug	11:36:19	0.197	331	14-Aug	12:25:19	0.196
283	14-Aug	11:37:19	0.207	332	14-Aug	12:26:19	0.191
284	14-Aug	11:38:19	0.256	333	14-Aug	12:27:19	0.194
285	14-Aug	11:39:19	0.207	334	14-Aug	12:28:19	0.189
286	14-Aug	11:40:19	0.201	335	14-Aug	12:29:19	0.189
287	14-Aug	11:41:19	0.201	336	14-Aug	12:30:19	0.19
288	14-Aug	11:42:19	0.204	337	14-Aug	12:31:19	0.516
289	14-Aug	11:43:19	0.232	338	14-Aug	12:32:19	0.575
290	14-Aug	11:44:19	0.267	339	14-Aug	12:33:19	0.338
291	14-Aug	11:45:19	0.64	340	14-Aug	12:34:19	0.359
292	14-Aug	11:46:19	0.457	341	14-Aug	12:35:19	0.397
293	14-Aug	11:47:19	0.334	342	14-Aug	12:36:19	0.381
294	14-Aug	11:48:19	0.322	343	14-Aug	12:37:19	0.266
295	14-Aug	11:49:19	0.256	344	14-Aug	12:38:19	0.225
296	14-Aug	11:50:19	0.237	345	14-Aug	12:39:19	0.335
297	14-Aug	11:51:19	0.874	346	14-Aug	12:40:19	0.224
298	14-Aug	11:52:19	0.646	347	14-Aug	12:41:19	0.211
299	14-Aug	11:53:19	0.245	348	14-Aug	12:42:19	0.453
300	14-Aug	11:54:19	0.203	349	14-Aug	12:43:19	0.352
301	14-Aug	11:55:19	0.197	350	14-Aug	12:44:19	0.374
302	14-Aug	11:56:19	0.193	351	14-Aug	12:45:19	0.22
303	14-Aug	11:57:19	0.199	352	14-Aug	12:46:19	0.352
304	14-Aug	11:58:19	0.193	353	14-Aug	12:47:19	0.205
305	14-Aug	11:59:19	0.194	354	14-Aug	12:48:19	0.273
306	14-Aug	12:00:19	0.196	355	14-Aug	12:49:19	0.275
307	14-Aug	12:01:19	0.193	356	14-Aug	12:50:19	0.306
308	14-Aug	12:02:19	0.192	357	14-Aug	12:51:19	0.337
309	14-Aug	12:03:19	0.196	358	14-Aug	12:52:19	0.23
310	14-Aug	12:04:19	0.193	359	14-Aug	12:53:19	0.233
311	14-Aug	12:05:19	0.192	360	14-Aug	12:54:19	0.249

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
361	14-Aug	12:55:19	0.286	410	14-Aug	13:44:19	0.783
362	14-Aug	12:56:19	0.241	411	14-Aug	13:45:19	1.41
363	14-Aug	12:57:19	0.267	412	14-Aug	13:46:19	0.315
364	14-Aug	12:58:19	0.308	413	14-Aug	13:47:19	0.205
365	14-Aug	12:59:19	0.215	414	14-Aug	13:48:19	0.255
366	14-Aug	13:00:19	0.265	415	14-Aug	13:49:19	0.235
367	14-Aug	13:01:19	0.318	416	14-Aug	13:50:19	0.369
368	14-Aug	13:02:19	0.217	417	14-Aug	13:51:19	0.21
369	14-Aug	13:03:19	0.241	418	14-Aug	13:52:19	0.215
370	14-Aug	13:04:19	0.255	419	14-Aug	13:53:19	0.254
371	14-Aug	13:05:19	0.193	420	14-Aug	13:54:19	0.702
372	14-Aug	13:06:19	0.194	421	14-Aug	13:55:19	0.613
373	14-Aug	13:07:19	0.202	422	14-Aug	13:56:19	0.681
374	14-Aug	13:08:19	0.204	423	14-Aug	13:57:19	0.269
375	14-Aug	13:09:19	0.194	424	14-Aug	13:58:19	0.415
376	14-Aug	13:10:19	0.193	425	14-Aug	13:59:19	0.399
377	14-Aug	13:11:19	0.195	426	14-Aug	14:00:19	0.481
378	14-Aug	13:12:19	0.194	427	14-Aug	14:01:19	0.186
379	14-Aug	13:13:19	0.29	428	14-Aug	14:02:19	0.624
380	14-Aug	13:14:19	0.529	429	14-Aug	14:03:19	0.567
381	14-Aug	13:15:19	0.26	430	14-Aug	14:04:19	0.198
382	14-Aug	13:16:19	0.224	431	14-Aug	14:05:19	0.529
383	14-Aug	13:17:19	0.257	432	14-Aug	14:06:19	0.449
384	14-Aug	13:18:19	0.212	433	14-Aug	14:07:19	0.208
385	14-Aug	13:19:19	0.196	434	14-Aug	14:08:19	0.206
386	14-Aug	13:20:19	0.191	435	14-Aug	14:09:19	0.838
387	14-Aug	13:21:19	0.799	436	14-Aug	14:10:19	0.366
388	14-Aug	13:22:19	0.413	437	14-Aug	14:11:19	0.513
389	14-Aug	13:23:19	0.443	438	14-Aug	14:12:19	0.208
390	14-Aug	13:24:19	0.309	439	14-Aug	14:13:19	0.415
391	14-Aug	13:25:19	0.223	440	14-Aug	14:14:19	0.246
392	14-Aug	13:26:19	0.529	441	14-Aug	14:15:19	0.259
393	14-Aug	13:27:19	0.63	442	14-Aug	14:16:19	0.654
394	14-Aug	13:28:19	0.267	443	14-Aug	14:17:19	0.414
395	14-Aug	13:29:19	0.284	444	14-Aug	14:18:19	0.203
396	14-Aug	13:30:19	0.382	445	14-Aug	14:19:19	2.19
397	14-Aug	13:31:19	0.31	446	14-Aug	14:20:19	0.587
398	14-Aug	13:32:19	0.264	447	14-Aug	14:21:19	0.226
399	14-Aug	13:33:19	0.264	448	14-Aug	14:22:19	0.249
400	14-Aug	13:34:19	0.587	449	14-Aug	14:23:19	0.511
401	14-Aug	13:35:19	0.4	450	14-Aug	14:24:19	0.41
402	14-Aug	13:36:19	0.224	451	14-Aug	14:25:19	0.666
403	14-Aug	13:37:19	0.735	452	14-Aug	14:26:19	0.394
404	14-Aug	13:38:19	0.228	453	14-Aug	14:27:19	0.515
405	14-Aug	13:39:19	0.278	454	14-Aug	14:28:19	0.252
406	14-Aug	13:40:19	0.222	455	14-Aug	14:29:19	0.207
407	14-Aug	13:41:19	0.204	456	14-Aug	14:30:19	0.351
408	14-Aug	13:42:19	0.664	457	14-Aug	14:31:19	2.329
409	14-Aug	13:43:19	0.266	458	14-Aug	14:32:19	1.06

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
459	14-Aug	14:33:19	0.353	508	14-Aug	15:22:19	0.201
460	14-Aug	14:34:19	0.407	509	14-Aug	15:23:19	0.338
461	14-Aug	14:35:19	0.725	510	14-Aug	15:24:19	0.206
462	14-Aug	14:36:19	0.266	511	14-Aug	15:25:19	0.224
463	14-Aug	14:37:19	0.245	512	14-Aug	15:26:19	0.206
464	14-Aug	14:38:19	0.279	513	14-Aug	15:27:19	0.199
465	14-Aug	14:39:19	0.333	514	14-Aug	15:28:19	0.204
466	14-Aug	14:40:19	0.686	515	14-Aug	15:29:19	0.199
467	14-Aug	14:41:19	1.518	516	14-Aug	15:30:19	0.202
468	14-Aug	14:42:19	0.309	517	14-Aug	15:31:19	0.201
469	14-Aug	14:43:19	0.342	518	14-Aug	15:32:19	0.2
470	14-Aug	14:44:19	6.77	519	14-Aug	15:33:19	0.2
471	14-Aug	14:45:19	1.091	520	14-Aug	15:34:19	0.199
472	14-Aug	14:46:19	0.327	521	14-Aug	15:35:19	0.2
473	14-Aug	14:47:19	0.229	522	14-Aug	15:36:19	0.201
474	14-Aug	14:48:19	0.203	523	14-Aug	15:37:19	0.209
475	14-Aug	14:49:19	0.202	524	14-Aug	15:38:19	0.219
476	14-Aug	14:50:19	0.277	525	14-Aug	15:39:19	0.204
477	14-Aug	14:51:19	0.258	526	14-Aug	15:40:19	0.201
478	14-Aug	14:52:19	0.244	527	14-Aug	15:41:19	0.201
479	14-Aug	14:53:19	0.252	528	14-Aug	15:42:19	0.201
480	14-Aug	14:54:19	0.259	529	14-Aug	15:43:19	0.201
481	14-Aug	14:55:19	0.198	530	14-Aug	15:44:19	0.201
482	14-Aug	14:56:19	0.24	531	14-Aug	15:45:19	0.202
483	14-Aug	14:57:19	0.207	532	14-Aug	15:46:19	0.202
484	14-Aug	14:58:19	0.2	533	14-Aug	15:47:19	0.218
485	14-Aug	14:59:19	0.233	534	14-Aug	15:48:19	0.204
486	14-Aug	15:00:19	0.21	535	14-Aug	15:49:19	0.204
487	14-Aug	15:01:19	0.256	536	14-Aug	15:50:19	0.203
488	14-Aug	15:02:19	0.207	537	14-Aug	15:51:19	0.202
489	14-Aug	15:03:19	0.196	538	14-Aug	15:52:19	0.202
490	14-Aug	15:04:19	0.215	539	14-Aug	15:53:19	0.204
491	14-Aug	15:05:19	0.198	540	14-Aug	15:54:19	0.203
492	14-Aug	15:06:19	0.199	541	14-Aug	15:55:19	0.202
493	14-Aug	15:07:19	0.196	542	14-Aug	15:56:19	0.201
494	14-Aug	15:08:19	0.197	543	14-Aug	15:57:19	0.206
495	14-Aug	15:09:19	0.198	544	14-Aug	15:58:19	0.207
496	14-Aug	15:10:19	0.197	545	14-Aug	15:59:19	0.203
497	14-Aug	15:11:19	0.196	546	14-Aug	16:00:19	0.2
498	14-Aug	15:12:19	0.199	547	14-Aug	16:01:19	0.202
499	14-Aug	15:13:19	0.229	548	14-Aug	16:02:19	0.202
500	14-Aug	15:14:19	0.221	549	14-Aug	16:03:19	0.224
501	14-Aug	15:15:19	0.201	550	14-Aug	16:04:19	0.203
502	14-Aug	15:16:19	0.202	551	14-Aug	16:05:19	0.201
503	14-Aug	15:17:19	0.199	552	14-Aug	16:06:19	0.204
504	14-Aug	15:18:19	0.199	553	14-Aug	16:07:19	0.202
505	14-Aug	15:19:19	0.2	554	14-Aug	16:08:19	0.206
506	14-Aug	15:20:19	0.198	555	14-Aug	16:09:19	0.209
507	14-Aug	15:21:19	0.198	556	14-Aug	16:10:19	0.208

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
557	14-Aug	16:11:19	0.21				
558	14-Aug	16:12:19	0.204				
559	14-Aug	16:13:19	0.203				
560	14-Aug	16:14:19	0.206				
561	14-Aug	16:15:19	0.204				
562	14-Aug	16:16:19	0.203				
563	14-Aug	16:17:19	0.203				
564	14-Aug	16:18:19	0.205				
565	14-Aug	16:19:19	0.205				
566	14-Aug	16:20:19	0.202				
567	14-Aug	16:21:19	0.213				
568	14-Aug	16:22:19	0.203				
569	14-Aug	16:23:19	0.203				
570	14-Aug	16:24:19	0.205				
571	14-Aug	16:25:19	0.203				
572	14-Aug	16:26:19	0.202				
573	14-Aug	16:27:19	0.207				
574	14-Aug	16:28:19	0.202				
575	14-Aug	16:29:19	0.202				
576	14-Aug	16:30:19	0.204				
577	14-Aug	16:31:19	0.208				
578	14-Aug	16:32:19	0.201				
579	14-Aug	16:33:19	0.203				
580	14-Aug	16:34:19	0.211				
581	14-Aug	16:35:19	0.202				
582	14-Aug	16:36:19	0.205				
583	14-Aug	16:37:19	0.203				
584	14-Aug	16:38:19	0.204				
585	14-Aug	16:39:19	0.204				
586	14-Aug	16:40:19	0.207				
587	14-Aug	16:41:19	0.205				
588	14-Aug	16:42:19	0.229				
589	14-Aug	16:43:19	0.236				
590	14-Aug	16:44:19	0.22				
591	14-Aug	16:45:19	0.672				
592	14-Aug	16:46:19	0.242				
593	14-Aug	16:47:19	0.204				
594	14-Aug	16:48:19	0.207				
595	14-Aug	16:49:19	0.207				
596	14-Aug	16:50:19	0.24				
597	14-Aug	16:51:19	0.579				
598	14-Aug	16:52:19	0.481				
599	14-Aug	16:53:19	0.399				
600	14-Aug	16:54:19	0.814				
601	14-Aug	16:55:19	0.626				
602	14-Aug	16:56:19	0.86				
603	14-Aug	16:57:19	0.325				
604	14-Aug	16:58:19	0.352				

August 15, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 04
Number of logged points: 594
Start time and date: 07:12:04 15-Aug
Elapsed time: 09:54:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 9.691 mg/m³
Time at maximum: 17:05:14 Aug 15
Max STEL Concentration: 1.113 mg/m³
Time at max STEL: 17:06:05 Aug 15
Overall Avg Conc: 0.299 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	15-Aug	07:13:04	0.284	34	15-Aug	07:46:04	0.23
2	15-Aug	07:14:04	0.592	35	15-Aug	07:47:04	0.227
3	15-Aug	07:15:04	0.421	36	15-Aug	07:48:04	0.231
4	15-Aug	07:16:04	0.423	37	15-Aug	07:49:04	0.236
5	15-Aug	07:17:04	0.406	38	15-Aug	07:50:04	0.23
6	15-Aug	07:18:04	0.338	39	15-Aug	07:51:04	0.232
7	15-Aug	07:19:04	0.601	40	15-Aug	07:52:04	0.23
8	15-Aug	07:20:04	0.256	41	15-Aug	07:53:04	0.227
9	15-Aug	07:21:04	0.432	42	15-Aug	07:54:04	0.227
10	15-Aug	07:22:04	0.359	43	15-Aug	07:55:04	0.229
11	15-Aug	07:23:04	0.787	44	15-Aug	07:56:04	0.231
12	15-Aug	07:24:04	0.269	45	15-Aug	07:57:04	0.231
13	15-Aug	07:25:04	0.268	46	15-Aug	07:58:04	0.229
14	15-Aug	07:26:04	0.296	47	15-Aug	07:59:04	0.228
15	15-Aug	07:27:04	0.259	48	15-Aug	08:00:04	0.226
16	15-Aug	07:28:04	0.462	49	15-Aug	08:01:04	0.238
17	15-Aug	07:29:04	0.362	50	15-Aug	08:02:04	0.229
18	15-Aug	07:30:04	0.275	51	15-Aug	08:03:04	0.226
19	15-Aug	07:31:04	0.369	52	15-Aug	08:04:04	0.223
20	15-Aug	07:32:04	0.397	53	15-Aug	08:05:04	0.224
21	15-Aug	07:33:04	0.405	54	15-Aug	08:06:04	0.225
22	15-Aug	07:34:04	0.345	55	15-Aug	08:07:04	0.227
23	15-Aug	07:35:04	0.306	56	15-Aug	08:08:04	0.223
24	15-Aug	07:36:04	0.249	57	15-Aug	08:09:04	0.223
25	15-Aug	07:37:04	0.44	58	15-Aug	08:10:04	0.228
26	15-Aug	07:38:04	0.357	59	15-Aug	08:11:04	0.222
27	15-Aug	07:39:04	0.669	60	15-Aug	08:12:04	0.227
28	15-Aug	07:40:04	0.42	61	15-Aug	08:13:04	0.225
29	15-Aug	07:41:04	0.262	62	15-Aug	08:14:04	0.229
30	15-Aug	07:42:04	0.229	63	15-Aug	08:15:04	0.76
31	15-Aug	07:43:04	0.229	64	15-Aug	08:16:04	0.295
32	15-Aug	07:44:04	0.23	65	15-Aug	08:17:04	0.231
33	15-Aug	07:45:04	0.235	66	15-Aug	08:18:04	0.228

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	15-Aug	08:19:04	0.227	116	15-Aug	09:08:04	0.248
68	15-Aug	08:20:04	0.23	117	15-Aug	09:09:04	0.239
69	15-Aug	08:21:04	1.639	118	15-Aug	09:10:04	0.241
70	15-Aug	08:22:04	0.317	119	15-Aug	09:11:04	0.238
71	15-Aug	08:23:04	0.275	120	15-Aug	09:12:04	0.24
72	15-Aug	08:24:04	0.249	121	15-Aug	09:13:04	0.241
73	15-Aug	08:25:04	0.235	122	15-Aug	09:14:04	0.24
74	15-Aug	08:26:04	0.311	123	15-Aug	09:15:04	0.245
75	15-Aug	08:27:04	0.66	124	15-Aug	09:16:04	0.244
76	15-Aug	08:28:04	0.301	125	15-Aug	09:17:04	0.243
77	15-Aug	08:29:04	0.246	126	15-Aug	09:18:04	0.241
78	15-Aug	08:30:04	0.24	127	15-Aug	09:19:04	0.249
79	15-Aug	08:31:04	0.243	128	15-Aug	09:20:04	0.24
80	15-Aug	08:32:04	0.246	129	15-Aug	09:21:04	0.241
81	15-Aug	08:33:04	0.245	130	15-Aug	09:22:04	0.239
82	15-Aug	08:34:04	0.24	131	15-Aug	09:23:04	0.237
83	15-Aug	08:35:04	0.246	132	15-Aug	09:24:04	0.236
84	15-Aug	08:36:04	0.241	133	15-Aug	09:25:04	0.237
85	15-Aug	08:37:04	0.243	134	15-Aug	09:26:04	0.24
86	15-Aug	08:38:04	0.244	135	15-Aug	09:27:04	0.242
87	15-Aug	08:39:04	0.238	136	15-Aug	09:28:04	0.241
88	15-Aug	08:40:04	0.239	137	15-Aug	09:29:04	0.241
89	15-Aug	08:41:04	0.248	138	15-Aug	09:30:04	0.242
90	15-Aug	08:42:04	0.245	139	15-Aug	09:31:04	0.243
91	15-Aug	08:43:04	0.243	140	15-Aug	09:32:04	0.241
92	15-Aug	08:44:04	0.248	141	15-Aug	09:33:04	0.245
93	15-Aug	08:45:04	0.241	142	15-Aug	09:34:04	0.243
94	15-Aug	08:46:04	0.245	143	15-Aug	09:35:04	0.248
95	15-Aug	08:47:04	0.246	144	15-Aug	09:36:04	0.246
96	15-Aug	08:48:04	0.247	145	15-Aug	09:37:04	0.244
97	15-Aug	08:49:04	0.245	146	15-Aug	09:38:04	0.248
98	15-Aug	08:50:04	0.249	147	15-Aug	09:39:04	0.248
99	15-Aug	08:51:04	0.248	148	15-Aug	09:40:04	0.24
100	15-Aug	08:52:04	0.252	149	15-Aug	09:41:04	0.241
101	15-Aug	08:53:04	0.252	150	15-Aug	09:42:04	0.247
102	15-Aug	08:54:04	0.245	151	15-Aug	09:43:04	0.247
103	15-Aug	08:55:04	0.255	152	15-Aug	09:44:04	0.242
104	15-Aug	08:56:04	0.254	153	15-Aug	09:45:04	0.247
105	15-Aug	08:57:04	0.25	154	15-Aug	09:46:04	0.251
106	15-Aug	08:58:04	0.251	155	15-Aug	09:47:04	0.252
107	15-Aug	08:59:04	0.255	156	15-Aug	09:48:04	0.256
108	15-Aug	09:00:04	0.242	157	15-Aug	09:49:04	0.255
109	15-Aug	09:01:04	0.252	158	15-Aug	09:50:04	0.253
110	15-Aug	09:02:04	0.251	159	15-Aug	09:51:04	0.247
111	15-Aug	09:03:04	0.244	160	15-Aug	09:52:04	0.245
112	15-Aug	09:04:04	0.236	161	15-Aug	09:53:04	0.249
113	15-Aug	09:05:04	0.243	162	15-Aug	09:54:04	0.246
114	15-Aug	09:06:04	0.247	163	15-Aug	09:55:04	0.251
115	15-Aug	09:07:04	0.247	164	15-Aug	09:56:04	0.25

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	15-Aug	09:57:04	0.245	214	15-Aug	10:46:04	0.239
166	15-Aug	09:58:04	0.248	215	15-Aug	10:47:04	0.239
167	15-Aug	09:59:04	0.246	216	15-Aug	10:48:04	0.239
168	15-Aug	10:00:04	0.243	217	15-Aug	10:49:04	0.24
169	15-Aug	10:01:04	0.244	218	15-Aug	10:50:04	0.241
170	15-Aug	10:02:04	0.241	219	15-Aug	10:51:04	0.245
171	15-Aug	10:03:04	0.243	220	15-Aug	10:52:04	0.238
172	15-Aug	10:04:04	0.247	221	15-Aug	10:53:04	0.239
173	15-Aug	10:05:04	0.247	222	15-Aug	10:54:04	0.245
174	15-Aug	10:06:04	0.247	223	15-Aug	10:55:04	0.24
175	15-Aug	10:07:04	0.24	224	15-Aug	10:56:04	0.235
176	15-Aug	10:08:04	0.242	225	15-Aug	10:57:04	0.239
177	15-Aug	10:09:04	0.238	226	15-Aug	10:58:04	0.24
178	15-Aug	10:10:04	0.238	227	15-Aug	10:59:04	0.238
179	15-Aug	10:11:04	0.24	228	15-Aug	11:00:04	0.237
180	15-Aug	10:12:04	0.239	229	15-Aug	11:01:04	0.238
181	15-Aug	10:13:04	0.241	230	15-Aug	11:02:04	0.238
182	15-Aug	10:14:04	0.24	231	15-Aug	11:03:04	0.237
183	15-Aug	10:15:04	0.242	232	15-Aug	11:04:04	0.236
184	15-Aug	10:16:04	0.236	233	15-Aug	11:05:04	0.24
185	15-Aug	10:17:04	0.24	234	15-Aug	11:06:04	0.238
186	15-Aug	10:18:04	0.239	235	15-Aug	11:07:04	0.239
187	15-Aug	10:19:04	0.24	236	15-Aug	11:08:04	0.239
188	15-Aug	10:20:04	0.243	237	15-Aug	11:09:04	0.236
189	15-Aug	10:21:04	0.241	238	15-Aug	11:10:04	0.239
190	15-Aug	10:22:04	0.239	239	15-Aug	11:11:04	2.099
191	15-Aug	10:23:04	0.24	240	15-Aug	11:12:04	1.675
192	15-Aug	10:24:04	0.235	241	15-Aug	11:13:04	0.618
193	15-Aug	10:25:04	0.241	242	15-Aug	11:14:04	0.406
194	15-Aug	10:26:04	0.234	243	15-Aug	11:15:04	0.321
195	15-Aug	10:27:04	0.245	244	15-Aug	11:16:04	0.265
196	15-Aug	10:28:04	0.24	245	15-Aug	11:17:04	0.253
197	15-Aug	10:29:04	0.237	246	15-Aug	11:18:04	0.242
198	15-Aug	10:30:04	0.247	247	15-Aug	11:19:04	0.241
199	15-Aug	10:31:04	0.32	248	15-Aug	11:20:04	0.234
200	15-Aug	10:32:04	0.641	249	15-Aug	11:21:04	0.233
201	15-Aug	10:33:04	0.366	250	15-Aug	11:22:04	0.233
202	15-Aug	10:34:04	0.271	251	15-Aug	11:23:04	0.235
203	15-Aug	10:35:04	0.242	252	15-Aug	11:24:04	0.244
204	15-Aug	10:36:04	0.248	253	15-Aug	11:25:04	0.237
205	15-Aug	10:37:04	0.246	254	15-Aug	11:26:04	0.254
206	15-Aug	10:38:04	0.248	255	15-Aug	11:27:04	0.249
207	15-Aug	10:39:04	0.242	256	15-Aug	11:28:04	0.244
208	15-Aug	10:40:04	0.238	257	15-Aug	11:29:04	0.245
209	15-Aug	10:41:04	0.239	258	15-Aug	11:30:04	0.244
210	15-Aug	10:42:04	0.246	259	15-Aug	11:31:04	0.245
211	15-Aug	10:43:04	0.244	260	15-Aug	11:32:04	0.244
212	15-Aug	10:44:04	0.247	261	15-Aug	11:33:04	0.246
213	15-Aug	10:45:04	0.246	262	15-Aug	11:34:04	0.244

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	15-Aug	11:35:04	0.245	312	15-Aug	12:24:04	0.242
264	15-Aug	11:36:04	0.246	313	15-Aug	12:25:04	0.242
265	15-Aug	11:37:04	0.247	314	15-Aug	12:26:04	0.24
266	15-Aug	11:38:04	0.244	315	15-Aug	12:27:04	0.241
267	15-Aug	11:39:04	0.25	316	15-Aug	12:28:04	0.242
268	15-Aug	11:40:04	0.243	317	15-Aug	12:29:04	0.241
269	15-Aug	11:41:04	0.245	318	15-Aug	12:30:04	0.241
270	15-Aug	11:42:04	0.245	319	15-Aug	12:31:04	0.238
271	15-Aug	11:43:04	0.252	320	15-Aug	12:32:04	0.237
272	15-Aug	11:44:04	0.246	321	15-Aug	12:33:04	0.239
273	15-Aug	11:45:04	0.241	322	15-Aug	12:34:04	0.236
274	15-Aug	11:46:04	0.245	323	15-Aug	12:35:04	0.249
275	15-Aug	11:47:04	0.247	324	15-Aug	12:36:04	0.238
276	15-Aug	11:48:04	0.244	325	15-Aug	12:37:04	0.24
277	15-Aug	11:49:04	0.244	326	15-Aug	12:38:04	0.24
278	15-Aug	11:50:04	0.244	327	15-Aug	12:39:04	0.236
279	15-Aug	11:51:04	0.246	328	15-Aug	12:40:04	0.238
280	15-Aug	11:52:04	0.247	329	15-Aug	12:41:04	0.239
281	15-Aug	11:53:04	0.247	330	15-Aug	12:42:04	0.243
282	15-Aug	11:54:04	0.246	331	15-Aug	12:43:04	0.242
283	15-Aug	11:55:04	0.248	332	15-Aug	12:44:04	0.242
284	15-Aug	11:56:04	0.246	333	15-Aug	12:45:04	0.239
285	15-Aug	11:57:04	0.247	334	15-Aug	12:46:04	1.513
286	15-Aug	11:58:04	0.248	335	15-Aug	12:47:04	0.282
287	15-Aug	11:59:04	0.246	336	15-Aug	12:48:04	0.253
288	15-Aug	12:00:04	0.246	337	15-Aug	12:49:04	0.25
289	15-Aug	12:01:04	0.248	338	15-Aug	12:50:04	0.25
290	15-Aug	12:02:04	0.245	339	15-Aug	12:51:04	0.247
291	15-Aug	12:03:04	0.246	340	15-Aug	12:52:04	0.249
292	15-Aug	12:04:04	0.247	341	15-Aug	12:53:04	0.252
293	15-Aug	12:05:04	0.248	342	15-Aug	12:54:04	0.249
294	15-Aug	12:06:04	0.246	343	15-Aug	12:55:04	0.249
295	15-Aug	12:07:04	0.249	344	15-Aug	12:56:04	0.25
296	15-Aug	12:08:04	0.245	345	15-Aug	12:57:04	0.247
297	15-Aug	12:09:04	0.246	346	15-Aug	12:58:04	0.249
298	15-Aug	12:10:04	0.246	347	15-Aug	12:59:04	0.253
299	15-Aug	12:11:04	0.247	348	15-Aug	13:00:04	0.257
300	15-Aug	12:12:04	0.248	349	15-Aug	13:01:04	0.253
301	15-Aug	12:13:04	0.243	350	15-Aug	13:02:04	0.253
302	15-Aug	12:14:04	0.245	351	15-Aug	13:03:04	0.253
303	15-Aug	12:15:04	0.244	352	15-Aug	13:04:04	0.25
304	15-Aug	12:16:04	0.248	353	15-Aug	13:05:04	0.253
305	15-Aug	12:17:04	0.245	354	15-Aug	13:06:04	0.254
306	15-Aug	12:18:04	0.241	355	15-Aug	13:07:04	0.249
307	15-Aug	12:19:04	0.251	356	15-Aug	13:08:04	0.252
308	15-Aug	12:20:04	0.243	357	15-Aug	13:09:04	0.252
309	15-Aug	12:21:04	0.242	358	15-Aug	13:10:04	0.251
310	15-Aug	12:22:04	0.251	359	15-Aug	13:11:04	0.253
311	15-Aug	12:23:04	0.241	360	15-Aug	13:12:04	0.253

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
361	15-Aug	13:13:04	0.378	410	15-Aug	14:02:04	0.228
362	15-Aug	13:14:04	0.366	411	15-Aug	14:03:04	0.23
363	15-Aug	13:15:04	0.333	412	15-Aug	14:04:04	0.227
364	15-Aug	13:16:04	0.26	413	15-Aug	14:05:04	0.23
365	15-Aug	13:17:04	0.28	414	15-Aug	14:06:04	0.227
366	15-Aug	13:18:04	0.282	415	15-Aug	14:07:04	0.228
367	15-Aug	13:19:04	0.259	416	15-Aug	14:08:04	0.228
368	15-Aug	13:20:04	0.248	417	15-Aug	14:09:04	0.233
369	15-Aug	13:21:04	0.282	418	15-Aug	14:10:04	0.229
370	15-Aug	13:22:04	0.386	419	15-Aug	14:11:04	0.936
371	15-Aug	13:23:04	0.255	420	15-Aug	14:12:04	0.25
372	15-Aug	13:24:04	0.288	421	15-Aug	14:13:04	0.655
373	15-Aug	13:25:04	0.25	422	15-Aug	14:14:04	0.332
374	15-Aug	13:26:04	0.251	423	15-Aug	14:15:04	0.253
375	15-Aug	13:27:04	0.295	424	15-Aug	14:16:04	0.225
376	15-Aug	13:28:04	4.46	425	15-Aug	14:17:04	0.314
377	15-Aug	13:29:04	1.737	426	15-Aug	14:18:04	0.231
378	15-Aug	13:30:04	0.403	427	15-Aug	14:19:04	0.222
379	15-Aug	13:31:04	0.252	428	15-Aug	14:20:04	0.224
380	15-Aug	13:32:04	0.239	429	15-Aug	14:21:04	0.227
381	15-Aug	13:33:04	0.238	430	15-Aug	14:22:04	0.222
382	15-Aug	13:34:04	0.239	431	15-Aug	14:23:04	0.221
383	15-Aug	13:35:04	0.237	432	15-Aug	14:24:04	0.218
384	15-Aug	13:36:04	0.233	433	15-Aug	14:25:04	0.22
385	15-Aug	13:37:04	0.236	434	15-Aug	14:26:04	0.221
386	15-Aug	13:38:04	0.236	435	15-Aug	14:27:04	0.222
387	15-Aug	13:39:04	0.234	436	15-Aug	14:28:04	0.245
388	15-Aug	13:40:04	0.236	437	15-Aug	14:29:04	0.285
389	15-Aug	13:41:04	0.24	438	15-Aug	14:30:04	0.217
390	15-Aug	13:42:04	0.233	439	15-Aug	14:31:04	0.217
391	15-Aug	13:43:04	0.238	440	15-Aug	14:32:04	0.216
392	15-Aug	13:44:04	0.231	441	15-Aug	14:33:04	0.216
393	15-Aug	13:45:04	0.234	442	15-Aug	14:34:04	0.219
394	15-Aug	13:46:04	0.245	443	15-Aug	14:35:04	0.218
395	15-Aug	13:47:04	0.278	444	15-Aug	14:36:04	0.216
396	15-Aug	13:48:04	0.235	445	15-Aug	14:37:04	0.217
397	15-Aug	13:49:04	0.263	446	15-Aug	14:38:04	0.215
398	15-Aug	13:50:04	0.249	447	15-Aug	14:39:04	0.217
399	15-Aug	13:51:04	0.229	448	15-Aug	14:40:04	0.221
400	15-Aug	13:52:04	0.238	449	15-Aug	14:41:04	0.218
401	15-Aug	13:53:04	0.234	450	15-Aug	14:42:04	0.216
402	15-Aug	13:54:04	0.227	451	15-Aug	14:43:04	0.218
403	15-Aug	13:55:04	0.232	452	15-Aug	14:44:04	0.216
404	15-Aug	13:56:04	0.231	453	15-Aug	14:45:04	0.216
405	15-Aug	13:57:04	0.231	454	15-Aug	14:46:04	0.214
406	15-Aug	13:58:04	0.233	455	15-Aug	14:47:04	0.217
407	15-Aug	13:59:04	0.232	456	15-Aug	14:48:04	0.213
408	15-Aug	14:00:04	0.232	457	15-Aug	14:49:04	0.216
409	15-Aug	14:01:04	0.233	458	15-Aug	14:50:04	0.214

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
459	15-Aug	14:51:04	0.214	508	15-Aug	15:40:04	0.213
460	15-Aug	14:52:04	0.215	509	15-Aug	15:41:04	0.214
461	15-Aug	14:53:04	0.214	510	15-Aug	15:42:04	0.211
462	15-Aug	14:54:04	0.215	511	15-Aug	15:43:04	0.212
463	15-Aug	14:55:04	0.214	512	15-Aug	15:44:04	0.212
464	15-Aug	14:56:04	0.214	513	15-Aug	15:45:04	0.211
465	15-Aug	14:57:04	0.214	514	15-Aug	15:46:04	0.214
466	15-Aug	14:58:04	0.217	515	15-Aug	15:47:04	0.209
467	15-Aug	14:59:04	0.218	516	15-Aug	15:48:04	0.21
468	15-Aug	15:00:04	0.213	517	15-Aug	15:49:04	0.211
469	15-Aug	15:01:04	0.215	518	15-Aug	15:50:04	0.212
470	15-Aug	15:02:04	0.218	519	15-Aug	15:51:04	0.21
471	15-Aug	15:03:04	0.217	520	15-Aug	15:52:04	0.21
472	15-Aug	15:04:04	0.214	521	15-Aug	15:53:04	0.21
473	15-Aug	15:05:04	0.214	522	15-Aug	15:54:04	0.209
474	15-Aug	15:06:04	0.214	523	15-Aug	15:55:04	0.218
475	15-Aug	15:07:04	0.213	524	15-Aug	15:56:04	0.21
476	15-Aug	15:08:04	0.216	525	15-Aug	15:57:04	0.212
477	15-Aug	15:09:04	0.213	526	15-Aug	15:58:04	0.214
478	15-Aug	15:10:04	0.212	527	15-Aug	15:59:04	0.212
479	15-Aug	15:11:04	0.214	528	15-Aug	16:00:04	0.213
480	15-Aug	15:12:04	0.212	529	15-Aug	16:01:04	0.214
481	15-Aug	15:13:04	0.213	530	15-Aug	16:02:04	0.215
482	15-Aug	15:14:04	0.214	531	15-Aug	16:03:04	0.211
483	15-Aug	15:15:04	0.213	532	15-Aug	16:04:04	0.211
484	15-Aug	15:16:04	0.213	533	15-Aug	16:05:04	0.213
485	15-Aug	15:17:04	0.213	534	15-Aug	16:06:04	0.211
486	15-Aug	15:18:04	0.213	535	15-Aug	16:07:04	0.21
487	15-Aug	15:19:04	0.213	536	15-Aug	16:08:04	0.21
488	15-Aug	15:20:04	0.213	537	15-Aug	16:09:04	0.211
489	15-Aug	15:21:04	0.214	538	15-Aug	16:10:04	0.21
490	15-Aug	15:22:04	0.216	539	15-Aug	16:11:04	0.21
491	15-Aug	15:23:04	0.213	540	15-Aug	16:12:04	0.212
492	15-Aug	15:24:04	0.213	541	15-Aug	16:13:04	0.209
493	15-Aug	15:25:04	0.214	542	15-Aug	16:14:04	0.212
494	15-Aug	15:26:04	0.215	543	15-Aug	16:15:04	0.214
495	15-Aug	15:27:04	0.213	544	15-Aug	16:16:04	0.213
496	15-Aug	15:28:04	0.214	545	15-Aug	16:17:04	0.213
497	15-Aug	15:29:04	0.214	546	15-Aug	16:18:04	0.211
498	15-Aug	15:30:04	0.217	547	15-Aug	16:19:04	0.21
499	15-Aug	15:31:04	0.213	548	15-Aug	16:20:04	0.218
500	15-Aug	15:32:04	0.212	549	15-Aug	16:21:04	0.46
501	15-Aug	15:33:04	0.212	550	15-Aug	16:22:04	0.212
502	15-Aug	15:34:04	0.213	551	15-Aug	16:23:04	0.211
503	15-Aug	15:35:04	0.212	552	15-Aug	16:24:04	0.22
504	15-Aug	15:36:04	0.218	553	15-Aug	16:25:04	0.211
505	15-Aug	15:37:04	0.212	554	15-Aug	16:26:04	0.212
506	15-Aug	15:38:04	0.215	555	15-Aug	16:27:04	0.213
507	15-Aug	15:39:04	0.212	556	15-Aug	16:28:04	0.213

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
557	15-Aug	16:29:04	0.213				
558	15-Aug	16:30:04	0.214				
559	15-Aug	16:31:04	0.213				
560	15-Aug	16:32:04	0.214				
561	15-Aug	16:33:04	0.211				
562	15-Aug	16:34:04	0.218				
563	15-Aug	16:35:04	0.636				
564	15-Aug	16:36:04	0.777				
565	15-Aug	16:37:04	0.221				
566	15-Aug	16:38:04	0.223				
567	15-Aug	16:39:04	0.323				
568	15-Aug	16:40:04	1.518				
569	15-Aug	16:41:04	0.267				
570	15-Aug	16:42:04	0.216				
571	15-Aug	16:43:04	0.247				
572	15-Aug	16:44:04	0.213				
573	15-Aug	16:45:04	0.216				
574	15-Aug	16:46:04	0.213				
575	15-Aug	16:47:04	0.214				
576	15-Aug	16:48:04	0.213				
577	15-Aug	16:49:04	0.219				
578	15-Aug	16:50:04	0.389				
579	15-Aug	16:51:04	0.247				
580	15-Aug	16:52:04	0.218				
581	15-Aug	16:53:04	0.214				
582	15-Aug	16:54:04	0.222				
583	15-Aug	16:55:04	0.222				
584	15-Aug	16:56:04	0.222				
585	15-Aug	16:57:04	0.223				
586	15-Aug	16:58:04	0.282				
587	15-Aug	16:59:04	0.765				
588	15-Aug	17:00:04	1.044				
589	15-Aug	17:01:04	0.46				
590	15-Aug	17:02:04	0.581				
591	15-Aug	17:03:04	0.69				
592	15-Aug	17:04:04	0.271				
593	15-Aug	17:05:04	7.61				
594	15-Aug	17:06:04	3.676				

August 16, 2001

pDR-1000 S/N: 00000
User ID: DuPont Site #2
Tag Number: 02
Number of logged points: 22
Start time and date: 07:09:25 16-Aug
Elapsed time: 00:22:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 0.839 mg/m³
Time at maximum: 07:22:57 Aug 16
Max STEL Concentration: 0.536 mg/m³
Time at max STEL: 07:27:25 Aug 16
Overall Avg Conc: 0.495 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)
1	16-Aug	07:10:25	0.443
2	16-Aug	07:11:25	0.366
3	16-Aug	07:12:25	0.341
4	16-Aug	07:13:25	0.452
5	16-Aug	07:14:25	0.416
6	16-Aug	07:15:25	0.439
7	16-Aug	07:16:25	0.531
8	16-Aug	07:17:25	0.52
9	16-Aug	07:18:25	0.412
10	16-Aug	07:19:25	0.38
11	16-Aug	07:20:25	0.65
12	16-Aug	07:21:25	0.61
13	16-Aug	07:22:25	0.625
14	16-Aug	07:23:25	0.782
15	16-Aug	07:24:25	0.55
16	16-Aug	07:25:25	0.6
17	16-Aug	07:26:25	0.686
18	16-Aug	07:27:25	0.379
19	16-Aug	07:28:25	0.41
20	16-Aug	07:29:25	0.416
21	16-Aug	07:30:25	0.401
22	16-Aug	07:31:25	0.507

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 01
Number of logged points: 385
Start time and date: 07:13:01 16-Aug
Elapsed time: 06:25:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 7.390 mg/m³
Time at maximum: 09:08:56 Aug 16
Max STEL Concentration: 0.760 mg/m³
Time at max STEL: 09:09:31 Aug 16
Overall Avg Conc: 0.400 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	16-Aug	07:14:01	0.263	37	16-Aug	07:50:01	0.22
2	16-Aug	07:15:01	0.268	38	16-Aug	07:51:01	0.22
3	16-Aug	07:16:01	0.239	39	16-Aug	07:52:01	0.221
4	16-Aug	07:17:01	0.242	40	16-Aug	07:53:01	0.224
5	16-Aug	07:18:01	0.255	41	16-Aug	07:54:01	2.531
6	16-Aug	07:19:01	0.789	42	16-Aug	07:55:01	0.243
7	16-Aug	07:20:01	0.444	43	16-Aug	07:56:01	0.273
8	16-Aug	07:21:01	0.556	44	16-Aug	07:57:01	0.219
9	16-Aug	07:22:01	2.87	45	16-Aug	07:58:01	0.222
10	16-Aug	07:23:01	1.507	46	16-Aug	07:59:01	0.223
11	16-Aug	07:24:01	0.298	47	16-Aug	08:00:01	0.222
12	16-Aug	07:25:01	0.374	48	16-Aug	08:01:01	0.228
13	16-Aug	07:26:01	0.278	49	16-Aug	08:02:01	0.22
14	16-Aug	07:27:01	0.296	50	16-Aug	08:03:01	0.219
15	16-Aug	07:28:01	0.263	51	16-Aug	08:04:01	0.22
16	16-Aug	07:29:01	0.292	52	16-Aug	08:05:01	0.224
17	16-Aug	07:30:01	0.295	53	16-Aug	08:06:01	0.223
18	16-Aug	07:31:01	0.565	54	16-Aug	08:07:01	0.221
19	16-Aug	07:32:01	0.22	55	16-Aug	08:08:01	0.232
20	16-Aug	07:33:01	0.221	56	16-Aug	08:09:01	0.24
21	16-Aug	07:34:01	0.258	57	16-Aug	08:10:01	0.224
22	16-Aug	07:35:01	0.61	58	16-Aug	08:11:01	0.222
23	16-Aug	07:36:01	1.608	59	16-Aug	08:12:01	0.219
24	16-Aug	07:37:01	0.373	60	16-Aug	08:13:01	0.279
25	16-Aug	07:38:01	1.585	61	16-Aug	08:14:01	0.347
26	16-Aug	07:39:01	0.345	62	16-Aug	08:15:01	3.088
27	16-Aug	07:40:01	0.225	63	16-Aug	08:16:01	0.778
28	16-Aug	07:41:01	0.231	64	16-Aug	08:17:01	0.222
29	16-Aug	07:42:01	0.221	65	16-Aug	08:18:01	0.22
30	16-Aug	07:43:01	0.25	66	16-Aug	08:19:01	0.221
31	16-Aug	07:44:01	0.224	67	16-Aug	08:20:01	0.218
32	16-Aug	07:45:01	0.221	68	16-Aug	08:21:01	0.22
33	16-Aug	07:46:01	0.221	69	16-Aug	08:22:01	0.219
34	16-Aug	07:47:01	0.22	70	16-Aug	08:23:01	0.228
35	16-Aug	07:48:01	0.219	71	16-Aug	08:24:01	0.223
36	16-Aug	07:49:01	0.221	72	16-Aug	08:25:01	0.22

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
73	16-Aug	08:26:01	0.22	122	16-Aug	09:15:01	0.347
74	16-Aug	08:27:01	0.22	123	16-Aug	09:16:01	0.236
75	16-Aug	08:28:01	1.745	124	16-Aug	09:17:01	0.226
76	16-Aug	08:29:01	0.502	125	16-Aug	09:18:01	0.223
77	16-Aug	08:30:01	0.339	126	16-Aug	09:19:01	0.222
78	16-Aug	08:31:01	0.235	127	16-Aug	09:20:01	0.249
79	16-Aug	08:32:01	0.229	128	16-Aug	09:21:01	0.242
80	16-Aug	08:33:01	0.228	129	16-Aug	09:22:01	0.221
81	16-Aug	08:34:01	0.22	130	16-Aug	09:23:01	0.222
82	16-Aug	08:35:01	0.225	131	16-Aug	09:24:01	0.271
83	16-Aug	08:36:01	0.22	132	16-Aug	09:25:01	0.257
84	16-Aug	08:37:01	0.219	133	16-Aug	09:26:01	0.221
85	16-Aug	08:38:01	0.226	134	16-Aug	09:27:01	0.222
86	16-Aug	08:39:01	0.254	135	16-Aug	09:28:01	0.226
87	16-Aug	08:40:01	0.317	136	16-Aug	09:29:01	0.232
88	16-Aug	08:41:01	0.227	137	16-Aug	09:30:01	3.264
89	16-Aug	08:42:01	0.221	138	16-Aug	09:31:01	0.4
90	16-Aug	08:43:01	0.221	139	16-Aug	09:32:01	0.228
91	16-Aug	08:44:01	0.438	140	16-Aug	09:33:01	0.223
92	16-Aug	08:45:01	0.245	141	16-Aug	09:34:01	0.227
93	16-Aug	08:46:01	0.235	142	16-Aug	09:35:01	0.225
94	16-Aug	08:47:01	0.221	143	16-Aug	09:36:01	1.363
95	16-Aug	08:48:01	0.226	144	16-Aug	09:37:01	0.27
96	16-Aug	08:49:01	0.236	145	16-Aug	09:38:01	0.234
97	16-Aug	08:50:01	0.374	146	16-Aug	09:39:01	0.223
98	16-Aug	08:51:01	0.518	147	16-Aug	09:40:01	0.228
99	16-Aug	08:52:01	0.442	148	16-Aug	09:41:01	0.226
100	16-Aug	08:53:01	0.84	149	16-Aug	09:42:01	0.228
101	16-Aug	08:54:01	0.412	150	16-Aug	09:43:01	0.224
102	16-Aug	08:55:01	0.429	151	16-Aug	09:44:01	0.23
103	16-Aug	08:56:01	0.282	152	16-Aug	09:45:01	0.228
104	16-Aug	08:57:01	0.224	153	16-Aug	09:46:01	0.234
105	16-Aug	08:58:01	0.274	154	16-Aug	09:47:01	0.409
106	16-Aug	08:59:01	0.234	155	16-Aug	09:48:01	0.424
107	16-Aug	09:00:01	0.222	156	16-Aug	09:49:01	0.416
108	16-Aug	09:01:01	0.222	157	16-Aug	09:50:01	0.23
109	16-Aug	09:02:01	0.222	158	16-Aug	09:51:01	0.306
110	16-Aug	09:03:01	0.226	159	16-Aug	09:52:01	0.25
111	16-Aug	09:04:01	0.221	160	16-Aug	09:53:01	0.235
112	16-Aug	09:05:01	0.222	161	16-Aug	09:54:01	0.325
113	16-Aug	09:06:01	0.22	162	16-Aug	09:55:01	0.718
114	16-Aug	09:07:01	0.484	163	16-Aug	09:56:01	0.282
115	16-Aug	09:08:01	0.443	164	16-Aug	09:57:01	0.255
116	16-Aug	09:09:01	7.35	165	16-Aug	09:58:01	0.316
117	16-Aug	09:10:01	0.404	166	16-Aug	09:59:01	0.335
118	16-Aug	09:11:01	0.241	167	16-Aug	10:00:01	0.299
119	16-Aug	09:12:01	0.225	168	16-Aug	10:01:01	0.228
120	16-Aug	09:13:01	0.221	169	16-Aug	10:02:01	0.244
121	16-Aug	09:14:01	0.221	170	16-Aug	10:03:01	0.236

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
171	16-Aug	10:04:01	0.227	220	16-Aug	10:53:01	0.287
172	16-Aug	10:05:01	0.227	221	16-Aug	10:54:01	0.247
173	16-Aug	10:06:01	0.236	222	16-Aug	10:55:01	0.382
174	16-Aug	10:07:01	0.227	223	16-Aug	10:56:01	0.712
175	16-Aug	10:08:01	0.237	224	16-Aug	10:57:01	0.501
176	16-Aug	10:09:01	0.291	225	16-Aug	10:58:01	0.272
177	16-Aug	10:10:01	0.235	226	16-Aug	10:59:01	0.288
178	16-Aug	10:11:01	0.228	227	16-Aug	11:00:01	0.26
179	16-Aug	10:12:01	0.392	228	16-Aug	11:01:01	0.342
180	16-Aug	10:13:01	0.378	229	16-Aug	11:02:01	0.24
181	16-Aug	10:14:01	0.307	230	16-Aug	11:03:01	0.257
182	16-Aug	10:15:01	0.362	231	16-Aug	11:04:01	0.286
183	16-Aug	10:16:01	0.343	232	16-Aug	11:05:01	0.27
184	16-Aug	10:17:01	0.281	233	16-Aug	11:06:01	0.234
185	16-Aug	10:18:01	0.24	234	16-Aug	11:07:01	0.264
186	16-Aug	10:19:01	0.33	235	16-Aug	11:08:01	0.311
187	16-Aug	10:20:01	0.279	236	16-Aug	11:09:01	0.236
188	16-Aug	10:21:01	0.398	237	16-Aug	11:10:01	0.285
189	16-Aug	10:22:01	0.325	238	16-Aug	11:11:01	0.264
190	16-Aug	10:23:01	0.386	239	16-Aug	11:12:01	0.274
191	16-Aug	10:24:01	0.263	240	16-Aug	11:13:01	0.236
192	16-Aug	10:25:01	0.328	241	16-Aug	11:14:01	0.306
193	16-Aug	10:26:01	0.553	242	16-Aug	11:15:01	0.426
194	16-Aug	10:27:01	0.273	243	16-Aug	11:16:01	0.404
195	16-Aug	10:28:01	0.374	244	16-Aug	11:17:01	1.065
196	16-Aug	10:29:01	0.236	245	16-Aug	11:18:01	0.319
197	16-Aug	10:30:01	0.236	246	16-Aug	11:19:01	0.813
198	16-Aug	10:31:01	0.263	247	16-Aug	11:20:01	0.691
199	16-Aug	10:32:01	0.29	248	16-Aug	11:21:01	0.487
200	16-Aug	10:33:01	0.308	249	16-Aug	11:22:01	0.43
201	16-Aug	10:34:01	0.251	250	16-Aug	11:23:01	0.485
202	16-Aug	10:35:01	0.3	251	16-Aug	11:24:01	0.353
203	16-Aug	10:36:01	0.467	252	16-Aug	11:25:01	0.658
204	16-Aug	10:37:01	0.919	253	16-Aug	11:26:01	0.324
205	16-Aug	10:38:01	0.277	254	16-Aug	11:27:01	0.394
206	16-Aug	10:39:01	0.245	255	16-Aug	11:28:01	0.328
207	16-Aug	10:40:01	0.286	256	16-Aug	11:29:01	0.36
208	16-Aug	10:41:01	0.248	257	16-Aug	11:30:01	0.392
209	16-Aug	10:42:01	0.221	258	16-Aug	11:31:01	0.25
210	16-Aug	10:43:01	0.221	259	16-Aug	11:32:01	0.237
211	16-Aug	10:44:01	0.234	260	16-Aug	11:33:01	0.252
212	16-Aug	10:45:01	0.221	261	16-Aug	11:34:01	0.25
213	16-Aug	10:46:01	0.244	262	16-Aug	11:35:01	0.261
214	16-Aug	10:47:01	0.472	263	16-Aug	11:36:01	0.39
215	16-Aug	10:48:01	0.304	264	16-Aug	11:37:01	0.278
216	16-Aug	10:49:01	0.221	265	16-Aug	11:38:01	0.26
217	16-Aug	10:50:01	0.257	266	16-Aug	11:39:01	0.308
218	16-Aug	10:51:01	0.592	267	16-Aug	11:40:01	0.245
219	16-Aug	10:52:01	0.395	268	16-Aug	11:41:01	0.407

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
269	16-Aug	11:42:01	0.294	318	16-Aug	12:31:01	0.217
270	16-Aug	11:43:01	0.453	319	16-Aug	12:32:01	0.222
271	16-Aug	11:44:01	0.321	320	16-Aug	12:33:01	0.218
272	16-Aug	11:45:01	0.946	321	16-Aug	12:34:01	0.218
273	16-Aug	11:46:01	0.334	322	16-Aug	12:35:01	0.217
274	16-Aug	11:47:01	0.698	323	16-Aug	12:36:01	0.387
275	16-Aug	11:48:01	0.693	324	16-Aug	12:37:01	0.367
276	16-Aug	11:49:01	0.27	325	16-Aug	12:38:01	0.499
277	16-Aug	11:50:01	0.547	326	16-Aug	12:39:01	0.354
278	16-Aug	11:51:01	0.61	327	16-Aug	12:40:01	0.383
279	16-Aug	11:52:01	0.344	328	16-Aug	12:41:01	0.377
280	16-Aug	11:53:01	0.357	329	16-Aug	12:42:01	0.88
281	16-Aug	11:54:01	1.051	330	16-Aug	12:43:01	0.342
282	16-Aug	11:55:01	0.372	331	16-Aug	12:44:01	0.301
283	16-Aug	11:56:01	0.225	332	16-Aug	12:45:01	0.283
284	16-Aug	11:57:01	0.225	333	16-Aug	12:46:01	0.36
285	16-Aug	11:58:01	0.231	334	16-Aug	12:47:01	1.821
286	16-Aug	11:59:01	0.225	335	16-Aug	12:48:01	1.868
287	16-Aug	12:00:01	0.221	336	16-Aug	12:49:01	0.396
288	16-Aug	12:01:01	0.222	337	16-Aug	12:50:01	0.48
289	16-Aug	12:02:01	0.227	338	16-Aug	12:51:01	0.293
290	16-Aug	12:03:01	0.22	339	16-Aug	12:52:01	0.354
291	16-Aug	12:04:01	0.224	340	16-Aug	12:53:01	0.258
292	16-Aug	12:05:01	0.22	341	16-Aug	12:54:01	0.232
293	16-Aug	12:06:01	0.22	342	16-Aug	12:55:01	0.357
294	16-Aug	12:07:01	0.222	343	16-Aug	12:56:01	0.32
295	16-Aug	12:08:01	0.222	344	16-Aug	12:57:01	0.315
296	16-Aug	12:09:01	0.217	345	16-Aug	12:58:01	0.355
297	16-Aug	12:10:01	0.22	346	16-Aug	12:59:01	0.3
298	16-Aug	12:11:01	0.221	347	16-Aug	13:00:01	0.29
299	16-Aug	12:12:01	0.218	348	16-Aug	13:01:01	0.245
300	16-Aug	12:13:01	0.217	349	16-Aug	13:02:01	0.488
301	16-Aug	12:14:01	0.219	350	16-Aug	13:03:01	0.471
302	16-Aug	12:15:01	0.218	351	16-Aug	13:04:01	0.559
303	16-Aug	12:16:01	0.221	352	16-Aug	13:05:01	0.351
304	16-Aug	12:17:01	0.217	353	16-Aug	13:06:01	0.568
305	16-Aug	12:18:01	0.217	354	16-Aug	13:07:01	1.491
306	16-Aug	12:19:01	0.217	355	16-Aug	13:08:01	0.733
307	16-Aug	12:20:01	0.217	356	16-Aug	13:09:01	0.563
308	16-Aug	12:21:01	0.23	357	16-Aug	13:10:01	0.858
309	16-Aug	12:22:01	0.223	358	16-Aug	13:11:01	0.328
310	16-Aug	12:23:01	0.225	359	16-Aug	13:12:01	0.661
311	16-Aug	12:24:01	0.219	360	16-Aug	13:13:01	0.668
312	16-Aug	12:25:01	0.222	361	16-Aug	13:14:01	0.368
313	16-Aug	12:26:01	0.225	362	16-Aug	13:15:01	0.547
314	16-Aug	12:27:01	0.222	363	16-Aug	13:16:01	0.255
315	16-Aug	12:28:01	0.241	364	16-Aug	13:17:01	0.271
316	16-Aug	12:29:01	0.246	365	16-Aug	13:18:01	0.357
317	16-Aug	12:30:01	0.231	366	16-Aug	13:19:01	0.362

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
367	16-Aug	13:20:01	0.545				
368	16-Aug	13:21:01	0.343				
369	16-Aug	13:22:01	0.457				
370	16-Aug	13:23:01	0.316				
371	16-Aug	13:24:01	0.345				
372	16-Aug	13:25:01	0.232				
373	16-Aug	13:26:01	0.262				
374	16-Aug	13:27:01	0.452				
375	16-Aug	13:28:01	0.224				
376	16-Aug	13:29:01	0.275				
377	16-Aug	13:30:01	0.248				
378	16-Aug	13:31:01	0.242				
379	16-Aug	13:32:01	0.9				
380	16-Aug	13:33:01	1.34				
381	16-Aug	13:34:01	1.175				
382	16-Aug	13:35:01	0.899				
383	16-Aug	13:36:01	0.855				
384	16-Aug	13:37:01	0.846				
385	16-Aug	13:38:01	0.365				

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 203
Start time and date: 13:38:55 16-Aug
Elapsed time: 03:23:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 3.169 mg/m³
Time at maximum: 13:44:09 Aug 16
Max STEL Concentration: 0.806 mg/m³
Time at max STEL: 13:53:55 Aug 16
Overall Avg Conc: 0.435 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	16-Aug	13:39:55	0.515	15	16-Aug	13:53:55	0.382
2	16-Aug	13:40:55	0.998	16	16-Aug	13:54:55	0.226
3	16-Aug	13:41:55	0.458	17	16-Aug	13:55:55	0.336
4	16-Aug	13:42:55	1.189	18	16-Aug	13:56:55	1.313
5	16-Aug	13:43:55	3.081	19	16-Aug	13:57:55	1.27
6	16-Aug	13:44:55	0.768	20	16-Aug	13:58:55	0.983
7	16-Aug	13:45:55	0.431	21	16-Aug	13:59:55	0.47
8	16-Aug	13:46:55	1.072	22	16-Aug	14:00:55	0.397
9	16-Aug	13:47:55	0.655	23	16-Aug	14:01:55	0.332
10	16-Aug	13:48:55	0.87	24	16-Aug	14:02:55	0.32
11	16-Aug	13:49:55	0.466	25	16-Aug	14:03:55	0.381
12	16-Aug	13:50:55	0.62	26	16-Aug	14:04:55	0.581
13	16-Aug	13:51:55	0.338	27	16-Aug	14:05:55	0.373
14	16-Aug	13:52:55	0.246	28	16-Aug	14:06:55	0.876

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
29	16-Aug	14:07:55	0.362	78	16-Aug	14:56:55	0.316
30	16-Aug	14:08:55	0.225	79	16-Aug	14:57:55	0.327
31	16-Aug	14:09:55	0.446	80	16-Aug	14:58:55	1.804
32	16-Aug	14:10:55	0.439	81	16-Aug	14:59:55	0.351
33	16-Aug	14:11:55	0.33	82	16-Aug	15:00:55	0.276
34	16-Aug	14:12:55	0.358	83	16-Aug	15:01:55	0.723
35	16-Aug	14:13:55	0.347	84	16-Aug	15:02:55	0.774
36	16-Aug	14:14:55	0.287	85	16-Aug	15:03:55	0.731
37	16-Aug	14:15:55	0.261	86	16-Aug	15:04:55	0.277
38	16-Aug	14:16:55	0.428	87	16-Aug	15:05:55	0.287
39	16-Aug	14:17:55	0.708	88	16-Aug	15:06:55	0.262
40	16-Aug	14:18:55	0.266	89	16-Aug	15:07:55	0.341
41	16-Aug	14:19:55	0.249	90	16-Aug	15:08:55	0.584
42	16-Aug	14:20:55	0.505	91	16-Aug	15:09:55	0.647
43	16-Aug	14:21:55	0.232	92	16-Aug	15:10:55	0.343
44	16-Aug	14:22:55	0.273	93	16-Aug	15:11:55	0.533
45	16-Aug	14:23:55	0.25	94	16-Aug	15:12:55	0.782
46	16-Aug	14:24:55	0.263	95	16-Aug	15:13:55	0.351
47	16-Aug	14:25:55	0.289	96	16-Aug	15:14:55	0.221
48	16-Aug	14:26:55	0.554	97	16-Aug	15:15:55	0.271
49	16-Aug	14:27:55	0.436	98	16-Aug	15:16:55	0.383
50	16-Aug	14:28:55	0.344	99	16-Aug	15:17:55	0.351
51	16-Aug	14:29:55	0.349	100	16-Aug	15:18:55	0.242
52	16-Aug	14:30:55	0.317	101	16-Aug	15:19:55	0.245
53	16-Aug	14:31:55	0.374	102	16-Aug	15:20:55	0.474
54	16-Aug	14:32:55	0.673	103	16-Aug	15:21:55	0.237
55	16-Aug	14:33:55	0.421	104	16-Aug	15:22:55	0.339
56	16-Aug	14:34:55	0.312	105	16-Aug	15:23:55	0.292
57	16-Aug	14:35:55	0.347	106	16-Aug	15:24:55	0.22
58	16-Aug	14:36:55	0.45	107	16-Aug	15:25:55	0.285
59	16-Aug	14:37:55	0.457	108	16-Aug	15:26:55	0.466
60	16-Aug	14:38:55	0.273	109	16-Aug	15:27:55	0.457
61	16-Aug	14:39:55	0.601	110	16-Aug	15:28:55	1.326
62	16-Aug	14:40:55	0.346	111	16-Aug	15:29:55	0.427
63	16-Aug	14:41:55	0.411	112	16-Aug	15:30:55	0.308
64	16-Aug	14:42:55	0.343	113	16-Aug	15:31:55	0.249
65	16-Aug	14:43:55	0.529	114	16-Aug	15:32:55	0.308
66	16-Aug	14:44:55	0.675	115	16-Aug	15:33:55	0.271
67	16-Aug	14:45:55	0.501	116	16-Aug	15:34:55	0.344
68	16-Aug	14:46:55	0.361	117	16-Aug	15:35:55	0.394
69	16-Aug	14:47:55	0.346	118	16-Aug	15:36:55	0.413
70	16-Aug	14:48:55	0.237	119	16-Aug	15:37:55	0.306
71	16-Aug	14:49:55	0.316	120	16-Aug	15:38:55	0.297
72	16-Aug	14:50:55	0.343	121	16-Aug	15:39:55	0.255
73	16-Aug	14:51:55	0.422	122	16-Aug	15:40:55	0.348
74	16-Aug	14:52:55	0.262	123	16-Aug	15:41:55	0.353
75	16-Aug	14:53:55	0.331	124	16-Aug	15:42:55	0.374
76	16-Aug	14:54:55	0.295	125	16-Aug	15:43:55	0.281
77	16-Aug	14:55:55	0.389	126	16-Aug	15:44:55	0.244

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
127	16-Aug	15:45:55	0.485	176	16-Aug	16:34:55	0.289
128	16-Aug	15:46:55	0.309	177	16-Aug	16:35:55	0.521
129	16-Aug	15:47:55	0.328	178	16-Aug	16:36:55	0.489
130	16-Aug	15:48:55	0.231	179	16-Aug	16:37:55	0.228
131	16-Aug	15:49:55	0.304	180	16-Aug	16:38:55	0.23
132	16-Aug	15:50:55	0.249	181	16-Aug	16:39:55	0.229
133	16-Aug	15:51:55	0.4	182	16-Aug	16:40:55	0.253
134	16-Aug	15:52:55	0.287	183	16-Aug	16:41:55	0.24
135	16-Aug	15:53:55	0.245	184	16-Aug	16:42:55	0.247
136	16-Aug	15:54:55	0.381	185	16-Aug	16:43:55	0.29
137	16-Aug	15:55:55	0.223	186	16-Aug	16:44:55	0.242
138	16-Aug	15:56:55	0.236	187	16-Aug	16:45:55	0.353
139	16-Aug	15:57:55	0.224	188	16-Aug	16:46:55	0.239
140	16-Aug	15:58:55	0.224	189	16-Aug	16:47:55	0.237
141	16-Aug	15:59:55	0.372	190	16-Aug	16:48:55	0.504
142	16-Aug	16:00:55	1.036	191	16-Aug	16:49:55	0.24
143	16-Aug	16:01:55	0.568	192	16-Aug	16:50:55	0.471
144	16-Aug	16:02:55	0.835	193	16-Aug	16:51:55	0.453
145	16-Aug	16:03:55	0.345	194	16-Aug	16:52:55	1.178
146	16-Aug	16:04:55	0.29	195	16-Aug	16:53:55	0.583
147	16-Aug	16:05:55	0.257	196	16-Aug	16:54:55	0.238
148	16-Aug	16:06:55	0.258	197	16-Aug	16:55:55	0.23
149	16-Aug	16:07:55	0.287	198	16-Aug	16:56:55	0.24
150	16-Aug	16:08:55	0.225	199	16-Aug	16:57:55	0.229
151	16-Aug	16:09:55	0.282	200	16-Aug	16:58:55	0.298
152	16-Aug	16:10:55	0.276	201	16-Aug	16:59:55	0.384
153	16-Aug	16:11:55	0.224	202	16-Aug	17:00:55	0.7
154	16-Aug	16:12:55	0.277	203	16-Aug	17:01:55	0.65
155	16-Aug	16:13:55	0.23				
156	16-Aug	16:14:55	0.242				
157	16-Aug	16:15:55	0.312				
158	16-Aug	16:16:55	0.271				
159	16-Aug	16:17:55	0.566				
160	16-Aug	16:18:55	0.558				
161	16-Aug	16:19:55	0.362				
162	16-Aug	16:20:55	0.423				
163	16-Aug	16:21:55	0.763				
164	16-Aug	16:22:55	0.574				
165	16-Aug	16:23:55	0.245				
166	16-Aug	16:24:55	0.238				
167	16-Aug	16:25:55	0.238				
168	16-Aug	16:26:55	0.226				
169	16-Aug	16:27:55	0.294				
170	16-Aug	16:28:55	0.346				
171	16-Aug	16:29:55	0.227				
172	16-Aug	16:30:55	0.252				
173	16-Aug	16:31:55	0.234				
174	16-Aug	16:32:55	0.562				
175	16-Aug	16:33:55	1.717				

August 20, 2001

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 03
Number of logged points: 271
Start time and date: 07:16:25 20-Aug
Elapsed time: 04:31:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 7.052 mg/m³
Time at maximum: 08:37:50 Aug 20
Max STEL Concentration: 1.248 mg/m³
Time at max STEL: 08:44:26 Aug 20
Overall Avg Conc: 0.488 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	20-Aug	07:17:25	0.297	34	20-Aug	07:50:25	0.708
2	20-Aug	07:18:25	0.361	35	20-Aug	07:51:25	0.316
3	20-Aug	07:19:25	0.663	36	20-Aug	07:52:25	0.359
4	20-Aug	07:20:25	0.608	37	20-Aug	07:53:25	0.474
5	20-Aug	07:21:25	0.482	38	20-Aug	07:54:25	0.259
6	20-Aug	07:22:25	0.577	39	20-Aug	07:55:25	0.656
7	20-Aug	07:23:25	0.818	40	20-Aug	07:56:25	1.209
8	20-Aug	07:24:25	0.513	41	20-Aug	07:57:25	2.452
9	20-Aug	07:25:25	0.565	42	20-Aug	07:58:25	0.53
10	20-Aug	07:26:25	0.427	43	20-Aug	07:59:25	0.29
11	20-Aug	07:27:25	0.356	44	20-Aug	08:00:25	0.3
12	20-Aug	07:28:25	0.609	45	20-Aug	08:01:25	0.3
13	20-Aug	07:29:25	0.353	46	20-Aug	08:02:25	0.285
14	20-Aug	07:30:25	0.369	47	20-Aug	08:03:25	0.462
15	20-Aug	07:31:25	0.298	48	20-Aug	08:04:25	0.291
16	20-Aug	07:32:25	0.301	49	20-Aug	08:05:25	0.253
17	20-Aug	07:33:25	0.289	50	20-Aug	08:06:25	0.251
18	20-Aug	07:34:25	0.404	51	20-Aug	08:07:25	0.256
19	20-Aug	07:35:25	0.52	52	20-Aug	08:08:25	0.251
20	20-Aug	07:36:25	0.353	53	20-Aug	08:09:25	0.256
21	20-Aug	07:37:25	0.308	54	20-Aug	08:10:25	0.472
22	20-Aug	07:38:25	0.322	55	20-Aug	08:11:25	1.087
23	20-Aug	07:39:25	0.322	56	20-Aug	08:12:25	0.624
24	20-Aug	07:40:25	0.389	57	20-Aug	08:13:25	0.353
25	20-Aug	07:41:25	0.308	58	20-Aug	08:14:25	0.547
26	20-Aug	07:42:25	0.306	59	20-Aug	08:15:25	0.675
27	20-Aug	07:43:25	0.358	60	20-Aug	08:16:25	0.256
28	20-Aug	07:44:25	0.416	61	20-Aug	08:17:25	0.436
29	20-Aug	07:45:25	0.306	62	20-Aug	08:18:25	0.539
30	20-Aug	07:46:25	0.313	63	20-Aug	08:19:25	0.778
31	20-Aug	07:47:25	0.302	64	20-Aug	08:20:25	0.353
32	20-Aug	07:48:25	0.295	65	20-Aug	08:21:25	0.756
33	20-Aug	07:49:25	1.413	66	20-Aug	08:22:25	0.493

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
67	20-Aug	08:23:25	0.323	116	20-Aug	09:12:25	0.289
68	20-Aug	08:24:25	0.299	117	20-Aug	09:13:25	0.266
69	20-Aug	08:25:25	0.286	118	20-Aug	09:14:25	0.277
70	20-Aug	08:26:25	0.273	119	20-Aug	09:15:25	0.352
71	20-Aug	08:27:25	0.274	120	20-Aug	09:16:25	0.485
72	20-Aug	08:28:25	0.27	121	20-Aug	09:17:25	0.331
73	20-Aug	08:29:25	0.426	122	20-Aug	09:18:25	0.324
74	20-Aug	08:30:25	0.68	123	20-Aug	09:19:25	0.407
75	20-Aug	08:31:25	0.466	124	20-Aug	09:20:25	0.283
76	20-Aug	08:32:25	1.371	125	20-Aug	09:21:25	0.294
77	20-Aug	08:33:25	0.827	126	20-Aug	09:22:25	0.519
78	20-Aug	08:34:25	1.784	127	20-Aug	09:23:25	0.29
79	20-Aug	08:35:25	0.878	128	20-Aug	09:24:25	0.314
80	20-Aug	08:36:25	0.806	129	20-Aug	09:25:25	0.381
81	20-Aug	08:37:25	1.751	130	20-Aug	09:26:25	0.361
82	20-Aug	08:38:25	5.73	131	20-Aug	09:27:25	0.384
83	20-Aug	08:39:25	0.555	132	20-Aug	09:28:25	0.273
84	20-Aug	08:40:25	0.612	133	20-Aug	09:29:25	0.456
85	20-Aug	08:41:25	0.858	134	20-Aug	09:30:25	0.285
86	20-Aug	08:42:25	0.362	135	20-Aug	09:31:25	0.369
87	20-Aug	08:43:25	1.366	136	20-Aug	09:32:25	0.259
88	20-Aug	08:44:25	0.675	137	20-Aug	09:33:25	0.349
89	20-Aug	08:45:25	0.468	138	20-Aug	09:34:25	0.34
90	20-Aug	08:46:25	0.375	139	20-Aug	09:35:25	0.526
91	20-Aug	08:47:25	0.418	140	20-Aug	09:36:25	0.372
92	20-Aug	08:48:25	0.411	141	20-Aug	09:37:25	0.294
93	20-Aug	08:49:25	0.468	142	20-Aug	09:38:25	0.339
94	20-Aug	08:50:25	0.593	143	20-Aug	09:39:25	0.325
95	20-Aug	08:51:25	0.551	144	20-Aug	09:40:25	0.373
96	20-Aug	08:52:25	0.478	145	20-Aug	09:41:25	0.367
97	20-Aug	08:53:25	0.674	146	20-Aug	09:42:25	0.364
98	20-Aug	08:54:25	0.329	147	20-Aug	09:43:25	0.286
99	20-Aug	08:55:25	0.332	148	20-Aug	09:44:25	0.269
100	20-Aug	08:56:25	0.314	149	20-Aug	09:45:25	0.275
101	20-Aug	08:57:25	0.459	150	20-Aug	09:46:25	0.392
102	20-Aug	08:58:25	0.338	151	20-Aug	09:47:25	0.466
103	20-Aug	08:59:25	0.694	152	20-Aug	09:48:25	0.354
104	20-Aug	09:00:25	0.344	153	20-Aug	09:49:25	0.263
105	20-Aug	09:01:25	0.291	154	20-Aug	09:50:25	0.252
106	20-Aug	09:02:25	0.291	155	20-Aug	09:51:25	0.255
107	20-Aug	09:03:25	0.286	156	20-Aug	09:52:25	0.266
108	20-Aug	09:04:25	0.468	157	20-Aug	09:53:25	0.267
109	20-Aug	09:05:25	0.561	158	20-Aug	09:54:25	0.266
110	20-Aug	09:06:25	0.35	159	20-Aug	09:55:25	0.398
111	20-Aug	09:07:25	0.299	160	20-Aug	09:56:25	0.356
112	20-Aug	09:08:25	0.32	161	20-Aug	09:57:25	0.251
113	20-Aug	09:09:25	0.321	162	20-Aug	09:58:25	1.028
114	20-Aug	09:10:25	0.343	163	20-Aug	09:59:25	0.5
115	20-Aug	09:11:25	0.584	164	20-Aug	10:00:25	0.351

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
165	20-Aug	10:01:25	0.286	214	20-Aug	10:50:25	0.288
166	20-Aug	10:02:25	1.142	215	20-Aug	10:51:25	0.274
167	20-Aug	10:03:25	0.258	216	20-Aug	10:52:25	0.251
168	20-Aug	10:04:25	0.309	217	20-Aug	10:53:25	0.309
169	20-Aug	10:05:25	0.327	218	20-Aug	10:54:25	0.262
170	20-Aug	10:06:25	0.382	219	20-Aug	10:55:25	0.254
171	20-Aug	10:07:25	0.269	220	20-Aug	10:56:25	0.277
172	20-Aug	10:08:25	0.64	221	20-Aug	10:57:25	0.268
173	20-Aug	10:09:25	0.381	222	20-Aug	10:58:25	0.442
174	20-Aug	10:10:25	0.291	223	20-Aug	10:59:25	0.377
175	20-Aug	10:11:25	0.285	224	20-Aug	11:00:25	0.406
176	20-Aug	10:12:25	0.279	225	20-Aug	11:01:25	0.332
177	20-Aug	10:13:25	0.268	226	20-Aug	11:02:25	0.296
178	20-Aug	10:14:25	0.273	227	20-Aug	11:03:25	0.306
179	20-Aug	10:15:25	0.309	228	20-Aug	11:04:25	0.273
180	20-Aug	10:16:25	0.921	229	20-Aug	11:05:25	0.267
181	20-Aug	10:17:25	0.45	230	20-Aug	11:06:25	0.33
182	20-Aug	10:18:25	0.424	231	20-Aug	11:07:25	0.254
183	20-Aug	10:19:25	0.424	232	20-Aug	11:08:25	0.258
184	20-Aug	10:20:25	0.394	233	20-Aug	11:09:25	0.252
185	20-Aug	10:21:25	0.357	234	20-Aug	11:10:25	0.256
186	20-Aug	10:22:25	0.471	235	20-Aug	11:11:25	0.33
187	20-Aug	10:23:25	0.261	236	20-Aug	11:12:25	0.403
188	20-Aug	10:24:25	0.272	237	20-Aug	11:13:25	0.645
189	20-Aug	10:25:25	0.469	238	20-Aug	11:14:25	0.561
190	20-Aug	10:26:25	0.385	239	20-Aug	11:15:25	0.598
191	20-Aug	10:27:25	0.34	240	20-Aug	11:16:25	0.623
192	20-Aug	10:28:25	0.401	241	20-Aug	11:17:25	0.61
193	20-Aug	10:29:25	0.268	242	20-Aug	11:18:25	0.617
194	20-Aug	10:30:25	0.387	243	20-Aug	11:19:25	0.624
195	20-Aug	10:31:25	0.481	244	20-Aug	11:20:25	0.604
196	20-Aug	10:32:25	0.318	245	20-Aug	11:21:25	0.605
197	20-Aug	10:33:25	0.34	246	20-Aug	11:22:25	0.671
198	20-Aug	10:34:25	0.272	247	20-Aug	11:23:25	0.709
199	20-Aug	10:35:25	0.418	248	20-Aug	11:24:25	0.58
200	20-Aug	10:36:25	0.27	249	20-Aug	11:25:25	0.356
201	20-Aug	10:37:25	0.261	250	20-Aug	11:26:25	0.311
202	20-Aug	10:38:25	0.254	251	20-Aug	11:27:25	0.287
203	20-Aug	10:39:25	0.862	252	20-Aug	11:28:25	0.356
204	20-Aug	10:40:25	0.266	253	20-Aug	11:29:25	0.847
205	20-Aug	10:41:25	0.305	254	20-Aug	11:30:25	0.648
206	20-Aug	10:42:25	0.449	255	20-Aug	11:31:25	0.67
207	20-Aug	10:43:25	0.279	256	20-Aug	11:32:25	0.555
208	20-Aug	10:44:25	0.278	257	20-Aug	11:33:25	0.444
209	20-Aug	10:45:25	0.324	258	20-Aug	11:34:25	0.54
210	20-Aug	10:46:25	0.283	259	20-Aug	11:35:25	0.65
211	20-Aug	10:47:25	0.283	260	20-Aug	11:36:25	0.402
212	20-Aug	10:48:25	0.254	261	20-Aug	11:37:25	3.587
213	20-Aug	10:49:25	0.268	262	20-Aug	11:38:25	1.08

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
263	20-Aug	11:39:25	0.462				
264	20-Aug	11:40:25	0.271				
265	20-Aug	11:41:25	0.802				
266	20-Aug	11:42:25	1.901				
267	20-Aug	11:43:25	0.352				
268	20-Aug	11:44:25	0.494				
269	20-Aug	11:45:25	0.697				
270	20-Aug	11:46:25	0.497				
271	20-Aug	11:47:25	1.003				

pDR-1000 S/N: 04061
User ID: DuPont Site #1
Tag Number: 04
Number of logged points: 257
Start time and date: 12:49:56 20-Aug
Elapsed time: 04:17:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 4.432 mg/m³
Time at maximum: 16:40:25 Aug 20
Max STEL Concentration: 0.835 mg/m³
Time at max STEL: 13:37:57 Aug 20
Overall Avg Conc: 0.469 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	20-Aug	12:50:56	0.382	24	20-Aug	13:13:56	0.259
2	20-Aug	12:51:56	0.374	25	20-Aug	13:14:56	0.25
3	20-Aug	12:52:56	0.325	26	20-Aug	13:15:56	0.413
4	20-Aug	12:53:56	0.358	27	20-Aug	13:16:56	0.259
5	20-Aug	12:54:56	0.401	28	20-Aug	13:17:56	0.283
6	20-Aug	12:55:56	0.614	29	20-Aug	13:18:56	0.255
7	20-Aug	12:56:56	0.671	30	20-Aug	13:19:56	0.261
8	20-Aug	12:57:56	0.635	31	20-Aug	13:20:56	0.261
9	20-Aug	12:58:56	0.757	32	20-Aug	13:21:56	0.26
10	20-Aug	12:59:56	0.44	33	20-Aug	13:22:56	0.275
11	20-Aug	13:00:56	0.631	34	20-Aug	13:23:56	0.399
12	20-Aug	13:01:56	0.344	35	20-Aug	13:24:56	0.454
13	20-Aug	13:02:56	0.319	36	20-Aug	13:25:56	1.107
14	20-Aug	13:03:56	0.562	37	20-Aug	13:26:56	0.579
15	20-Aug	13:04:56	0.332	38	20-Aug	13:27:56	1.262
16	20-Aug	13:05:56	0.524	39	20-Aug	13:28:56	1.474
17	20-Aug	13:06:56	0.583	40	20-Aug	13:29:56	0.795
18	20-Aug	13:07:56	0.266	41	20-Aug	13:30:56	0.375
19	20-Aug	13:08:56	0.264	42	20-Aug	13:31:56	1.821
20	20-Aug	13:09:56	0.304	43	20-Aug	13:32:56	0.524
21	20-Aug	13:10:56	0.264	44	20-Aug	13:33:56	0.683
22	20-Aug	13:11:56	0.261	45	20-Aug	13:34:56	1.288
23	20-Aug	13:12:56	0.26	46	20-Aug	13:35:56	0.944

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
47	20-Aug	13:36:56	0.387	96	20-Aug	14:25:56	0.276
48	20-Aug	13:37:56	0.428	97	20-Aug	14:26:56	0.399
49	20-Aug	13:38:56	0.376	98	20-Aug	14:27:56	0.32
50	20-Aug	13:39:56	0.411	99	20-Aug	14:28:56	0.634
51	20-Aug	13:40:56	0.355	100	20-Aug	14:29:56	0.483
52	20-Aug	13:41:56	0.4	101	20-Aug	14:30:56	0.324
53	20-Aug	13:42:56	0.332	102	20-Aug	14:31:56	0.295
54	20-Aug	13:43:56	0.469	103	20-Aug	14:32:56	0.251
55	20-Aug	13:44:56	0.397	104	20-Aug	14:33:56	0.235
56	20-Aug	13:45:56	1.146	105	20-Aug	14:34:56	0.244
57	20-Aug	13:46:56	0.363	106	20-Aug	14:35:56	0.727
58	20-Aug	13:47:56	0.349	107	20-Aug	14:36:56	0.464
59	20-Aug	13:48:56	0.243	108	20-Aug	14:37:56	0.302
60	20-Aug	13:49:56	0.332	109	20-Aug	14:38:56	0.321
61	20-Aug	13:50:56	2.338	110	20-Aug	14:39:56	0.281
62	20-Aug	13:51:56	0.357	111	20-Aug	14:40:56	0.549
63	20-Aug	13:52:56	0.287	112	20-Aug	14:41:56	0.314
64	20-Aug	13:53:56	0.29	113	20-Aug	14:42:56	0.246
65	20-Aug	13:54:56	0.277	114	20-Aug	14:43:56	0.254
66	20-Aug	13:55:56	0.382	115	20-Aug	14:44:56	1.059
67	20-Aug	13:56:56	0.282	116	20-Aug	14:45:56	0.835
68	20-Aug	13:57:56	0.366	117	20-Aug	14:46:56	0.237
69	20-Aug	13:58:56	0.548	118	20-Aug	14:47:56	0.252
70	20-Aug	13:59:56	0.514	119	20-Aug	14:48:56	0.242
71	20-Aug	14:00:56	0.258	120	20-Aug	14:49:56	0.234
72	20-Aug	14:01:56	0.279	121	20-Aug	14:50:56	0.351
73	20-Aug	14:02:56	0.249	122	20-Aug	14:51:56	0.786
74	20-Aug	14:03:56	0.319	123	20-Aug	14:52:56	0.388
75	20-Aug	14:04:56	0.318	124	20-Aug	14:53:56	0.575
76	20-Aug	14:05:56	0.918	125	20-Aug	14:54:56	0.262
77	20-Aug	14:06:56	1.393	126	20-Aug	14:55:56	0.376
78	20-Aug	14:07:56	0.391	127	20-Aug	14:56:56	0.325
79	20-Aug	14:08:56	0.529	128	20-Aug	14:57:56	0.273
80	20-Aug	14:09:56	0.476	129	20-Aug	14:58:56	0.339
81	20-Aug	14:10:56	0.383	130	20-Aug	14:59:56	0.452
82	20-Aug	14:11:56	0.656	131	20-Aug	15:00:56	0.366
83	20-Aug	14:12:56	0.896	132	20-Aug	15:01:56	0.44
84	20-Aug	14:13:56	0.613	133	20-Aug	15:02:56	0.408
85	20-Aug	14:14:56	0.868	134	20-Aug	15:03:56	0.412
86	20-Aug	14:15:56	0.249	135	20-Aug	15:04:56	0.284
87	20-Aug	14:16:56	0.267	136	20-Aug	15:05:56	0.304
88	20-Aug	14:17:56	0.267	137	20-Aug	15:06:56	0.501
89	20-Aug	14:18:56	0.258	138	20-Aug	15:07:56	0.278
90	20-Aug	14:19:56	0.634	139	20-Aug	15:08:56	0.4
91	20-Aug	14:20:56	0.366	140	20-Aug	15:09:56	0.307
92	20-Aug	14:21:56	0.249	141	20-Aug	15:10:56	0.284
93	20-Aug	14:22:56	1.999	142	20-Aug	15:11:56	0.342
94	20-Aug	14:23:56	0.259	143	20-Aug	15:12:56	0.901
95	20-Aug	14:24:56	0.273	144	20-Aug	15:13:56	0.313

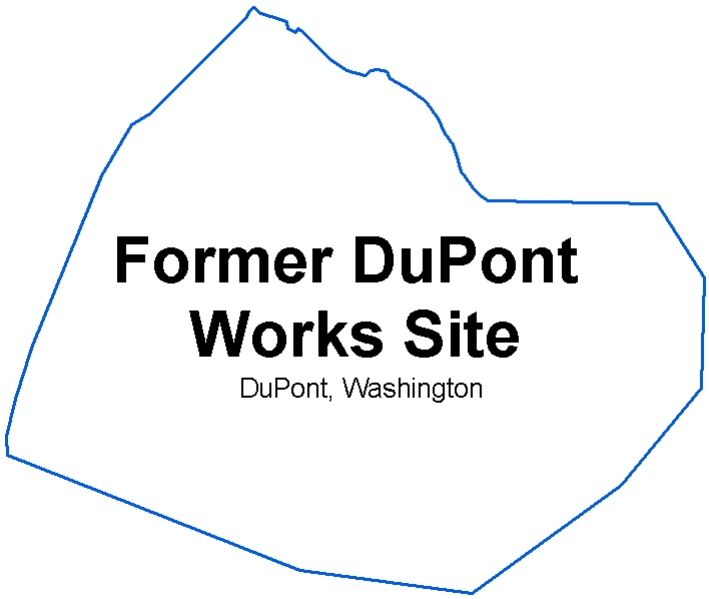
Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
145	20-Aug	15:14:56	0.361	194	20-Aug	16:03:56	0.387
146	20-Aug	15:15:56	0.326	195	20-Aug	16:04:56	0.512
147	20-Aug	15:16:56	0.476	196	20-Aug	16:05:56	0.34
148	20-Aug	15:17:56	0.376	197	20-Aug	16:06:56	0.742
149	20-Aug	15:18:56	0.391	198	20-Aug	16:07:56	0.294
150	20-Aug	15:19:56	0.357	199	20-Aug	16:08:56	0.362
151	20-Aug	15:20:56	0.251	200	20-Aug	16:09:56	0.44
152	20-Aug	15:21:56	1.95	201	20-Aug	16:10:56	0.271
153	20-Aug	15:22:56	0.322	202	20-Aug	16:11:56	0.31
154	20-Aug	15:23:56	0.319	203	20-Aug	16:12:56	1.484
155	20-Aug	15:24:56	0.411	204	20-Aug	16:13:56	0.861
156	20-Aug	15:25:56	0.267	205	20-Aug	16:14:56	0.615
157	20-Aug	15:26:56	0.329	206	20-Aug	16:15:56	0.517
158	20-Aug	15:27:56	0.286	207	20-Aug	16:16:56	0.296
159	20-Aug	15:28:56	0.347	208	20-Aug	16:17:56	0.242
160	20-Aug	15:29:56	0.271	209	20-Aug	16:18:56	0.295
161	20-Aug	15:30:56	0.999	210	20-Aug	16:19:56	0.39
162	20-Aug	15:31:56	0.273	211	20-Aug	16:20:56	0.474
163	20-Aug	15:32:56	0.375	212	20-Aug	16:21:56	0.353
164	20-Aug	15:33:56	0.371	213	20-Aug	16:22:56	0.425
165	20-Aug	15:34:56	0.295	214	20-Aug	16:23:56	0.634
166	20-Aug	15:35:56	0.389	215	20-Aug	16:24:56	0.467
167	20-Aug	15:36:56	0.249	216	20-Aug	16:25:56	0.35
168	20-Aug	15:37:56	0.75	217	20-Aug	16:26:56	0.245
169	20-Aug	15:38:56	0.313	218	20-Aug	16:27:56	0.352
170	20-Aug	15:39:56	0.31	219	20-Aug	16:28:56	0.355
171	20-Aug	15:40:56	0.561	220	20-Aug	16:29:56	0.434
172	20-Aug	15:41:56	0.544	221	20-Aug	16:30:56	0.242
173	20-Aug	15:42:56	0.38	222	20-Aug	16:31:56	0.241
174	20-Aug	15:43:56	0.366	223	20-Aug	16:32:56	0.262
175	20-Aug	15:44:56	0.519	224	20-Aug	16:33:56	0.444
176	20-Aug	15:45:56	0.38	225	20-Aug	16:34:56	0.27
177	20-Aug	15:46:56	0.253	226	20-Aug	16:35:56	0.288
178	20-Aug	15:47:56	0.368	227	20-Aug	16:36:56	0.408
179	20-Aug	15:48:56	0.309	228	20-Aug	16:37:56	0.296
180	20-Aug	15:49:56	1.01	229	20-Aug	16:38:56	0.627
181	20-Aug	15:50:56	0.987	230	20-Aug	16:39:56	4.2
182	20-Aug	15:51:56	0.425	231	20-Aug	16:40:56	0.573
183	20-Aug	15:52:56	0.264	232	20-Aug	16:41:56	0.512
184	20-Aug	15:53:56	0.395	233	20-Aug	16:42:56	0.282
185	20-Aug	15:54:56	0.369	234	20-Aug	16:43:56	0.887
186	20-Aug	15:55:56	0.249	235	20-Aug	16:44:56	0.296
187	20-Aug	15:56:56	0.261	236	20-Aug	16:45:56	0.271
188	20-Aug	15:57:56	0.351	237	20-Aug	16:46:56	0.276
189	20-Aug	15:58:56	0.322	238	20-Aug	16:47:56	0.305
190	20-Aug	15:59:56	0.276	239	20-Aug	16:48:56	0.329
191	20-Aug	16:00:56	0.246	240	20-Aug	16:49:56	0.344
192	20-Aug	16:01:56	0.251	241	20-Aug	16:50:56	0.291
193	20-Aug	16:02:56	0.307	242	20-Aug	16:51:56	0.313

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
243	20-Aug	16:52:56	0.349				
244	20-Aug	16:53:56	0.295				
245	20-Aug	16:54:56	0.298				
246	20-Aug	16:55:56	0.26				
247	20-Aug	16:56:56	1.244				
248	20-Aug	16:57:56	0.891				
249	20-Aug	16:58:56	0.265				
250	20-Aug	16:59:56	0.351				
251	20-Aug	17:00:56	0.317				
252	20-Aug	17:01:56	0.314				
253	20-Aug	17:02:56	0.293				
254	20-Aug	17:03:56	0.367				
255	20-Aug	17:04:56	0.324				
256	20-Aug	17:05:56	0.387				
257	20-Aug	17:06:56	0.325				

Personal Air Monitoring Report – 2002



Prepared for:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared by:

PIONEER Technologies Corporation & West Shore Corporation, NW

March 2003

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION 1-1

SECTION 2 – SUMMARY OF ACTIVITIES 2-1

2.1 Action Level Calculations 2-1
2.2 Personal Air Monitoring 2-1
2.3 Real Time Air Monitoring 2-1

SECTION 3 – RESULTS 3-1

3.1 Personal Air Monitoring Results 3-1
3.2 Real -Time Air Monitoring Results 3-1

APPENDIX A – REAL-TIME AIR MONITORING RESULTS – 2002 ..... A-1

TABLES

Table 2-1 – Derivation of Site-specific Action Levels for 8-hour Time Weighted Exposures 2-2
Table 2-2 – Personal Air Sample Results 2-3

SECTION 1 – INTRODUCTION

Workplace air monitoring is an essential part of the Health and Safety Program at the former DuPont Works Site in DuPont, Washington. Such a program was implemented during 2002 for the following programs:

- Grubbing of Site Vegetation
- Chipping of Site Vegetation
- Interim corrective action taken to excavate arsenic and lead contaminated soil near the perimeter of the Site property.

The monitoring program was established to assess airborne arsenic and lead concentrations as dust. During this program concentrations of lead and arsenic in soil may have been present at levels up to 10,000 mg/kg and 1,000 mg/kg, respectively.

To ensure that workers were not exposed to elevated levels of these contaminants, an air monitoring plan was prepared and implemented during excavation activities. This plan included provisions for both personal air monitoring and real-time air monitoring. Personal air samples were taken in the breathing zone of workers assumed to have the highest potential exposure, and real-time air samples were taken in areas adjacent to workers, where airborne particulate levels were assumed to be highest. The workers were informed of the results of the air monitoring at daily health and safety meetings.

SECTION 2 – SUMMARY OF ACTIVITIES

The results of the personal air monitoring and real-time air monitoring conducted during the interim source removal actions, clearing, and grubbing are presented below.

2.1 Action Level Calculations

Conservative air monitoring action levels were developed for lead and arsenic. It was assumed that concentration of lead in soil was 10,000 mg/kg and the concentration of arsenic in soil was 1,000 mg/kg for the purpose of calculating an action level. These concentrations are at least two times the expected highest concentration in the soil to be excavated. These concentrations were combined with the 8-hour time-weighted-average (TWA) permissible exposure levels (PEL) to determine site-specific airborne dust action levels. PELs are the highest average concentrations a worker may be exposed to for a 40-hour work week without experiencing any adverse health effects. Using the calculations presented in Table 2-1 the mini-ram concentration that would result in exposure to lead at the PEL was 5.0 mg/m^3 (assuming a soil concentration of 10,000 mg/kg lead). This level was also protective for exposure to arsenic. To provide an additional margin of safety continued measurements above 2.5 mg/m^3 (one half of the PEL) were set as the action level for instituting additional soil wetting to suppress dust, or if this was ineffective, to upgrade Personal Protective Equipment (PPE) to Level C.

2.2 Personal Air Monitoring

Personal air samples were collected throughout the duration of excavation activities. During excavation activities, individuals expected to receive the highest exposure were monitored during an entire work shift. The samples were analyzed for arsenic and lead by STL Labs, Fife, WA using the Environmental Protection Agency (EPA) Method SW 6020. The results of this analysis are presented in Table 2-2.

2.3 Real Time Air Monitoring

Real time air monitoring was conducted using a mini-ram (personal DataRAM™, model pDR-1000AN, Monitoring Instruments for the Environment, Inc.) in order to ensure that the PELs for arsenic and lead would not be exceeded. The mini-ram measures respirable particulate concentrations and was used throughout the duration of field activities. The frequency of sampling was determined based on the readings, changes in work patterns, or changes in soil conditions that could potentially result in increased dust emissions. The action level for the miniram was set at 2.5 mg/m^3 (one half of the PEL) Air measurements were recorded as one-minute averages, daily averages (corresponding to the logging period of the instrument), and short-term exposure levels (STELs), which are 15-minute average concentrations. Daily average concentrations were the values compared to the 2.5 mg/m^3 action level.

Table 2-1 – Derivation of Site-specific Action Levels for 8-hour Time Weighted Exposures

Action Level Concentration in Air (mg/m^3) = $\frac{\text{Occupational exposure limit (mg/m3) x 1,000,000 (mg/kg)}}{\text{Soil concentration (mg/kg) x safety factor}}$		
Parameter	**Value**	**Units**
Site-specific particulate Action Level for lead	2.5	mg/m^3
Occupational exposure Limit for lead (8-hour TWA)	0.05	mg/m^3
Current Maximum lead concentration in soil on site	10,000	mg/kg
Safety Factor	2	
Conversion Factor	1,000,000	mg/kg
Site-specific particulate Action Level for arsenic	250	mg/m^3
Occupational exposure Limit for arsenic (8-hour TWA)	0.5	mg/m^3
Current Maximum arsenic concentration in soil on site	1,000	mg/kg
Safety Factor	2	
Conversion Factor	1,000,000	mg/kg

Table 2-2 – Personal Air Sample Results

Date Sampled	Sample Number	Worker Activity	Arsenic Level[1] (*ug*/m^3)	Lead Level[2] (*ug*/m^3)
5/13/2002	2-5-13-02	Ground Person	< 0.84[3]	0.79
5/15/2002	2-5-15-02	Ground Person	< 0.47	0.71
5/15/2002	3-5-15-02	Bulldozer Operator	< 0.46	< 0.09
5/16/2002	2-5-16-02	Ground Person	< 0.47	< 0.23
5/16/2002	3-5-16-02	Bulldozer Operator	< 0.46	< 0.23
5/22/2002	1-5-22-02	Bulldozer Operator	< 0.46	< 0.28
5/22/2002	2-5-22-02	Archeologist	< 0.47	< 0.57
5/22/2002	3-5-22-02	Ground Person	< 0.46	0.21
5/23/2002	2-5-23-02	Bulldozer Operator	< 0.47	0.62
5/23/2002	3-5-23-02	Ground Person	< 0.45	0.47
6/3/2002	1-6-3-02	Archeologist	< 0.47	0.61
6/3/2002	2-6-3-02	Bulldozer Operator	< 0.46	0.13
6/3/2002	3-6-3-02	Ground Person	< 0.46	< 0.12
6/10/2002	1-6-10-02	Archeologist	< 0.47	0.39
6/10/2002	2-6-10-02	Bulldozer Operator	< 0.93	0.47
6/10/2002	3-6-10-02	Ground Person	< 0.92	< 0.12
6/11/2002	1-6-11-02	Archeologist	< 0.46	0.21
6/11/2002	2-6-11-02	Bulldozer Operator	< 0.46	9.12
6/11/2002	3-6-11-02	Ground Person	< 0.46	< 0.17
6/12/2002	1-6-12-02	Archeologist	< 0.23	1.67
6/12/2002	2-6-12-02	Bulldozer Operator	< 0.23	0.63
6/12/2002	3-6-12-02	Ground Person	< 0.23	0.30
6/13/2002	1-6-13-02	Archeologist	< 0.23	0.14
6/13/2002	2-6-13-02	Bulldozer Operator	< 0.23	1.41
6/13/2002	3-6-13-02	Ground Person	< 0.24	0.32
6/14/2002	1-6-14-02	Archeologist	< 0.28	0.41
6/14/2002	2-6-14-02	Bulldozer Operator	3.32	0.73
6/14/2002	3-6-14-02	Ground Person	< 0.25	1.07
6/17/2002	1-6-17-02	Archeologist	< 0.57	< 0.59
6/17/2002	2-6-17-02	Bulldozer Operator	< 0.59	0.24
6/17/2002	3-6-17-02	Ground Person	< 0.60	0.82
6/20/2002	1-6-20-02	Scraper Operator	< 0.20	2.16
6/20/2002	2-6-20-02	Scraper Operator	< 0.21	0.52
6/20/2002	3-6-20-02	Scraper Operator	< 0.20	0.10
6/25/2002	1-6-25-02	Ground Person	0.11	0.82
6/25/2002	2-6-25-02	Bulldozer Operator	0.27	0.16
6/25/2002	3-6-25-02	Scraper Operator	< 0.09	0.12
6/26/2002	1-6-26-02	Ground Person	< 0.09	3.08
6/26/2002	2-6-26-02	Bulldozer Operator	1.02	16.90

Table 2-2 – Personal Air Sample Results

Date Sampled	Sample Number	Worker Activity	Arsenic Level[(1)] (*u*g/m^3)	Lead Level[(2)] (*u*g/m^3)
6/26/2002	3-6-26-02	Scraper Operator	< 0.09	1.49
6/27/2002	1-6-27-02	Ground Person	< 0.13	2.15
6/27/2002	2-6-27-02	Bulldozer Operator	0.24	0.45
6/27/2002	3-6-27-02	Scraper Operator	< 0.13	0.12
7/1/2002	1-7-1-02	Ground Person	< 0.09	0.21
7/1/2002	2-7-1-02	Chipper Operator	< 0.11	0.34
7/2/2002	1-7-2-02	Ground Person	< 0.09	0.60
7/2/2002	2-7-2-02	Scraper Operator	< 0.10	0.32
7/2/2002	3-7-2-02	Chipper Operator	< 0.09	0.29
7/9/2002	1-7-9-02	Ground Person	< 0.12	< 0.24
7/9/2002	2-7-9-02	Bulldozer Operator	0.64	0.32
7/9/2002	3-7-9-02	Archeologist	< 0.13	< 0.60
7/10/2002	1-7-10-02	Ground Person	< 0.12	0.48
7/10/2002	2-7-10-02	Bulldozer Operator	0.39	0.14
7/10/2002	3-7-10-02	Archeologist	< 0.13	0.10
7/22/2002	1-7-22-02	Ground Person	< 0.12	0.57
7/22/2002	2-7-22-02	Bulldozer Operator	1.04	0.55
7/22/2002	3-7-22-02	Brush Grinder	< 0.12	0.24
7/23/2002	2-7-23-02	Bulldozer Operator	2.65	< 0.09
7/23/2002	3-7-23-02	Water Truck	< 0.12	0.18
8/28/2002	1-8-28-02	Bulldozer Operator	2.80	0.13
8/28/2002	2-8-28-02	Excavator Operator	1.07	< 0.12
8/28/2002	3-8-28-02	Ground Person	< 0.12	0.51

NOTES:
[(1)]The 8-hour time weighted average PEL for arsenic is 500 ug/m^3.
[(2)]The 8-hour time weighted average PEL for lead is 50 ug/m^3.
[(3)]Values with a "<" sign indicate that the analyte w as undetected in that sample. The value after the "<" sign is the sample detection limit.

SECTION 3 – RESULTS

3.1 Personal Air Monitoring Results

As shown in Table 2, all arsenic and lead levels were well below the Washington Industrial Safety and Health Administration (WISHA) PEL of 500 ug/m^3 for arsenic and 50 ug/m^3 for lead. The highest detected arsenic level was 3.32 ug/m^3, and the highest detected lead concentration was 16.9 ug/m^3. Both of these concentrations were measured on a bulldozer operator.

3.2 Real -Time Air Monitoring Results

During periods of heavy equipment operation and other times of maximum soil disturbance, continuous particulate readings were taken next to workers assumed to have the potential for maximum exposure. Workers chosen for monitoring included Heavy Equipment Operators, Archeologists and Ground People working adjacent to heavy equipment. A summary of the real-time air monitoring results is presented in Table 3-1. As shown in this table, there were three instances where the average air concentrations were above the 2.5 mg/m^3 action level. When these results were noted, additional soil wetting was implemented to reduce airborne dust levels. All average air concentrations were below the PEL of 5.0 (the maximum average concentration was 3.47 mg/m^3). All of the real-time sampling results are presented in Appendix A.

Table 3-1 – Real-Time Air Monitoring Results

Date	Average Concentration (mg/m^3)[1]	Activity of Person Sampled
20-Jun-02	0.35	Bulldozer Operator
20-Jun-02	0.24	Ground Person
20-Jun-02	0.21	Chipper/Excavator
01-Aug-02	0.04	Not Recorded
05-Aug-02	0.35	Stump Pulling
05-Aug-02	0.05	Bulldozer Operator
06-Aug-02	0.29	Bulldozer Operator
08-Aug-02	3.47[2]	Bulldozer Operator
08-Aug-02	0.36	Excavator Operator
08-Aug-02	0.17	Chipper/Excavator
22-Aug-02	1.52	Bulldozer Operator
22-Aug-02	0.30	Excavator Operator
22-Aug-02	0.19	Grinder/Excavator
27-Aug-02	2.59	Bulldozer Operator
27-Aug-02	0.47	Excavator Operator
27-Aug-02	0.48	Ground Person
29-Aug-02	2.86	Bulldozer Operator
29-Aug-02	1.10	Excavator Operator
29-Aug-02	0.09	Ground Person
05-Sept-02	0.11	Bulldozer Operator
05-Sept-02	1.26	Grinder Operator
05-Sept-02	0.33	Ground Clearing
10-Sept-02	0.57	Ground Clearing
10-Sept-02	0.50	Grinder Operator
10-Sept-02	0.18	Bulldozer Operator
17-Sept-02	0.04	Excavator Operator
17-Sept-02	0.29	Chipper Operator
17-Sept-02	0.21	Ground Person
23-Sept-02	0.10	Bulldozer Operator
23-Sept-02	0.38	Chipper Operator
23-Sept-02	0.19	Waterer
26-Sept-02	0.03	Archeologist

[1]Concentration is the average respirable particulate concentration measured during the logging period of the miniram.
[2]Shaded values indicate levels that exceeded the action level of 2.5 mg/m^3.

APPENDIX A – REAL-TIME AIR MONITORING RESULTS – 2002

A copy of all real time air monitoring data is presented in this appendix. These data were logged on a miniram portable respirable dust monitors. The data is presented in chronological order, as identified in Table 3-1. Note the site-specific 8-hour TWA is 2.5 mg/m^3 and zero values are instances where the measured concentration was less than 0.001 mg/m^3.

June 20, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 01
Number of logged points: 448
Start time and date: 08:04:52 20-Jun
Elapsed time: 07:28:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 28.569 mg/m³
Time at maximum: 08:30:26 Jun 20
Max STEL Concentration: 1.506 mg/m³
Time at max STEL: 12:05:52 Jun 20
Overall Avg Conc: 0.346 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³	Point	Date	Time	Avg.(mg/m³
1	20-Jun	08:05:52	0.127	29	20-Jun	08:33:52	0.115
2	20-Jun	08:06:52	0.39	30	20-Jun	08:34:52	0.127
3	20-Jun	08:07:52	0.116	31	20-Jun	08:35:52	0.106
4	20-Jun	08:08:52	0.157	32	20-Jun	08:36:52	0.132
5	20-Jun	08:09:52	0.201	33	20-Jun	08:37:52	0.084
6	20-Jun	08:10:52	0.113	34	20-Jun	08:38:52	0.287
7	20-Jun	08:11:52	0.114	35	20-Jun	08:39:52	1.435
8	20-Jun	08:12:52	0.116	36	20-Jun	08:40:52	0.435
9	20-Jun	08:13:52	0.093	37	20-Jun	08:41:52	0.497
10	20-Jun	08:14:52	0.107	38	20-Jun	08:42:52	0.681
11	20-Jun	08:15:52	0.12	39	20-Jun	08:43:52	0.691
12	20-Jun	08:16:52	0.1	40	20-Jun	08:44:52	0.627
13	20-Jun	08:17:52	0.133	41	20-Jun	08:45:52	0.398
14	20-Jun	08:18:52	0.107	42	20-Jun	08:46:52	0.105
15	20-Jun	08:19:52	0.083	43	20-Jun	08:47:52	0.009
16	20-Jun	08:20:52	0.125	44	20-Jun	08:48:52	0.609
17	20-Jun	08:21:52	0.155	45	20-Jun	08:49:52	0.095
18	20-Jun	08:22:52	0.593	46	20-Jun	08:50:52	0.125
19	20-Jun	08:23:52	0.519	47	20-Jun	08:51:52	0.024
20	20-Jun	08:24:52	0.271	48	20-Jun	08:52:52	0.147
21	20-Jun	08:25:52	0.152	49	20-Jun	08:53:52	0.086
22	20-Jun	08:26:52	0.153	50	20-Jun	08:54:52	0.377
23	20-Jun	08:27:52	0.166	51	20-Jun	08:55:52	0.09
24	20-Jun	08:28:52	0.213	52	20-Jun	08:56:52	0.228
25	20-Jun	08:29:52	0.123	53	20-Jun	08:57:52	0.17
26	20-Jun	08:30:52	6.33	54	20-Jun	08:58:52	0.141
27	20-Jun	08:31:52	0.422	55	20-Jun	08:59:52	0.318
28	20-Jun	08:32:52	0.301	56	20-Jun	09:00:52	0.568

Point	Date	Time	Avg.(mg/m³	Point	Date	Time	Avg.(mg/m³
57	20-Jun	09:01:52	1.156	104	20-Jun	09:48:52	0.123
58	20-Jun	09:02:52	0.759	105	20-Jun	09:49:52	0.211
59	20-Jun	09:03:52	0.4	106	20-Jun	09:50:52	0.232
60	20-Jun	09:04:52	0.379	107	20-Jun	09:51:52	0.529
61	20-Jun	09:05:52	0.416	108	20-Jun	09:52:52	0.25
62	20-Jun	09:06:52	0.459	109	20-Jun	09:53:52	0.35
63	20-Jun	09:07:52	0.467	110	20-Jun	09:54:52	0.34
64	20-Jun	09:08:52	0.205	111	20-Jun	09:55:52	0.203
65	20-Jun	09:09:52	0.241	112	20-Jun	09:56:52	0.227
66	20-Jun	09:10:52	0.629	113	20-Jun	09:57:52	0.388
67	20-Jun	09:11:52	0.424	114	20-Jun	09:58:52	0.666
68	20-Jun	09:12:52	0.496	115	20-Jun	09:59:52	0.146
69	20-Jun	09:13:52	1.206	116	20-Jun	10:00:52	0.148
70	20-Jun	09:14:52	0.966	117	20-Jun	10:01:52	0.721
71	20-Jun	09:15:52	0.89	118	20-Jun	10:02:52	0.391
72	20-Jun	09:16:52	0.538	119	20-Jun	10:03:52	0.149
73	20-Jun	09:17:52	0.78	120	20-Jun	10:04:52	0.129
74	20-Jun	09:18:52	0.475	121	20-Jun	10:05:52	0.124
75	20-Jun	09:19:52	0.519	122	20-Jun	10:06:52	0.091
76	20-Jun	09:20:52	0.287	123	20-Jun	10:07:52	0.084
77	20-Jun	09:21:52	0.132	124	20-Jun	10:08:52	0.125
78	20-Jun	09:22:52	0.388	125	20-Jun	10:09:52	0.107
79	20-Jun	09:23:52	0.304	126	20-Jun	10:10:52	0.083
80	20-Jun	09:24:52	0.185	127	20-Jun	10:11:52	0.357
81	20-Jun	09:25:52	0.242	128	20-Jun	10:12:52	0.52
82	20-Jun	09:26:52	0.17	129	20-Jun	10:13:52	0.179
83	20-Jun	09:27:52	0.129	130	20-Jun	10:14:52	0.294
84	20-Jun	09:28:52	0.082	131	20-Jun	10:15:52	0.062
85	20-Jun	09:29:52	0.223	132	20-Jun	10:16:52	0.072
86	20-Jun	09:30:52	0.194	133	20-Jun	10:17:52	0.062
87	20-Jun	09:31:52	0.205	134	20-Jun	10:18:52	0.185
88	20-Jun	09:32:52	0.471	135	20-Jun	10:19:52	0.085
89	20-Jun	09:33:52	0.303	136	20-Jun	10:20:52	0.182
90	20-Jun	09:34:52	0.177	137	20-Jun	10:21:52	0.891
91	20-Jun	09:35:52	0.452	138	20-Jun	10:22:52	2.317
92	20-Jun	09:36:52	0.513	139	20-Jun	10:23:52	4.58
93	20-Jun	09:37:52	0.658	140	20-Jun	10:24:52	2.196
94	20-Jun	09:38:52	0.225	141	20-Jun	10:25:52	0.643
95	20-Jun	09:39:52	0.458	142	20-Jun	10:26:52	0.656
96	20-Jun	09:40:52	0.289	143	20-Jun	10:27:52	0.862
97	20-Jun	09:41:52	0.604	144	20-Jun	10:28:52	0.812
98	20-Jun	09:42:52	0.559	145	20-Jun	10:29:52	0.84
99	20-Jun	09:43:52	0.325	146	20-Jun	10:30:52	1.611
100	20-Jun	09:44:52	0.222	147	20-Jun	10:31:52	0.907
101	20-Jun	09:45:52	0.581	148	20-Jun	10:32:52	1.352
102	20-Jun	09:46:52	0.343	149	20-Jun	10:33:52	1.143
103	20-Jun	09:47:52	0.282	150	20-Jun	10:34:52	0.322

Point	Date	Time	Avg.(mg/m³	Point	Date	Time	Avg.(mg/m³
151	20-Jun	10:35:52	0.849	198	20-Jun	11:22:52	0.189
152	20-Jun	10:36:52	0.227	199	20-Jun	11:23:52	1.38
153	20-Jun	10:37:52	0.262	200	20-Jun	11:24:52	1.152
154	20-Jun	10:38:52	0.688	201	20-Jun	11:25:52	0.563
155	20-Jun	10:39:52	1.617	202	20-Jun	11:26:52	1.079
156	20-Jun	10:40:52	2.494	203	20-Jun	11:27:52	0.778
157	20-Jun	10:41:52	0.864	204	20-Jun	11:28:52	0.387
158	20-Jun	10:42:52	0.267	205	20-Jun	11:29:52	1.16
159	20-Jun	10:43:52	0.586	206	20-Jun	11:30:52	0.186
160	20-Jun	10:44:52	1.293	207	20-Jun	11:31:52	0.282
161	20-Jun	10:45:52	0.301	208	20-Jun	11:32:52	0.707
162	20-Jun	10:46:52	0.204	209	20-Jun	11:33:52	0.172
163	20-Jun	10:47:52	0.561	210	20-Jun	11:34:52	0.062
164	20-Jun	10:48:52	1.094	211	20-Jun	11:35:52	0.054
165	20-Jun	10:49:52	1.205	212	20-Jun	11:36:52	0.059
166	20-Jun	10:50:52	0.374	213	20-Jun	11:37:52	0.097
167	20-Jun	10:51:52	0.281	214	20-Jun	11:38:52	0.056
168	20-Jun	10:52:52	0.265	215	20-Jun	11:39:52	0.052
169	20-Jun	10:53:52	0.434	216	20-Jun	11:40:52	0.872
170	20-Jun	10:54:52	0.4	217	20-Jun	11:41:52	0.189
171	20-Jun	10:55:52	0.521	218	20-Jun	11:42:52	0.453
172	20-Jun	10:56:52	1.588	219	20-Jun	11:43:52	0.059
173	20-Jun	10:57:52	0.775	220	20-Jun	11:44:52	0.029
174	20-Jun	10:58:52	0.232	221	20-Jun	11:45:52	0.085
175	20-Jun	10:59:52	0.229	222	20-Jun	11:46:52	0.091
176	20-Jun	11:00:52	0.193	223	20-Jun	11:47:52	0.136
177	20-Jun	11:01:52	0.139	224	20-Jun	11:48:52	0.1
178	20-Jun	11:02:52	0.226	225	20-Jun	11:49:52	0.174
179	20-Jun	11:03:52	0.263	226	20-Jun	11:50:52	0.227
180	20-Jun	11:04:52	1.545	227	20-Jun	11:51:52	0.151
181	20-Jun	11:05:52	0.18	228	20-Jun	11:52:52	0.485
182	20-Jun	11:06:52	0.409	229	20-Jun	11:53:52	0.843
183	20-Jun	11:07:52	0.202	230	20-Jun	11:54:52	1.459
184	20-Jun	11:08:52	0.09	231	20-Jun	11:55:52	0.661
185	20-Jun	11:09:52	0.317	232	20-Jun	11:56:52	0.549
186	20-Jun	11:10:52	0.194	233	20-Jun	11:57:52	0.765
187	20-Jun	11:11:52	0.307	234	20-Jun	11:58:52	1.196
188	20-Jun	11:12:52	0.879	235	20-Jun	11:59:52	1.97
189	20-Jun	11:13:52	0.524	236	20-Jun	12:00:52	5.12
190	20-Jun	11:14:52	0.776	237	20-Jun	12:01:52	1.49
191	20-Jun	11:15:52	1.504	238	20-Jun	12:02:52	4.07
192	20-Jun	11:16:52	0.55	239	20-Jun	12:03:52	2.229
193	20-Jun	11:17:52	0.274	240	20-Jun	12:04:52	0.318
194	20-Jun	11:18:52	0.515	241	20-Jun	12:05:52	1.399
195	20-Jun	11:19:52	1.236	242	20-Jun	12:06:52	0.143
196	20-Jun	11:20:52	0.864	243	20-Jun	12:07:52	0.084
197	20-Jun	11:21:52	0.677	244	20-Jun	12:08:52	0.066

Point	Date	Time	Avg.(mg/m³	Point	Date	Time	Avg.(mg/m³
245	20-Jun	12:09:52	0.062	292	20-Jun	12:56:52	0.117
246	20-Jun	12:10:52	0.056	293	20-Jun	12:57:52	0.116
247	20-Jun	12:11:52	0.059	294	20-Jun	12:58:52	0.12
248	20-Jun	12:12:52	0.118	295	20-Jun	12:59:52	0.119
249	20-Jun	12:13:52	0.224	296	20-Jun	13:00:52	0.12
250	20-Jun	12:14:52	0.25	297	20-Jun	13:01:52	0.127
251	20-Jun	12:15:52	0.2	298	20-Jun	13:02:52	0.119
252	20-Jun	12:16:52	0.17	299	20-Jun	13:03:52	0.118
253	20-Jun	12:17:52	0.134	300	20-Jun	13:04:52	0.118
254	20-Jun	12:18:52	0.161	301	20-Jun	13:05:52	0.122
255	20-Jun	12:19:52	0.135	302	20-Jun	13:06:52	0.117
256	20-Jun	12:20:52	0.146	303	20-Jun	13:07:52	0.12
257	20-Jun	12:21:52	0.133	304	20-Jun	13:08:52	0.12
258	20-Jun	12:22:52	0.13	305	20-Jun	13:09:52	0.12
259	20-Jun	12:23:52	0.135	306	20-Jun	13:10:52	0.118
260	20-Jun	12:24:52	0.154	307	20-Jun	13:11:52	0.12
261	20-Jun	12:25:52	0.139	308	20-Jun	13:12:52	0.12
262	20-Jun	12:26:52	0.175	309	20-Jun	13:13:52	0.12
263	20-Jun	12:27:52	0.143	310	20-Jun	13:14:52	0.128
264	20-Jun	12:28:52	0.13	311	20-Jun	13:15:52	0.117
265	20-Jun	12:29:52	0.129	312	20-Jun	13:16:52	0.117
266	20-Jun	12:30:52	0.131	313	20-Jun	13:17:52	0.118
267	20-Jun	12:31:52	0.133	314	20-Jun	13:18:52	0.12
268	20-Jun	12:32:52	0.127	315	20-Jun	13:19:52	0.115
269	20-Jun	12:33:52	0.138	316	20-Jun	13:20:52	0.118
270	20-Jun	12:34:52	0.127	317	20-Jun	13:21:52	0.117
271	20-Jun	12:35:52	0.145	318	20-Jun	13:22:52	0.115
272	20-Jun	12:36:52	0.137	319	20-Jun	13:23:52	0.119
273	20-Jun	12:37:52	0.134	320	20-Jun	13:24:52	0.117
274	20-Jun	12:38:52	0.124	321	20-Jun	13:25:52	0.115
275	20-Jun	12:39:52	0.146	322	20-Jun	13:26:52	0.118
276	20-Jun	12:40:52	0.151	323	20-Jun	13:27:52	0.118
277	20-Jun	12:41:52	0.131	324	20-Jun	13:28:52	0.118
278	20-Jun	12:42:52	0.14	325	20-Jun	13:29:52	0.118
279	20-Jun	12:43:52	0.13	326	20-Jun	13:30:52	0.115
280	20-Jun	12:44:52	0.125	327	20-Jun	13:31:52	0.118
281	20-Jun	12:45:52	0.125	328	20-Jun	13:32:52	0.123
282	20-Jun	12:46:52	0.127	329	20-Jun	13:33:52	0.117
283	20-Jun	12:47:52	0.125	330	20-Jun	13:34:52	0.115
284	20-Jun	12:48:52	0.13	331	20-Jun	13:35:52	0.117
285	20-Jun	12:49:52	0.124	332	20-Jun	13:36:52	0.124
286	20-Jun	12:50:52	0.123	333	20-Jun	13:37:52	0.116
287	20-Jun	12:51:52	0.123	334	20-Jun	13:38:52	0.117
288	20-Jun	12:52:52	0.125	335	20-Jun	13:39:52	0.116
289	20-Jun	12:53:52	0.12	336	20-Jun	13:40:52	0.12
290	20-Jun	12:54:52	0.119	337	20-Jun	13:41:52	0.115
291	20-Jun	12:55:52	0.127	338	20-Jun	13:42:52	0.116

Point	Date	Time	Avg.(mg/m³	Point	Date	Time	Avg.(mg/m³
339	20-Jun	13:43:52	0.112	386	20-Jun	14:30:52	0.114
340	20-Jun	13:44:52	0.116	387	20-Jun	14:31:52	0.113
341	20-Jun	13:45:52	0.116	388	20-Jun	14:32:52	0.116
342	20-Jun	13:46:52	0.115	389	20-Jun	14:33:52	0.119
343	20-Jun	13:47:52	0.116	390	20-Jun	14:34:52	0.123
344	20-Jun	13:48:52	0.115	391	20-Jun	14:35:52	0.122
345	20-Jun	13:49:52	0.118	392	20-Jun	14:36:52	0.147
346	20-Jun	13:50:52	0.116	393	20-Jun	14:37:52	0.121
347	20-Jun	13:51:52	0.117	394	20-Jun	14:38:52	0.138
348	20-Jun	13:52:52	0.114	395	20-Jun	14:39:52	0.121
349	20-Jun	13:53:52	0.118	396	20-Jun	14:40:52	0.118
350	20-Jun	13:54:52	0.119	397	20-Jun	14:41:52	0.133
351	20-Jun	13:55:52	0.122	398	20-Jun	14:42:52	0.117
352	20-Jun	13:56:52	0.117	399	20-Jun	14:43:52	0.114
353	20-Jun	13:57:52	0.118	400	20-Jun	14:44:52	0.115
354	20-Jun	13:58:52	0.118	401	20-Jun	14:45:52	0.115
355	20-Jun	13:59:52	0.119	402	20-Jun	14:46:52	0.116
356	20-Jun	14:00:52	0.125	403	20-Jun	14:47:52	0.119
357	20-Jun	14:01:52	0.124	404	20-Jun	14:48:52	0.121
358	20-Jun	14:02:52	0.116	405	20-Jun	14:49:52	0.126
359	20-Jun	14:03:52	0.116	406	20-Jun	14:50:52	0.117
360	20-Jun	14:04:52	0.114	407	20-Jun	14:51:52	0.131
361	20-Jun	14:05:52	0.114	408	20-Jun	14:52:52	0.115
362	20-Jun	14:06:52	0.114	409	20-Jun	14:53:52	0.119
363	20-Jun	14:07:52	0.117	410	20-Jun	14:54:52	0.115
364	20-Jun	14:08:52	0.114	411	20-Jun	14:55:52	0.118
365	20-Jun	14:09:52	0.12	412	20-Jun	14:56:52	0.119
366	20-Jun	14:10:52	0.121	413	20-Jun	14:57:52	0.113
367	20-Jun	14:11:52	0.117	414	20-Jun	14:58:52	0.114
368	20-Jun	14:12:52	0.122	415	20-Jun	14:59:52	0.115
369	20-Jun	14:13:52	0.114	416	20-Jun	15:00:52	0.115
370	20-Jun	14:14:52	0.114	417	20-Jun	15:01:52	0.115
371	20-Jun	14:15:52	0.115	418	20-Jun	15:02:52	0.122
372	20-Jun	14:16:52	0.116	419	20-Jun	15:03:52	0.112
373	20-Jun	14:17:52	0.117	420	20-Jun	15:04:52	0.119
374	20-Jun	14:18:52	0.115	421	20-Jun	15:05:52	0.114
375	20-Jun	14:19:52	0.115	422	20-Jun	15:06:52	0.112
376	20-Jun	14:20:52	0.116	423	20-Jun	15:07:52	0.112
377	20-Jun	14:21:52	0.118	424	20-Jun	15:08:52	0.113
378	20-Jun	14:22:52	0.117	425	20-Jun	15:09:52	0.113
379	20-Jun	14:23:52	0.114	426	20-Jun	15:10:52	0.119
380	20-Jun	14:24:52	0.119	427	20-Jun	15:11:52	0.111
381	20-Jun	14:25:52	0.12	428	20-Jun	15:12:52	0.114
382	20-Jun	14:26:52	0.117	429	20-Jun	15:13:52	0.112
383	20-Jun	14:27:52	0.118	430	20-Jun	15:14:52	0.117
384	20-Jun	14:28:52	0.12	431	20-Jun	15:15:52	0.112
385	20-Jun	14:29:52	0.114	432	20-Jun	15:16:52	0.11

Point	Date	Time	Avg.(mg/m³	Point	Date	Time	Avg.(mg/m³
433	20-Jun	15:17:52	0.119				
434	20-Jun	15:18:52	0.12				
435	20-Jun	15:19:52	0.11				
436	20-Jun	15:20:52	0.109				
437	20-Jun	15:21:52	0.109				
438	20-Jun	15:22:52	0.114				
439	20-Jun	15:23:52	0.11				
440	20-Jun	15:24:52	0.11				
441	20-Jun	15:25:52	0.108				
442	20-Jun	15:26:52	0.112				
443	20-Jun	15:27:52	0.113				
444	20-Jun	15:28:52	0.11				
445	20-Jun	15:29:52	0.111				
446	20-Jun	15:30:52	0.108				
447	20-Jun	15:31:52	0.109				
448	20-Jun	15:32:52	0.111				

pDR-1000 S/N: 04878
User ID: DuPont Site PDR-2
Tag Number: 01
Number of logged points: 336
Start time and date: 08:05:13 20-Jun
Elapsed time: 05:36:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 11.687 mg/m³
Time at maximum: 08:30:30 Jun 20
Max STEL Concentration: 0.921 mg/m³
Time at max STEL: 08:45:14 Jun 20
Overall Avg Conc: 0.239 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	20-Jun	08:06:13	0.019	11	20-Jun	08:16:13	0.017
2	20-Jun	08:07:13	0.132	12	20-Jun	08:17:13	0.087
3	20-Jun	08:08:13	0.028	13	20-Jun	08:18:13	0.02
4	20-Jun	08:09:13	0.006	14	20-Jun	08:19:13	0.019
5	20-Jun	08:10:13	0.03	15	20-Jun	08:20:13	0.028
6	20-Jun	08:11:13	0.014	16	20-Jun	08:21:13	0.053
7	20-Jun	08:12:13	0.032	17	20-Jun	08:22:13	0.217
8	20-Jun	08:13:13	0.025	18	20-Jun	08:23:13	0.093
9	20-Jun	08:14:13	0.013	19	20-Jun	08:24:13	0.112
10	20-Jun	08:15:13	0.04	20	20-Jun	08:25:13	0.083

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
21	20-Jun	08:26:13	0.051	68	20-Jun	09:13:13	0.056
22	20-Jun	08:27:13	0.039	69	20-Jun	09:14:13	1.166
23	20-Jun	08:28:13	0.04	70	20-Jun	09:15:13	0.125
24	20-Jun	08:29:13	0.044	71	20-Jun	09:16:13	0.126
25	20-Jun	08:30:13	0.042	72	20-Jun	09:17:13	0.086
26	20-Jun	08:31:13	2.384	73	20-Jun	09:18:13	0.197
27	20-Jun	08:32:13	0.63	74	20-Jun	09:19:13	0.15
28	20-Jun	08:33:13	0.68	75	20-Jun	09:20:13	0.302
29	20-Jun	08:34:13	1.281	76	20-Jun	09:21:13	0.016
30	20-Jun	08:35:13	0.199	77	20-Jun	09:22:13	0.041
31	20-Jun	08:36:13	0.113	78	20-Jun	09:23:13	0.194
32	20-Jun	08:37:13	0.343	79	20-Jun	09:24:13	0.144
33	20-Jun	08:38:13	0.435	80	20-Jun	09:25:13	0.071
34	20-Jun	08:39:13	1.599	81	20-Jun	09:26:13	0.192
35	20-Jun	08:40:13	3.048	82	20-Jun	09:27:13	0.038
36	20-Jun	08:41:13	1.043	83	20-Jun	09:28:13	0.143
37	20-Jun	08:42:13	0.918	84	20-Jun	09:29:13	0.281
38	20-Jun	08:43:13	0.817	85	20-Jun	09:30:13	0.18
39	20-Jun	08:44:13	0.287	86	20-Jun	09:31:13	0.444
40	20-Jun	08:45:13	0.055	87	20-Jun	09:32:13	0.133
41	20-Jun	08:46:13	1.025	88	20-Jun	09:33:13	0.127
42	20-Jun	08:47:13	0.172	89	20-Jun	09:34:13	0.327
43	20-Jun	08:48:13	0.389	90	20-Jun	09:35:13	0.164
44	20-Jun	08:49:13	0.189	91	20-Jun	09:36:13	1.699
45	20-Jun	08:50:13	0.316	92	20-Jun	09:37:13	0.429
46	20-Jun	08:51:13	0.388	93	20-Jun	09:38:13	0.378
47	20-Jun	08:52:13	0.163	94	20-Jun	09:39:13	0.518
48	20-Jun	08:53:13	0.022	95	20-Jun	09:40:13	0.271
49	20-Jun	08:54:13	0.013	96	20-Jun	09:41:13	0.417
50	20-Jun	08:55:13	0.011	97	20-Jun	09:42:13	0.338
51	20-Jun	08:56:13	0.012	98	20-Jun	09:43:13	0.538
52	20-Jun	08:57:13	0.013	99	20-Jun	09:44:13	0.327
53	20-Jun	08:58:13	0.05	100	20-Jun	09:45:13	0.151
54	20-Jun	08:59:13	0.125	101	20-Jun	09:46:13	0.451
55	20-Jun	09:00:13	0.225	102	20-Jun	09:47:13	0.431
56	20-Jun	09:01:13	0.911	103	20-Jun	09:48:13	0.691
57	20-Jun	09:02:13	0.706	104	20-Jun	09:49:13	0.428
58	20-Jun	09:03:13	0.514	105	20-Jun	09:50:13	0.262
59	20-Jun	09:04:13	0.46	106	20-Jun	09:51:13	0.2
60	20-Jun	09:05:13	0.133	107	20-Jun	09:52:13	0.216
61	20-Jun	09:06:13	0.574	108	20-Jun	09:53:13	0.141
62	20-Jun	09:07:13	1.146	109	20-Jun	09:54:13	0.184
63	20-Jun	09:08:13	0.206	110	20-Jun	09:55:13	0.053
64	20-Jun	09:09:13	0.22	111	20-Jun	09:56:13	0.056
65	20-Jun	09:10:13	0.681	112	20-Jun	09:57:13	0.04
66	20-Jun	09:11:13	0.36	113	20-Jun	09:58:13	0.013
67	20-Jun	09:12:13	0.105	114	20-Jun	09:59:13	0.034

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
115	20-Jun	10:00:13	0.24	162	20-Jun	10:47:13	0.126
116	20-Jun	10:01:13	0.081	163	20-Jun	10:48:13	0.17
117	20-Jun	10:02:13	0.127	164	20-Jun	10:49:13	0.085
118	20-Jun	10:03:13	0.662	165	20-Jun	10:50:13	0.114
119	20-Jun	10:04:13	0.167	166	20-Jun	10:51:13	0.765
120	20-Jun	10:05:13	0.023	167	20-Jun	10:52:13	0.783
121	20-Jun	10:06:13	0.091	168	20-Jun	10:53:13	1.619
122	20-Jun	10:07:13	0.073	169	20-Jun	10:54:13	0.676
123	20-Jun	10:08:13	0.018	170	20-Jun	10:55:13	0.305
124	20-Jun	10:09:13	0.028	171	20-Jun	10:56:13	0.401
125	20-Jun	10:10:13	0.108	172	20-Jun	10:57:13	0.695
126	20-Jun	10:11:13	0.19	173	20-Jun	10:58:13	0.783
127	20-Jun	10:12:13	0.153	174	20-Jun	10:59:13	0.068
128	20-Jun	10:13:13	0.263	175	20-Jun	11:00:13	0.182
129	20-Jun	10:14:13	0.092	176	20-Jun	11:01:13	0.217
130	20-Jun	10:15:13	0.247	177	20-Jun	11:02:13	0.058
131	20-Jun	10:16:13	0.08	178	20-Jun	11:03:13	0.058
132	20-Jun	10:17:13	0.36	179	20-Jun	11:04:13	0.056
133	20-Jun	10:18:13	0.044	180	20-Jun	11:05:13	0.156
134	20-Jun	10:19:13	0.047	181	20-Jun	11:06:13	0.063
135	20-Jun	10:20:13	0.045	182	20-Jun	11:07:13	0.169
136	20-Jun	10:21:13	0.026	183	20-Jun	11:08:13	0.088
137	20-Jun	10:22:13	0.029	184	20-Jun	11:09:13	0.229
138	20-Jun	10:23:13	0.028	185	20-Jun	11:10:13	0.037
139	20-Jun	10:24:13	0.085	186	20-Jun	11:11:13	0.059
140	20-Jun	10:25:13	0.093	187	20-Jun	11:12:13	0.072
141	20-Jun	10:26:13	0.062	188	20-Jun	11:13:13	0.233
142	20-Jun	10:27:13	0.093	189	20-Jun	11:14:13	0.136
143	20-Jun	10:28:13	0.083	190	20-Jun	11:15:13	0.162
144	20-Jun	10:29:13	0.038	191	20-Jun	11:16:13	0.138
145	20-Jun	10:30:13	0.044	192	20-Jun	11:17:13	0.136
146	20-Jun	10:31:13	0.062	193	20-Jun	11:18:13	0.036
147	20-Jun	10:32:13	0.054	194	20-Jun	11:19:13	0.122
148	20-Jun	10:33:13	0.022	195	20-Jun	11:20:13	0.129
149	20-Jun	10:34:13	0.024	196	20-Jun	11:21:13	0.175
150	20-Jun	10:35:13	0.029	197	20-Jun	11:22:13	0.183
151	20-Jun	10:36:13	0.033	198	20-Jun	11:23:13	0.083
152	20-Jun	10:37:13	0.025	199	20-Jun	11:24:13	0.241
153	20-Jun	10:38:13	0.017	200	20-Jun	11:25:13	0.347
154	20-Jun	10:39:13	0.017	201	20-Jun	11:26:13	0.491
155	20-Jun	10:40:13	0.06	202	20-Jun	11:27:13	0.157
156	20-Jun	10:41:13	0.02	203	20-Jun	11:28:13	0.06
157	20-Jun	10:42:13	0.031	204	20-Jun	11:29:13	0.429
158	20-Jun	10:43:13	0.031	205	20-Jun	11:30:13	1.254
159	20-Jun	10:44:13	0.59	206	20-Jun	11:31:13	0.305
160	20-Jun	10:45:13	0.41	207	20-Jun	11:32:13	1.27
161	20-Jun	10:46:13	0.19	208	20-Jun	11:33:13	3.961

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
209	20-Jun	11:34:13	1.064	256	20-Jun	12:21:13	0.02
210	20-Jun	11:35:13	0.466	257	20-Jun	12:22:13	0.021
211	20-Jun	11:36:13	0.321	258	20-Jun	12:23:13	0.019
212	20-Jun	11:37:13	0.314	259	20-Jun	12:24:13	0.018
213	20-Jun	11:38:13	0.044	260	20-Jun	12:25:13	0.019
214	20-Jun	11:39:13	0.036	261	20-Jun	12:26:13	0.018
215	20-Jun	11:40:13	0.022	262	20-Jun	12:27:13	0.017
216	20-Jun	11:41:13	0.074	263	20-Jun	12:28:13	0.018
217	20-Jun	11:42:13	0.16	264	20-Jun	12:29:13	0.018
218	20-Jun	11:43:13	0.057	265	20-Jun	12:30:13	0.026
219	20-Jun	11:44:13	0.038	266	20-Jun	12:31:13	0.031
220	20-Jun	11:45:13	0.021	267	20-Jun	12:32:13	0.022
221	20-Jun	11:46:13	0.034	268	20-Jun	12:33:13	0.022
222	20-Jun	11:47:13	0.035	269	20-Jun	12:34:13	0.018
223	20-Jun	11:48:13	0.038	270	20-Jun	12:35:13	0.018
224	20-Jun	11:49:13	0.021	271	20-Jun	12:36:13	0.016
225	20-Jun	11:50:13	0.049	272	20-Jun	12:37:13	0.018
226	20-Jun	11:51:13	0.139	273	20-Jun	12:38:13	0.017
227	20-Jun	11:52:13	0.267	274	20-Jun	12:39:13	0.016
228	20-Jun	11:53:13	0.125	275	20-Jun	12:40:13	0.017
229	20-Jun	11:54:13	0.071	276	20-Jun	12:41:13	0.015
230	20-Jun	11:55:13	0.038	277	20-Jun	12:42:13	0.016
231	20-Jun	11:56:13	0.077	278	20-Jun	12:43:13	0.017
232	20-Jun	11:57:13	0.041	279	20-Jun	12:44:13	0.052
233	20-Jun	11:58:13	0.19	280	20-Jun	12:45:13	0.022
234	20-Jun	11:59:13	0.096	281	20-Jun	12:46:13	0.035
235	20-Jun	12:00:13	0.032	282	20-Jun	12:47:13	0.017
236	20-Jun	12:01:13	0.052	283	20-Jun	12:48:13	0.016
237	20-Jun	12:02:13	0.148	284	20-Jun	12:49:13	0.019
238	20-Jun	12:03:13	0.566	285	20-Jun	12:50:13	0.041
239	20-Jun	12:04:13	0.266	286	20-Jun	12:51:13	0.036
240	20-Jun	12:05:13	0.216	287	20-Jun	12:52:13	0.072
241	20-Jun	12:06:13	0.654	288	20-Jun	12:53:13	0.018
242	20-Jun	12:07:13	0.116	289	20-Jun	12:54:13	0.018
243	20-Jun	12:08:13	0.097	290	20-Jun	12:55:13	0.014
244	20-Jun	12:09:13	0.086	291	20-Jun	12:56:13	0.016
245	20-Jun	12:10:13	0.081	292	20-Jun	12:57:13	0.017
246	20-Jun	12:11:13	0.021	293	20-Jun	12:58:13	0.015
247	20-Jun	12:12:13	0.019	294	20-Jun	12:59:13	0.015
248	20-Jun	12:13:13	0.08	295	20-Jun	13:00:13	0.016
249	20-Jun	12:14:13	0.027	296	20-Jun	13:01:13	0.016
250	20-Jun	12:15:13	0.02	297	20-Jun	13:02:13	0.014
251	20-Jun	12:16:13	0.025	298	20-Jun	13:03:13	0.48
252	20-Jun	12:17:13	0.019	299	20-Jun	13:04:13	0.322
253	20-Jun	12:18:13	0.02	300	20-Jun	13:05:13	0.173
254	20-Jun	12:19:13	0.018	301	20-Jun	13:06:13	0.11
255	20-Jun	12:20:13	0.018	302	20-Jun	13:07:13	0.08

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
303	20-Jun	13:08:13	0.051				
304	20-Jun	13:09:13	0.043				
305	20-Jun	13:10:13	0.027				
306	20-Jun	13:11:13	0.065				
307	20-Jun	13:12:13	0.092				
308	20-Jun	13:13:13	0.289				
309	20-Jun	13:14:13	0.046				
310	20-Jun	13:15:13	0.048				
311	20-Jun	13:16:13	0.034				
312	20-Jun	13:17:13	0.036				
313	20-Jun	13:18:13	0.025				
314	20-Jun	13:19:13	0.075				
315	20-Jun	13:20:13	0.159				
316	20-Jun	13:21:13	0.331				
317	20-Jun	13:22:13	0.288				
318	20-Jun	13:23:13	0.32				
319	20-Jun	13:24:13	0.115				
320	20-Jun	13:25:13	0.309				
321	20-Jun	13:26:13	0.669				
322	20-Jun	13:27:13	0.54				
323	20-Jun	13:28:13	2.539				
324	20-Jun	13:29:13	1.263				
325	20-Jun	13:30:13	0.419				
326	20-Jun	13:31:13	0.475				
327	20-Jun	13:32:13	0.424				
328	20-Jun	13:33:13	0.311				
329	20-Jun	13:34:13	0.193				
330	20-Jun	13:35:13	0.483				
331	20-Jun	13:36:13	0.445				
332	20-Jun	13:37:13	0.252				
333	20-Jun	13:38:13	0.186				
334	20-Jun	13:39:13	0.072				
335	20-Jun	13:40:13	0.156				
336	20-Jun	13:41:13	0.398				

pDR-1000 S/N: 04881
User ID: DuPont Site PDR-3
Tag Number: 01
Number of logged points: 561
Start time and date: 08:04:58 20-Jun
Elapsed time: 09:21:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 11.992 mg/m³
Time at maximum: 14:43:07 Jun 20
Max STEL Concentration: 0.925 mg/m³
Time at max STEL: 14:53:59 Jun 20
Overall Avg Conc: 0.207 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	20-Jun	08:05:58	0.02	31	20-Jun	08:35:58	0.03
2	20-Jun	08:06:58	0.17	32	20-Jun	08:36:58	0.027
3	20-Jun	08:07:58	0.011	33	20-Jun	08:37:58	0.02
4	20-Jun	08:08:58	0.017	34	20-Jun	08:38:58	0.14
5	20-Jun	08:09:58	0.03	35	20-Jun	08:39:58	0.494
6	20-Jun	08:10:58	0.032	36	20-Jun	08:40:58	0.466
7	20-Jun	08:11:58	0.017	37	20-Jun	08:41:58	0.138
8	20-Jun	08:12:58	0.019	38	20-Jun	08:42:58	0.3
9	20-Jun	08:13:58	0.021	39	20-Jun	08:43:58	0.231
10	20-Jun	08:14:58	0.033	40	20-Jun	08:44:58	0.068
11	20-Jun	08:15:58	0.026	41	20-Jun	08:45:58	0.112
12	20-Jun	08:16:58	0.036	42	20-Jun	08:46:58	0.059
13	20-Jun	08:17:58	0.054	43	20-Jun	08:47:58	0.038
14	20-Jun	08:18:58	0.021	44	20-Jun	08:48:58	0.056
15	20-Jun	08:19:58	0.025	45	20-Jun	08:49:58	0.03
16	20-Jun	08:20:58	0.058	46	20-Jun	08:50:58	0.054
17	20-Jun	08:21:58	0.357	47	20-Jun	08:51:58	0.093
18	20-Jun	08:22:58	0.29	48	20-Jun	08:52:58	0.088
19	20-Jun	08:23:58	0.132	49	20-Jun	08:53:58	0.099
20	20-Jun	08:24:58	0.073	50	20-Jun	08:54:58	0.131
21	20-Jun	08:25:58	0.05	51	20-Jun	08:55:58	0.248
22	20-Jun	08:26:58	0.038	52	20-Jun	08:56:58	0.118
23	20-Jun	08:27:58	0.043	53	20-Jun	08:57:58	0.186
24	20-Jun	08:28:58	0.055	54	20-Jun	08:58:58	0.103
25	20-Jun	08:29:58	0.032	55	20-Jun	08:59:58	0.049
26	20-Jun	08:30:58	2.465	56	20-Jun	09:00:58	0.1
27	20-Jun	08:31:58	0.982	57	20-Jun	09:01:58	0.07
28	20-Jun	08:32:58	0.231	58	20-Jun	09:02:58	0.066
29	20-Jun	08:33:58	0.056	59	20-Jun	09:03:58	0.179
30	20-Jun	08:34:58	0.047	60	20-Jun	09:04:58	0.088

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
61	20-Jun	09:05:58	0.063	108	20-Jun	09:52:58	0.018
62	20-Jun	09:06:58	0.097	109	20-Jun	09:53:58	0.015
63	20-Jun	09:07:58	0.189	110	20-Jun	09:54:58	0.01
64	20-Jun	09:08:58	0.086	111	20-Jun	09:55:58	0.014
65	20-Jun	09:09:58	0.046	112	20-Jun	09:56:58	0.026
66	20-Jun	09:10:58	0.021	113	20-Jun	09:57:58	0.049
67	20-Jun	09:11:58	0.073	114	20-Jun	09:58:58	0.025
68	20-Jun	09:12:58	0.104	115	20-Jun	09:59:58	0.025
69	20-Jun	09:13:58	0.114	116	20-Jun	10:00:58	0.178
70	20-Jun	09:14:58	0.091	117	20-Jun	10:01:58	0.744
71	20-Jun	09:15:58	0.091	118	20-Jun	10:02:58	0.098
72	20-Jun	09:16:58	0.065	119	20-Jun	10:03:58	0.108
73	20-Jun	09:17:58	0.054	120	20-Jun	10:04:58	0.067
74	20-Jun	09:18:58	0.078	121	20-Jun	10:05:58	0.702
75	20-Jun	09:19:58	0.037	122	20-Jun	10:06:58	0.755
76	20-Jun	09:20:58	0.025	123	20-Jun	10:07:58	0.301
77	20-Jun	09:21:58	0.022	124	20-Jun	10:08:58	0.15
78	20-Jun	09:22:58	0.093	125	20-Jun	10:09:58	0.097
79	20-Jun	09:23:58	0.073	126	20-Jun	10:10:58	0.255
80	20-Jun	09:24:58	0.039	127	20-Jun	10:11:58	0.274
81	20-Jun	09:25:58	0.076	128	20-Jun	10:12:58	0.261
82	20-Jun	09:26:58	0.036	129	20-Jun	10:13:58	0.172
83	20-Jun	09:27:58	0.035	130	20-Jun	10:14:58	0.101
84	20-Jun	09:28:58	0.014	131	20-Jun	10:15:58	0.117
85	20-Jun	09:29:58	0.026	132	20-Jun	10:16:58	0.15
86	20-Jun	09:30:58	0.134	133	20-Jun	10:17:58	0.258
87	20-Jun	09:31:58	0.087	134	20-Jun	10:18:58	0.31
88	20-Jun	09:32:58	0.058	135	20-Jun	10:19:58	0.154
89	20-Jun	09:33:58	0.146	136	20-Jun	10:20:58	0.195
90	20-Jun	09:34:58	0.378	137	20-Jun	10:21:58	0.046
91	20-Jun	09:35:58	0.19	138	20-Jun	10:22:58	0.619
92	20-Jun	09:36:58	0.081	139	20-Jun	10:23:58	0.67
93	20-Jun	09:37:58	0.079	140	20-Jun	10:24:58	0.546
94	20-Jun	09:38:58	0.137	141	20-Jun	10:25:58	0.316
95	20-Jun	09:39:58	0.106	142	20-Jun	10:26:58	0.339
96	20-Jun	09:40:58	0.245	143	20-Jun	10:27:58	0.295
97	20-Jun	09:41:58	0.355	144	20-Jun	10:28:58	0.261
98	20-Jun	09:42:58	0.194	145	20-Jun	10:29:58	0.22
99	20-Jun	09:43:58	0.07	146	20-Jun	10:30:58	0.274
100	20-Jun	09:44:58	1.201	147	20-Jun	10:31:58	0.179
101	20-Jun	09:45:58	0.793	148	20-Jun	10:32:58	0.203
102	20-Jun	09:46:58	1.182	149	20-Jun	10:33:58	0.11
103	20-Jun	09:47:58	0.726	150	20-Jun	10:34:58	0.108
104	20-Jun	09:48:58	0.772	151	20-Jun	10:35:58	0.095
105	20-Jun	09:49:58	0.07	152	20-Jun	10:36:58	0.067
106	20-Jun	09:50:58	0.014	153	20-Jun	10:37:58	0.092
107	20-Jun	09:51:58	0.015	154	20-Jun	10:38:58	0.149

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
155	20-Jun	10:39:58	0.245	202	20-Jun	11:26:58	0.102
156	20-Jun	10:40:58	0.076	203	20-Jun	11:27:58	0.214
157	20-Jun	10:41:58	0.117	204	20-Jun	11:28:58	0.223
158	20-Jun	10:42:58	0.085	205	20-Jun	11:29:58	0.272
159	20-Jun	10:43:58	0.175	206	20-Jun	11:30:58	0.033
160	20-Jun	10:44:58	0.268	207	20-Jun	11:31:58	0.163
161	20-Jun	10:45:58	0.131	208	20-Jun	11:32:58	0.035
162	20-Jun	10:46:58	0.208	209	20-Jun	11:33:58	0.028
163	20-Jun	10:47:58	0.101	210	20-Jun	11:34:58	0.026
164	20-Jun	10:48:58	0.179	211	20-Jun	11:35:58	0.023
165	20-Jun	10:49:58	0.408	212	20-Jun	11:36:58	0.022
166	20-Jun	10:50:58	0.108	213	20-Jun	11:37:58	0.025
167	20-Jun	10:51:58	0.038	214	20-Jun	11:38:58	0.021
168	20-Jun	10:52:58	0.085	215	20-Jun	11:39:58	0.024
169	20-Jun	10:53:58	0.168	216	20-Jun	11:40:58	0.025
170	20-Jun	10:54:58	0.121	217	20-Jun	11:41:58	0.022
171	20-Jun	10:55:58	0.06	218	20-Jun	11:42:58	0.03
172	20-Jun	10:56:58	0.083	219	20-Jun	11:43:58	0.02
173	20-Jun	10:57:58	0.206	220	20-Jun	11:44:58	0.022
174	20-Jun	10:58:58	0.131	221	20-Jun	11:45:58	0.022
175	20-Jun	10:59:58	0.058	222	20-Jun	11:46:58	0.028
176	20-Jun	11:00:58	0.095	223	20-Jun	11:47:58	0.022
177	20-Jun	11:01:58	0.06	224	20-Jun	11:48:58	0.02
178	20-Jun	11:02:58	0.033	225	20-Jun	11:49:58	0.021
179	20-Jun	11:03:58	0.048	226	20-Jun	11:50:58	0.026
180	20-Jun	11:04:58	0.1	227	20-Jun	11:51:58	0.026
181	20-Jun	11:05:58	0.206	228	20-Jun	11:52:58	0.023
182	20-Jun	11:06:58	0.268	229	20-Jun	11:53:58	0.024
183	20-Jun	11:07:58	0.134	230	20-Jun	11:54:58	0.032
184	20-Jun	11:08:58	0.087	231	20-Jun	11:55:58	0.026
185	20-Jun	11:09:58	0.111	232	20-Jun	11:56:58	0.029
186	20-Jun	11:10:58	0.106	233	20-Jun	11:57:58	0.035
187	20-Jun	11:11:58	0.098	234	20-Jun	11:58:58	0.028
188	20-Jun	11:12:58	0.136	235	20-Jun	11:59:58	0.031
189	20-Jun	11:13:58	0.059	236	20-Jun	12:00:58	0.026
190	20-Jun	11:14:58	0.039	237	20-Jun	12:01:58	0.028
191	20-Jun	11:15:58	0.029	238	20-Jun	12:02:58	0.044
192	20-Jun	11:16:58	0.021	239	20-Jun	12:03:58	0.027
193	20-Jun	11:17:58	0.025	240	20-Jun	12:04:58	0.027
194	20-Jun	11:18:58	0.03	241	20-Jun	12:05:58	0.028
195	20-Jun	11:19:58	0.024	242	20-Jun	12:06:58	0.052
196	20-Jun	11:20:58	0.023	243	20-Jun	12:07:58	0.045
197	20-Jun	11:21:58	0.039	244	20-Jun	12:08:58	0.031
198	20-Jun	11:22:58	0.028	245	20-Jun	12:09:58	0.025
199	20-Jun	11:23:58	0.026	246	20-Jun	12:10:58	0.029
200	20-Jun	11:24:58	0.035	247	20-Jun	12:11:58	0.045
201	20-Jun	11:25:58	0.037	248	20-Jun	12:12:58	0.027

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
249	20-Jun	12:13:58	0.034	296	20-Jun	13:00:58	0.028
250	20-Jun	12:14:58	0.027	297	20-Jun	13:01:58	0.019
251	20-Jun	12:15:58	0.027	298	20-Jun	13:02:58	0.02
252	20-Jun	12:16:58	0.023	299	20-Jun	13:03:58	0.025
253	20-Jun	12:17:58	0.028	300	20-Jun	13:04:58	0.021
254	20-Jun	12:18:58	0.036	301	20-Jun	13:05:58	0.028
255	20-Jun	12:19:58	0.023	302	20-Jun	13:06:58	1.133
256	20-Jun	12:20:58	0.03	303	20-Jun	13:07:58	0.029
257	20-Jun	12:21:58	0.03	304	20-Jun	13:08:58	0.023
258	20-Jun	12:22:58	0.044	305	20-Jun	13:09:58	0.02
259	20-Jun	12:23:58	0.028	306	20-Jun	13:10:58	0.024
260	20-Jun	12:24:58	0.027	307	20-Jun	13:11:58	0.03
261	20-Jun	12:25:58	0.024	308	20-Jun	13:12:58	0.026
262	20-Jun	12:26:58	0.043	309	20-Jun	13:13:58	0.029
263	20-Jun	12:27:58	0.023	310	20-Jun	13:14:58	0.113
264	20-Jun	12:28:58	0.023	311	20-Jun	13:15:58	0.487
265	20-Jun	12:29:58	0.022	312	20-Jun	13:16:58	0.177
266	20-Jun	12:30:58	0.025	313	20-Jun	13:17:58	0.299
267	20-Jun	12:31:58	0.028	314	20-Jun	13:18:58	0.148
268	20-Jun	12:32:58	0.022	315	20-Jun	13:19:58	0.122
269	20-Jun	12:33:58	0.032	316	20-Jun	13:20:58	0.118
270	20-Jun	12:34:58	0.022	317	20-Jun	13:21:58	0.515
271	20-Jun	12:35:58	0.023	318	20-Jun	13:22:58	0.4
272	20-Jun	12:36:58	0.022	319	20-Jun	13:23:58	0.375
273	20-Jun	12:37:58	0.02	320	20-Jun	13:24:58	0.05
274	20-Jun	12:38:58	0.02	321	20-Jun	13:25:58	0.078
275	20-Jun	12:39:58	0.029	322	20-Jun	13:26:58	0.264
276	20-Jun	12:40:58	0.023	323	20-Jun	13:27:58	0.518
277	20-Jun	12:41:58	0.021	324	20-Jun	13:28:58	0.371
278	20-Jun	12:42:58	0.02	325	20-Jun	13:29:58	0.107
279	20-Jun	12:43:58	0.025	326	20-Jun	13:30:58	0.349
280	20-Jun	12:44:58	0.018	327	20-Jun	13:31:58	0.201
281	20-Jun	12:45:58	0.022	328	20-Jun	13:32:58	0.576
282	20-Jun	12:46:58	0.022	329	20-Jun	13:33:58	0.467
283	20-Jun	12:47:58	0.02	330	20-Jun	13:34:58	0.639
284	20-Jun	12:48:58	0.02	331	20-Jun	13:35:58	0.281
285	20-Jun	12:49:58	0.021	332	20-Jun	13:36:58	0.068
286	20-Jun	12:50:58	0.019	333	20-Jun	13:37:58	0.072
287	20-Jun	12:51:58	0.037	334	20-Jun	13:38:58	0.12
288	20-Jun	12:52:58	0.021	335	20-Jun	13:39:58	0.339
289	20-Jun	12:53:58	0.02	336	20-Jun	13:40:58	0.165
290	20-Jun	12:54:58	0.022	337	20-Jun	13:41:58	0.207
291	20-Jun	12:55:58	0.02	338	20-Jun	13:42:58	0.488
292	20-Jun	12:56:58	0.028	339	20-Jun	13:43:58	0.235
293	20-Jun	12:57:58	0.022	340	20-Jun	13:44:58	0.297
294	20-Jun	12:58:58	0.023	341	20-Jun	13:45:58	0.194
295	20-Jun	12:59:58	0.02	342	20-Jun	13:46:58	0.154

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
343	20-Jun	13:47:58	0.264	390	20-Jun	14:34:58	0.077
344	20-Jun	13:48:58	0.372	391	20-Jun	14:35:58	0.077
345	20-Jun	13:49:58	0.191	392	20-Jun	14:36:58	0.101
346	20-Jun	13:50:58	0.6	393	20-Jun	14:37:58	0.14
347	20-Jun	13:51:58	0.202	394	20-Jun	14:38:58	0.073
348	20-Jun	13:52:58	0.273	395	20-Jun	14:39:58	2.312
349	20-Jun	13:53:58	0.155	396	20-Jun	14:40:58	0.123
350	20-Jun	13:54:58	0.104	397	20-Jun	14:41:58	0.175
351	20-Jun	13:55:58	0.096	398	20-Jun	14:42:58	1.495
352	20-Jun	13:56:58	0.096	399	20-Jun	14:43:58	3.308
353	20-Jun	13:57:58	0.04	400	20-Jun	14:44:58	1.478
354	20-Jun	13:58:58	0.073	401	20-Jun	14:45:58	0.277
355	20-Jun	13:59:58	0.043	402	20-Jun	14:46:58	0.12
356	20-Jun	14:00:58	0.031	403	20-Jun	14:47:58	0.64
357	20-Jun	14:01:58	0.061	404	20-Jun	14:48:58	0.265
358	20-Jun	14:02:58	0.279	405	20-Jun	14:49:58	0.847
359	20-Jun	14:03:58	0.226	406	20-Jun	14:50:58	0.603
360	20-Jun	14:04:58	0.079	407	20-Jun	14:51:58	0.576
361	20-Jun	14:05:58	0.121	408	20-Jun	14:52:58	1.275
362	20-Jun	14:06:58	0.118	409	20-Jun	14:53:58	0.373
363	20-Jun	14:07:58	0.131	410	20-Jun	14:54:58	0.367
364	20-Jun	14:08:58	0.079	411	20-Jun	14:55:58	0.269
365	20-Jun	14:09:58	0.055	412	20-Jun	14:56:58	0.228
366	20-Jun	14:10:58	0.122	413	20-Jun	14:57:58	0.254
367	20-Jun	14:11:58	0.066	414	20-Jun	14:58:58	0.11
368	20-Jun	14:12:58	0.054	415	20-Jun	14:59:58	0.185
369	20-Jun	14:13:58	0.138	416	20-Jun	15:00:58	0.274
370	20-Jun	14:14:58	0.067	417	20-Jun	15:01:58	1.408
371	20-Jun	14:15:58	0.037	418	20-Jun	15:02:58	0.26
372	20-Jun	14:16:58	0.31	419	20-Jun	15:03:58	0.041
373	20-Jun	14:17:58	0.274	420	20-Jun	15:04:58	0.191
374	20-Jun	14:18:58	0.038	421	20-Jun	15:05:58	0.447
375	20-Jun	14:19:58	0.08	422	20-Jun	15:06:58	0.145
376	20-Jun	14:20:58	0.046	423	20-Jun	15:07:58	0.071
377	20-Jun	14:21:58	0.068	424	20-Jun	15:08:58	0.272
378	20-Jun	14:22:58	0.032	425	20-Jun	15:09:58	0.152
379	20-Jun	14:23:58	0.047	426	20-Jun	15:10:58	0.051
380	20-Jun	14:24:58	0.174	427	20-Jun	15:11:58	0.056
381	20-Jun	14:25:58	0.106	428	20-Jun	15:12:58	0.082
382	20-Jun	14:26:58	0.038	429	20-Jun	15:13:58	0.031
383	20-Jun	14:27:58	0.399	430	20-Jun	15:14:58	0.075
384	20-Jun	14:28:58	0.429	431	20-Jun	15:15:58	0.102
385	20-Jun	14:29:58	0.075	432	20-Jun	15:16:58	0.042
386	20-Jun	14:30:58	0.096	433	20-Jun	15:17:58	0.043
387	20-Jun	14:31:58	0.026	434	20-Jun	15:18:58	0.037
388	20-Jun	14:32:58	0.025	435	20-Jun	15:19:58	0.03
389	20-Jun	14:33:58	0.035	436	20-Jun	15:20:58	0.042

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
437	20-Jun	15:21:58	0.326	484	20-Jun	16:08:58	0.259
438	20-Jun	15:22:58	0.332	485	20-Jun	16:09:58	0.159
439	20-Jun	15:23:58	0.419	486	20-Jun	16:10:58	0.362
440	20-Jun	15:24:58	0.137	487	20-Jun	16:11:58	0.11
441	20-Jun	15:25:58	0.357	488	20-Jun	16:12:58	0.307
442	20-Jun	15:26:58	0.241	489	20-Jun	16:13:58	0.467
443	20-Jun	15:27:58	0.488	490	20-Jun	16:14:58	0.182
444	20-Jun	15:28:58	0.217	491	20-Jun	16:15:58	0.443
445	20-Jun	15:29:58	0.374	492	20-Jun	16:16:58	0.1
446	20-Jun	15:30:58	0.244	493	20-Jun	16:17:58	1.786
447	20-Jun	15:31:58	0.148	494	20-Jun	16:18:58	0.553
448	20-Jun	15:32:58	0.172	495	20-Jun	16:19:58	0.414
449	20-Jun	15:33:58	0.466	496	20-Jun	16:20:58	0.257
450	20-Jun	15:34:58	0.252	497	20-Jun	16:21:58	0.238
451	20-Jun	15:35:58	0.476	498	20-Jun	16:22:58	1.099
452	20-Jun	15:36:58	0.64	499	20-Jun	16:23:58	0.316
453	20-Jun	15:37:58	0.65	500	20-Jun	16:24:58	0.325
454	20-Jun	15:38:58	1.144	501	20-Jun	16:25:58	0.304
455	20-Jun	15:39:58	0.244	502	20-Jun	16:26:58	0.532
456	20-Jun	15:40:58	0.425	503	20-Jun	16:27:58	0.331
457	20-Jun	15:41:58	0.245	504	20-Jun	16:28:58	0.261
458	20-Jun	15:42:58	0.186	505	20-Jun	16:29:58	0.104
459	20-Jun	15:43:58	0.245	506	20-Jun	16:30:58	0.049
460	20-Jun	15:44:58	0.23	507	20-Jun	16:31:58	0.087
461	20-Jun	15:45:58	0.283	508	20-Jun	16:32:58	0.118
462	20-Jun	15:46:58	0.257	509	20-Jun	16:33:58	0.37
463	20-Jun	15:47:58	0.15	510	20-Jun	16:34:58	0.165
464	20-Jun	15:48:58	0.145	511	20-Jun	16:35:58	0.072
465	20-Jun	15:49:58	1.168	512	20-Jun	16:36:58	0.073
466	20-Jun	15:50:58	0.907	513	20-Jun	16:37:58	0.04
467	20-Jun	15:51:58	0.246	514	20-Jun	16:38:58	0.071
468	20-Jun	15:52:58	0.298	515	20-Jun	16:39:58	0.165
469	20-Jun	15:53:58	0.202	516	20-Jun	16:40:58	0.383
470	20-Jun	15:54:58	0.391	517	20-Jun	16:41:58	0.136
471	20-Jun	15:55:58	0.367	518	20-Jun	16:42:58	1.148
472	20-Jun	15:56:58	0.132	519	20-Jun	16:43:58	0.089
473	20-Jun	15:57:58	0.086	520	20-Jun	16:44:58	0.04
474	20-Jun	15:58:58	0.279	521	20-Jun	16:45:58	0.052
475	20-Jun	15:59:58	0.101	522	20-Jun	16:46:58	0.998
476	20-Jun	16:00:58	0.135	523	20-Jun	16:47:58	0.095
477	20-Jun	16:01:58	0.08	524	20-Jun	16:48:58	0.195
478	20-Jun	16:02:58	0.093	525	20-Jun	16:49:58	0.198
479	20-Jun	16:03:58	0.07	526	20-Jun	16:50:58	0.192
480	20-Jun	16:04:58	0.245	527	20-Jun	16:51:58	0.208
481	20-Jun	16:05:58	0.365	528	20-Jun	16:52:58	0.785
482	20-Jun	16:06:58	0.163	529	20-Jun	16:53:58	2.154
483	20-Jun	16:07:58	0.064	530	20-Jun	16:54:58	0.748

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
531	20-Jun	16:55:58	0.418				
532	20-Jun	16:56:58	1.549				
533	20-Jun	16:57:58	2.099				
534	20-Jun	16:58:58	0.495				
535	20-Jun	16:59:58	0.228				
536	20-Jun	17:00:58	0.17				
537	20-Jun	17:01:58	0.09				
538	20-Jun	17:02:58	0.07				
539	20-Jun	17:03:58	0.558				
540	20-Jun	17:04:58	0.591				
541	20-Jun	17:05:58	0.36				
542	20-Jun	17:06:58	0.489				
543	20-Jun	17:07:58	0.207				
544	20-Jun	17:08:58	0.093				
545	20-Jun	17:09:58	0.109				
546	20-Jun	17:10:58	0.121				
547	20-Jun	17:11:58	0.086				
548	20-Jun	17:12:58	0.04				
549	20-Jun	17:13:58	0.064				
550	20-Jun	17:14:58	0.057				
551	20-Jun	17:15:58	0.26				
552	20-Jun	17:16:58	0.591				
553	20-Jun	17:17:58	0.103				
554	20-Jun	17:18:58	0.124				
555	20-Jun	17:19:58	0.926				
556	20-Jun	17:20:58	0.403				
557	20-Jun	17:21:58	0.15				
558	20-Jun	17:22:58	0.045				
559	20-Jun	17:23:58	0.061				
560	20-Jun	17:24:58	0.015				
561	20-Jun	17:25:58	0.027				

August 1, 2002

pDR-1000 S/N: 04881
User ID: DuPont Site #1
Tag Number: 01
Number of logged points: 307
Start time and date: 12:54:38 01-Aug
Elapsed time: 05:07:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 0.222 mg/m³
Time at maximum: 12:57:11 Aug 01
Max STEL Concentration: 0.067 mg/m³
Time at max STEL: 13:11:38 Aug 01
Overall Avg Conc: 0.044 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	1-Aug	12:55:38	0.052	29	1-Aug	13:23:38	0.047
2	1-Aug	12:56:38	0.053	30	1-Aug	13:24:38	0.045
3	1-Aug	12:57:38	0.079	31	1-Aug	13:25:38	0.044
4	1-Aug	12:58:38	0.049	32	1-Aug	13:26:38	0.044
5	1-Aug	12:59:38	0.046	33	1-Aug	13:27:38	0.043
6	1-Aug	13:00:38	0.046	34	1-Aug	13:28:38	0.043
7	1-Aug	13:01:38	0.046	35	1-Aug	13:29:38	0.042
8	1-Aug	13:02:38	0.044	36	1-Aug	13:30:38	0.041
9	1-Aug	13:03:38	0.051	37	1-Aug	13:31:38	0.044
10	1-Aug	13:04:38	0.045	38	1-Aug	13:32:38	0.044
11	1-Aug	13:05:38	0.086	39	1-Aug	13:33:38	0.043
12	1-Aug	13:06:38	0.105	40	1-Aug	13:34:38	0.044
13	1-Aug	13:07:38	0.104	41	1-Aug	13:35:38	0.043
14	1-Aug	13:08:38	0.099	42	1-Aug	13:36:38	0.045
15	1-Aug	13:09:38	0.077	43	1-Aug	13:37:38	0.045
16	1-Aug	13:10:38	0.065	44	1-Aug	13:38:38	0.043
17	1-Aug	13:11:38	0.061	45	1-Aug	13:39:38	0.046
18	1-Aug	13:12:38	0.053	46	1-Aug	13:40:38	0.048
19	1-Aug	13:13:38	0.053	47	1-Aug	13:41:38	0.055
20	1-Aug	13:14:38	0.05	48	1-Aug	13:42:38	0.048
21	1-Aug	13:15:38	0.047	49	1-Aug	13:43:38	0.05
22	1-Aug	13:16:38	0.051	50	1-Aug	13:44:38	0.052
23	1-Aug	13:17:38	0.049	51	1-Aug	13:45:38	0.044
24	1-Aug	13:18:38	0.046	52	1-Aug	13:46:38	0.046
25	1-Aug	13:19:38	0.047	53	1-Aug	13:47:38	0.044
26	1-Aug	13:20:38	0.047	54	1-Aug	13:48:38	0.046
27	1-Aug	13:21:38	0.046	55	1-Aug	13:49:38	0.044
28	1-Aug	13:22:38	0.049	56	1-Aug	13:50:38	0.044

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
57	1-Aug	13:51:38	0.043	104	1-Aug	14:38:38	0.043
58	1-Aug	13:52:38	0.043	105	1-Aug	14:39:38	0.042
59	1-Aug	13:53:38	0.046	106	1-Aug	14:40:38	0.043
60	1-Aug	13:54:38	0.042	107	1-Aug	14:41:38	0.043
61	1-Aug	13:55:38	0.044	108	1-Aug	14:42:38	0.042
62	1-Aug	13:56:38	0.049	109	1-Aug	14:43:38	0.043
63	1-Aug	13:57:38	0.043	110	1-Aug	14:44:38	0.042
64	1-Aug	13:58:38	0.042	111	1-Aug	14:45:38	0.043
65	1-Aug	13:59:38	0.043	112	1-Aug	14:46:38	0.042
66	1-Aug	14:00:38	0.045	113	1-Aug	14:47:38	0.042
67	1-Aug	14:01:38	0.044	114	1-Aug	14:48:38	0.041
68	1-Aug	14:02:38	0.042	115	1-Aug	14:49:38	0.043
69	1-Aug	14:03:38	0.044	116	1-Aug	14:50:38	0.042
70	1-Aug	14:04:38	0.044	117	1-Aug	14:51:38	0.042
71	1-Aug	14:05:38	0.047	118	1-Aug	14:52:38	0.042
72	1-Aug	14:06:38	0.045	119	1-Aug	14:53:38	0.041
73	1-Aug	14:07:38	0.045	120	1-Aug	14:54:38	0.042
74	1-Aug	14:08:38	0.049	121	1-Aug	14:55:38	0.041
75	1-Aug	14:09:38	0.045	122	1-Aug	14:56:38	0.041
76	1-Aug	14:10:38	0.043	123	1-Aug	14:57:38	0.043
77	1-Aug	14:11:38	0.044	124	1-Aug	14:58:38	0.042
78	1-Aug	14:12:38	0.045	125	1-Aug	14:59:38	0.041
79	1-Aug	14:13:38	0.043	126	1-Aug	15:00:38	0.043
80	1-Aug	14:14:38	0.043	127	1-Aug	15:01:38	0.044
81	1-Aug	14:15:38	0.044	128	1-Aug	15:02:38	0.044
82	1-Aug	14:16:38	0.044	129	1-Aug	15:03:38	0.04
83	1-Aug	14:17:38	0.043	130	1-Aug	15:04:38	0.042
84	1-Aug	14:18:38	0.044	131	1-Aug	15:05:38	0.042
85	1-Aug	14:19:38	0.043	132	1-Aug	15:06:38	0.041
86	1-Aug	14:20:38	0.042	133	1-Aug	15:07:38	0.041
87	1-Aug	14:21:38	0.042	134	1-Aug	15:08:38	0.042
88	1-Aug	14:22:38	0.042	135	1-Aug	15:09:38	0.043
89	1-Aug	14:23:38	0.042	136	1-Aug	15:10:38	0.043
90	1-Aug	14:24:38	0.043	137	1-Aug	15:11:38	0.045
91	1-Aug	14:25:38	0.042	138	1-Aug	15:12:38	0.044
92	1-Aug	14:26:38	0.043	139	1-Aug	15:13:38	0.042
93	1-Aug	14:27:38	0.042	140	1-Aug	15:14:38	0.043
94	1-Aug	14:28:38	0.042	141	1-Aug	15:15:38	0.043
95	1-Aug	14:29:38	0.042	142	1-Aug	15:16:38	0.042
96	1-Aug	14:30:38	0.042	143	1-Aug	15:17:38	0.041
97	1-Aug	14:31:38	0.043	144	1-Aug	15:18:38	0.041
98	1-Aug	14:32:38	0.042	145	1-Aug	15:19:38	0.043
99	1-Aug	14:33:38	0.042	146	1-Aug	15:20:38	0.042
100	1-Aug	14:34:38	0.044	147	1-Aug	15:21:38	0.041
101	1-Aug	14:35:38	0.042	148	1-Aug	15:22:38	0.044
102	1-Aug	14:36:38	0.042	149	1-Aug	15:23:38	0.042
103	1-Aug	14:37:38	0.041	150	1-Aug	15:24:38	0.042

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
151	1-Aug	15:25:38	0.041	198	1-Aug	16:12:38	0.041
152	1-Aug	15:26:38	0.043	199	1-Aug	16:13:38	0.042
153	1-Aug	15:27:38	0.042	200	1-Aug	16:14:38	0.042
154	1-Aug	15:28:38	0.043	201	1-Aug	16:15:38	0.041
155	1-Aug	15:29:38	0.042	202	1-Aug	16:16:38	0.042
156	1-Aug	15:30:38	0.042	203	1-Aug	16:17:38	0.042
157	1-Aug	15:31:38	0.042	204	1-Aug	16:18:38	0.042
158	1-Aug	15:32:38	0.043	205	1-Aug	16:19:38	0.041
159	1-Aug	15:33:38	0.042	206	1-Aug	16:20:38	0.043
160	1-Aug	15:34:38	0.041	207	1-Aug	16:21:38	0.042
161	1-Aug	15:35:38	0.042	208	1-Aug	16:22:38	0.042
162	1-Aug	15:36:38	0.043	209	1-Aug	16:23:38	0.043
163	1-Aug	15:37:38	0.042	210	1-Aug	16:24:38	0.042
164	1-Aug	15:38:38	0.042	211	1-Aug	16:25:38	0.042
165	1-Aug	15:39:38	0.041	212	1-Aug	16:26:38	0.042
166	1-Aug	15:40:38	0.042	213	1-Aug	16:27:38	0.041
167	1-Aug	15:41:38	0.043	214	1-Aug	16:28:38	0.042
168	1-Aug	15:42:38	0.041	215	1-Aug	16:29:38	0.041
169	1-Aug	15:43:38	0.04	216	1-Aug	16:30:38	0.043
170	1-Aug	15:44:38	0.041	217	1-Aug	16:31:38	0.043
171	1-Aug	15:45:38	0.044	218	1-Aug	16:32:38	0.041
172	1-Aug	15:46:38	0.042	219	1-Aug	16:33:38	0.042
173	1-Aug	15:47:38	0.042	220	1-Aug	16:34:38	0.041
174	1-Aug	15:48:38	0.043	221	1-Aug	16:35:38	0.042
175	1-Aug	15:49:38	0.043	222	1-Aug	16:36:38	0.041
176	1-Aug	15:50:38	0.043	223	1-Aug	16:37:38	0.041
177	1-Aug	15:51:38	0.042	224	1-Aug	16:38:38	0.041
178	1-Aug	15:52:38	0.041	225	1-Aug	16:39:38	0.042
179	1-Aug	15:53:38	0.042	226	1-Aug	16:40:38	0.042
180	1-Aug	15:54:38	0.042	227	1-Aug	16:41:38	0.042
181	1-Aug	15:55:38	0.042	228	1-Aug	16:42:38	0.044
182	1-Aug	15:56:38	0.043	229	1-Aug	16:43:38	0.04
183	1-Aug	15:57:38	0.043	230	1-Aug	16:44:38	0.041
184	1-Aug	15:58:38	0.041	231	1-Aug	16:45:38	0.041
185	1-Aug	15:59:38	0.043	232	1-Aug	16:46:38	0.039
186	1-Aug	16:00:38	0.042	233	1-Aug	16:47:38	0.04
187	1-Aug	16:01:38	0.043	234	1-Aug	16:48:38	0.042
188	1-Aug	16:02:38	0.044	235	1-Aug	16:49:38	0.042
189	1-Aug	16:03:38	0.041	236	1-Aug	16:50:38	0.04
190	1-Aug	16:04:38	0.041	237	1-Aug	16:51:38	0.041
191	1-Aug	16:05:38	0.042	238	1-Aug	16:52:38	0.045
192	1-Aug	16:06:38	0.041	239	1-Aug	16:53:38	0.042
193	1-Aug	16:07:38	0.04	240	1-Aug	16:54:38	0.043
194	1-Aug	16:08:38	0.043	241	1-Aug	16:55:38	0.044
195	1-Aug	16:09:38	0.043	242	1-Aug	16:56:38	0.042
196	1-Aug	16:10:38	0.043	243	1-Aug	16:57:38	0.041
197	1-Aug	16:11:38	0.042	244	1-Aug	16:58:38	0.041

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
245	1-Aug	16:59:38	0.041	292	1-Aug	17:46:38	0.043
246	1-Aug	17:00:38	0.042	293	1-Aug	17:47:38	0.041
247	1-Aug	17:01:38	0.042	294	1-Aug	17:48:38	0.039
248	1-Aug	17:02:38	0.042	295	1-Aug	17:49:38	0.039
249	1-Aug	17:03:38	0.041	296	1-Aug	17:50:38	0.04
250	1-Aug	17:04:38	0.041	297	1-Aug	17:51:38	0.04
251	1-Aug	17:05:38	0.041	298	1-Aug	17:52:38	0.04
252	1-Aug	17:06:38	0.041	299	1-Aug	17:53:38	0.039
253	1-Aug	17:07:38	0.042	300	1-Aug	17:54:38	0.04
254	1-Aug	17:08:38	0.04	301	1-Aug	17:55:38	0.041
255	1-Aug	17:09:38	0.044	302	1-Aug	17:56:38	0.039
256	1-Aug	17:10:38	0.041	303	1-Aug	17:57:38	0.038
257	1-Aug	17:11:38	0.042	304	1-Aug	17:58:38	0.04
258	1-Aug	17:12:38	0.041	305	1-Aug	17:59:38	0.039
259	1-Aug	17:13:38	0.041	306	1-Aug	18:00:38	0.038
260	1-Aug	17:14:38	0.041	307	1-Aug	18:01:38	0.038
261	1-Aug	17:15:38	0.044				
262	1-Aug	17:16:38	0.041				
263	1-Aug	17:17:38	0.041				
264	1-Aug	17:18:38	0.041				
265	1-Aug	17:19:38	0.04				
266	1-Aug	17:20:38	0.04				
267	1-Aug	17:21:38	0.041				
268	1-Aug	17:22:38	0.04				
269	1-Aug	17:23:38	0.042				
270	1-Aug	17:24:38	0.041				
271	1-Aug	17:25:38	0.041				
272	1-Aug	17:26:38	0.043				
273	1-Aug	17:27:38	0.043				
274	1-Aug	17:28:38	0.042				
275	1-Aug	17:29:38	0.04				
276	1-Aug	17:30:38	0.041				
277	1-Aug	17:31:38	0.041				
278	1-Aug	17:32:38	0.042				
279	1-Aug	17:33:38	0.041				
280	1-Aug	17:34:38	0.041				
281	1-Aug	17:35:38	0.04				
282	1-Aug	17:36:38	0.04				
283	1-Aug	17:37:38	0.04				
284	1-Aug	17:38:38	0.039				
285	1-Aug	17:39:38	0.04				
286	1-Aug	17:40:38	0.041				
287	1-Aug	17:41:38	0.041				
288	1-Aug	17:42:38	0.041				
289	1-Aug	17:43:38	0.04				
290	1-Aug	17:44:38	0.039				
291	1-Aug	17:45:38	0.039				

pDR-1000 S/N: 04848
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 433
Start time and date: 07:50:32 05-Aug
Elapsed time: 07:13:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 4.660 mg/m³
Time at maximum: 11:42:55 Aug 05
Max STEL Concentration: 0.363 mg/m³
Time at max STEL: 13:25:33 Aug 05
Overall Avg Conc: 0.053 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	5-Aug	07:51:32	0	28	5-Aug	08:18:32	0
2	5-Aug	07:52:32	0	29	5-Aug	08:19:32	0
3	5-Aug	07:53:32	0	30	5-Aug	08:20:32	0
4	5-Aug	07:54:32	0	31	5-Aug	08:21:32	0
5	5-Aug	07:55:32	0.026	32	5-Aug	08:22:32	0.229
6	5-Aug	07:56:32	0	33	5-Aug	08:23:32	0.096
7	5-Aug	07:57:32	0.006	34	5-Aug	08:24:32	0.227
8	5-Aug	07:58:32	0	35	5-Aug	08:25:32	0.039
9	5-Aug	07:59:32	0.002	36	5-Aug	08:26:32	0.027
10	5-Aug	08:00:32	0.004	37	5-Aug	08:27:32	0.271
11	5-Aug	08:01:32	0.001	38	5-Aug	08:28:32	0.236
12	5-Aug	08:02:32	0.009	39	5-Aug	08:29:32	0.145
13	5-Aug	08:03:32	0	40	5-Aug	08:30:32	0.004
14	5-Aug	08:04:32	0.01	41	5-Aug	08:31:32	0.01
15	5-Aug	08:05:32	0	42	5-Aug	08:32:32	0.011
16	5-Aug	08:06:32	0	43	5-Aug	08:33:32	0.046
17	5-Aug	08:07:32	0	44	5-Aug	08:34:32	0.001
18	5-Aug	08:08:32	0.001	45	5-Aug	08:35:32	0.029
19	5-Aug	08:09:32	0	46	5-Aug	08:36:32	0.034
20	5-Aug	08:10:32	0	47	5-Aug	08:37:32	0.196
21	5-Aug	08:11:32	0	48	5-Aug	08:38:32	0.025
22	5-Aug	08:12:32	0.22	49	5-Aug	08:39:32	0.005
23	5-Aug	08:13:32	0	50	5-Aug	08:40:32	0.031
24	5-Aug	08:14:32	0	51	5-Aug	08:41:32	0.012
25	5-Aug	08:15:32	0	52	5-Aug	08:42:32	0
26	5-Aug	08:16:32	0	53	5-Aug	08:43:32	0.008
27	5-Aug	08:17:32	0	54	5-Aug	08:44:32	0
Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

55	5-Aug	08:45:32	0.032	102	5-Aug	09:32:32	0.023
56	5-Aug	08:46:32	0.049	103	5-Aug	09:33:32	0.015
57	5-Aug	08:47:32	0.011	104	5-Aug	09:34:32	0.053
58	5-Aug	08:48:32	0.122	105	5-Aug	09:35:32	0.053
59	5-Aug	08:49:32	0.164	106	5-Aug	09:36:32	0.059
60	5-Aug	08:50:32	0.018	107	5-Aug	09:37:32	0.059
61	5-Aug	08:51:32	0.036	108	5-Aug	09:38:32	0.012
62	5-Aug	08:52:32	0.045	109	5-Aug	09:39:32	0.01
63	5-Aug	08:53:32	0.024	110	5-Aug	09:40:32	0.025
64	5-Aug	08:54:32	0.012	111	5-Aug	09:41:32	0.002
65	5-Aug	08:55:32	0.017	112	5-Aug	09:42:32	0.001
66	5-Aug	08:56:32	0.065	113	5-Aug	09:43:32	0.046
67	5-Aug	08:57:32	0.008	114	5-Aug	09:44:32	0.02
68	5-Aug	08:58:32	0.046	115	5-Aug	09:45:32	0.001
69	5-Aug	08:59:32	0.042	116	5-Aug	09:46:32	0.037
70	5-Aug	09:00:32	0.189	117	5-Aug	09:47:32	0.004
71	5-Aug	09:01:32	0.063	118	5-Aug	09:48:32	0.307
72	5-Aug	09:02:32	0.012	119	5-Aug	09:49:32	0.095
73	5-Aug	09:03:32	0.055	120	5-Aug	09:50:32	0.127
74	5-Aug	09:04:32	0.095	121	5-Aug	09:51:32	0.004
75	5-Aug	09:05:32	0.098	122	5-Aug	09:52:32	0.011
76	5-Aug	09:06:32	0.09	123	5-Aug	09:53:32	0.06
77	5-Aug	09:07:32	0.009	124	5-Aug	09:54:32	0.024
78	5-Aug	09:08:32	0.376	125	5-Aug	09:55:32	0.004
79	5-Aug	09:09:32	0.039	126	5-Aug	09:56:32	0.004
80	5-Aug	09:10:32	0.008	127	5-Aug	09:57:32	0.004
81	5-Aug	09:11:32	0.005	128	5-Aug	09:58:32	0.054
82	5-Aug	09:12:32	0	129	5-Aug	09:59:32	0.147
83	5-Aug	09:13:32	0.099	130	5-Aug	10:00:32	0.06
84	5-Aug	09:14:32	0.107	131	5-Aug	10:01:32	0.208
85	5-Aug	09:15:32	0.064	132	5-Aug	10:02:32	0.189
86	5-Aug	09:16:32	0.006	133	5-Aug	10:03:32	0.014
87	5-Aug	09:17:32	0.064	134	5-Aug	10:04:32	0.056
88	5-Aug	09:18:32	0	135	5-Aug	10:05:32	0.024
89	5-Aug	09:19:32	0.007	136	5-Aug	10:06:32	0
90	5-Aug	09:20:32	0	137	5-Aug	10:07:32	0.005
91	5-Aug	09:21:32	0.168	138	5-Aug	10:08:32	0
92	5-Aug	09:22:32	0.086	139	5-Aug	10:09:32	0.053
93	5-Aug	09:23:32	0.108	140	5-Aug	10:10:32	0.159
94	5-Aug	09:24:32	0.101	141	5-Aug	10:11:32	0.064
95	5-Aug	09:25:32	0.003	142	5-Aug	10:12:32	0.002
96	5-Aug	09:26:32	0.044	143	5-Aug	10:13:32	0.01
97	5-Aug	09:27:32	0.005	144	5-Aug	10:14:32	0.059
98	5-Aug	09:28:32	0.004	145	5-Aug	10:15:32	0.003
99	5-Aug	09:29:32	0.052	146	5-Aug	10:16:32	0.004
100	5-Aug	09:30:32	0.249	147	5-Aug	10:17:32	0.121
101	5-Aug	09:31:32	0.084	148	5-Aug	10:18:32	0.022

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

149	5-Aug	10:19:32	0.065	196	5-Aug	11:06:32	0
150	5-Aug	10:20:32	0.056	197	5-Aug	11:07:32	0
151	5-Aug	10:21:32	0.068	198	5-Aug	11:08:32	0
152	5-Aug	10:22:32	0.204	199	5-Aug	11:09:32	0
153	5-Aug	10:23:32	0.3	200	5-Aug	11:10:32	0
154	5-Aug	10:24:32	0.171	201	5-Aug	11:11:32	0
155	5-Aug	10:25:32	0.023	202	5-Aug	11:12:32	0
156	5-Aug	10:26:32	0.267	203	5-Aug	11:13:32	0.003
157	5-Aug	10:27:32	0.32	204	5-Aug	11:14:32	0
158	5-Aug	10:28:32	0.915	205	5-Aug	11:15:32	0
159	5-Aug	10:29:32	0.072	206	5-Aug	11:16:32	0.22
160	5-Aug	10:30:32	0.183	207	5-Aug	11:17:32	0.641
161	5-Aug	10:31:32	0.891	208	5-Aug	11:18:32	0.093
162	5-Aug	10:32:32	0.157	209	5-Aug	11:19:32	0.573
163	5-Aug	10:33:32	0.525	210	5-Aug	11:20:32	0.263
164	5-Aug	10:34:32	0.068	211	5-Aug	11:21:32	0.001
165	5-Aug	10:35:32	0.211	212	5-Aug	11:22:32	0.007
166	5-Aug	10:36:32	0.388	213	5-Aug	11:23:32	0.009
167	5-Aug	10:37:32	0.166	214	5-Aug	11:24:32	0.007
168	5-Aug	10:38:32	0.056	215	5-Aug	11:25:32	0.066
169	5-Aug	10:39:32	0.116	216	5-Aug	11:26:32	0.299
170	5-Aug	10:40:32	0.011	217	5-Aug	11:27:32	0.004
171	5-Aug	10:41:32	0.195	218	5-Aug	11:28:32	0.152
172	5-Aug	10:42:32	0.092	219	5-Aug	11:29:32	0.164
173	5-Aug	10:43:32	0.163	220	5-Aug	11:30:32	0.009
174	5-Aug	10:44:32	0.12	221	5-Aug	11:31:32	0.088
175	5-Aug	10:45:32	0.837	222	5-Aug	11:32:32	0.06
176	5-Aug	10:46:32	0.188	223	5-Aug	11:33:32	0.02
177	5-Aug	10:47:32	0.044	224	5-Aug	11:34:32	0.01
178	5-Aug	10:48:32	0.068	225	5-Aug	11:35:32	0.049
179	5-Aug	10:49:32	0.126	226	5-Aug	11:36:32	0.056
180	5-Aug	10:50:32	0.02	227	5-Aug	11:37:32	0.016
181	5-Aug	10:51:32	0.128	228	5-Aug	11:38:32	0.035
182	5-Aug	10:52:32	0.049	229	5-Aug	11:39:32	0.006
183	5-Aug	10:53:32	0.034	230	5-Aug	11:40:32	0.016
184	5-Aug	10:54:32	0	231	5-Aug	11:41:32	0.135
185	5-Aug	10:55:32	0	232	5-Aug	11:42:32	1.1
186	5-Aug	10:56:32	0.003	233	5-Aug	11:43:32	1.808
187	5-Aug	10:57:32	0	234	5-Aug	11:44:32	0.721
188	5-Aug	10:58:32	0	235	5-Aug	11:45:32	0.107
189	5-Aug	10:59:32	0	236	5-Aug	11:46:32	0.888
190	5-Aug	11:00:32	0	237	5-Aug	11:47:32	0.12
191	5-Aug	11:01:32	0	238	5-Aug	11:48:32	0.375
192	5-Aug	11:02:32	0	239	5-Aug	11:49:32	0.113
193	5-Aug	11:03:32	0	240	5-Aug	11:50:32	0.001
194	5-Aug	11:04:32	0	241	5-Aug	11:51:32	0
195	5-Aug	11:05:32	0	242	5-Aug	11:52:32	0.002

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

243	5-Aug	11:53:32	0.016	290	5-Aug	12:40:32	0
244	5-Aug	11:54:32	0	291	5-Aug	12:41:32	0.002
245	5-Aug	11:55:32	0	292	5-Aug	12:42:32	0
246	5-Aug	11:56:32	0	293	5-Aug	12:43:32	0
247	5-Aug	11:57:32	0	294	5-Aug	12:44:32	0
248	5-Aug	11:58:32	0	295	5-Aug	12:45:32	0
249	5-Aug	11:59:32	0	296	5-Aug	12:46:32	0
250	5-Aug	12:00:32	0.004	297	5-Aug	12:47:32	0
251	5-Aug	12:01:32	0	298	5-Aug	12:48:32	0
252	5-Aug	12:02:32	0	299	5-Aug	12:49:32	0
253	5-Aug	12:03:32	0.034	300	5-Aug	12:50:32	0
254	5-Aug	12:04:32	0	301	5-Aug	12:51:32	0.001
255	5-Aug	12:05:32	0.001	302	5-Aug	12:52:32	0
256	5-Aug	12:06:32	0	303	5-Aug	12:53:32	0
257	5-Aug	12:07:32	0	304	5-Aug	12:54:32	0
258	5-Aug	12:08:32	0.001	305	5-Aug	12:55:32	0
259	5-Aug	12:09:32	0	306	5-Aug	12:56:32	0
260	5-Aug	12:10:32	0	307	5-Aug	12:57:32	0
261	5-Aug	12:11:32	0	308	5-Aug	12:58:32	0.019
262	5-Aug	12:12:32	0	309	5-Aug	12:59:32	0
263	5-Aug	12:13:32	0	310	5-Aug	13:00:32	0.002
264	5-Aug	12:14:32	0.001	311	5-Aug	13:01:32	0
265	5-Aug	12:15:32	0	312	5-Aug	13:02:32	0.026
266	5-Aug	12:16:32	0	313	5-Aug	13:03:32	0.009
267	5-Aug	12:17:32	0	314	5-Aug	13:04:32	0.017
268	5-Aug	12:18:32	0	315	5-Aug	13:05:32	0.731
269	5-Aug	12:19:32	0	316	5-Aug	13:06:32	0.02
270	5-Aug	12:20:32	0	317	5-Aug	13:07:32	0.028
271	5-Aug	12:21:32	0	318	5-Aug	13:08:32	0.008
272	5-Aug	12:22:32	0	319	5-Aug	13:09:32	0.029
273	5-Aug	12:23:32	0	320	5-Aug	13:10:32	0.138
274	5-Aug	12:24:32	0	321	5-Aug	13:11:32	0.14
275	5-Aug	12:25:32	0	322	5-Aug	13:12:32	1.392
276	5-Aug	12:26:32	0	323	5-Aug	13:13:32	0.58
277	5-Aug	12:27:32	0	324	5-Aug	13:14:32	1.037
278	5-Aug	12:28:32	0	325	5-Aug	13:15:32	0.734
279	5-Aug	12:29:32	0	326	5-Aug	13:16:32	0.174
280	5-Aug	12:30:32	0	327	5-Aug	13:17:32	0.02
281	5-Aug	12:31:32	0	328	5-Aug	13:18:32	0.027
282	5-Aug	12:32:32	0	329	5-Aug	13:19:32	0.12
283	5-Aug	12:33:32	0.003	330	5-Aug	13:20:32	0.353
284	5-Aug	12:34:32	0	331	5-Aug	13:21:32	0.423
285	5-Aug	12:35:32	0	332	5-Aug	13:22:32	0.292
286	5-Aug	12:36:32	0	333	5-Aug	13:23:32	0.111
287	5-Aug	12:37:32	0	334	5-Aug	13:24:32	0.116
288	5-Aug	12:38:32	0	335	5-Aug	13:25:32	0.181
289	5-Aug	12:39:32	0	336	5-Aug	13:26:32	0.08

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

337	5-Aug	13:27:32	0.045	384	5-Aug	14:14:32	0.403
338	5-Aug	13:28:32	0.029	385	5-Aug	14:15:32	0.004
339	5-Aug	13:29:32	0.216	386	5-Aug	14:16:32	0.028
340	5-Aug	13:30:32	0.141	387	5-Aug	14:17:32	0.005
341	5-Aug	13:31:32	0.276	388	5-Aug	14:18:32	0.013
342	5-Aug	13:32:32	0.09	389	5-Aug	14:19:32	0.058
343	5-Aug	13:33:32	0.029	390	5-Aug	14:20:32	0.253
344	5-Aug	13:34:32	0.394	391	5-Aug	14:21:32	0.104
345	5-Aug	13:35:32	0.023	392	5-Aug	14:22:32	0.032
346	5-Aug	13:36:32	0.016	393	5-Aug	14:23:32	0.003
347	5-Aug	13:37:32	0.006	394	5-Aug	14:24:32	0
348	5-Aug	13:38:32	0.45	395	5-Aug	14:25:32	0
349	5-Aug	13:39:32	0.249	396	5-Aug	14:26:32	0.469
350	5-Aug	13:40:32	0.096	397	5-Aug	14:27:32	0.451
351	5-Aug	13:41:32	0.018	398	5-Aug	14:28:32	0.376
352	5-Aug	13:42:32	0.022	399	5-Aug	14:29:32	0.137
353	5-Aug	13:43:32	0.09	400	5-Aug	14:30:32	0.055
354	5-Aug	13:44:32	0.06	401	5-Aug	14:31:32	0.623
355	5-Aug	13:45:32	0.334	402	5-Aug	14:32:32	0.019
356	5-Aug	13:46:32	0.602	403	5-Aug	14:33:32	0.063
357	5-Aug	13:47:32	0.019	404	5-Aug	14:34:32	0.703
358	5-Aug	13:48:32	0.254	405	5-Aug	14:35:32	0.013
359	5-Aug	13:49:32	0.286	406	5-Aug	14:36:32	0
360	5-Aug	13:50:32	0	407	5-Aug	14:37:32	0.227
361	5-Aug	13:51:32	0.253	408	5-Aug	14:38:32	0.033
362	5-Aug	13:52:32	0.265	409	5-Aug	14:39:32	0.04
363	5-Aug	13:53:32	0.019	410	5-Aug	14:40:32	0.492
364	5-Aug	13:54:32	0.13	411	5-Aug	14:41:32	0.076
365	5-Aug	13:55:32	0.038	412	5-Aug	14:42:32	0.049
366	5-Aug	13:56:32	0.003	413	5-Aug	14:43:32	0.223
367	5-Aug	13:57:32	0.054	414	5-Aug	14:44:32	0.079
368	5-Aug	13:58:32	0.005	415	5-Aug	14:45:32	0.022
369	5-Aug	13:59:32	0.009	416	5-Aug	14:46:32	0.012
370	5-Aug	14:00:32	0.011	417	5-Aug	14:47:32	0.261
371	5-Aug	14:01:32	0	418	5-Aug	14:48:32	0.26
372	5-Aug	14:02:32	0.033	419	5-Aug	14:49:32	0.395
373	5-Aug	14:03:32	0.031	420	5-Aug	14:50:32	0.408
374	5-Aug	14:04:32	0.037	421	5-Aug	14:51:32	0.097
375	5-Aug	14:05:32	0.097	422	5-Aug	14:52:32	0.016
376	5-Aug	14:06:32	0.004	423	5-Aug	14:53:32	0.04
377	5-Aug	14:07:32	0.04	424	5-Aug	14:54:32	0.074
378	5-Aug	14:08:32	0.018	425	5-Aug	14:55:32	0.07
379	5-Aug	14:09:32	0.025	426	5-Aug	14:56:32	0.127
380	5-Aug	14:10:32	0.081	427	5-Aug	14:57:32	0.06
381	5-Aug	14:11:32	0.088	428	5-Aug	14:58:32	0.029
382	5-Aug	14:12:32	0.034	429	5-Aug	14:59:32	0.038
383	5-Aug	14:13:32	0.081	430	5-Aug	15:00:32	1.322

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

431	5-Aug	15:01:32	0.195
432	5-Aug	15:02:32	0
433	5-Aug	15:03:32	0

pDR-1000 S/N: 04878
User ID: DuPont Site #1
Tag Number: 01
Number of logged points: 416
Start time and date: 07:54:31 05-Aug
Elapsed time: 06:56:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 6.373 mg/m³
Time at maximum: 14:18:28 Aug 05
Max STEL Concentration: 1.383 mg/m³
Time at max STEL: 13:10:32 Aug 05
Overall Avg Conc: 0.348 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	5-Aug	07:55:31	0.013	24	5-Aug	08:18:31	0.005
2	5-Aug	07:56:31	0.117	25	5-Aug	08:19:31	0.009
3	5-Aug	07:57:31	0.066	26	5-Aug	08:20:31	0.009
4	5-Aug	07:58:31	0.05	27	5-Aug	08:21:31	0.008
5	5-Aug	07:59:31	0.018	28	5-Aug	08:22:31	0.009
6	5-Aug	08:00:31	0.009	29	5-Aug	08:23:31	0.008
7	5-Aug	08:01:31	0.033	30	5-Aug	08:24:31	0.01
8	5-Aug	08:02:31	0.017	31	5-Aug	08:25:31	0.008
9	5-Aug	08:03:31	0.02	32	5-Aug	08:26:31	0.037
10	5-Aug	08:04:31	0.006	33	5-Aug	08:27:31	0.053
11	5-Aug	08:05:31	0.005	34	5-Aug	08:28:31	0.01
12	5-Aug	08:06:31	0.007	35	5-Aug	08:29:31	0.008
13	5-Aug	08:07:31	0.009	36	5-Aug	08:30:31	0.007
14	5-Aug	08:08:31	0.008	37	5-Aug	08:31:31	0.01
15	5-Aug	08:09:31	0.007	38	5-Aug	08:32:31	0.01
16	5-Aug	08:10:31	0.007	39	5-Aug	08:33:31	0.01
17	5-Aug	08:11:31	0.006	40	5-Aug	08:34:31	0.008
18	5-Aug	08:12:31	0.01	41	5-Aug	08:35:31	0.254
19	5-Aug	08:13:31	0.008	42	5-Aug	08:36:31	0.123
20	5-Aug	08:14:31	0.009	43	5-Aug	08:37:31	0.127
21	5-Aug	08:15:31	0.011	44	5-Aug	08:38:31	0.017
22	5-Aug	08:16:31	0.007	45	5-Aug	08:39:31	0.053
23	5-Aug	08:17:31	0.007	46	5-Aug	08:40:31	0.021
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

47	5-Aug	08:41:31	0.02	94	5-Aug	09:28:31	0.01
48	5-Aug	08:42:31	0.014	95	5-Aug	09:29:31	0.007
49	5-Aug	08:43:31	0.014	96	5-Aug	09:30:31	0.011
50	5-Aug	08:44:31	0.005	97	5-Aug	09:31:31	0.011
51	5-Aug	08:45:31	0.01	98	5-Aug	09:32:31	0.009
52	5-Aug	08:46:31	0.016	99	5-Aug	09:33:31	0.007
53	5-Aug	08:47:31	0.04	100	5-Aug	09:34:31	0.007
54	5-Aug	08:48:31	0.007	101	5-Aug	09:35:31	0.009
55	5-Aug	08:49:31	0.006	102	5-Aug	09:36:31	0.008
56	5-Aug	08:50:31	0.007	103	5-Aug	09:37:31	0.006
57	5-Aug	08:51:31	0.01	104	5-Aug	09:38:31	0.007
58	5-Aug	08:52:31	0.009	105	5-Aug	09:39:31	0.005
59	5-Aug	08:53:31	0.013	106	5-Aug	09:40:31	0.006
60	5-Aug	08:54:31	0.015	107	5-Aug	09:41:31	0.006
61	5-Aug	08:55:31	0.006	108	5-Aug	09:42:31	0.008
62	5-Aug	08:56:31	0.007	109	5-Aug	09:43:31	0.008
63	5-Aug	08:57:31	0.005	110	5-Aug	09:44:31	0.008
64	5-Aug	08:58:31	0.006	111	5-Aug	09:45:31	0.005
65	5-Aug	08:59:31	0.007	112	5-Aug	09:46:31	0.008
66	5-Aug	09:00:31	0.006	113	5-Aug	09:47:31	0.007
67	5-Aug	09:01:31	0.006	114	5-Aug	09:48:31	0.007
68	5-Aug	09:02:31	0.023	115	5-Aug	09:49:31	0.006
69	5-Aug	09:03:31	0.01	116	5-Aug	09:50:31	0.005
70	5-Aug	09:04:31	0.007	117	5-Aug	09:51:31	0.005
71	5-Aug	09:05:31	0.006	118	5-Aug	09:52:31	0.007
72	5-Aug	09:06:31	0.005	119	5-Aug	09:53:31	0.007
73	5-Aug	09:07:31	0.005	120	5-Aug	09:54:31	0.007
74	5-Aug	09:08:31	0.007	121	5-Aug	09:55:31	0.006
75	5-Aug	09:09:31	0.007	122	5-Aug	09:56:31	0.009
76	5-Aug	09:10:31	0.005	123	5-Aug	09:57:31	0.009
77	5-Aug	09:11:31	0.006	124	5-Aug	09:58:31	0.008
78	5-Aug	09:12:31	0.009	125	5-Aug	09:59:31	0.007
79	5-Aug	09:13:31	0.006	126	5-Aug	10:00:31	0.007
80	5-Aug	09:14:31	0.005	127	5-Aug	10:01:31	0.007
81	5-Aug	09:15:31	0.005	128	5-Aug	10:02:31	0.007
82	5-Aug	09:16:31	0.005	129	5-Aug	10:03:31	0.01
83	5-Aug	09:17:31	0.004	130	5-Aug	10:04:31	0.008
84	5-Aug	09:18:31	0.009	131	5-Aug	10:05:31	0.007
85	5-Aug	09:19:31	0.005	132	5-Aug	10:06:31	0.011
86	5-Aug	09:20:31	0.005	133	5-Aug	10:07:31	0.012
87	5-Aug	09:21:31	0.006	134	5-Aug	10:08:31	0.008
88	5-Aug	09:22:31	0.009	135	5-Aug	10:09:31	0.007
89	5-Aug	09:23:31	0.006	136	5-Aug	10:10:31	0.007
90	5-Aug	09:24:31	0.005	137	5-Aug	10:11:31	0.006
91	5-Aug	09:25:31	0.007	138	5-Aug	10:12:31	0.007
92	5-Aug	09:26:31	0.008	139	5-Aug	10:13:31	0.006
93	5-Aug	09:27:31	0.006	140	5-Aug	10:14:31	0.005
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

141	5-Aug	10:15:31	0.006	188	5-Aug	11:02:31	0.006
142	5-Aug	10:16:31	0.006	189	5-Aug	11:03:31	0.005
143	5-Aug	10:17:31	0.006	190	5-Aug	11:04:31	0.006
144	5-Aug	10:18:31	0.008	191	5-Aug	11:05:31	0.006
145	5-Aug	10:19:31	0.006	192	5-Aug	11:06:31	0.006
146	5-Aug	10:20:31	0.006	193	5-Aug	11:07:31	0.005
147	5-Aug	10:21:31	0.006	194	5-Aug	11:08:31	0.007
148	5-Aug	10:22:31	0.005	195	5-Aug	11:09:31	0.005
149	5-Aug	10:23:31	0.008	196	5-Aug	11:10:31	0.006
150	5-Aug	10:24:31	0.005	197	5-Aug	11:11:31	0.007
151	5-Aug	10:25:31	0.005	198	5-Aug	11:12:31	0.009
152	5-Aug	10:26:31	0.008	199	5-Aug	11:13:31	0.006
153	5-Aug	10:27:31	0.006	200	5-Aug	11:14:31	0.009
154	5-Aug	10:28:31	0.005	201	5-Aug	11:15:31	0.005
155	5-Aug	10:29:31	0.005	202	5-Aug	11:16:31	0.006
156	5-Aug	10:30:31	0.005	203	5-Aug	11:17:31	0.005
157	5-Aug	10:31:31	0.007	204	5-Aug	11:18:31	0.007
158	5-Aug	10:32:31	0.004	205	5-Aug	11:19:31	0.006
159	5-Aug	10:33:31	0.008	206	5-Aug	11:20:31	0.006
160	5-Aug	10:34:31	0.01	207	5-Aug	11:21:31	0.006
161	5-Aug	10:35:31	0.005	208	5-Aug	11:22:31	0.004
162	5-Aug	10:36:31	0.008	209	5-Aug	11:23:31	0.003
163	5-Aug	10:37:31	0.004	210	5-Aug	11:24:31	0.004
164	5-Aug	10:38:31	0.004	211	5-Aug	11:25:31	0.007
165	5-Aug	10:39:31	0.006	212	5-Aug	11:26:31	0.006
166	5-Aug	10:40:31	0.005	213	5-Aug	11:27:31	0.005
167	5-Aug	10:41:31	0.007	214	5-Aug	11:28:31	0.006
168	5-Aug	10:42:31	0.01	215	5-Aug	11:29:31	0.005
169	5-Aug	10:43:31	0.015	216	5-Aug	11:30:31	0.006
170	5-Aug	10:44:31	0.005	217	5-Aug	11:31:31	0.006
171	5-Aug	10:45:31	0.004	218	5-Aug	11:32:31	0.007
172	5-Aug	10:46:31	0.005	219	5-Aug	11:33:31	0.006
173	5-Aug	10:47:31	0.007	220	5-Aug	11:34:31	0.006
174	5-Aug	10:48:31	0.005	221	5-Aug	11:35:31	0.005
175	5-Aug	10:49:31	0.006	222	5-Aug	11:36:31	0.006
176	5-Aug	10:50:31	0.008	223	5-Aug	11:37:31	0.005
177	5-Aug	10:51:31	0.005	224	5-Aug	11:38:31	0.006
178	5-Aug	10:52:31	0.005	225	5-Aug	11:39:31	0.007
179	5-Aug	10:53:31	0.005	226	5-Aug	11:40:31	0.006
180	5-Aug	10:54:31	0.005	227	5-Aug	11:41:31	0.006
181	5-Aug	10:55:31	0.007	228	5-Aug	11:42:31	0.006
182	5-Aug	10:56:31	0.006	229	5-Aug	11:43:31	0.006
183	5-Aug	10:57:31	0.007	230	5-Aug	11:44:31	0.005
184	5-Aug	10:58:31	0.007	231	5-Aug	11:45:31	0.005
185	5-Aug	10:59:31	0.01	232	5-Aug	11:46:31	0.006
186	5-Aug	11:00:31	0.007	233	5-Aug	11:47:31	0.007
187	5-Aug	11:01:31	0.006	234	5-Aug	11:48:31	0.005

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

235	5-Aug	11:49:31	0.007	282	5-Aug	12:36:31	0.006
236	5-Aug	11:50:31	0.008	283	5-Aug	12:37:31	0.004
237	5-Aug	11:51:31	0.006	284	5-Aug	12:38:31	0.005
238	5-Aug	11:52:31	0.06	285	5-Aug	12:39:31	0.005
239	5-Aug	11:53:31	0.075	286	5-Aug	12:40:31	0.71
240	5-Aug	11:54:31	0.046	287	5-Aug	12:41:31	0.641
241	5-Aug	11:55:31	0.074	288	5-Aug	12:42:31	0.591
242	5-Aug	11:56:31	0.225	289	5-Aug	12:43:31	0.482
243	5-Aug	11:57:31	0.333	290	5-Aug	12:44:31	0.27
244	5-Aug	11:58:31	0.839	291	5-Aug	12:45:31	0.995
245	5-Aug	11:59:31	0.234	292	5-Aug	12:46:31	0.02
246	5-Aug	12:00:31	0.395	293	5-Aug	12:47:31	0.153
247	5-Aug	12:01:31	0.209	294	5-Aug	12:48:31	0.006
248	5-Aug	12:02:31	0.113	295	5-Aug	12:49:31	0.015
249	5-Aug	12:03:31	0.026	296	5-Aug	12:50:31	0.053
250	5-Aug	12:04:31	0.019	297	5-Aug	12:51:31	0.006
251	5-Aug	12:05:31	0.006	298	5-Aug	12:52:31	0.008
252	5-Aug	12:06:31	0.005	299	5-Aug	12:53:31	0.012
253	5-Aug	12:07:31	0.005	300	5-Aug	12:54:31	0.007
254	5-Aug	12:08:31	0.004	301	5-Aug	12:55:31	0.557
255	5-Aug	12:09:31	0.005	302	5-Aug	12:56:31	1.704
256	5-Aug	12:10:31	0.004	303	5-Aug	12:57:31	1.625
257	5-Aug	12:11:31	0.005	304	5-Aug	12:58:31	1.402
258	5-Aug	12:12:31	0.005	305	5-Aug	12:59:31	1.416
259	5-Aug	12:13:31	0.004	306	5-Aug	13:00:31	1.46
260	5-Aug	12:14:31	0.012	307	5-Aug	13:01:31	1.207
261	5-Aug	12:15:31	0.006	308	5-Aug	13:02:31	1.604
262	5-Aug	12:16:31	0.005	309	5-Aug	13:03:31	1.55
263	5-Aug	12:17:31	0.006	310	5-Aug	13:04:31	1.384
264	5-Aug	12:18:31	0.006	311	5-Aug	13:05:31	1.205
265	5-Aug	12:19:31	0.005	312	5-Aug	13:06:31	1.325
266	5-Aug	12:20:31	0.006	313	5-Aug	13:07:31	0.977
267	5-Aug	12:21:31	0.005	314	5-Aug	13:08:31	1.271
268	5-Aug	12:22:31	0.006	315	5-Aug	13:09:31	1.338
269	5-Aug	12:23:31	0.006	316	5-Aug	13:10:31	1.278
270	5-Aug	12:24:31	0.008	317	5-Aug	13:11:31	1.238
271	5-Aug	12:25:31	0.005	318	5-Aug	13:12:31	1.201
272	5-Aug	12:26:31	0.005	319	5-Aug	13:13:31	1.08
273	5-Aug	12:27:31	0.006	320	5-Aug	13:14:31	1.034
274	5-Aug	12:28:31	0.007	321	5-Aug	13:15:31	1.083
275	5-Aug	12:29:31	0.005	322	5-Aug	13:16:31	1.052
276	5-Aug	12:30:31	0.005	323	5-Aug	13:17:31	1.277
277	5-Aug	12:31:31	0.005	324	5-Aug	13:18:31	1.023
278	5-Aug	12:32:31	0.017	325	5-Aug	13:19:31	1.202
279	5-Aug	12:33:31	0.008	326	5-Aug	13:20:31	1.237
280	5-Aug	12:34:31	0.005	327	5-Aug	13:21:31	1.007
281	5-Aug	12:35:31	0.004	328	5-Aug	13:22:31	1.253
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

329	5-Aug 13:23:31	0.987	376	5-Aug 14:10:31	0.813
330	5-Aug 13:24:31	1.072	377	5-Aug 14:11:31	0.916
331	5-Aug 13:25:31	1.152	378	5-Aug 14:12:31	0.827
332	5-Aug 13:26:31	0.907	379	5-Aug 14:13:31	0.597
333	5-Aug 13:27:31	1.007	380	5-Aug 14:14:31	1.402
334	5-Aug 13:28:31	1.334	381	5-Aug 14:15:31	1.104
335	5-Aug 13:29:31	1.289	382	5-Aug 14:16:31	0.99
336	5-Aug 13:30:31	1.225	383	5-Aug 14:17:31	1.332
337	5-Aug 13:31:31	1.163	384	5-Aug 14:18:31	2.601
338	5-Aug 13:32:31	1.038	385	5-Aug 14:19:31	1.19
339	5-Aug 13:33:31	1.331	386	5-Aug 14:20:31	1.861
340	5-Aug 13:34:31	1.735	387	5-Aug 14:21:31	1.534
341	5-Aug 13:35:31	1.133	388	5-Aug 14:22:31	1.147
342	5-Aug 13:36:31	0.948	389	5-Aug 14:23:31	1.101
343	5-Aug 13:37:31	1.087	390	5-Aug 14:24:31	0.976
344	5-Aug 13:38:31	1.113	391	5-Aug 14:25:31	1.131
345	5-Aug 13:39:31	1.385	392	5-Aug 14:26:31	1.129
346	5-Aug 13:40:31	1.117	393	5-Aug 14:27:31	1.054
347	5-Aug 13:41:31	0.794	394	5-Aug 14:28:31	1.341
348	5-Aug 13:42:31	2.372	395	5-Aug 14:29:31	1.024
349	5-Aug 13:43:31	1.923	396	5-Aug 14:30:31	1.156
350	5-Aug 13:44:31	1.261	397	5-Aug 14:31:31	1.159
351	5-Aug 13:45:31	1.414	398	5-Aug 14:32:31	0.936
352	5-Aug 13:46:31	1.028	399	5-Aug 14:33:31	1.074
353	5-Aug 13:47:31	1.173	400	5-Aug 14:34:31	0.983
354	5-Aug 13:48:31	1.027	401	5-Aug 14:35:31	1.052
355	5-Aug 13:49:31	0.983	402	5-Aug 14:36:31	0.756
356	5-Aug 13:50:31	0.807	403	5-Aug 14:37:31	0.809
357	5-Aug 13:51:31	0.767	404	5-Aug 14:38:31	1.346
358	5-Aug 13:52:31	0.703	405	5-Aug 14:39:31	1.489
359	5-Aug 13:53:31	0.609	406	5-Aug 14:40:31	1.265
360	5-Aug 13:54:31	0.68	407	5-Aug 14:41:31	1.283
361	5-Aug 13:55:31	1.037	408	5-Aug 14:42:31	1.107
362	5-Aug 13:56:31	1.122	409	5-Aug 14:43:31	1.014
363	5-Aug 13:57:31	1.005	410	5-Aug 14:44:31	1.17
364	5-Aug 13:58:31	0.856	411	5-Aug 14:45:31	1.006
365	5-Aug 13:59:31	0.922	412	5-Aug 14:46:31	0.946
366	5-Aug 14:00:31	1.795	413	5-Aug 14:47:31	1.114
367	5-Aug 14:01:31	1.373	414	5-Aug 14:48:31	1.13
368	5-Aug 14:02:31	0.89	415	5-Aug 14:49:31	1.184
369	5-Aug 14:03:31	0.955	416	5-Aug 14:50:31	0.833
370	5-Aug 14:04:31	1.522			
371	5-Aug 14:05:31	1.38			
372	5-Aug 14:06:31	0.941			
373	5-Aug 14:07:31	0.916			
374	5-Aug 14:08:31	0.976			
375	5-Aug 14:09:31	0.859			

August 6, 2002

pDR-1000 S/N: 04878
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 553
Start time and date: 07:00:08 06-Aug
Elapsed time: 09:13:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 79.447 mg/m³
Time at maximum: 15:26:13 Aug 06
Max STEL Concentration: 1.406 mg/m³
Time at max STEL: 15:27:09 Aug 06
Overall Avg Conc: 0.294 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	6-Aug	07:01:08	0.008	32	6-Aug	07:32:08	0.014
2	6-Aug	07:02:08	0.006	33	6-Aug	07:33:08	0.024
3	6-Aug	07:03:08	0.003	34	6-Aug	07:34:08	0.051
4	6-Aug	07:04:08	0.003	35	6-Aug	07:35:08	0.024
5	6-Aug	07:05:08	0.006	36	6-Aug	07:36:08	0.024
6	6-Aug	07:06:08	0.005	37	6-Aug	07:37:08	0.009
7	6-Aug	07:07:08	0.005	38	6-Aug	07:38:08	0.014
8	6-Aug	07:08:08	0.006	39	6-Aug	07:39:08	0.012
9	6-Aug	07:09:08	0.01	40	6-Aug	07:40:08	0.011
10	6-Aug	07:10:08	0.003	41	6-Aug	07:41:08	0.011
11	6-Aug	07:11:08	0.004	42	6-Aug	07:42:08	0.009
12	6-Aug	07:12:08	0.003	43	6-Aug	07:43:08	0.009
13	6-Aug	07:13:08	0.004	44	6-Aug	07:44:08	0.01
14	6-Aug	07:14:08	0.01	45	6-Aug	07:45:08	0.011
15	6-Aug	07:15:08	0.009	46	6-Aug	07:46:08	0.105
16	6-Aug	07:16:08	0.023	47	6-Aug	07:47:08	0.038
17	6-Aug	07:17:08	0.007	48	6-Aug	07:48:08	0.029
18	6-Aug	07:18:08	0.002	49	6-Aug	07:49:08	0.014
19	6-Aug	07:19:08	0.004	50	6-Aug	07:50:08	0.008
20	6-Aug	07:20:08	0.006	51	6-Aug	07:51:08	0.007
21	6-Aug	07:21:08	0.011	52	6-Aug	07:52:08	0.007
22	6-Aug	07:22:08	0.088	53	6-Aug	07:53:08	0.009
23	6-Aug	07:23:08	0.046	54	6-Aug	07:54:08	0.006
24	6-Aug	07:24:08	0.024	55	6-Aug	07:55:08	0.007
25	6-Aug	07:25:08	0.019	56	6-Aug	07:56:08	0.009
26	6-Aug	07:26:08	0.017	57	6-Aug	07:57:08	0.008
27	6-Aug	07:27:08	0.011	58	6-Aug	07:58:08	0.009
28	6-Aug	07:28:08	0.023	59	6-Aug	07:59:08	0.007
29	6-Aug	07:29:08	0.016	60	6-Aug	08:00:08	0.007
30	6-Aug	07:30:08	0.013	61	6-Aug	08:01:08	0.007
31	6-Aug	07:31:08	0.02	62	6-Aug	08:02:08	0.008
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	6-Aug	08:03:08	0.009	114	6-Aug	08:54:08	0.644
64	6-Aug	08:04:08	0.008	115	6-Aug	08:55:08	1.042
65	6-Aug	08:05:08	0.007	116	6-Aug	08:56:08	0.223
66	6-Aug	08:06:08	0.008	117	6-Aug	08:57:08	0.166
67	6-Aug	08:07:08	0.006	118	6-Aug	08:58:08	0.477
68	6-Aug	08:08:08	0.009	119	6-Aug	08:59:08	0.33
69	6-Aug	08:09:08	0.007	120	6-Aug	09:00:08	0.706
70	6-Aug	08:10:08	0.008	121	6-Aug	09:01:08	0.331
71	6-Aug	08:11:08	0.008	122	6-Aug	09:02:08	0.025
72	6-Aug	08:12:08	0.01	123	6-Aug	09:03:08	0.075
73	6-Aug	08:13:08	0.011	124	6-Aug	09:04:08	0.121
74	6-Aug	08:14:08	0.463	125	6-Aug	09:05:08	0.125
75	6-Aug	08:15:08	0.054	126	6-Aug	09:06:08	0.227
76	6-Aug	08:16:08	0.02	127	6-Aug	09:07:08	1.236
77	6-Aug	08:17:08	0.156	128	6-Aug	09:08:08	1.213
78	6-Aug	08:18:08	0.041	129	6-Aug	09:09:08	0.932
79	6-Aug	08:19:08	0.012	130	6-Aug	09:10:08	0.275
80	6-Aug	08:20:08	0.028	131	6-Aug	09:11:08	0.175
81	6-Aug	08:21:08	0.042	132	6-Aug	09:12:08	0.437
82	6-Aug	08:22:08	0.012	133	6-Aug	09:13:08	0.122
83	6-Aug	08:23:08	0.023	134	6-Aug	09:14:08	0.365
84	6-Aug	08:24:08	0.008	135	6-Aug	09:15:08	0.332
85	6-Aug	08:25:08	0.009	136	6-Aug	09:16:08	0.247
86	6-Aug	08:26:08	0.011	137	6-Aug	09:17:08	0.255
87	6-Aug	08:27:08	0.029	138	6-Aug	09:18:08	0.853
88	6-Aug	08:28:08	0.008	139	6-Aug	09:19:08	1.343
89	6-Aug	08:29:08	0.009	140	6-Aug	09:20:08	0.322
90	6-Aug	08:30:08	0.008	141	6-Aug	09:21:08	0.291
91	6-Aug	08:31:08	0.005	142	6-Aug	09:22:08	0.323
92	6-Aug	08:32:08	0.005	143	6-Aug	09:23:08	0.242
93	6-Aug	08:33:08	0.007	144	6-Aug	09:24:08	0.319
94	6-Aug	08:34:08	0.006	145	6-Aug	09:25:08	0.4
95	6-Aug	08:35:08	0.007	146	6-Aug	09:26:08	0.153
96	6-Aug	08:36:08	0.007	147	6-Aug	09:27:08	0.473
97	6-Aug	08:37:08	0.006	148	6-Aug	09:28:08	0.947
98	6-Aug	08:38:08	0.006	149	6-Aug	09:29:08	0.768
99	6-Aug	08:39:08	0.008	150	6-Aug	09:30:08	0.442
100	6-Aug	08:40:08	0.006	151	6-Aug	09:31:08	0.125
101	6-Aug	08:41:08	0.133	152	6-Aug	09:32:08	1.062
102	6-Aug	08:42:08	0.024	153	6-Aug	09:33:08	0.49
103	6-Aug	08:43:08	1.676	154	6-Aug	09:34:08	0.132
104	6-Aug	08:44:08	0.023	155	6-Aug	09:35:08	0.092
105	6-Aug	08:45:08	0.012	156	6-Aug	09:36:08	0.494
106	6-Aug	08:46:08	0.013	157	6-Aug	09:37:08	1.367
107	6-Aug	08:47:08	0.046	158	6-Aug	09:38:08	0.112
108	6-Aug	08:48:08	0.015	159	6-Aug	09:39:08	0.065
109	6-Aug	08:49:08	0.011	160	6-Aug	09:40:08	0.144
110	6-Aug	08:50:08	0.013	161	6-Aug	09:41:08	0.146
111	6-Aug	08:51:08	0.008	162	6-Aug	09:42:08	0.156
112	6-Aug	08:52:08	0.007	163	6-Aug	09:43:08	0.266
113	6-Aug	08:53:08	0.009	164	6-Aug	09:44:08	0.465

165	6-Aug	09:45:08	0.412	216	6-Aug	10:36:08	0.206
166	6-Aug	09:46:08	0.26	217	6-Aug	10:37:08	0.146
167	6-Aug	09:47:08	0.129	218	6-Aug	10:38:08	0.214
168	6-Aug	09:48:08	0.149	219	6-Aug	10:39:08	0.263
169	6-Aug	09:49:08	0.222	220	6-Aug	10:40:08	0.104
170	6-Aug	09:50:08	0.282	221	6-Aug	10:41:08	0.356
171	6-Aug	09:51:08	0.312	222	6-Aug	10:42:08	0.113
172	6-Aug	09:52:08	0.13	223	6-Aug	10:43:08	0.082
173	6-Aug	09:53:08	0.18	224	6-Aug	10:44:08	0.404
174	6-Aug	09:54:08	0.215	225	6-Aug	10:45:08	0.366
175	6-Aug	09:55:08	0.079	226	6-Aug	10:46:08	0.318
176	6-Aug	09:56:08	0.101	227	6-Aug	10:47:08	1.24
177	6-Aug	09:57:08	0.195	228	6-Aug	10:48:08	0.227
178	6-Aug	09:58:08	0.236	229	6-Aug	10:49:08	0.259
179	6-Aug	09:59:08	0.294	230	6-Aug	10:50:08	0.151
180	6-Aug	10:00:08	0.27	231	6-Aug	10:51:08	0.153
181	6-Aug	10:01:08	0.233	232	6-Aug	10:52:08	0.128
182	6-Aug	10:02:08	0.092	233	6-Aug	10:53:08	0.41
183	6-Aug	10:03:08	0.115	234	6-Aug	10:54:08	0.374
184	6-Aug	10:04:08	0.183	235	6-Aug	10:55:08	0.208
185	6-Aug	10:05:08	0.122	236	6-Aug	10:56:08	0.212
186	6-Aug	10:06:08	0.19	237	6-Aug	10:57:08	0.637
187	6-Aug	10:07:08	0.188	238	6-Aug	10:58:08	0.367
188	6-Aug	10:08:08	0.195	239	6-Aug	10:59:08	0.31
189	6-Aug	10:09:08	0.28	240	6-Aug	11:00:08	0.399
190	6-Aug	10:10:08	0.274	241	6-Aug	11:01:08	0.381
191	6-Aug	10:11:08	0.098	242	6-Aug	11:02:08	0.238
192	6-Aug	10:12:08	0.114	243	6-Aug	11:03:08	0.387
193	6-Aug	10:13:08	0.219	244	6-Aug	11:04:08	1.283
194	6-Aug	10:14:08	0.095	245	6-Aug	11:05:08	0.256
195	6-Aug	10:15:08	0.131	246	6-Aug	11:06:08	0.688
196	6-Aug	10:16:08	0.123	247	6-Aug	11:07:08	0.47
197	6-Aug	10:17:08	0.293	248	6-Aug	11:08:08	0.184
198	6-Aug	10:18:08	0.223	249	6-Aug	11:09:08	0.939
199	6-Aug	10:19:08	0.128	250	6-Aug	11:10:08	0.418
200	6-Aug	10:20:08	0.088	251	6-Aug	11:11:08	1.459
201	6-Aug	10:21:08	0.155	252	6-Aug	11:12:08	1.29
202	6-Aug	10:22:08	0.238	253	6-Aug	11:13:08	0.476
203	6-Aug	10:23:08	0.108	254	6-Aug	11:14:08	0.478
204	6-Aug	10:24:08	0.07	255	6-Aug	11:15:08	0.135
205	6-Aug	10:25:08	0.02	256	6-Aug	11:16:08	0.201
206	6-Aug	10:26:08	0.007	257	6-Aug	11:17:08	1.021
207	6-Aug	10:27:08	0.008	258	6-Aug	11:18:08	0.475
208	6-Aug	10:28:08	0.013	259	6-Aug	11:19:08	0.191
209	6-Aug	10:29:08	0.406	260	6-Aug	11:20:08	0.28
210	6-Aug	10:30:08	0.471	261	6-Aug	11:21:08	0.459
211	6-Aug	10:31:08	0.197	262	6-Aug	11:22:08	0.156
212	6-Aug	10:32:08	0.233	263	6-Aug	11:23:08	0.265
213	6-Aug	10:33:08	0.09	264	6-Aug	11:24:08	0.638
214	6-Aug	10:34:08	0.151	265	6-Aug	11:25:08	0.299
215	6-Aug	10:35:08	0.109	266	6-Aug	11:26:08	0.007
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
267	6-Aug	11:27:08	0.011	318	6-Aug	12:18:08	0.013
268	6-Aug	11:28:08	0.017	319	6-Aug	12:19:08	0.011
269	6-Aug	11:29:08	0.007	320	6-Aug	12:20:08	0.012
270	6-Aug	11:30:08	0.01	321	6-Aug	12:21:08	0.012
271	6-Aug	11:31:08	0.009	322	6-Aug	12:22:08	0.016
272	6-Aug	11:32:08	0.007	323	6-Aug	12:23:08	0.01
273	6-Aug	11:33:08	0.005	324	6-Aug	12:24:08	0.014
274	6-Aug	11:34:08	0.009	325	6-Aug	12:25:08	0.012
275	6-Aug	11:35:08	0.007	326	6-Aug	12:26:08	0.068
276	6-Aug	11:36:08	0.006	327	6-Aug	12:27:08	0.016
277	6-Aug	11:37:08	0.011	328	6-Aug	12:28:08	0.012
278	6-Aug	11:38:08	0.006	329	6-Aug	12:29:08	0.011
279	6-Aug	11:39:08	0.012	330	6-Aug	12:30:08	0.012
280	6-Aug	11:40:08	0.006	331	6-Aug	12:31:08	0.011
281	6-Aug	11:41:08	0.005	332	6-Aug	12:32:08	0.011
282	6-Aug	11:42:08	0.007	333	6-Aug	12:33:08	0.012
283	6-Aug	11:43:08	0.006	334	6-Aug	12:34:08	0.009
284	6-Aug	11:44:08	0.006	335	6-Aug	12:35:08	0.017
285	6-Aug	11:45:08	0.008	336	6-Aug	12:36:08	0.01
286	6-Aug	11:46:08	0.023	337	6-Aug	12:37:08	0.009
287	6-Aug	11:47:08	0.006	338	6-Aug	12:38:08	0.015
288	6-Aug	11:48:08	0.006	339	6-Aug	12:39:08	0.011
289	6-Aug	11:49:08	0.026	340	6-Aug	12:40:08	0.145
290	6-Aug	11:50:08	0.29	341	6-Aug	12:41:08	0.025
291	6-Aug	11:51:08	1.687	342	6-Aug	12:42:08	0.011
292	6-Aug	11:52:08	1.376	343	6-Aug	12:43:08	0.013
293	6-Aug	11:53:08	0.383	344	6-Aug	12:44:08	0.011
294	6-Aug	11:54:08	4.79	345	6-Aug	12:45:08	0.011
295	6-Aug	11:55:08	3.173	346	6-Aug	12:46:08	0.014
296	6-Aug	11:56:08	5.88	347	6-Aug	12:47:08	0.011
297	6-Aug	11:57:08	0.441	348	6-Aug	12:48:08	0.012
298	6-Aug	11:58:08	0.031	349	6-Aug	12:49:08	0.013
299	6-Aug	11:59:08	0.013	350	6-Aug	12:50:08	0.011
300	6-Aug	12:00:08	0.014	351	6-Aug	12:51:08	0.011
301	6-Aug	12:01:08	0.015	352	6-Aug	12:52:08	0.011
302	6-Aug	12:02:08	0.022	353	6-Aug	12:53:08	0.012
303	6-Aug	12:03:08	0.014	354	6-Aug	12:54:08	0.011
304	6-Aug	12:04:08	0.011	355	6-Aug	12:55:08	0.012
305	6-Aug	12:05:08	0.01	356	6-Aug	12:56:08	0.018
306	6-Aug	12:06:08	0.011	357	6-Aug	12:57:08	0.029
307	6-Aug	12:07:08	0.011	358	6-Aug	12:58:08	0.011
308	6-Aug	12:08:08	0.022	359	6-Aug	12:59:08	0.013
309	6-Aug	12:09:08	0.016	360	6-Aug	13:00:08	0.012
310	6-Aug	12:10:08	0.011	361	6-Aug	13:01:08	0.01
311	6-Aug	12:11:08	0.015	362	6-Aug	13:02:08	0.013
312	6-Aug	12:12:08	0.031	363	6-Aug	13:03:08	0.011
313	6-Aug	12:13:08	0.013	364	6-Aug	13:04:08	0.01
314	6-Aug	12:14:08	0.012	365	6-Aug	13:05:08	0.245
315	6-Aug	12:15:08	0.012	366	6-Aug	13:06:08	0.03
316	6-Aug	12:16:08	0.054	367	6-Aug	13:07:08	0.011
317	6-Aug	12:17:08	0.022	368	6-Aug	13:08:08	0.021

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
369	6-Aug	13:09:08	0.012	420	6-Aug	14:00:08	0.624
370	6-Aug	13:10:08	0.013	421	6-Aug	14:01:08	1.191
371	6-Aug	13:11:08	0.012	422	6-Aug	14:02:08	0.311
372	6-Aug	13:12:08	0.012	423	6-Aug	14:03:08	0.654
373	6-Aug	13:13:08	0.013	424	6-Aug	14:04:08	0.473
374	6-Aug	13:14:08	0.011	425	6-Aug	14:05:08	2.01
375	6-Aug	13:15:08	0.012	426	6-Aug	14:06:08	0.75
376	6-Aug	13:16:08	0.018	427	6-Aug	14:07:08	0.264
377	6-Aug	13:17:08	0.02	428	6-Aug	14:08:08	0.959
378	6-Aug	13:18:08	0.014	429	6-Aug	14:09:08	0.555
379	6-Aug	13:19:08	0.046	430	6-Aug	14:10:08	0.234
380	6-Aug	13:20:08	0.035	431	6-Aug	14:11:08	0.382
381	6-Aug	13:21:08	0.013	432	6-Aug	14:12:08	0.36
382	6-Aug	13:22:08	0.012	433	6-Aug	14:13:08	0.794
383	6-Aug	13:23:08	0.014	434	6-Aug	14:14:08	0.523
384	6-Aug	13:24:08	0.014	435	6-Aug	14:15:08	0.582
385	6-Aug	13:25:08	0.012	436	6-Aug	14:16:08	0.414
386	6-Aug	13:26:08	0.012	437	6-Aug	14:17:08	0.333
387	6-Aug	13:27:08	0.012	438	6-Aug	14:18:08	0.15
388	6-Aug	13:28:08	0.012	439	6-Aug	14:19:08	3.367
389	6-Aug	13:29:08	0.013	440	6-Aug	14:20:08	0.622
390	6-Aug	13:30:08	0.222	441	6-Aug	14:21:08	0.15
391	6-Aug	13:31:08	0.07	442	6-Aug	14:22:08	0.285
392	6-Aug	13:32:08	0.292	443	6-Aug	14:23:08	0.69
393	6-Aug	13:33:08	1.016	444	6-Aug	14:24:08	0.024
394	6-Aug	13:34:08	0.709	445	6-Aug	14:25:08	0.059
395	6-Aug	13:35:08	0.083	446	6-Aug	14:26:08	0.174
396	6-Aug	13:36:08	1.693	447	6-Aug	14:27:08	0.036
397	6-Aug	13:37:08	0.298	448	6-Aug	14:28:08	0.059
398	6-Aug	13:38:08	0.079	449	6-Aug	14:29:08	0.313
399	6-Aug	13:39:08	0.12	450	6-Aug	14:30:08	0.056
400	6-Aug	13:40:08	1.456	451	6-Aug	14:31:08	0.107
401	6-Aug	13:41:08	0.293	452	6-Aug	14:32:08	0.027
402	6-Aug	13:42:08	0.255	453	6-Aug	14:33:08	0.044
403	6-Aug	13:43:08	0.599	454	6-Aug	14:34:08	0.167
404	6-Aug	13:44:08	0.056	455	6-Aug	14:35:08	0.255
405	6-Aug	13:45:08	0.023	456	6-Aug	14:36:08	0.087
406	6-Aug	13:46:08	0.016	457	6-Aug	14:37:08	0.075
407	6-Aug	13:47:08	0.149	458	6-Aug	14:38:08	0.082
408	6-Aug	13:48:08	1.44	459	6-Aug	14:39:08	0.065
409	6-Aug	13:49:08	5.94	460	6-Aug	14:40:08	0.026
410	6-Aug	13:50:08	0.166	461	6-Aug	14:41:08	0.078
411	6-Aug	13:51:08	1.142	462	6-Aug	14:42:08	0.084
412	6-Aug	13:52:08	0.255	463	6-Aug	14:43:08	1.256
413	6-Aug	13:53:08	0.394	464	6-Aug	14:44:08	0.33
414	6-Aug	13:54:08	0.244	465	6-Aug	14:45:08	0.174
415	6-Aug	13:55:08	0.249	466	6-Aug	14:46:08	0.142
416	6-Aug	13:56:08	0.11	467	6-Aug	14:47:08	0.094
417	6-Aug	13:57:08	0.321	468	6-Aug	14:48:08	0.062
418	6-Aug	13:58:08	0.094	469	6-Aug	14:49:08	0.258
419	6-Aug	13:59:08	0.369	470	6-Aug	14:50:08	1.161

471	6-Aug	14:51:08	0.481	522	6-Aug	15:42:08	0.184
472	6-Aug	14:52:08	0.302	523	6-Aug	15:43:08	0.496
473	6-Aug	14:53:08	0.55	524	6-Aug	15:44:08	0.111
474	6-Aug	14:54:08	0.319	525	6-Aug	15:45:08	1.364
475	6-Aug	14:55:08	0.893	526	6-Aug	15:46:08	0.421
476	6-Aug	14:56:08	0.174	527	6-Aug	15:47:08	0.1
477	6-Aug	14:57:08	0.301	528	6-Aug	15:48:08	0.187
478	6-Aug	14:58:08	0.438	529	6-Aug	15:49:08	0.894
479	6-Aug	14:59:08	0.762	530	6-Aug	15:50:08	0.418
480	6-Aug	15:00:08	0.245	531	6-Aug	15:51:08	0.797
481	6-Aug	15:01:08	0.289	532	6-Aug	15:52:08	0.127
482	6-Aug	15:02:08	0.126	533	6-Aug	15:53:08	0.164
483	6-Aug	15:03:08	0.28	534	6-Aug	15:54:08	0.309
484	6-Aug	15:04:08	0.204	535	6-Aug	15:55:08	0.602
485	6-Aug	15:05:08	0.108	536	6-Aug	15:56:08	1.058
486	6-Aug	15:06:08	0.301	537	6-Aug	15:57:08	0.192
487	6-Aug	15:07:08	1.266	538	6-Aug	15:58:08	0.224
488	6-Aug	15:08:08	0.532	539	6-Aug	15:59:08	0.026
489	6-Aug	15:09:08	0.102	540	6-Aug	16:00:08	0.027
490	6-Aug	15:10:08	0.172	541	6-Aug	16:01:08	0.024
491	6-Aug	15:11:08	0.138	542	6-Aug	16:02:08	0.023
492	6-Aug	15:12:08	0.374	543	6-Aug	16:03:08	0.026
493	6-Aug	15:13:08	0.256	544	6-Aug	16:04:08	0.068
494	6-Aug	15:14:08	0.327	545	6-Aug	16:05:08	0.074
495	6-Aug	15:15:08	0.301	546	6-Aug	16:06:08	0.107
496	6-Aug	15:16:08	0.295	547	6-Aug	16:07:08	0.852
497	6-Aug	15:17:08	0.232	548	6-Aug	16:08:08	2.051
498	6-Aug	15:18:08	0.225	549	6-Aug	16:09:08	0.947
499	6-Aug	15:19:08	0.272	550	6-Aug	16:10:08	0.364
500	6-Aug	15:20:08	0.41	551	6-Aug	16:11:08	0.2
501	6-Aug	15:21:08	0.1	552	6-Aug	16:12:08	0.425
502	6-Aug	15:22:08	0.55	553	6-Aug	16:13:08	0.387
503	6-Aug	15:23:08	0.529				
504	6-Aug	15:24:08	0.866				
505	6-Aug	15:25:08	0.219				
506	6-Aug	15:26:08	13.07				
507	6-Aug	15:27:08	3.431				
508	6-Aug	15:28:08	0.186				
509	6-Aug	15:29:08	0.262				
510	6-Aug	15:30:08	0.17				
511	6-Aug	15:31:08	0.128				
512	6-Aug	15:32:08	0.062				
513	6-Aug	15:33:08	0.287				
514	6-Aug	15:34:08	0.404				
515	6-Aug	15:35:08	0.366				
516	6-Aug	15:36:08	0.215				
517	6-Aug	15:37:08	0.092				
518	6-Aug	15:38:08	0.469				
519	6-Aug	15:39:08	0.115				
520	6-Aug	15:40:08	0.206				
521	6-Aug	15:41:08	0.603				

August 8, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site #1
Tag Number: 04
Number of logged points: 497
Start time and date: 07:46:53 08-Aug
Elapsed time: 08:17:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 107.722 mg/m³
Time at maximum: 08:43:35 Aug 08
Max STEL Concentration: 13.379 mg/m³
Time at max STEL: 08:57:53 Aug 08
Overall Avg Conc: 3.468 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	8-Aug	07:47:53	0.362	28	8-Aug	08:14:53	0.032
2	8-Aug	07:48:53	0.16	29	8-Aug	08:15:53	0.015
3	8-Aug	07:49:53	0.094	30	8-Aug	08:16:53	0.022
4	8-Aug	07:50:53	0.079	31	8-Aug	08:17:53	0.124
5	8-Aug	07:51:53	0.074	32	8-Aug	08:18:53	0.153
6	8-Aug	07:52:53	0.074	33	8-Aug	08:19:53	0.157
7	8-Aug	07:53:53	0.075	34	8-Aug	08:20:53	0.013
8	8-Aug	07:54:53	0.071	35	8-Aug	08:21:53	0.505
9	8-Aug	07:55:53	0.065	36	8-Aug	08:22:53	0.55
10	8-Aug	07:56:53	0.065	37	8-Aug	08:23:53	0.58
11	8-Aug	07:57:53	0.063	38	8-Aug	08:24:53	0.651
12	8-Aug	07:58:53	0.063	39	8-Aug	08:25:53	1.319
13	8-Aug	07:59:53	0.372	40	8-Aug	08:26:53	10.53
14	8-Aug	08:00:53	0.011	41	8-Aug	08:27:53	16.3
15	8-Aug	08:01:53	0.068	42	8-Aug	08:28:53	13.69
16	8-Aug	08:02:53	0.076	43	8-Aug	08:29:53	11.64
17	8-Aug	08:03:53	0.253	44	8-Aug	08:30:53	10.45
18	8-Aug	08:04:53	0.118	45	8-Aug	08:31:53	8.44
19	8-Aug	08:05:53	0.052	46	8-Aug	08:32:53	5.62
20	8-Aug	08:06:53	0.244	47	8-Aug	08:33:53	7.13
21	8-Aug	08:07:53	0.117	48	8-Aug	08:34:53	9.71
22	8-Aug	08:08:53	0.014	49	8-Aug	08:35:53	3.503
23	8-Aug	08:09:53	0.014	50	8-Aug	08:36:53	4.36
24	8-Aug	08:10:53	0.252	51	8-Aug	08:37:53	10.23
25	8-Aug	08:11:53	0.488	52	8-Aug	08:38:53	4.95
26	8-Aug	08:12:53	0.645	53	8-Aug	08:39:53	7.64
27	8-Aug	08:13:53	0.411	54	8-Aug	08:40:53	13.97
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

55	8-Aug 08:41:53	11.78	102	8-Aug 09:28:53	10.41
56	8-Aug 08:42:53	8.26	103	8-Aug 09:29:53	11.64
57	8-Aug 08:43:53	35.48	104	8-Aug 09:30:53	8.45
58	8-Aug 08:44:53	14.94	105	8-Aug 09:31:53	6.38
59	8-Aug 08:45:53	13.86	106	8-Aug 09:32:53	12.9
60	8-Aug 08:46:53	14.7	107	8-Aug 09:33:53	7.16
61	8-Aug 08:47:53	13.85	108	8-Aug 09:34:53	4.17
62	8-Aug 08:48:53	13.04	109	8-Aug 09:35:53	6.21
63	8-Aug 08:49:53	13.77	110	8-Aug 09:36:53	3.24
64	8-Aug 08:50:53	4.87	111	8-Aug 09:37:53	6.94
65	8-Aug 08:51:53	5.86	112	8-Aug 09:38:53	3.786
66	8-Aug 08:52:53	6.19	113	8-Aug 09:39:53	8.56
67	8-Aug 08:53:53	15.2	114	8-Aug 09:40:53	6.11
68	8-Aug 08:54:53	11.79	115	8-Aug 09:41:53	8.13
69	8-Aug 08:55:53	14.03	116	8-Aug 09:42:53	3.425
70	8-Aug 08:56:53	13.19	117	8-Aug 09:43:53	6.53
71	8-Aug 08:57:53	9.92	118	8-Aug 09:44:53	3.546
72	8-Aug 08:58:53	9.11	119	8-Aug 09:45:53	4.98
73	8-Aug 08:59:53	8.99	120	8-Aug 09:46:53	3.932
74	8-Aug 09:00:53	11.96	121	8-Aug 09:47:53	4.33
75	8-Aug 09:01:53	8.53	122	8-Aug 09:48:53	7.8
76	8-Aug 09:02:53	11.84	123	8-Aug 09:49:53	4.81
77	8-Aug 09:03:53	12.74	124	8-Aug 09:50:53	13.31
78	8-Aug 09:04:53	11.87	125	8-Aug 09:51:53	10.09
79	8-Aug 09:05:53	9.79	126	8-Aug 09:52:53	6.39
80	8-Aug 09:06:53	11.98	127	8-Aug 09:53:53	6.33
81	8-Aug 09:07:53	6.88	128	8-Aug 09:54:53	6.1
82	8-Aug 09:08:53	7.46	129	8-Aug 09:55:53	4.68
83	8-Aug 09:09:53	9.58	130	8-Aug 09:56:53	10.03
84	8-Aug 09:10:53	6.85	131	8-Aug 09:57:53	9.25
85	8-Aug 09:11:53	9.53	132	8-Aug 09:58:53	5.9
86	8-Aug 09:12:53	15.71	133	8-Aug 09:59:53	9.87
87	8-Aug 09:13:53	13.07	134	8-Aug 10:00:53	5.53
88	8-Aug 09:14:53	8.5	135	8-Aug 10:01:53	8.33
89	8-Aug 09:15:53	6.91	136	8-Aug 10:02:53	4.28
90	8-Aug 09:16:53	4.36	137	8-Aug 10:03:53	4.5
91	8-Aug 09:17:53	7.9	138	8-Aug 10:04:53	11.4
92	8-Aug 09:18:53	9.44	139	8-Aug 10:05:53	12.95
93	8-Aug 09:19:53	8.17	140	8-Aug 10:06:53	14.05
94	8-Aug 09:20:53	8.62	141	8-Aug 10:07:53	11.76
95	8-Aug 09:21:53	8.05	142	8-Aug 10:08:53	17.08
96	8-Aug 09:22:53	5.42	143	8-Aug 10:09:53	14.78
97	8-Aug 09:23:53	6.92	144	8-Aug 10:10:53	7.09
98	8-Aug 09:24:53	6.86	145	8-Aug 10:11:53	18.88
99	8-Aug 09:25:53	6.36	146	8-Aug 10:12:53	6.03
100	8-Aug 09:26:53	6.46	147	8-Aug 10:13:53	9.52
101	8-Aug 09:27:53	4.24	148	8-Aug 10:14:53	10.85

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

149	8-Aug	10:15:53	10.68	196	8-Aug	11:02:53	0.274
150	8-Aug	10:16:53	8.95	197	8-Aug	11:03:53	0.245
151	8-Aug	10:17:53	11.54	198	8-Aug	11:04:53	3.124
152	8-Aug	10:18:53	16.35	199	8-Aug	11:05:53	6.66
153	8-Aug	10:19:53	4.066	200	8-Aug	11:06:53	6.74
154	8-Aug	10:20:53	7.18	201	8-Aug	11:07:53	5.68
155	8-Aug	10:21:53	9.38	202	8-Aug	11:08:53	2.644
156	8-Aug	10:22:53	3.192	203	8-Aug	11:09:53	1.348
157	8-Aug	10:23:53	19.42	204	8-Aug	11:10:53	2.503
158	8-Aug	10:24:53	9.61	205	8-Aug	11:11:53	3.825
159	8-Aug	10:25:53	0.498	206	8-Aug	11:12:53	0.688
160	8-Aug	10:26:53	0.259	207	8-Aug	11:13:53	2.054
161	8-Aug	10:27:53	0.251	208	8-Aug	11:14:53	2.686
162	8-Aug	10:28:53	0.255	209	8-Aug	11:15:53	3.819
163	8-Aug	10:29:53	0.26	210	8-Aug	11:16:53	1.567
164	8-Aug	10:30:53	0.293	211	8-Aug	11:17:53	0.339
165	8-Aug	10:31:53	0.561	212	8-Aug	11:18:53	5.07
166	8-Aug	10:32:53	0.342	213	8-Aug	11:19:53	2.163
167	8-Aug	10:33:53	0.375	214	8-Aug	11:20:53	2.378
168	8-Aug	10:34:53	0.29	215	8-Aug	11:21:53	4.36
169	8-Aug	10:35:53	0.262	216	8-Aug	11:22:53	4.76
170	8-Aug	10:36:53	0.259	217	8-Aug	11:23:53	5.14
171	8-Aug	10:37:53	0.258	218	8-Aug	11:24:53	2.583
172	8-Aug	10:38:53	0.257	219	8-Aug	11:25:53	6.98
173	8-Aug	10:39:53	0.257	220	8-Aug	11:26:53	6.76
174	8-Aug	10:40:53	0.262	221	8-Aug	11:27:53	8.69
175	8-Aug	10:41:53	0.306	222	8-Aug	11:28:53	6.48
176	8-Aug	10:42:53	0.251	223	8-Aug	11:29:53	3.064
177	8-Aug	10:43:53	0.252	224	8-Aug	11:30:53	3.673
178	8-Aug	10:44:53	0.251	225	8-Aug	11:31:53	5.76
179	8-Aug	10:45:53	0.25	226	8-Aug	11:32:53	2.123
180	8-Aug	10:46:53	0.249	227	8-Aug	11:33:53	6.47
181	8-Aug	10:47:53	0.253	228	8-Aug	11:34:53	3.08
182	8-Aug	10:48:53	0.253	229	8-Aug	11:35:53	2.034
183	8-Aug	10:49:53	0.264	230	8-Aug	11:36:53	2.212
184	8-Aug	10:50:53	0.275	231	8-Aug	11:37:53	1.626
185	8-Aug	10:51:53	0.268	232	8-Aug	11:38:53	1.976
186	8-Aug	10:52:53	0.249	233	8-Aug	11:39:53	4.94
187	8-Aug	10:53:53	0.247	234	8-Aug	11:40:53	2.649
188	8-Aug	10:54:53	0.247	235	8-Aug	11:41:53	2.962
189	8-Aug	10:55:53	0.25	236	8-Aug	11:42:53	0.955
190	8-Aug	10:56:53	0.246	237	8-Aug	11:43:53	2.724
191	8-Aug	10:57:53	0.245	238	8-Aug	11:44:53	2.359
192	8-Aug	10:58:53	0.246	239	8-Aug	11:45:53	2.925
193	8-Aug	10:59:53	0.249	240	8-Aug	11:46:53	4.56
194	8-Aug	11:00:53	0.246	241	8-Aug	11:47:53	2.22
195	8-Aug	11:01:53	0.246	242	8-Aug	11:48:53	2.502
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

243	8-Aug	11:49:53	4.45	290	8-Aug	12:36:53	0.048
244	8-Aug	11:50:53	4.57	291	8-Aug	12:37:53	0
245	8-Aug	11:51:53	2.054	292	8-Aug	12:38:53	0
246	8-Aug	11:52:53	1.799	293	8-Aug	12:39:53	0
247	8-Aug	11:53:53	3.784	294	8-Aug	12:40:53	0
248	8-Aug	11:54:53	1.784	295	8-Aug	12:41:53	0
249	8-Aug	11:55:53	2.471	296	8-Aug	12:42:53	0
250	8-Aug	11:56:53	1.936	297	8-Aug	12:43:53	0
251	8-Aug	11:57:53	0.703	298	8-Aug	12:44:53	0
252	8-Aug	11:58:53	1.073	299	8-Aug	12:45:53	0
253	8-Aug	11:59:53	2.428	300	8-Aug	12:46:53	0.004
254	8-Aug	12:00:53	6.66	301	8-Aug	12:47:53	0
255	8-Aug	12:01:53	3.527	302	8-Aug	12:48:53	0.02
256	8-Aug	12:02:53	4.21	303	8-Aug	12:49:53	0.001
257	8-Aug	12:03:53	3.101	304	8-Aug	12:50:53	0.014
258	8-Aug	12:04:53	7.15	305	8-Aug	12:51:53	0
259	8-Aug	12:05:53	4.58	306	8-Aug	12:52:53	0
260	8-Aug	12:06:53	12.93	307	8-Aug	12:53:53	0
261	8-Aug	12:07:53	0.75	308	8-Aug	12:54:53	0
262	8-Aug	12:08:53	0.914	309	8-Aug	12:55:53	0.001
263	8-Aug	12:09:53	0.004	310	8-Aug	12:56:53	0
264	8-Aug	12:10:53	0.002	311	8-Aug	12:57:53	0.03
265	8-Aug	12:11:53	0.007	312	8-Aug	12:58:53	0.022
266	8-Aug	12:12:53	0	313	8-Aug	12:59:53	0
267	8-Aug	12:13:53	0.01	314	8-Aug	13:00:53	0
268	8-Aug	12:14:53	0.245	315	8-Aug	13:01:53	0.004
269	8-Aug	12:15:53	0.001	316	8-Aug	13:02:53	0.001
270	8-Aug	12:16:53	0.097	317	8-Aug	13:03:53	0
271	8-Aug	12:17:53	0.019	318	8-Aug	13:04:53	0
272	8-Aug	12:18:53	0.268	319	8-Aug	13:05:53	0
273	8-Aug	12:19:53	0	320	8-Aug	13:06:53	0.002
274	8-Aug	12:20:53	0	321	8-Aug	13:07:53	0.031
275	8-Aug	12:21:53	0.009	322	8-Aug	13:08:53	0
276	8-Aug	12:22:53	0	323	8-Aug	13:09:53	0
277	8-Aug	12:23:53	0	324	8-Aug	13:10:53	0
278	8-Aug	12:24:53	0.026	325	8-Aug	13:11:53	0.478
279	8-Aug	12:25:53	0	326	8-Aug	13:12:53	0.006
280	8-Aug	12:26:53	0	327	8-Aug	13:13:53	0
281	8-Aug	12:27:53	0	328	8-Aug	13:14:53	0.001
282	8-Aug	12:28:53	0	329	8-Aug	13:15:53	0
283	8-Aug	12:29:53	0.033	330	8-Aug	13:16:53	0
284	8-Aug	12:30:53	0	331	8-Aug	13:17:53	0
285	8-Aug	12:31:53	0	332	8-Aug	13:18:53	0
286	8-Aug	12:32:53	0	333	8-Aug	13:19:53	0.001
287	8-Aug	12:33:53	0	334	8-Aug	13:20:53	0.009
288	8-Aug	12:34:53	0	335	8-Aug	13:21:53	0.001
289	8-Aug	12:35:53	0	336	8-Aug	13:22:53	0
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

337	8-Aug	13:23:53	0	384	8-Aug 14:10:53	2.386
338	8-Aug	13:24:53	0.025	385	8-Aug 14:11:53	2.381
339	8-Aug	13:25:53	0	386	8-Aug 14:12:53	1.354
340	8-Aug	13:26:53	0.006	387	8-Aug 14:13:53	6.25
341	8-Aug	13:27:53	0	388	8-Aug 14:14:53	4.34
342	8-Aug	13:28:53	0	389	8-Aug 14:15:53	2.328
343	8-Aug	13:29:53	0	390	8-Aug 14:16:53	0.403
344	8-Aug	13:30:53	0	391	8-Aug 14:17:53	3.291
345	8-Aug	13:31:53	0	392	8-Aug 14:18:53	0.041
346	8-Aug	13:32:53	0.003	393	8-Aug 14:19:53	0.002
347	8-Aug	13:33:53	0	394	8-Aug 14:20:53	0.431
348	8-Aug	13:34:53	0	395	8-Aug 14:21:53	0.505
349	8-Aug	13:35:53	0	396	8-Aug 14:22:53	0.108
350	8-Aug	13:36:53	0	397	8-Aug 14:23:53	0.776
351	8-Aug	13:37:53	0.019	398	8-Aug 14:24:53	1.516
352	8-Aug	13:38:53	0	399	8-Aug 14:25:53	0.199
353	8-Aug	13:39:53	0	400	8-Aug 14:26:53	0.626
354	8-Aug	13:40:53	0	401	8-Aug 14:27:53	1.723
355	8-Aug	13:41:53	0	402	8-Aug 14:28:53	5.77
356	8-Aug	13:42:53	0.014	403	8-Aug 14:29:53	4.41
357	8-Aug	13:43:53	0	404	8-Aug 14:30:53	5.07
358	8-Aug	13:44:53	0	405	8-Aug 14:31:53	2.345
359	8-Aug	13:45:53	0.012	406	8-Aug 14:32:53	4.35
360	8-Aug	13:46:53	0.007	407	8-Aug 14:33:53	1.568
361	8-Aug	13:47:53	10.03	408	8-Aug 14:34:53	2.002
362	8-Aug	13:48:53	3.33	409	8-Aug 14:35:53	2.337
363	8-Aug	13:49:53	5.83	410	8-Aug 14:36:53	0.453
364	8-Aug	13:50:53	3.121	411	8-Aug 14:37:53	0.138
365	8-Aug	13:51:53	3.901	412	8-Aug 14:38:53	3.015
366	8-Aug	13:52:53	6.8	413	8-Aug 14:39:53	0.244
367	8-Aug	13:53:53	5.45	414	8-Aug 14:40:53	0.311
368	8-Aug	13:54:53	9.04	415	8-Aug 14:41:53	0.067
369	8-Aug	13:55:53	5.32	416	8-Aug 14:42:53	0.934
370	8-Aug	13:56:53	3.42	417	8-Aug 14:43:53	0.245
371	8-Aug	13:57:53	0.932	418	8-Aug 14:44:53	0.157
372	8-Aug	13:58:53	5	419	8-Aug 14:45:53	0.054
373	8-Aug	13:59:53	2.117	420	8-Aug 14:46:53	0.012
374	8-Aug	14:00:53	4.36	421	8-Aug 14:47:53	0.131
375	8-Aug	14:01:53	5.17	422	8-Aug 14:48:53	0.257
376	8-Aug	14:02:53	0.631	423	8-Aug 14:49:53	0.268
377	8-Aug	14:03:53	0.14	424	8-Aug 14:50:53	0.183
378	8-Aug	14:04:53	2.388	425	8-Aug 14:51:53	0.132
379	8-Aug	14:05:53	8.94	426	8-Aug 14:52:53	0.055
380	8-Aug	14:06:53	5.81	427	8-Aug 14:53:53	0.901
381	8-Aug	14:07:53	5.22	428	8-Aug 14:54:53	1.401
382	8-Aug	14:08:53	8.84	429	8-Aug 14:55:53	0.006
383	8-Aug	14:09:53	8.04	430	8-Aug 14:56:53	0.011

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

431	8-Aug 14:57:53	0.12
432	8-Aug 14:58:53	0.399
433	8-Aug 14:59:53	3.891
434	8-Aug 15:00:53	1.762
435	8-Aug 15:01:53	7.89
436	8-Aug 15:02:53	0.669
437	8-Aug 15:03:53	1.043
438	8-Aug 15:04:53	2.493
439	8-Aug 15:05:53	1.171
440	8-Aug 15:06:53	1.906
441	8-Aug 15:07:53	5.37
442	8-Aug 15:08:53	1.433
443	8-Aug 15:09:53	0.43
444	8-Aug 15:10:53	1.479
445	8-Aug 15:11:53	0.386
446	8-Aug 15:12:53	1.516
447	8-Aug 15:13:53	1.443
448	8-Aug 15:14:53	9.29
449	8-Aug 15:15:53	9.67
450	8-Aug 15:16:53	6.07
451	8-Aug 15:17:53	13.56
452	8-Aug 15:18:53	5.86
453	8-Aug 15:19:53	3.054
454	8-Aug 15:20:53	7.85
455	8-Aug 15:21:53	3.064
456	8-Aug 15:22:53	2.909
457	8-Aug 15:23:53	8.66
458	8-Aug 15:24:53	3.28
459	8-Aug 15:25:53	0.908
460	8-Aug 15:26:53	0.892
461	8-Aug 15:27:53	1.745
462	8-Aug 15:28:53	12.17
463	8-Aug 15:29:53	12.52
464	8-Aug 15:30:53	4.52
465	8-Aug 15:31:53	3.807
466	8-Aug 15:32:53	3.035
467	8-Aug 15:33:53	2.982
468	8-Aug 15:34:53	11.45
469	8-Aug 15:35:53	6.55
470	8-Aug 15:36:53	5.78
471	8-Aug 15:37:53	1.108
472	8-Aug 15:38:53	0.854
473	8-Aug 15:39:53	3.126
474	8-Aug 15:40:53	1.264
475	8-Aug 15:41:53	6.97
476	8-Aug 15:42:53	1.005
477	8-Aug 15:43:53	0
478	8-Aug 15:44:53	0
479	8-Aug 15:45:53	0
480	8-Aug 15:46:53	0
481	8-Aug 15:47:53	0
482	8-Aug 15:48:53	0
483	8-Aug 15:49:53	0
484	8-Aug 15:50:53	0
485	8-Aug 15:51:53	0
486	8-Aug 15:52:53	0.138
487	8-Aug 15:53:53	0.005
488	8-Aug 15:54:53	0
489	8-Aug 15:55:53	0.793
490	8-Aug 15:56:53	3.638
491	8-Aug 15:57:53	1.837
492	8-Aug 15:58:53	0.21
493	8-Aug 15:59:53	2.114
494	8-Aug 16:00:53	1.476
495	8-Aug 16:01:53	0.454
496	8-Aug 16:02:53	0.542
497	8-Aug 16:03:53	0.687

pDR-1000 S/N: 04878

User ID: DuPont Site #1
Tag Number: 04
Number of logged points: 468
Start time and date: 07:55:47 08-Aug
Elapsed time: 07:48:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 21.027 mg/m³
Time at maximum: 13:58:55 Aug 08
Max STEL Concentration: 1.670 mg/m³
Time at max STEL: 14:11:18 Aug 08
Overall Avg Conc: 0.357 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	8-Aug	07:56:47	0.043	31	8-Aug	08:26:47	0.785
2	8-Aug	07:57:47	0.025	32	8-Aug	08:27:47	1.651
3	8-Aug	07:58:47	0.034	33	8-Aug	08:28:47	1.124
4	8-Aug	07:59:47	0.049	34	8-Aug	08:29:47	1.161
5	8-Aug	08:00:47	0.029	35	8-Aug	08:30:47	0.367
6	8-Aug	08:01:47	0.146	36	8-Aug	08:31:47	0.404
7	8-Aug	08:02:47	0.031	37	8-Aug	08:32:47	0.49
8	8-Aug	08:03:47	0.021	38	8-Aug	08:33:47	0.811
9	8-Aug	08:04:47	0.014	39	8-Aug	08:34:47	0.698
10	8-Aug	08:05:47	0.018	40	8-Aug	08:35:47	1.573
11	8-Aug	08:06:47	0.094	41	8-Aug	08:36:47	0.413
12	8-Aug	08:07:47	0.084	42	8-Aug	08:37:47	1.206
13	8-Aug	08:08:47	0.05	43	8-Aug	08:38:47	1.208
14	8-Aug	08:09:47	0.034	44	8-Aug	08:39:47	1.396
15	8-Aug	08:10:47	0.024	45	8-Aug	08:40:47	0.383
16	8-Aug	08:11:47	0.067	46	8-Aug	08:41:47	0.427
17	8-Aug	08:12:47	0.06	47	8-Aug	08:42:47	0.45
18	8-Aug	08:13:47	0.076	48	8-Aug	08:43:47	0.328
19	8-Aug	08:14:47	0.026	49	8-Aug	08:44:47	0.682
20	8-Aug	08:15:47	0.042	50	8-Aug	08:45:47	0.477
21	8-Aug	08:16:47	0.083	51	8-Aug	08:46:47	0.621
22	8-Aug	08:17:47	0.042	52	8-Aug	08:47:47	1.061
23	8-Aug	08:18:47	0.025	53	8-Aug	08:48:47	0.801
24	8-Aug	08:19:47	0.026	54	8-Aug	08:49:47	0.335
25	8-Aug	08:20:47	0.024	55	8-Aug	08:50:47	0.167
26	8-Aug	08:21:47	0.037	56	8-Aug	08:51:47	0.524
27	8-Aug	08:22:47	0.302	57	8-Aug	08:52:47	0.189
28	8-Aug	08:23:47	0.09	58	8-Aug	08:53:47	0.165
29	8-Aug	08:24:47	0.022	59	8-Aug	08:54:47	0.223
30	8-Aug	08:25:47	0.028	60	8-Aug	08:55:47	0.893
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

61	8-Aug	08:56:47	0.103	108	8-Aug	09:43:47	1.403
62	8-Aug	08:57:47	0.114	109	8-Aug	09:44:47	0.3
63	8-Aug	08:58:47	0.111	110	8-Aug	09:45:47	0.256
64	8-Aug	08:59:47	0.078	111	8-Aug	09:46:47	0.584
65	8-Aug	09:00:47	0.17	112	8-Aug	09:47:47	1.206
66	8-Aug	09:01:47	0.279	113	8-Aug	09:48:47	0.49
67	8-Aug	09:02:47	1.525	114	8-Aug	09:49:47	0.629
68	8-Aug	09:03:47	0.131	115	8-Aug	09:50:47	1.043
69	8-Aug	09:04:47	0.11	116	8-Aug	09:51:47	0.311
70	8-Aug	09:05:47	0.076	117	8-Aug	09:52:47	0.662
71	8-Aug	09:06:47	0.773	118	8-Aug	09:53:47	0.425
72	8-Aug	09:07:47	0.311	119	8-Aug	09:54:47	0.316
73	8-Aug	09:08:47	0.186	120	8-Aug	09:55:47	0.306
74	8-Aug	09:09:47	0.101	121	8-Aug	09:56:47	0.525
75	8-Aug	09:10:47	0.382	122	8-Aug	09:57:47	1.563
76	8-Aug	09:11:47	0.127	123	8-Aug	09:58:47	0.42
77	8-Aug	09:12:47	0.166	124	8-Aug	09:59:47	1.147
78	8-Aug	09:13:47	0.375	125	8-Aug	10:00:47	0.731
79	8-Aug	09:14:47	0.057	126	8-Aug	10:01:47	0.403
80	8-Aug	09:15:47	0.12	127	8-Aug	10:02:47	1.126
81	8-Aug	09:16:47	0.087	128	8-Aug	10:03:47	0.769
82	8-Aug	09:17:47	0.028	129	8-Aug	10:04:47	0.178
83	8-Aug	09:18:47	0.057	130	8-Aug	10:05:47	0.461
84	8-Aug	09:19:47	0.078	131	8-Aug	10:06:47	0.357
85	8-Aug	09:20:47	0.058	132	8-Aug	10:07:47	0.883
86	8-Aug	09:21:47	0.058	133	8-Aug	10:08:47	0.792
87	8-Aug	09:22:47	0.37	134	8-Aug	10:09:47	0.824
88	8-Aug	09:23:47	0.153	135	8-Aug	10:10:47	0.116
89	8-Aug	09:24:47	0.908	136	8-Aug	10:11:47	0.125
90	8-Aug	09:25:47	0.696	137	8-Aug	10:12:47	0.137
91	8-Aug	09:26:47	0.397	138	8-Aug	10:13:47	0.134
92	8-Aug	09:27:47	0.834	139	8-Aug	10:14:47	0.02
93	8-Aug	09:28:47	0.896	140	8-Aug	10:15:47	0.041
94	8-Aug	09:29:47	1.673	141	8-Aug	10:16:47	0.021
95	8-Aug	09:30:47	1.176	142	8-Aug	10:17:47	0.025
96	8-Aug	09:31:47	0.351	143	8-Aug	10:18:47	0.02
97	8-Aug	09:32:47	0.723	144	8-Aug	10:19:47	0.023
98	8-Aug	09:33:47	0.82	145	8-Aug	10:20:47	0.019
99	8-Aug	09:34:47	0.338	146	8-Aug	10:21:47	0.019
100	8-Aug	09:35:47	0.025	147	8-Aug	10:22:47	0.03
101	8-Aug	09:36:47	0.248	148	8-Aug	10:23:47	0.022
102	8-Aug	09:37:47	0.265	149	8-Aug	10:24:47	0.025
103	8-Aug	09:38:47	0.622	150	8-Aug	10:25:47	0.022
104	8-Aug	09:39:47	0.863	151	8-Aug	10:26:47	0.028
105	8-Aug	09:40:47	0.224	152	8-Aug	10:27:47	0.024
106	8-Aug	09:41:47	2.884	153	8-Aug	10:28:47	0.025
107	8-Aug	09:42:47	0.729	154	8-Aug	10:29:47	0.038

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

155	8-Aug	10:30:47	0.031	202	8-Aug	11:17:47	0.219
156	8-Aug	10:31:47	0.028	203	8-Aug	11:18:47	0.108
157	8-Aug	10:32:47	0.024	204	8-Aug	11:19:47	0.092
158	8-Aug	10:33:47	0.027	205	8-Aug	11:20:47	0.107
159	8-Aug	10:34:47	0.025	206	8-Aug	11:21:47	0.345
160	8-Aug	10:35:47	0.029	207	8-Aug	11:22:47	0.55
161	8-Aug	10:36:47	0.028	208	8-Aug	11:23:47	0.209
162	8-Aug	10:37:47	0.032	209	8-Aug	11:24:47	0.692
163	8-Aug	10:38:47	0.026	210	8-Aug	11:25:47	0.088
164	8-Aug	10:39:47	0.028	211	8-Aug	11:26:47	0.019
165	8-Aug	10:40:47	0.026	212	8-Aug	11:27:47	0.021
166	8-Aug	10:41:47	0.026	213	8-Aug	11:28:47	0.032
167	8-Aug	10:42:47	0.028	214	8-Aug	11:29:47	0.073
168	8-Aug	10:43:47	0.024	215	8-Aug	11:30:47	0.023
169	8-Aug	10:44:47	0.027	216	8-Aug	11:31:47	0.018
170	8-Aug	10:45:47	0.03	217	8-Aug	11:32:47	0.019
171	8-Aug	10:46:47	0.028	218	8-Aug	11:33:47	0.018
172	8-Aug	10:47:47	0.024	219	8-Aug	11:34:47	0.017
173	8-Aug	10:48:47	0.024	220	8-Aug	11:35:47	0.021
174	8-Aug	10:49:47	0.029	221	8-Aug	11:36:47	0.021
175	8-Aug	10:50:47	0.027	222	8-Aug	11:37:47	0.019
176	8-Aug	10:51:47	0.038	223	8-Aug	11:38:47	0.02
177	8-Aug	10:52:47	0.023	224	8-Aug	11:39:47	0.019
178	8-Aug	10:53:47	0.029	225	8-Aug	11:40:47	0.112
179	8-Aug	10:54:47	0.028	226	8-Aug	11:41:47	0.866
180	8-Aug	10:55:47	0.021	227	8-Aug	11:42:47	1.505
181	8-Aug	10:56:47	0.021	228	8-Aug	11:43:47	0.406
182	8-Aug	10:57:47	0.023	229	8-Aug	11:44:47	0.194
183	8-Aug	10:58:47	0.021	230	8-Aug	11:45:47	0.47
184	8-Aug	10:59:47	0.019	231	8-Aug	11:46:47	1.36
185	8-Aug	11:00:47	0.019	232	8-Aug	11:47:47	0.482
186	8-Aug	11:01:47	0.028	233	8-Aug	11:48:47	0.201
187	8-Aug	11:02:47	0.029	234	8-Aug	11:49:47	0.3
188	8-Aug	11:03:47	0.026	235	8-Aug	11:50:47	0.565
189	8-Aug	11:04:47	0.059	236	8-Aug	11:51:47	0.705
190	8-Aug	11:05:47	0.451	237	8-Aug	11:52:47	0.689
191	8-Aug	11:06:47	0.15	238	8-Aug	11:53:47	2.093
192	8-Aug	11:07:47	1.088	239	8-Aug	11:54:47	1.032
193	8-Aug	11:08:47	0.188	240	8-Aug	11:55:47	1.076
194	8-Aug	11:09:47	0.117	241	8-Aug	11:56:47	0.807
195	8-Aug	11:10:47	0.134	242	8-Aug	11:57:47	2.465
196	8-Aug	11:11:47	0.587	243	8-Aug	11:58:47	1.651
197	8-Aug	11:12:47	1.031	244	8-Aug	11:59:47	0.533
198	8-Aug	11:13:47	0.485	245	8-Aug	12:00:47	1.085
199	8-Aug	11:14:47	0.374	246	8-Aug	12:01:47	0.335
200	8-Aug	11:15:47	0.329	247	8-Aug	12:02:47	1.159
201	8-Aug	11:16:47	0.282	248	8-Aug	12:03:47	0.11

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

249	8-Aug	12:04:47	0.096	296	8-Aug	12:51:47	0.027
250	8-Aug	12:05:47	0.03	297	8-Aug	12:52:47	0.017
251	8-Aug	12:06:47	0.025	298	8-Aug	12:53:47	0.017
252	8-Aug	12:07:47	0.042	299	8-Aug	12:54:47	0.016
253	8-Aug	12:08:47	0.024	300	8-Aug	12:55:47	0.022
254	8-Aug	12:09:47	0.022	301	8-Aug	12:56:47	0.05
255	8-Aug	12:10:47	0.022	302	8-Aug	12:57:47	0.023
256	8-Aug	12:11:47	0.021	303	8-Aug	12:58:47	0.018
257	8-Aug	12:12:47	0.023	304	8-Aug	12:59:47	0.018
258	8-Aug	12:13:47	0.031	305	8-Aug	13:00:47	0.016
259	8-Aug	12:14:47	0.023	306	8-Aug	13:01:47	0.018
260	8-Aug	12:15:47	0.023	307	8-Aug	13:02:47	0.018
261	8-Aug	12:16:47	0.02	308	8-Aug	13:03:47	0.042
262	8-Aug	12:17:47	0.025	309	8-Aug	13:04:47	0.024
263	8-Aug	12:18:47	0.025	310	8-Aug	13:05:47	0.021
264	8-Aug	12:19:47	0.021	311	8-Aug	13:06:47	0.021
265	8-Aug	12:20:47	0.02	312	8-Aug	13:07:47	0.023
266	8-Aug	12:21:47	0.019	313	8-Aug	13:08:47	0.022
267	8-Aug	12:22:47	0.023	314	8-Aug	13:09:47	0.021
268	8-Aug	12:23:47	0.024	315	8-Aug	13:10:47	0.02
269	8-Aug	12:24:47	0.024	316	8-Aug	13:11:47	0.022
270	8-Aug	12:25:47	0.02	317	8-Aug	13:12:47	0.021
271	8-Aug	12:26:47	0.02	318	8-Aug	13:13:47	0.025
272	8-Aug	12:27:47	0.021	319	8-Aug	13:14:47	0.022
273	8-Aug	12:28:47	0.021	320	8-Aug	13:15:47	0.022
274	8-Aug	12:29:47	0.022	321	8-Aug	13:16:47	0.025
275	8-Aug	12:30:47	0.021	322	8-Aug	13:17:47	0.022
276	8-Aug	12:31:47	0.035	323	8-Aug	13:18:47	0.028
277	8-Aug	12:32:47	0.02	324	8-Aug	13:19:47	0.027
278	8-Aug	12:33:47	0.02	325	8-Aug	13:20:47	0.058
279	8-Aug	12:34:47	0.022	326	8-Aug	13:21:47	0.044
280	8-Aug	12:35:47	0.021	327	8-Aug	13:22:47	0.027
281	8-Aug	12:36:47	0.018	328	8-Aug	13:23:47	0.022
282	8-Aug	12:37:47	0.02	329	8-Aug	13:24:47	0.024
283	8-Aug	12:38:47	0.02	330	8-Aug	13:25:47	0.023
284	8-Aug	12:39:47	0.02	331	8-Aug	13:26:47	0.03
285	8-Aug	12:40:47	0.064	332	8-Aug	13:27:47	0.046
286	8-Aug	12:41:47	0.018	333	8-Aug	13:28:47	0.023
287	8-Aug	12:42:47	0.02	334	8-Aug	13:29:47	0.023
288	8-Aug	12:43:47	0.019	335	8-Aug	13:30:47	0.026
289	8-Aug	12:44:47	0.019	336	8-Aug	13:31:47	0.032
290	8-Aug	12:45:47	0.019	337	8-Aug	13:32:47	0.023
291	8-Aug	12:46:47	0.021	338	8-Aug	13:33:47	0.021
292	8-Aug	12:47:47	0.019	339	8-Aug	13:34:47	0.019
293	8-Aug	12:48:47	0.023	340	8-Aug	13:35:47	0.02
294	8-Aug	12:49:47	0.019	341	8-Aug	13:36:47	0.02
295	8-Aug	12:50:47	0.016	342	8-Aug	13:37:47	0.019
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

343	8-Aug	13:38:47	0.022	390	8-Aug	14:25:47	0.035
344	8-Aug	13:39:47	0.027	391	8-Aug	14:26:47	0.044
345	8-Aug	13:40:47	0.022	392	8-Aug	14:27:47	0.043
346	8-Aug	13:41:47	0.02	393	8-Aug	14:28:47	0.043
347	8-Aug	13:42:47	0.019	394	8-Aug	14:29:47	0.043
348	8-Aug	13:43:47	0.021	395	8-Aug	14:30:47	0.029
349	8-Aug	13:44:47	0.024	396	8-Aug	14:31:47	0.046
350	8-Aug	13:45:47	0.022	397	8-Aug	14:32:47	0.112
351	8-Aug	13:46:47	0.019	398	8-Aug	14:33:47	0.689
352	8-Aug	13:47:47	0.02	399	8-Aug	14:34:47	0.577
353	8-Aug	13:48:47	0.214	400	8-Aug	14:35:47	0.213
354	8-Aug	13:49:47	0.912	401	8-Aug	14:36:47	0.82
355	8-Aug	13:50:47	0.449	402	8-Aug	14:37:47	1.498
356	8-Aug	13:51:47	0.243	403	8-Aug	14:38:47	0.639
357	8-Aug	13:52:47	0.203	404	8-Aug	14:39:47	0.145
358	8-Aug	13:53:47	0.125	405	8-Aug	14:40:47	0.234
359	8-Aug	13:54:47	0.381	406	8-Aug	14:41:47	0.098
360	8-Aug	13:55:47	1.26	407	8-Aug	14:42:47	0.106
361	8-Aug	13:56:47	1.004	408	8-Aug	14:43:47	0.229
362	8-Aug	13:57:47	2.834	409	8-Aug	14:44:47	0.398
363	8-Aug	13:58:47	5.07	410	8-Aug	14:45:47	0.943
364	8-Aug	13:59:47	3.649	411	8-Aug	14:46:47	0.272
365	8-Aug	14:00:47	3.229	412	8-Aug	14:47:47	0.777
366	8-Aug	14:01:47	0.65	413	8-Aug	14:48:47	0.204
367	8-Aug	14:02:47	1.437	414	8-Aug	14:49:47	0.095
368	8-Aug	14:03:47	0.896	415	8-Aug	14:50:47	0.346
369	8-Aug	14:04:47	0.932	416	8-Aug	14:51:47	0.304
370	8-Aug	14:05:47	0.278	417	8-Aug	14:52:47	1.258
371	8-Aug	14:06:47	0.194	418	8-Aug	14:53:47	0.374
372	8-Aug	14:07:47	1.718	419	8-Aug	14:54:47	0.18
373	8-Aug	14:08:47	0.858	420	8-Aug	14:55:47	0.135
374	8-Aug	14:09:47	0.483	421	8-Aug	14:56:47	0.166
375	8-Aug	14:10:47	1.532	422	8-Aug	14:57:47	0.197
376	8-Aug	14:11:47	0.826	423	8-Aug	14:58:47	0.395
377	8-Aug	14:12:47	0.132	424	8-Aug	14:59:47	0.31
378	8-Aug	14:13:47	0.412	425	8-Aug	15:00:47	0.224
379	8-Aug	14:14:47	0.687	426	8-Aug	15:01:47	0.282
380	8-Aug	14:15:47	0.465	427	8-Aug	15:02:47	1.331
381	8-Aug	14:16:47	0.409	428	8-Aug	15:03:47	0.405
382	8-Aug	14:17:47	0.68	429	8-Aug	15:04:47	0.118
383	8-Aug	14:18:47	2.185	430	8-Aug	15:05:47	0.262
384	8-Aug	14:19:47	1.561	431	8-Aug	15:06:47	0.241
385	8-Aug	14:20:47	0.141	432	8-Aug	15:07:47	0.68
386	8-Aug	14:21:47	0.047	433	8-Aug	15:08:47	4.46
387	8-Aug	14:22:47	0.053	434	8-Aug	15:09:47	3.576
388	8-Aug	14:23:47	0.038	435	8-Aug	15:10:47	0.612
389	8-Aug	14:24:47	0.05	436	8-Aug	15:11:47	2.478

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

437	8-Aug	15:12:47	0.843
438	8-Aug	15:13:47	0.586
439	8-Aug	15:14:47	0.14
440	8-Aug	15:15:47	0.167
441	8-Aug	15:16:47	0.369
442	8-Aug	15:17:47	0.235
443	8-Aug	15:18:47	0.507
444	8-Aug	15:19:47	0.164
445	8-Aug	15:20:47	0.374
446	8-Aug	15:21:47	0.35
447	8-Aug	15:22:47	0.303
448	8-Aug	15:23:47	0.667
449	8-Aug	15:24:47	0.44
450	8-Aug	15:25:47	0.423
451	8-Aug	15:26:47	0.424
452	8-Aug	15:27:47	0.582
453	8-Aug	15:28:47	0.362
454	8-Aug	15:29:47	0.151
455	8-Aug	15:30:47	0.331
456	8-Aug	15:31:47	0.398
457	8-Aug	15:32:47	0.467
458	8-Aug	15:33:47	0.817
459	8-Aug	15:34:47	0.2
460	8-Aug	15:35:47	0.08
461	8-Aug	15:36:47	0.084
462	8-Aug	15:37:47	0.047
463	8-Aug	15:38:47	0.071
464	8-Aug	15:39:47	0.073
465	8-Aug	15:40:47	0.06
466	8-Aug	15:41:47	0.12
467	8-Aug	15:42:47	0.066
468	8-Aug	15:43:47	0.052

pDR-1000 S/N: 04881
User ID: DuPont Site #1
Tag Number: 02
Number of logged points: 397
Start time and date: 07:39:27 08-Aug
Elapsed time: 06:37:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 9.289 mg/m³
Time at maximum: 08:04:30 Aug 08
Max STEL Concentration: 0.973 mg/m³
Time at max STEL: 11:30:57 Aug 08
Overall Avg Conc: 0.169 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	8-Aug	07:40:27	0.012	33	8-Aug	08:12:27	0.005
2	8-Aug	07:41:27	0.003	34	8-Aug	08:13:27	0.009
3	8-Aug	07:42:27	0.009	35	8-Aug	08:14:27	0.005
4	8-Aug	07:43:27	0.011	36	8-Aug	08:15:27	0.003
5	8-Aug	07:44:27	0.127	37	8-Aug	08:16:27	0.011
6	8-Aug	07:45:27	0.041	38	8-Aug	08:17:27	0.002
7	8-Aug	07:46:27	0.08	39	8-Aug	08:18:27	0.002
8	8-Aug	07:47:27	0.011	40	8-Aug	08:19:27	0.001
9	8-Aug	07:48:27	0.157	41	8-Aug	08:20:27	0.008
10	8-Aug	07:49:27	0.055	42	8-Aug	08:21:27	0.382
11	8-Aug	07:50:27	0.026	43	8-Aug	08:22:27	0.166
12	8-Aug	07:51:27	0.015	44	8-Aug	08:23:27	0.187
13	8-Aug	07:52:27	0.039	45	8-Aug	08:24:27	0.17
14	8-Aug	07:53:27	0.019	46	8-Aug	08:25:27	0.034
15	8-Aug	07:54:27	0.006	47	8-Aug	08:26:27	0.008
16	8-Aug	07:55:27	0.006	48	8-Aug	08:27:27	0.006
17	8-Aug	07:56:27	0.002	49	8-Aug	08:28:27	0.006
18	8-Aug	07:57:27	0.002	50	8-Aug	08:29:27	0.007
19	8-Aug	07:58:27	0.001	51	8-Aug	08:30:27	0.004
20	8-Aug	07:59:27	0.357	52	8-Aug	08:31:27	0.001
21	8-Aug	08:00:27	0.026	53	8-Aug	08:32:27	0.002
22	8-Aug	08:01:27	0.054	54	8-Aug	08:33:27	0.003
23	8-Aug	08:02:27	0.03	55	8-Aug	08:34:27	0.007
24	8-Aug	08:03:27	0.109	56	8-Aug	08:35:27	0.01
25	8-Aug	08:04:27	1.244	57	8-Aug	08:36:27	0.006
26	8-Aug	08:05:27	0.961	58	8-Aug	08:37:27	0.005
27	8-Aug	08:06:27	0.039	59	8-Aug	08:38:27	0.002
28	8-Aug	08:07:27	0.455	60	8-Aug	08:39:27	0.001
29	8-Aug	08:08:27	0.031	61	8-Aug	08:40:27	0.004
30	8-Aug	08:09:27	0.013	62	8-Aug	08:41:27	0.001
31	8-Aug	08:10:27	0.016	63	8-Aug	08:42:27	0.192
32	8-Aug	08:11:27	0.011	64	8-Aug	08:43:27	0.064

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
65	8-Aug	08:44:27	0.037	116	8-Aug	09:35:27	0.107
66	8-Aug	08:45:27	0.02	117	8-Aug	09:36:27	0.061
67	8-Aug	08:46:27	0.002	118	8-Aug	09:37:27	0.116
68	8-Aug	08:47:27	0.021	119	8-Aug	09:38:27	0.296
69	8-Aug	08:48:27	0.006	120	8-Aug	09:39:27	0.178
70	8-Aug	08:49:27	0.022	121	8-Aug	09:40:27	0.036
71	8-Aug	08:50:27	0.011	122	8-Aug	09:41:27	0.05
72	8-Aug	08:51:27	0.016	123	8-Aug	09:42:27	0.027
73	8-Aug	08:52:27	0.049	124	8-Aug	09:43:27	0.214
74	8-Aug	08:53:27	0.204	125	8-Aug	09:44:27	0.08
75	8-Aug	08:54:27	0.074	126	8-Aug	09:45:27	0.199
76	8-Aug	08:55:27	0.021	127	8-Aug	09:46:27	0.144
77	8-Aug	08:56:27	0.005	128	8-Aug	09:47:27	0.037
78	8-Aug	08:57:27	0.01	129	8-Aug	09:48:27	0.089
79	8-Aug	08:58:27	0.013	130	8-Aug	09:49:27	0.149
80	8-Aug	08:59:27	0.179	131	8-Aug	09:50:27	0.261
81	8-Aug	09:00:27	0.366	132	8-Aug	09:51:27	0.051
82	8-Aug	09:01:27	0.539	133	8-Aug	09:52:27	0.054
83	8-Aug	09:02:27	0.114	134	8-Aug	09:53:27	0.052
84	8-Aug	09:03:27	0.2	135	8-Aug	09:54:27	0.028
85	8-Aug	09:04:27	0.264	136	8-Aug	09:55:27	0.052
86	8-Aug	09:05:27	0.097	137	8-Aug	09:56:27	0.039
87	8-Aug	09:06:27	0.272	138	8-Aug	09:57:27	0.14
88	8-Aug	09:07:27	0.613	139	8-Aug	09:58:27	0.141
89	8-Aug	09:08:27	0.192	140	8-Aug	09:59:27	0.068
90	8-Aug	09:09:27	0.419	141	8-Aug	10:00:27	0.031
91	8-Aug	09:10:27	0.453	142	8-Aug	10:01:27	0.02
92	8-Aug	09:11:27	0.156	143	8-Aug	10:02:27	0.04
93	8-Aug	09:12:27	0.183	144	8-Aug	10:03:27	0.123
94	8-Aug	09:13:27	0.074	145	8-Aug	10:04:27	0.116
95	8-Aug	09:14:27	0.091	146	8-Aug	10:05:27	0.05
96	8-Aug	09:15:27	0.144	147	8-Aug	10:06:27	0.05
97	8-Aug	09:16:27	0.087	148	8-Aug	10:07:27	0.046
98	8-Aug	09:17:27	0.774	149	8-Aug	10:08:27	0.071
99	8-Aug	09:18:27	0.154	150	8-Aug	10:09:27	0.062
100	8-Aug	09:19:27	0.164	151	8-Aug	10:10:27	0.125
101	8-Aug	09:20:27	0.062	152	8-Aug	10:11:27	0.142
102	8-Aug	09:21:27	0.089	153	8-Aug	10:12:27	0.072
103	8-Aug	09:22:27	0.139	154	8-Aug	10:13:27	0.042
104	8-Aug	09:23:27	0.344	155	8-Aug	10:14:27	0.203
105	8-Aug	09:24:27	0.169	156	8-Aug	10:15:27	0.23
106	8-Aug	09:25:27	0.874	157	8-Aug	10:16:27	0.044
107	8-Aug	09:26:27	0.701	158	8-Aug	10:17:27	0.26
108	8-Aug	09:27:27	0.313	159	8-Aug	10:18:27	0.849
109	8-Aug	09:28:27	0.231	160	8-Aug	10:19:27	0.101
110	8-Aug	09:29:27	0.642	161	8-Aug	10:20:27	0.19
111	8-Aug	09:30:27	0.457	162	8-Aug	10:21:27	0.141
112	8-Aug	09:31:27	0.212	163	8-Aug	10:22:27	0.232
113	8-Aug	09:32:27	0.682	164	8-Aug	10:23:27	0.036
114	8-Aug	09:33:27	0.18	165	8-Aug	10:24:27	0.059
115	8-Aug	09:34:27	0.062	166	8-Aug	10:25:27	0.156

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
167	8-Aug	10:26:27	0.124	218	8-Aug	11:17:27	3.33
168	8-Aug	10:27:27	0.062	219	8-Aug	11:18:27	1.234
169	8-Aug	10:28:27	0.152	220	8-Aug	11:19:27	1.057
170	8-Aug	10:29:27	0.054	221	8-Aug	11:20:27	0.532
171	8-Aug	10:30:27	0.066	222	8-Aug	11:21:27	0.042
172	8-Aug	10:31:27	0.264	223	8-Aug	11:22:27	0.033
173	8-Aug	10:32:27	3.541	224	8-Aug	11:23:27	0.481
174	8-Aug	10:33:27	0.241	225	8-Aug	11:24:27	0.196
175	8-Aug	10:34:27	0.283	226	8-Aug	11:25:27	0.191
176	8-Aug	10:35:27	0.14	227	8-Aug	11:26:27	0.789
177	8-Aug	10:36:27	0.163	228	8-Aug	11:27:27	2.504
178	8-Aug	10:37:27	0.295	229	8-Aug	11:28:27	2.78
179	8-Aug	10:38:27	0.076	230	8-Aug	11:29:27	0.742
180	8-Aug	10:39:27	0.234	231	8-Aug	11:30:27	0.11
181	8-Aug	10:40:27	0.427	232	8-Aug	11:31:27	0.08
182	8-Aug	10:41:27	0.164	233	8-Aug	11:32:27	0.205
183	8-Aug	10:42:27	0.273	234	8-Aug	11:33:27	1.003
184	8-Aug	10:43:27	0.236	235	8-Aug	11:34:27	0.683
185	8-Aug	10:44:27	0.157	236	8-Aug	11:35:27	0.166
186	8-Aug	10:45:27	2.884	237	8-Aug	11:36:27	0.196
187	8-Aug	10:46:27	0.364	238	8-Aug	11:37:27	0.21
188	8-Aug	10:47:27	0.586	239	8-Aug	11:38:27	0.397
189	8-Aug	10:48:27	0.194	240	8-Aug	11:39:27	0.288
190	8-Aug	10:49:27	0.101	241	8-Aug	11:40:27	0.257
191	8-Aug	10:50:27	0.092	242	8-Aug	11:41:27	0.307
192	8-Aug	10:51:27	0.741	243	8-Aug	11:42:27	0.172
193	8-Aug	10:52:27	0.038	244	8-Aug	11:43:27	0.352
194	8-Aug	10:53:27	0.182	245	8-Aug	11:44:27	0.318
195	8-Aug	10:54:27	0.125	246	8-Aug	11:45:27	0.205
196	8-Aug	10:55:27	0.12	247	8-Aug	11:46:27	0.208
197	8-Aug	10:56:27	0.065	248	8-Aug	11:47:27	0.261
198	8-Aug	10:57:27	0.041	249	8-Aug	11:48:27	0.277
199	8-Aug	10:58:27	0.07	250	8-Aug	11:49:27	0.299
200	8-Aug	10:59:27	0.044	251	8-Aug	11:50:27	0.283
201	8-Aug	11:00:27	0.138	252	8-Aug	11:51:27	0.331
202	8-Aug	11:01:27	0.17	253	8-Aug	11:52:27	0.158
203	8-Aug	11:02:27	0.169	254	8-Aug	11:53:27	0.182
204	8-Aug	11:03:27	0.267	255	8-Aug	11:54:27	0.628
205	8-Aug	11:04:27	0.527	256	8-Aug	11:55:27	0.172
206	8-Aug	11:05:27	0.171	257	8-Aug	11:56:27	0.139
207	8-Aug	11:06:27	0.098	258	8-Aug	11:57:27	0.088
208	8-Aug	11:07:27	0.053	259	8-Aug	11:58:27	0
209	8-Aug	11:08:27	0.448	260	8-Aug	11:59:27	0.011
210	8-Aug	11:09:27	0.146	261	8-Aug	12:00:27	0.002
211	8-Aug	11:10:27	0.103	262	8-Aug	12:01:27	0
212	8-Aug	11:11:27	0.113	263	8-Aug	12:02:27	0
213	8-Aug	11:12:27	1.025	264	8-Aug	12:03:27	0
214	8-Aug	11:13:27	0.542	265	8-Aug	12:04:27	0.001
215	8-Aug	11:14:27	0.111	266	8-Aug	12:05:27	0
216	8-Aug	11:15:27	0.087	267	8-Aug	12:06:27	0
217	8-Aug	11:16:27	0.524	268	8-Aug	12:07:27	0

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
269	8-Aug	12:08:27	0	320	8-Aug	12:59:27	0
270	8-Aug	12:09:27	0	321	8-Aug	13:00:27	0
271	8-Aug	12:10:27	0	322	8-Aug	13:01:27	0
272	8-Aug	12:11:27	0	323	8-Aug	13:02:27	0.001
273	8-Aug	12:12:27	0	324	8-Aug	13:03:27	0.006
274	8-Aug	12:13:27	0	325	8-Aug	13:04:27	0.01
275	8-Aug	12:14:27	0	326	8-Aug	13:05:27	0
276	8-Aug	12:15:27	0.002	327	8-Aug	13:06:27	0
277	8-Aug	12:16:27	0	328	8-Aug	13:07:27	0
278	8-Aug	12:17:27	0	329	8-Aug	13:08:27	0.001
279	8-Aug	12:18:27	0	330	8-Aug	13:09:27	0.014
280	8-Aug	12:19:27	0	331	8-Aug	13:10:27	0.002
281	8-Aug	12:20:27	0	332	8-Aug	13:11:27	0
282	8-Aug	12:21:27	0	333	8-Aug	13:12:27	0
283	8-Aug	12:22:27	0	334	8-Aug	13:13:27	0.001
284	8-Aug	12:23:27	0	335	8-Aug	13:14:27	0
285	8-Aug	12:24:27	0	336	8-Aug	13:15:27	0
286	8-Aug	12:25:27	0	337	8-Aug	13:16:27	0
287	8-Aug	12:26:27	0	338	8-Aug	13:17:27	0
288	8-Aug	12:27:27	0	339	8-Aug	13:18:27	0
289	8-Aug	12:28:27	0	340	8-Aug	13:19:27	0
290	8-Aug	12:29:27	0	341	8-Aug	13:20:27	0
291	8-Aug	12:30:27	0.001	342	8-Aug	13:21:27	0
292	8-Aug	12:31:27	0	343	8-Aug	13:22:27	0
293	8-Aug	12:32:27	0	344	8-Aug	13:23:27	0
294	8-Aug	12:33:27	0	345	8-Aug	13:24:27	0.256
295	8-Aug	12:34:27	0	346	8-Aug	13:25:27	0.123
296	8-Aug	12:35:27	0	347	8-Aug	13:26:27	0.553
297	8-Aug	12:36:27	0	348	8-Aug	13:27:27	0.085
298	8-Aug	12:37:27	0	349	8-Aug	13:28:27	0.022
299	8-Aug	12:38:27	0	350	8-Aug	13:29:27	0.086
300	8-Aug	12:39:27	0	351	8-Aug	13:30:27	0.048
301	8-Aug	12:40:27	0	352	8-Aug	13:31:27	0.298
302	8-Aug	12:41:27	0	353	8-Aug	13:32:27	0.169
303	8-Aug	12:42:27	0	354	8-Aug	13:33:27	0.045
304	8-Aug	12:43:27	0	355	8-Aug	13:34:27	0.009
305	8-Aug	12:44:27	0	356	8-Aug	13:35:27	0
306	8-Aug	12:45:27	0	357	8-Aug	13:36:27	0
307	8-Aug	12:46:27	0	358	8-Aug	13:37:27	0
308	8-Aug	12:47:27	0	359	8-Aug	13:38:27	0
309	8-Aug	12:48:27	0.011	360	8-Aug	13:39:27	0
310	8-Aug	12:49:27	0	361	8-Aug	13:40:27	0.114
311	8-Aug	12:50:27	0	362	8-Aug	13:41:27	0.003
312	8-Aug	12:51:27	0	363	8-Aug	13:42:27	0.008
313	8-Aug	12:52:27	0	364	8-Aug	13:43:27	0
314	8-Aug	12:53:27	0.007	365	8-Aug	13:44:27	1.514
315	8-Aug	12:54:27	0	366	8-Aug	13:45:27	0.39
316	8-Aug	12:55:27	0	367	8-Aug	13:46:27	0.001
317	8-Aug	12:56:27	0	368	8-Aug	13:47:27	0
318	8-Aug	12:57:27	0	369	8-Aug	13:48:27	0.007
319	8-Aug	12:58:27	0	370	8-Aug	13:49:27	0.089

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
371	8-Aug	13:50:27	0.076				
372	8-Aug	13:51:27	0				
373	8-Aug	13:52:27	0				
374	8-Aug	13:53:27	0				
375	8-Aug	13:54:27	0.007				
376	8-Aug	13:55:27	0				
377	8-Aug	13:56:27	0				
378	8-Aug	13:57:27	0.422				
379	8-Aug	13:58:27	0.045				
380	8-Aug	13:59:27	0.133				
381	8-Aug	14:00:27	0.437				
382	8-Aug	14:01:27	0.715				
383	8-Aug	14:02:27	0.229				
384	8-Aug	14:03:27	0.326				
385	8-Aug	14:04:27	0.289				
386	8-Aug	14:05:27	0				
387	8-Aug	14:06:27	0.001				
388	8-Aug	14:07:27	0.01				
389	8-Aug	14:08:27	0.097				
390	8-Aug	14:09:27	0.064				
391	8-Aug	14:10:27	0.164				
392	8-Aug	14:11:27	0				
393	8-Aug	14:12:27	0				
394	8-Aug	14:13:27	0				
395	8-Aug	14:14:27	0.069				
396	8-Aug	14:15:27	0.024				
397	8-Aug	14:16:27	0.047				

August 22, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 01
Number of logged points: 207
Start time and date: 07:57:44 22-Aug
Elapsed time: 03:27:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 39.840 mg/m³
Time at maximum: 08:50:00 Aug 22
Max STEL Concentration: 3.413 mg/m³
Time at max STEL: 11:10:14 Aug 22
Overall Avg Conc: 1.515 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	22-Aug	07:58:44	0.716	29	22-Aug	08:26:44	0.458
2	22-Aug	07:59:44	0.009	30	22-Aug	08:27:44	0.43
3	22-Aug	08:00:44	0.006	31	22-Aug	08:28:44	4.046
4	22-Aug	08:01:44	0.006	32	22-Aug	08:29:44	1.751
5	22-Aug	08:02:44	0.006	33	22-Aug	08:30:44	3.138
6	22-Aug	08:03:44	0.007	34	22-Aug	08:31:44	0.6
7	22-Aug	08:04:44	0.014	35	22-Aug	08:32:44	2.062
8	22-Aug	08:05:44	0.002	36	22-Aug	08:33:44	0.942
9	22-Aug	08:06:44	0.054	37	22-Aug	08:34:44	0.295
10	22-Aug	08:07:44	0.133	38	22-Aug	08:35:44	0.695
11	22-Aug	08:08:44	0.224	39	22-Aug	08:36:44	2.048
12	22-Aug	08:09:44	0.097	40	22-Aug	08:37:44	2.258
13	22-Aug	08:10:44	0.075	41	22-Aug	08:38:44	3.077
14	22-Aug	08:11:44	0.07	42	22-Aug	08:39:44	0.275
15	22-Aug	08:12:44	0.087	43	22-Aug	08:40:44	0.271
16	22-Aug	08:13:44	0.102	44	22-Aug	08:41:44	0.724
17	22-Aug	08:14:44	0.094	45	22-Aug	08:42:44	0.903
18	22-Aug	08:15:44	0.106	46	22-Aug	08:43:44	1.911
19	22-Aug	08:16:44	0.345	47	22-Aug	08:44:44	2.815
20	22-Aug	08:17:44	0.389	48	22-Aug	08:45:44	6.69
21	22-Aug	08:18:44	0.399	49	22-Aug	08:46:44	4.81
22	22-Aug	08:19:44	0.433	50	22-Aug	08:47:44	2.993
23	22-Aug	08:20:44	0.048	51	22-Aug	08:48:44	1.384
24	22-Aug	08:21:44	0.131	52	22-Aug	08:49:44	0.462
25	22-Aug	08:22:44	0.82	53	22-Aug	08:50:44	9.27
26	22-Aug	08:23:44	0.216	54	22-Aug	08:51:44	3.009
27	22-Aug	08:24:44	0.257	55	22-Aug	08:52:44	2.029
28	22-Aug	08:25:44	0.204	56	22-Aug	08:53:44	1.804

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
57	22-Aug	08:54:44	1.315	104	22-Aug	09:41:44	0.931
58	22-Aug	08:55:44	0.689	105	22-Aug	09:42:44	0.422
59	22-Aug	08:56:44	1.174	106	22-Aug	09:43:44	2.85
60	22-Aug	08:57:44	1.15	107	22-Aug	09:44:44	1.715
61	22-Aug	08:58:44	0.258	108	22-Aug	09:45:44	2.015
62	22-Aug	08:59:44	0.408	109	22-Aug	09:46:44	1.982
63	22-Aug	09:00:44	0.496	110	22-Aug	09:47:44	0.575
64	22-Aug	09:01:44	0.843	111	22-Aug	09:48:44	0.914
65	22-Aug	09:02:44	1.995	112	22-Aug	09:49:44	3.09
66	22-Aug	09:03:44	1.361	113	22-Aug	09:50:44	1.342
67	22-Aug	09:04:44	0.842	114	22-Aug	09:51:44	0.874
68	22-Aug	09:05:44	0.425	115	22-Aug	09:52:44	0.745
69	22-Aug	09:06:44	0.265	116	22-Aug	09:53:44	0.306
70	22-Aug	09:07:44	0.164	117	22-Aug	09:54:44	0.784
71	22-Aug	09:08:44	0.58	118	22-Aug	09:55:44	0.769
72	22-Aug	09:09:44	0.686	119	22-Aug	09:56:44	1.477
73	22-Aug	09:10:44	0.373	120	22-Aug	09:57:44	0.564
74	22-Aug	09:11:44	0.193	121	22-Aug	09:58:44	1.668
75	22-Aug	09:12:44	0.286	122	22-Aug	09:59:44	2.683
76	22-Aug	09:13:44	0.094	123	22-Aug	10:00:44	0.746
77	22-Aug	09:14:44	0.576	124	22-Aug	10:01:44	1.346
78	22-Aug	09:15:44	0.175	125	22-Aug	10:02:44	1.301
79	22-Aug	09:16:44	0.29	126	22-Aug	10:03:44	2.223
80	22-Aug	09:17:44	1.793	127	22-Aug	10:04:44	1.134
81	22-Aug	09:18:44	0.527	128	22-Aug	10:05:44	1.035
82	22-Aug	09:19:44	0.347	129	22-Aug	10:06:44	2.019
83	22-Aug	09:20:44	0.521	130	22-Aug	10:07:44	5.25
84	22-Aug	09:21:44	0.253	131	22-Aug	10:08:44	2.884
85	22-Aug	09:22:44	0.643	132	22-Aug	10:09:44	4.84
86	22-Aug	09:23:44	0.137	133	22-Aug	10:10:44	0.765
87	22-Aug	09:24:44	0.101	134	22-Aug	10:11:44	1.165
88	22-Aug	09:25:44	0.044	135	22-Aug	10:12:44	1.908
89	22-Aug	09:26:44	0.034	136	22-Aug	10:13:44	1.59
90	22-Aug	09:27:44	0.011	137	22-Aug	10:14:44	5.12
91	22-Aug	09:28:44	0	138	22-Aug	10:15:44	0.996
92	22-Aug	09:29:44	0.394	139	22-Aug	10:16:44	0.833
93	22-Aug	09:30:44	0.352	140	22-Aug	10:17:44	2.086
94	22-Aug	09:31:44	0.166	141	22-Aug	10:18:44	1.724
95	22-Aug	09:32:44	0.099	142	22-Aug	10:19:44	0.797
96	22-Aug	09:33:44	0.893	143	22-Aug	10:20:44	0.632
97	22-Aug	09:34:44	0.848	144	22-Aug	10:21:44	1.207
98	22-Aug	09:35:44	1.584	145	22-Aug	10:22:44	0.723
99	22-Aug	09:36:44	2.174	146	22-Aug	10:23:44	0.456
100	22-Aug	09:37:44	1.806	147	22-Aug	10:24:44	0.455
101	22-Aug	09:38:44	1.053	148	22-Aug	10:25:44	1.194
102	22-Aug	09:39:44	0.834	149	22-Aug	10:26:44	1.006
103	22-Aug	09:40:44	0.745	150	22-Aug	10:27:44	1.943

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
151	22-Aug	10:28:44	1.135	198	22-Aug	11:15:44	1.365
152	22-Aug	10:29:44	1.037	199	22-Aug	11:16:44	1.105
153	22-Aug	10:30:44	1.059	200	22-Aug	11:17:44	1.764
154	22-Aug	10:31:44	1.133	201	22-Aug	11:18:44	2.106
155	22-Aug	10:32:44	1.3	202	22-Aug	11:19:44	1.577
156	22-Aug	10:33:44	1.93	203	22-Aug	11:20:44	3.037
157	22-Aug	10:34:44	2.491	204	22-Aug	11:21:44	4.4
158	22-Aug	10:35:44	1.097	205	22-Aug	11:22:44	3.748
159	22-Aug	10:36:44	1.098	206	22-Aug	11:23:44	1.932
160	22-Aug	10:37:44	0.986	207	22-Aug	11:24:44	6.08
161	22-Aug	10:38:44	1.457				
162	22-Aug	10:39:44	0.765				
163	22-Aug	10:40:44	2.414				
164	22-Aug	10:41:44	8.69				
165	22-Aug	10:42:44	8.21				
166	22-Aug	10:43:44	0.72				
167	22-Aug	10:44:44	1.334				
168	22-Aug	10:45:44	1.163				
169	22-Aug	10:46:44	3.782				
170	22-Aug	10:47:44	1.596				
171	22-Aug	10:48:44	1.355				
172	22-Aug	10:49:44	2.631				
173	22-Aug	10:50:44	1.841				
174	22-Aug	10:51:44	1.331				
175	22-Aug	10:52:44	1.389				
176	22-Aug	10:53:44	2.256				
177	22-Aug	10:54:44	3.097				
178	22-Aug	10:55:44	3.233				
179	22-Aug	10:56:44	2.831				
180	22-Aug	10:57:44	3.482				
181	22-Aug	10:58:44	2.769				
182	22-Aug	10:59:44	1.396				
183	22-Aug	11:00:44	1.25				
184	22-Aug	11:01:44	3.64				
185	22-Aug	11:02:44	1.377				
186	22-Aug	11:03:44	4.026				
187	22-Aug	11:04:44	0.875				
188	22-Aug	11:05:44	1.429				
189	22-Aug	11:06:44	4.21				
190	22-Aug	11:07:44	3.939				
191	22-Aug	11:08:44	10.72				
192	22-Aug	11:09:44	4.89				
193	22-Aug	11:10:44	3.278				
194	22-Aug	11:11:44	1.181				
195	22-Aug	11:12:44	3.433				
196	22-Aug	11:13:44	1.185				
197	22-Aug	11:14:44	2.222				

pDR-1000 S/N: 04878
User ID: DuPont Site PDR-3
Tag Number: 01
Number of logged points: 139
Start time and date: 08:01:18 22-Aug
Elapsed time: 02:19:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 29.447 mg/m³
Time at maximum: 09:54:27 Aug 22
Max STEL Concentration: 1.151 mg/m³
Time at max STEL: 09:55:48 Aug 22
Overall Avg Conc: 0.299 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	22-Aug	08:02:18	0.046	32	22-Aug	08:33:18	0.194
2	22-Aug	08:03:18	0.007	33	22-Aug	08:34:18	0.116
3	22-Aug	08:04:18	0.007	34	22-Aug	08:35:18	0.131
4	22-Aug	08:05:18	0.011	35	22-Aug	08:36:18	0.698
5	22-Aug	08:06:18	0.01	36	22-Aug	08:37:18	0.264
6	22-Aug	08:07:18	0.032	37	22-Aug	08:38:18	0.095
7	22-Aug	08:08:18	0.079	38	22-Aug	08:39:18	0.219
8	22-Aug	08:09:18	0.202	39	22-Aug	08:40:18	0.688
9	22-Aug	08:10:18	0.045	40	22-Aug	08:41:18	0.275
10	22-Aug	08:11:18	0.011	41	22-Aug	08:42:18	2.045
11	22-Aug	08:12:18	0.002	42	22-Aug	08:43:18	0.824
12	22-Aug	08:13:18	0.006	43	22-Aug	08:44:18	0.545
13	22-Aug	08:14:18	0	44	22-Aug	08:45:18	4.5
14	22-Aug	08:15:18	0.002	45	22-Aug	08:46:18	0.512
15	22-Aug	08:16:18	0.006	46	22-Aug	08:47:18	0.32
16	22-Aug	08:17:18	0.312	47	22-Aug	08:48:18	1.124
17	22-Aug	08:18:18	0.443	48	22-Aug	08:49:18	0.262
18	22-Aug	08:19:18	0.261	49	22-Aug	08:50:18	0.266
19	22-Aug	08:20:18	0.493	50	22-Aug	08:51:18	0.314
20	22-Aug	08:21:18	0.453	51	22-Aug	08:52:18	0.143
21	22-Aug	08:22:18	0.245	52	22-Aug	08:53:18	0.452
22	22-Aug	08:23:18	0.414	53	22-Aug	08:54:18	0.024
23	22-Aug	08:24:18	0.662	54	22-Aug	08:55:18	0
24	22-Aug	08:25:18	0.183	55	22-Aug	08:56:18	0.001
25	22-Aug	08:26:18	0.137	56	22-Aug	08:57:18	0.005
26	22-Aug	08:27:18	0.274	57	22-Aug	08:58:18	0.008
27	22-Aug	08:28:18	0.517	58	22-Aug	08:59:18	0
28	22-Aug	08:29:18	0.569	59	22-Aug	09:00:18	0.008
29	22-Aug	08:30:18	1.426	60	22-Aug	09:01:18	0.001
30	22-Aug	08:31:18	1.264	61	22-Aug	09:02:18	0.008
31	22-Aug	08:32:18	0.177	62	22-Aug	09:03:18	0

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	22-Aug	09:04:18	0.021	110	22-Aug	09:51:18	0.871
64	22-Aug	09:05:18	0.006	111	22-Aug	09:52:18	6.45
65	22-Aug	09:06:18	0	112	22-Aug	09:53:18	1.118
66	22-Aug	09:07:18	0.002	113	22-Aug	09:54:18	0.467
67	22-Aug	09:08:18	0	114	22-Aug	09:55:18	6.04
68	22-Aug	09:09:18	0	115	22-Aug	09:56:18	0.308
69	22-Aug	09:10:18	0.001	116	22-Aug	09:57:18	0.01
70	22-Aug	09:11:18	0	117	22-Aug	09:58:18	0.002
71	22-Aug	09:12:18	0.002	118	22-Aug	09:59:18	0.022
72	22-Aug	09:13:18	0.019	119	22-Aug	10:00:18	0.01
73	22-Aug	09:14:18	0	120	22-Aug	10:01:18	0
74	22-Aug	09:15:18	0.002	121	22-Aug	10:02:18	0
75	22-Aug	09:16:18	0.008	122	22-Aug	10:03:18	0.002
76	22-Aug	09:17:18	0.004	123	22-Aug	10:04:18	0.009
77	22-Aug	09:18:18	0	124	22-Aug	10:05:18	0.01
78	22-Aug	09:19:18	0.004	125	22-Aug	10:06:18	0.012
79	22-Aug	09:20:18	0.021	126	22-Aug	10:07:18	0.11
80	22-Aug	09:21:18	0.001	127	22-Aug	10:08:18	0.795
81	22-Aug	09:22:18	0	128	22-Aug	10:09:18	0.133
82	22-Aug	09:23:18	0	129	22-Aug	10:10:18	0.112
83	22-Aug	09:24:18	0	130	22-Aug	10:11:18	0.017
84	22-Aug	09:25:18	0	131	22-Aug	10:12:18	0
85	22-Aug	09:26:18	0	132	22-Aug	10:13:18	0.055
86	22-Aug	09:27:18	0	133	22-Aug	10:14:18	0.015
87	22-Aug	09:28:18	0	134	22-Aug	10:15:18	0.003
88	22-Aug	09:29:18	0	135	22-Aug	10:16:18	0.236
89	22-Aug	09:30:18	0	136	22-Aug	10:17:18	0.128
90	22-Aug	09:31:18	0	137	22-Aug	10:18:18	0.001
91	22-Aug	09:32:18	0	138	22-Aug	10:19:18	0.009
92	22-Aug	09:33:18	0	139	22-Aug	10:20:18	0.301
93	22-Aug	09:34:18	0				
94	22-Aug	09:35:18	0				
95	22-Aug	09:36:18	0				
96	22-Aug	09:37:18	0.564				
97	22-Aug	09:38:18	0.117				
98	22-Aug	09:39:18	0.124				
99	22-Aug	09:40:18	0.036				
100	22-Aug	09:41:18	0.245				
101	22-Aug	09:42:18	0.199				
102	22-Aug	09:43:18	0.286				
103	22-Aug	09:44:18	0.319				
104	22-Aug	09:45:18	0.319				
105	22-Aug	09:46:18	0.118				
106	22-Aug	09:47:18	0.278				
107	22-Aug	09:48:18	0.082				
108	22-Aug	09:49:18	0.176				
109	22-Aug	09:50:18	0.184				

pDR-1000 S/N: 04881
User ID: DuPont Site PDR-3
Tag Number: 01
Number of logged points: 153
Start time and date: 08:02:26 22-Aug
Elapsed time: 02:33:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 9.045 mg/m³
Time at maximum: 09:39:48 Aug 22
Max STEL Concentration: 0.471 mg/m³
Time at max STEL: 09:53:26 Aug 22
Overall Avg Conc: 0.189 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	22-Aug	08:03:26	0.013	32	22-Aug	08:34:26	0.113
2	22-Aug	08:04:26	0.016	33	22-Aug	08:35:26	0.07
3	22-Aug	08:05:26	0.014	34	22-Aug	08:36:26	0.065
4	22-Aug	08:06:26	0.012	35	22-Aug	08:37:26	0.08
5	22-Aug	08:07:26	0.099	36	22-Aug	08:38:26	0.281
6	22-Aug	08:08:26	0.141	37	22-Aug	08:39:26	0.058
7	22-Aug	08:09:26	0.011	38	22-Aug	08:40:26	0.083
8	22-Aug	08:10:26	0.004	39	22-Aug	08:41:26	0.083
9	22-Aug	08:11:26	0.003	40	22-Aug	08:42:26	0.149
10	22-Aug	08:12:26	0.006	41	22-Aug	08:43:26	0.98
11	22-Aug	08:13:26	0.001	42	22-Aug	08:44:26	0.211
12	22-Aug	08:14:26	0.015	43	22-Aug	08:45:26	0.159
13	22-Aug	08:15:26	0.007	44	22-Aug	08:46:26	0.222
14	22-Aug	08:16:26	0.341	45	22-Aug	08:47:26	0.218
15	22-Aug	08:17:26	0.485	46	22-Aug	08:48:26	0.084
16	22-Aug	08:18:26	0.48	47	22-Aug	08:49:26	0.119
17	22-Aug	08:19:26	0.258	48	22-Aug	08:50:26	0.172
18	22-Aug	08:20:26	0.198	49	22-Aug	08:51:26	0.111
19	22-Aug	08:21:26	0.069	50	22-Aug	08:52:26	0.117
20	22-Aug	08:22:26	0.136	51	22-Aug	08:53:26	0.088
21	22-Aug	08:23:26	0.103	52	22-Aug	08:54:26	0.205
22	22-Aug	08:24:26	0.091	53	22-Aug	08:55:26	0.135
23	22-Aug	08:25:26	0.069	54	22-Aug	08:56:26	0.255
24	22-Aug	08:26:26	0.074	55	22-Aug	08:57:26	0.369
25	22-Aug	08:27:26	0.2	56	22-Aug	08:58:26	0.213
26	22-Aug	08:28:26	0.077	57	22-Aug	08:59:26	0.093
27	22-Aug	08:29:26	0.179	58	22-Aug	09:00:26	0.323
28	22-Aug	08:30:26	0.059	59	22-Aug	09:01:26	0.292
29	22-Aug	08:31:26	0.046	60	22-Aug	09:02:26	0.118
30	22-Aug	08:32:26	0.236	61	22-Aug	09:03:26	0.058
31	22-Aug	08:33:26	0.237	62	22-Aug	09:04:26	0.33

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	22-Aug	09:05:26	0.226	110	22-Aug	09:52:26	0.134
64	22-Aug	09:06:26	0.243	111	22-Aug	09:53:26	0.127
65	22-Aug	09:07:26	0.157	112	22-Aug	09:54:26	0.067
66	22-Aug	09:08:26	0.103	113	22-Aug	09:55:26	0.024
67	22-Aug	09:09:26	0.063	114	22-Aug	09:56:26	0.015
68	22-Aug	09:10:26	0.115	115	22-Aug	09:57:26	0.024
69	22-Aug	09:11:26	0.197	116	22-Aug	09:58:26	0.06
70	22-Aug	09:12:26	0.086	117	22-Aug	09:59:26	0.283
71	22-Aug	09:13:26	0.208	118	22-Aug	10:00:26	0.113
72	22-Aug	09:14:26	0.097	119	22-Aug	10:01:26	0.159
73	22-Aug	09:15:26	0.127	120	22-Aug	10:02:26	0.077
74	22-Aug	09:16:26	0.162	121	22-Aug	10:03:26	0.049
75	22-Aug	09:17:26	0.064	122	22-Aug	10:04:26	0.036
76	22-Aug	09:18:26	0.185	123	22-Aug	10:05:26	0.019
77	22-Aug	09:19:26	0.072	124	22-Aug	10:06:26	0.086
78	22-Aug	09:20:26	0.016	125	22-Aug	10:07:26	0.23
79	22-Aug	09:21:26	0.062	126	22-Aug	10:08:26	0.056
80	22-Aug	09:22:26	0.064	127	22-Aug	10:09:26	0.058
81	22-Aug	09:23:26	0.182	128	22-Aug	10:10:26	0.018
82	22-Aug	09:24:26	0.146	129	22-Aug	10:11:26	0.073
83	22-Aug	09:25:26	0.13	130	22-Aug	10:12:26	0.393
84	22-Aug	09:26:26	0.115	131	22-Aug	10:13:26	0.064
85	22-Aug	09:27:26	0.112	132	22-Aug	10:14:26	0.06
86	22-Aug	09:28:26	0.376	133	22-Aug	10:15:26	0.095
87	22-Aug	09:29:26	0.07	134	22-Aug	10:16:26	0.043
88	22-Aug	09:30:26	0.017	135	22-Aug	10:17:26	0.149
89	22-Aug	09:31:26	0.065	136	22-Aug	10:18:26	0.47
90	22-Aug	09:32:26	0.061	137	22-Aug	10:19:26	1.123
91	22-Aug	09:33:26	0.166	138	22-Aug	10:20:26	0.206
92	22-Aug	09:34:26	0.132	139	22-Aug	10:21:26	0.147
93	22-Aug	09:35:26	0.072	140	22-Aug	10:22:26	0.101
94	22-Aug	09:36:26	0.352	141	22-Aug	10:23:26	0.32
95	22-Aug	09:37:26	0.091	142	22-Aug	10:24:26	0.674
96	22-Aug	09:38:26	0.064	143	22-Aug	10:25:26	0.109
97	22-Aug	09:39:26	0.908	144	22-Aug	10:26:26	0.045
98	22-Aug	09:40:26	3.286	145	22-Aug	10:27:26	0.24
99	22-Aug	09:41:26	0.146	146	22-Aug	10:28:26	0.333
100	22-Aug	09:42:26	0.094	147	22-Aug	10:29:26	0.154
101	22-Aug	09:43:26	0.09	148	22-Aug	10:30:26	0.659
102	22-Aug	09:44:26	0.179	149	22-Aug	10:31:26	0.434
103	22-Aug	09:45:26	0.117	150	22-Aug	10:32:26	0.171
104	22-Aug	09:46:26	0.029	151	22-Aug	10:33:26	0.076
105	22-Aug	09:47:26	0.086	152	22-Aug	10:34:26	0.092
106	22-Aug	09:48:26	0.31	153	22-Aug	10:35:26	0.027
107	22-Aug	09:49:26	0.088				
108	22-Aug	09:50:26	0.16				
109	22-Aug	09:51:26	1.317				

August 27, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 02
Number of logged points: 284
Start time and date: 07:56:07 27-Aug
Elapsed time: 04:44:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 38.806 mg/m³
Time at maximum: 09:42:22 Aug 27
Max STEL Concentration: 8.169 mg/m³
Time at max STEL: 09:48:38 Aug 27
Overall Avg Conc: 2.594 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	27-Aug	07:57:07	0	30	27-Aug	08:26:07	0.172
2	27-Aug	07:58:07	0	31	27-Aug	08:27:07	0.198
3	27-Aug	07:59:07	0	32	27-Aug	08:28:07	0.098
4	27-Aug	08:00:07	0.002	33	27-Aug	08:29:07	0.141
5	27-Aug	08:01:07	0.025	34	27-Aug	08:30:07	0.2
6	27-Aug	08:02:07	0	35	27-Aug	08:31:07	0.168
7	27-Aug	08:03:07	0.006	36	27-Aug	08:32:07	0.405
8	27-Aug	08:04:07	0	37	27-Aug	08:33:07	2.308
9	27-Aug	08:05:07	0	38	27-Aug	08:34:07	2.109
10	27-Aug	08:06:07	0	39	27-Aug	08:35:07	2.196
11	27-Aug	08:07:07	0	40	27-Aug	08:36:07	1.628
12	27-Aug	08:08:07	0	41	27-Aug	08:37:07	2.339
13	27-Aug	08:09:07	0	42	27-Aug	08:38:07	2.661
14	27-Aug	08:10:07	0	43	27-Aug	08:39:07	4.8
15	27-Aug	08:11:07	0	44	27-Aug	08:40:07	4.14
16	27-Aug	08:12:07	0.126	45	27-Aug	08:41:07	2.035
17	27-Aug	08:13:07	0.003	46	27-Aug	08:42:07	5.05
18	27-Aug	08:14:07	0	47	27-Aug	08:43:07	7.32
19	27-Aug	08:15:07	0.008	48	27-Aug	08:44:07	6.85
20	27-Aug	08:16:07	0.002	49	27-Aug	08:45:07	6.56
21	27-Aug	08:17:07	0.191	50	27-Aug	08:46:07	9.89
22	27-Aug	08:18:07	0.21	51	27-Aug	08:47:07	9.96
23	27-Aug	08:19:07	0.765	52	27-Aug	08:48:07	6.14
24	27-Aug	08:20:07	0.344	53	27-Aug	08:49:07	7.75
25	27-Aug	08:21:07	0.125	54	27-Aug	08:50:07	3.839
26	27-Aug	08:22:07	0.207	55	27-Aug	08:51:07	4.11
27	27-Aug	08:23:07	0.144	56	27-Aug	08:52:07	2.353
28	27-Aug	08:24:07	0.138	57	27-Aug	08:53:07	7.83
29	27-Aug	08:25:07	0.033	58	27-Aug	08:54:07	4.69

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
59	27-Aug	08:55:07	5.21	106	27-Aug	09:42:07	10.38
60	27-Aug	08:56:07	9.17	107	27-Aug	09:43:07	13.95
61	27-Aug	08:57:07	4.17	108	27-Aug	09:44:07	12.81
62	27-Aug	08:58:07	5.19	109	27-Aug	09:45:07	8.57
63	27-Aug	08:59:07	5.18	110	27-Aug	09:46:07	11.66
64	27-Aug	09:00:07	5.78	111	27-Aug	09:47:07	9.44
65	27-Aug	09:01:07	4.89	112	27-Aug	09:48:07	7.81
66	27-Aug	09:02:07	3.809	113	27-Aug	09:49:07	4.17
67	27-Aug	09:03:07	2.607	114	27-Aug	09:50:07	2.111
68	27-Aug	09:04:07	3.709	115	27-Aug	09:51:07	5.03
69	27-Aug	09:05:07	3.198	116	27-Aug	09:52:07	3.941
70	27-Aug	09:06:07	3.726	117	27-Aug	09:53:07	8.44
71	27-Aug	09:07:07	5.6	118	27-Aug	09:54:07	4.95
72	27-Aug	09:08:07	1.433	119	27-Aug	09:55:07	7.01
73	27-Aug	09:09:07	2.572	120	27-Aug	09:56:07	1.583
74	27-Aug	09:10:07	2.367	121	27-Aug	09:57:07	5.17
75	27-Aug	09:11:07	3.295	122	27-Aug	09:58:07	2.649
76	27-Aug	09:12:07	7.47	123	27-Aug	09:59:07	1.235
77	27-Aug	09:13:07	6.07	124	27-Aug	10:00:07	0.466
78	27-Aug	09:14:07	3.068	125	27-Aug	10:01:07	0.492
79	27-Aug	09:15:07	3.374	126	27-Aug	10:02:07	0.342
80	27-Aug	09:16:07	3.33	127	27-Aug	10:03:07	0.117
81	27-Aug	09:17:07	2.12	128	27-Aug	10:04:07	0.02
82	27-Aug	09:18:07	1.414	129	27-Aug	10:05:07	0.813
83	27-Aug	09:19:07	3.646	130	27-Aug	10:06:07	5.59
84	27-Aug	09:20:07	2.581	131	27-Aug	10:07:07	3.505
85	27-Aug	09:21:07	9.82	132	27-Aug	10:08:07	4.14
86	27-Aug	09:22:07	3.153	133	27-Aug	10:09:07	2.258
87	27-Aug	09:23:07	3.63	134	27-Aug	10:10:07	0.849
88	27-Aug	09:24:07	2.596	135	27-Aug	10:11:07	1.633
89	27-Aug	09:25:07	10.08	136	27-Aug	10:12:07	1.061
90	27-Aug	09:26:07	11.99	137	27-Aug	10:13:07	1.504
91	27-Aug	09:27:07	10.77	138	27-Aug	10:14:07	1.943
92	27-Aug	09:28:07	5.53	139	27-Aug	10:15:07	1.603
93	27-Aug	09:29:07	1.679	140	27-Aug	10:16:07	2.193
94	27-Aug	09:30:07	6.1	141	27-Aug	10:17:07	1.358
95	27-Aug	09:31:07	9.1	142	27-Aug	10:18:07	2.843
96	27-Aug	09:32:07	3.451	143	27-Aug	10:19:07	0.215
97	27-Aug	09:33:07	3.986	144	27-Aug	10:20:07	0.167
98	27-Aug	09:34:07	2.559	145	27-Aug	10:21:07	0.197
99	27-Aug	09:35:07	3.907	146	27-Aug	10:22:07	0.662
100	27-Aug	09:36:07	10.36	147	27-Aug	10:23:07	0.525
101	27-Aug	09:37:07	3.391	148	27-Aug	10:24:07	0.354
102	27-Aug	09:38:07	5.86	149	27-Aug	10:25:07	0.308
103	27-Aug	09:39:07	4.89	150	27-Aug	10:26:07	1.149
104	27-Aug	09:40:07	6.21	151	27-Aug	10:27:07	0.987
105	27-Aug	09:41:07	8.91	152	27-Aug	10:28:07	0.987

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
153	27-Aug	10:29:07	0.993	200	27-Aug	11:16:07	3.616
154	27-Aug	10:30:07	7.06	201	27-Aug	11:17:07	7.77
155	27-Aug	10:31:07	4.3	202	27-Aug	11:18:07	6.19
156	27-Aug	10:32:07	2.163	203	27-Aug	11:19:07	6.68
157	27-Aug	10:33:07	14.78	204	27-Aug	11:20:07	3.727
158	27-Aug	10:34:07	3.231	205	27-Aug	11:21:07	5.56
159	27-Aug	10:35:07	0.836	206	27-Aug	11:22:07	7.8
160	27-Aug	10:36:07	1.882	207	27-Aug	11:23:07	3.037
161	27-Aug	10:37:07	2.41	208	27-Aug	11:24:07	1.354
162	27-Aug	10:38:07	0.105	209	27-Aug	11:25:07	5.25
163	27-Aug	10:39:07	0.043	210	27-Aug	11:26:07	2.162
164	27-Aug	10:40:07	0	211	27-Aug	11:27:07	5.17
165	27-Aug	10:41:07	0.042	212	27-Aug	11:28:07	8.37
166	27-Aug	10:42:07	0.741	213	27-Aug	11:29:07	7.2
167	27-Aug	10:43:07	0.067	214	27-Aug	11:30:07	1.16
168	27-Aug	10:44:07	0	215	27-Aug	11:31:07	0.953
169	27-Aug	10:45:07	3.012	216	27-Aug	11:32:07	1.925
170	27-Aug	10:46:07	2.882	217	27-Aug	11:33:07	0.84
171	27-Aug	10:47:07	5.49	218	27-Aug	11:34:07	1.693
172	27-Aug	10:48:07	4.57	219	27-Aug	11:35:07	1.553
173	27-Aug	10:49:07	1.593	220	27-Aug	11:36:07	1.429
174	27-Aug	10:50:07	5.98	221	27-Aug	11:37:07	0.578
175	27-Aug	10:51:07	1.917	222	27-Aug	11:38:07	0.222
176	27-Aug	10:52:07	2.618	223	27-Aug	11:39:07	0.211
177	27-Aug	10:53:07	2.454	224	27-Aug	11:40:07	0.063
178	27-Aug	10:54:07	1.383	225	27-Aug	11:41:07	0.063
179	27-Aug	10:55:07	1.725	226	27-Aug	11:42:07	0.091
180	27-Aug	10:56:07	1.794	227	27-Aug	11:43:07	0.019
181	27-Aug	10:57:07	1.686	228	27-Aug	11:44:07	0.011
182	27-Aug	10:58:07	2.958	229	27-Aug	11:45:07	0.016
183	27-Aug	10:59:07	2.253	230	27-Aug	11:46:07	0.46
184	27-Aug	11:00:07	4.58	231	27-Aug	11:47:07	0.03
185	27-Aug	11:01:07	9.04	232	27-Aug	11:48:07	0.078
186	27-Aug	11:02:07	4.97	233	27-Aug	11:49:07	0.262
187	27-Aug	11:03:07	10.83	234	27-Aug	11:50:07	0.103
188	27-Aug	11:04:07	2.858	235	27-Aug	11:51:07	0.004
189	27-Aug	11:05:07	4.15	236	27-Aug	11:52:07	0.288
190	27-Aug	11:06:07	1.984	237	27-Aug	11:53:07	0.385
191	27-Aug	11:07:07	5.64	238	27-Aug	11:54:07	0.085
192	27-Aug	11:08:07	3.104	239	27-Aug	11:55:07	1.794
193	27-Aug	11:09:07	1.043	240	27-Aug	11:56:07	1.049
194	27-Aug	11:10:07	1.263	241	27-Aug	11:57:07	1.546
195	27-Aug	11:11:07	3.218	242	27-Aug	11:58:07	0.846
196	27-Aug	11:12:07	1.639	243	27-Aug	11:59:07	1.059
197	27-Aug	11:13:07	2.362	244	27-Aug	12:00:07	1.416
198	27-Aug	11:14:07	3.901	245	27-Aug	12:01:07	2.074
199	27-Aug	11:15:07	3.751	246	27-Aug	12:02:07	2.482

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
247	27-Aug	12:03:07	0.569				
248	27-Aug	12:04:07	0				
249	27-Aug	12:05:07	0.007				
250	27-Aug	12:06:07	0.01				
251	27-Aug	12:07:07	0				
252	27-Aug	12:08:07	0.651				
253	27-Aug	12:09:07	0				
254	27-Aug	12:10:07	0				
255	27-Aug	12:11:07	0.001				
256	27-Aug	12:12:07	0.004				
257	27-Aug	12:13:07	0				
258	27-Aug	12:14:07	0.054				
259	27-Aug	12:15:07	0				
260	27-Aug	12:16:07	0.034				
261	27-Aug	12:17:07	0				
262	27-Aug	12:18:07	0				
263	27-Aug	12:19:07	0				
264	27-Aug	12:20:07	0				
265	27-Aug	12:21:07	0				
266	27-Aug	12:22:07	0				
267	27-Aug	12:23:07	0				
268	27-Aug	12:24:07	0				
269	27-Aug	12:25:07	0				
270	27-Aug	12:26:07	0				
271	27-Aug	12:27:07	0				
272	27-Aug	12:28:07	0				
273	27-Aug	12:29:07	0				
274	27-Aug	12:30:07	0				
275	27-Aug	12:31:07	0				
276	27-Aug	12:32:07	0				
277	27-Aug	12:33:07	0				
278	27-Aug	12:34:07	0.001				
279	27-Aug	12:35:07	0.007				
280	27-Aug	12:36:07	0				
281	27-Aug	12:37:07	0				
282	27-Aug	12:38:07	0				
283	27-Aug	12:39:07	0				
284	27-Aug	12:40:07	0				

pDR-1000 S/N: 04878
User ID: DuPont Site PDR-3
Tag Number: 02
Number of logged points: 302
Start time and date: 07:58:00 27-Aug
Elapsed time: 05:02:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 25.915 mg/m³
Time at maximum: 10:16:03 Aug 27
Max STEL Concentration: 2.143 mg/m³
Time at max STEL: 10:25:30 Aug 27
Overall Avg Conc: 0.471 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	27-Aug	07:59:00	0.009	32	27-Aug	08:30:00	0.004
2	27-Aug	08:00:00	0.004	33	27-Aug	08:31:00	0.007
3	27-Aug	08:01:00	0.016	34	27-Aug	08:32:00	0.175
4	27-Aug	08:02:00	0.013	35	27-Aug	08:33:00	0.243
5	27-Aug	08:03:00	0.003	36	27-Aug	08:34:00	0.7
6	27-Aug	08:04:00	0.002	37	27-Aug	08:35:00	2.368
7	27-Aug	08:05:00	0.002	38	27-Aug	08:36:00	0.642
8	27-Aug	08:06:00	0.002	39	27-Aug	08:37:00	0.203
9	27-Aug	08:07:00	0.004	40	27-Aug	08:38:00	0.147
10	27-Aug	08:08:00	0.003	41	27-Aug	08:39:00	0.124
11	27-Aug	08:09:00	0.003	42	27-Aug	08:40:00	0.025
12	27-Aug	08:10:00	0.002	43	27-Aug	08:41:00	0.025
13	27-Aug	08:11:00	0.008	44	27-Aug	08:42:00	0.283
14	27-Aug	08:12:00	0.003	45	27-Aug	08:43:00	0.846
15	27-Aug	08:13:00	0.068	46	27-Aug	08:44:00	0.609
16	27-Aug	08:14:00	0.047	47	27-Aug	08:45:00	0.059
17	27-Aug	08:15:00	0.014	48	27-Aug	08:46:00	1.1
18	27-Aug	08:16:00	0.005	49	27-Aug	08:47:00	0.514
19	27-Aug	08:17:00	0.049	50	27-Aug	08:48:00	1.491
20	27-Aug	08:18:00	0.356	51	27-Aug	08:49:00	0.884
21	27-Aug	08:19:00	0.299	52	27-Aug	08:50:00	0.175
22	27-Aug	08:20:00	1.408	53	27-Aug	08:51:00	0.621
23	27-Aug	08:21:00	0.201	54	27-Aug	08:52:00	0.728
24	27-Aug	08:22:00	0.006	55	27-Aug	08:53:00	0.428
25	27-Aug	08:23:00	0.004	56	27-Aug	08:54:00	0.327
26	27-Aug	08:24:00	0.009	57	27-Aug	08:55:00	1.999
27	27-Aug	08:25:00	0.007	58	27-Aug	08:56:00	0.644
28	27-Aug	08:26:00	0.004	59	27-Aug	08:57:00	1.51
29	27-Aug	08:27:00	0.006	60	27-Aug	08:58:00	0.782
30	27-Aug	08:28:00	0.005	61	27-Aug	08:59:00	0.88
31	27-Aug	08:29:00	0.004	62	27-Aug	09:00:00	0.834

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	27-Aug	09:01:00	0.141	110	27-Aug	09:48:00	0.067
64	27-Aug	09:02:00	0.027	111	27-Aug	09:49:00	0.015
65	27-Aug	09:03:00	0.11	112	27-Aug	09:50:00	0.06
66	27-Aug	09:04:00	0.043	113	27-Aug	09:51:00	0.071
67	27-Aug	09:05:00	0.014	114	27-Aug	09:52:00	0.031
68	27-Aug	09:06:00	0.014	115	27-Aug	09:53:00	0.447
69	27-Aug	09:07:00	0.01	116	27-Aug	09:54:00	1.228
70	27-Aug	09:08:00	0.01	117	27-Aug	09:55:00	0.892
71	27-Aug	09:09:00	0.009	118	27-Aug	09:56:00	0.633
72	27-Aug	09:10:00	0.007	119	27-Aug	09:57:00	1.974
73	27-Aug	09:11:00	0.017	120	27-Aug	09:58:00	0.079
74	27-Aug	09:12:00	0.052	121	27-Aug	09:59:00	0.019
75	27-Aug	09:13:00	0.026	122	27-Aug	10:00:00	0.016
76	27-Aug	09:14:00	0.015	123	27-Aug	10:01:00	0.016
77	27-Aug	09:15:00	0.023	124	27-Aug	10:02:00	0.015
78	27-Aug	09:16:00	0.02	125	27-Aug	10:03:00	0.012
79	27-Aug	09:17:00	0.014	126	27-Aug	10:04:00	0.014
80	27-Aug	09:18:00	0.01	127	27-Aug	10:05:00	0.013
81	27-Aug	09:19:00	0.007	128	27-Aug	10:06:00	0.013
82	27-Aug	09:20:00	0.012	129	27-Aug	10:07:00	0.765
83	27-Aug	09:21:00	0.007	130	27-Aug	10:08:00	3.437
84	27-Aug	09:22:00	0.009	131	27-Aug	10:09:00	0.541
85	27-Aug	09:23:00	0.007	132	27-Aug	10:10:00	0.334
86	27-Aug	09:24:00	0.182	133	27-Aug	10:11:00	1.557
87	27-Aug	09:25:00	0.347	134	27-Aug	10:12:00	1.625
88	27-Aug	09:26:00	0.019	135	27-Aug	10:13:00	0.421
89	27-Aug	09:27:00	0.01	136	27-Aug	10:14:00	4.35
90	27-Aug	09:28:00	0.007	137	27-Aug	10:15:00	1.092
91	27-Aug	09:29:00	0.015	138	27-Aug	10:16:00	4.95
92	27-Aug	09:30:00	0.01	139	27-Aug	10:17:00	6.08
93	27-Aug	09:31:00	0.008	140	27-Aug	10:18:00	1.707
94	27-Aug	09:32:00	0.119	141	27-Aug	10:19:00	0.388
95	27-Aug	09:33:00	0.208	142	27-Aug	10:20:00	1.017
96	27-Aug	09:34:00	0.453	143	27-Aug	10:21:00	2.874
97	27-Aug	09:35:00	1.432	144	27-Aug	10:22:00	0.593
98	27-Aug	09:36:00	0.995	145	27-Aug	10:23:00	1.982
99	27-Aug	09:37:00	0.191	146	27-Aug	10:24:00	2.229
100	27-Aug	09:38:00	1.454	147	27-Aug	10:25:00	1.096
101	27-Aug	09:39:00	0.8	148	27-Aug	10:26:00	0.569
102	27-Aug	09:40:00	2.681	149	27-Aug	10:27:00	0.656
103	27-Aug	09:41:00	1.761	150	27-Aug	10:28:00	0.158
104	27-Aug	09:42:00	0.523	151	27-Aug	10:29:00	0.787
105	27-Aug	09:43:00	0.095	152	27-Aug	10:30:00	0.636
106	27-Aug	09:44:00	0.118	153	27-Aug	10:31:00	2.159
107	27-Aug	09:45:00	0.066	154	27-Aug	10:32:00	3.092
108	27-Aug	09:46:00	0.195	155	27-Aug	10:33:00	0.419
109	27-Aug	09:47:00	0.054	156	27-Aug	10:34:00	0.126

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
157	27-Aug	10:35:00	2.332	204	27-Aug	11:22:00	0.247
158	27-Aug	10:36:00	0.237	205	27-Aug	11:23:00	0.557
159	27-Aug	10:37:00	0.792	206	27-Aug	11:24:00	0.408
160	27-Aug	10:38:00	6.51	207	27-Aug	11:25:00	0.591
161	27-Aug	10:39:00	1.327	208	27-Aug	11:26:00	0.186
162	27-Aug	10:40:00	0.143	209	27-Aug	11:27:00	0.289
163	27-Aug	10:41:00	0.192	210	27-Aug	11:28:00	0.189
164	27-Aug	10:42:00	0.234	211	27-Aug	11:29:00	0.192
165	27-Aug	10:43:00	0.083	212	27-Aug	11:30:00	0.603
166	27-Aug	10:44:00	0.037	213	27-Aug	11:31:00	0.129
167	27-Aug	10:45:00	0.035	214	27-Aug	11:32:00	0.141
168	27-Aug	10:46:00	1.151	215	27-Aug	11:33:00	0.243
169	27-Aug	10:47:00	0.144	216	27-Aug	11:34:00	0.144
170	27-Aug	10:48:00	0.421	217	27-Aug	11:35:00	0.111
171	27-Aug	10:49:00	0.381	218	27-Aug	11:36:00	0.4
172	27-Aug	10:50:00	0.046	219	27-Aug	11:37:00	0.089
173	27-Aug	10:51:00	0.061	220	27-Aug	11:38:00	0.104
174	27-Aug	10:52:00	0.231	221	27-Aug	11:39:00	0.046
175	27-Aug	10:53:00	1.3	222	27-Aug	11:40:00	0.035
176	27-Aug	10:54:00	0.33	223	27-Aug	11:41:00	0.044
177	27-Aug	10:55:00	0.643	224	27-Aug	11:42:00	0.035
178	27-Aug	10:56:00	0.418	225	27-Aug	11:43:00	0.071
179	27-Aug	10:57:00	0.26	226	27-Aug	11:44:00	0.043
180	27-Aug	10:58:00	0.776	227	27-Aug	11:45:00	0.038
181	27-Aug	10:59:00	0.46	228	27-Aug	11:46:00	0.045
182	27-Aug	11:00:00	1.782	229	27-Aug	11:47:00	0.038
183	27-Aug	11:01:00	0.396	230	27-Aug	11:48:00	0.041
184	27-Aug	11:02:00	1.463	231	27-Aug	11:49:00	0.05
185	27-Aug	11:03:00	1.062	232	27-Aug	11:50:00	0.039
186	27-Aug	11:04:00	1.048	233	27-Aug	11:51:00	0.047
187	27-Aug	11:05:00	0.525	234	27-Aug	11:52:00	0.04
188	27-Aug	11:06:00	0.516	235	27-Aug	11:53:00	0.04
189	27-Aug	11:07:00	0.844	236	27-Aug	11:54:00	0.057
190	27-Aug	11:08:00	0.627	237	27-Aug	11:55:00	0.034
191	27-Aug	11:09:00	1.03	238	27-Aug	11:56:00	0.149
192	27-Aug	11:10:00	1.63	239	27-Aug	11:57:00	0.357
193	27-Aug	11:11:00	1.165	240	27-Aug	11:58:00	0.121
194	27-Aug	11:12:00	5.09	241	27-Aug	11:59:00	0.521
195	27-Aug	11:13:00	1.351	242	27-Aug	12:00:00	0.118
196	27-Aug	11:14:00	2.622	243	27-Aug	12:01:00	0.227
197	27-Aug	11:15:00	1.236	244	27-Aug	12:02:00	2.358
198	27-Aug	11:16:00	0.613	245	27-Aug	12:03:00	0.149
199	27-Aug	11:17:00	1.142	246	27-Aug	12:04:00	0.155
200	27-Aug	11:18:00	0.41	247	27-Aug	12:05:00	0.038
201	27-Aug	11:19:00	0.782	248	27-Aug	12:06:00	0.04
202	27-Aug	11:20:00	0.742	249	27-Aug	12:07:00	0.037
203	27-Aug	11:21:00	0.682	250	27-Aug	12:08:00	0.035

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
251	27-Aug	12:09:00	0.054	298	27-Aug	12:56:00	0.03
252	27-Aug	12:10:00	0.038	299	27-Aug	12:57:00	0.034
253	27-Aug	12:11:00	0.039	300	27-Aug	12:58:00	0.03
254	27-Aug	12:12:00	0.052	301	27-Aug	12:59:00	0.029
255	27-Aug	12:13:00	0.043	302	27-Aug	13:00:00	0.03
256	27-Aug	12:14:00	0.033				
257	27-Aug	12:15:00	0.033				
258	27-Aug	12:16:00	0.049				
259	27-Aug	12:17:00	0.038				
260	27-Aug	12:18:00	0.06				
261	27-Aug	12:19:00	0.033				
262	27-Aug	12:20:00	0.036				
263	27-Aug	12:21:00	0.047				
264	27-Aug	12:22:00	0.032				
265	27-Aug	12:23:00	0.031				
266	27-Aug	12:24:00	0.039				
267	27-Aug	12:25:00	0.032				
268	27-Aug	12:26:00	0.038				
269	27-Aug	12:27:00	0.034				
270	27-Aug	12:28:00	0.032				
271	27-Aug	12:29:00	0.051				
272	27-Aug	12:30:00	0.041				
273	27-Aug	12:31:00	0.041				
274	27-Aug	12:32:00	0.033				
275	27-Aug	12:33:00	0.035				
276	27-Aug	12:34:00	0.083				
277	27-Aug	12:35:00	0.038				
278	27-Aug	12:36:00	0.041				
279	27-Aug	12:37:00	0.032				
280	27-Aug	12:38:00	0.038				
281	27-Aug	12:39:00	0.033				
282	27-Aug	12:40:00	0.041				
283	27-Aug	12:41:00	0.032				
284	27-Aug	12:42:00	0.032				
285	27-Aug	12:43:00	0.032				
286	27-Aug	12:44:00	0.062				
287	27-Aug	12:45:00	0.033				
288	27-Aug	12:46:00	0.038				
289	27-Aug	12:47:00	0.041				
290	27-Aug	12:48:00	0.033				
291	27-Aug	12:49:00	0.034				
292	27-Aug	12:50:00	0.031				
293	27-Aug	12:51:00	0.033				
294	27-Aug	12:52:00	0.136				
295	27-Aug	12:53:00	0.073				
296	27-Aug	12:54:00	0.03				
297	27-Aug	12:55:00	0.032				

pDR-1000 S/N: 04881
User ID: DuPont Site PDR-3
Tag Number: 02
Number of logged points: 272
Start time and date: 07:58:50 27-Aug
Elapsed time: 04:32:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 24.541 mg/m³
Time at maximum: 10:36:23 Aug 27
Max STEL Concentration: 1.758 mg/m³
Time at max STEL: 10:47:50 Aug 27
Overall Avg Conc: 0.477 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	27-Aug	07:59:50	0.013	32	27-Aug	08:30:50	0.002
2	27-Aug	08:00:50	0.031	33	27-Aug	08:31:50	0
3	27-Aug	08:01:50	0.001	34	27-Aug	08:32:50	0
4	27-Aug	08:02:50	0.003	35	27-Aug	08:33:50	0.001
5	27-Aug	08:03:50	0.002	36	27-Aug	08:34:50	0.003
6	27-Aug	08:04:50	0.001	37	27-Aug	08:35:50	0.002
7	27-Aug	08:05:50	0.001	38	27-Aug	08:36:50	0.001
8	27-Aug	08:06:50	0	39	27-Aug	08:37:50	0.011
9	27-Aug	08:07:50	0.001	40	27-Aug	08:38:50	0.013
10	27-Aug	08:08:50	0.003	41	27-Aug	08:39:50	0.002
11	27-Aug	08:09:50	0.002	42	27-Aug	08:40:50	0.006
12	27-Aug	08:10:50	0.001	43	27-Aug	08:41:50	0.002
13	27-Aug	08:11:50	0.004	44	27-Aug	08:42:50	0.204
14	27-Aug	08:12:50	0.013	45	27-Aug	08:43:50	0.095
15	27-Aug	08:13:50	0.018	46	27-Aug	08:44:50	0.08
16	27-Aug	08:14:50	0.002	47	27-Aug	08:45:50	0.04
17	27-Aug	08:15:50	0.04	48	27-Aug	08:46:50	0.039
18	27-Aug	08:16:50	0.302	49	27-Aug	08:47:50	0.369
19	27-Aug	08:17:50	0.259	50	27-Aug	08:48:50	0.411
20	27-Aug	08:18:50	0.187	51	27-Aug	08:49:50	0.614
21	27-Aug	08:19:50	0.062	52	27-Aug	08:50:50	0.769
22	27-Aug	08:20:50	0.029	53	27-Aug	08:51:50	0.19
23	27-Aug	08:21:50	0.016	54	27-Aug	08:52:50	0.052
24	27-Aug	08:22:50	0.004	55	27-Aug	08:53:50	0.552
25	27-Aug	08:23:50	0.005	56	27-Aug	08:54:50	0.464
26	27-Aug	08:24:50	0.003	57	27-Aug	08:55:50	0.651
27	27-Aug	08:25:50	0.001	58	27-Aug	08:56:50	0.7
28	27-Aug	08:26:50	0.005	59	27-Aug	08:57:50	1.308
29	27-Aug	08:27:50	0.004	60	27-Aug	08:58:50	0.307
30	27-Aug	08:28:50	0.002	61	27-Aug	08:59:50	0.422
31	27-Aug	08:29:50	0	62	27-Aug	09:00:50	0.182

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
63	27-Aug	09:01:50	0.714	110	27-Aug	09:48:50	0.559
64	27-Aug	09:02:50	0.231	111	27-Aug	09:49:50	0.266
65	27-Aug	09:03:50	0.231	112	27-Aug	09:50:50	0.937
66	27-Aug	09:04:50	0.893	113	27-Aug	09:51:50	1.006
67	27-Aug	09:05:50	0.326	114	27-Aug	09:52:50	0.215
68	27-Aug	09:06:50	0.161	115	27-Aug	09:53:50	0.468
69	27-Aug	09:07:50	0.08	116	27-Aug	09:54:50	0.348
70	27-Aug	09:08:50	0.125	117	27-Aug	09:55:50	0.21
71	27-Aug	09:09:50	0.034	118	27-Aug	09:56:50	0.664
72	27-Aug	09:10:50	0.028	119	27-Aug	09:57:50	2.022
73	27-Aug	09:11:50	0.074	120	27-Aug	09:58:50	0.723
74	27-Aug	09:12:50	0.211	121	27-Aug	09:59:50	0.511
75	27-Aug	09:13:50	1.172	122	27-Aug	10:00:50	0.534
76	27-Aug	09:14:50	0.739	123	27-Aug	10:01:50	0.189
77	27-Aug	09:15:50	0.697	124	27-Aug	10:02:50	0.592
78	27-Aug	09:16:50	0.24	125	27-Aug	10:03:50	0.675
79	27-Aug	09:17:50	0.031	126	27-Aug	10:04:50	0.302
80	27-Aug	09:18:50	0.054	127	27-Aug	10:05:50	0.658
81	27-Aug	09:19:50	0.065	128	27-Aug	10:06:50	0.483
82	27-Aug	09:20:50	0.075	129	27-Aug	10:07:50	0.748
83	27-Aug	09:21:50	0.144	130	27-Aug	10:08:50	0.474
84	27-Aug	09:22:50	0.584	131	27-Aug	10:09:50	0.18
85	27-Aug	09:23:50	0.508	132	27-Aug	10:10:50	0.185
86	27-Aug	09:24:50	0.265	133	27-Aug	10:11:50	0.338
87	27-Aug	09:25:50	0.266	134	27-Aug	10:12:50	0.708
88	27-Aug	09:26:50	0.226	135	27-Aug	10:13:50	0.371
89	27-Aug	09:27:50	0.104	136	27-Aug	10:14:50	1.021
90	27-Aug	09:28:50	0.378	137	27-Aug	10:15:50	0.278
91	27-Aug	09:29:50	0.435	138	27-Aug	10:16:50	0.836
92	27-Aug	09:30:50	0.507	139	27-Aug	10:17:50	0.413
93	27-Aug	09:31:50	0.27	140	27-Aug	10:18:50	0.165
94	27-Aug	09:32:50	0.327	141	27-Aug	10:19:50	0.446
95	27-Aug	09:33:50	0.222	142	27-Aug	10:20:50	1.334
96	27-Aug	09:34:50	0.099	143	27-Aug	10:21:50	1.232
97	27-Aug	09:35:50	0.289	144	27-Aug	10:22:50	1.396
98	27-Aug	09:36:50	4.039	145	27-Aug	10:23:50	0.114
99	27-Aug	09:37:50	0.34	146	27-Aug	10:24:50	0.142
100	27-Aug	09:38:50	0.354	147	27-Aug	10:25:50	0.05
101	27-Aug	09:39:50	0.206	148	27-Aug	10:26:50	0.134
102	27-Aug	09:40:50	0.633	149	27-Aug	10:27:50	0.12
103	27-Aug	09:41:50	1.12	150	27-Aug	10:28:50	0.048
104	27-Aug	09:42:50	0.978	151	27-Aug	10:29:50	0.066
105	27-Aug	09:43:50	0.061	152	27-Aug	10:30:50	0.09
106	27-Aug	09:44:50	0.066	153	27-Aug	10:31:50	0.028
107	27-Aug	09:45:50	0.069	154	27-Aug	10:32:50	0.061
108	27-Aug	09:46:50	0.101	155	27-Aug	10:33:50	0.16
109	27-Aug	09:47:50	0.064	156	27-Aug	10:34:50	1.63

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
157	27-Aug	10:35:50	1.819	204	27-Aug	11:22:50	0.3
158	27-Aug	10:36:50	9.94	205	27-Aug	11:23:50	0.275
159	27-Aug	10:37:50	1.538	206	27-Aug	11:24:50	0.299
160	27-Aug	10:38:50	0.137	207	27-Aug	11:25:50	0.128
161	27-Aug	10:39:50	0.133	208	27-Aug	11:26:50	0.1
162	27-Aug	10:40:50	1.488	209	27-Aug	11:27:50	0.098
163	27-Aug	10:41:50	0.301	210	27-Aug	11:28:50	0.825
164	27-Aug	10:42:50	0.09	211	27-Aug	11:29:50	1.051
165	27-Aug	10:43:50	0.112	212	27-Aug	11:30:50	1.699
166	27-Aug	10:44:50	0.252	213	27-Aug	11:31:50	1.125
167	27-Aug	10:45:50	0.752	214	27-Aug	11:32:50	0.847
168	27-Aug	10:46:50	4.93	215	27-Aug	11:33:50	0.376
169	27-Aug	10:47:50	3.092	216	27-Aug	11:34:50	0.299
170	27-Aug	10:48:50	0.136	217	27-Aug	11:35:50	0.308
171	27-Aug	10:49:50	0.798	218	27-Aug	11:36:50	0.188
172	27-Aug	10:50:50	1.109	219	27-Aug	11:37:50	0.114
173	27-Aug	10:51:50	0.403	220	27-Aug	11:38:50	0.114
174	27-Aug	10:52:50	0.247	221	27-Aug	11:39:50	0.101
175	27-Aug	10:53:50	1.893	222	27-Aug	11:40:50	0.318
176	27-Aug	10:54:50	0.307	223	27-Aug	11:41:50	0.09
177	27-Aug	10:55:50	0.45	224	27-Aug	11:42:50	0.189
178	27-Aug	10:56:50	0.805	225	27-Aug	11:43:50	0.067
179	27-Aug	10:57:50	0.528	226	27-Aug	11:44:50	0.128
180	27-Aug	10:58:50	1.703	227	27-Aug	11:45:50	0.143
181	27-Aug	10:59:50	0.963	228	27-Aug	11:46:50	0.081
182	27-Aug	11:00:50	0.487	229	27-Aug	11:47:50	0.155
183	27-Aug	11:01:50	0.248	230	27-Aug	11:48:50	0.56
184	27-Aug	11:02:50	1.75	231	27-Aug	11:49:50	1.485
185	27-Aug	11:03:50	0.226	232	27-Aug	11:50:50	0.138
186	27-Aug	11:04:50	0.186	233	27-Aug	11:51:50	0.052
187	27-Aug	11:05:50	0.147	234	27-Aug	11:52:50	0.083
188	27-Aug	11:06:50	0.189	235	27-Aug	11:53:50	0.768
189	27-Aug	11:07:50	0.163	236	27-Aug	11:54:50	0.335
190	27-Aug	11:08:50	0.181	237	27-Aug	11:55:50	0.146
191	27-Aug	11:09:50	0.199	238	27-Aug	11:56:50	0.273
192	27-Aug	11:10:50	0.21	239	27-Aug	11:57:50	0.694
193	27-Aug	11:11:50	0.184	240	27-Aug	11:58:50	0.549
194	27-Aug	11:12:50	0.474	241	27-Aug	11:59:50	9.99
195	27-Aug	11:13:50	0.315	242	27-Aug	12:00:50	6.82
196	27-Aug	11:14:50	0.365	243	27-Aug	12:01:50	3.106
197	27-Aug	11:15:50	0.387	244	27-Aug	12:02:50	0.908
198	27-Aug	11:16:50	0.531	245	27-Aug	12:03:50	0.383
199	27-Aug	11:17:50	0.23	246	27-Aug	12:04:50	0.146
200	27-Aug	11:18:50	0.413	247	27-Aug	12:05:50	0.073
201	27-Aug	11:19:50	0.212	248	27-Aug	12:06:50	0.036
202	27-Aug	11:20:50	0.25	249	27-Aug	12:07:50	0.024
203	27-Aug	11:21:50	0.521	250	27-Aug	12:08:50	0.022

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
251	27-Aug	12:09:50	0.135				
252	27-Aug	12:10:50	0.113				
253	27-Aug	12:11:50	0.047				
254	27-Aug	12:12:50	0.033				
255	27-Aug	12:13:50	0.027				
256	27-Aug	12:14:50	0.021				
257	27-Aug	12:15:50	0.018				
258	27-Aug	12:16:50	0.013				
259	27-Aug	12:17:50	0.014				
260	27-Aug	12:18:50	0.019				
261	27-Aug	12:19:50	0.014				
262	27-Aug	12:20:50	0.011				
263	27-Aug	12:21:50	0.011				
264	27-Aug	12:22:50	0.015				
265	27-Aug	12:23:50	0.044				
266	27-Aug	12:24:50	0.011				
267	27-Aug	12:25:50	0.01				
268	27-Aug	12:26:50	0.011				
269	27-Aug	12:27:50	0.01				
270	27-Aug	12:28:50	0.027				
271	27-Aug	12:29:50	0.01				
272	27-Aug	12:30:50	0.008				

August 29, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 01
Number of logged points: 274
Start time and date: 08:10:49 29-Aug
Elapsed time: 04:34:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 58.470 mg/m³
Time at maximum: 10:18:04 Aug 29
Max STEL Concentration: 8.209 mg/m³
Time at max STEL: 10:18:49 Aug 29
Overall Avg Conc: 2.864 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	29-Aug	08:11:49	0.066	29	29-Aug	08:39:49	0
2	29-Aug	08:12:49	0	30	29-Aug	08:40:49	0.039
3	29-Aug	08:13:49	0	31	29-Aug	08:41:49	0.015
4	29-Aug	08:14:49	0.006	32	29-Aug	08:42:49	0.003
5	29-Aug	08:15:49	0	33	29-Aug	08:43:49	0.021
6	29-Aug	08:16:49	0	34	29-Aug	08:44:49	0.004
7	29-Aug	08:17:49	0.114	35	29-Aug	08:45:49	0.011
8	29-Aug	08:18:49	0.016	36	29-Aug	08:46:49	0.042
9	29-Aug	08:19:49	0	37	29-Aug	08:47:49	0.131
10	29-Aug	08:20:49	0.341	38	29-Aug	08:48:49	0.063
11	29-Aug	08:21:49	0.022	39	29-Aug	08:49:49	0.093
12	29-Aug	08:22:49	0.006	40	29-Aug	08:50:49	0.026
13	29-Aug	08:23:49	0.001	41	29-Aug	08:51:49	0.493
14	29-Aug	08:24:49	0	42	29-Aug	08:52:49	0.512
15	29-Aug	08:25:49	0	43	29-Aug	08:53:49	0.039
16	29-Aug	08:26:49	0.005	44	29-Aug	08:54:49	0.126
17	29-Aug	08:27:49	0.016	45	29-Aug	08:55:49	0.355
18	29-Aug	08:28:49	0.008	46	29-Aug	08:56:49	0.015
19	29-Aug	08:29:49	0	47	29-Aug	08:57:49	0
20	29-Aug	08:30:49	0.013	48	29-Aug	08:58:49	0
21	29-Aug	08:31:49	0.02	49	29-Aug	08:59:49	0
22	29-Aug	08:32:49	0.046	50	29-Aug	09:00:49	0
23	29-Aug	08:33:49	0.082	51	29-Aug	09:01:49	0
24	29-Aug	08:34:49	0.091	52	29-Aug	09:02:49	0
25	29-Aug	08:35:49	0.093	53	29-Aug	09:03:49	0.102
26	29-Aug	08:36:49	0.021	54	29-Aug	09:04:49	0.016
27	29-Aug	08:37:49	0.004	55	29-Aug	09:05:49	0.002
28	29-Aug	08:38:49	0.004	56	29-Aug	09:06:49	0.239

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
57	29-Aug	09:07:49	1.064	104	29-Aug	09:54:49	6.66
58	29-Aug	09:08:49	3.027	105	29-Aug	09:55:49	3.428
59	29-Aug	09:09:49	4.25	106	29-Aug	09:56:49	1.635
60	29-Aug	09:10:49	3.358	107	29-Aug	09:57:49	9.87
61	29-Aug	09:11:49	0.687	108	29-Aug	09:58:49	7.28
62	29-Aug	09:12:49	4.79	109	29-Aug	09:59:49	6.66
63	29-Aug	09:13:49	7.28	110	29-Aug	10:00:49	5.5
64	29-Aug	09:14:49	7.58	111	29-Aug	10:01:49	5.32
65	29-Aug	09:15:49	5.8	112	29-Aug	10:02:49	5.74
66	29-Aug	09:16:49	3.532	113	29-Aug	10:03:49	7.56
67	29-Aug	09:17:49	4.95	114	29-Aug	10:04:49	9.32
68	29-Aug	09:18:49	2.138	115	29-Aug	10:05:49	5.87
69	29-Aug	09:19:49	2.273	116	29-Aug	10:06:49	4.32
70	29-Aug	09:20:49	2.691	117	29-Aug	10:07:49	8.99
71	29-Aug	09:21:49	3.931	118	29-Aug	10:08:49	13.27
72	29-Aug	09:22:49	6.18	119	29-Aug	10:09:49	5.2
73	29-Aug	09:23:49	5.91	120	29-Aug	10:10:49	1.991
74	29-Aug	09:24:49	4.38	121	29-Aug	10:11:49	5.31
75	29-Aug	09:25:49	3.754	122	29-Aug	10:12:49	7.01
76	29-Aug	09:26:49	3.835	123	29-Aug	10:13:49	17.08
77	29-Aug	09:27:49	3.532	124	29-Aug	10:14:49	6.25
78	29-Aug	09:28:49	5.9	125	29-Aug	10:15:49	4.087
79	29-Aug	09:29:49	4.2	126	29-Aug	10:16:49	12.46
80	29-Aug	09:30:49	4.45	127	29-Aug	10:17:49	3.646
81	29-Aug	09:31:49	2.485	128	29-Aug	10:18:49	18.35
82	29-Aug	09:32:49	1.694	129	29-Aug	10:19:49	1.904
83	29-Aug	09:33:49	4.61	130	29-Aug	10:20:49	3.635
84	29-Aug	09:34:49	2.107	131	29-Aug	10:21:49	5
85	29-Aug	09:35:49	1.975	132	29-Aug	10:22:49	3.5
86	29-Aug	09:36:49	1.265	133	29-Aug	10:23:49	4.86
87	29-Aug	09:37:49	2.836	134	29-Aug	10:24:49	5.1
88	29-Aug	09:38:49	7.44	135	29-Aug	10:25:49	4.73
89	29-Aug	09:39:49	2.66	136	29-Aug	10:26:49	3.082
90	29-Aug	09:40:49	2.561	137	29-Aug	10:27:49	9.96
91	29-Aug	09:41:49	3.494	138	29-Aug	10:28:49	3.44
92	29-Aug	09:42:49	2.714	139	29-Aug	10:29:49	3.472
93	29-Aug	09:43:49	4.88	140	29-Aug	10:30:49	1.663
94	29-Aug	09:44:49	5.56	141	29-Aug	10:31:49	1.019
95	29-Aug	09:45:49	4.61	142	29-Aug	10:32:49	0.769
96	29-Aug	09:46:49	7.27	143	29-Aug	10:33:49	2.093
97	29-Aug	09:47:49	7.67	144	29-Aug	10:34:49	1.462
98	29-Aug	09:48:49	14.48	145	29-Aug	10:35:49	2.453
99	29-Aug	09:49:49	9.35	146	29-Aug	10:36:49	1.366
100	29-Aug	09:50:49	2.878	147	29-Aug	10:37:49	4.47
101	29-Aug	09:51:49	6.06	148	29-Aug	10:38:49	1.83
102	29-Aug	09:52:49	2.107	149	29-Aug	10:39:49	1.198
103	29-Aug	09:53:49	6.52	150	29-Aug	10:40:49	0.824

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
151	29-Aug	10:41:49	0.777	198	29-Aug	11:28:49	2.588
152	29-Aug	10:42:49	4.2	199	29-Aug	11:29:49	3.158
153	29-Aug	10:43:49	5.47	200	29-Aug	11:30:49	5.04
154	29-Aug	10:44:49	8.38	201	29-Aug	11:31:49	1.664
155	29-Aug	10:45:49	1.742	202	29-Aug	11:32:49	5.64
156	29-Aug	10:46:49	2.61	203	29-Aug	11:33:49	3.576
157	29-Aug	10:47:49	3.791	204	29-Aug	11:34:49	3.161
158	29-Aug	10:48:49	8.53	205	29-Aug	11:35:49	7.29
159	29-Aug	10:49:49	12.79	206	29-Aug	11:36:49	7.07
160	29-Aug	10:50:49	4	207	29-Aug	11:37:49	5.61
161	29-Aug	10:51:49	3.388	208	29-Aug	11:38:49	6.28
162	29-Aug	10:52:49	2.453	209	29-Aug	11:39:49	2.769
163	29-Aug	10:53:49	6.44	210	29-Aug	11:40:49	1.24
164	29-Aug	10:54:49	9.76	211	29-Aug	11:41:49	12.81
165	29-Aug	10:55:49	0.961	212	29-Aug	11:42:49	8.86
166	29-Aug	10:56:49	0.611	213	29-Aug	11:43:49	5.91
167	29-Aug	10:57:49	2.568	214	29-Aug	11:44:49	10.72
168	29-Aug	10:58:49	1.324	215	29-Aug	11:45:49	3.781
169	29-Aug	10:59:49	2.415	216	29-Aug	11:46:49	4.56
170	29-Aug	11:00:49	1.947	217	29-Aug	11:47:49	6.63
171	29-Aug	11:01:49	1.687	218	29-Aug	11:48:49	5.49
172	29-Aug	11:02:49	3.295	219	29-Aug	11:49:49	9.77
173	29-Aug	11:03:49	3.075	220	29-Aug	11:50:49	8.57
174	29-Aug	11:04:49	1.436	221	29-Aug	11:51:49	10.76
175	29-Aug	11:05:49	5.29	222	29-Aug	11:52:49	1.423
176	29-Aug	11:06:49	4.06	223	29-Aug	11:53:49	5.1
177	29-Aug	11:07:49	3.864	224	29-Aug	11:54:49	5.05
178	29-Aug	11:08:49	3.47	225	29-Aug	11:55:49	3.734
179	29-Aug	11:09:49	0.29	226	29-Aug	11:56:49	2.138
180	29-Aug	11:10:49	2.811	227	29-Aug	11:57:49	6.84
181	29-Aug	11:11:49	0.536	228	29-Aug	11:58:49	4.41
182	29-Aug	11:12:49	0.955	229	29-Aug	11:59:49	0.918
183	29-Aug	11:13:49	2.311	230	29-Aug	12:00:49	0.464
184	29-Aug	11:14:49	1.606	231	29-Aug	12:01:49	2.494
185	29-Aug	11:15:49	0.787	232	29-Aug	12:02:49	5.65
186	29-Aug	11:16:49	1.688	233	29-Aug	12:03:49	0.54
187	29-Aug	11:17:49	1.098	234	29-Aug	12:04:49	0.028
188	29-Aug	11:18:49	1.904	235	29-Aug	12:05:49	0.004
189	29-Aug	11:19:49	3.767	236	29-Aug	12:06:49	0.025
190	29-Aug	11:20:49	1.072	237	29-Aug	12:07:49	0
191	29-Aug	11:21:49	2.433	238	29-Aug	12:08:49	0
192	29-Aug	11:22:49	3.93	239	29-Aug	12:09:49	0
193	29-Aug	11:23:49	1.959	240	29-Aug	12:10:49	0
194	29-Aug	11:24:49	3.151	241	29-Aug	12:11:49	0
195	29-Aug	11:25:49	4.4	242	29-Aug	12:12:49	0
196	29-Aug	11:26:49	2.678	243	29-Aug	12:13:49	0
197	29-Aug	11:27:49	2.221	244	29-Aug	12:14:49	0

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
245	29-Aug	12:15:49	0				
246	29-Aug	12:16:49	0				
247	29-Aug	12:17:49	0				
248	29-Aug	12:18:49	0				
249	29-Aug	12:19:49	0				
250	29-Aug	12:20:49	0				
251	29-Aug	12:21:49	0				
252	29-Aug	12:22:49	0				
253	29-Aug	12:23:49	0				
254	29-Aug	12:24:49	0				
255	29-Aug	12:25:49	0				
256	29-Aug	12:26:49	0				
257	29-Aug	12:27:49	0				
258	29-Aug	12:28:49	0				
259	29-Aug	12:29:49	0				
260	29-Aug	12:30:49	0				
261	29-Aug	12:31:49	0				
262	29-Aug	12:32:49	0				
263	29-Aug	12:33:49	0				
264	29-Aug	12:34:49	0				
265	29-Aug	12:35:49	0				
266	29-Aug	12:36:49	0				
267	29-Aug	12:37:49	0				
268	29-Aug	12:38:49	0				
269	29-Aug	12:39:49	0				
270	29-Aug	12:40:49	0				
271	29-Aug	12:41:49	0				
272	29-Aug	12:42:49	0.001				
273	29-Aug	12:43:49	0				
274	29-Aug	12:44:49	0				

pDR-1000 S/N: 04878
User ID: DuPont Site PDR-1
Tag Number: 01
Number of logged points: 392
Start time and date: 08:13:43 29-Aug
Elapsed time: 06:32:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 74.514 mg/m³
Time at maximum: 11:25:57 Aug 29
Max STEL Concentration: 4.592 mg/m³
Time at max STEL: 11:39:43 Aug 29
Overall Avg Conc: 1.105 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	29-Aug	08:14:43	0.005	31	29-Aug	08:44:43	0.025
2	29-Aug	08:15:43	0.002	32	29-Aug	08:45:43	0.023
3	29-Aug	08:16:43	0.004	33	29-Aug	08:46:43	0.008
4	29-Aug	08:17:43	0.003	34	29-Aug	08:47:43	0.039
5	29-Aug	08:18:43	0.014	35	29-Aug	08:48:43	0.189
6	29-Aug	08:19:43	0.012	36	29-Aug	08:49:43	0.591
7	29-Aug	08:20:43	0.021	37	29-Aug	08:50:43	0.14
8	29-Aug	08:21:43	0.106	38	29-Aug	08:51:43	0.063
9	29-Aug	08:22:43	0.055	39	29-Aug	08:52:43	0.504
10	29-Aug	08:23:43	0.029	40	29-Aug	08:53:43	0.473
11	29-Aug	08:24:43	0.023	41	29-Aug	08:54:43	0.084
12	29-Aug	08:25:43	0.031	42	29-Aug	08:55:43	0.124
13	29-Aug	08:26:43	0.027	43	29-Aug	08:56:43	0.29
14	29-Aug	08:27:43	0.046	44	29-Aug	08:57:43	0.066
15	29-Aug	08:28:43	0.058	45	29-Aug	08:58:43	0.034
16	29-Aug	08:29:43	0.02	46	29-Aug	08:59:43	0.035
17	29-Aug	08:30:43	0.126	47	29-Aug	09:00:43	0.013
18	29-Aug	08:31:43	0.22	48	29-Aug	09:01:43	0.006
19	29-Aug	08:32:43	0.102	49	29-Aug	09:02:43	0.004
20	29-Aug	08:33:43	0.094	50	29-Aug	09:03:43	0.119
21	29-Aug	08:34:43	0.077	51	29-Aug	09:04:43	0.333
22	29-Aug	08:35:43	0.092	52	29-Aug	09:05:43	0.09
23	29-Aug	08:36:43	0.07	53	29-Aug	09:06:43	0.025
24	29-Aug	08:37:43	0.024	54	29-Aug	09:07:43	0.134
25	29-Aug	08:38:43	0.009	55	29-Aug	09:08:43	1.982
26	29-Aug	08:39:43	0.007	56	29-Aug	09:09:43	4.094
27	29-Aug	08:40:43	0.009	57	29-Aug	09:10:43	1.569
28	29-Aug	08:41:43	0.077	58	29-Aug	09:11:43	0.635
29	29-Aug	08:42:43	0.015	59	29-Aug	09:12:43	0.102
30	29-Aug	08:43:43	0.008	60	29-Aug	09:13:43	0.215

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
61	29-Aug	09:14:43	0.314	108	29-Aug	10:01:43	0.076
62	29-Aug	09:15:43	0.378	109	29-Aug	10:02:43	4.36
63	29-Aug	09:16:43	0.594	110	29-Aug	10:03:43	2.051
64	29-Aug	09:17:43	0.307	111	29-Aug	10:04:43	2.678
65	29-Aug	09:18:43	1.728	112	29-Aug	10:05:43	0.898
66	29-Aug	09:19:43	0.149	113	29-Aug	10:06:43	0.23
67	29-Aug	09:20:43	0.072	114	29-Aug	10:07:43	1.493
68	29-Aug	09:21:43	0.097	115	29-Aug	10:08:43	0.164
69	29-Aug	09:22:43	0.586	116	29-Aug	10:09:43	0.485
70	29-Aug	09:23:43	2.371	117	29-Aug	10:10:43	4.34
71	29-Aug	09:24:43	0.066	118	29-Aug	10:11:43	0.631
72	29-Aug	09:25:43	0.29	119	29-Aug	10:12:43	2.086
73	29-Aug	09:26:43	0.783	120	29-Aug	10:13:43	3.444
74	29-Aug	09:27:43	2.313	121	29-Aug	10:14:43	1.027
75	29-Aug	09:28:43	2.731	122	29-Aug	10:15:43	1.405
76	29-Aug	09:29:43	2.491	123	29-Aug	10:16:43	1.32
77	29-Aug	09:30:43	1.427	124	29-Aug	10:17:43	0.305
78	29-Aug	09:31:43	3.826	125	29-Aug	10:18:43	0.21
79	29-Aug	09:32:43	0.698	126	29-Aug	10:19:43	0.249
80	29-Aug	09:33:43	1.382	127	29-Aug	10:20:43	0.43
81	29-Aug	09:34:43	6.41	128	29-Aug	10:21:43	0.769
82	29-Aug	09:35:43	3.477	129	29-Aug	10:22:43	0.722
83	29-Aug	09:36:43	0.912	130	29-Aug	10:23:43	0.158
84	29-Aug	09:37:43	1.052	131	29-Aug	10:24:43	1.713
85	29-Aug	09:38:43	1.001	132	29-Aug	10:25:43	0.233
86	29-Aug	09:39:43	0.72	133	29-Aug	10:26:43	0.267
87	29-Aug	09:40:43	0.947	134	29-Aug	10:27:43	0.251
88	29-Aug	09:41:43	3.09	135	29-Aug	10:28:43	0.63
89	29-Aug	09:42:43	1.449	136	29-Aug	10:29:43	0.17
90	29-Aug	09:43:43	0.655	137	29-Aug	10:30:43	0.095
91	29-Aug	09:44:43	1.047	138	29-Aug	10:31:43	0.079
92	29-Aug	09:45:43	0.299	139	29-Aug	10:32:43	0.068
93	29-Aug	09:46:43	0.998	140	29-Aug	10:33:43	0.068
94	29-Aug	09:47:43	4.6	141	29-Aug	10:34:43	0.483
95	29-Aug	09:48:43	0.954	142	29-Aug	10:35:43	1.427
96	29-Aug	09:49:43	1.348	143	29-Aug	10:36:43	1.854
97	29-Aug	09:50:43	1.223	144	29-Aug	10:37:43	2.238
98	29-Aug	09:51:43	1.182	145	29-Aug	10:38:43	0.794
99	29-Aug	09:52:43	0.588	146	29-Aug	10:39:43	2.51
100	29-Aug	09:53:43	7.01	147	29-Aug	10:40:43	1.537
101	29-Aug	09:54:43	10.14	148	29-Aug	10:41:43	2.088
102	29-Aug	09:55:43	2.672	149	29-Aug	10:42:43	3.233
103	29-Aug	09:56:43	0.034	150	29-Aug	10:43:43	0.629
104	29-Aug	09:57:43	0.094	151	29-Aug	10:44:43	1.571
105	29-Aug	09:58:43	0.031	152	29-Aug	10:45:43	6.39
106	29-Aug	09:59:43	0.026	153	29-Aug	10:46:43	2.992
107	29-Aug	10:00:43	0.036	154	29-Aug	10:47:43	0.992

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
155	29-Aug	10:48:43	5.36	202	29-Aug	11:35:43	1.164
156	29-Aug	10:49:43	3.492	203	29-Aug	11:36:43	0.567
157	29-Aug	10:50:43	3.929	204	29-Aug	11:37:43	1.979
158	29-Aug	10:51:43	1.601	205	29-Aug	11:38:43	6.62
159	29-Aug	10:52:43	1.579	206	29-Aug	11:39:43	0.916
160	29-Aug	10:53:43	2.26	207	29-Aug	11:40:43	0.839
161	29-Aug	10:54:43	1.351	208	29-Aug	11:41:43	2.52
162	29-Aug	10:55:43	2.696	209	29-Aug	11:42:43	0.744
163	29-Aug	10:56:43	1.244	210	29-Aug	11:43:43	0.856
164	29-Aug	10:57:43	0.189	211	29-Aug	11:44:43	0.322
165	29-Aug	10:58:43	3.566	212	29-Aug	11:45:43	0.514
166	29-Aug	10:59:43	6.44	213	29-Aug	11:46:43	1.147
167	29-Aug	11:00:43	2.249	214	29-Aug	11:47:43	1.719
168	29-Aug	11:01:43	0.952	215	29-Aug	11:48:43	1.487
169	29-Aug	11:02:43	5.29	216	29-Aug	11:49:43	2.322
170	29-Aug	11:03:43	1.479	217	29-Aug	11:50:43	0.15
171	29-Aug	11:04:43	0.965	218	29-Aug	11:51:43	0.123
172	29-Aug	11:05:43	0.189	219	29-Aug	11:52:43	0.204
173	29-Aug	11:06:43	0.114	220	29-Aug	11:53:43	0.078
174	29-Aug	11:07:43	0.336	221	29-Aug	11:54:43	0.084
175	29-Aug	11:08:43	0.159	222	29-Aug	11:55:43	0.075
176	29-Aug	11:09:43	0.367	223	29-Aug	11:56:43	0.135
177	29-Aug	11:10:43	0.124	224	29-Aug	11:57:43	0.507
178	29-Aug	11:11:43	0.089	225	29-Aug	11:58:43	0.408
179	29-Aug	11:12:43	0.108	226	29-Aug	11:59:43	0.081
180	29-Aug	11:13:43	0.127	227	29-Aug	12:00:43	0.094
181	29-Aug	11:14:43	0.144	228	29-Aug	12:01:43	0.086
182	29-Aug	11:15:43	0.139	229	29-Aug	12:02:43	0.079
183	29-Aug	11:16:43	0.123	230	29-Aug	12:03:43	0.078
184	29-Aug	11:17:43	0.431	231	29-Aug	12:04:43	0.098
185	29-Aug	11:18:43	0.208	232	29-Aug	12:05:43	0.078
186	29-Aug	11:19:43	0.109	233	29-Aug	12:06:43	0.08
187	29-Aug	11:20:43	0.161	234	29-Aug	12:07:43	0.105
188	29-Aug	11:21:43	0.251	235	29-Aug	12:08:43	0.074
189	29-Aug	11:22:43	0.139	236	29-Aug	12:09:43	0.077
190	29-Aug	11:23:43	0.11	237	29-Aug	12:10:43	0.083
191	29-Aug	11:24:43	0.138	238	29-Aug	12:11:43	0.08
192	29-Aug	11:25:43	8.85	239	29-Aug	12:12:43	0.079
193	29-Aug	11:26:43	27.05	240	29-Aug	12:13:43	0.08
194	29-Aug	11:27:43	14.97	241	29-Aug	12:14:43	0.092
195	29-Aug	11:28:43	0.936	242	29-Aug	12:15:43	0.075
196	29-Aug	11:29:43	0.314	243	29-Aug	12:16:43	0.087
197	29-Aug	11:30:43	0.992	244	29-Aug	12:17:43	0.086
198	29-Aug	11:31:43	1.678	245	29-Aug	12:18:43	0.076
199	29-Aug	11:32:43	0.818	246	29-Aug	12:19:43	0.077
200	29-Aug	11:33:43	0.303	247	29-Aug	12:20:43	0.077
201	29-Aug	11:34:43	1.722	248	29-Aug	12:21:43	0.081

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
249	29-Aug	12:22:43	0.077	296	29-Aug	13:09:43	1.04
250	29-Aug	12:23:43	0.077	297	29-Aug	13:10:43	1.059
251	29-Aug	12:24:43	0.1	298	29-Aug	13:11:43	0.604
252	29-Aug	12:25:43	0.095	299	29-Aug	13:12:43	2.215
253	29-Aug	12:26:43	0.08	300	29-Aug	13:13:43	0.197
254	29-Aug	12:27:43	0.103	301	29-Aug	13:14:43	2.327
255	29-Aug	12:28:43	0.077	302	29-Aug	13:15:43	1.398
256	29-Aug	12:29:43	0.085	303	29-Aug	13:16:43	0.215
257	29-Aug	12:30:43	0.075	304	29-Aug	13:17:43	9.5
258	29-Aug	12:31:43	0.105	305	29-Aug	13:18:43	2.006
259	29-Aug	12:32:43	0.079	306	29-Aug	13:19:43	0.564
260	29-Aug	12:33:43	0.079	307	29-Aug	13:20:43	0.997
261	29-Aug	12:34:43	0.078	308	29-Aug	13:21:43	0.159
262	29-Aug	12:35:43	0.079	309	29-Aug	13:22:43	1.688
263	29-Aug	12:36:43	0.089	310	29-Aug	13:23:43	2.407
264	29-Aug	12:37:43	0.077	311	29-Aug	13:24:43	0.365
265	29-Aug	12:38:43	0.077	312	29-Aug	13:25:43	0.235
266	29-Aug	12:39:43	0.079	313	29-Aug	13:26:43	0.695
267	29-Aug	12:40:43	0.081	314	29-Aug	13:27:43	0.612
268	29-Aug	12:41:43	0.076	315	29-Aug	13:28:43	0.655
269	29-Aug	12:42:43	0.088	316	29-Aug	13:29:43	0.764
270	29-Aug	12:43:43	0.146	317	29-Aug	13:30:43	0.924
271	29-Aug	12:44:43	0.078	318	29-Aug	13:31:43	0.459
272	29-Aug	12:45:43	0.077	319	29-Aug	13:32:43	3.547
273	29-Aug	12:46:43	0.094	320	29-Aug	13:33:43	0.238
274	29-Aug	12:47:43	0.093	321	29-Aug	13:34:43	1.15
275	29-Aug	12:48:43	0.077	322	29-Aug	13:35:43	1.672
276	29-Aug	12:49:43	0.076	323	29-Aug	13:36:43	0.84
277	29-Aug	12:50:43	0.078	324	29-Aug	13:37:43	0.288
278	29-Aug	12:51:43	0.077	325	29-Aug	13:38:43	0.152
279	29-Aug	12:52:43	0.076	326	29-Aug	13:39:43	0.325
280	29-Aug	12:53:43	0.078	327	29-Aug	13:40:43	0.202
281	29-Aug	12:54:43	0.08	328	29-Aug	13:41:43	0.112
282	29-Aug	12:55:43	0.088	329	29-Aug	13:42:43	0.258
283	29-Aug	12:56:43	0.136	330	29-Aug	13:43:43	1.484
284	29-Aug	12:57:43	1.892	331	29-Aug	13:44:43	0.285
285	29-Aug	12:58:43	1.149	332	29-Aug	13:45:43	0.251
286	29-Aug	12:59:43	0.302	333	29-Aug	13:46:43	0.207
287	29-Aug	13:00:43	2.568	334	29-Aug	13:47:43	0.941
288	29-Aug	13:01:43	3.353	335	29-Aug	13:48:43	0.292
289	29-Aug	13:02:43	1.133	336	29-Aug	13:49:43	0.717
290	29-Aug	13:03:43	1.065	337	29-Aug	13:50:43	0.995
291	29-Aug	13:04:43	4.94	338	29-Aug	13:51:43	1.2
292	29-Aug	13:05:43	2.8	339	29-Aug	13:52:43	4.64
293	29-Aug	13:06:43	2.065	340	29-Aug	13:53:43	0.986
294	29-Aug	13:07:43	1.156	341	29-Aug	13:54:43	0.654
295	29-Aug	13:08:43	5.44	342	29-Aug	13:55:43	0.541

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
343	29-Aug	13:56:43	1.425	390	29-Aug	14:43:43	0.124
344	29-Aug	13:57:43	1.022	391	29-Aug	14:44:43	0.21
345	29-Aug	13:58:43	1.672	392	29-Aug	14:45:43	0.219
346	29-Aug	13:59:43	0.607				
347	29-Aug	14:00:43	1.006				
348	29-Aug	14:01:43	1.642				
349	29-Aug	14:02:43	0.9				
350	29-Aug	14:03:43	1.969				
351	29-Aug	14:04:43	5.14				
352	29-Aug	14:05:43	5.44				
353	29-Aug	14:06:43	1.584				
354	29-Aug	14:07:43	0.425				
355	29-Aug	14:08:43	0.198				
356	29-Aug	14:09:43	0.831				
357	29-Aug	14:10:43	0.239				
358	29-Aug	14:11:43	0.521				
359	29-Aug	14:12:43	0.514				
360	29-Aug	14:13:43	1.458				
361	29-Aug	14:14:43	2.578				
362	29-Aug	14:15:43	1.745				
363	29-Aug	14:16:43	1.561				
364	29-Aug	14:17:43	0.393				
365	29-Aug	14:18:43	0.217				
366	29-Aug	14:19:43	0.644				
367	29-Aug	14:20:43	0.428				
368	29-Aug	14:21:43	1.278				
369	29-Aug	14:22:43	1.19				
370	29-Aug	14:23:43	1.162				
371	29-Aug	14:24:43	0.408				
372	29-Aug	14:25:43	4.2				
373	29-Aug	14:26:43	3.418				
374	29-Aug	14:27:43	4.47				
375	29-Aug	14:28:43	0.643				
376	29-Aug	14:29:43	0.134				
377	29-Aug	14:30:43	0.141				
378	29-Aug	14:31:43	0.175				
379	29-Aug	14:32:43	0.181				
380	29-Aug	14:33:43	1.129				
381	29-Aug	14:34:43	1.65				
382	29-Aug	14:35:43	1.078				
383	29-Aug	14:36:43	1.917				
384	29-Aug	14:37:43	0.493				
385	29-Aug	14:38:43	1.164				
386	29-Aug	14:39:43	0.213				
387	29-Aug	14:40:43	2.596				
388	29-Aug	14:41:43	3.876				
389	29-Aug	14:42:43	0.28				

pDR-1000 S/N: 04881
User ID: DuPont Site PDR-3
Tag Number: 03
Number of logged points: 357
Start time and date: 08:15:07 29-Aug
Elapsed time: 05:57:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 6.307 mg/m³
Time at maximum: 11:56:19 Aug 29
Max STEL Concentration: 0.339 mg/m³
Time at max STEL: 09:23:37 Aug 29
Overall Avg Conc: 0.092 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	29-Aug	08:16:07	0.005	31	29-Aug	08:46:07	0.014
2	29-Aug	08:17:07	0.016	32	29-Aug	08:47:07	0.113
3	29-Aug	08:18:07	0.022	33	29-Aug	08:48:07	0.164
4	29-Aug	08:19:07	0.03	34	29-Aug	08:49:07	0.102
5	29-Aug	08:20:07	0.353	35	29-Aug	08:50:07	0.059
6	29-Aug	08:21:07	0.149	36	29-Aug	08:51:07	0.053
7	29-Aug	08:22:07	0.05	37	29-Aug	08:52:07	1.272
8	29-Aug	08:23:07	0.02	38	29-Aug	08:53:07	0.318
9	29-Aug	08:24:07	0.015	39	29-Aug	08:54:07	0.107
10	29-Aug	08:25:07	0.016	40	29-Aug	08:55:07	0.166
11	29-Aug	08:26:07	0.013	41	29-Aug	08:56:07	0.111
12	29-Aug	08:27:07	0.027	42	29-Aug	08:57:07	0.043
13	29-Aug	08:28:07	0.025	43	29-Aug	08:58:07	0.035
14	29-Aug	08:29:07	0.014	44	29-Aug	08:59:07	0.016
15	29-Aug	08:30:07	0.025	45	29-Aug	09:00:07	0.009
16	29-Aug	08:31:07	0.043	46	29-Aug	09:01:07	0.008
17	29-Aug	08:32:07	0.04	47	29-Aug	09:02:07	0.008
18	29-Aug	08:33:07	0.049	48	29-Aug	09:03:07	0.169
19	29-Aug	08:34:07	0.047	49	29-Aug	09:04:07	0.128
20	29-Aug	08:35:07	0.095	50	29-Aug	09:05:07	0.041
21	29-Aug	08:36:07	0.041	51	29-Aug	09:06:07	0.047
22	29-Aug	08:37:07	0.019	52	29-Aug	09:07:07	0.077
23	29-Aug	08:38:07	0.016	53	29-Aug	09:08:07	0.03
24	29-Aug	08:39:07	0.013	54	29-Aug	09:09:07	0.06
25	29-Aug	08:40:07	0.007	55	29-Aug	09:10:07	0.887
26	29-Aug	08:41:07	0.031	56	29-Aug	09:11:07	0.918
27	29-Aug	08:42:07	0.03	57	29-Aug	09:12:07	0.549
28	29-Aug	08:43:07	0.011	58	29-Aug	09:13:07	0.5
29	29-Aug	08:44:07	0.019	59	29-Aug	09:14:07	0.504
30	29-Aug	08:45:07	0.035	60	29-Aug	09:15:07	0.284

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
61	29-Aug	09:16:07	0.24	108	29-Aug	10:03:07	0.27
62	29-Aug	09:17:07	0.268	109	29-Aug	10:04:07	0.372
63	29-Aug	09:18:07	0.205	110	29-Aug	10:05:07	0.061
64	29-Aug	09:19:07	0.163	111	29-Aug	10:06:07	0.086
65	29-Aug	09:20:07	0.126	112	29-Aug	10:07:07	0.053
66	29-Aug	09:21:07	0.125	113	29-Aug	10:08:07	0.056
67	29-Aug	09:22:07	0.11	114	29-Aug	10:09:07	0.028
68	29-Aug	09:23:07	0.111	115	29-Aug	10:10:07	0.019
69	29-Aug	09:24:07	0.085	116	29-Aug	10:11:07	0.011
70	29-Aug	09:25:07	0.084	117	29-Aug	10:12:07	0.026
71	29-Aug	09:26:07	0.111	118	29-Aug	10:13:07	0.035
72	29-Aug	09:27:07	0.072	119	29-Aug	10:14:07	0.012
73	29-Aug	09:28:07	0.098	120	29-Aug	10:15:07	0.015
74	29-Aug	09:29:07	0.049	121	29-Aug	10:16:07	0.01
75	29-Aug	09:30:07	0.051	122	29-Aug	10:17:07	0.007
76	29-Aug	09:31:07	0.047	123	29-Aug	10:18:07	0.008
77	29-Aug	09:32:07	0.062	124	29-Aug	10:19:07	0.013
78	29-Aug	09:33:07	0.035	125	29-Aug	10:20:07	0.006
79	29-Aug	09:34:07	0.038	126	29-Aug	10:21:07	0.006
80	29-Aug	09:35:07	0.032	127	29-Aug	10:22:07	0.007
81	29-Aug	09:36:07	0.029	128	29-Aug	10:23:07	0.006
82	29-Aug	09:37:07	0.031	129	29-Aug	10:24:07	0.01
83	29-Aug	09:38:07	0.902	130	29-Aug	10:25:07	0.007
84	29-Aug	09:39:07	0.467	131	29-Aug	10:26:07	0.006
85	29-Aug	09:40:07	0.621	132	29-Aug	10:27:07	0.139
86	29-Aug	09:41:07	0.119	133	29-Aug	10:28:07	0.303
87	29-Aug	09:42:07	0.074	134	29-Aug	10:29:07	0.109
88	29-Aug	09:43:07	0.24	135	29-Aug	10:30:07	0.049
89	29-Aug	09:44:07	0.304	136	29-Aug	10:31:07	0.114
90	29-Aug	09:45:07	0.321	137	29-Aug	10:32:07	0.168
91	29-Aug	09:46:07	0.22	138	29-Aug	10:33:07	0.186
92	29-Aug	09:47:07	0.027	139	29-Aug	10:34:07	0.046
93	29-Aug	09:48:07	0.48	140	29-Aug	10:35:07	0.027
94	29-Aug	09:49:07	0.178	141	29-Aug	10:36:07	0.02
95	29-Aug	09:50:07	0.101	142	29-Aug	10:37:07	0.015
96	29-Aug	09:51:07	0.053	143	29-Aug	10:38:07	0.011
97	29-Aug	09:52:07	0.093	144	29-Aug	10:39:07	0.009
98	29-Aug	09:53:07	0.033	145	29-Aug	10:40:07	0.01
99	29-Aug	09:54:07	0.117	146	29-Aug	10:41:07	0.016
100	29-Aug	09:55:07	0.094	147	29-Aug	10:42:07	0.007
101	29-Aug	09:56:07	0.079	148	29-Aug	10:43:07	0.01
102	29-Aug	09:57:07	0.031	149	29-Aug	10:44:07	0.009
103	29-Aug	09:58:07	0.017	150	29-Aug	10:45:07	0.42
104	29-Aug	09:59:07	0.014	151	29-Aug	10:46:07	0.237
105	29-Aug	10:00:07	0.014	152	29-Aug	10:47:07	0.125
106	29-Aug	10:01:07	0.76	153	29-Aug	10:48:07	0.051
107	29-Aug	10:02:07	0.507	154	29-Aug	10:49:07	0.146

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
155	29-Aug	10:50:07	0.22	202	29-Aug	11:37:07	0.002
156	29-Aug	10:51:07	0.014	203	29-Aug	11:38:07	0.001
157	29-Aug	10:52:07	0.014	204	29-Aug	11:39:07	0.002
158	29-Aug	10:53:07	0.005	205	29-Aug	11:40:07	0
159	29-Aug	10:54:07	0.006	206	29-Aug	11:41:07	0.002
160	29-Aug	10:55:07	0.007	207	29-Aug	11:42:07	0.001
161	29-Aug	10:56:07	0.009	208	29-Aug	11:43:07	0.002
162	29-Aug	10:57:07	0.018	209	29-Aug	11:44:07	0.002
163	29-Aug	10:58:07	0.375	210	29-Aug	11:45:07	0.003
164	29-Aug	10:59:07	0.426	211	29-Aug	11:46:07	0.001
165	29-Aug	11:00:07	0.26	212	29-Aug	11:47:07	0.001
166	29-Aug	11:01:07	0.196	213	29-Aug	11:48:07	0.003
167	29-Aug	11:02:07	0.065	214	29-Aug	11:49:07	0.003
168	29-Aug	11:03:07	0.018	215	29-Aug	11:50:07	0.001
169	29-Aug	11:04:07	0.033	216	29-Aug	11:51:07	0.001
170	29-Aug	11:05:07	0.023	217	29-Aug	11:52:07	0.002
171	29-Aug	11:06:07	0.01	218	29-Aug	11:53:07	0.002
172	29-Aug	11:07:07	0.092	219	29-Aug	11:54:07	0.002
173	29-Aug	11:08:07	0.042	220	29-Aug	11:55:07	0.001
174	29-Aug	11:09:07	0.074	221	29-Aug	11:56:07	0.168
175	29-Aug	11:10:07	0.047	222	29-Aug	11:57:07	1.472
176	29-Aug	11:11:07	0.028	223	29-Aug	11:58:07	0.422
177	29-Aug	11:12:07	0.076	224	29-Aug	11:59:07	0.417
178	29-Aug	11:13:07	0.079	225	29-Aug	12:00:07	0.204
179	29-Aug	11:14:07	0.1	226	29-Aug	12:01:07	0.027
180	29-Aug	11:15:07	0.072	227	29-Aug	12:02:07	0.059
181	29-Aug	11:16:07	0.106	228	29-Aug	12:03:07	0.042
182	29-Aug	11:17:07	0.349	229	29-Aug	12:04:07	0.048
183	29-Aug	11:18:07	0.073	230	29-Aug	12:05:07	0.022
184	29-Aug	11:19:07	0.477	231	29-Aug	12:06:07	0.003
185	29-Aug	11:20:07	0.837	232	29-Aug	12:07:07	0.006
186	29-Aug	11:21:07	0.457	233	29-Aug	12:08:07	0.003
187	29-Aug	11:22:07	0.34	234	29-Aug	12:09:07	0.001
188	29-Aug	11:23:07	0.22	235	29-Aug	12:10:07	0.001
189	29-Aug	11:24:07	0.067	236	29-Aug	12:11:07	0.002
190	29-Aug	11:25:07	0.03	237	29-Aug	12:12:07	0.001
191	29-Aug	11:26:07	0.005	238	29-Aug	12:13:07	0.001
192	29-Aug	11:27:07	0.001	239	29-Aug	12:14:07	0
193	29-Aug	11:28:07	0	240	29-Aug	12:15:07	0.001
194	29-Aug	11:29:07	0.001	241	29-Aug	12:16:07	0
195	29-Aug	11:30:07	0.001	242	29-Aug	12:17:07	0.002
196	29-Aug	11:31:07	0.003	243	29-Aug	12:18:07	0.001
197	29-Aug	11:32:07	0.009	244	29-Aug	12:19:07	0.001
198	29-Aug	11:33:07	0.003	245	29-Aug	12:20:07	0.002
199	29-Aug	11:34:07	0.001	246	29-Aug	12:21:07	0.001
200	29-Aug	11:35:07	0.002	247	29-Aug	12:22:07	0.003
201	29-Aug	11:36:07	0.002	248	29-Aug	12:23:07	0

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
249	29-Aug	12:24:07	0.001	296	29-Aug	13:11:07	0.641
250	29-Aug	12:25:07	0.003	297	29-Aug	13:12:07	0.104
251	29-Aug	12:26:07	0.001	298	29-Aug	13:13:07	0.081
252	29-Aug	12:27:07	0.003	299	29-Aug	13:14:07	0.156
253	29-Aug	12:28:07	0.002	300	29-Aug	13:15:07	0.135
254	29-Aug	12:29:07	0.001	301	29-Aug	13:16:07	0.103
255	29-Aug	12:30:07	0.001	302	29-Aug	13:17:07	0.339
256	29-Aug	12:31:07	0	303	29-Aug	13:18:07	0.113
257	29-Aug	12:32:07	0.006	304	29-Aug	13:19:07	0.004
258	29-Aug	12:33:07	0.001	305	29-Aug	13:20:07	0.323
259	29-Aug	12:34:07	0.002	306	29-Aug	13:21:07	0.179
260	29-Aug	12:35:07	0.001	307	29-Aug	13:22:07	0.047
261	29-Aug	12:36:07	0.001	308	29-Aug	13:23:07	0.321
262	29-Aug	12:37:07	0	309	29-Aug	13:24:07	0.046
263	29-Aug	12:38:07	0.003	310	29-Aug	13:25:07	0.012
264	29-Aug	12:39:07	0.004	311	29-Aug	13:26:07	0.007
265	29-Aug	12:40:07	0.004	312	29-Aug	13:27:07	0.004
266	29-Aug	12:41:07	0	313	29-Aug	13:28:07	0.001
267	29-Aug	12:42:07	0.001	314	29-Aug	13:29:07	0.001
268	29-Aug	12:43:07	0	315	29-Aug	13:30:07	0.001
269	29-Aug	12:44:07	0.001	316	29-Aug	13:31:07	0.001
270	29-Aug	12:45:07	0.001	317	29-Aug	13:32:07	0.003
271	29-Aug	12:46:07	0.001	318	29-Aug	13:33:07	0.015
272	29-Aug	12:47:07	0.003	319	29-Aug	13:34:07	0.005
273	29-Aug	12:48:07	0.001	320	29-Aug	13:35:07	0.003
274	29-Aug	12:49:07	0	321	29-Aug	13:36:07	0.002
275	29-Aug	12:50:07	0.003	322	29-Aug	13:37:07	0
276	29-Aug	12:51:07	0.006	323	29-Aug	13:38:07	0.001
277	29-Aug	12:52:07	0.011	324	29-Aug	13:39:07	0.007
278	29-Aug	12:53:07	0.004	325	29-Aug	13:40:07	0.003
279	29-Aug	12:54:07	0.005	326	29-Aug	13:41:07	0.001
280	29-Aug	12:55:07	0.001	327	29-Aug	13:42:07	0.002
281	29-Aug	12:56:07	0.004	328	29-Aug	13:43:07	0.002
282	29-Aug	12:57:07	0.003	329	29-Aug	13:44:07	0.003
283	29-Aug	12:58:07	0.004	330	29-Aug	13:45:07	0
284	29-Aug	12:59:07	0.001	331	29-Aug	13:46:07	0.003
285	29-Aug	13:00:07	0	332	29-Aug	13:47:07	0.001
286	29-Aug	13:01:07	0	333	29-Aug	13:48:07	0
287	29-Aug	13:02:07	0.001	334	29-Aug	13:49:07	0.001
288	29-Aug	13:03:07	1.136	335	29-Aug	13:50:07	0.001
289	29-Aug	13:04:07	0.242	336	29-Aug	13:51:07	0.001
290	29-Aug	13:05:07	0.126	337	29-Aug	13:52:07	0.005
291	29-Aug	13:06:07	0.094	338	29-Aug	13:53:07	0.012
292	29-Aug	13:07:07	0.061	339	29-Aug	13:54:07	0.001
293	29-Aug	13:08:07	0.767	340	29-Aug	13:55:07	0.001
294	29-Aug	13:09:07	0.217	341	29-Aug	13:56:07	0.003
295	29-Aug	13:10:07	0.092	342	29-Aug	13:57:07	0.002

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
343	29-Aug	13:58:07	0.001				
344	29-Aug	13:59:07	0.003				
345	29-Aug	14:00:07	0.003				
346	29-Aug	14:01:07	0.001				
347	29-Aug	14:02:07	0.001				
348	29-Aug	14:03:07	0				
349	29-Aug	14:04:07	0.001				
350	29-Aug	14:05:07	0.003				
351	29-Aug	14:06:07	0.002				
352	29-Aug	14:07:07	0.003				
353	29-Aug	14:08:07	0.002				
354	29-Aug	14:09:07	0.002				
355	29-Aug	14:10:07	0.01				
356	29-Aug	14:11:07	0.001				
357	29-Aug	14:12:07	0				

September 5, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 02
Number of logged points: 629
Start time and date: 07:03:48 05-Sep
Elapsed time: 10:29:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 27.298 mg/m³
Time at maximum: 07:27:44 Sep 05
Max STEL Concentration: 1.448 mg/m³
Time at max STEL: 13:04:19 Sep 05
Overall Avg Conc: 0.114 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	5-Sep	07:04:48	0.011	28	5-Sep	07:31:48	0.111
2	5-Sep	07:05:48	0.021	29	5-Sep	07:32:48	0.136
3	5-Sep	07:06:48	0.089	30	5-Sep	07:33:48	0.104
4	5-Sep	07:07:48	0.013	31	5-Sep	07:34:48	0.052
5	5-Sep	07:08:48	0.016	32	5-Sep	07:35:48	0.018
6	5-Sep	07:09:48	0.008	33	5-Sep	07:36:48	0.009
7	5-Sep	07:10:48	0	34	5-Sep	07:37:48	0.003
8	5-Sep	07:11:48	0.003	35	5-Sep	07:38:48	0.002
9	5-Sep	07:12:48	0.005	36	5-Sep	07:39:48	0.003
10	5-Sep	07:13:48	0.001	37	5-Sep	07:40:48	0.003
11	5-Sep	07:14:48	0.003	38	5-Sep	07:41:48	0.009
12	5-Sep	07:15:48	0.002	39	5-Sep	07:42:48	0.071
13	5-Sep	07:16:48	0.012	40	5-Sep	07:43:48	1.04
14	5-Sep	07:17:48	0.015	41	5-Sep	07:44:48	0.315
15	5-Sep	07:18:48	0	42	5-Sep	07:45:48	0.064
16	5-Sep	07:19:48	0.045	43	5-Sep	07:46:48	0.016
17	5-Sep	07:20:48	0.047	44	5-Sep	07:47:48	0.052
18	5-Sep	07:21:48	1.023	45	5-Sep	07:48:48	0.021
19	5-Sep	07:22:48	0.787	46	5-Sep	07:49:48	0.028
20	5-Sep	07:23:48	0.694	47	5-Sep	07:50:48	0.019
21	5-Sep	07:24:48	0.381	48	5-Sep	07:51:48	0.009
22	5-Sep	07:25:48	0.21	49	5-Sep	07:52:48	0.009
23	5-Sep	07:26:48	0.182	50	5-Sep	07:53:48	0.012
24	5-Sep	07:27:48	8.09	51	5-Sep	07:54:48	0.008
25	5-Sep	07:28:48	1.108	52	5-Sep	07:55:48	0.01
26	5-Sep	07:29:48	0.071	53	5-Sep	07:56:48	0.009
27	5-Sep	07:30:48	0.079	54	5-Sep	07:57:48	0.005

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
55	5-Sep	07:58:48	0.011	102	5-Sep	08:45:48	0.009
56	5-Sep	07:59:48	0.01	103	5-Sep	08:46:48	0.01
57	5-Sep	08:00:48	0.009	104	5-Sep	08:47:48	0.01
58	5-Sep	08:01:48	0.009	105	5-Sep	08:48:48	0.009
59	5-Sep	08:02:48	0.007	106	5-Sep	08:49:48	0.009
60	5-Sep	08:03:48	0.008	107	5-Sep	08:50:48	0.01
61	5-Sep	08:04:48	0.006	108	5-Sep	08:51:48	0.012
62	5-Sep	08:05:48	0.007	109	5-Sep	08:52:48	0.011
63	5-Sep	08:06:48	0.008	110	5-Sep	08:53:48	0.011
64	5-Sep	08:07:48	0.008	111	5-Sep	08:54:48	0.013
65	5-Sep	08:08:48	0.007	112	5-Sep	08:55:48	0.01
66	5-Sep	08:09:48	0.007	113	5-Sep	08:56:48	0.013
67	5-Sep	08:10:48	0.007	114	5-Sep	08:57:48	0.011
68	5-Sep	08:11:48	0.007	115	5-Sep	08:58:48	0.017
69	5-Sep	08:12:48	0.008	116	5-Sep	08:59:48	0.013
70	5-Sep	08:13:48	0.009	117	5-Sep	09:00:48	0.014
71	5-Sep	08:14:48	0.008	118	5-Sep	09:01:48	0.012
72	5-Sep	08:15:48	0.011	119	5-Sep	09:02:48	0.014
73	5-Sep	08:16:48	0.009	120	5-Sep	09:03:48	0.012
74	5-Sep	08:17:48	0.009	121	5-Sep	09:04:48	0.01
75	5-Sep	08:18:48	0.008	122	5-Sep	09:05:48	0.01
76	5-Sep	08:19:48	0.008	123	5-Sep	09:06:48	0.013
77	5-Sep	08:20:48	0.008	124	5-Sep	09:07:48	0.011
78	5-Sep	08:21:48	0.008	125	5-Sep	09:08:48	0.01
79	5-Sep	08:22:48	0.009	126	5-Sep	09:09:48	0.031
80	5-Sep	08:23:48	0.007	127	5-Sep	09:10:48	0.045
81	5-Sep	08:24:48	0.007	128	5-Sep	09:11:48	0.166
82	5-Sep	08:25:48	0.007	129	5-Sep	09:12:48	0.39
83	5-Sep	08:26:48	0.008	130	5-Sep	09:13:48	0.16
84	5-Sep	08:27:48	0.012	131	5-Sep	09:14:48	0.069
85	5-Sep	08:28:48	0.01	132	5-Sep	09:15:48	0.026
86	5-Sep	08:29:48	0.013	133	5-Sep	09:16:48	0.013
87	5-Sep	08:30:48	0.012	134	5-Sep	09:17:48	0.023
88	5-Sep	08:31:48	0.013	135	5-Sep	09:18:48	0.007
89	5-Sep	08:32:48	0.011	136	5-Sep	09:19:48	0.028
90	5-Sep	08:33:48	0.011	137	5-Sep	09:20:48	0.064
91	5-Sep	08:34:48	0.011	138	5-Sep	09:21:48	0.024
92	5-Sep	08:35:48	0.01	139	5-Sep	09:22:48	0.935
93	5-Sep	08:36:48	0.011	140	5-Sep	09:23:48	0.788
94	5-Sep	08:37:48	0.012	141	5-Sep	09:24:48	0.195
95	5-Sep	08:38:48	0.009	142	5-Sep	09:25:48	0.071
96	5-Sep	08:39:48	0.013	143	5-Sep	09:26:48	0.049
97	5-Sep	08:40:48	0.01	144	5-Sep	09:27:48	0.016
98	5-Sep	08:41:48	0.011	145	5-Sep	09:28:48	0.009
99	5-Sep	08:42:48	0.01	146	5-Sep	09:29:48	0.008
100	5-Sep	08:43:48	0.01	147	5-Sep	09:30:48	0.009
101	5-Sep	08:44:48	0.013	148	5-Sep	09:31:48	0.005

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
149	5-Sep	09:32:48	0.005	196	5-Sep	10:19:48	0.004
150	5-Sep	09:33:48	0.011	197	5-Sep	10:20:48	0.005
151	5-Sep	09:34:48	0.007	198	5-Sep	10:21:48	0.007
152	5-Sep	09:35:48	0.005	199	5-Sep	10:22:48	0.003
153	5-Sep	09:36:48	0.005	200	5-Sep	10:23:48	0.003
154	5-Sep	09:37:48	0.004	201	5-Sep	10:24:48	0.003
155	5-Sep	09:38:48	0.011	202	5-Sep	10:25:48	0.007
156	5-Sep	09:39:48	0.008	203	5-Sep	10:26:48	0.007
157	5-Sep	09:40:48	0.012	204	5-Sep	10:27:48	0.004
158	5-Sep	09:41:48	0.008	205	5-Sep	10:28:48	0.006
159	5-Sep	09:42:48	0.006	206	5-Sep	10:29:48	0.004
160	5-Sep	09:43:48	0.004	207	5-Sep	10:30:48	0.008
161	5-Sep	09:44:48	0.002	208	5-Sep	10:31:48	0.016
162	5-Sep	09:45:48	0.005	209	5-Sep	10:32:48	0.007
163	5-Sep	09:46:48	0.008	210	5-Sep	10:33:48	0.009
164	5-Sep	09:47:48	0.006	211	5-Sep	10:34:48	0.007
165	5-Sep	09:48:48	0.007	212	5-Sep	10:35:48	0.009
166	5-Sep	09:49:48	0.004	213	5-Sep	10:36:48	0.005
167	5-Sep	09:50:48	0.012	214	5-Sep	10:37:48	0.007
168	5-Sep	09:51:48	0.008	215	5-Sep	10:38:48	0.004
169	5-Sep	09:52:48	0.005	216	5-Sep	10:39:48	0.007
170	5-Sep	09:53:48	0.004	217	5-Sep	10:40:48	0.004
171	5-Sep	09:54:48	0.006	218	5-Sep	10:41:48	0.003
172	5-Sep	09:55:48	0.009	219	5-Sep	10:42:48	0.006
173	5-Sep	09:56:48	0.006	220	5-Sep	10:43:48	0.005
174	5-Sep	09:57:48	0.006	221	5-Sep	10:44:48	0.007
175	5-Sep	09:58:48	0.007	222	5-Sep	10:45:48	0.005
176	5-Sep	09:59:48	0.004	223	5-Sep	10:46:48	0.008
177	5-Sep	10:00:48	0.003	224	5-Sep	10:47:48	0.007
178	5-Sep	10:01:48	0.004	225	5-Sep	10:48:48	0.008
179	5-Sep	10:02:48	0.004	226	5-Sep	10:49:48	0.009
180	5-Sep	10:03:48	0.006	227	5-Sep	10:50:48	0.011
181	5-Sep	10:04:48	0.009	228	5-Sep	10:51:48	0.01
182	5-Sep	10:05:48	0.009	229	5-Sep	10:52:48	0.005
183	5-Sep	10:06:48	0.01	230	5-Sep	10:53:48	0.008
184	5-Sep	10:07:48	0.008	231	5-Sep	10:54:48	0.004
185	5-Sep	10:08:48	0.009	232	5-Sep	10:55:48	0.007
186	5-Sep	10:09:48	0.006	233	5-Sep	10:56:48	0.004
187	5-Sep	10:10:48	0.005	234	5-Sep	10:57:48	0.003
188	5-Sep	10:11:48	0.003	235	5-Sep	10:58:48	0.013
189	5-Sep	10:12:48	0.004	236	5-Sep	10:59:48	0.008
190	5-Sep	10:13:48	0.007	237	5-Sep	11:00:48	0.02
191	5-Sep	10:14:48	0.015	238	5-Sep	11:01:48	0.006
192	5-Sep	10:15:48	0.009	239	5-Sep	11:02:48	0.008
193	5-Sep	10:16:48	0.007	240	5-Sep	11:03:48	0.004
194	5-Sep	10:17:48	0.006	241	5-Sep	11:04:48	0.003
195	5-Sep	10:18:48	0.006	242	5-Sep	11:05:48	0.009

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
243	5-Sep	11:06:48	0.003	290	5-Sep	11:53:48	0.131
244	5-Sep	11:07:48	0.002	291	5-Sep	11:54:48	0.076
245	5-Sep	11:08:48	0.007	292	5-Sep	11:55:48	0.153
246	5-Sep	11:09:48	0.005	293	5-Sep	11:56:48	0.075
247	5-Sep	11:10:48	0.005	294	5-Sep	11:57:48	0.043
248	5-Sep	11:11:48	0.004	295	5-Sep	11:58:48	0.016
249	5-Sep	11:12:48	0.004	296	5-Sep	11:59:48	0.011
250	5-Sep	11:13:48	0.003	297	5-Sep	12:00:48	0.023
251	5-Sep	11:14:48	0.003	298	5-Sep	12:01:48	0.008
252	5-Sep	11:15:48	0.004	299	5-Sep	12:02:48	4.73
253	5-Sep	11:16:48	0.014	300	5-Sep	12:03:48	2.706
254	5-Sep	11:17:48	0.006	301	5-Sep	12:04:48	1.511
255	5-Sep	11:18:48	0.003	302	5-Sep	12:05:48	0.788
256	5-Sep	11:19:48	0.004	303	5-Sep	12:06:48	1.368
257	5-Sep	11:20:48	0.005	304	5-Sep	12:07:48	0.079
258	5-Sep	11:21:48	0.007	305	5-Sep	12:08:48	0.055
259	5-Sep	11:22:48	0.005	306	5-Sep	12:09:48	0.055
260	5-Sep	11:23:48	0.005	307	5-Sep	12:10:48	0.054
261	5-Sep	11:24:48	0.004	308	5-Sep	12:11:48	0.054
262	5-Sep	11:25:48	0.007	309	5-Sep	12:12:48	0.055
263	5-Sep	11:26:48	0.006	310	5-Sep	12:13:48	0.054
264	5-Sep	11:27:48	0.008	311	5-Sep	12:14:48	0.052
265	5-Sep	11:28:48	0.004	312	5-Sep	12:15:48	0.052
266	5-Sep	11:29:48	0.006	313	5-Sep	12:16:48	0.054
267	5-Sep	11:30:48	0.003	314	5-Sep	12:17:48	0.052
268	5-Sep	11:31:48	0.005	315	5-Sep	12:18:48	0.053
269	5-Sep	11:32:48	0.006	316	5-Sep	12:19:48	0.08
270	5-Sep	11:33:48	0.006	317	5-Sep	12:20:48	0.053
271	5-Sep	11:34:48	0.004	318	5-Sep	12:21:48	0.053
272	5-Sep	11:35:48	0.007	319	5-Sep	12:22:48	0.053
273	5-Sep	11:36:48	0.006	320	5-Sep	12:23:48	0.053
274	5-Sep	11:37:48	0.004	321	5-Sep	12:24:48	0.053
275	5-Sep	11:38:48	0.004	322	5-Sep	12:25:48	0.052
276	5-Sep	11:39:48	0.009	323	5-Sep	12:26:48	0.051
277	5-Sep	11:40:48	0.002	324	5-Sep	12:27:48	0.052
278	5-Sep	11:41:48	0.004	325	5-Sep	12:28:48	0.052
279	5-Sep	11:42:48	0.027	326	5-Sep	12:29:48	0.051
280	5-Sep	11:43:48	0.01	327	5-Sep	12:30:48	0.052
281	5-Sep	11:44:48	0.03	328	5-Sep	12:31:48	0.051
282	5-Sep	11:45:48	0.209	329	5-Sep	12:32:48	0.051
283	5-Sep	11:46:48	0.284	330	5-Sep	12:33:48	0.051
284	5-Sep	11:47:48	0.23	331	5-Sep	12:34:48	0.051
285	5-Sep	11:48:48	0.065	332	5-Sep	12:35:48	0.057
286	5-Sep	11:49:48	0.016	333	5-Sep	12:36:48	0.051
287	5-Sep	11:50:48	0.016	334	5-Sep	12:37:48	0.052
288	5-Sep	11:51:48	0.005	335	5-Sep	12:38:48	0.052
289	5-Sep	11:52:48	0.005	336	5-Sep	12:39:48	0.051

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
337	5-Sep	12:40:48	0.053	384	5-Sep	13:27:48	0.058
338	5-Sep	12:41:48	0.051	385	5-Sep	13:28:48	0.052
339	5-Sep	12:42:48	0.051	386	5-Sep	13:29:48	0.058
340	5-Sep	12:43:48	0.051	387	5-Sep	13:30:48	0.052
341	5-Sep	12:44:48	0.057	388	5-Sep	13:31:48	0.054
342	5-Sep	12:45:48	0.051	389	5-Sep	13:32:48	0.054
343	5-Sep	12:46:48	0.051	390	5-Sep	13:33:48	0.054
344	5-Sep	12:47:48	0.051	391	5-Sep	13:34:48	0.052
345	5-Sep	12:48:48	0.053	392	5-Sep	13:35:48	0.053
346	5-Sep	12:49:48	0.052	393	5-Sep	13:36:48	0.052
347	5-Sep	12:50:48	0.052	394	5-Sep	13:37:48	0.056
348	5-Sep	12:51:48	1.589	395	5-Sep	13:38:48	0.052
349	5-Sep	12:52:48	5.52	396	5-Sep	13:39:48	0.051
350	5-Sep	12:53:48	0.639	397	5-Sep	13:40:48	0.052
351	5-Sep	12:54:48	1.369	398	5-Sep	13:41:48	0.051
352	5-Sep	12:55:48	2.324	399	5-Sep	13:42:48	0.051
353	5-Sep	12:56:48	3.876	400	5-Sep	13:43:48	0.051
354	5-Sep	12:57:48	5.15	401	5-Sep	13:44:48	0.05
355	5-Sep	12:58:48	0.828	402	5-Sep	13:45:48	0.051
356	5-Sep	12:59:48	0.085	403	5-Sep	13:46:48	0.051
357	5-Sep	13:00:48	0.059	404	5-Sep	13:47:48	0.05
358	5-Sep	13:01:48	0.057	405	5-Sep	13:48:48	0.05
359	5-Sep	13:02:48	0.056	406	5-Sep	13:49:48	0.051
360	5-Sep	13:03:48	0.053	407	5-Sep	13:50:48	0.052
361	5-Sep	13:04:48	0.053	408	5-Sep	13:51:48	0.05
362	5-Sep	13:05:48	0.052	409	5-Sep	13:52:48	0.051
363	5-Sep	13:06:48	0.054	410	5-Sep	13:53:48	0.05
364	5-Sep	13:07:48	0.058	411	5-Sep	13:54:48	0.051
365	5-Sep	13:08:48	0.053	412	5-Sep	13:55:48	0.05
366	5-Sep	13:09:48	0.052	413	5-Sep	13:56:48	0.051
367	5-Sep	13:10:48	0.053	414	5-Sep	13:57:48	0.05
368	5-Sep	13:11:48	0.053	415	5-Sep	13:58:48	0.051
369	5-Sep	13:12:48	0.052	416	5-Sep	13:59:48	0.051
370	5-Sep	13:13:48	0.053	417	5-Sep	14:00:48	0.051
371	5-Sep	13:14:48	0.051	418	5-Sep	14:01:48	0.05
372	5-Sep	13:15:48	0.051	419	5-Sep	14:02:48	0.051
373	5-Sep	13:16:48	0.064	420	5-Sep	14:03:48	0.05
374	5-Sep	13:17:48	0.064	421	5-Sep	14:04:48	0.05
375	5-Sep	13:18:48	0.052	422	5-Sep	14:05:48	0.05
376	5-Sep	13:19:48	0.063	423	5-Sep	14:06:48	0.05
377	5-Sep	13:20:48	0.068	424	5-Sep	14:07:48	0.049
378	5-Sep	13:21:48	0.055	425	5-Sep	14:08:48	0.05
379	5-Sep	13:22:48	0.064	426	5-Sep	14:09:48	0.049
380	5-Sep	13:23:48	0.056	427	5-Sep	14:10:48	0.049
381	5-Sep	13:24:48	0.053	428	5-Sep	14:11:48	0.05
382	5-Sep	13:25:48	0.055	429	5-Sep	14:12:48	0.049
383	5-Sep	13:26:48	0.076	430	5-Sep	14:13:48	0.05

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
431	5-Sep	14:14:48	0.049	478	5-Sep	15:01:48	0.049
432	5-Sep	14:15:48	0.049	479	5-Sep	15:02:48	0.049
433	5-Sep	14:16:48	0.049	480	5-Sep	15:03:48	0.048
434	5-Sep	14:17:48	0.049	481	5-Sep	15:04:48	0.048
435	5-Sep	14:18:48	0.049	482	5-Sep	15:05:48	0.047
436	5-Sep	14:19:48	0.049	483	5-Sep	15:06:48	0.05
437	5-Sep	14:20:48	0.049	484	5-Sep	15:07:48	0.05
438	5-Sep	14:21:48	0.049	485	5-Sep	15:08:48	0.05
439	5-Sep	14:22:48	0.049	486	5-Sep	15:09:48	0.049
440	5-Sep	14:23:48	0.049	487	5-Sep	15:10:48	0.05
441	5-Sep	14:24:48	0.05	488	5-Sep	15:11:48	0.048
442	5-Sep	14:25:48	0.048	489	5-Sep	15:12:48	0.048
443	5-Sep	14:26:48	0.049	490	5-Sep	15:13:48	0.049
444	5-Sep	14:27:48	0.049	491	5-Sep	15:14:48	0.048
445	5-Sep	14:28:48	0.048	492	5-Sep	15:15:48	0.048
446	5-Sep	14:29:48	0.05	493	5-Sep	15:16:48	0.048
447	5-Sep	14:30:48	0.049	494	5-Sep	15:17:48	0.051
448	5-Sep	14:31:48	0.049	495	5-Sep	15:18:48	0.048
449	5-Sep	14:32:48	0.049	496	5-Sep	15:19:48	0.047
450	5-Sep	14:33:48	0.049	497	5-Sep	15:20:48	0.047
451	5-Sep	14:34:48	0.049	498	5-Sep	15:21:48	0.047
452	5-Sep	14:35:48	0.049	499	5-Sep	15:22:48	0.048
453	5-Sep	14:36:48	0.05	500	5-Sep	15:23:48	0.047
454	5-Sep	14:37:48	0.049	501	5-Sep	15:24:48	0.046
455	5-Sep	14:38:48	0.05	502	5-Sep	15:25:48	0.048
456	5-Sep	14:39:48	0.049	503	5-Sep	15:26:48	0.049
457	5-Sep	14:40:48	0.049	504	5-Sep	15:27:48	0.048
458	5-Sep	14:41:48	0.049	505	5-Sep	15:28:48	0.05
459	5-Sep	14:42:48	0.049	506	5-Sep	15:29:48	0.048
460	5-Sep	14:43:48	0.05	507	5-Sep	15:30:48	0.046
461	5-Sep	14:44:48	0.049	508	5-Sep	15:31:48	0.048
462	5-Sep	14:45:48	0.049	509	5-Sep	15:32:48	0.047
463	5-Sep	14:46:48	0.05	510	5-Sep	15:33:48	0.047
464	5-Sep	14:47:48	0.049	511	5-Sep	15:34:48	0.049
465	5-Sep	14:48:48	0.048	512	5-Sep	15:35:48	0.046
466	5-Sep	14:49:48	0.049	513	5-Sep	15:36:48	0.046
467	5-Sep	14:50:48	0.05	514	5-Sep	15:37:48	0.046
468	5-Sep	14:51:48	0.049	515	5-Sep	15:38:48	0.047
469	5-Sep	14:52:48	0.049	516	5-Sep	15:39:48	0.047
470	5-Sep	14:53:48	0.049	517	5-Sep	15:40:48	0.048
471	5-Sep	14:54:48	0.048	518	5-Sep	15:41:48	0.049
472	5-Sep	14:55:48	0.048	519	5-Sep	15:42:48	0.046
473	5-Sep	14:56:48	0.05	520	5-Sep	15:43:48	0.047
474	5-Sep	14:57:48	0.051	521	5-Sep	15:44:48	0.047
475	5-Sep	14:58:48	0.05	522	5-Sep	15:45:48	0.047
476	5-Sep	14:59:48	0.048	523	5-Sep	15:46:48	0.047
477	5-Sep	15:00:48	0.048	524	5-Sep	15:47:48	0.046

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
525	5-Sep	15:48:48	0.046	572	5-Sep	16:35:48	0.047
526	5-Sep	15:49:48	0.047	573	5-Sep	16:36:48	0.046
527	5-Sep	15:50:48	0.047	574	5-Sep	16:37:48	0.048
528	5-Sep	15:51:48	0.048	575	5-Sep	16:38:48	0.047
529	5-Sep	15:52:48	0.047	576	5-Sep	16:39:48	0.046
530	5-Sep	15:53:48	0.047	577	5-Sep	16:40:48	0.046
531	5-Sep	15:54:48	0.046	578	5-Sep	16:41:48	0.047
532	5-Sep	15:55:48	0.046	579	5-Sep	16:42:48	0.047
533	5-Sep	15:56:48	0.046	580	5-Sep	16:43:48	0.047
534	5-Sep	15:57:48	0.046	581	5-Sep	16:44:48	0.048
535	5-Sep	15:58:48	0.049	582	5-Sep	16:45:48	0.046
536	5-Sep	15:59:48	0.046	583	5-Sep	16:46:48	0.047
537	5-Sep	16:00:48	0.048	584	5-Sep	16:47:48	0.046
538	5-Sep	16:01:48	0.048	585	5-Sep	16:48:48	0.045
539	5-Sep	16:02:48	0.047	586	5-Sep	16:49:48	0.046
540	5-Sep	16:03:48	0.048	587	5-Sep	16:50:48	0.046
541	5-Sep	16:04:48	0.047	588	5-Sep	16:51:48	0.046
542	5-Sep	16:05:48	0.046	589	5-Sep	16:52:48	0.048
543	5-Sep	16:06:48	0.046	590	5-Sep	16:53:48	0.049
544	5-Sep	16:07:48	0.046	591	5-Sep	16:54:48	0.046
545	5-Sep	16:08:48	0.046	592	5-Sep	16:55:48	0.046
546	5-Sep	16:09:48	0.046	593	5-Sep	16:56:48	0.045
547	5-Sep	16:10:48	0.048	594	5-Sep	16:57:48	0.046
548	5-Sep	16:11:48	0.046	595	5-Sep	16:58:48	0.045
549	5-Sep	16:12:48	0.046	596	5-Sep	16:59:48	0.045
550	5-Sep	16:13:48	0.046	597	5-Sep	17:00:48	0.047
551	5-Sep	16:14:48	0.046	598	5-Sep	17:01:48	0.047
552	5-Sep	16:15:48	0.048	599	5-Sep	17:02:48	0.045
553	5-Sep	16:16:48	0.046	600	5-Sep	17:03:48	0.045
554	5-Sep	16:17:48	0.046	601	5-Sep	17:04:48	0.045
555	5-Sep	16:18:48	0.046	602	5-Sep	17:05:48	0.045
556	5-Sep	16:19:48	0.046	603	5-Sep	17:06:48	0.046
557	5-Sep	16:20:48	0.048	604	5-Sep	17:07:48	0.048
558	5-Sep	16:21:48	0.047	605	5-Sep	17:08:48	0.059
559	5-Sep	16:22:48	0.046	606	5-Sep	17:09:48	0.133
560	5-Sep	16:23:48	0.048	607	5-Sep	17:10:48	0.081
561	5-Sep	16:24:48	0.051	608	5-Sep	17:11:48	0.098
562	5-Sep	16:25:48	0.046	609	5-Sep	17:12:48	0.339
563	5-Sep	16:26:48	0.051	610	5-Sep	17:13:48	0.23
564	5-Sep	16:27:48	0.048	611	5-Sep	17:14:48	0.368
565	5-Sep	16:28:48	0.046	612	5-Sep	17:15:48	0.04
566	5-Sep	16:29:48	0.046	613	5-Sep	17:16:48	0.114
567	5-Sep	16:30:48	0.046	614	5-Sep	17:17:48	0.32
568	5-Sep	16:31:48	0.046	615	5-Sep	17:18:48	0.35
569	5-Sep	16:32:48	0.046	616	5-Sep	17:19:48	0.194
570	5-Sep	16:33:48	0.051	617	5-Sep	17:20:48	0.082
571	5-Sep	16:34:48	0.045	618	5-Sep	17:21:48	0.075

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
619	5-Sep	17:22:48	0.324				
620	5-Sep	17:23:48	0.128				
621	5-Sep	17:24:48	0.109				
622	5-Sep	17:25:48	0.037				
623	5-Sep	17:26:48	0.328				
624	5-Sep	17:27:48	0.026				
625	5-Sep	17:28:48	0.191				
626	5-Sep	17:29:48	0.061				
627	5-Sep	17:30:48	0.135				
628	5-Sep	17:31:48	0.051				
629	5-Sep	17:32:48	0.022				

pDR-1000 S/N: 04878
User ID: DuPont Site PDR-1
Tag Number: 02
Number of logged points: 628
Start time and date: 07:05:23 05-Sep
Elapsed time: 10:28:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 80.625 mg/m³
Time at maximum: 16:29:41 Sep 05
Max STEL Concentration: 12.315 mg/m³
Time at max STEL: 16:33:55 Sep 05
Overall Avg Conc: 1.262 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	5-Sep	07:06:23	0.003	16	5-Sep	07:21:23	0.023
2	5-Sep	07:07:23	0.055	17	5-Sep	07:22:23	0.083
3	5-Sep	07:08:23	0.06	18	5-Sep	07:23:23	0.18
4	5-Sep	07:09:23	0.088	19	5-Sep	07:24:23	0.034
5	5-Sep	07:10:23	0.004	20	5-Sep	07:25:23	0.111
6	5-Sep	07:11:23	0.01	21	5-Sep	07:26:23	0.022
7	5-Sep	07:12:23	0.003	22	5-Sep	07:27:23	0.158
8	5-Sep	07:13:23	0.009	23	5-Sep	07:28:23	0.606
9	5-Sep	07:14:23	0.002	24	5-Sep	07:29:23	0
10	5-Sep	07:15:23	0.006	25	5-Sep	07:30:23	0
11	5-Sep	07:16:23	0.002	26	5-Sep	07:31:23	0
12	5-Sep	07:17:23	0.006	27	5-Sep	07:32:23	0.498
13	5-Sep	07:18:23	0	28	5-Sep	07:33:23	0.001
14	5-Sep	07:19:23	0.002	29	5-Sep	07:34:23	1.355
15	5-Sep	07:20:23	0.008	30	5-Sep	07:35:23	0.261

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
31	5-Sep	07:36:23	0.124	78	5-Sep	08:23:23	0.072
32	5-Sep	07:37:23	1.653	79	5-Sep	08:24:23	0.186
33	5-Sep	07:38:23	3.443	80	5-Sep	08:25:23	0.456
34	5-Sep	07:39:23	0.474	81	5-Sep	08:26:23	0.177
35	5-Sep	07:40:23	0.137	82	5-Sep	08:27:23	0.195
36	5-Sep	07:41:23	0.194	83	5-Sep	08:28:23	0.267
37	5-Sep	07:42:23	0.778	84	5-Sep	08:29:23	1.021
38	5-Sep	07:43:23	0.425	85	5-Sep	08:30:23	0.565
39	5-Sep	07:44:23	0.504	86	5-Sep	08:31:23	0.22
40	5-Sep	07:45:23	0.572	87	5-Sep	08:32:23	0.201
41	5-Sep	07:46:23	0.416	88	5-Sep	08:33:23	0.665
42	5-Sep	07:47:23	2.625	89	5-Sep	08:34:23	0.834
43	5-Sep	07:48:23	0.373	90	5-Sep	08:35:23	0.856
44	5-Sep	07:49:23	0.312	91	5-Sep	08:36:23	0.158
45	5-Sep	07:50:23	0.264	92	5-Sep	08:37:23	0.058
46	5-Sep	07:51:23	0.453	93	5-Sep	08:38:23	0.103
47	5-Sep	07:52:23	0.139	94	5-Sep	08:39:23	0.054
48	5-Sep	07:53:23	0.143	95	5-Sep	08:40:23	0.023
49	5-Sep	07:54:23	0.224	96	5-Sep	08:41:23	0.107
50	5-Sep	07:55:23	5.53	97	5-Sep	08:42:23	0.065
51	5-Sep	07:56:23	1.475	98	5-Sep	08:43:23	0.02
52	5-Sep	07:57:23	1.344	99	5-Sep	08:44:23	0.051
53	5-Sep	07:58:23	1.03	100	5-Sep	08:45:23	0.056
54	5-Sep	07:59:23	0.391	101	5-Sep	08:46:23	0.431
55	5-Sep	08:00:23	1.675	102	5-Sep	08:47:23	0.186
56	5-Sep	08:01:23	4.65	103	5-Sep	08:48:23	0.115
57	5-Sep	08:02:23	0.471	104	5-Sep	08:49:23	0.386
58	5-Sep	08:03:23	0.318	105	5-Sep	08:50:23	0.373
59	5-Sep	08:04:23	0.404	106	5-Sep	08:51:23	0.604
60	5-Sep	08:05:23	0.778	107	5-Sep	08:52:23	0.076
61	5-Sep	08:06:23	0.643	108	5-Sep	08:53:23	0.029
62	5-Sep	08:07:23	0.872	109	5-Sep	08:54:23	0.027
63	5-Sep	08:08:23	0.608	110	5-Sep	08:55:23	0.149
64	5-Sep	08:09:23	0.803	111	5-Sep	08:56:23	0.362
65	5-Sep	08:10:23	3.442	112	5-Sep	08:57:23	0.068
66	5-Sep	08:11:23	5.8	113	5-Sep	08:58:23	0.109
67	5-Sep	08:12:23	3.472	114	5-Sep	08:59:23	0.634
68	5-Sep	08:13:23	0.66	115	5-Sep	09:00:23	0.017
69	5-Sep	08:14:23	0.302	116	5-Sep	09:01:23	0
70	5-Sep	08:15:23	0.04	117	5-Sep	09:02:23	0
71	5-Sep	08:16:23	0.059	118	5-Sep	09:03:23	0
72	5-Sep	08:17:23	0.056	119	5-Sep	09:04:23	0
73	5-Sep	08:18:23	0.5	120	5-Sep	09:05:23	0.008
74	5-Sep	08:19:23	0.433	121	5-Sep	09:06:23	0.001
75	5-Sep	08:20:23	1.647	122	5-Sep	09:07:23	0.019
76	5-Sep	08:21:23	0.107	123	5-Sep	09:08:23	0.004
77	5-Sep	08:22:23	0.226	124	5-Sep	09:09:23	0.112

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
125	5-Sep	09:10:23	0.046	172	5-Sep	09:57:23	0.037
126	5-Sep	09:11:23	0.119	173	5-Sep	09:58:23	0.037
127	5-Sep	09:12:23	0.015	174	5-Sep	09:59:23	0.426
128	5-Sep	09:13:23	0.783	175	5-Sep	10:00:23	0.05
129	5-Sep	09:14:23	1.816	176	5-Sep	10:01:23	0.235
130	5-Sep	09:15:23	0.789	177	5-Sep	10:02:23	1.555
131	5-Sep	09:16:23	1.436	178	5-Sep	10:03:23	2.981
132	5-Sep	09:17:23	2.791	179	5-Sep	10:04:23	0.371
133	5-Sep	09:18:23	0.462	180	5-Sep	10:05:23	0.097
134	5-Sep	09:19:23	0.054	181	5-Sep	10:06:23	0.018
135	5-Sep	09:20:23	0.053	182	5-Sep	10:07:23	0.057
136	5-Sep	09:21:23	0.004	183	5-Sep	10:08:23	0.074
137	5-Sep	09:22:23	0	184	5-Sep	10:09:23	0.041
138	5-Sep	09:23:23	0	185	5-Sep	10:10:23	0.014
139	5-Sep	09:24:23	0	186	5-Sep	10:11:23	0.046
140	5-Sep	09:25:23	0.002	187	5-Sep	10:12:23	0.07
141	5-Sep	09:26:23	0.004	188	5-Sep	10:13:23	0.158
142	5-Sep	09:27:23	0.144	189	5-Sep	10:14:23	0.845
143	5-Sep	09:28:23	0.018	190	5-Sep	10:15:23	1.019
144	5-Sep	09:29:23	0.116	191	5-Sep	10:16:23	0.959
145	5-Sep	09:30:23	0.111	192	5-Sep	10:17:23	1.472
146	5-Sep	09:31:23	0.12	193	5-Sep	10:18:23	1.102
147	5-Sep	09:32:23	0.005	194	5-Sep	10:19:23	0.523
148	5-Sep	09:33:23	0.074	195	5-Sep	10:20:23	2.642
149	5-Sep	09:34:23	0.188	196	5-Sep	10:21:23	1.431
150	5-Sep	09:35:23	0.179	197	5-Sep	10:22:23	2.217
151	5-Sep	09:36:23	0.146	198	5-Sep	10:23:23	8.38
152	5-Sep	09:37:23	0.228	199	5-Sep	10:24:23	4.22
153	5-Sep	09:38:23	0.045	200	5-Sep	10:25:23	0.613
154	5-Sep	09:39:23	0.238	201	5-Sep	10:26:23	0.311
155	5-Sep	09:40:23	0.011	202	5-Sep	10:27:23	5.17
156	5-Sep	09:41:23	0.016	203	5-Sep	10:28:23	7.01
157	5-Sep	09:42:23	0.036	204	5-Sep	10:29:23	4.075
158	5-Sep	09:43:23	0.009	205	5-Sep	10:30:23	8.78
159	5-Sep	09:44:23	0	206	5-Sep	10:31:23	1.419
160	5-Sep	09:45:23	0	207	5-Sep	10:32:23	0.618
161	5-Sep	09:46:23	0.007	208	5-Sep	10:33:23	0.463
162	5-Sep	09:47:23	0.006	209	5-Sep	10:34:23	0.499
163	5-Sep	09:48:23	0.022	210	5-Sep	10:35:23	0.342
164	5-Sep	09:49:23	0.001	211	5-Sep	10:36:23	0.429
165	5-Sep	09:50:23	0	212	5-Sep	10:37:23	0.4
166	5-Sep	09:51:23	0	213	5-Sep	10:38:23	0.343
167	5-Sep	09:52:23	0.002	214	5-Sep	10:39:23	0.56
168	5-Sep	09:53:23	0.001	215	5-Sep	10:40:23	0.628
169	5-Sep	09:54:23	0	216	5-Sep	10:41:23	1.105
170	5-Sep	09:55:23	0	217	5-Sep	10:42:23	0.643
171	5-Sep	09:56:23	0.182	218	5-Sep	10:43:23	0.599

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
219	5-Sep	10:44:23	1.049	266	5-Sep	11:31:23	0.056
220	5-Sep	10:45:23	0.702	267	5-Sep	11:32:23	0.201
221	5-Sep	10:46:23	0.835	268	5-Sep	11:33:23	0.107
222	5-Sep	10:47:23	0.511	269	5-Sep	11:34:23	0.287
223	5-Sep	10:48:23	0.318	270	5-Sep	11:35:23	0.324
224	5-Sep	10:49:23	0.663	271	5-Sep	11:36:23	0.111
225	5-Sep	10:50:23	0.325	272	5-Sep	11:37:23	0.058
226	5-Sep	10:51:23	0.29	273	5-Sep	11:38:23	0.162
227	5-Sep	10:52:23	0.44	274	5-Sep	11:39:23	0.358
228	5-Sep	10:53:23	0.747	275	5-Sep	11:40:23	1.036
229	5-Sep	10:54:23	1.523	276	5-Sep	11:41:23	0.516
230	5-Sep	10:55:23	0.226	277	5-Sep	11:42:23	0.516
231	5-Sep	10:56:23	2.049	278	5-Sep	11:43:23	0.379
232	5-Sep	10:57:23	0.741	279	5-Sep	11:44:23	0.166
233	5-Sep	10:58:23	0.442	280	5-Sep	11:45:23	0.007
234	5-Sep	10:59:23	0.217	281	5-Sep	11:46:23	0.928
235	5-Sep	11:00:23	0.143	282	5-Sep	11:47:23	0.601
236	5-Sep	11:01:23	0.264	283	5-Sep	11:48:23	0.2
237	5-Sep	11:02:23	0.271	284	5-Sep	11:49:23	1.05
238	5-Sep	11:03:23	0.174	285	5-Sep	11:50:23	0.329
239	5-Sep	11:04:23	1.105	286	5-Sep	11:51:23	0.86
240	5-Sep	11:05:23	0.214	287	5-Sep	11:52:23	1.818
241	5-Sep	11:06:23	0.114	288	5-Sep	11:53:23	5.94
242	5-Sep	11:07:23	0.208	289	5-Sep	11:54:23	0.234
243	5-Sep	11:08:23	2.587	290	5-Sep	11:55:23	0.173
244	5-Sep	11:09:23	0.444	291	5-Sep	11:56:23	7.75
245	5-Sep	11:10:23	0.131	292	5-Sep	11:57:23	7.76
246	5-Sep	11:11:23	0.222	293	5-Sep	11:58:23	1.244
247	5-Sep	11:12:23	0.352	294	5-Sep	11:59:23	0.729
248	5-Sep	11:13:23	0.449	295	5-Sep	12:00:23	1.36
249	5-Sep	11:14:23	0.822	296	5-Sep	12:01:23	0.476
250	5-Sep	11:15:23	0.607	297	5-Sep	12:02:23	1.457
251	5-Sep	11:16:23	3.145	298	5-Sep	12:03:23	3.313
252	5-Sep	11:17:23	0.19	299	5-Sep	12:04:23	0.237
253	5-Sep	11:18:23	0.1	300	5-Sep	12:05:23	0.184
254	5-Sep	11:19:23	1.107	301	5-Sep	12:06:23	2.836
255	5-Sep	11:20:23	3.365	302	5-Sep	12:07:23	2.476
256	5-Sep	11:21:23	0.627	303	5-Sep	12:08:23	0.157
257	5-Sep	11:22:23	0.215	304	5-Sep	12:09:23	0.005
258	5-Sep	11:23:23	7.83	305	5-Sep	12:10:23	0
259	5-Sep	11:24:23	5.25	306	5-Sep	12:11:23	0
260	5-Sep	11:25:23	0.692	307	5-Sep	12:12:23	0.032
261	5-Sep	11:26:23	0.284	308	5-Sep	12:13:23	0
262	5-Sep	11:27:23	0.056	309	5-Sep	12:14:23	0
263	5-Sep	11:28:23	0.315	310	5-Sep	12:15:23	0.002
264	5-Sep	11:29:23	0.334	311	5-Sep	12:16:23	0
265	5-Sep	11:30:23	0.104	312	5-Sep	12:17:23	0

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
313	5-Sep	12:18:23	0.005	360	5-Sep	13:05:23	0.345
314	5-Sep	12:19:23	0	361	5-Sep	13:06:23	0.365
315	5-Sep	12:20:23	0.001	362	5-Sep	13:07:23	0.07
316	5-Sep	12:21:23	0	363	5-Sep	13:08:23	0.185
317	5-Sep	12:22:23	0.001	364	5-Sep	13:09:23	0.579
318	5-Sep	12:23:23	0	365	5-Sep	13:10:23	0.541
319	5-Sep	12:24:23	0	366	5-Sep	13:11:23	0.863
320	5-Sep	12:25:23	0	367	5-Sep	13:12:23	1.071
321	5-Sep	12:26:23	0	368	5-Sep	13:13:23	0.402
322	5-Sep	12:27:23	0	369	5-Sep	13:14:23	0.079
323	5-Sep	12:28:23	0.003	370	5-Sep	13:15:23	2.08
324	5-Sep	12:29:23	0	371	5-Sep	13:16:23	2.129
325	5-Sep	12:30:23	0.006	372	5-Sep	13:17:23	1.058
326	5-Sep	12:31:23	0	373	5-Sep	13:18:23	0.739
327	5-Sep	12:32:23	0	374	5-Sep	13:19:23	0.115
328	5-Sep	12:33:23	0	375	5-Sep	13:20:23	0.522
329	5-Sep	12:34:23	0.002	376	5-Sep	13:21:23	0.179
330	5-Sep	12:35:23	0	377	5-Sep	13:22:23	0.149
331	5-Sep	12:36:23	0	378	5-Sep	13:23:23	0.577
332	5-Sep	12:37:23	0	379	5-Sep	13:24:23	0.516
333	5-Sep	12:38:23	0	380	5-Sep	13:25:23	0.026
334	5-Sep	12:39:23	0.003	381	5-Sep	13:26:23	0.82
335	5-Sep	12:40:23	0	382	5-Sep	13:27:23	0.959
336	5-Sep	12:41:23	0.002	383	5-Sep	13:28:23	3.763
337	5-Sep	12:42:23	0	384	5-Sep	13:29:23	0.017
338	5-Sep	12:43:23	0	385	5-Sep	13:30:23	0.094
339	5-Sep	12:44:23	0	386	5-Sep	13:31:23	0.935
340	5-Sep	12:45:23	0	387	5-Sep	13:32:23	0.53
341	5-Sep	12:46:23	0	388	5-Sep	13:33:23	0.357
342	5-Sep	12:47:23	0	389	5-Sep	13:34:23	0.161
343	5-Sep	12:48:23	0	390	5-Sep	13:35:23	0.057
344	5-Sep	12:49:23	0	391	5-Sep	13:36:23	0.155
345	5-Sep	12:50:23	0.003	392	5-Sep	13:37:23	2.269
346	5-Sep	12:51:23	0.008	393	5-Sep	13:38:23	0.445
347	5-Sep	12:52:23	0.06	394	5-Sep	13:39:23	0.738
348	5-Sep	12:53:23	0.029	395	5-Sep	13:40:23	0.084
349	5-Sep	12:54:23	0.001	396	5-Sep	13:41:23	0.025
350	5-Sep	12:55:23	0.105	397	5-Sep	13:42:23	0.026
351	5-Sep	12:56:23	0.048	398	5-Sep	13:43:23	4.31
352	5-Sep	12:57:23	0.001	399	5-Sep	13:44:23	0.744
353	5-Sep	12:58:23	0.008	400	5-Sep	13:45:23	0.034
354	5-Sep	12:59:23	0.284	401	5-Sep	13:46:23	0.214
355	5-Sep	13:00:23	0.49	402	5-Sep	13:47:23	0.481
356	5-Sep	13:01:23	1.049	403	5-Sep	13:48:23	0.096
357	5-Sep	13:02:23	1.862	404	5-Sep	13:49:23	0.067
358	5-Sep	13:03:23	0.568	405	5-Sep	13:50:23	0.078
359	5-Sep	13:04:23	0.424	406	5-Sep	13:51:23	9.83

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
407	5-Sep	13:52:23	0.456	454	5-Sep	14:39:23	0.183
408	5-Sep	13:53:23	0.621	455	5-Sep	14:40:23	0.437
409	5-Sep	13:54:23	7.29	456	5-Sep	14:41:23	4.87
410	5-Sep	13:55:23	0.948	457	5-Sep	14:42:23	4.44
411	5-Sep	13:56:23	0.133	458	5-Sep	14:43:23	2.57
412	5-Sep	13:57:23	0.25	459	5-Sep	14:44:23	5.35
413	5-Sep	13:58:23	10.1	460	5-Sep	14:45:23	0.12
414	5-Sep	13:59:23	3.685	461	5-Sep	14:46:23	1.312
415	5-Sep	14:00:23	0.334	462	5-Sep	14:47:23	0.275
416	5-Sep	14:01:23	0.392	463	5-Sep	14:48:23	0.211
417	5-Sep	14:02:23	1.443	464	5-Sep	14:49:23	2.613
418	5-Sep	14:03:23	1.113	465	5-Sep	14:50:23	0.414
419	5-Sep	14:04:23	1.176	466	5-Sep	14:51:23	4.48
420	5-Sep	14:05:23	1.677	467	5-Sep	14:52:23	4.44
421	5-Sep	14:06:23	1.324	468	5-Sep	14:53:23	4.21
422	5-Sep	14:07:23	0.917	469	5-Sep	14:54:23	0.808
423	5-Sep	14:08:23	0.358	470	5-Sep	14:55:23	2.459
424	5-Sep	14:09:23	0.178	471	5-Sep	14:56:23	14.12
425	5-Sep	14:10:23	0.308	472	5-Sep	14:57:23	0.639
426	5-Sep	14:11:23	0.368	473	5-Sep	14:58:23	0.541
427	5-Sep	14:12:23	0.431	474	5-Sep	14:59:23	0.539
428	5-Sep	14:13:23	0.712	475	5-Sep	15:00:23	16.34
429	5-Sep	14:14:23	0.263	476	5-Sep	15:01:23	4.13
430	5-Sep	14:15:23	1.132	477	5-Sep	15:02:23	4.81
431	5-Sep	14:16:23	2.163	478	5-Sep	15:03:23	0.51
432	5-Sep	14:17:23	0.349	479	5-Sep	15:04:23	0.904
433	5-Sep	14:18:23	0.071	480	5-Sep	15:05:23	3.026
434	5-Sep	14:19:23	0.932	481	5-Sep	15:06:23	1.692
435	5-Sep	14:20:23	0.124	482	5-Sep	15:07:23	0.719
436	5-Sep	14:21:23	0.237	483	5-Sep	15:08:23	2.663
437	5-Sep	14:22:23	0.102	484	5-Sep	15:09:23	1.52
438	5-Sep	14:23:23	0.088	485	5-Sep	15:10:23	5.59
439	5-Sep	14:24:23	2.448	486	5-Sep	15:11:23	0.98
440	5-Sep	14:25:23	0.236	487	5-Sep	15:12:23	0.347
441	5-Sep	14:26:23	0.373	488	5-Sep	15:13:23	0.473
442	5-Sep	14:27:23	0.473	489	5-Sep	15:14:23	0.377
443	5-Sep	14:28:23	0.217	490	5-Sep	15:15:23	0.899
444	5-Sep	14:29:23	0.204	491	5-Sep	15:16:23	1.139
445	5-Sep	14:30:23	0.39	492	5-Sep	15:17:23	0.549
446	5-Sep	14:31:23	0.415	493	5-Sep	15:18:23	1.234
447	5-Sep	14:32:23	0.87	494	5-Sep	15:19:23	0.735
448	5-Sep	14:33:23	0.502	495	5-Sep	15:20:23	0.494
449	5-Sep	14:34:23	0.732	496	5-Sep	15:21:23	1.076
450	5-Sep	14:35:23	0.284	497	5-Sep	15:22:23	0.905
451	5-Sep	14:36:23	0.037	498	5-Sep	15:23:23	0.899
452	5-Sep	14:37:23	0.5	499	5-Sep	15:24:23	1.355
453	5-Sep	14:38:23	0.235	500	5-Sep	15:25:23	0.654

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
501	5-Sep	15:26:23	0.75	548	5-Sep	16:13:23	0.752
502	5-Sep	15:27:23	0.5	549	5-Sep	16:14:23	3.685
503	5-Sep	15:28:23	0.335	550	5-Sep	16:15:23	1.168
504	5-Sep	15:29:23	0.256	551	5-Sep	16:16:23	1.895
505	5-Sep	15:30:23	0.273	552	5-Sep	16:17:23	9.08
506	5-Sep	15:31:23	0.79	553	5-Sep	16:18:23	2.351
507	5-Sep	15:32:23	0.641	554	5-Sep	16:19:23	7.01
508	5-Sep	15:33:23	0.209	555	5-Sep	16:20:23	3.789
509	5-Sep	15:34:23	0.412	556	5-Sep	16:21:23	8.96
510	5-Sep	15:35:23	0.74	557	5-Sep	16:22:23	10.17
511	5-Sep	15:36:23	0.867	558	5-Sep	16:23:23	8.69
512	5-Sep	15:37:23	0.67	559	5-Sep	16:24:23	1.655
513	5-Sep	15:38:23	0.713	560	5-Sep	16:25:23	1.536
514	5-Sep	15:39:23	1.564	561	5-Sep	16:26:23	3.896
515	5-Sep	15:40:23	0.501	562	5-Sep	16:27:23	1.852
516	5-Sep	15:41:23	4.092	563	5-Sep	16:28:23	0.259
517	5-Sep	15:42:23	0.56	564	5-Sep	16:29:23	7.41
518	5-Sep	15:43:23	6.44	565	5-Sep	16:30:23	45.4
519	5-Sep	15:44:23	1.275	566	5-Sep	16:31:23	21.87
520	5-Sep	15:45:23	1.25	567	5-Sep	16:32:23	35.34
521	5-Sep	15:46:23	0.125	568	5-Sep	16:33:23	12.12
522	5-Sep	15:47:23	0.175	569	5-Sep	16:34:23	19.01
523	5-Sep	15:48:23	0.208	570	5-Sep	16:35:23	0.339
524	5-Sep	15:49:23	0.07	571	5-Sep	16:36:23	0.343
525	5-Sep	15:50:23	0.837	572	5-Sep	16:37:23	0.242
526	5-Sep	15:51:23	0.43	573	5-Sep	16:38:23	0.249
527	5-Sep	15:52:23	0.073	574	5-Sep	16:39:23	17.02
528	5-Sep	15:53:23	0.05	575	5-Sep	16:40:23	3.345
529	5-Sep	15:54:23	0.553	576	5-Sep	16:41:23	3.626
530	5-Sep	15:55:23	0.177	577	5-Sep	16:42:23	1.265
531	5-Sep	15:56:23	0.404	578	5-Sep	16:43:23	0.236
532	5-Sep	15:57:23	0.226	579	5-Sep	16:44:23	2.661
533	5-Sep	15:58:23	0.514	580	5-Sep	16:45:23	18.99
534	5-Sep	15:59:23	0.526	581	5-Sep	16:46:23	2.595
535	5-Sep	16:00:23	0.404	582	5-Sep	16:47:23	0.531
536	5-Sep	16:01:23	7.64	583	5-Sep	16:48:23	0.523
537	5-Sep	16:02:23	0.25	584	5-Sep	16:49:23	2.431
538	5-Sep	16:03:23	0.106	585	5-Sep	16:50:23	0.469
539	5-Sep	16:04:23	0.417	586	5-Sep	16:51:23	0.298
540	5-Sep	16:05:23	0.259	587	5-Sep	16:52:23	0.459
541	5-Sep	16:06:23	9.74	588	5-Sep	16:53:23	0.376
542	5-Sep	16:07:23	0.148	589	5-Sep	16:54:23	1.199
543	5-Sep	16:08:23	0.331	590	5-Sep	16:55:23	0.183
544	5-Sep	16:09:23	0.267	591	5-Sep	16:56:23	0.204
545	5-Sep	16:10:23	0.818	592	5-Sep	16:57:23	0.449
546	5-Sep	16:11:23	9.62	593	5-Sep	16:58:23	0.25
547	5-Sep	16:12:23	9.06	594	5-Sep	16:59:23	0.647

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
595	5-Sep	17:00:23	0.431				
596	5-Sep	17:01:23	0.24				
597	5-Sep	17:02:23	0.161				
598	5-Sep	17:03:23	0.65				
599	5-Sep	17:04:23	1.164				
600	5-Sep	17:05:23	0.816				
601	5-Sep	17:06:23	0.323				
602	5-Sep	17:07:23	0.635				
603	5-Sep	17:08:23	0.131				
604	5-Sep	17:09:23	0.16				
605	5-Sep	17:10:23	0.11				
606	5-Sep	17:11:23	0.803				
607	5-Sep	17:12:23	0.069				
608	5-Sep	17:13:23	5.94				
609	5-Sep	17:14:23	0.241				
610	5-Sep	17:15:23	0.257				
611	5-Sep	17:16:23	0.005				
612	5-Sep	17:17:23	0.006				
613	5-Sep	17:18:23	2.186				
614	5-Sep	17:19:23	0.588				
615	5-Sep	17:20:23	0.247				
616	5-Sep	17:21:23	0.27				
617	5-Sep	17:22:23	12.13				
618	5-Sep	17:23:23	0.933				
619	5-Sep	17:24:23	0.282				
620	5-Sep	17:25:23	1.222				
621	5-Sep	17:26:23	0.582				
622	5-Sep	17:27:23	0.134				
623	5-Sep	17:28:23	0.05				
624	5-Sep	17:29:23	0.247				
625	5-Sep	17:30:23	0.101				
626	5-Sep	17:31:23	0.011				
627	5-Sep	17:32:23	0.058				
628	5-Sep	17:33:23	0.016				

pDR-1000 S/N: 04881
User ID: DuPont Site PDR-3
Tag Number: 04
Number of logged points: 628
Start time and date: 07:04:47 05-Sep
Elapsed time: 10:28:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 28.099 mg/m³
Time at maximum: 13:03:32 Sep 05
Max STEL Concentration: 2.013 mg/m³
Time at max STEL: 10:34:17 Sep 05
Overall Avg Conc: 0.328 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	5-Sep	07:05:47	0.193	35	5-Sep	07:39:47	0
2	5-Sep	07:06:47	0.018	36	5-Sep	07:40:47	0
3	5-Sep	07:07:47	0.008	37	5-Sep	07:41:47	0
4	5-Sep	07:08:47	0.014	38	5-Sep	07:42:47	2.425
5	5-Sep	07:09:47	0.001	39	5-Sep	07:43:47	0.65
6	5-Sep	07:10:47	0	40	5-Sep	07:44:47	0.369
7	5-Sep	07:11:47	0.001	41	5-Sep	07:45:47	0.069
8	5-Sep	07:12:47	0.003	42	5-Sep	07:46:47	0.044
9	5-Sep	07:13:47	0.001	43	5-Sep	07:47:47	0.082
10	5-Sep	07:14:47	0.002	44	5-Sep	07:48:47	0.014
11	5-Sep	07:15:47	0.002	45	5-Sep	07:49:47	0
12	5-Sep	07:16:47	0.003	46	5-Sep	07:50:47	0.001
13	5-Sep	07:17:47	0.001	47	5-Sep	07:51:47	0
14	5-Sep	07:18:47	0.004	48	5-Sep	07:52:47	0
15	5-Sep	07:19:47	0.037	49	5-Sep	07:53:47	0
16	5-Sep	07:20:47	0.018	50	5-Sep	07:54:47	0
17	5-Sep	07:21:47	0.11	51	5-Sep	07:55:47	0
18	5-Sep	07:22:47	0.272	52	5-Sep	07:56:47	0
19	5-Sep	07:23:47	4.6	53	5-Sep	07:57:47	0
20	5-Sep	07:24:47	0.596	54	5-Sep	07:58:47	0
21	5-Sep	07:25:47	0.057	55	5-Sep	07:59:47	0
22	5-Sep	07:26:47	0.045	56	5-Sep	08:00:47	0
23	5-Sep	07:27:47	4.27	57	5-Sep	08:01:47	0
24	5-Sep	07:28:47	2.203	58	5-Sep	08:02:47	0
25	5-Sep	07:29:47	0.07	59	5-Sep	08:03:47	0
26	5-Sep	07:30:47	0.107	60	5-Sep	08:04:47	0
27	5-Sep	07:31:47	0.25	61	5-Sep	08:05:47	0
28	5-Sep	07:32:47	0.245	62	5-Sep	08:06:47	0.001
29	5-Sep	07:33:47	0.16	63	5-Sep	08:07:47	0
30	5-Sep	07:34:47	0.05	64	5-Sep	08:08:47	0
31	5-Sep	07:35:47	0.007	65	5-Sep	08:09:47	0
32	5-Sep	07:36:47	0.001	66	5-Sep	08:10:47	0
33	5-Sep	07:37:47	0	67	5-Sep	08:11:47	0
34	5-Sep	07:38:47	0	68	5-Sep	08:12:47	0

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
69	5-Sep	08:13:47	0	120	5-Sep	09:04:47	0
70	5-Sep	08:14:47	0	121	5-Sep	09:05:47	0
71	5-Sep	08:15:47	0	122	5-Sep	09:06:47	0
72	5-Sep	08:16:47	0	123	5-Sep	09:07:47	0
73	5-Sep	08:17:47	0	124	5-Sep	09:08:47	0.675
74	5-Sep	08:18:47	0	125	5-Sep	09:09:47	0.858
75	5-Sep	08:19:47	0	126	5-Sep	09:10:47	0.238
76	5-Sep	08:20:47	0	127	5-Sep	09:11:47	0.758
77	5-Sep	08:21:47	0	128	5-Sep	09:12:47	0.913
78	5-Sep	08:22:47	0	129	5-Sep	09:13:47	1.485
79	5-Sep	08:23:47	0	130	5-Sep	09:14:47	1.674
80	5-Sep	08:24:47	0	131	5-Sep	09:15:47	0.622
81	5-Sep	08:25:47	0	132	5-Sep	09:16:47	0.602
82	5-Sep	08:26:47	0	133	5-Sep	09:17:47	0.736
83	5-Sep	08:27:47	0	134	5-Sep	09:18:47	1.272
84	5-Sep	08:28:47	0	135	5-Sep	09:19:47	4.076
85	5-Sep	08:29:47	0	136	5-Sep	09:20:47	2.147
86	5-Sep	08:30:47	0	137	5-Sep	09:21:47	1.119
87	5-Sep	08:31:47	0	138	5-Sep	09:22:47	0.976
88	5-Sep	08:32:47	0	139	5-Sep	09:23:47	1.078
89	5-Sep	08:33:47	0	140	5-Sep	09:24:47	1.113
90	5-Sep	08:34:47	0	141	5-Sep	09:25:47	0.909
91	5-Sep	08:35:47	0	142	5-Sep	09:26:47	0.6
92	5-Sep	08:36:47	0	143	5-Sep	09:27:47	0.512
93	5-Sep	08:37:47	0	144	5-Sep	09:28:47	0.426
94	5-Sep	08:38:47	0	145	5-Sep	09:29:47	0.983
95	5-Sep	08:39:47	0	146	5-Sep	09:30:47	0.684
96	5-Sep	08:40:47	0	147	5-Sep	09:31:47	0.212
97	5-Sep	08:41:47	0	148	5-Sep	09:32:47	2.051
98	5-Sep	08:42:47	0	149	5-Sep	09:33:47	0.877
99	5-Sep	08:43:47	0	150	5-Sep	09:34:47	0.71
100	5-Sep	08:44:47	0	151	5-Sep	09:35:47	0.161
101	5-Sep	08:45:47	0	152	5-Sep	09:36:47	0.01
102	5-Sep	08:46:47	0	153	5-Sep	09:37:47	0.007
103	5-Sep	08:47:47	0	154	5-Sep	09:38:47	0.112
104	5-Sep	08:48:47	0	155	5-Sep	09:39:47	0.462
105	5-Sep	08:49:47	0	156	5-Sep	09:40:47	0.169
106	5-Sep	08:50:47	0	157	5-Sep	09:41:47	1.65
107	5-Sep	08:51:47	0	158	5-Sep	09:42:47	0.524
108	5-Sep	08:52:47	0	159	5-Sep	09:43:47	0.594
109	5-Sep	08:53:47	0	160	5-Sep	09:44:47	0.825
110	5-Sep	08:54:47	0	161	5-Sep	09:45:47	0.023
111	5-Sep	08:55:47	0	162	5-Sep	09:46:47	0.231
112	5-Sep	08:56:47	0	163	5-Sep	09:47:47	0.211
113	5-Sep	08:57:47	0	164	5-Sep	09:48:47	0.036
114	5-Sep	08:58:47	0	165	5-Sep	09:49:47	0.52
115	5-Sep	08:59:47	0.001	166	5-Sep	09:50:47	0.549
116	5-Sep	09:00:47	0	167	5-Sep	09:51:47	0.446
117	5-Sep	09:01:47	0	168	5-Sep	09:52:47	3.373
118	5-Sep	09:02:47	0	169	5-Sep	09:53:47	2.254
119	5-Sep	09:03:47	0	170	5-Sep	09:54:47	0.352

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
171	5-Sep	09:55:47	0.167	222	5-Sep	10:46:47	0.203
172	5-Sep	09:56:47	1.899	223	5-Sep	10:47:47	0.391
173	5-Sep	09:57:47	0.991	224	5-Sep	10:48:47	0.043
174	5-Sep	09:58:47	0.236	225	5-Sep	10:49:47	0.465
175	5-Sep	09:59:47	1.451	226	5-Sep	10:50:47	0.321
176	5-Sep	10:00:47	0.167	227	5-Sep	10:51:47	0.329
177	5-Sep	10:01:47	0.435	228	5-Sep	10:52:47	0.143
178	5-Sep	10:02:47	0.453	229	5-Sep	10:53:47	0.258
179	5-Sep	10:03:47	0.836	230	5-Sep	10:54:47	0.208
180	5-Sep	10:04:47	2.022	231	5-Sep	10:55:47	0.199
181	5-Sep	10:05:47	0.613	232	5-Sep	10:56:47	0.111
182	5-Sep	10:06:47	1.472	233	5-Sep	10:57:47	0.978
183	5-Sep	10:07:47	0.87	234	5-Sep	10:58:47	0.509
184	5-Sep	10:08:47	0.394	235	5-Sep	10:59:47	0.178
185	5-Sep	10:09:47	0.383	236	5-Sep	11:00:47	0.255
186	5-Sep	10:10:47	0.061	237	5-Sep	11:01:47	0.833
187	5-Sep	10:11:47	0.621	238	5-Sep	11:02:47	0.349
188	5-Sep	10:12:47	3.54	239	5-Sep	11:03:47	0.278
189	5-Sep	10:13:47	0.519	240	5-Sep	11:04:47	1.947
190	5-Sep	10:14:47	0.118	241	5-Sep	11:05:47	1.388
191	5-Sep	10:15:47	0.402	242	5-Sep	11:06:47	0.751
192	5-Sep	10:16:47	0.183	243	5-Sep	11:07:47	0.599
193	5-Sep	10:17:47	0.405	244	5-Sep	11:08:47	2.219
194	5-Sep	10:18:47	0.318	245	5-Sep	11:09:47	0.808
195	5-Sep	10:19:47	4.051	246	5-Sep	11:10:47	0.482
196	5-Sep	10:20:47	1.61	247	5-Sep	11:11:47	0.213
197	5-Sep	10:21:47	0.321	248	5-Sep	11:12:47	0.161
198	5-Sep	10:22:47	1.11	249	5-Sep	11:13:47	0.431
199	5-Sep	10:23:47	0.145	250	5-Sep	11:14:47	0.243
200	5-Sep	10:24:47	1.661	251	5-Sep	11:15:47	1.137
201	5-Sep	10:25:47	0.605	252	5-Sep	11:16:47	0.546
202	5-Sep	10:26:47	7.11	253	5-Sep	11:17:47	0.497
203	5-Sep	10:27:47	6.14	254	5-Sep	11:18:47	0.485
204	5-Sep	10:28:47	1.303	255	5-Sep	11:19:47	0.22
205	5-Sep	10:29:47	2.498	256	5-Sep	11:20:47	0.322
206	5-Sep	10:30:47	2.303	257	5-Sep	11:21:47	0.243
207	5-Sep	10:31:47	0.5	258	5-Sep	11:22:47	0.154
208	5-Sep	10:32:47	0.467	259	5-Sep	11:23:47	0.337
209	5-Sep	10:33:47	0.285	260	5-Sep	11:24:47	0.53
210	5-Sep	10:34:47	0.643	261	5-Sep	11:25:47	0.53
211	5-Sep	10:35:47	0.462	262	5-Sep	11:26:47	0.018
212	5-Sep	10:36:47	0.74	263	5-Sep	11:27:47	0.02
213	5-Sep	10:37:47	2.011	264	5-Sep	11:28:47	0.016
214	5-Sep	10:38:47	0.844	265	5-Sep	11:29:47	0.012
215	5-Sep	10:39:47	0.177	266	5-Sep	11:30:47	0.03
216	5-Sep	10:40:47	0.371	267	5-Sep	11:31:47	0.015
217	5-Sep	10:41:47	0.642	268	5-Sep	11:32:47	0.017
218	5-Sep	10:42:47	0.307	269	5-Sep	11:33:47	0.03
219	5-Sep	10:43:47	0.508	270	5-Sep	11:34:47	0.019
220	5-Sep	10:44:47	0.67	271	5-Sep	11:35:47	0.019
221	5-Sep	10:45:47	0.27	272	5-Sep	11:36:47	0.015

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
273	5-Sep	11:37:47	0.01	324	5-Sep	12:28:47	0.01
274	5-Sep	11:38:47	0.012	325	5-Sep	12:29:47	0.009
275	5-Sep	11:39:47	0.012	326	5-Sep	12:30:47	0.013
276	5-Sep	11:40:47	0.03	327	5-Sep	12:31:47	0.035
277	5-Sep	11:41:47	0.012	328	5-Sep	12:32:47	0.013
278	5-Sep	11:42:47	0.014	329	5-Sep	12:33:47	0.006
279	5-Sep	11:43:47	0.022	330	5-Sep	12:34:47	0.009
280	5-Sep	11:44:47	0.009	331	5-Sep	12:35:47	0.03
281	5-Sep	11:45:47	0.012	332	5-Sep	12:36:47	0.014
282	5-Sep	11:46:47	0.008	333	5-Sep	12:37:47	0.013
283	5-Sep	11:47:47	0.027	334	5-Sep	12:38:47	0.008
284	5-Sep	11:48:47	0.006	335	5-Sep	12:39:47	0.008
285	5-Sep	11:49:47	0.052	336	5-Sep	12:40:47	0.023
286	5-Sep	11:50:47	0.007	337	5-Sep	12:41:47	0.011
287	5-Sep	11:51:47	0.012	338	5-Sep	12:42:47	0.011
288	5-Sep	11:52:47	0.071	339	5-Sep	12:43:47	0.006
289	5-Sep	11:53:47	0.525	340	5-Sep	12:44:47	0.01
290	5-Sep	11:54:47	0.539	341	5-Sep	12:45:47	0.008
291	5-Sep	11:55:47	0.097	342	5-Sep	12:46:47	0.008
292	5-Sep	11:56:47	0.073	343	5-Sep	12:47:47	0.105
293	5-Sep	11:57:47	0.046	344	5-Sep	12:48:47	0.036
294	5-Sep	11:58:47	1.681	345	5-Sep	12:49:47	0.019
295	5-Sep	11:59:47	0.265	346	5-Sep	12:50:47	0.008
296	5-Sep	12:00:47	0.232	347	5-Sep	12:51:47	0.02
297	5-Sep	12:01:47	0.156	348	5-Sep	12:52:47	0.007
298	5-Sep	12:02:47	0.015	349	5-Sep	12:53:47	0.011
299	5-Sep	12:03:47	0.009	350	5-Sep	12:54:47	0.011
300	5-Sep	12:04:47	0.009	351	5-Sep	12:55:47	0.018
301	5-Sep	12:05:47	0.01	352	5-Sep	12:56:47	0.014
302	5-Sep	12:06:47	0.021	353	5-Sep	12:57:47	0.074
303	5-Sep	12:07:47	0.01	354	5-Sep	12:58:47	0.023
304	5-Sep	12:08:47	0.007	355	5-Sep	12:59:47	0.008
305	5-Sep	12:09:47	0.008	356	5-Sep	13:00:47	0.014
306	5-Sep	12:10:47	0.011	357	5-Sep	13:01:47	0.009
307	5-Sep	12:11:47	0.007	358	5-Sep	13:02:47	0.008
308	5-Sep	12:12:47	0.007	359	5-Sep	13:03:47	5.1
309	5-Sep	12:13:47	0.007	360	5-Sep	13:04:47	0.061
310	5-Sep	12:14:47	0.009	361	5-Sep	13:05:47	0.376
311	5-Sep	12:15:47	0.006	362	5-Sep	13:06:47	0.276
312	5-Sep	12:16:47	0.006	363	5-Sep	13:07:47	0.835
313	5-Sep	12:17:47	0.011	364	5-Sep	13:08:47	0.065
314	5-Sep	12:18:47	0.068	365	5-Sep	13:09:47	0.412
315	5-Sep	12:19:47	0.031	366	5-Sep	13:10:47	0.251
316	5-Sep	12:20:47	0.008	367	5-Sep	13:11:47	0.024
317	5-Sep	12:21:47	0.007	368	5-Sep	13:12:47	0.256
318	5-Sep	12:22:47	0.009	369	5-Sep	13:13:47	0.122
319	5-Sep	12:23:47	0.007	370	5-Sep	13:14:47	0.498
320	5-Sep	12:24:47	0.01	371	5-Sep	13:15:47	0.349
321	5-Sep	12:25:47	0.011	372	5-Sep	13:16:47	2.77
322	5-Sep	12:26:47	0.01	373	5-Sep	13:17:47	2.457
323	5-Sep	12:27:47	0.007	374	5-Sep	13:18:47	0.559

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
375	5-Sep	13:19:47	0.154	426	5-Sep	14:10:47	0.311
376	5-Sep	13:20:47	0.065	427	5-Sep	14:11:47	0.228
377	5-Sep	13:21:47	0.04	428	5-Sep	14:12:47	0.018
378	5-Sep	13:22:47	0.183	429	5-Sep	14:13:47	0.014
379	5-Sep	13:23:47	0.468	430	5-Sep	14:14:47	0.272
380	5-Sep	13:24:47	0.073	431	5-Sep	14:15:47	0.036
381	5-Sep	13:25:47	0.136	432	5-Sep	14:16:47	0.024
382	5-Sep	13:26:47	0.013	433	5-Sep	14:17:47	1.169
383	5-Sep	13:27:47	0.264	434	5-Sep	14:18:47	0.288
384	5-Sep	13:28:47	0.121	435	5-Sep	14:19:47	0.153
385	5-Sep	13:29:47	0.844	436	5-Sep	14:20:47	0.052
386	5-Sep	13:30:47	0.446	437	5-Sep	14:21:47	0.065
387	5-Sep	13:31:47	0.454	438	5-Sep	14:22:47	0.428
388	5-Sep	13:32:47	0.368	439	5-Sep	14:23:47	0.493
389	5-Sep	13:33:47	0.111	440	5-Sep	14:24:47	0.807
390	5-Sep	13:34:47	0.144	441	5-Sep	14:25:47	0.128
391	5-Sep	13:35:47	0.02	442	5-Sep	14:26:47	0
392	5-Sep	13:36:47	0.092	443	5-Sep	14:27:47	0.003
393	5-Sep	13:37:47	0.164	444	5-Sep	14:28:47	0.003
394	5-Sep	13:38:47	0.075	445	5-Sep	14:29:47	0
395	5-Sep	13:39:47	0.126	446	5-Sep	14:30:47	0.001
396	5-Sep	13:40:47	0.237	447	5-Sep	14:31:47	0
397	5-Sep	13:41:47	0.264	448	5-Sep	14:32:47	0.044
398	5-Sep	13:42:47	0.467	449	5-Sep	14:33:47	0.083
399	5-Sep	13:43:47	0.547	450	5-Sep	14:34:47	0.02
400	5-Sep	13:44:47	0.414	451	5-Sep	14:35:47	0.062
401	5-Sep	13:45:47	0.026	452	5-Sep	14:36:47	0.002
402	5-Sep	13:46:47	0.296	453	5-Sep	14:37:47	0.173
403	5-Sep	13:47:47	0.056	454	5-Sep	14:38:47	0.009
404	5-Sep	13:48:47	0.571	455	5-Sep	14:39:47	0.043
405	5-Sep	13:49:47	0.277	456	5-Sep	14:40:47	0.002
406	5-Sep	13:50:47	0.762	457	5-Sep	14:41:47	0.001
407	5-Sep	13:51:47	0.268	458	5-Sep	14:42:47	0.078
408	5-Sep	13:52:47	0.395	459	5-Sep	14:43:47	0.041
409	5-Sep	13:53:47	0.054	460	5-Sep	14:44:47	0.706
410	5-Sep	13:54:47	0.287	461	5-Sep	14:45:47	0.03
411	5-Sep	13:55:47	0.101	462	5-Sep	14:46:47	0.026
412	5-Sep	13:56:47	0.062	463	5-Sep	14:47:47	0
413	5-Sep	13:57:47	0.046	464	5-Sep	14:48:47	0.132
414	5-Sep	13:58:47	0.105	465	5-Sep	14:49:47	0.011
415	5-Sep	13:59:47	0.062	466	5-Sep	14:50:47	0.146
416	5-Sep	14:00:47	0.109	467	5-Sep	14:51:47	0.565
417	5-Sep	14:01:47	0.144	468	5-Sep	14:52:47	0.571
418	5-Sep	14:02:47	0.137	469	5-Sep	14:53:47	0.43
419	5-Sep	14:03:47	0.028	470	5-Sep	14:54:47	0.482
420	5-Sep	14:04:47	0.06	471	5-Sep	14:55:47	0.285
421	5-Sep	14:05:47	0.202	472	5-Sep	14:56:47	0.318
422	5-Sep	14:06:47	0.108	473	5-Sep	14:57:47	0.717
423	5-Sep	14:07:47	0.139	474	5-Sep	14:58:47	0.136
424	5-Sep	14:08:47	1.211	475	5-Sep	14:59:47	0.247
425	5-Sep	14:09:47	0.242	476	5-Sep	15:00:47	0.431

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
477	5-Sep	15:01:47	0.485	528	5-Sep	15:52:47	0.043
478	5-Sep	15:02:47	0.128	529	5-Sep	15:53:47	0.027
479	5-Sep	15:03:47	0.116	530	5-Sep	15:54:47	0.135
480	5-Sep	15:04:47	0.075	531	5-Sep	15:55:47	0.083
481	5-Sep	15:05:47	0.189	532	5-Sep	15:56:47	0.102
482	5-Sep	15:06:47	0.436	533	5-Sep	15:57:47	0.131
483	5-Sep	15:07:47	0.552	534	5-Sep	15:58:47	0.033
484	5-Sep	15:08:47	0.703	535	5-Sep	15:59:47	0.04
485	5-Sep	15:09:47	1.542	536	5-Sep	16:00:47	0.049
486	5-Sep	15:10:47	0.511	537	5-Sep	16:01:47	0.129
487	5-Sep	15:11:47	0.064	538	5-Sep	16:02:47	0.125
488	5-Sep	15:12:47	0.027	539	5-Sep	16:03:47	0.116
489	5-Sep	15:13:47	0.022	540	5-Sep	16:04:47	0.021
490	5-Sep	15:14:47	0.128	541	5-Sep	16:05:47	0.11
491	5-Sep	15:15:47	0.078	542	5-Sep	16:06:47	0.484
492	5-Sep	15:16:47	0.089	543	5-Sep	16:07:47	0.342
493	5-Sep	15:17:47	0.092	544	5-Sep	16:08:47	0.14
494	5-Sep	15:18:47	0.006	545	5-Sep	16:09:47	0.03
495	5-Sep	15:19:47	0.003	546	5-Sep	16:10:47	0.225
496	5-Sep	15:20:47	0.014	547	5-Sep	16:11:47	0.088
497	5-Sep	15:21:47	0.145	548	5-Sep	16:12:47	0.018
498	5-Sep	15:22:47	0.017	549	5-Sep	16:13:47	0.203
499	5-Sep	15:23:47	0.058	550	5-Sep	16:14:47	0.085
500	5-Sep	15:24:47	0.129	551	5-Sep	16:15:47	0.044
501	5-Sep	15:25:47	0.282	552	5-Sep	16:16:47	0.202
502	5-Sep	15:26:47	0.176	553	5-Sep	16:17:47	0.597
503	5-Sep	15:27:47	0.219	554	5-Sep	16:18:47	0.611
504	5-Sep	15:28:47	0.525	555	5-Sep	16:19:47	0.517
505	5-Sep	15:29:47	0.07	556	5-Sep	16:20:47	0.04
506	5-Sep	15:30:47	0.064	557	5-Sep	16:21:47	0.035
507	5-Sep	15:31:47	0.085	558	5-Sep	16:22:47	0.036
508	5-Sep	15:32:47	0.051	559	5-Sep	16:23:47	0.02
509	5-Sep	15:33:47	0.131	560	5-Sep	16:24:47	0.031
510	5-Sep	15:34:47	0.162	561	5-Sep	16:25:47	0.234
511	5-Sep	15:35:47	0.49	562	5-Sep	16:26:47	0.305
512	5-Sep	15:36:47	0.315	563	5-Sep	16:27:47	0.192
513	5-Sep	15:37:47	0.041	564	5-Sep	16:28:47	1.081
514	5-Sep	15:38:47	0.101	565	5-Sep	16:29:47	0.306
515	5-Sep	15:39:47	0.039	566	5-Sep	16:30:47	0.209
516	5-Sep	15:40:47	0.067	567	5-Sep	16:31:47	0.179
517	5-Sep	15:41:47	0.027	568	5-Sep	16:32:47	0.188
518	5-Sep	15:42:47	0.19	569	5-Sep	16:33:47	0.048
519	5-Sep	15:43:47	0.134	570	5-Sep	16:34:47	0.371
520	5-Sep	15:44:47	0.359	571	5-Sep	16:35:47	0.26
521	5-Sep	15:45:47	0.177	572	5-Sep	16:36:47	0.034
522	5-Sep	15:46:47	0.233	573	5-Sep	16:37:47	0.252
523	5-Sep	15:47:47	0.193	574	5-Sep	16:38:47	0.329
524	5-Sep	15:48:47	0.244	575	5-Sep	16:39:47	0.129
525	5-Sep	15:49:47	0.067	576	5-Sep	16:40:47	0.291
526	5-Sep	15:50:47	0.059	577	5-Sep	16:41:47	0.067
527	5-Sep	15:51:47	0.098	578	5-Sep	16:42:47	0.106

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
579	5-Sep	16:43:47	0.318				
580	5-Sep	16:44:47	0.405				
581	5-Sep	16:45:47	0.436				
582	5-Sep	16:46:47	0.244				
583	5-Sep	16:47:47	0.139				
584	5-Sep	16:48:47	0.211				
585	5-Sep	16:49:47	0.476				
586	5-Sep	16:50:47	0.347				
587	5-Sep	16:51:47	0.932				
588	5-Sep	16:52:47	0.893				
589	5-Sep	16:53:47	0.534				
590	5-Sep	16:54:47	0.408				
591	5-Sep	16:55:47	0.288				
592	5-Sep	16:56:47	0.31				
593	5-Sep	16:57:47	0.215				
594	5-Sep	16:58:47	1.468				
595	5-Sep	16:59:47	0.705				
596	5-Sep	17:00:47	0.732				
597	5-Sep	17:01:47	0.018				
598	5-Sep	17:02:47	0				
599	5-Sep	17:03:47	0.001				
600	5-Sep	17:04:47	0				
601	5-Sep	17:05:47	0.002				
602	5-Sep	17:06:47	0.722				
603	5-Sep	17:07:47	0.226				
604	5-Sep	17:08:47	0.249				
605	5-Sep	17:09:47	0.121				
606	5-Sep	17:10:47	0.218				
607	5-Sep	17:11:47	0.232				
608	5-Sep	17:12:47	0.74				
609	5-Sep	17:13:47	0.019				
610	5-Sep	17:14:47	0.025				
611	5-Sep	17:15:47	0.061				
612	5-Sep	17:16:47	0.038				
613	5-Sep	17:17:47	0.424				
614	5-Sep	17:18:47	0.404				
615	5-Sep	17:19:47	0.188				
616	5-Sep	17:20:47	0.202				
617	5-Sep	17:21:47	0.104				
618	5-Sep	17:22:47	0.477				
619	5-Sep	17:23:47	0.112				
620	5-Sep	17:24:47	0.059				
621	5-Sep	17:25:47	0.067				
622	5-Sep	17:26:47	0.011				
623	5-Sep	17:27:47	0.017				
624	5-Sep	17:28:47	0.245				
625	5-Sep	17:29:47	0.029				
626	5-Sep	17:30:47	0.07				
627	5-Sep	17:31:47	0.068				
628	5-Sep	17:32:47	0.011				

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 01
Number of logged points: 205
Start time and date: 07:58:07 10-Sep
Elapsed time: 03:25:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 16.632 mg/m³
Time at maximum: 11:07:38 Sep 10
Max STEL Concentration: 2.286 mg/m³
Time at max STEL: 11:20:37 Sep 10
Overall Avg Conc: 0.573 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	10-Sep	07:59:07	0.002	29	10-Sep	08:27:07	0.512
2	10-Sep	08:00:07	0	30	10-Sep	08:28:07	1.139
3	10-Sep	08:01:07	0.002	31	10-Sep	08:29:07	0.401
4	10-Sep	08:02:07	0	32	10-Sep	08:30:07	0.58
5	10-Sep	08:03:07	0.014	33	10-Sep	08:31:07	1.246
6	10-Sep	08:04:07	0.003	34	10-Sep	08:32:07	2.418
7	10-Sep	08:05:07	0.072	35	10-Sep	08:33:07	2.063
8	10-Sep	08:06:07	0.002	36	10-Sep	08:34:07	1.963
9	10-Sep	08:07:07	0	37	10-Sep	08:35:07	0.446
10	10-Sep	08:08:07	0.174	38	10-Sep	08:36:07	0.269
11	10-Sep	08:09:07	0.353	39	10-Sep	08:37:07	0.228
12	10-Sep	08:10:07	0.271	40	10-Sep	08:38:07	0.501
13	10-Sep	08:11:07	0.178	41	10-Sep	08:39:07	1.007
14	10-Sep	08:12:07	0.075	42	10-Sep	08:40:07	0.521
15	10-Sep	08:13:07	0.026	43	10-Sep	08:41:07	1.288
16	10-Sep	08:14:07	0.081	44	10-Sep	08:42:07	0.752
17	10-Sep	08:15:07	0.025	45	10-Sep	08:43:07	0.144
18	10-Sep	08:16:07	0.189	46	10-Sep	08:44:07	0.101
19	10-Sep	08:17:07	0.206	47	10-Sep	08:45:07	0.351
20	10-Sep	08:18:07	0.019	48	10-Sep	08:46:07	0.057
21	10-Sep	08:19:07	0.272	49	10-Sep	08:47:07	0.096
22	10-Sep	08:20:07	0.379	50	10-Sep	08:48:07	0.245
23	10-Sep	08:21:07	0.521	51	10-Sep	08:49:07	0.123
24	10-Sep	08:22:07	0.299	52	10-Sep	08:50:07	0.233
25	10-Sep	08:23:07	1.119	53	10-Sep	08:51:07	0.164
26	10-Sep	08:24:07	0.917	54	10-Sep	08:52:07	0.032
27	10-Sep	08:25:07	0.354	55	10-Sep	08:53:07	0.104
28	10-Sep	08:26:07	0.696	56	10-Sep	08:54:07	0.337
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

57	10-Sep	08:55:07	0.677	104	10-Sep	09:42:07	0.121
58	10-Sep	08:56:07	1.421	105	10-Sep	09:43:07	0.477
59	10-Sep	08:57:07	0.631	106	10-Sep	09:44:07	0.797
60	10-Sep	08:58:07	1.877	107	10-Sep	09:45:07	0.031
61	10-Sep	08:59:07	2.806	108	10-Sep	09:46:07	0.065
62	10-Sep	09:00:07	0.547	109	10-Sep	09:47:07	0.557
63	10-Sep	09:01:07	1.066	110	10-Sep	09:48:07	0.166
64	10-Sep	09:02:07	0.749	111	10-Sep	09:49:07	0.386
65	10-Sep	09:03:07	0.099	112	10-Sep	09:50:07	0.423
66	10-Sep	09:04:07	1.444	113	10-Sep	09:51:07	0.206
67	10-Sep	09:05:07	1.166	114	10-Sep	09:52:07	0.042
68	10-Sep	09:06:07	1.121	115	10-Sep	09:53:07	0.191
69	10-Sep	09:07:07	0.683	116	10-Sep	09:54:07	0.123
70	10-Sep	09:08:07	0.292	117	10-Sep	09:55:07	0.071
71	10-Sep	09:09:07	0.63	118	10-Sep	09:56:07	0.095
72	10-Sep	09:10:07	0.058	119	10-Sep	09:57:07	0.256
73	10-Sep	09:11:07	0	120	10-Sep	09:58:07	0.189
74	10-Sep	09:12:07	0.003	121	10-Sep	09:59:07	0.125
75	10-Sep	09:13:07	0.014	122	10-Sep	10:00:07	0.541
76	10-Sep	09:14:07	0	123	10-Sep	10:01:07	0.263
77	10-Sep	09:15:07	0	124	10-Sep	10:02:07	0.177
78	10-Sep	09:16:07	0.01	125	10-Sep	10:03:07	0.339
79	10-Sep	09:17:07	0	126	10-Sep	10:04:07	0.443
80	10-Sep	09:18:07	0	127	10-Sep	10:05:07	0.316
81	10-Sep	09:19:07	0	128	10-Sep	10:06:07	0.051
82	10-Sep	09:20:07	0	129	10-Sep	10:07:07	0.261
83	10-Sep	09:21:07	0.981	130	10-Sep	10:08:07	0.665
84	10-Sep	09:22:07	0.082	131	10-Sep	10:09:07	0.057
85	10-Sep	09:23:07	0.574	132	10-Sep	10:10:07	0.113
86	10-Sep	09:24:07	0.236	133	10-Sep	10:11:07	0.125
87	10-Sep	09:25:07	0.259	134	10-Sep	10:12:07	0.078
88	10-Sep	09:26:07	0.088	135	10-Sep	10:13:07	0.036
89	10-Sep	09:27:07	0.313	136	10-Sep	10:14:07	0.037
90	10-Sep	09:28:07	0.253	137	10-Sep	10:15:07	0.065
91	10-Sep	09:29:07	0.421	138	10-Sep	10:16:07	0.031
92	10-Sep	09:30:07	1.284	139	10-Sep	10:17:07	0.019
93	10-Sep	09:31:07	0.2	140	10-Sep	10:18:07	0.042
94	10-Sep	09:32:07	0.037	141	10-Sep	10:19:07	0.182
95	10-Sep	09:33:07	0.318	142	10-Sep	10:20:07	0.174
96	10-Sep	09:34:07	0.911	143	10-Sep	10:21:07	0.349
97	10-Sep	09:35:07	0.862	144	10-Sep	10:22:07	0.242
98	10-Sep	09:36:07	0.813	145	10-Sep	10:23:07	0.079
99	10-Sep	09:37:07	0.189	146	10-Sep	10:24:07	0.16
100	10-Sep	09:38:07	1.743	147	10-Sep	10:25:07	0.004
101	10-Sep	09:39:07	0.632	148	10-Sep	10:26:07	0.153
102	10-Sep	09:40:07	0.376	149	10-Sep	10:27:07	0.171
103	10-Sep	09:41:07	1.24	150	10-Sep	10:28:07	0.151
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

151	10-Sep 10:29:07	0.195	198	10-Sep 11:16:07	1.152
152	10-Sep 10:30:07	0.119	199	10-Sep 11:17:07	2.005
153	10-Sep 10:31:07	0.168	200	10-Sep 11:18:07	6.2
154	10-Sep 10:32:07	0.08	201	10-Sep 11:19:07	3.53
155	10-Sep 10:33:07	0.074	202	10-Sep 11:20:07	4.22
156	10-Sep 10:34:07	0.062	203	10-Sep 11:21:07	5.29
157	10-Sep 10:35:07	0.077	204	10-Sep 11:22:07	1.393
158	10-Sep 10:36:07	0.166	205	10-Sep 11:23:07	4.67
159	10-Sep 10:37:07	0.05			
160	10-Sep 10:38:07	0.124			
161	10-Sep 10:39:07	0.114			
162	10-Sep 10:40:07	0.031			
163	10-Sep 10:41:07	0.039			
164	10-Sep 10:42:07	0.13			
165	10-Sep 10:43:07	0.061			
166	10-Sep 10:44:07	0.061			
167	10-Sep 10:45:07	0.052			
168	10-Sep 10:46:07	1.166			
169	10-Sep 10:47:07	0.42			
170	10-Sep 10:48:07	0.114			
171	10-Sep 10:49:07	0.742			
172	10-Sep 10:50:07	0.538			
173	10-Sep 10:51:07	0.08			
174	10-Sep 10:52:07	0.334			
175	10-Sep 10:53:07	0.146			
176	10-Sep 10:54:07	0.229			
177	10-Sep 10:55:07	0.123			
178	10-Sep 10:56:07	0.075			
179	10-Sep 10:57:07	0.151			
180	10-Sep 10:58:07	0.48			
181	10-Sep 10:59:07	0.088			
182	10-Sep 11:00:07	0.01			
183	10-Sep 11:01:07	0.168			
184	10-Sep 11:02:07	0.282			
185	10-Sep 11:03:07	2.142			
186	10-Sep 11:04:07	1.701			
187	10-Sep 11:05:07	2.457			
188	10-Sep 11:06:07	4.45			
189	10-Sep 11:07:07	1.896			
190	10-Sep 11:08:07	6.94			
191	10-Sep 11:09:07	0.438			
192	10-Sep 11:10:07	0.2			
193	10-Sep 11:11:07	0.304			
194	10-Sep 11:12:07	0.236			
195	10-Sep 11:13:07	1.318			
196	10-Sep 11:14:07	0.466			
197	10-Sep 11:15:07	0.084			

pDR-1000 S/N: 04878

User ID: DuPont Site PDR-2
Tag Number: 01
Number of logged points: 579
Start time and date: 07:58:06 10-Sep
Elapsed time: 09:39:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 82.167 mg/m³
Time at maximum: 16:45:02 Sep 10
Max STEL Concentration: 3.811 mg/m³
Time at max STEL: 16:47:08 Sep 10
Overall Avg Conc: 0.495 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	10-Sep	07:59:06	0.056	31	10-Sep	08:29:06	0.055
2	10-Sep	08:00:06	0.005	32	10-Sep	08:30:06	0.029
3	10-Sep	08:01:06	0.003	33	10-Sep	08:31:06	0.022
4	10-Sep	08:02:06	0.019	34	10-Sep	08:32:06	0.02
5	10-Sep	08:03:06	0.003	35	10-Sep	08:33:06	0.098
6	10-Sep	08:04:06	0.002	36	10-Sep	08:34:06	0.003
7	10-Sep	08:05:06	0.009	37	10-Sep	08:35:06	0.003
8	10-Sep	08:06:06	0.041	38	10-Sep	08:36:06	0.084
9	10-Sep	08:07:06	0.006	39	10-Sep	08:37:06	0.223
10	10-Sep	08:08:06	0.003	40	10-Sep	08:38:06	0.136
11	10-Sep	08:09:06	0.004	41	10-Sep	08:39:06	0.202
12	10-Sep	08:10:06	0.002	42	10-Sep	08:40:06	0.03
13	10-Sep	08:11:06	0.003	43	10-Sep	08:41:06	0.056
14	10-Sep	08:12:06	0.005	44	10-Sep	08:42:06	0.412
15	10-Sep	08:13:06	0.002	45	10-Sep	08:43:06	0.287
16	10-Sep	08:14:06	0.002	46	10-Sep	08:44:06	0.07
17	10-Sep	08:15:06	0.002	47	10-Sep	08:45:06	0.3
18	10-Sep	08:16:06	0.001	48	10-Sep	08:46:06	0.009
19	10-Sep	08:17:06	0.005	49	10-Sep	08:47:06	0.147
20	10-Sep	08:18:06	0.002	50	10-Sep	08:48:06	0.142
21	10-Sep	08:19:06	0.041	51	10-Sep	08:49:06	1.159
22	10-Sep	08:20:06	0.012	52	10-Sep	08:50:06	0.142
23	10-Sep	08:21:06	0.009	53	10-Sep	08:51:06	0.171
24	10-Sep	08:22:06	0.003	54	10-Sep	08:52:06	0.109
25	10-Sep	08:23:06	0.074	55	10-Sep	08:53:06	0.061
26	10-Sep	08:24:06	0.017	56	10-Sep	08:54:06	0.152
27	10-Sep	08:25:06	0.029	57	10-Sep	08:55:06	0.117
28	10-Sep	08:26:06	0.006	58	10-Sep	08:56:06	0.071
29	10-Sep	08:27:06	0.004	59	10-Sep	08:57:06	0.198
30	10-Sep	08:28:06	0.005	60	10-Sep	08:58:06	0.249
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

61	10-Sep	08:59:06	0.082	108	10-Sep	09:46:06	0.172
62	10-Sep	09:00:06	0.174	109	10-Sep	09:47:06	0.016
63	10-Sep	09:01:06	0.126	110	10-Sep	09:48:06	0.004
64	10-Sep	09:02:06	0.007	111	10-Sep	09:49:06	0.538
65	10-Sep	09:03:06	0	112	10-Sep	09:50:06	0.213
66	10-Sep	09:04:06	0	113	10-Sep	09:51:06	0.246
67	10-Sep	09:05:06	0	114	10-Sep	09:52:06	0.449
68	10-Sep	09:06:06	0	115	10-Sep	09:53:06	0.463
69	10-Sep	09:07:06	0	116	10-Sep	09:54:06	0.348
70	10-Sep	09:08:06	0.001	117	10-Sep	09:55:06	0.183
71	10-Sep	09:09:06	0	118	10-Sep	09:56:06	1.051
72	10-Sep	09:10:06	0.002	119	10-Sep	09:57:06	0.635
73	10-Sep	09:11:06	0.008	120	10-Sep	09:58:06	0.202
74	10-Sep	09:12:06	0.327	121	10-Sep	09:59:06	0.159
75	10-Sep	09:13:06	0.346	122	10-Sep	10:00:06	0.537
76	10-Sep	09:14:06	0.13	123	10-Sep	10:01:06	0.267
77	10-Sep	09:15:06	0.096	124	10-Sep	10:02:06	1.366
78	10-Sep	09:16:06	0.087	125	10-Sep	10:03:06	0.297
79	10-Sep	09:17:06	0.102	126	10-Sep	10:04:06	0.116
80	10-Sep	09:18:06	0.135	127	10-Sep	10:05:06	0.66
81	10-Sep	09:19:06	0.093	128	10-Sep	10:06:06	0.613
82	10-Sep	09:20:06	0.031	129	10-Sep	10:07:06	2.19
83	10-Sep	09:21:06	0.053	130	10-Sep	10:08:06	0.171
84	10-Sep	09:22:06	0.138	131	10-Sep	10:09:06	2.022
85	10-Sep	09:23:06	0.126	132	10-Sep	10:10:06	0.085
86	10-Sep	09:24:06	0.139	133	10-Sep	10:11:06	0.043
87	10-Sep	09:25:06	0.034	134	10-Sep	10:12:06	0.04
88	10-Sep	09:26:06	0.283	135	10-Sep	10:13:06	0.559
89	10-Sep	09:27:06	0.264	136	10-Sep	10:14:06	0.218
90	10-Sep	09:28:06	0.126	137	10-Sep	10:15:06	0.271
91	10-Sep	09:29:06	0.102	138	10-Sep	10:16:06	0.047
92	10-Sep	09:30:06	0.113	139	10-Sep	10:17:06	0.135
93	10-Sep	09:31:06	0.128	140	10-Sep	10:18:06	0.03
94	10-Sep	09:32:06	0.071	141	10-Sep	10:19:06	0.437
95	10-Sep	09:33:06	0.227	142	10-Sep	10:20:06	0.268
96	10-Sep	09:34:06	0.192	143	10-Sep	10:21:06	0.191
97	10-Sep	09:35:06	0.138	144	10-Sep	10:22:06	1.246
98	10-Sep	09:36:06	0.14	145	10-Sep	10:23:06	3.519
99	10-Sep	09:37:06	0.108	146	10-Sep	10:24:06	7.16
100	10-Sep	09:38:06	0.066	147	10-Sep	10:25:06	2.135
101	10-Sep	09:39:06	0.04	148	10-Sep	10:26:06	1.143
102	10-Sep	09:40:06	0.145	149	10-Sep	10:27:06	0.224
103	10-Sep	09:41:06	0.713	150	10-Sep	10:28:06	0.012
104	10-Sep	09:42:06	0.137	151	10-Sep	10:29:06	0.004
105	10-Sep	09:43:06	0.101	152	10-Sep	10:30:06	0.001
106	10-Sep	09:44:06	0.662	153	10-Sep	10:31:06	0.007
107	10-Sep	09:45:06	0.62	154	10-Sep	10:32:06	0.042
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

155	10-Sep	10:33:06	0.105	202	10-Sep	11:20:06	0.153
156	10-Sep	10:34:06	0.036	203	10-Sep	11:21:06	0.121
157	10-Sep	10:35:06	0.015	204	10-Sep	11:22:06	0.023
158	10-Sep	10:36:06	0.045	205	10-Sep	11:23:06	0.034
159	10-Sep	10:37:06	0.011	206	10-Sep	11:24:06	0.027
160	10-Sep	10:38:06	0.042	207	10-Sep	11:25:06	0.033
161	10-Sep	10:39:06	0.088	208	10-Sep	11:26:06	0.036
162	10-Sep	10:40:06	0.013	209	10-Sep	11:27:06	0.023
163	10-Sep	10:41:06	0.037	210	10-Sep	11:28:06	0.039
164	10-Sep	10:42:06	0.06	211	10-Sep	11:29:06	0.039
165	10-Sep	10:43:06	0.027	212	10-Sep	11:30:06	0.125
166	10-Sep	10:44:06	0.042	213	10-Sep	11:31:06	0.15
167	10-Sep	10:45:06	0.072	214	10-Sep	11:32:06	0.161
168	10-Sep	10:46:06	0.043	215	10-Sep	11:33:06	0.115
169	10-Sep	10:47:06	0.435	216	10-Sep	11:34:06	0.817
170	10-Sep	10:48:06	0.026	217	10-Sep	11:35:06	1.756
171	10-Sep	10:49:06	0.03	218	10-Sep	11:36:06	0.041
172	10-Sep	10:50:06	0.028	219	10-Sep	11:37:06	0.006
173	10-Sep	10:51:06	0.004	220	10-Sep	11:38:06	0.011
174	10-Sep	10:52:06	0.01	221	10-Sep	11:39:06	0.014
175	10-Sep	10:53:06	0.036	222	10-Sep	11:40:06	0.018
176	10-Sep	10:54:06	0.053	223	10-Sep	11:41:06	0.007
177	10-Sep	10:55:06	0.021	224	10-Sep	11:42:06	0.01
178	10-Sep	10:56:06	0.024	225	10-Sep	11:43:06	0.029
179	10-Sep	10:57:06	0.11	226	10-Sep	11:44:06	0.013
180	10-Sep	10:58:06	0.76	227	10-Sep	11:45:06	0.054
181	10-Sep	10:59:06	0.266	228	10-Sep	11:46:06	0.057
182	10-Sep	11:00:06	0.067	229	10-Sep	11:47:06	0.052
183	10-Sep	11:01:06	0.081	230	10-Sep	11:48:06	0.037
184	10-Sep	11:02:06	0.122	231	10-Sep	11:49:06	0.018
185	10-Sep	11:03:06	0.09	232	10-Sep	11:50:06	0.038
186	10-Sep	11:04:06	0.052	233	10-Sep	11:51:06	0.045
187	10-Sep	11:05:06	0.169	234	10-Sep	11:52:06	0.099
188	10-Sep	11:06:06	0.855	235	10-Sep	11:53:06	0.033
189	10-Sep	11:07:06	0.552	236	10-Sep	11:54:06	0.082
190	10-Sep	11:08:06	0.159	237	10-Sep	11:55:06	0.029
191	10-Sep	11:09:06	0.117	238	10-Sep	11:56:06	0.021
192	10-Sep	11:10:06	1.357	239	10-Sep	11:57:06	0.034
193	10-Sep	11:11:06	1.788	240	10-Sep	11:58:06	0.051
194	10-Sep	11:12:06	0.717	241	10-Sep	11:59:06	0.03
195	10-Sep	11:13:06	0.036	242	10-Sep	12:00:06	0.026
196	10-Sep	11:14:06	0.021	243	10-Sep	12:01:06	0.002
197	10-Sep	11:15:06	0.064	244	10-Sep	12:02:06	0.004
198	10-Sep	11:16:06	0.067	245	10-Sep	12:03:06	0.003
199	10-Sep	11:17:06	0.022	246	10-Sep	12:04:06	0.002
200	10-Sep	11:18:06	0.029	247	10-Sep	12:05:06	0.002
201	10-Sep	11:19:06	0.027	248	10-Sep	12:06:06	0.003
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

249	10-Sep	12:07:06	0.002	296	10-Sep	12:54:06	0.004
250	10-Sep	12:08:06	0.003	297	10-Sep	12:55:06	0.001
251	10-Sep	12:09:06	0.003	298	10-Sep	12:56:06	0.003
252	10-Sep	12:10:06	0.003	299	10-Sep	12:57:06	0.001
253	10-Sep	12:11:06	0.003	300	10-Sep	12:58:06	0.002
254	10-Sep	12:12:06	0.056	301	10-Sep	12:59:06	0
255	10-Sep	12:13:06	0.012	302	10-Sep	13:00:06	0.001
256	10-Sep	12:14:06	0.002	303	10-Sep	13:01:06	0.004
257	10-Sep	12:15:06	0.022	304	10-Sep	13:02:06	0.004
258	10-Sep	12:16:06	0.002	305	10-Sep	13:03:06	0.003
259	10-Sep	12:17:06	0.002	306	10-Sep	13:04:06	0.001
260	10-Sep	12:18:06	0.001	307	10-Sep	13:05:06	0.002
261	10-Sep	12:19:06	0.001	308	10-Sep	13:06:06	0.001
262	10-Sep	12:20:06	0.005	309	10-Sep	13:07:06	0.014
263	10-Sep	12:21:06	0.001	310	10-Sep	13:08:06	0.008
264	10-Sep	12:22:06	0.003	311	10-Sep	13:09:06	0.073
265	10-Sep	12:23:06	0.002	312	10-Sep	13:10:06	0.142
266	10-Sep	12:24:06	0.002	313	10-Sep	13:11:06	0.269
267	10-Sep	12:25:06	0.001	314	10-Sep	13:12:06	0.047
268	10-Sep	12:26:06	0.001	315	10-Sep	13:13:06	0.181
269	10-Sep	12:27:06	0.003	316	10-Sep	13:14:06	0.167
270	10-Sep	12:28:06	0.002	317	10-Sep	13:15:06	0.405
271	10-Sep	12:29:06	0.001	318	10-Sep	13:16:06	0.622
272	10-Sep	12:30:06	0.001	319	10-Sep	13:17:06	0.114
273	10-Sep	12:31:06	0.01	320	10-Sep	13:18:06	0.06
274	10-Sep	12:32:06	0.002	321	10-Sep	13:19:06	0.46
275	10-Sep	12:33:06	0.002	322	10-Sep	13:20:06	0.211
276	10-Sep	12:34:06	0.002	323	10-Sep	13:21:06	0.122
277	10-Sep	12:35:06	0.002	324	10-Sep	13:22:06	0.041
278	10-Sep	12:36:06	0.009	325	10-Sep	13:23:06	0.027
279	10-Sep	12:37:06	0.001	326	10-Sep	13:24:06	0.193
280	10-Sep	12:38:06	0	327	10-Sep	13:25:06	0.074
281	10-Sep	12:39:06	0.003	328	10-Sep	13:26:06	1.173
282	10-Sep	12:40:06	0.002	329	10-Sep	13:27:06	0.299
283	10-Sep	12:41:06	0	330	10-Sep	13:28:06	0.161
284	10-Sep	12:42:06	0.001	331	10-Sep	13:29:06	1.992
285	10-Sep	12:43:06	0.001	332	10-Sep	13:30:06	0.574
286	10-Sep	12:44:06	0.001	333	10-Sep	13:31:06	0.14
287	10-Sep	12:45:06	0.001	334	10-Sep	13:32:06	0.05
288	10-Sep	12:46:06	0.001	335	10-Sep	13:33:06	0.352
289	10-Sep	12:47:06	0.001	336	10-Sep	13:34:06	0.07
290	10-Sep	12:48:06	0	337	10-Sep	13:35:06	0.994
291	10-Sep	12:49:06	0.001	338	10-Sep	13:36:06	0.239
292	10-Sep	12:50:06	0.002	339	10-Sep	13:37:06	0.245
293	10-Sep	12:51:06	0.002	340	10-Sep	13:38:06	2.286
294	10-Sep	12:52:06	0.003	341	10-Sep	13:39:06	3.388
295	10-Sep	12:53:06	0.001	342	10-Sep	13:40:06	1.605
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

343	10-Sep	13:41:06	0.059	390	10-Sep	14:28:06	0.124
344	10-Sep	13:42:06	0.01	391	10-Sep	14:29:06	0.088
345	10-Sep	13:43:06	2.653	392	10-Sep	14:30:06	0.286
346	10-Sep	13:44:06	2.235	393	10-Sep	14:31:06	0.085
347	10-Sep	13:45:06	0.18	394	10-Sep	14:32:06	0.464
348	10-Sep	13:46:06	0.05	395	10-Sep	14:33:06	0.13
349	10-Sep	13:47:06	0.792	396	10-Sep	14:34:06	0.061
350	10-Sep	13:48:06	0.092	397	10-Sep	14:35:06	0.214
351	10-Sep	13:49:06	0.201	398	10-Sep	14:36:06	0.42
352	10-Sep	13:50:06	0.046	399	10-Sep	14:37:06	0.235
353	10-Sep	13:51:06	0.423	400	10-Sep	14:38:06	0.042
354	10-Sep	13:52:06	0.088	401	10-Sep	14:39:06	0.182
355	10-Sep	13:53:06	0.022	402	10-Sep	14:40:06	0.187
356	10-Sep	13:54:06	1.176	403	10-Sep	14:41:06	0.409
357	10-Sep	13:55:06	0.454	404	10-Sep	14:42:06	0.178
358	10-Sep	13:56:06	0.243	405	10-Sep	14:43:06	0.298
359	10-Sep	13:57:06	0.074	406	10-Sep	14:44:06	0.16
360	10-Sep	13:58:06	0.533	407	10-Sep	14:45:06	0.748
361	10-Sep	13:59:06	2.308	408	10-Sep	14:46:06	1.954
362	10-Sep	14:00:06	2.458	409	10-Sep	14:47:06	0.104
363	10-Sep	14:01:06	1.297	410	10-Sep	14:48:06	0.026
364	10-Sep	14:02:06	1.387	411	10-Sep	14:49:06	0.118
365	10-Sep	14:03:06	0.328	412	10-Sep	14:50:06	0.097
366	10-Sep	14:04:06	2.882	413	10-Sep	14:51:06	1.035
367	10-Sep	14:05:06	0.026	414	10-Sep	14:52:06	0.108
368	10-Sep	14:06:06	14.36	415	10-Sep	14:53:06	3.033
369	10-Sep	14:07:06	14.57	416	10-Sep	14:54:06	1.972
370	10-Sep	14:08:06	1.173	417	10-Sep	14:55:06	1.172
371	10-Sep	14:09:06	3.983	418	10-Sep	14:56:06	0.18
372	10-Sep	14:10:06	2.241	419	10-Sep	14:57:06	0.024
373	10-Sep	14:11:06	0.146	420	10-Sep	14:58:06	0.027
374	10-Sep	14:12:06	0.806	421	10-Sep	14:59:06	0.049
375	10-Sep	14:13:06	1.198	422	10-Sep	15:00:06	0.079
376	10-Sep	14:14:06	0.622	423	10-Sep	15:01:06	0.405
377	10-Sep	14:15:06	0.219	424	10-Sep	15:02:06	0.06
378	10-Sep	14:16:06	0.028	425	10-Sep	15:03:06	0.27
379	10-Sep	14:17:06	0.031	426	10-Sep	15:04:06	0.403
380	10-Sep	14:18:06	0.114	427	10-Sep	15:05:06	0.121
381	10-Sep	14:19:06	2.66	428	10-Sep	15:06:06	1.481
382	10-Sep	14:20:06	0.416	429	10-Sep	15:07:06	0.121
383	10-Sep	14:21:06	0.291	430	10-Sep	15:08:06	0.11
384	10-Sep	14:22:06	0.427	431	10-Sep	15:09:06	0.175
385	10-Sep	14:23:06	0.274	432	10-Sep	15:10:06	0.261
386	10-Sep	14:24:06	0.236	433	10-Sep	15:11:06	0.076
387	10-Sep	14:25:06	0.495	434	10-Sep	15:12:06	0.079
388	10-Sep	14:26:06	0.707	435	10-Sep	15:13:06	0.081
389	10-Sep	14:27:06	0.974	436	10-Sep	15:14:06	0.102
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

437	10-Sep	15:15:06	0.05	484	10-Sep	16:02:06	1.227
438	10-Sep	15:16:06	0.141	485	10-Sep	16:03:06	1.734
439	10-Sep	15:17:06	0.089	486	10-Sep	16:04:06	0.225
440	10-Sep	15:18:06	0.377	487	10-Sep	16:05:06	0.112
441	10-Sep	15:19:06	0.239	488	10-Sep	16:06:06	0.198
442	10-Sep	15:20:06	0.247	489	10-Sep	16:07:06	0.089
443	10-Sep	15:21:06	0.078	490	10-Sep	16:08:06	0.069
444	10-Sep	15:22:06	3.531	491	10-Sep	16:09:06	1.775
445	10-Sep	15:23:06	0.771	492	10-Sep	16:10:06	0.494
446	10-Sep	15:24:06	0.138	493	10-Sep	16:11:06	0.085
447	10-Sep	15:25:06	0.353	494	10-Sep	16:12:06	0.068
448	10-Sep	15:26:06	1.001	495	10-Sep	16:13:06	0.036
449	10-Sep	15:27:06	4.21	496	10-Sep	16:14:06	0.068
450	10-Sep	15:28:06	0.318	497	10-Sep	16:15:06	0.044
451	10-Sep	15:29:06	0.224	498	10-Sep	16:16:06	0.035
452	10-Sep	15:30:06	1.265	499	10-Sep	16:17:06	0.034
453	10-Sep	15:31:06	2.613	500	10-Sep	16:18:06	0.586
454	10-Sep	15:32:06	0.162	501	10-Sep	16:19:06	0.462
455	10-Sep	15:33:06	0.591	502	10-Sep	16:20:06	0.12
456	10-Sep	15:34:06	0.163	503	10-Sep	16:21:06	0.217
457	10-Sep	15:35:06	0.059	504	10-Sep	16:22:06	0.51
458	10-Sep	15:36:06	0.038	505	10-Sep	16:23:06	1.097
459	10-Sep	15:37:06	0.022	506	10-Sep	16:24:06	0.203
460	10-Sep	15:38:06	0.058	507	10-Sep	16:25:06	1.464
461	10-Sep	15:39:06	0.52	508	10-Sep	16:26:06	0.2
462	10-Sep	15:40:06	11.82	509	10-Sep	16:27:06	0.349
463	10-Sep	15:41:06	2.723	510	10-Sep	16:28:06	0.394
464	10-Sep	15:42:06	0.134	511	10-Sep	16:29:06	0.079
465	10-Sep	15:43:06	0.067	512	10-Sep	16:30:06	0.375
466	10-Sep	15:44:06	0.232	513	10-Sep	16:31:06	0.379
467	10-Sep	15:45:06	0.103	514	10-Sep	16:32:06	0.256
468	10-Sep	15:46:06	0.063	515	10-Sep	16:33:06	0.348
469	10-Sep	15:47:06	0.024	516	10-Sep	16:34:06	5.58
470	10-Sep	15:48:06	0.023	517	10-Sep	16:35:06	0.452
471	10-Sep	15:49:06	0.021	518	10-Sep	16:36:06	0.156
472	10-Sep	15:50:06	0.022	519	10-Sep	16:37:06	0.404
473	10-Sep	15:51:06	0.022	520	10-Sep	16:38:06	3.886
474	10-Sep	15:52:06	0.021	521	10-Sep	16:39:06	2.522
475	10-Sep	15:53:06	0.095	522	10-Sep	16:40:06	4.89
476	10-Sep	15:54:06	0.027	523	10-Sep	16:41:06	1.004
477	10-Sep	15:55:06	0.058	524	10-Sep	16:42:06	1.713
478	10-Sep	15:56:06	0.048	525	10-Sep	16:43:06	0.792
479	10-Sep	15:57:06	0.075	526	10-Sep	16:44:06	5.19
480	10-Sep	15:58:06	0.12	527	10-Sep	16:45:06	24.46
481	10-Sep	15:59:06	0.097	528	10-Sep	16:46:06	5.26
482	10-Sep	16:00:06	0.418	529	10-Sep	16:47:06	0.516
483	10-Sep	16:01:06	2.388	530	10-Sep	16:48:06	0.061

Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

531	10-Sep 16:49:06	0.391
532	10-Sep 16:50:06	0.363
533	10-Sep 16:51:06	0.639
534	10-Sep 16:52:06	1.073
535	10-Sep 16:53:06	1.135
536	10-Sep 16:54:06	0.732
537	10-Sep 16:55:06	0.105
538	10-Sep 16:56:06	0.192
539	10-Sep 16:57:06	0.421
540	10-Sep 16:58:06	2.386
541	10-Sep 16:59:06	0.748
542	10-Sep 17:00:06	4.8
543	10-Sep 17:01:06	1.559
544	10-Sep 17:02:06	0.322
545	10-Sep 17:03:06	0.561
546	10-Sep 17:04:06	0.746
547	10-Sep 17:05:06	0.303
548	10-Sep 17:06:06	0.098
549	10-Sep 17:07:06	0.048
550	10-Sep 17:08:06	0.049
551	10-Sep 17:09:06	0.162
552	10-Sep 17:10:06	0.556
553	10-Sep 17:11:06	3.877
554	10-Sep 17:12:06	0.582
555	10-Sep 17:13:06	0.194
556	10-Sep 17:14:06	0.068
557	10-Sep 17:15:06	0.152
558	10-Sep 17:16:06	0.087
559	10-Sep 17:17:06	0.087
560	10-Sep 17:18:06	0.404
561	10-Sep 17:19:06	0.035
562	10-Sep 17:20:06	0.063
563	10-Sep 17:21:06	0.294
564	10-Sep 17:22:06	0.044
565	10-Sep 17:23:06	0.027
566	10-Sep 17:24:06	0.025
567	10-Sep 17:25:06	0.025
568	10-Sep 17:26:06	0.027
569	10-Sep 17:27:06	0.041
570	10-Sep 17:28:06	0.027
571	10-Sep 17:29:06	0.024
572	10-Sep 17:30:06	0.025
573	10-Sep 17:31:06	0.029
574	10-Sep 17:32:06	0.024
575	10-Sep 17:33:06	0.17
576	10-Sep 17:34:06	0.112
577	10-Sep 17:35:06	0.127
578	10-Sep 17:36:06	0.125
579	10-Sep 17:37:06	0.14

pDR-1000 S/N: 04881

User ID: DuPont Site PDR-3
Tag Number: 01
Number of logged points: 576
Start time and date: 07:59:48 10-Sep
Elapsed time: 09:36:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 12.292 mg/m³
Time at maximum: 17:28:15 Sep 10
Max STEL Concentration: 0.877 mg/m³
Time at max STEL: 13:15:18 Sep 10
Overall Avg Conc: 0.179 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	10-Sep	08:00:48	0.008	31	10-Sep	08:30:48	0.316
2	10-Sep	08:01:48	0.006	32	10-Sep	08:31:48	0.072
3	10-Sep	08:02:48	0.017	33	10-Sep	08:32:48	0.065
4	10-Sep	08:03:48	0.011	34	10-Sep	08:33:48	0.044
5	10-Sep	08:04:48	0.183	35	10-Sep	08:34:48	0.033
6	10-Sep	08:05:48	0.009	36	10-Sep	08:35:48	0.256
7	10-Sep	08:06:48	0.008	37	10-Sep	08:36:48	0.067
8	10-Sep	08:07:48	0.048	38	10-Sep	08:37:48	0.03
9	10-Sep	08:08:48	0.35	39	10-Sep	08:38:48	0.033
10	10-Sep	08:09:48	0.052	40	10-Sep	08:39:48	0.06
11	10-Sep	08:10:48	0.345	41	10-Sep	08:40:48	0.031
12	10-Sep	08:11:48	0.091	42	10-Sep	08:41:48	0.046
13	10-Sep	08:12:48	0.859	43	10-Sep	08:42:48	0.315
14	10-Sep	08:13:48	0.126	44	10-Sep	08:43:48	0.26
15	10-Sep	08:14:48	0.243	45	10-Sep	08:44:48	0.035
16	10-Sep	08:15:48	0.83	46	10-Sep	08:45:48	0.017
17	10-Sep	08:16:48	0.075	47	10-Sep	08:46:48	0.051
18	10-Sep	08:17:48	0.226	48	10-Sep	08:47:48	0.025
19	10-Sep	08:18:48	0.05	49	10-Sep	08:48:48	0.023
20	10-Sep	08:19:48	0.093	50	10-Sep	08:49:48	0.024
21	10-Sep	08:20:48	0.052	51	10-Sep	08:50:48	0.036
22	10-Sep	08:21:48	0.062	52	10-Sep	08:51:48	0.03
23	10-Sep	08:22:48	0.031	53	10-Sep	08:52:48	0.177
24	10-Sep	08:23:48	0.075	54	10-Sep	08:53:48	0.066
25	10-Sep	08:24:48	0.067	55	10-Sep	08:54:48	0.024
26	10-Sep	08:25:48	0.297	56	10-Sep	08:55:48	0.298
27	10-Sep	08:26:48	0.186	57	10-Sep	08:56:48	0.033
28	10-Sep	08:27:48	0.06	58	10-Sep	08:57:48	0.018
29	10-Sep	08:28:48	0.036	59	10-Sep	08:58:48	0.023
30	10-Sep	08:29:48	0.039	60	10-Sep	08:59:48	0.025
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

61	10-Sep	09:00:48	0.028	108	10-Sep	09:47:48	0.024
62	10-Sep	09:01:48	0.019	109	10-Sep	09:48:48	0.031
63	10-Sep	09:02:48	0.023	110	10-Sep	09:49:48	0.029
64	10-Sep	09:03:48	0.06	111	10-Sep	09:50:48	0.031
65	10-Sep	09:04:48	0.04	112	10-Sep	09:51:48	0.053
66	10-Sep	09:05:48	0.02	113	10-Sep	09:52:48	0.027
67	10-Sep	09:06:48	0.022	114	10-Sep	09:53:48	0.025
68	10-Sep	09:07:48	0.021	115	10-Sep	09:54:48	0.029
69	10-Sep	09:08:48	0.023	116	10-Sep	09:55:48	0.028
70	10-Sep	09:09:48	0.02	117	10-Sep	09:56:48	0.047
71	10-Sep	09:10:48	0.023	118	10-Sep	09:57:48	0.032
72	10-Sep	09:11:48	0.029	119	10-Sep	09:58:48	0.029
73	10-Sep	09:12:48	0.137	120	10-Sep	09:59:48	0.05
74	10-Sep	09:13:48	0.26	121	10-Sep	10:00:48	0.042
75	10-Sep	09:14:48	0.144	122	10-Sep	10:01:48	0.033
76	10-Sep	09:15:48	0.024	123	10-Sep	10:02:48	0.082
77	10-Sep	09:16:48	0.03	124	10-Sep	10:03:48	0.069
78	10-Sep	09:17:48	0.021	125	10-Sep	10:04:48	0.062
79	10-Sep	09:18:48	0.019	126	10-Sep	10:05:48	0.17
80	10-Sep	09:19:48	0.055	127	10-Sep	10:06:48	0.076
81	10-Sep	09:20:48	0.025	128	10-Sep	10:07:48	0.033
82	10-Sep	09:21:48	0.021	129	10-Sep	10:08:48	0.033
83	10-Sep	09:22:48	0.036	130	10-Sep	10:09:48	0.037
84	10-Sep	09:23:48	0.023	131	10-Sep	10:10:48	0.04
85	10-Sep	09:24:48	0.032	132	10-Sep	10:11:48	0.035
86	10-Sep	09:25:48	0.027	133	10-Sep	10:12:48	0.06
87	10-Sep	09:26:48	0.021	134	10-Sep	10:13:48	0.042
88	10-Sep	09:27:48	0.022	135	10-Sep	10:14:48	0.04
89	10-Sep	09:28:48	0.021	136	10-Sep	10:15:48	0.035
90	10-Sep	09:29:48	0.028	137	10-Sep	10:16:48	0.034
91	10-Sep	09:30:48	0.048	138	10-Sep	10:17:48	0.033
92	10-Sep	09:31:48	0.029	139	10-Sep	10:18:48	0.034
93	10-Sep	09:32:48	0.032	140	10-Sep	10:19:48	0.037
94	10-Sep	09:33:48	0.128	141	10-Sep	10:20:48	0.035
95	10-Sep	09:34:48	0.051	142	10-Sep	10:21:48	0.041
96	10-Sep	09:35:48	0.033	143	10-Sep	10:22:48	0.042
97	10-Sep	09:36:48	0.023	144	10-Sep	10:23:48	0.042
98	10-Sep	09:37:48	0.044	145	10-Sep	10:24:48	0.036
99	10-Sep	09:38:48	0.026	146	10-Sep	10:25:48	0.034
100	10-Sep	09:39:48	0.022	147	10-Sep	10:26:48	0.041
101	10-Sep	09:40:48	0.029	148	10-Sep	10:27:48	0.032
102	10-Sep	09:41:48	0.046	149	10-Sep	10:28:48	0.032
103	10-Sep	09:42:48	0.038	150	10-Sep	10:29:48	0.045
104	10-Sep	09:43:48	0.023	151	10-Sep	10:30:48	0.038
105	10-Sep	09:44:48	0.032	152	10-Sep	10:31:48	0.041
106	10-Sep	09:45:48	0.025	153	10-Sep	10:32:48	0.037
107	10-Sep	09:46:48	0.025	154	10-Sep	10:33:48	0.036
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

155	10-Sep	10:34:48	0.036	202	10-Sep	11:21:48	1.857
156	10-Sep	10:35:48	0.035	203	10-Sep	11:22:48	1.351
157	10-Sep	10:36:48	0.033	204	10-Sep	11:23:48	0.66
158	10-Sep	10:37:48	0.036	205	10-Sep	11:24:48	0.809
159	10-Sep	10:38:48	0.037	206	10-Sep	11:25:48	0.525
160	10-Sep	10:39:48	0.033	207	10-Sep	11:26:48	0.138
161	10-Sep	10:40:48	0.035	208	10-Sep	11:27:48	0.167
162	10-Sep	10:41:48	0.037	209	10-Sep	11:28:48	0.105
163	10-Sep	10:42:48	0.038	210	10-Sep	11:29:48	0.167
164	10-Sep	10:43:48	0.037	211	10-Sep	11:30:48	0.122
165	10-Sep	10:44:48	0.042	212	10-Sep	11:31:48	0.105
166	10-Sep	10:45:48	0.13	213	10-Sep	11:32:48	0.102
167	10-Sep	10:46:48	0.109	214	10-Sep	11:33:48	0.099
168	10-Sep	10:47:48	0.079	215	10-Sep	11:34:48	0.151
169	10-Sep	10:48:48	0.062	216	10-Sep	11:35:48	0.12
170	10-Sep	10:49:48	0.259	217	10-Sep	11:36:48	0.092
171	10-Sep	10:50:48	0.063	218	10-Sep	11:37:48	0.1
172	10-Sep	10:51:48	0.091	219	10-Sep	11:38:48	0.107
173	10-Sep	10:52:48	0.059	220	10-Sep	11:39:48	0.106
174	10-Sep	10:53:48	0.055	221	10-Sep	11:40:48	0.16
175	10-Sep	10:54:48	0.056	222	10-Sep	11:41:48	0.095
176	10-Sep	10:55:48	0.059	223	10-Sep	11:42:48	0.095
177	10-Sep	10:56:48	0.053	224	10-Sep	11:43:48	0.158
178	10-Sep	10:57:48	0.077	225	10-Sep	11:44:48	0.205
179	10-Sep	10:58:48	0.055	226	10-Sep	11:45:48	0.176
180	10-Sep	10:59:48	0.049	227	10-Sep	11:46:48	0.146
181	10-Sep	11:00:48	0.05	228	10-Sep	11:47:48	0.143
182	10-Sep	11:01:48	0.067	229	10-Sep	11:48:48	0.105
183	10-Sep	11:02:48	0.049	230	10-Sep	11:49:48	0.099
184	10-Sep	11:03:48	0.077	231	10-Sep	11:50:48	0.115
185	10-Sep	11:04:48	0.055	232	10-Sep	11:51:48	0.099
186	10-Sep	11:05:48	0.11	233	10-Sep	11:52:48	0.097
187	10-Sep	11:06:48	0.1	234	10-Sep	11:53:48	0.096
188	10-Sep	11:07:48	0.05	235	10-Sep	11:54:48	0.13
189	10-Sep	11:08:48	0.05	236	10-Sep	11:55:48	0.107
190	10-Sep	11:09:48	0.067	237	10-Sep	11:56:48	0.157
191	10-Sep	11:10:48	0.06	238	10-Sep	11:57:48	0.384
192	10-Sep	11:11:48	0.052	239	10-Sep	11:58:48	0.111
193	10-Sep	11:12:48	0.189	240	10-Sep	11:59:48	0.122
194	10-Sep	11:13:48	0.075	241	10-Sep	12:00:48	0.108
195	10-Sep	11:14:48	0.054	242	10-Sep	12:01:48	0.107
196	10-Sep	11:15:48	0.056	243	10-Sep	12:02:48	0.098
197	10-Sep	11:16:48	0.069	244	10-Sep	12:03:48	0.096
198	10-Sep	11:17:48	0.049	245	10-Sep	12:04:48	0.093
199	10-Sep	11:18:48	1.754	246	10-Sep	12:05:48	0.094
200	10-Sep	11:19:48	2.306	247	10-Sep	12:06:48	0.093
201	10-Sep	11:20:48	2.475	248	10-Sep	12:07:48	0.094
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

249	10-Sep	12:08:48	0.094	296	10-Sep	12:55:48	0.089
250	10-Sep	12:09:48	0.092	297	10-Sep	12:56:48	0.101
251	10-Sep	12:10:48	0.094	298	10-Sep	12:57:48	0.12
252	10-Sep	12:11:48	0.093	299	10-Sep	12:58:48	0.092
253	10-Sep	12:12:48	0.093	300	10-Sep	12:59:48	0.135
254	10-Sep	12:13:48	0.094	301	10-Sep	13:00:48	0.592
255	10-Sep	12:14:48	0.093	302	10-Sep	13:01:48	0.557
256	10-Sep	12:15:48	0.095	303	10-Sep	13:02:48	0.982
257	10-Sep	12:16:48	0.094	304	10-Sep	13:03:48	0.822
258	10-Sep	12:17:48	0.098	305	10-Sep	13:04:48	0.542
259	10-Sep	12:18:48	0.096	306	10-Sep	13:05:48	0.51
260	10-Sep	12:19:48	0.096	307	10-Sep	13:06:48	1.884
261	10-Sep	12:20:48	0.093	308	10-Sep	13:07:48	0.915
262	10-Sep	12:21:48	0.094	309	10-Sep	13:08:48	0.956
263	10-Sep	12:22:48	0.093	310	10-Sep	13:09:48	0.447
264	10-Sep	12:23:48	0.091	311	10-Sep	13:10:48	0.768
265	10-Sep	12:24:48	0.091	312	10-Sep	13:11:48	0.429
266	10-Sep	12:25:48	0.09	313	10-Sep	13:12:48	0.843
267	10-Sep	12:26:48	0.092	314	10-Sep	13:13:48	1.309
268	10-Sep	12:27:48	0.092	315	10-Sep	13:14:48	1.541
269	10-Sep	12:28:48	0.09	316	10-Sep	13:15:48	0.427
270	10-Sep	12:29:48	0.09	317	10-Sep	13:16:48	0.626
271	10-Sep	12:30:48	0.091	318	10-Sep	13:17:48	0.492
272	10-Sep	12:31:48	0.136	319	10-Sep	13:18:48	0.692
273	10-Sep	12:32:48	0.091	320	10-Sep	13:19:48	0.305
274	10-Sep	12:33:48	0.089	321	10-Sep	13:20:48	0.206
275	10-Sep	12:34:48	0.089	322	10-Sep	13:21:48	0.232
276	10-Sep	12:35:48	0.09	323	10-Sep	13:22:48	0.291
277	10-Sep	12:36:48	0.088	324	10-Sep	13:23:48	0.358
278	10-Sep	12:37:48	0.088	325	10-Sep	13:24:48	0.156
279	10-Sep	12:38:48	0.091	326	10-Sep	13:25:48	0.274
280	10-Sep	12:39:48	0.087	327	10-Sep	13:26:48	0.171
281	10-Sep	12:40:48	0.088	328	10-Sep	13:27:48	0.123
282	10-Sep	12:41:48	0.086	329	10-Sep	13:28:48	0.094
283	10-Sep	12:42:48	0.087	330	10-Sep	13:29:48	0.12
284	10-Sep	12:43:48	0.086	331	10-Sep	13:30:48	0.2
285	10-Sep	12:44:48	0.084	332	10-Sep	13:31:48	0.1
286	10-Sep	12:45:48	0.086	333	10-Sep	13:32:48	0.164
287	10-Sep	12:46:48	0.095	334	10-Sep	13:33:48	0.107
288	10-Sep	12:47:48	0.084	335	10-Sep	13:34:48	0.168
289	10-Sep	12:48:48	0.084	336	10-Sep	13:35:48	0.123
290	10-Sep	12:49:48	0.088	337	10-Sep	13:36:48	0.941
291	10-Sep	12:50:48	0.085	338	10-Sep	13:37:48	0.265
292	10-Sep	12:51:48	0.086	339	10-Sep	13:38:48	0.278
293	10-Sep	12:52:48	0.084	340	10-Sep	13:39:48	0.533
294	10-Sep	12:53:48	0.09	341	10-Sep	13:40:48	0.526
295	10-Sep	12:54:48	0.089	342	10-Sep	13:41:48	0.184
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

343	10-Sep	13:42:48	0.32	390	10-Sep	14:29:48	0.193
344	10-Sep	13:43:48	0.164	391	10-Sep	14:30:48	0.202
345	10-Sep	13:44:48	0.15	392	10-Sep	14:31:48	0.175
346	10-Sep	13:45:48	0.201	393	10-Sep	14:32:48	0.188
347	10-Sep	13:46:48	0.585	394	10-Sep	14:33:48	0.166
348	10-Sep	13:47:48	0.336	395	10-Sep	14:34:48	0.158
349	10-Sep	13:48:48	0.171	396	10-Sep	14:35:48	0.328
350	10-Sep	13:49:48	0.14	397	10-Sep	14:36:48	0.186
351	10-Sep	13:50:48	0.386	398	10-Sep	14:37:48	0.19
352	10-Sep	13:51:48	0.22	399	10-Sep	14:38:48	0.195
353	10-Sep	13:52:48	0.19	400	10-Sep	14:39:48	0.217
354	10-Sep	13:53:48	0.108	401	10-Sep	14:40:48	0.203
355	10-Sep	13:54:48	0.107	402	10-Sep	14:41:48	0.274
356	10-Sep	13:55:48	0.123	403	10-Sep	14:42:48	0.16
357	10-Sep	13:56:48	0.1	404	10-Sep	14:43:48	0.148
358	10-Sep	13:57:48	0.117	405	10-Sep	14:44:48	0.314
359	10-Sep	13:58:48	0.127	406	10-Sep	14:45:48	0.144
360	10-Sep	13:59:48	0.127	407	10-Sep	14:46:48	0.219
361	10-Sep	14:00:48	0.114	408	10-Sep	14:47:48	0.162
362	10-Sep	14:01:48	0.105	409	10-Sep	14:48:48	0.265
363	10-Sep	14:02:48	0.093	410	10-Sep	14:49:48	0.167
364	10-Sep	14:03:48	0.125	411	10-Sep	14:50:48	0.269
365	10-Sep	14:04:48	0.101	412	10-Sep	14:51:48	0.134
366	10-Sep	14:05:48	0.098	413	10-Sep	14:52:48	0.17
367	10-Sep	14:06:48	0.104	414	10-Sep	14:53:48	0.264
368	10-Sep	14:07:48	0.105	415	10-Sep	14:54:48	0.231
369	10-Sep	14:08:48	0.099	416	10-Sep	14:55:48	0.117
370	10-Sep	14:09:48	0.099	417	10-Sep	14:56:48	0.111
371	10-Sep	14:10:48	0.095	418	10-Sep	14:57:48	0.189
372	10-Sep	14:11:48	0.134	419	10-Sep	14:58:48	0.182
373	10-Sep	14:12:48	0.104	420	10-Sep	14:59:48	0.159
374	10-Sep	14:13:48	0.103	421	10-Sep	15:00:48	0.202
375	10-Sep	14:14:48	0.229	422	10-Sep	15:01:48	0.335
376	10-Sep	14:15:48	0.095	423	10-Sep	15:02:48	0.269
377	10-Sep	14:16:48	0.447	424	10-Sep	15:03:48	0.326
378	10-Sep	14:17:48	0.104	425	10-Sep	15:04:48	0.606
379	10-Sep	14:18:48	0.125	426	10-Sep	15:05:48	0.651
380	10-Sep	14:19:48	0.125	427	10-Sep	15:06:48	0.423
381	10-Sep	14:20:48	0.116	428	10-Sep	15:07:48	0.201
382	10-Sep	14:21:48	0.117	429	10-Sep	15:08:48	0.261
383	10-Sep	14:22:48	0.102	430	10-Sep	15:09:48	0.281
384	10-Sep	14:23:48	0.108	431	10-Sep	15:10:48	0.301
385	10-Sep	14:24:48	0.113	432	10-Sep	15:11:48	0.174
386	10-Sep	14:25:48	0.102	433	10-Sep	15:12:48	0.357
387	10-Sep	14:26:48	0.291	434	10-Sep	15:13:48	0.189
388	10-Sep	14:27:48	0.304	435	10-Sep	15:14:48	0.239
389	10-Sep	14:28:48	0.333	436	10-Sep	15:15:48	0.168

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)

437	10-Sep	15:16:48	0.728	484	10-Sep	16:03:48	0.069
438	10-Sep	15:17:48	0.162	485	10-Sep	16:04:48	0.074
439	10-Sep	15:18:48	0.393	486	10-Sep	16:05:48	0.126
440	10-Sep	15:19:48	0.337	487	10-Sep	16:06:48	0.084
441	10-Sep	15:20:48	0.733	488	10-Sep	16:07:48	0.141
442	10-Sep	15:21:48	0.317	489	10-Sep	16:08:48	0.177
443	10-Sep	15:22:48	0.309	490	10-Sep	16:09:48	0.106
444	10-Sep	15:23:48	0.606	491	10-Sep	16:10:48	0.081
445	10-Sep	15:24:48	0.253	492	10-Sep	16:11:48	0.19
446	10-Sep	15:25:48	0.24	493	10-Sep	16:12:48	0.084
447	10-Sep	15:26:48	0.152	494	10-Sep	16:13:48	0.09
448	10-Sep	15:27:48	0.157	495	10-Sep	16:14:48	0.155
449	10-Sep	15:28:48	0.135	496	10-Sep	16:15:48	0.2
450	10-Sep	15:29:48	0.274	497	10-Sep	16:16:48	0.519
451	10-Sep	15:30:48	0.144	498	10-Sep	16:17:48	0.067
452	10-Sep	15:31:48	0.118	499	10-Sep	16:18:48	0.066
453	10-Sep	15:32:48	0.107	500	10-Sep	16:19:48	0.1
454	10-Sep	15:33:48	0.142	501	10-Sep	16:20:48	0.092
455	10-Sep	15:34:48	0.104	502	10-Sep	16:21:48	0.093
456	10-Sep	15:35:48	0.108	503	10-Sep	16:22:48	0.165
457	10-Sep	15:36:48	0.12	504	10-Sep	16:23:48	0.524
458	10-Sep	15:37:48	0.144	505	10-Sep	16:24:48	0.115
459	10-Sep	15:38:48	0.102	506	10-Sep	16:25:48	0.123
460	10-Sep	15:39:48	0.097	507	10-Sep	16:26:48	0.17
461	10-Sep	15:40:48	0.109	508	10-Sep	16:27:48	0.114
462	10-Sep	15:41:48	0.109	509	10-Sep	16:28:48	0.101
463	10-Sep	15:42:48	0.331	510	10-Sep	16:29:48	0.425
464	10-Sep	15:43:48	0.25	511	10-Sep	16:30:48	0.165
465	10-Sep	15:44:48	0.195	512	10-Sep	16:31:48	0.053
466	10-Sep	15:45:48	0.426	513	10-Sep	16:32:48	0.109
467	10-Sep	15:46:48	0.72	514	10-Sep	16:33:48	0.064
468	10-Sep	15:47:48	0.506	515	10-Sep	16:34:48	0.065
469	10-Sep	15:48:48	0.192	516	10-Sep	16:35:48	0.071
470	10-Sep	15:49:48	0.177	517	10-Sep	16:36:48	0.152
471	10-Sep	15:50:48	0.271	518	10-Sep	16:37:48	0.06
472	10-Sep	15:51:48	0.378	519	10-Sep	16:38:48	0.078
473	10-Sep	15:52:48	0.382	520	10-Sep	16:39:48	0.113
474	10-Sep	15:53:48	0.359	521	10-Sep	16:40:48	0.063
475	10-Sep	15:54:48	0.698	522	10-Sep	16:41:48	0.213
476	10-Sep	15:55:48	0.201	523	10-Sep	16:42:48	0.106
477	10-Sep	15:56:48	0.117	524	10-Sep	16:43:48	0.084
478	10-Sep	15:57:48	0.229	525	10-Sep	16:44:48	0.06
479	10-Sep	15:58:48	0.223	526	10-Sep	16:45:48	0.073
480	10-Sep	15:59:48	0.184	527	10-Sep	16:46:48	0.067
481	10-Sep	16:00:48	0.495	528	10-Sep	16:47:48	0.055
482	10-Sep	16:01:48	0.124	529	10-Sep	16:48:48	0.103
483	10-Sep	16:02:48	0.081	530	10-Sep	16:49:48	0.076
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**

531	10-Sep 16:50:48	0.086
532	10-Sep 16:51:48	0.254
533	10-Sep 16:52:48	0.091
534	10-Sep 16:53:48	0.079
535	10-Sep 16:54:48	0.072
536	10-Sep 16:55:48	0.072
537	10-Sep 16:56:48	0.062
538	10-Sep 16:57:48	0.067
539	10-Sep 16:58:48	0.077
540	10-Sep 16:59:48	0.069
541	10-Sep 17:00:48	0.054
542	10-Sep 17:01:48	0.066
543	10-Sep 17:02:48	0.079
544	10-Sep 17:03:48	0.068
545	10-Sep 17:04:48	0.071
546	10-Sep 17:05:48	0.17
547	10-Sep 17:06:48	0.076
548	10-Sep 17:07:48	0.084
549	10-Sep 17:08:48	0.074
550	10-Sep 17:09:48	0.168
551	10-Sep 17:10:48	0.404
552	10-Sep 17:11:48	0.059
553	10-Sep 17:12:48	0.13
554	10-Sep 17:13:48	0.08
555	10-Sep 17:14:48	0.083
556	10-Sep 17:15:48	0.077
557	10-Sep 17:16:48	0.091
558	10-Sep 17:17:48	0.131
559	10-Sep 17:18:48	0.124
560	10-Sep 17:19:48	0.082
561	10-Sep 17:20:48	0.08
562	10-Sep 17:21:48	0.079
563	10-Sep 17:22:48	0.073
564	10-Sep 17:23:48	0.084
565	10-Sep 17:24:48	0.079
566	10-Sep 17:25:48	0.117
567	10-Sep 17:26:48	1.369
568	10-Sep 17:27:48	0.898
569	10-Sep 17:28:48	3.083
570	10-Sep 17:29:48	0.377
571	10-Sep 17:30:48	0.105
572	10-Sep 17:31:48	0.071
573	10-Sep 17:32:48	0.06
574	10-Sep 17:33:48	0.049
575	10-Sep 17:34:48	0.086
576	10-Sep 17:35:48	0.151

September 17, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 02
Number of logged points: 635
Start time and date: 07:00:43 17-Sep
Elapsed time: 10:35:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 57.597 mg/m³
Time at maximum: 07:44:07 Sep 17
Max STEL Concentration: 1.466 mg/m³
Time at max STEL: 07:46:43 Sep 17
Overall Avg Conc: 0.036 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	17-Sep	07:01:43	0.004	29	17-Sep	07:29:43	0.008
2	17-Sep	07:02:43	0.041	30	17-Sep	07:30:43	0.049
3	17-Sep	07:03:43	0.003	31	17-Sep	07:31:43	0.058
4	17-Sep	07:04:43	0.002	32	17-Sep	07:32:43	0.047
5	17-Sep	07:05:43	0.006	33	17-Sep	07:33:43	0.032
6	17-Sep	07:06:43	0.009	34	17-Sep	07:34:43	0.016
7	17-Sep	07:07:43	0.022	35	17-Sep	07:35:43	0.031
8	17-Sep	07:08:43	0.007	36	17-Sep	07:36:43	0.032
9	17-Sep	07:09:43	0.009	37	17-Sep	07:37:43	0.013
10	17-Sep	07:10:43	0.008	38	17-Sep	07:38:43	0.011
11	17-Sep	07:11:43	0.015	39	17-Sep	07:39:43	0.01
12	17-Sep	07:12:43	0.023	40	17-Sep	07:40:43	0.014
13	17-Sep	07:13:43	0.026	41	17-Sep	07:41:43	0.015
14	17-Sep	07:14:43	0.009	42	17-Sep	07:42:43	0.031
15	17-Sep	07:15:43	0.005	43	17-Sep	07:43:43	3.149
16	17-Sep	07:16:43	0.006	44	17-Sep	07:44:43	17.86
17	17-Sep	07:17:43	0.007	45	17-Sep	07:45:43	0.615
18	17-Sep	07:18:43	0.003	46	17-Sep	07:46:43	0.121
19	17-Sep	07:19:43	0.003	47	17-Sep	07:47:43	0.021
20	17-Sep	07:20:43	0.002	48	17-Sep	07:48:43	0.011
21	17-Sep	07:21:43	0.004	49	17-Sep	07:49:43	0.002
22	17-Sep	07:22:43	0	50	17-Sep	07:50:43	0.017
23	17-Sep	07:23:43	0.009	51	17-Sep	07:51:43	0.018
24	17-Sep	07:24:43	0.013	52	17-Sep	07:52:43	0.007
25	17-Sep	07:25:43	0.012	53	17-Sep	07:53:43	0.002
26	17-Sep	07:26:43	0.053	54	17-Sep	07:54:43	0
27	17-Sep	07:27:43	0.004	55	17-Sep	07:55:43	0.024
28	17-Sep	07:28:43	0.005	56	17-Sep	07:56:43	0.018
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
57	17-Sep	07:57:43	0.002	104	17-Sep	08:44:43	0

58	17-Sep	07:58:43	0	105	17-Sep	08:45:43	0
59	17-Sep	07:59:43	0.009	106	17-Sep	08:46:43	0
60	17-Sep	08:00:43	0.011	107	17-Sep	08:47:43	0
61	17-Sep	08:01:43	0	108	17-Sep	08:48:43	0
62	17-Sep	08:02:43	0.001	109	17-Sep	08:49:43	0
63	17-Sep	08:03:43	0.009	110	17-Sep	08:50:43	0.008
64	17-Sep	08:04:43	0.003	111	17-Sep	08:51:43	0
65	17-Sep	08:05:43	0.001	112	17-Sep	08:52:43	0
66	17-Sep	08:06:43	0.002	113	17-Sep	08:53:43	0
67	17-Sep	08:07:43	0.003	114	17-Sep	08:54:43	0.024
68	17-Sep	08:08:43	0.002	115	17-Sep	08:55:43	0
69	17-Sep	08:09:43	0.009	116	17-Sep	08:56:43	0
70	17-Sep	08:10:43	0.015	117	17-Sep	08:57:43	0
71	17-Sep	08:11:43	0.022	118	17-Sep	08:58:43	0
72	17-Sep	08:12:43	0.022	119	17-Sep	08:59:43	0
73	17-Sep	08:13:43	0.013	120	17-Sep	09:00:43	0
74	17-Sep	08:14:43	0.028	121	17-Sep	09:01:43	0.001
75	17-Sep	08:15:43	0.017	122	17-Sep	09:02:43	0.001
76	17-Sep	08:16:43	0.011	123	17-Sep	09:03:43	0.003
77	17-Sep	08:17:43	0.014	124	17-Sep	09:04:43	0.001
78	17-Sep	08:18:43	0.016	125	17-Sep	09:05:43	0.006
79	17-Sep	08:19:43	0.021	126	17-Sep	09:06:43	0
80	17-Sep	08:20:43	0.03	127	17-Sep	09:07:43	0.005
81	17-Sep	08:21:43	0.038	128	17-Sep	09:08:43	0
82	17-Sep	08:22:43	0.036	129	17-Sep	09:09:43	0
83	17-Sep	08:23:43	0.026	130	17-Sep	09:10:43	0
84	17-Sep	08:24:43	0.019	131	17-Sep	09:11:43	0
85	17-Sep	08:25:43	0.014	132	17-Sep	09:12:43	0.001
86	17-Sep	08:26:43	0.011	133	17-Sep	09:13:43	0
87	17-Sep	08:27:43	0.007	134	17-Sep	09:14:43	0
88	17-Sep	08:28:43	0.004	135	17-Sep	09:15:43	0
89	17-Sep	08:29:43	0.002	136	17-Sep	09:16:43	0
90	17-Sep	08:30:43	0.003	137	17-Sep	09:17:43	0
91	17-Sep	08:31:43	0.002	138	17-Sep	09:18:43	0.002
92	17-Sep	08:32:43	0.005	139	17-Sep	09:19:43	0
93	17-Sep	08:33:43	0.001	140	17-Sep	09:20:43	0
94	17-Sep	08:34:43	0	141	17-Sep	09:21:43	0
95	17-Sep	08:35:43	0.001	142	17-Sep	09:22:43	0
96	17-Sep	08:36:43	0	143	17-Sep	09:23:43	0
97	17-Sep	08:37:43	0	144	17-Sep	09:24:43	0
98	17-Sep	08:38:43	0	145	17-Sep	09:25:43	0
99	17-Sep	08:39:43	0	146	17-Sep	09:26:43	0
100	17-Sep	08:40:43	0.002	147	17-Sep	09:27:43	0
101	17-Sep	08:41:43	0.011	148	17-Sep	09:28:43	0
102	17-Sep	08:42:43	0.004	149	17-Sep	09:29:43	0
103	17-Sep	08:43:43	0.001	150	17-Sep	09:30:43	0
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
151	17-Sep	09:31:43	0	198	17-Sep	10:18:43	0

152	17-Sep	09:32:43	0	199	17-Sep	10:19:43	0
153	17-Sep	09:33:43	0	200	17-Sep	10:20:43	0
154	17-Sep	09:34:43	0	201	17-Sep	10:21:43	0
155	17-Sep	09:35:43	0	202	17-Sep	10:22:43	0.001
156	17-Sep	09:36:43	0.003	203	17-Sep	10:23:43	0
157	17-Sep	09:37:43	0	204	17-Sep	10:24:43	0
158	17-Sep	09:38:43	0	205	17-Sep	10:25:43	0
159	17-Sep	09:39:43	0	206	17-Sep	10:26:43	0
160	17-Sep	09:40:43	0	207	17-Sep	10:27:43	0.004
161	17-Sep	09:41:43	0	208	17-Sep	10:28:43	0
162	17-Sep	09:42:43	0	209	17-Sep	10:29:43	0.008
163	17-Sep	09:43:43	0.001	210	17-Sep	10:30:43	0.002
164	17-Sep	09:44:43	0	211	17-Sep	10:31:43	0.001
165	17-Sep	09:45:43	0	212	17-Sep	10:32:43	0
166	17-Sep	09:46:43	0	213	17-Sep	10:33:43	0.027
167	17-Sep	09:47:43	0	214	17-Sep	10:34:43	0.011
168	17-Sep	09:48:43	0	215	17-Sep	10:35:43	0.008
169	17-Sep	09:49:43	0	216	17-Sep	10:36:43	0
170	17-Sep	09:50:43	0	217	17-Sep	10:37:43	0
171	17-Sep	09:51:43	0	218	17-Sep	10:38:43	0
172	17-Sep	09:52:43	0	219	17-Sep	10:39:43	0
173	17-Sep	09:53:43	0.002	220	17-Sep	10:40:43	0
174	17-Sep	09:54:43	0	221	17-Sep	10:41:43	0
175	17-Sep	09:55:43	0	222	17-Sep	10:42:43	0.014
176	17-Sep	09:56:43	0	223	17-Sep	10:43:43	0.008
177	17-Sep	09:57:43	0	224	17-Sep	10:44:43	0.002
178	17-Sep	09:58:43	0	225	17-Sep	10:45:43	0
179	17-Sep	09:59:43	0	226	17-Sep	10:46:43	0
180	17-Sep	10:00:43	0	227	17-Sep	10:47:43	0.004
181	17-Sep	10:01:43	0	228	17-Sep	10:48:43	0.004
182	17-Sep	10:02:43	0	229	17-Sep	10:49:43	0.001
183	17-Sep	10:03:43	0.024	230	17-Sep	10:50:43	0
184	17-Sep	10:04:43	0.037	231	17-Sep	10:51:43	0
185	17-Sep	10:05:43	0.012	232	17-Sep	10:52:43	0.001
186	17-Sep	10:06:43	0.004	233	17-Sep	10:53:43	0
187	17-Sep	10:07:43	0.002	234	17-Sep	10:54:43	0.002
188	17-Sep	10:08:43	0.002	235	17-Sep	10:55:43	0
189	17-Sep	10:09:43	0.003	236	17-Sep	10:56:43	0
190	17-Sep	10:10:43	0	237	17-Sep	10:57:43	0
191	17-Sep	10:11:43	0	238	17-Sep	10:58:43	0
192	17-Sep	10:12:43	0	239	17-Sep	10:59:43	0
193	17-Sep	10:13:43	0	240	17-Sep	11:00:43	0
194	17-Sep	10:14:43	0	241	17-Sep	11:01:43	0
195	17-Sep	10:15:43	0	242	17-Sep	11:02:43	0.001
196	17-Sep	10:16:43	0	243	17-Sep	11:03:43	0
197	17-Sep	10:17:43	0	244	17-Sep	11:04:43	0.001

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
245	17-Sep	11:05:43	0	292	17-Sep	11:52:43	0.001

246	17-Sep	11:06:43	0.004	293	17-Sep	11:53:43	0.001
247	17-Sep	11:07:43	0.002	294	17-Sep	11:54:43	0
248	17-Sep	11:08:43	0	295	17-Sep	11:55:43	0.002
249	17-Sep	11:09:43	0	296	17-Sep	11:56:43	0.004
250	17-Sep	11:10:43	0	297	17-Sep	11:57:43	0.013
251	17-Sep	11:11:43	0	298	17-Sep	11:58:43	0.004
252	17-Sep	11:12:43	0	299	17-Sep	11:59:43	0.003
253	17-Sep	11:13:43	0	300	17-Sep	12:00:43	0.007
254	17-Sep	11:14:43	0	301	17-Sep	12:01:43	0.006
255	17-Sep	11:15:43	0	302	17-Sep	12:02:43	0.007
256	17-Sep	11:16:43	0.004	303	17-Sep	12:03:43	0.005
257	17-Sep	11:17:43	0.001	304	17-Sep	12:04:43	0.002
258	17-Sep	11:18:43	0	305	17-Sep	12:05:43	0.007
259	17-Sep	11:19:43	0.002	306	17-Sep	12:06:43	0
260	17-Sep	11:20:43	0	307	17-Sep	12:07:43	0.002
261	17-Sep	11:21:43	0	308	17-Sep	12:08:43	0.003
262	17-Sep	11:22:43	0	309	17-Sep	12:09:43	0.005
263	17-Sep	11:23:43	0.001	310	17-Sep	12:10:43	0.001
264	17-Sep	11:24:43	0.001	311	17-Sep	12:11:43	0.002
265	17-Sep	11:25:43	0	312	17-Sep	12:12:43	0.01
266	17-Sep	11:26:43	0	313	17-Sep	12:13:43	0.004
267	17-Sep	11:27:43	0.005	314	17-Sep	12:14:43	0.001
268	17-Sep	11:28:43	0	315	17-Sep	12:15:43	0.005
269	17-Sep	11:29:43	0	316	17-Sep	12:16:43	0.001
270	17-Sep	11:30:43	0.025	317	17-Sep	12:17:43	0.001
271	17-Sep	11:31:43	0.03	318	17-Sep	12:18:43	0.002
272	17-Sep	11:32:43	0.012	319	17-Sep	12:19:43	0.002
273	17-Sep	11:33:43	0.003	320	17-Sep	12:20:43	0.001
274	17-Sep	11:34:43	0.011	321	17-Sep	12:21:43	0.006
275	17-Sep	11:35:43	0.006	322	17-Sep	12:22:43	0.001
276	17-Sep	11:36:43	0.006	323	17-Sep	12:23:43	0
277	17-Sep	11:37:43	0	324	17-Sep	12:24:43	0.001
278	17-Sep	11:38:43	0.007	325	17-Sep	12:25:43	0.001
279	17-Sep	11:39:43	0.009	326	17-Sep	12:26:43	0
280	17-Sep	11:40:43	0.005	327	17-Sep	12:27:43	0
281	17-Sep	11:41:43	0.002	328	17-Sep	12:28:43	0
282	17-Sep	11:42:43	0.046	329	17-Sep	12:29:43	0
283	17-Sep	11:43:43	0.02	330	17-Sep	12:30:43	0
284	17-Sep	11:44:43	0.038	331	17-Sep	12:31:43	0
285	17-Sep	11:45:43	0.006	332	17-Sep	12:32:43	0
286	17-Sep	11:46:43	0.009	333	17-Sep	12:33:43	0
287	17-Sep	11:47:43	0.007	334	17-Sep	12:34:43	0
288	17-Sep	11:48:43	0.008	335	17-Sep	12:35:43	0
289	17-Sep	11:49:43	0.002	336	17-Sep	12:36:43	0.001
290	17-Sep	11:50:43	0.001	337	17-Sep	12:37:43	0
291	17-Sep	11:51:43	0	338	17-Sep	12:38:43	0
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
339	17-Sep	12:39:43	0.007	386	17-Sep	13:26:43	0.012

340	17-Sep	12:40:43	0	387	17-Sep	13:27:43	0.005
341	17-Sep	12:41:43	0.001	388	17-Sep	13:28:43	0.017
342	17-Sep	12:42:43	0.004	389	17-Sep	13:29:43	0.011
343	17-Sep	12:43:43	0.004	390	17-Sep	13:30:43	0.002
344	17-Sep	12:44:43	0.001	391	17-Sep	13:31:43	0.005
345	17-Sep	12:45:43	0.001	392	17-Sep	13:32:43	0.002
346	17-Sep	12:46:43	0	393	17-Sep	13:33:43	0.002
347	17-Sep	12:47:43	0.001	394	17-Sep	13:34:43	0.001
348	17-Sep	12:48:43	0.001	395	17-Sep	13:35:43	0.004
349	17-Sep	12:49:43	0.001	396	17-Sep	13:36:43	0.001
350	17-Sep	12:50:43	0	397	17-Sep	13:37:43	0.006
351	17-Sep	12:51:43	0	398	17-Sep	13:38:43	0.013
352	17-Sep	12:52:43	0.001	399	17-Sep	13:39:43	0.004
353	17-Sep	12:53:43	0.001	400	17-Sep	13:40:43	0.004
354	17-Sep	12:54:43	0	401	17-Sep	13:41:43	0.003
355	17-Sep	12:55:43	0.001	402	17-Sep	13:42:43	0.011
356	17-Sep	12:56:43	0.001	403	17-Sep	13:43:43	0.002
357	17-Sep	12:57:43	0	404	17-Sep	13:44:43	0.008
358	17-Sep	12:58:43	0.051	405	17-Sep	13:45:43	0.003
359	17-Sep	12:59:43	0.028	406	17-Sep	13:46:43	0.004
360	17-Sep	13:00:43	0.021	407	17-Sep	13:47:43	0.002
361	17-Sep	13:01:43	0.015	408	17-Sep	13:48:43	0.013
362	17-Sep	13:02:43	0.012	409	17-Sep	13:49:43	0.022
363	17-Sep	13:03:43	0.013	410	17-Sep	13:50:43	0.013
364	17-Sep	13:04:43	0.013	411	17-Sep	13:51:43	0.007
365	17-Sep	13:05:43	0.013	412	17-Sep	13:52:43	0.007
366	17-Sep	13:06:43	0.009	413	17-Sep	13:53:43	0.003
367	17-Sep	13:07:43	0.023	414	17-Sep	13:54:43	0.004
368	17-Sep	13:08:43	0.006	415	17-Sep	13:55:43	0.009
369	17-Sep	13:09:43	0.006	416	17-Sep	13:56:43	0.001
370	17-Sep	13:10:43	0.009	417	17-Sep	13:57:43	0.014
371	17-Sep	13:11:43	0.014	418	17-Sep	13:58:43	0.022
372	17-Sep	13:12:43	0.002	419	17-Sep	13:59:43	0.022
373	17-Sep	13:13:43	0.001	420	17-Sep	14:00:43	0.021
374	17-Sep	13:14:43	0.037	421	17-Sep	14:01:43	0.031
375	17-Sep	13:15:43	0.02	422	17-Sep	14:02:43	0.01
376	17-Sep	13:16:43	0.062	423	17-Sep	14:03:43	0.016
377	17-Sep	13:17:43	0.029	424	17-Sep	14:04:43	0.007
378	17-Sep	13:18:43	0.017	425	17-Sep	14:05:43	0.002
379	17-Sep	13:19:43	0.006	426	17-Sep	14:06:43	0.001
380	17-Sep	13:20:43	0.004	427	17-Sep	14:07:43	0
381	17-Sep	13:21:43	0.001	428	17-Sep	14:08:43	0.002
382	17-Sep	13:22:43	0.029	429	17-Sep	14:09:43	0.001
383	17-Sep	13:23:43	0.039	430	17-Sep	14:10:43	0.012
384	17-Sep	13:24:43	0.035	431	17-Sep	14:11:43	0.007
385	17-Sep	13:25:43	0.014	432	17-Sep	14:12:43	0.003
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
433	17-Sep	14:13:43	0.003	480	17-Sep	15:00:43	0.006

434	17-Sep	14:14:43	0.001	481	17-Sep	15:01:43	0.014
435	17-Sep	14:15:43	0	482	17-Sep	15:02:43	0.001
436	17-Sep	14:16:43	0	483	17-Sep	15:03:43	0.001
437	17-Sep	14:17:43	0.002	484	17-Sep	15:04:43	0.009
438	17-Sep	14:18:43	0.001	485	17-Sep	15:05:43	0.011
439	17-Sep	14:19:43	0.029	486	17-Sep	15:06:43	0.007
440	17-Sep	14:20:43	0.004	487	17-Sep	15:07:43	0
441	17-Sep	14:21:43	0.127	488	17-Sep	15:08:43	0.006
442	17-Sep	14:22:43	0.069	489	17-Sep	15:09:43	0
443	17-Sep	14:23:43	0.017	490	17-Sep	15:10:43	0.004
444	17-Sep	14:24:43	0.019	491	17-Sep	15:11:43	0.015
445	17-Sep	14:25:43	0.016	492	17-Sep	15:12:43	0.006
446	17-Sep	14:26:43	0.01	493	17-Sep	15:13:43	0.023
447	17-Sep	14:27:43	0.001	494	17-Sep	15:14:43	0.025
448	17-Sep	14:28:43	0.003	495	17-Sep	15:15:43	0.015
449	17-Sep	14:29:43	0.002	496	17-Sep	15:16:43	0.009
450	17-Sep	14:30:43	0.007	497	17-Sep	15:17:43	0.004
451	17-Sep	14:31:43	0.032	498	17-Sep	15:18:43	0.002
452	17-Sep	14:32:43	0.028	499	17-Sep	15:19:43	0
453	17-Sep	14:33:43	0.02	500	17-Sep	15:20:43	0.002
454	17-Sep	14:34:43	0.014	501	17-Sep	15:21:43	0.004
455	17-Sep	14:35:43	0.015	502	17-Sep	15:22:43	0.003
456	17-Sep	14:36:43	0.011	503	17-Sep	15:23:43	0.006
457	17-Sep	14:37:43	0.002	504	17-Sep	15:24:43	0.002
458	17-Sep	14:38:43	0.002	505	17-Sep	15:25:43	0.002
459	17-Sep	14:39:43	0.016	506	17-Sep	15:26:43	0.006
460	17-Sep	14:40:43	0.008	507	17-Sep	15:27:43	0.009
461	17-Sep	14:41:43	0.018	508	17-Sep	15:28:43	0.01
462	17-Sep	14:42:43	0.003	509	17-Sep	15:29:43	0.005
463	17-Sep	14:43:43	0.013	510	17-Sep	15:30:43	0.004
464	17-Sep	14:44:43	0.013	511	17-Sep	15:31:43	0.004
465	17-Sep	14:45:43	0.031	512	17-Sep	15:32:43	0.003
466	17-Sep	14:46:43	0.066	513	17-Sep	15:33:43	0.01
467	17-Sep	14:47:43	0.018	514	17-Sep	15:34:43	0.007
468	17-Sep	14:48:43	0.001	515	17-Sep	15:35:43	0.002
469	17-Sep	14:49:43	0.008	516	17-Sep	15:36:43	0.004
470	17-Sep	14:50:43	0.01	517	17-Sep	15:37:43	0.001
471	17-Sep	14:51:43	0.017	518	17-Sep	15:38:43	0.001
472	17-Sep	14:52:43	0.024	519	17-Sep	15:39:43	0
473	17-Sep	14:53:43	0.028	520	17-Sep	15:40:43	0
474	17-Sep	14:54:43	0.026	521	17-Sep	15:41:43	0.004
475	17-Sep	14:55:43	0.026	522	17-Sep	15:42:43	0.007
476	17-Sep	14:56:43	0.039	523	17-Sep	15:43:43	0.006
477	17-Sep	14:57:43	0.005	524	17-Sep	15:44:43	0.007
478	17-Sep	14:58:43	0.003	525	17-Sep	15:45:43	0.011
479	17-Sep	14:59:43	0.003	526	17-Sep	15:46:43	0.007
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
527	17-Sep	15:47:43	0.003	574	17-Sep	16:34:43	0.002

528	17-Sep	15:48:43	0.007	575	17-Sep	16:35:43	0.014
529	17-Sep	15:49:43	0.005	576	17-Sep	16:36:43	0.001
530	17-Sep	15:50:43	0.013	577	17-Sep	16:37:43	0.003
531	17-Sep	15:51:43	0.001	578	17-Sep	16:38:43	0.013
532	17-Sep	15:52:43	0.001	579	17-Sep	16:39:43	0.01
533	17-Sep	15:53:43	0.001	580	17-Sep	16:40:43	0.002
534	17-Sep	15:54:43	0.003	581	17-Sep	16:41:43	0.011
535	17-Sep	15:55:43	0.002	582	17-Sep	16:42:43	0.005
536	17-Sep	15:56:43	0.005	583	17-Sep	16:43:43	0.009
537	17-Sep	15:57:43	0.001	584	17-Sep	16:44:43	0.014
538	17-Sep	15:58:43	0.002	585	17-Sep	16:45:43	0.007
539	17-Sep	15:59:43	0.005	586	17-Sep	16:46:43	0.006
540	17-Sep	16:00:43	0.022	587	17-Sep	16:47:43	0.004
541	17-Sep	16:01:43	0.039	588	17-Sep	16:48:43	0.003
542	17-Sep	16:02:43	0.019	589	17-Sep	16:49:43	0.007
543	17-Sep	16:03:43	0.011	590	17-Sep	16:50:43	0.005
544	17-Sep	16:04:43	0.01	591	17-Sep	16:51:43	0.002
545	17-Sep	16:05:43	0.004	592	17-Sep	16:52:43	0.005
546	17-Sep	16:06:43	0.005	593	17-Sep	16:53:43	0.005
547	17-Sep	16:07:43	0.005	594	17-Sep	16:54:43	0.001
548	17-Sep	16:08:43	0.002	595	17-Sep	16:55:43	0.002
549	17-Sep	16:09:43	0.003	596	17-Sep	16:56:43	0.002
550	17-Sep	16:10:43	0.004	597	17-Sep	16:57:43	0.005
551	17-Sep	16:11:43	0.002	598	17-Sep	16:58:43	0.008
552	17-Sep	16:12:43	0.008	599	17-Sep	16:59:43	0.003
553	17-Sep	16:13:43	0.012	600	17-Sep	17:00:43	0.003
554	17-Sep	16:14:43	0.003	601	17-Sep	17:01:43	0.013
555	17-Sep	16:15:43	0.011	602	17-Sep	17:02:43	0.002
556	17-Sep	16:16:43	0.003	603	17-Sep	17:03:43	0.011
557	17-Sep	16:17:43	0.013	604	17-Sep	17:04:43	0.002
558	17-Sep	16:18:43	0.008	605	17-Sep	17:05:43	0.001
559	17-Sep	16:19:43	0.018	606	17-Sep	17:06:43	0.002
560	17-Sep	16:20:43	0.007	607	17-Sep	17:07:43	0.001
561	17-Sep	16:21:43	0.002	608	17-Sep	17:08:43	0.001
562	17-Sep	16:22:43	0.004	609	17-Sep	17:09:43	0.004
563	17-Sep	16:23:43	0.008	610	17-Sep	17:10:43	0.008
564	17-Sep	16:24:43	0.003	611	17-Sep	17:11:43	0.004
565	17-Sep	16:25:43	0.001	612	17-Sep	17:12:43	0.006
566	17-Sep	16:26:43	0.003	613	17-Sep	17:13:43	0.045
567	17-Sep	16:27:43	0.01	614	17-Sep	17:14:43	0.055
568	17-Sep	16:28:43	0.042	615	17-Sep	17:15:43	0.137
569	17-Sep	16:29:43	0.044	616	17-Sep	17:16:43	0.098
570	17-Sep	16:30:43	0.021	617	17-Sep	17:17:43	0.053
571	17-Sep	16:31:43	0.012	618	17-Sep	17:18:43	0.064
572	17-Sep	16:32:43	0.008	619	17-Sep	17:19:43	0.033
573	17-Sep	16:33:43	0.003	620	17-Sep	17:20:43	0.082

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
621	17-Sep	17:21:43	0.115				

622	17-Sep	17:22:43	0.065
623	17-Sep	17:23:43	0.038
624	17-Sep	17:24:43	0.102
625	17-Sep	17:25:43	0.151
626	17-Sep	17:26:43	0.122
627	17-Sep	17:27:43	0.127
628	17-Sep	17:28:43	0.027
629	17-Sep	17:29:43	0.063
630	17-Sep	17:30:43	0.067
631	17-Sep	17:31:43	0.103
632	17-Sep	17:32:43	0.155
633	17-Sep	17:33:43	0.017
634	17-Sep	17:34:43	0.046
635	17-Sep	17:35:43	0.02

pDR-1000 S/N: 04878
User ID: DuPont Site PDR-2
Tag Number: 02
Number of logged points: 620
Start time and date: 07:00:23 17-Sep
Elapsed time: 10:20:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 56.817 mg/m³
Time at maximum: 09:11:05 Sep 17
Max STEL Concentration: 2.548 mg/m³
Time at max STEL: 10:29:53 Sep 17
Overall Avg Conc: 0.292 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	17-Sep	07:01:23	0.011	13	17-Sep	07:13:23	0.035
2	17-Sep	07:02:23	0.043	14	17-Sep	07:14:23	0.025
3	17-Sep	07:03:23	0.004	15	17-Sep	07:15:23	0.022
4	17-Sep	07:04:23	0.004	16	17-Sep	07:16:23	0.034
5	17-Sep	07:05:23	0.01	17	17-Sep	07:17:23	0.022
6	17-Sep	07:06:23	0.007	18	17-Sep	07:18:23	0.026
7	17-Sep	07:07:23	0.008	19	17-Sep	07:19:23	0.049
8	17-Sep	07:08:23	0.025	20	17-Sep	07:20:23	0.018
9	17-Sep	07:09:23	0.032	21	17-Sep	07:21:23	0.018
10	17-Sep	07:10:23	0.058	22	17-Sep	07:22:23	0.021
11	17-Sep	07:11:23	0.04	23	17-Sep	07:23:23	0.035
12	17-Sep	07:12:23	0.03	24	17-Sep	07:24:23	0.031
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
25	17-Sep	07:25:23	0.033	72	17-Sep	08:12:23	0.472

26	17-Sep	07:26:23	0.148	73	17-Sep	08:13:23	0.692
27	17-Sep	07:27:23	0.03	74	17-Sep	08:14:23	0.778
28	17-Sep	07:28:23	0.013	75	17-Sep	08:15:23	1.113
29	17-Sep	07:29:23	0.011	76	17-Sep	08:16:23	1.31
30	17-Sep	07:30:23	0.017	77	17-Sep	08:17:23	0.536
31	17-Sep	07:31:23	0.032	78	17-Sep	08:18:23	0.509
32	17-Sep	07:32:23	0.043	79	17-Sep	08:19:23	0.395
33	17-Sep	07:33:23	0.032	80	17-Sep	08:20:23	1.883
34	17-Sep	07:34:23	0.278	81	17-Sep	08:21:23	2.528
35	17-Sep	07:35:23	0.048	82	17-Sep	08:22:23	1.012
36	17-Sep	07:36:23	0.052	83	17-Sep	08:23:23	0.277
37	17-Sep	07:37:23	0.037	84	17-Sep	08:24:23	0.145
38	17-Sep	07:38:23	0.014	85	17-Sep	08:25:23	0.227
39	17-Sep	07:39:23	0.02	86	17-Sep	08:26:23	0.199
40	17-Sep	07:40:23	0.033	87	17-Sep	08:27:23	0.163
41	17-Sep	07:41:23	0.015	88	17-Sep	08:28:23	0.563
42	17-Sep	07:42:23	0.013	89	17-Sep	08:29:23	0.352
43	17-Sep	07:43:23	0.015	90	17-Sep	08:30:23	0.798
44	17-Sep	07:44:23	0.015	91	17-Sep	08:31:23	0.567
45	17-Sep	07:45:23	0.012	92	17-Sep	08:32:23	0.509
46	17-Sep	07:46:23	0.006	93	17-Sep	08:33:23	0.339
47	17-Sep	07:47:23	0.007	94	17-Sep	08:34:23	0.272
48	17-Sep	07:48:23	0.009	95	17-Sep	08:35:23	0.152
49	17-Sep	07:49:23	0.012	96	17-Sep	08:36:23	0.383
50	17-Sep	07:50:23	0.106	97	17-Sep	08:37:23	1.044
51	17-Sep	07:51:23	0.012	98	17-Sep	08:38:23	0.721
52	17-Sep	07:52:23	0.037	99	17-Sep	08:39:23	0.182
53	17-Sep	07:53:23	0.008	100	17-Sep	08:40:23	0.306
54	17-Sep	07:54:23	0.007	101	17-Sep	08:41:23	0.359
55	17-Sep	07:55:23	0.006	102	17-Sep	08:42:23	1.685
56	17-Sep	07:56:23	0.034	103	17-Sep	08:43:23	0.285
57	17-Sep	07:57:23	0.332	104	17-Sep	08:44:23	0.529
58	17-Sep	07:58:23	0.03	105	17-Sep	08:45:23	1.16
59	17-Sep	07:59:23	0.346	106	17-Sep	08:46:23	0.333
60	17-Sep	08:00:23	1.122	107	17-Sep	08:47:23	0.858
61	17-Sep	08:01:23	1.519	108	17-Sep	08:48:23	0.711
62	17-Sep	08:02:23	0.91	109	17-Sep	08:49:23	3.201
63	17-Sep	08:03:23	0.84	110	17-Sep	08:50:23	0.554
64	17-Sep	08:04:23	0.561	111	17-Sep	08:51:23	0.719
65	17-Sep	08:05:23	0.386	112	17-Sep	08:52:23	0.478
66	17-Sep	08:06:23	0.314	113	17-Sep	08:53:23	0.657
67	17-Sep	08:07:23	1.058	114	17-Sep	08:54:23	1.856
68	17-Sep	08:08:23	0.639	115	17-Sep	08:55:23	1.233
69	17-Sep	08:09:23	0.214	116	17-Sep	08:56:23	0.434
70	17-Sep	08:10:23	1.988	117	17-Sep	08:57:23	0.301
71	17-Sep	08:11:23	0.853	118	17-Sep	08:58:23	1.44
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
119	17-Sep	08:59:23	0.609	166	17-Sep	09:46:23	0.345

120	17-Sep	09:00:23	0.194	167	17-Sep	09:47:23	1.9
121	17-Sep	09:01:23	0.038	168	17-Sep	09:48:23	1.256
122	17-Sep	09:02:23	0.019	169	17-Sep	09:49:23	1.375
123	17-Sep	09:03:23	0.956	170	17-Sep	09:50:23	0.717
124	17-Sep	09:04:23	0.36	171	17-Sep	09:51:23	1.232
125	17-Sep	09:05:23	0.02	172	17-Sep	09:52:23	1.954
126	17-Sep	09:06:23	0.013	173	17-Sep	09:53:23	0.793
127	17-Sep	09:07:23	0.489	174	17-Sep	09:54:23	0.401
128	17-Sep	09:08:23	0.087	175	17-Sep	09:55:23	0.134
129	17-Sep	09:09:23	0.249	176	17-Sep	09:56:23	0.621
130	17-Sep	09:10:23	6.2	177	17-Sep	09:57:23	0.174
131	17-Sep	09:11:23	11.53	178	17-Sep	09:58:23	0.363
132	17-Sep	09:12:23	0.982	179	17-Sep	09:59:23	0.242
133	17-Sep	09:13:23	0.879	180	17-Sep	10:00:23	0.174
134	17-Sep	09:14:23	1.255	181	17-Sep	10:01:23	0.193
135	17-Sep	09:15:23	0.601	182	17-Sep	10:02:23	0.413
136	17-Sep	09:16:23	0.107	183	17-Sep	10:03:23	0.841
137	17-Sep	09:17:23	0.147	184	17-Sep	10:04:23	0.152
138	17-Sep	09:18:23	0.113	185	17-Sep	10:05:23	0.291
139	17-Sep	09:19:23	0.066	186	17-Sep	10:06:23	2.336
140	17-Sep	09:20:23	0.525	187	17-Sep	10:07:23	0.959
141	17-Sep	09:21:23	0.319	188	17-Sep	10:08:23	0.543
142	17-Sep	09:22:23	0.306	189	17-Sep	10:09:23	0.526
143	17-Sep	09:23:23	0.392	190	17-Sep	10:10:23	0.608
144	17-Sep	09:24:23	0.59	191	17-Sep	10:11:23	0.4
145	17-Sep	09:25:23	1.66	192	17-Sep	10:12:23	0.29
146	17-Sep	09:26:23	0.355	193	17-Sep	10:13:23	1.025
147	17-Sep	09:27:23	0.114	194	17-Sep	10:14:23	1.318
148	17-Sep	09:28:23	0.065	195	17-Sep	10:15:23	1.922
149	17-Sep	09:29:23	0.035	196	17-Sep	10:16:23	2.679
150	17-Sep	09:30:23	0.038	197	17-Sep	10:17:23	3.152
151	17-Sep	09:31:23	0.022	198	17-Sep	10:18:23	0.907
152	17-Sep	09:32:23	0.027	199	17-Sep	10:19:23	6.38
153	17-Sep	09:33:23	0.019	200	17-Sep	10:20:23	4.99
154	17-Sep	09:34:23	0.019	201	17-Sep	10:21:23	2.631
155	17-Sep	09:35:23	0.036	202	17-Sep	10:22:23	1.443
156	17-Sep	09:36:23	0.036	203	17-Sep	10:23:23	3.84
157	17-Sep	09:37:23	0.027	204	17-Sep	10:24:23	0.974
158	17-Sep	09:38:23	0.035	205	17-Sep	10:25:23	1.582
159	17-Sep	09:39:23	0.041	206	17-Sep	10:26:23	1.097
160	17-Sep	09:40:23	0.022	207	17-Sep	10:27:23	2.62
161	17-Sep	09:41:23	0.031	208	17-Sep	10:28:23	2.358
162	17-Sep	09:42:23	0.037	209	17-Sep	10:29:23	1.456
163	17-Sep	09:43:23	0.504	210	17-Sep	10:30:23	1.102
164	17-Sep	09:44:23	0.363	211	17-Sep	10:31:23	1.549
165	17-Sep	09:45:23	0.997	212	17-Sep	10:32:23	0.416
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
213	17-Sep	10:33:23	0.591	260	17-Sep	11:20:23	0.041

214	17-Sep	10:34:23	6.09	261	17-Sep	11:21:23	0.043
215	17-Sep	10:35:23	2.649	262	17-Sep	11:22:23	0.032
216	17-Sep	10:36:23	2.732	263	17-Sep	11:23:23	0.025
217	17-Sep	10:37:23	4.96	264	17-Sep	11:24:23	0.025
218	17-Sep	10:38:23	1.79	265	17-Sep	11:25:23	0.032
219	17-Sep	10:39:23	1.593	266	17-Sep	11:26:23	0.03
220	17-Sep	10:40:23	0.465	267	17-Sep	11:27:23	0.029
221	17-Sep	10:41:23	0.057	268	17-Sep	11:28:23	0.03
222	17-Sep	10:42:23	0.226	269	17-Sep	11:29:23	0.039
223	17-Sep	10:43:23	0.064	270	17-Sep	11:30:23	0.026
224	17-Sep	10:44:23	0.449	271	17-Sep	11:31:23	0.026
225	17-Sep	10:45:23	1.139	272	17-Sep	11:32:23	0.026
226	17-Sep	10:46:23	0.086	273	17-Sep	11:33:23	0.027
227	17-Sep	10:47:23	0.028	274	17-Sep	11:34:23	0.028
228	17-Sep	10:48:23	0.031	275	17-Sep	11:35:23	0.027
229	17-Sep	10:49:23	0.031	276	17-Sep	11:36:23	0.029
230	17-Sep	10:50:23	0.088	277	17-Sep	11:37:23	0.029
231	17-Sep	10:51:23	0.099	278	17-Sep	11:38:23	0.026
232	17-Sep	10:52:23	0.063	279	17-Sep	11:39:23	0.026
233	17-Sep	10:53:23	0.325	280	17-Sep	11:40:23	0.03
234	17-Sep	10:54:23	0.183	281	17-Sep	11:41:23	0.024
235	17-Sep	10:55:23	0.031	282	17-Sep	11:42:23	0.024
236	17-Sep	10:56:23	0.049	283	17-Sep	11:43:23	0.025
237	17-Sep	10:57:23	0.033	284	17-Sep	11:44:23	0.025
238	17-Sep	10:58:23	0.03	285	17-Sep	11:45:23	0.025
239	17-Sep	10:59:23	0.03	286	17-Sep	11:46:23	0.026
240	17-Sep	11:00:23	0.03	287	17-Sep	11:47:23	0.026
241	17-Sep	11:01:23	0.032	288	17-Sep	11:48:23	0.028
242	17-Sep	11:02:23	0.057	289	17-Sep	11:49:23	0.025
243	17-Sep	11:03:23	2.982	290	17-Sep	11:50:23	0.026
244	17-Sep	11:04:23	0.916	291	17-Sep	11:51:23	0.027
245	17-Sep	11:05:23	0.384	292	17-Sep	11:52:23	0.026
246	17-Sep	11:06:23	0.246	293	17-Sep	11:53:23	0.025
247	17-Sep	11:07:23	0.257	294	17-Sep	11:54:23	0.024
248	17-Sep	11:08:23	0.19	295	17-Sep	11:55:23	0.026
249	17-Sep	11:09:23	0.127	296	17-Sep	11:56:23	0.026
250	17-Sep	11:10:23	0.125	297	17-Sep	11:57:23	0.025
251	17-Sep	11:11:23	0.123	298	17-Sep	11:58:23	0.025
252	17-Sep	11:12:23	0.087	299	17-Sep	11:59:23	0.026
253	17-Sep	11:13:23	0.074	300	17-Sep	12:00:23	0.026
254	17-Sep	11:14:23	0.061	301	17-Sep	12:01:23	0.025
255	17-Sep	11:15:23	0.06	302	17-Sep	12:02:23	0.025
256	17-Sep	11:16:23	0.052	303	17-Sep	12:03:23	0.025
257	17-Sep	11:17:23	0.046	304	17-Sep	12:04:23	0.024
258	17-Sep	11:18:23	0.042	305	17-Sep	12:05:23	0.026
259	17-Sep	11:19:23	0.039	306	17-Sep	12:06:23	0.025
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
307	17-Sep	12:07:23	0.024	354	17-Sep	12:54:23	0.016

308	17-Sep	12:08:23	0.025	355	17-Sep	12:55:23	0.015
309	17-Sep	12:09:23	0.026	356	17-Sep	12:56:23	0.015
310	17-Sep	12:10:23	0.026	357	17-Sep	12:57:23	0.015
311	17-Sep	12:11:23	0.026	358	17-Sep	12:58:23	0.015
312	17-Sep	12:12:23	0.027	359	17-Sep	12:59:23	0.016
313	17-Sep	12:13:23	0.025	360	17-Sep	13:00:23	0.015
314	17-Sep	12:14:23	0.025	361	17-Sep	13:01:23	0.016
315	17-Sep	12:15:23	0.026	362	17-Sep	13:02:23	0.021
316	17-Sep	12:16:23	0.029	363	17-Sep	13:03:23	0.014
317	17-Sep	12:17:23	0.086	364	17-Sep	13:04:23	0.014
318	17-Sep	12:18:23	0.959	365	17-Sep	13:05:23	0.02
319	17-Sep	12:19:23	0.15	366	17-Sep	13:06:23	0.014
320	17-Sep	12:20:23	0.083	367	17-Sep	13:07:23	0.015
321	17-Sep	12:21:23	0.065	368	17-Sep	13:08:23	0.017
322	17-Sep	12:22:23	0.049	369	17-Sep	13:09:23	0.016
323	17-Sep	12:23:23	0.032	370	17-Sep	13:10:23	0.015
324	17-Sep	12:24:23	0.04	371	17-Sep	13:11:23	0.016
325	17-Sep	12:25:23	0.03	372	17-Sep	13:12:23	0.015
326	17-Sep	12:26:23	0.037	373	17-Sep	13:13:23	0.015
327	17-Sep	12:27:23	0.026	374	17-Sep	13:14:23	0.016
328	17-Sep	12:28:23	0.022	375	17-Sep	13:15:23	0.014
329	17-Sep	12:29:23	0.021	376	17-Sep	13:16:23	0.014
330	17-Sep	12:30:23	0.017	377	17-Sep	13:17:23	0.023
331	17-Sep	12:31:23	0.017	378	17-Sep	13:18:23	0.014
332	17-Sep	12:32:23	0.02	379	17-Sep	13:19:23	0.014
333	17-Sep	12:33:23	0.02	380	17-Sep	13:20:23	0.015
334	17-Sep	12:34:23	0.019	381	17-Sep	13:21:23	0.016
335	17-Sep	12:35:23	0.018	382	17-Sep	13:22:23	0.016
336	17-Sep	12:36:23	0.017	383	17-Sep	13:23:23	0.016
337	17-Sep	12:37:23	0.02	384	17-Sep	13:24:23	0.016
338	17-Sep	12:38:23	0.016	385	17-Sep	13:25:23	0.015
339	17-Sep	12:39:23	0.017	386	17-Sep	13:26:23	0.015
340	17-Sep	12:40:23	0.016	387	17-Sep	13:27:23	0.016
341	17-Sep	12:41:23	0.017	388	17-Sep	13:28:23	0.015
342	17-Sep	12:42:23	0.016	389	17-Sep	13:29:23	0.017
343	17-Sep	12:43:23	0.015	390	17-Sep	13:30:23	0.015
344	17-Sep	12:44:23	0.016	391	17-Sep	13:31:23	0.015
345	17-Sep	12:45:23	0.016	392	17-Sep	13:32:23	0.018
346	17-Sep	12:46:23	0.017	393	17-Sep	13:33:23	0.016
347	17-Sep	12:47:23	0.017	394	17-Sep	13:34:23	0.015
348	17-Sep	12:48:23	0.016	395	17-Sep	13:35:23	0.015
349	17-Sep	12:49:23	0.015	396	17-Sep	13:36:23	0.015
350	17-Sep	12:50:23	0.015	397	17-Sep	13:37:23	0.015
351	17-Sep	12:51:23	0.015	398	17-Sep	13:38:23	0.015
352	17-Sep	12:52:23	0.015	399	17-Sep	13:39:23	0.015
353	17-Sep	12:53:23	0.016	400	17-Sep	13:40:23	0.013
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
401	17-Sep	13:41:23	0.014	448	17-Sep	14:28:23	0.014

402	17-Sep	13:42:23	0.015	449	17-Sep	14:29:23	0.015
403	17-Sep	13:43:23	0.014	450	17-Sep	14:30:23	0.016
404	17-Sep	13:44:23	0.015	451	17-Sep	14:31:23	0.015
405	17-Sep	13:45:23	0.014	452	17-Sep	14:32:23	0.015
406	17-Sep	13:46:23	0.015	453	17-Sep	14:33:23	0.014
407	17-Sep	13:47:23	0.016	454	17-Sep	14:34:23	0.014
408	17-Sep	13:48:23	0.017	455	17-Sep	14:35:23	0.014
409	17-Sep	13:49:23	0.015	456	17-Sep	14:36:23	0.014
410	17-Sep	13:50:23	0.014	457	17-Sep	14:37:23	0.013
411	17-Sep	13:51:23	0.015	458	17-Sep	14:38:23	0.014
412	17-Sep	13:52:23	0.015	459	17-Sep	14:39:23	0.017
413	17-Sep	13:53:23	0.015	460	17-Sep	14:40:23	0.016
414	17-Sep	13:54:23	0.015	461	17-Sep	14:41:23	0.014
415	17-Sep	13:55:23	0.015	462	17-Sep	14:42:23	0.014
416	17-Sep	13:56:23	0.016	463	17-Sep	14:43:23	0.015
417	17-Sep	13:57:23	0.015	464	17-Sep	14:44:23	0.015
418	17-Sep	13:58:23	0.018	465	17-Sep	14:45:23	0.014
419	17-Sep	13:59:23	0.017	466	17-Sep	14:46:23	0.016
420	17-Sep	14:00:23	0.015	467	17-Sep	14:47:23	0.014
421	17-Sep	14:01:23	0.014	468	17-Sep	14:48:23	0.017
422	17-Sep	14:02:23	0.014	469	17-Sep	14:49:23	0.018
423	17-Sep	14:03:23	0.019	470	17-Sep	14:50:23	0.016
424	17-Sep	14:04:23	0.014	471	17-Sep	14:51:23	0.013
425	17-Sep	14:05:23	0.014	472	17-Sep	14:52:23	0.016
426	17-Sep	14:06:23	0.016	473	17-Sep	14:53:23	0.013
427	17-Sep	14:07:23	0.015	474	17-Sep	14:54:23	0.013
428	17-Sep	14:08:23	0.016	475	17-Sep	14:55:23	0.013
429	17-Sep	14:09:23	0.015	476	17-Sep	14:56:23	0.014
430	17-Sep	14:10:23	0.023	477	17-Sep	14:57:23	0.013
431	17-Sep	14:11:23	0.016	478	17-Sep	14:58:23	0.014
432	17-Sep	14:12:23	0.014	479	17-Sep	14:59:23	0.014
433	17-Sep	14:13:23	0.016	480	17-Sep	15:00:23	0.014
434	17-Sep	14:14:23	0.017	481	17-Sep	15:01:23	0.015
435	17-Sep	14:15:23	0.015	482	17-Sep	15:02:23	0.013
436	17-Sep	14:16:23	0.013	483	17-Sep	15:03:23	0.014
437	17-Sep	14:17:23	0.014	484	17-Sep	15:04:23	0.013
438	17-Sep	14:18:23	0.017	485	17-Sep	15:05:23	0.014
439	17-Sep	14:19:23	0.017	486	17-Sep	15:06:23	0.014
440	17-Sep	14:20:23	0.016	487	17-Sep	15:07:23	0.012
441	17-Sep	14:21:23	0.014	488	17-Sep	15:08:23	0.014
442	17-Sep	14:22:23	0.015	489	17-Sep	15:09:23	0.012
443	17-Sep	14:23:23	0.014	490	17-Sep	15:10:23	0.013
444	17-Sep	14:24:23	0.015	491	17-Sep	15:11:23	0.015
445	17-Sep	14:25:23	0.015	492	17-Sep	15:12:23	0.013
446	17-Sep	14:26:23	0.018	493	17-Sep	15:13:23	0.015
447	17-Sep	14:27:23	0.013	494	17-Sep	15:14:23	0.012
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
495	17-Sep	15:15:23	0.013	542	17-Sep	16:02:23	0.014

496	17-Sep	15:16:23	0.012	543	17-Sep	16:03:23	0.015
497	17-Sep	15:17:23	0.014	544	17-Sep	16:04:23	0.011
498	17-Sep	15:18:23	0.013	545	17-Sep	16:05:23	0.013
499	17-Sep	15:19:23	0.012	546	17-Sep	16:06:23	0.016
500	17-Sep	15:20:23	0.012	547	17-Sep	16:07:23	0.013
501	17-Sep	15:21:23	0.012	548	17-Sep	16:08:23	0.011
502	17-Sep	15:22:23	0.013	549	17-Sep	16:09:23	0.012
503	17-Sep	15:23:23	0.013	550	17-Sep	16:10:23	0.011
504	17-Sep	15:24:23	0.013	551	17-Sep	16:11:23	0.014
505	17-Sep	15:25:23	0.013	552	17-Sep	16:12:23	0.012
506	17-Sep	15:26:23	0.012	553	17-Sep	16:13:23	0.012
507	17-Sep	15:27:23	0.013	554	17-Sep	16:14:23	0.014
508	17-Sep	15:28:23	0.012	555	17-Sep	16:15:23	0.016
509	17-Sep	15:29:23	0.015	556	17-Sep	16:16:23	0.014
510	17-Sep	15:30:23	0.017	557	17-Sep	16:17:23	0.012
511	17-Sep	15:31:23	0.013	558	17-Sep	16:18:23	0.012
512	17-Sep	15:32:23	0.013	559	17-Sep	16:19:23	0.012
513	17-Sep	15:33:23	0.012	560	17-Sep	16:20:23	0.012
514	17-Sep	15:34:23	0.016	561	17-Sep	16:21:23	0.024
515	17-Sep	15:35:23	0.013	562	17-Sep	16:22:23	0.013
516	17-Sep	15:36:23	0.014	563	17-Sep	16:23:23	0.011
517	17-Sep	15:37:23	0.014	564	17-Sep	16:24:23	0.013
518	17-Sep	15:38:23	0.013	565	17-Sep	16:25:23	0.014
519	17-Sep	15:39:23	0.016	566	17-Sep	16:26:23	0.014
520	17-Sep	15:40:23	0.012	567	17-Sep	16:27:23	0.014
521	17-Sep	15:41:23	0.014	568	17-Sep	16:28:23	0.015
522	17-Sep	15:42:23	0.019	569	17-Sep	16:29:23	0.016
523	17-Sep	15:43:23	0.014	570	17-Sep	16:30:23	0.014
524	17-Sep	15:44:23	0.015	571	17-Sep	16:31:23	0.021
525	17-Sep	15:45:23	0.012	572	17-Sep	16:32:23	0.014
526	17-Sep	15:46:23	0.012	573	17-Sep	16:33:23	0.017
527	17-Sep	15:47:23	0.013	574	17-Sep	16:34:23	0.013
528	17-Sep	15:48:23	0.016	575	17-Sep	16:35:23	0.012
529	17-Sep	15:49:23	0.012	576	17-Sep	16:36:23	0.011
530	17-Sep	15:50:23	0.012	577	17-Sep	16:37:23	0.011
531	17-Sep	15:51:23	0.015	578	17-Sep	16:38:23	0.013
532	17-Sep	15:52:23	0.013	579	17-Sep	16:39:23	0.013
533	17-Sep	15:53:23	0.014	580	17-Sep	16:40:23	0.013
534	17-Sep	15:54:23	0.016	581	17-Sep	16:41:23	0.013
535	17-Sep	15:55:23	0.012	582	17-Sep	16:42:23	0.013
536	17-Sep	15:56:23	0.012	583	17-Sep	16:43:23	0.012
537	17-Sep	15:57:23	0.013	584	17-Sep	16:44:23	0.012
538	17-Sep	15:58:23	0.013	585	17-Sep	16:45:23	0.013
539	17-Sep	15:59:23	0.013	586	17-Sep	16:46:23	0.012
540	17-Sep	16:00:23	0.013	587	17-Sep	16:47:23	0.011
541	17-Sep	16:01:23	0.013	588	17-Sep	16:48:23	0.014
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
589	17-Sep	16:49:23	0.011				

590	17-Sep 16:50:23	0.013
591	17-Sep 16:51:23	0.014
592	17-Sep 16:52:23	0.012
593	17-Sep 16:53:23	0.015
594	17-Sep 16:54:23	0.017
595	17-Sep 16:55:23	0.041
596	17-Sep 16:56:23	0.081
597	17-Sep 16:57:23	0.111
598	17-Sep 16:58:23	0.078
599	17-Sep 16:59:23	0.053
600	17-Sep 17:00:23	0.066
601	17-Sep 17:01:23	0.036
602	17-Sep 17:02:23	0.026
603	17-Sep 17:03:23	0.023
604	17-Sep 17:04:23	0.117
605	17-Sep 17:05:23	0.159
606	17-Sep 17:06:23	0.327
607	17-Sep 17:07:23	0.156
608	17-Sep 17:08:23	0.086
609	17-Sep 17:09:23	0.05
610	17-Sep 17:10:23	0.04
611	17-Sep 17:11:23	0.029
612	17-Sep 17:12:23	0.112
613	17-Sep 17:13:23	0.063
614	17-Sep 17:14:23	0.062
615	17-Sep 17:15:23	0.115
616	17-Sep 17:16:23	0.116
617	17-Sep 17:17:23	0.074
618	17-Sep 17:18:23	0.07
619	17-Sep 17:19:23	0.067
620	17-Sep 17:20:23	0.01

pDR-1000 S/N: 04881
User ID: DuPont Site PDR-3

Tag Number: 02
Number of logged points: 621
Start time and date: 06:58:17 17-Sep
Elapsed time: 10:21:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 29.159 mg/m³
Time at maximum: 16:50:04 Sep 17
Max STEL Concentration: 1.850 mg/m³
Time at max STEL: 16:55:18 Sep 17
Overall Avg Conc: 0.210 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	17-Sep	06:59:17	0.008	31	17-Sep	07:29:17	0.045
2	17-Sep	07:00:17	0.013	32	17-Sep	07:30:17	0.025
3	17-Sep	07:01:17	0.022	33	17-Sep	07:31:17	0.03
4	17-Sep	07:02:17	0.054	34	17-Sep	07:32:17	0.022
5	17-Sep	07:03:17	0.01	35	17-Sep	07:33:17	0.023
6	17-Sep	07:04:17	0.005	36	17-Sep	07:34:17	0.056
7	17-Sep	07:05:17	0	37	17-Sep	07:35:17	0.022
8	17-Sep	07:06:17	0.014	38	17-Sep	07:36:17	0.011
9	17-Sep	07:07:17	0.034	39	17-Sep	07:37:17	0.008
10	17-Sep	07:08:17	0.024	40	17-Sep	07:38:17	0.007
11	17-Sep	07:09:17	0.018	41	17-Sep	07:39:17	0.039
12	17-Sep	07:10:17	0.012	42	17-Sep	07:40:17	0.007
13	17-Sep	07:11:17	0.017	43	17-Sep	07:41:17	0.01
14	17-Sep	07:12:17	0.022	44	17-Sep	07:42:17	0.019
15	17-Sep	07:13:17	0.037	45	17-Sep	07:43:17	0.007
16	17-Sep	07:14:17	0.011	46	17-Sep	07:44:17	0.055
17	17-Sep	07:15:17	0.022	47	17-Sep	07:45:17	0.132
18	17-Sep	07:16:17	0.009	48	17-Sep	07:46:17	0.057
19	17-Sep	07:17:17	0.009	49	17-Sep	07:47:17	0.023
20	17-Sep	07:18:17	0.001	50	17-Sep	07:48:17	0.01
21	17-Sep	07:19:17	0.012	51	17-Sep	07:49:17	0.553
22	17-Sep	07:20:17	0.002	52	17-Sep	07:50:17	0.165
23	17-Sep	07:21:17	0.008	53	17-Sep	07:51:17	0.16
24	17-Sep	07:22:17	0.006	54	17-Sep	07:52:17	0.135
25	17-Sep	07:23:17	0.021	55	17-Sep	07:53:17	0.148
26	17-Sep	07:24:17	0.152	56	17-Sep	07:54:17	0.161
27	17-Sep	07:25:17	0.028	57	17-Sep	07:55:17	1.135
28	17-Sep	07:26:17	0.02	58	17-Sep	07:56:17	0.389
29	17-Sep	07:27:17	0.023	59	17-Sep	07:57:17	0.043
30	17-Sep	07:28:17	0.008	60	17-Sep	07:58:17	0.109
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
61	17-Sep	07:59:17	0.037	108	17-Sep	08:46:17	0.039

62	17-Sep	08:00:17	0.006	109	17-Sep	08:47:17	0.094
63	17-Sep	08:01:17	0.111	110	17-Sep	08:48:17	0.07
64	17-Sep	08:02:17	0.051	111	17-Sep	08:49:17	0.098
65	17-Sep	08:03:17	0.045	112	17-Sep	08:50:17	0.102
66	17-Sep	08:04:17	0.023	113	17-Sep	08:51:17	0.081
67	17-Sep	08:05:17	0.023	114	17-Sep	08:52:17	0.241
68	17-Sep	08:06:17	0.025	115	17-Sep	08:53:17	0.091
69	17-Sep	08:07:17	0.026	116	17-Sep	08:54:17	0.441
70	17-Sep	08:08:17	0.051	117	17-Sep	08:55:17	0.215
71	17-Sep	08:09:17	0.184	118	17-Sep	08:56:17	0.332
72	17-Sep	08:10:17	0.405	119	17-Sep	08:57:17	0.428
73	17-Sep	08:11:17	0.308	120	17-Sep	08:58:17	0.195
74	17-Sep	08:12:17	0.057	121	17-Sep	08:59:17	0.142
75	17-Sep	08:13:17	0.078	122	17-Sep	09:00:17	0.721
76	17-Sep	08:14:17	0.127	123	17-Sep	09:01:17	0.575
77	17-Sep	08:15:17	0.012	124	17-Sep	09:02:17	1.06
78	17-Sep	08:16:17	0.013	125	17-Sep	09:03:17	0.223
79	17-Sep	08:17:17	0.065	126	17-Sep	09:04:17	0.174
80	17-Sep	08:18:17	0.07	127	17-Sep	09:05:17	0.042
81	17-Sep	08:19:17	0.063	128	17-Sep	09:06:17	0.154
82	17-Sep	08:20:17	0.044	129	17-Sep	09:07:17	0.037
83	17-Sep	08:21:17	0.049	130	17-Sep	09:08:17	0.037
84	17-Sep	08:22:17	0.057	131	17-Sep	09:09:17	0.038
85	17-Sep	08:23:17	0.157	132	17-Sep	09:10:17	0.183
86	17-Sep	08:24:17	0.113	133	17-Sep	09:11:17	0.177
87	17-Sep	08:25:17	0.012	134	17-Sep	09:12:17	0.082
88	17-Sep	08:26:17	0.001	135	17-Sep	09:13:17	0.099
89	17-Sep	08:27:17	0.13	136	17-Sep	09:14:17	0.11
90	17-Sep	08:28:17	0.041	137	17-Sep	09:15:17	0.014
91	17-Sep	08:29:17	0.066	138	17-Sep	09:16:17	0.15
92	17-Sep	08:30:17	0.125	139	17-Sep	09:17:17	0.089
93	17-Sep	08:31:17	0.056	140	17-Sep	09:18:17	0.044
94	17-Sep	08:32:17	0.058	141	17-Sep	09:19:17	0.055
95	17-Sep	08:33:17	0.016	142	17-Sep	09:20:17	0.012
96	17-Sep	08:34:17	0.111	143	17-Sep	09:21:17	0.07
97	17-Sep	08:35:17	0.049	144	17-Sep	09:22:17	0.072
98	17-Sep	08:36:17	0.156	145	17-Sep	09:23:17	0.048
99	17-Sep	08:37:17	0.008	146	17-Sep	09:24:17	0.216
100	17-Sep	08:38:17	0.017	147	17-Sep	09:25:17	0.132
101	17-Sep	08:39:17	0.009	148	17-Sep	09:26:17	0.257
102	17-Sep	08:40:17	0.047	149	17-Sep	09:27:17	0.078
103	17-Sep	08:41:17	0.075	150	17-Sep	09:28:17	0.149
104	17-Sep	08:42:17	0.217	151	17-Sep	09:29:17	0.111
105	17-Sep	08:43:17	0.074	152	17-Sep	09:30:17	0.099
106	17-Sep	08:44:17	0.109	153	17-Sep	09:31:17	0.11
107	17-Sep	08:45:17	0.219	154	17-Sep	09:32:17	0.087
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
155	17-Sep	09:33:17	0.078	202	17-Sep	10:20:17	1.331

156	17-Sep	09:34:17	0.071	203	17-Sep	10:21:17	0.125
157	17-Sep	09:35:17	0.069	204	17-Sep	10:22:17	0.072
158	17-Sep	09:36:17	0.036	205	17-Sep	10:23:17	0.15
159	17-Sep	09:37:17	1.1	206	17-Sep	10:24:17	0.549
160	17-Sep	09:38:17	0.711	207	17-Sep	10:25:17	0.152
161	17-Sep	09:39:17	0.392	208	17-Sep	10:26:17	0.409
162	17-Sep	09:40:17	0.235	209	17-Sep	10:27:17	0.414
163	17-Sep	09:41:17	0.089	210	17-Sep	10:28:17	0.335
164	17-Sep	09:42:17	0.069	211	17-Sep	10:29:17	0.183
165	17-Sep	09:43:17	0.016	212	17-Sep	10:30:17	0.389
166	17-Sep	09:44:17	0.004	213	17-Sep	10:31:17	0.476
167	17-Sep	09:45:17	0.03	214	17-Sep	10:32:17	0.3
168	17-Sep	09:46:17	0.049	215	17-Sep	10:33:17	0.547
169	17-Sep	09:47:17	0.185	216	17-Sep	10:34:17	0.288
170	17-Sep	09:48:17	0.217	217	17-Sep	10:35:17	0.448
171	17-Sep	09:49:17	0.118	218	17-Sep	10:36:17	0.188
172	17-Sep	09:50:17	0.128	219	17-Sep	10:37:17	0.356
173	17-Sep	09:51:17	0.306	220	17-Sep	10:38:17	0.602
174	17-Sep	09:52:17	0.208	221	17-Sep	10:39:17	0.103
175	17-Sep	09:53:17	0.262	222	17-Sep	10:40:17	0.86
176	17-Sep	09:54:17	0.174	223	17-Sep	10:41:17	2.398
177	17-Sep	09:55:17	0.19	224	17-Sep	10:42:17	0.021
178	17-Sep	09:56:17	0.133	225	17-Sep	10:43:17	0.191
179	17-Sep	09:57:17	0.206	226	17-Sep	10:44:17	0.457
180	17-Sep	09:58:17	0.102	227	17-Sep	10:45:17	0.406
181	17-Sep	09:59:17	0.35	228	17-Sep	10:46:17	0.768
182	17-Sep	10:00:17	0.314	229	17-Sep	10:47:17	0.585
183	17-Sep	10:01:17	0.445	230	17-Sep	10:48:17	0.406
184	17-Sep	10:02:17	0.442	231	17-Sep	10:49:17	0.197
185	17-Sep	10:03:17	0.511	232	17-Sep	10:50:17	0.337
186	17-Sep	10:04:17	0.156	233	17-Sep	10:51:17	0.06
187	17-Sep	10:05:17	0.251	234	17-Sep	10:52:17	0.255
188	17-Sep	10:06:17	0.352	235	17-Sep	10:53:17	0.412
189	17-Sep	10:07:17	0.937	236	17-Sep	10:54:17	0.751
190	17-Sep	10:08:17	2.358	237	17-Sep	10:55:17	0.369
191	17-Sep	10:09:17	0.822	238	17-Sep	10:56:17	0.685
192	17-Sep	10:10:17	0.659	239	17-Sep	10:57:17	0.974
193	17-Sep	10:11:17	0.049	240	17-Sep	10:58:17	0.318
194	17-Sep	10:12:17	0.089	241	17-Sep	10:59:17	0.003
195	17-Sep	10:13:17	0.13	242	17-Sep	11:00:17	0.066
196	17-Sep	10:14:17	0.249	243	17-Sep	11:01:17	0.177
197	17-Sep	10:15:17	0.241	244	17-Sep	11:02:17	0.281
198	17-Sep	10:16:17	0.265	245	17-Sep	11:03:17	0.325
199	17-Sep	10:17:17	0.152	246	17-Sep	11:04:17	0.001
200	17-Sep	10:18:17	0.297	247	17-Sep	11:05:17	0.095
201	17-Sep	10:19:17	0.437	248	17-Sep	11:06:17	0.064
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
249	17-Sep	11:07:17	0.201	296	17-Sep	11:54:17	0.227

250	17-Sep	11:08:17	0.345	297	17-Sep	11:55:17	0.005
251	17-Sep	11:09:17	0.229	298	17-Sep	11:56:17	0.288
252	17-Sep	11:10:17	0.195	299	17-Sep	11:57:17	1.998
253	17-Sep	11:11:17	0.256	300	17-Sep	11:58:17	1.365
254	17-Sep	11:12:17	0.466	301	17-Sep	11:59:17	0.234
255	17-Sep	11:13:17	1.025	302	17-Sep	12:00:17	0.348
256	17-Sep	11:14:17	0.52	303	17-Sep	12:01:17	0.496
257	17-Sep	11:15:17	0.303	304	17-Sep	12:02:17	0.708
258	17-Sep	11:16:17	0.157	305	17-Sep	12:03:17	0.501
259	17-Sep	11:17:17	0.017	306	17-Sep	12:04:17	0.143
260	17-Sep	11:18:17	0.142	307	17-Sep	12:05:17	0.213
261	17-Sep	11:19:17	0.579	308	17-Sep	12:06:17	0.145
262	17-Sep	11:20:17	0.37	309	17-Sep	12:07:17	0.708
263	17-Sep	11:21:17	0.051	310	17-Sep	12:08:17	0.42
264	17-Sep	11:22:17	0.946	311	17-Sep	12:09:17	0.109
265	17-Sep	11:23:17	0.811	312	17-Sep	12:10:17	0.427
266	17-Sep	11:24:17	1.156	313	17-Sep	12:11:17	0.259
267	17-Sep	11:25:17	1.095	314	17-Sep	12:12:17	0.55
268	17-Sep	11:26:17	0.606	315	17-Sep	12:13:17	0.112
269	17-Sep	11:27:17	3.917	316	17-Sep	12:14:17	0.119
270	17-Sep	11:28:17	8.68	317	17-Sep	12:15:17	0.003
271	17-Sep	11:29:17	0.18	318	17-Sep	12:16:17	0.001
272	17-Sep	11:30:17	0.019	319	17-Sep	12:17:17	0
273	17-Sep	11:31:17	0.2	320	17-Sep	12:18:17	0
274	17-Sep	11:32:17	0.038	321	17-Sep	12:19:17	0
275	17-Sep	11:33:17	0.144	322	17-Sep	12:20:17	0
276	17-Sep	11:34:17	0.003	323	17-Sep	12:21:17	0
277	17-Sep	11:35:17	0.005	324	17-Sep	12:22:17	0
278	17-Sep	11:36:17	0.001	325	17-Sep	12:23:17	0
279	17-Sep	11:37:17	0	326	17-Sep	12:24:17	0.001
280	17-Sep	11:38:17	0.005	327	17-Sep	12:25:17	0
281	17-Sep	11:39:17	0.023	328	17-Sep	12:26:17	0
282	17-Sep	11:40:17	0.366	329	17-Sep	12:27:17	0
283	17-Sep	11:41:17	0.221	330	17-Sep	12:28:17	0
284	17-Sep	11:42:17	0.343	331	17-Sep	12:29:17	0
285	17-Sep	11:43:17	0.599	332	17-Sep	12:30:17	0
286	17-Sep	11:44:17	1.118	333	17-Sep	12:31:17	0
287	17-Sep	11:45:17	0.279	334	17-Sep	12:32:17	0
288	17-Sep	11:46:17	0.199	335	17-Sep	12:33:17	0
289	17-Sep	11:47:17	0.285	336	17-Sep	12:34:17	0
290	17-Sep	11:48:17	0.315	337	17-Sep	12:35:17	0
291	17-Sep	11:49:17	0.179	338	17-Sep	12:36:17	0
292	17-Sep	11:50:17	0.3	339	17-Sep	12:37:17	0
293	17-Sep	11:51:17	0.129	340	17-Sep	12:38:17	0
294	17-Sep	11:52:17	0.215	341	17-Sep	12:39:17	0
295	17-Sep	11:53:17	0.22	342	17-Sep	12:40:17	0
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
343	17-Sep	12:41:17	0	390	17-Sep	13:28:17	0

344	17-Sep	12:42:17	0	391	17-Sep	13:29:17	0.002
345	17-Sep	12:43:17	0.002	392	17-Sep	13:30:17	0.021
346	17-Sep	12:44:17	0	393	17-Sep	13:31:17	0.004
347	17-Sep	12:45:17	0	394	17-Sep	13:32:17	0.002
348	17-Sep	12:46:17	0	395	17-Sep	13:33:17	0
349	17-Sep	12:47:17	0.02	396	17-Sep	13:34:17	0.009
350	17-Sep	12:48:17	0.021	397	17-Sep	13:35:17	0.002
351	17-Sep	12:49:17	0.027	398	17-Sep	13:36:17	0.002
352	17-Sep	12:50:17	0.003	399	17-Sep	13:37:17	0
353	17-Sep	12:51:17	0.021	400	17-Sep	13:38:17	0
354	17-Sep	12:52:17	0.019	401	17-Sep	13:39:17	0.003
355	17-Sep	12:53:17	0.015	402	17-Sep	13:40:17	0.002
356	17-Sep	12:54:17	0.016	403	17-Sep	13:41:17	0
357	17-Sep	12:55:17	0	404	17-Sep	13:42:17	0
358	17-Sep	12:56:17	0.025	405	17-Sep	13:43:17	0
359	17-Sep	12:57:17	0.01	406	17-Sep	13:44:17	0.001
360	17-Sep	12:58:17	0	407	17-Sep	13:45:17	0.003
361	17-Sep	12:59:17	0	408	17-Sep	13:46:17	0.002
362	17-Sep	13:00:17	0	409	17-Sep	13:47:17	0.002
363	17-Sep	13:01:17	0	410	17-Sep	13:48:17	0.005
364	17-Sep	13:02:17	0	411	17-Sep	13:49:17	0
365	17-Sep	13:03:17	0	412	17-Sep	13:50:17	0
366	17-Sep	13:04:17	0.022	413	17-Sep	13:51:17	0.007
367	17-Sep	13:05:17	0.085	414	17-Sep	13:52:17	0
368	17-Sep	13:06:17	0.234	415	17-Sep	13:53:17	0
369	17-Sep	13:07:17	0.068	416	17-Sep	13:54:17	0.002
370	17-Sep	13:08:17	0.001	417	17-Sep	13:55:17	0.001
371	17-Sep	13:09:17	0	418	17-Sep	13:56:17	0.003
372	17-Sep	13:10:17	0.007	419	17-Sep	13:57:17	0.112
373	17-Sep	13:11:17	0.001	420	17-Sep	13:58:17	0.009
374	17-Sep	13:12:17	0	421	17-Sep	13:59:17	0
375	17-Sep	13:13:17	0	422	17-Sep	14:00:17	0.009
376	17-Sep	13:14:17	0.001	423	17-Sep	14:01:17	0.008
377	17-Sep	13:15:17	0	424	17-Sep	14:02:17	0
378	17-Sep	13:16:17	0.004	425	17-Sep	14:03:17	0.003
379	17-Sep	13:17:17	0.002	426	17-Sep	14:04:17	0.004
380	17-Sep	13:18:17	0.011	427	17-Sep	14:05:17	0.003
381	17-Sep	13:19:17	0	428	17-Sep	14:06:17	0.002
382	17-Sep	13:20:17	0.003	429	17-Sep	14:07:17	0.001
383	17-Sep	13:21:17	0	430	17-Sep	14:08:17	0
384	17-Sep	13:22:17	0.011	431	17-Sep	14:09:17	0.001
385	17-Sep	13:23:17	0.007	432	17-Sep	14:10:17	0.001
386	17-Sep	13:24:17	0	433	17-Sep	14:11:17	0
387	17-Sep	13:25:17	0	434	17-Sep	14:12:17	0.001
388	17-Sep	13:26:17	0	435	17-Sep	14:13:17	0.001
389	17-Sep	13:27:17	0.001	436	17-Sep	14:14:17	0.004
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
437	17-Sep	14:15:17	0.003	484	17-Sep	15:02:17	0.006

438	17-Sep	14:16:17	0.001	485	17-Sep	15:03:17	0.02
439	17-Sep	14:17:17	0	486	17-Sep	15:04:17	0.004
440	17-Sep	14:18:17	0.002	487	17-Sep	15:05:17	0.006
441	17-Sep	14:19:17	0	488	17-Sep	15:06:17	0.004
442	17-Sep	14:20:17	0.001	489	17-Sep	15:07:17	0.001
443	17-Sep	14:21:17	0.007	490	17-Sep	15:08:17	0.001
444	17-Sep	14:22:17	0.011	491	17-Sep	15:09:17	0.002
445	17-Sep	14:23:17	0.009	492	17-Sep	15:10:17	0.001
446	17-Sep	14:24:17	0.003	493	17-Sep	15:11:17	0.008
447	17-Sep	14:25:17	0.001	494	17-Sep	15:12:17	0.029
448	17-Sep	14:26:17	0.004	495	17-Sep	15:13:17	0.008
449	17-Sep	14:27:17	0.004	496	17-Sep	15:14:17	0.007
450	17-Sep	14:28:17	0.001	497	17-Sep	15:15:17	0.003
451	17-Sep	14:29:17	0	498	17-Sep	15:16:17	0.005
452	17-Sep	14:30:17	0	499	17-Sep	15:17:17	0
453	17-Sep	14:31:17	0.003	500	17-Sep	15:18:17	0.004
454	17-Sep	14:32:17	0.008	501	17-Sep	15:19:17	0.002
455	17-Sep	14:33:17	0.019	502	17-Sep	15:20:17	0.014
456	17-Sep	14:34:17	0.064	503	17-Sep	15:21:17	0.006
457	17-Sep	14:35:17	0.007	504	17-Sep	15:22:17	0.001
458	17-Sep	14:36:17	0.027	505	17-Sep	15:23:17	0.006
459	17-Sep	14:37:17	0.01	506	17-Sep	15:24:17	0.015
460	17-Sep	14:38:17	0.008	507	17-Sep	15:25:17	0.002
461	17-Sep	14:39:17	0.069	508	17-Sep	15:26:17	0
462	17-Sep	14:40:17	0.125	509	17-Sep	15:27:17	0.003
463	17-Sep	14:41:17	0.024	510	17-Sep	15:28:17	0.003
464	17-Sep	14:42:17	0.015	511	17-Sep	15:29:17	0.003
465	17-Sep	14:43:17	0.001	512	17-Sep	15:30:17	0.002
466	17-Sep	14:44:17	0.008	513	17-Sep	15:31:17	0.006
467	17-Sep	14:45:17	0.029	514	17-Sep	15:32:17	0.001
468	17-Sep	14:46:17	0.034	515	17-Sep	15:33:17	0.005
469	17-Sep	14:47:17	0.057	516	17-Sep	15:34:17	0.01
470	17-Sep	14:48:17	0.051	517	17-Sep	15:35:17	0.018
471	17-Sep	14:49:17	0.254	518	17-Sep	15:36:17	0.002
472	17-Sep	14:50:17	0.038	519	17-Sep	15:37:17	0
473	17-Sep	14:51:17	0.019	520	17-Sep	15:38:17	0.001
474	17-Sep	14:52:17	0.011	521	17-Sep	15:39:17	0.001
475	17-Sep	14:53:17	0.004	522	17-Sep	15:40:17	0.003
476	17-Sep	14:54:17	0.017	523	17-Sep	15:41:17	0.003
477	17-Sep	14:55:17	0.011	524	17-Sep	15:42:17	0.001
478	17-Sep	14:56:17	0.007	525	17-Sep	15:43:17	0.009
479	17-Sep	14:57:17	0.026	526	17-Sep	15:44:17	0.001
480	17-Sep	14:58:17	0.021	527	17-Sep	15:45:17	0.006
481	17-Sep	14:59:17	0.004	528	17-Sep	15:46:17	0.012
482	17-Sep	15:00:17	0.001	529	17-Sep	15:47:17	0
483	17-Sep	15:01:17	0.006	530	17-Sep	15:48:17	0.006
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
531	17-Sep	15:49:17	0.007	578	17-Sep	16:36:17	0.079

532	17-Sep 15:50:17	0.024	579	17-Sep 16:37:17	0.198
533	17-Sep 15:51:17	0.085	580	17-Sep 16:38:17	0.365
534	17-Sep 15:52:17	0.026	581	17-Sep 16:39:17	0.152
535	17-Sep 15:53:17	0.024	582	17-Sep 16:40:17	0.397
536	17-Sep 15:54:17	0.024	583	17-Sep 16:41:17	0.678
537	17-Sep 15:55:17	0.007	584	17-Sep 16:42:17	0.426
538	17-Sep 15:56:17	0	585	17-Sep 16:43:17	1.686
539	17-Sep 15:57:17	0	586	17-Sep 16:44:17	1.015
540	17-Sep 15:58:17	0.014	587	17-Sep 16:45:17	0.396
541	17-Sep 15:59:17	0	588	17-Sep 16:46:17	2.332
542	17-Sep 16:00:17	0.006	589	17-Sep 16:47:17	1.607
543	17-Sep 16:01:17	0.015	590	17-Sep 16:48:17	0.756
544	17-Sep 16:02:17	0.001	591	17-Sep 16:49:17	0.511
545	17-Sep 16:03:17	0.001	592	17-Sep 16:50:17	6.39
546	17-Sep 16:04:17	0	593	17-Sep 16:51:17	0.638
547	17-Sep 16:05:17	0.007	594	17-Sep 16:52:17	1.278
548	17-Sep 16:06:17	0.241	595	17-Sep 16:53:17	1.063
549	17-Sep 16:07:17	0.041	596	17-Sep 16:54:17	4.42
550	17-Sep 16:08:17	0.229	597	17-Sep 16:55:17	4.56
551	17-Sep 16:09:17	0.034	598	17-Sep 16:56:17	0.531
552	17-Sep 16:10:17	0.189	599	17-Sep 16:57:17	0.577
553	17-Sep 16:11:17	0.122	600	17-Sep 16:58:17	0.095
554	17-Sep 16:12:17	0.097	601	17-Sep 16:59:17	0.248
555	17-Sep 16:13:17	0.23	602	17-Sep 17:00:17	0.621
556	17-Sep 16:14:17	0.467	603	17-Sep 17:01:17	0.613
557	17-Sep 16:15:17	0.628	604	17-Sep 17:02:17	0.141
558	17-Sep 16:16:17	0.096	605	17-Sep 17:03:17	0.368
559	17-Sep 16:17:17	0.007	606	17-Sep 17:04:17	0.351
560	17-Sep 16:18:17	0.009	607	17-Sep 17:05:17	0.19
561	17-Sep 16:19:17	0.749	608	17-Sep 17:06:17	0.197
562	17-Sep 16:20:17	0.58	609	17-Sep 17:07:17	0.003
563	17-Sep 16:21:17	0.115	610	17-Sep 17:08:17	0.647
564	17-Sep 16:22:17	0.187	611	17-Sep 17:09:17	0.001
565	17-Sep 16:23:17	0.088	612	17-Sep 17:10:17	0.01
566	17-Sep 16:24:17	0.205	613	17-Sep 17:11:17	0
567	17-Sep 16:25:17	0.663	614	17-Sep 17:12:17	0.002
568	17-Sep 16:26:17	2.852	615	17-Sep 17:13:17	0.017
569	17-Sep 16:27:17	0.099	616	17-Sep 17:14:17	0
570	17-Sep 16:28:17	0.554	617	17-Sep 17:15:17	0.071
571	17-Sep 16:29:17	0.207	618	17-Sep 17:16:17	0.027
572	17-Sep 16:30:17	0.164	619	17-Sep 17:17:17	0.009
573	17-Sep 16:31:17	0.195	620	17-Sep 17:18:17	0.023
574	17-Sep 16:32:17	0.379	621	17-Sep 17:19:17	0.009
575	17-Sep 16:33:17	0.065			
576	17-Sep 16:34:17	0.069			
577	17-Sep 16:35:17	0.16			

September 23, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 03
Number of logged points: 610
Start time and date: 07:19:45 23-Sep
Elapsed time: 10:10:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 11.929 mg/m³
Time at maximum: 07:39:24 Sep 23
Max STEL Concentration: 0.769 mg/m³
Time at max STEL: 07:41:45 Sep 23
Overall Avg Conc: 0.103 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	23-Sep	07:20:45	0.011	29	23-Sep	07:48:45	0
2	23-Sep	07:21:45	0.005	30	23-Sep	07:49:45	0.005
3	23-Sep	07:22:45	0	31	23-Sep	07:50:45	0
4	23-Sep	07:23:45	0.007	32	23-Sep	07:51:45	0.005
5	23-Sep	07:24:45	0.001	33	23-Sep	07:52:45	0.015
6	23-Sep	07:25:45	0.028	34	23-Sep	07:53:45	0.018
7	23-Sep	07:26:45	0.009	35	23-Sep	07:54:45	0.004
8	23-Sep	07:27:45	0.05	36	23-Sep	07:55:45	0.005
9	23-Sep	07:28:45	0.059	37	23-Sep	07:56:45	0.003
10	23-Sep	07:29:45	0.091	38	23-Sep	07:57:45	0.004
11	23-Sep	07:30:45	0.052	39	23-Sep	07:58:45	0.014
12	23-Sep	07:31:45	0.063	40	23-Sep	07:59:45	0
13	23-Sep	07:32:45	0.005	41	23-Sep	08:00:45	0.049
14	23-Sep	07:33:45	0.048	42	23-Sep	08:01:45	0.011
15	23-Sep	07:34:45	0.278	43	23-Sep	08:02:45	0.055
16	23-Sep	07:35:45	0.208	44	23-Sep	08:03:45	0
17	23-Sep	07:36:45	0.338	45	23-Sep	08:04:45	0
18	23-Sep	07:37:45	0.026	46	23-Sep	08:05:45	0.004
19	23-Sep	07:38:45	0.014	47	23-Sep	08:06:45	0
20	23-Sep	07:39:45	3.989	48	23-Sep	08:07:45	0
21	23-Sep	07:40:45	5.51	49	23-Sep	08:08:45	0.017
22	23-Sep	07:41:45	0.844	50	23-Sep	08:09:45	0.002
23	23-Sep	07:42:45	0.021	51	23-Sep	08:10:45	0
24	23-Sep	07:43:45	0.001	52	23-Sep	08:11:45	0
25	23-Sep	07:44:45	0.003	53	23-Sep	08:12:45	0.001
26	23-Sep	07:45:45	0.017	54	23-Sep	08:13:45	0.001
27	23-Sep	07:46:45	0.006	55	23-Sep	08:14:45	0
28	23-Sep	07:47:45	0.009	56	23-Sep	08:15:45	0.001
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
57	23-Sep	08:16:45	0	104	23-Sep	09:03:45	0.055

58	23-Sep	08:17:45	0.001	105	23-Sep	09:04:45	0.147
59	23-Sep	08:18:45	0	106	23-Sep	09:05:45	0.012
60	23-Sep	08:19:45	0.001	107	23-Sep	09:06:45	0.056
61	23-Sep	08:20:45	0	108	23-Sep	09:07:45	0.023
62	23-Sep	08:21:45	0	109	23-Sep	09:08:45	0.006
63	23-Sep	08:22:45	0.001	110	23-Sep	09:09:45	0.002
64	23-Sep	08:23:45	0.003	111	23-Sep	09:10:45	0.011
65	23-Sep	08:24:45	0	112	23-Sep	09:11:45	0.006
66	23-Sep	08:25:45	0	113	23-Sep	09:12:45	0.017
67	23-Sep	08:26:45	0.002	114	23-Sep	09:13:45	0.009
68	23-Sep	08:27:45	0.006	115	23-Sep	09:14:45	0.009
69	23-Sep	08:28:45	0	116	23-Sep	09:15:45	0.082
70	23-Sep	08:29:45	0.002	117	23-Sep	09:16:45	0.039
71	23-Sep	08:30:45	0	118	23-Sep	09:17:45	0
72	23-Sep	08:31:45	0	119	23-Sep	09:18:45	0.131
73	23-Sep	08:32:45	0	120	23-Sep	09:19:45	0.084
74	23-Sep	08:33:45	0	121	23-Sep	09:20:45	0.446
75	23-Sep	08:34:45	0	122	23-Sep	09:21:45	1.176
76	23-Sep	08:35:45	0.005	123	23-Sep	09:22:45	1.31
77	23-Sep	08:36:45	0.002	124	23-Sep	09:23:45	0.551
78	23-Sep	08:37:45	0.006	125	23-Sep	09:24:45	0.069
79	23-Sep	08:38:45	0	126	23-Sep	09:25:45	0.043
80	23-Sep	08:39:45	0.009	127	23-Sep	09:26:45	0.055
81	23-Sep	08:40:45	0.001	128	23-Sep	09:27:45	0.013
82	23-Sep	08:41:45	0.001	129	23-Sep	09:28:45	0.006
83	23-Sep	08:42:45	0.001	130	23-Sep	09:29:45	0
84	23-Sep	08:43:45	0.005	131	23-Sep	09:30:45	0
85	23-Sep	08:44:45	0	132	23-Sep	09:31:45	0
86	23-Sep	08:45:45	0.001	133	23-Sep	09:32:45	0
87	23-Sep	08:46:45	0	134	23-Sep	09:33:45	0.062
88	23-Sep	08:47:45	0.012	135	23-Sep	09:34:45	0.03
89	23-Sep	08:48:45	0.008	136	23-Sep	09:35:45	0.174
90	23-Sep	08:49:45	0	137	23-Sep	09:36:45	0.037
91	23-Sep	08:50:45	0.001	138	23-Sep	09:37:45	0.033
92	23-Sep	08:51:45	0	139	23-Sep	09:38:45	0.047
93	23-Sep	08:52:45	0.026	140	23-Sep	09:39:45	0.001
94	23-Sep	08:53:45	0.001	141	23-Sep	09:40:45	0.015
95	23-Sep	08:54:45	0.002	142	23-Sep	09:41:45	0
96	23-Sep	08:55:45	0.009	143	23-Sep	09:42:45	0
97	23-Sep	08:56:45	0.001	144	23-Sep	09:43:45	0
98	23-Sep	08:57:45	0.02	145	23-Sep	09:44:45	0
99	23-Sep	08:58:45	0.216	146	23-Sep	09:45:45	0
100	23-Sep	08:59:45	0.761	147	23-Sep	09:46:45	0.014
101	23-Sep	09:00:45	0.425	148	23-Sep	09:47:45	0.056
102	23-Sep	09:01:45	0.14	149	23-Sep	09:48:45	0.113
103	23-Sep	09:02:45	0.049	150	23-Sep	09:49:45	0.106
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
151	23-Sep	09:50:45	0.341	198	23-Sep	10:37:45	0.088

152	23-Sep	09:51:45	0.565	199	23-Sep	10:38:45	0.179
153	23-Sep	09:52:45	0.696	200	23-Sep	10:39:45	0.195
154	23-Sep	09:53:45	0.387	201	23-Sep	10:40:45	0.262
155	23-Sep	09:54:45	0.84	202	23-Sep	10:41:45	0.073
156	23-Sep	09:55:45	0.533	203	23-Sep	10:42:45	0.056
157	23-Sep	09:56:45	0.498	204	23-Sep	10:43:45	0.159
158	23-Sep	09:57:45	0.335	205	23-Sep	10:44:45	0.11
159	23-Sep	09:58:45	0.075	206	23-Sep	10:45:45	0.196
160	23-Sep	09:59:45	0.232	207	23-Sep	10:46:45	0.158
161	23-Sep	10:00:45	0.069	208	23-Sep	10:47:45	0.141
162	23-Sep	10:01:45	0.273	209	23-Sep	10:48:45	0.08
163	23-Sep	10:02:45	0.067	210	23-Sep	10:49:45	0.049
164	23-Sep	10:03:45	0.044	211	23-Sep	10:50:45	0.092
165	23-Sep	10:04:45	0.07	212	23-Sep	10:51:45	0.018
166	23-Sep	10:05:45	0.06	213	23-Sep	10:52:45	0.012
167	23-Sep	10:06:45	0.139	214	23-Sep	10:53:45	0.068
168	23-Sep	10:07:45	0.033	215	23-Sep	10:54:45	0.058
169	23-Sep	10:08:45	0.144	216	23-Sep	10:55:45	0.05
170	23-Sep	10:09:45	0.016	217	23-Sep	10:56:45	0.074
171	23-Sep	10:10:45	0.032	218	23-Sep	10:57:45	0.034
172	23-Sep	10:11:45	0.049	219	23-Sep	10:58:45	0.069
173	23-Sep	10:12:45	0.016	220	23-Sep	10:59:45	0.136
174	23-Sep	10:13:45	0.035	221	23-Sep	11:00:45	0.018
175	23-Sep	10:14:45	0.02	222	23-Sep	11:01:45	0.009
176	23-Sep	10:15:45	0.007	223	23-Sep	11:02:45	0.012
177	23-Sep	10:16:45	0.029	224	23-Sep	11:03:45	0.035
178	23-Sep	10:17:45	0.012	225	23-Sep	11:04:45	0.007
179	23-Sep	10:18:45	0.028	226	23-Sep	11:05:45	0.013
180	23-Sep	10:19:45	0.016	227	23-Sep	11:06:45	0.059
181	23-Sep	10:20:45	0.14	228	23-Sep	11:07:45	0.017
182	23-Sep	10:21:45	0.159	229	23-Sep	11:08:45	0.038
183	23-Sep	10:22:45	0.023	230	23-Sep	11:09:45	0.001
184	23-Sep	10:23:45	0.043	231	23-Sep	11:10:45	0.003
185	23-Sep	10:24:45	0.079	232	23-Sep	11:11:45	0.005
186	23-Sep	10:25:45	0.059	233	23-Sep	11:12:45	0.108
187	23-Sep	10:26:45	0.07	234	23-Sep	11:13:45	0.021
188	23-Sep	10:27:45	0.063	235	23-Sep	11:14:45	0.01
189	23-Sep	10:28:45	0.028	236	23-Sep	11:15:45	0.084
190	23-Sep	10:29:45	0.072	237	23-Sep	11:16:45	0.013
191	23-Sep	10:30:45	0.066	238	23-Sep	11:17:45	0.058
192	23-Sep	10:31:45	0.05	239	23-Sep	11:18:45	1.021
193	23-Sep	10:32:45	0.021	240	23-Sep	11:19:45	0.05
194	23-Sep	10:33:45	0.045	241	23-Sep	11:20:45	0.059
195	23-Sep	10:34:45	0.055	242	23-Sep	11:21:45	0.1
196	23-Sep	10:35:45	0.033	243	23-Sep	11:22:45	0.116
197	23-Sep	10:36:45	0.045	244	23-Sep	11:23:45	0.027
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
245	23-Sep	11:24:45	0.164	292	23-Sep	12:11:45	0

246	23-Sep	11:25:45	0.068	293	23-Sep	12:12:45	0
247	23-Sep	11:26:45	0.032	294	23-Sep	12:13:45	0
248	23-Sep	11:27:45	0.468	295	23-Sep	12:14:45	0
249	23-Sep	11:28:45	0.005	296	23-Sep	12:15:45	0.004
250	23-Sep	11:29:45	0.051	297	23-Sep	12:16:45	0.007
251	23-Sep	11:30:45	0.001	298	23-Sep	12:17:45	0
252	23-Sep	11:31:45	0.02	299	23-Sep	12:18:45	0
253	23-Sep	11:32:45	0.043	300	23-Sep	12:19:45	0
254	23-Sep	11:33:45	0.008	301	23-Sep	12:20:45	0
255	23-Sep	11:34:45	0.004	302	23-Sep	12:21:45	0
256	23-Sep	11:35:45	0.002	303	23-Sep	12:22:45	0.001
257	23-Sep	11:36:45	0.067	304	23-Sep	12:23:45	0
258	23-Sep	11:37:45	0	305	23-Sep	12:24:45	0.001
259	23-Sep	11:38:45	0.014	306	23-Sep	12:25:45	0
260	23-Sep	11:39:45	0.004	307	23-Sep	12:26:45	0
261	23-Sep	11:40:45	0.001	308	23-Sep	12:27:45	0.001
262	23-Sep	11:41:45	0.018	309	23-Sep	12:28:45	0
263	23-Sep	11:42:45	0.023	310	23-Sep	12:29:45	0
264	23-Sep	11:43:45	0.05	311	23-Sep	12:30:45	0
265	23-Sep	11:44:45	0.036	312	23-Sep	12:31:45	0
266	23-Sep	11:45:45	0.012	313	23-Sep	12:32:45	0
267	23-Sep	11:46:45	0.005	314	23-Sep	12:33:45	0
268	23-Sep	11:47:45	0.022	315	23-Sep	12:34:45	0.004
269	23-Sep	11:48:45	0.018	316	23-Sep	12:35:45	0
270	23-Sep	11:49:45	0.071	317	23-Sep	12:36:45	0
271	23-Sep	11:50:45	0.006	318	23-Sep	12:37:45	0
272	23-Sep	11:51:45	0.043	319	23-Sep	12:38:45	0
273	23-Sep	11:52:45	0.022	320	23-Sep	12:39:45	0
274	23-Sep	11:53:45	0.005	321	23-Sep	12:40:45	0
275	23-Sep	11:54:45	0.009	322	23-Sep	12:41:45	0
276	23-Sep	11:55:45	0.006	323	23-Sep	12:42:45	0
277	23-Sep	11:56:45	0.02	324	23-Sep	12:43:45	0
278	23-Sep	11:57:45	0	325	23-Sep	12:44:45	0
279	23-Sep	11:58:45	0.056	326	23-Sep	12:45:45	0.001
280	23-Sep	11:59:45	0.011	327	23-Sep	12:46:45	0
281	23-Sep	12:00:45	0.015	328	23-Sep	12:47:45	0
282	23-Sep	12:01:45	0.083	329	23-Sep	12:48:45	0.006
283	23-Sep	12:02:45	0.013	330	23-Sep	12:49:45	0
284	23-Sep	12:03:45	0.046	331	23-Sep	12:50:45	0
285	23-Sep	12:04:45	0.001	332	23-Sep	12:51:45	0
286	23-Sep	12:05:45	0.016	333	23-Sep	12:52:45	0.003
287	23-Sep	12:06:45	0	334	23-Sep	12:53:45	0.002
288	23-Sep	12:07:45	0.006	335	23-Sep	12:54:45	0
289	23-Sep	12:08:45	0.036	336	23-Sep	12:55:45	0
290	23-Sep	12:09:45	0.001	337	23-Sep	12:56:45	0.001
291	23-Sep	12:10:45	0	338	23-Sep	12:57:45	0
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
339	23-Sep	12:58:45	0	386	23-Sep	13:45:45	0.276

340	23-Sep	12:59:45	0	387	23-Sep	13:46:45	0.186
341	23-Sep	13:00:45	0.005	388	23-Sep	13:47:45	0.234
342	23-Sep	13:01:45	0	389	23-Sep	13:48:45	0.103
343	23-Sep	13:02:45	0	390	23-Sep	13:49:45	0.526
344	23-Sep	13:03:45	0	391	23-Sep	13:50:45	1.033
345	23-Sep	13:04:45	0	392	23-Sep	13:51:45	0.841
346	23-Sep	13:05:45	0.004	393	23-Sep	13:52:45	0.12
347	23-Sep	13:06:45	0	394	23-Sep	13:53:45	2.151
348	23-Sep	13:07:45	0	395	23-Sep	13:54:45	0.299
349	23-Sep	13:08:45	0.122	396	23-Sep	13:55:45	0.273
350	23-Sep	13:09:45	0.016	397	23-Sep	13:56:45	0.214
351	23-Sep	13:10:45	0.095	398	23-Sep	13:57:45	0.044
352	23-Sep	13:11:45	0.294	399	23-Sep	13:58:45	0.108
353	23-Sep	13:12:45	0.383	400	23-Sep	13:59:45	0.104
354	23-Sep	13:13:45	0.03	401	23-Sep	14:00:45	0.028
355	23-Sep	13:14:45	0.016	402	23-Sep	14:01:45	0.032
356	23-Sep	13:15:45	0.338	403	23-Sep	14:02:45	0.097
357	23-Sep	13:16:45	0.062	404	23-Sep	14:03:45	0.022
358	23-Sep	13:17:45	0.184	405	23-Sep	14:04:45	0.019
359	23-Sep	13:18:45	0.046	406	23-Sep	14:05:45	0.09
360	23-Sep	13:19:45	0.051	407	23-Sep	14:06:45	0.14
361	23-Sep	13:20:45	0.007	408	23-Sep	14:07:45	0.026
362	23-Sep	13:21:45	0.055	409	23-Sep	14:08:45	0.219
363	23-Sep	13:22:45	0.101	410	23-Sep	14:09:45	0.09
364	23-Sep	13:23:45	0.033	411	23-Sep	14:10:45	0.132
365	23-Sep	13:24:45	0.046	412	23-Sep	14:11:45	0.032
366	23-Sep	13:25:45	0.018	413	23-Sep	14:12:45	0.03
367	23-Sep	13:26:45	0.004	414	23-Sep	14:13:45	0.046
368	23-Sep	13:27:45	0.03	415	23-Sep	14:14:45	0.101
369	23-Sep	13:28:45	0.708	416	23-Sep	14:15:45	0.035
370	23-Sep	13:29:45	0.029	417	23-Sep	14:16:45	0.017
371	23-Sep	13:30:45	0.076	418	23-Sep	14:17:45	0.062
372	23-Sep	13:31:45	0.076	419	23-Sep	14:18:45	0.011
373	23-Sep	13:32:45	0.049	420	23-Sep	14:19:45	0.016
374	23-Sep	13:33:45	0.041	421	23-Sep	14:20:45	0.045
375	23-Sep	13:34:45	0.052	422	23-Sep	14:21:45	0.106
376	23-Sep	13:35:45	0.08	423	23-Sep	14:22:45	0.035
377	23-Sep	13:36:45	0.072	424	23-Sep	14:23:45	0.046
378	23-Sep	13:37:45	0.051	425	23-Sep	14:24:45	0.154
379	23-Sep	13:38:45	0.25	426	23-Sep	14:25:45	0.044
380	23-Sep	13:39:45	0.084	427	23-Sep	14:26:45	0.013
381	23-Sep	13:40:45	0.119	428	23-Sep	14:27:45	0.011
382	23-Sep	13:41:45	0.093	429	23-Sep	14:28:45	0.055
383	23-Sep	13:42:45	0.134	430	23-Sep	14:29:45	0.024
384	23-Sep	13:43:45	0.427	431	23-Sep	14:30:45	0.013
385	23-Sep	13:44:45	0.63	432	23-Sep	14:31:45	0.071
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
433	23-Sep	14:32:45	0.012	480	23-Sep	15:19:45	0.005

434	23-Sep	14:33:45	0.011	481	23-Sep	15:20:45	0.003
435	23-Sep	14:34:45	0.011	482	23-Sep	15:21:45	0.008
436	23-Sep	14:35:45	0.027	483	23-Sep	15:22:45	0.118
437	23-Sep	14:36:45	0.02	484	23-Sep	15:23:45	0.071
438	23-Sep	14:37:45	0.026	485	23-Sep	15:24:45	0.022
439	23-Sep	14:38:45	0.056	486	23-Sep	15:25:45	0.042
440	23-Sep	14:39:45	0.016	487	23-Sep	15:26:45	0.101
441	23-Sep	14:40:45	0.042	488	23-Sep	15:27:45	0.273
442	23-Sep	14:41:45	0.215	489	23-Sep	15:28:45	0.369
443	23-Sep	14:42:45	0.019	490	23-Sep	15:29:45	0.065
444	23-Sep	14:43:45	0.009	491	23-Sep	15:30:45	0.08
445	23-Sep	14:44:45	0.472	492	23-Sep	15:31:45	0.203
446	23-Sep	14:45:45	0.142	493	23-Sep	15:32:45	0.06
447	23-Sep	14:46:45	0.16	494	23-Sep	15:33:45	0.16
448	23-Sep	14:47:45	0.139	495	23-Sep	15:34:45	0.066
449	23-Sep	14:48:45	0.084	496	23-Sep	15:35:45	0.026
450	23-Sep	14:49:45	0.04	497	23-Sep	15:36:45	0.007
451	23-Sep	14:50:45	0.241	498	23-Sep	15:37:45	0.026
452	23-Sep	14:51:45	0.524	499	23-Sep	15:38:45	0.169
453	23-Sep	14:52:45	0.051	500	23-Sep	15:39:45	0.07
454	23-Sep	14:53:45	0.056	501	23-Sep	15:40:45	0.061
455	23-Sep	14:54:45	0.117	502	23-Sep	15:41:45	0.032
456	23-Sep	14:55:45	0.152	503	23-Sep	15:42:45	0.013
457	23-Sep	14:56:45	0.009	504	23-Sep	15:43:45	0.088
458	23-Sep	14:57:45	0.045	505	23-Sep	15:44:45	0.091
459	23-Sep	14:58:45	0.103	506	23-Sep	15:45:45	0.098
460	23-Sep	14:59:45	0.105	507	23-Sep	15:46:45	0.021
461	23-Sep	15:00:45	0.05	508	23-Sep	15:47:45	0.07
462	23-Sep	15:01:45	0.054	509	23-Sep	15:48:45	0.099
463	23-Sep	15:02:45	0.033	510	23-Sep	15:49:45	0.024
464	23-Sep	15:03:45	0.015	511	23-Sep	15:50:45	0.055
465	23-Sep	15:04:45	0.026	512	23-Sep	15:51:45	0.012
466	23-Sep	15:05:45	0.002	513	23-Sep	15:52:45	0.238
467	23-Sep	15:06:45	0.001	514	23-Sep	15:53:45	0.063
468	23-Sep	15:07:45	0.009	515	23-Sep	15:54:45	0.003
469	23-Sep	15:08:45	0.007	516	23-Sep	15:55:45	0.106
470	23-Sep	15:09:45	0.008	517	23-Sep	15:56:45	0.051
471	23-Sep	15:10:45	0.012	518	23-Sep	15:57:45	0.085
472	23-Sep	15:11:45	0.226	519	23-Sep	15:58:45	0.054
473	23-Sep	15:12:45	0.011	520	23-Sep	15:59:45	0.02
474	23-Sep	15:13:45	0.009	521	23-Sep	16:00:45	0.184
475	23-Sep	15:14:45	0.011	522	23-Sep	16:01:45	0.126
476	23-Sep	15:15:45	0.002	523	23-Sep	16:02:45	0.116
477	23-Sep	15:16:45	0.027	524	23-Sep	16:03:45	0.172
478	23-Sep	15:17:45	0.038	525	23-Sep	16:04:45	0.109
479	23-Sep	15:18:45	0.006	526	23-Sep	16:05:45	0.192
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
527	23-Sep	16:06:45	0.118	574	23-Sep	16:53:45	0.046

528	23-Sep 16:07:45	0.164	575	23-Sep 16:54:45	0.011
529	23-Sep 16:08:45	0.076	576	23-Sep 16:55:45	0.036
530	23-Sep 16:09:45	0.079	577	23-Sep 16:56:45	0.006
531	23-Sep 16:10:45	0.02	578	23-Sep 16:57:45	0.075
532	23-Sep 16:11:45	0.04	579	23-Sep 16:58:45	0.042
533	23-Sep 16:12:45	0.124	580	23-Sep 16:59:45	0.127
534	23-Sep 16:13:45	0.021	581	23-Sep 17:00:45	0.077
535	23-Sep 16:14:45	0.348	582	23-Sep 17:01:45	0.102
536	23-Sep 16:15:45	0.291	583	23-Sep 17:02:45	0.261
537	23-Sep 16:16:45	0.142	584	23-Sep 17:03:45	0.297
538	23-Sep 16:17:45	0.157	585	23-Sep 17:04:45	0.07
539	23-Sep 16:18:45	0.359	586	23-Sep 17:05:45	0.035
540	23-Sep 16:19:45	0.154	587	23-Sep 17:06:45	0.027
541	23-Sep 16:20:45	0.081	588	23-Sep 17:07:45	0.015
542	23-Sep 16:21:45	0.031	589	23-Sep 17:08:45	0.04
543	23-Sep 16:22:45	0.08	590	23-Sep 17:09:45	0.047
544	23-Sep 16:23:45	0.058	591	23-Sep 17:10:45	0.142
545	23-Sep 16:24:45	0.066	592	23-Sep 17:11:45	0.043
546	23-Sep 16:25:45	0.011	593	23-Sep 17:12:45	0.02
547	23-Sep 16:26:45	0.012	594	23-Sep 17:13:45	0.112
548	23-Sep 16:27:45	0.01	595	23-Sep 17:14:45	0.155
549	23-Sep 16:28:45	0.019	596	23-Sep 17:15:45	0.047
550	23-Sep 16:29:45	0.364	597	23-Sep 17:16:45	0.248
551	23-Sep 16:30:45	0.011	598	23-Sep 17:17:45	0
552	23-Sep 16:31:45	0.069	599	23-Sep 17:18:45	0.129
553	23-Sep 16:32:45	0.04	600	23-Sep 17:19:45	0.007
554	23-Sep 16:33:45	0.017	601	23-Sep 17:20:45	0.31
555	23-Sep 16:34:45	0.028	602	23-Sep 17:21:45	0.062
556	23-Sep 16:35:45	0.052	603	23-Sep 17:22:45	0.259
557	23-Sep 16:36:45	0.008	604	23-Sep 17:23:45	2.311
558	23-Sep 16:37:45	0.014	605	23-Sep 17:24:45	1.203
559	23-Sep 16:38:45	0.152	606	23-Sep 17:25:45	1.737
560	23-Sep 16:39:45	0.014	607	23-Sep 17:26:45	0.388
561	23-Sep 16:40:45	0.064	608	23-Sep 17:27:45	0.197
562	23-Sep 16:41:45	0.006	609	23-Sep 17:28:45	0.223
563	23-Sep 16:42:45	0.012	610	23-Sep 17:29:45	0.318
564	23-Sep 16:43:45	0.012			
565	23-Sep 16:44:45	0.026			
566	23-Sep 16:45:45	0.008			
567	23-Sep 16:46:45	0.004			
568	23-Sep 16:47:45	0.002			
569	23-Sep 16:48:45	0.004			
570	23-Sep 16:49:45	0.003			
571	23-Sep 16:50:45	0.003			
572	23-Sep 16:51:45	0.021			
573	23-Sep 16:52:45	0.078			

pDR-1000 S/N: 04878

User ID: DuPont Site PDR-2

Tag Number: 03
Number of logged points: 598
Start time and date: 07:20:32 23-Sep
Elapsed time: 09:58:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 23.365 mg/m³
Time at maximum: 13:31:58 Sep 23
Max STEL Concentration: 2.197 mg/m³
Time at max STEL: 13:15:03 Sep 23
Overall Avg Conc: 0.381 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	23-Sep	07:21:32	0.187	31	23-Sep	07:51:32	0.005
2	23-Sep	07:22:32	0.071	32	23-Sep	07:52:32	0.17
3	23-Sep	07:23:32	0.203	33	23-Sep	07:53:32	0.14
4	23-Sep	07:24:32	0.004	34	23-Sep	07:54:32	0.049
5	23-Sep	07:25:32	0.002	35	23-Sep	07:55:32	0.031
6	23-Sep	07:26:32	0.195	36	23-Sep	07:56:32	0.01
7	23-Sep	07:27:32	0.05	37	23-Sep	07:57:32	0.012
8	23-Sep	07:28:32	0.077	38	23-Sep	07:58:32	0.016
9	23-Sep	07:29:32	1.555	39	23-Sep	07:59:32	0.008
10	23-Sep	07:30:32	2.669	40	23-Sep	08:00:32	0.064
11	23-Sep	07:31:32	0.317	41	23-Sep	08:01:32	0.059
12	23-Sep	07:32:32	0.091	42	23-Sep	08:02:32	0.031
13	23-Sep	07:33:32	0.161	43	23-Sep	08:03:32	0.085
14	23-Sep	07:34:32	0.249	44	23-Sep	08:04:32	0.055
15	23-Sep	07:35:32	0.096	45	23-Sep	08:05:32	0.022
16	23-Sep	07:36:32	0.85	46	23-Sep	08:06:32	0.24
17	23-Sep	07:37:32	0.077	47	23-Sep	08:07:32	0.508
18	23-Sep	07:38:32	0.153	48	23-Sep	08:08:32	0.366
19	23-Sep	07:39:32	0.037	49	23-Sep	08:09:32	0.478
20	23-Sep	07:40:32	0.045	50	23-Sep	08:10:32	0.265
21	23-Sep	07:41:32	0.234	51	23-Sep	08:11:32	0.396
22	23-Sep	07:42:32	0.026	52	23-Sep	08:12:32	0.012
23	23-Sep	07:43:32	0.008	53	23-Sep	08:13:32	0.171
24	23-Sep	07:44:32	0.002	54	23-Sep	08:14:32	0.075
25	23-Sep	07:45:32	0	55	23-Sep	08:15:32	0.005
26	23-Sep	07:46:32	0.002	56	23-Sep	08:16:32	0.005
27	23-Sep	07:47:32	0.002	57	23-Sep	08:17:32	0.014
28	23-Sep	07:48:32	0.002	58	23-Sep	08:18:32	0.034
29	23-Sep	07:49:32	0.003	59	23-Sep	08:19:32	0.067
30	23-Sep	07:50:32	0.007	60	23-Sep	08:20:32	0.072
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
61	23-Sep	08:21:32	0.744	108	23-Sep	09:08:32	0.027

62	23-Sep	08:22:32	0.112	109	23-Sep	09:09:32	0.021
63	23-Sep	08:23:32	0.186	110	23-Sep	09:10:32	0.017
64	23-Sep	08:24:32	0.136	111	23-Sep	09:11:32	0.011
65	23-Sep	08:25:32	0.025	112	23-Sep	09:12:32	0.009
66	23-Sep	08:26:32	0.013	113	23-Sep	09:13:32	0.009
67	23-Sep	08:27:32	0.008	114	23-Sep	09:14:32	0.014
68	23-Sep	08:28:32	0.009	115	23-Sep	09:15:32	0.01
69	23-Sep	08:29:32	0.104	116	23-Sep	09:16:32	0.007
70	23-Sep	08:30:32	0.105	117	23-Sep	09:17:32	0.009
71	23-Sep	08:31:32	0.03	118	23-Sep	09:18:32	0.007
72	23-Sep	08:32:32	0.026	119	23-Sep	09:19:32	0.024
73	23-Sep	08:33:32	0.02	120	23-Sep	09:20:32	0.017
74	23-Sep	08:34:32	0.008	121	23-Sep	09:21:32	0.024
75	23-Sep	08:35:32	0.012	122	23-Sep	09:22:32	0.046
76	23-Sep	08:36:32	0.014	123	23-Sep	09:23:32	0.235
77	23-Sep	08:37:32	0.022	124	23-Sep	09:24:32	0.099
78	23-Sep	08:38:32	0.059	125	23-Sep	09:25:32	0.024
79	23-Sep	08:39:32	0.046	126	23-Sep	09:26:32	0.012
80	23-Sep	08:40:32	0.024	127	23-Sep	09:27:32	0.006
81	23-Sep	08:41:32	0.018	128	23-Sep	09:28:32	0.009
82	23-Sep	08:42:32	0.017	129	23-Sep	09:29:32	0.03
83	23-Sep	08:43:32	0.019	130	23-Sep	09:30:32	0.012
84	23-Sep	08:44:32	0.318	131	23-Sep	09:31:32	0.04
85	23-Sep	08:45:32	0.16	132	23-Sep	09:32:32	0.015
86	23-Sep	08:46:32	0.191	133	23-Sep	09:33:32	0.834
87	23-Sep	08:47:32	0.437	134	23-Sep	09:34:32	0.195
88	23-Sep	08:48:32	0.185	135	23-Sep	09:35:32	0.031
89	23-Sep	08:49:32	0.101	136	23-Sep	09:36:32	0.013
90	23-Sep	08:50:32	0.034	137	23-Sep	09:37:32	0.03
91	23-Sep	08:51:32	0.027	138	23-Sep	09:38:32	0.024
92	23-Sep	08:52:32	0.01	139	23-Sep	09:39:32	0.016
93	23-Sep	08:53:32	0.016	140	23-Sep	09:40:32	0.012
94	23-Sep	08:54:32	0.009	141	23-Sep	09:41:32	0.075
95	23-Sep	08:55:32	0.011	142	23-Sep	09:42:32	0.389
96	23-Sep	08:56:32	0.024	143	23-Sep	09:43:32	0.197
97	23-Sep	08:57:32	0.013	144	23-Sep	09:44:32	0.28
98	23-Sep	08:58:32	0.011	145	23-Sep	09:45:32	0.083
99	23-Sep	08:59:32	0.024	146	23-Sep	09:46:32	0.071
100	23-Sep	09:00:32	0.01	147	23-Sep	09:47:32	0.338
101	23-Sep	09:01:32	0.019	148	23-Sep	09:48:32	4.52
102	23-Sep	09:02:32	0.013	149	23-Sep	09:49:32	1.321
103	23-Sep	09:03:32	0.012	150	23-Sep	09:50:32	0.445
104	23-Sep	09:04:32	0.01	151	23-Sep	09:51:32	0.152
105	23-Sep	09:05:32	0.011	152	23-Sep	09:52:32	0.06
106	23-Sep	09:06:32	0.009	153	23-Sep	09:53:32	0.07
107	23-Sep	09:07:32	0.009	154	23-Sep	09:54:32	0.03
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
155	23-Sep	09:55:32	0.03	202	23-Sep	10:42:32	0.098

156	23-Sep	09:56:32	0.022	203	23-Sep	10:43:32	0.061
157	23-Sep	09:57:32	0.019	204	23-Sep	10:44:32	0.177
158	23-Sep	09:58:32	0.017	205	23-Sep	10:45:32	0.059
159	23-Sep	09:59:32	0.023	206	23-Sep	10:46:32	0.091
160	23-Sep	10:00:32	0.025	207	23-Sep	10:47:32	0.246
161	23-Sep	10:01:32	0.019	208	23-Sep	10:48:32	0.481
162	23-Sep	10:02:32	0.017	209	23-Sep	10:49:32	2.096
163	23-Sep	10:03:32	0.02	210	23-Sep	10:50:32	0.143
164	23-Sep	10:04:32	0.022	211	23-Sep	10:51:32	0.685
165	23-Sep	10:05:32	0.017	212	23-Sep	10:52:32	1.417
166	23-Sep	10:06:32	0.017	213	23-Sep	10:53:32	1.642
167	23-Sep	10:07:32	0.018	214	23-Sep	10:54:32	0.195
168	23-Sep	10:08:32	0.017	215	23-Sep	10:55:32	0.794
169	23-Sep	10:09:32	0.053	216	23-Sep	10:56:32	0.582
170	23-Sep	10:10:32	0.045	217	23-Sep	10:57:32	0.218
171	23-Sep	10:11:32	0.015	218	23-Sep	10:58:32	0.163
172	23-Sep	10:12:32	0.019	219	23-Sep	10:59:32	0.076
173	23-Sep	10:13:32	0.015	220	23-Sep	11:00:32	0.069
174	23-Sep	10:14:32	0.017	221	23-Sep	11:01:32	0.88
175	23-Sep	10:15:32	0.015	222	23-Sep	11:02:32	0.155
176	23-Sep	10:16:32	0.018	223	23-Sep	11:03:32	0.077
177	23-Sep	10:17:32	0.018	224	23-Sep	11:04:32	0.42
178	23-Sep	10:18:32	0.011	225	23-Sep	11:05:32	0.894
179	23-Sep	10:19:32	0.014	226	23-Sep	11:06:32	0.141
180	23-Sep	10:20:32	0.019	227	23-Sep	11:07:32	0.198
181	23-Sep	10:21:32	0.037	228	23-Sep	11:08:32	0.087
182	23-Sep	10:22:32	0.024	229	23-Sep	11:09:32	0.156
183	23-Sep	10:23:32	0.055	230	23-Sep	11:10:32	0.112
184	23-Sep	10:24:32	0.089	231	23-Sep	11:11:32	0.791
185	23-Sep	10:25:32	0.083	232	23-Sep	11:12:32	2.654
186	23-Sep	10:26:32	0.035	233	23-Sep	11:13:32	0.111
187	23-Sep	10:27:32	0.037	234	23-Sep	11:14:32	1.044
188	23-Sep	10:28:32	0.112	235	23-Sep	11:15:32	0.242
189	23-Sep	10:29:32	0.055	236	23-Sep	11:16:32	0.46
190	23-Sep	10:30:32	0.017	237	23-Sep	11:17:32	0.363
191	23-Sep	10:31:32	0.012	238	23-Sep	11:18:32	0.405
192	23-Sep	10:32:32	0.014	239	23-Sep	11:19:32	0.519
193	23-Sep	10:33:32	0.022	240	23-Sep	11:20:32	0.759
194	23-Sep	10:34:32	0.015	241	23-Sep	11:21:32	0.518
195	23-Sep	10:35:32	0.028	242	23-Sep	11:22:32	1.102
196	23-Sep	10:36:32	0.289	243	23-Sep	11:23:32	0.503
197	23-Sep	10:37:32	0.537	244	23-Sep	11:24:32	0.449
198	23-Sep	10:38:32	0.166	245	23-Sep	11:25:32	0.269
199	23-Sep	10:39:32	0.044	246	23-Sep	11:26:32	0.898
200	23-Sep	10:40:32	0.02	247	23-Sep	11:27:32	0.516
201	23-Sep	10:41:32	0.834	248	23-Sep	11:28:32	0.487
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
249	23-Sep	11:29:32	1.631	296	23-Sep	12:16:32	0.022

250	23-Sep	11:30:32	0.365	297	23-Sep	12:17:32	0.007
251	23-Sep	11:31:32	0.061	298	23-Sep	12:18:32	0.003
252	23-Sep	11:32:32	0.06	299	23-Sep	12:19:32	0.004
253	23-Sep	11:33:32	0.03	300	23-Sep	12:20:32	0.003
254	23-Sep	11:34:32	0.292	301	23-Sep	12:21:32	0.005
255	23-Sep	11:35:32	0.048	302	23-Sep	12:22:32	0.008
256	23-Sep	11:36:32	3.541	303	23-Sep	12:23:32	0.003
257	23-Sep	11:37:32	0.288	304	23-Sep	12:24:32	0.018
258	23-Sep	11:38:32	0.084	305	23-Sep	12:25:32	0.009
259	23-Sep	11:39:32	0.063	306	23-Sep	12:26:32	0.004
260	23-Sep	11:40:32	0.11	307	23-Sep	12:27:32	0.021
261	23-Sep	11:41:32	0.115	308	23-Sep	12:28:32	0.017
262	23-Sep	11:42:32	0.082	309	23-Sep	12:29:32	0.013
263	23-Sep	11:43:32	0.077	310	23-Sep	12:30:32	0.017
264	23-Sep	11:44:32	0.316	311	23-Sep	12:31:32	0.009
265	23-Sep	11:45:32	0.635	312	23-Sep	12:32:32	0.017
266	23-Sep	11:46:32	2.167	313	23-Sep	12:33:32	0.046
267	23-Sep	11:47:32	0.699	314	23-Sep	12:34:32	0.013
268	23-Sep	11:48:32	1.051	315	23-Sep	12:35:32	0.003
269	23-Sep	11:49:32	0.921	316	23-Sep	12:36:32	0.009
270	23-Sep	11:50:32	0.479	317	23-Sep	12:37:32	0.003
271	23-Sep	11:51:32	1.131	318	23-Sep	12:38:32	0.005
272	23-Sep	11:52:32	0.368	319	23-Sep	12:39:32	0.004
273	23-Sep	11:53:32	0.893	320	23-Sep	12:40:32	0.013
274	23-Sep	11:54:32	1.811	321	23-Sep	12:41:32	0.003
275	23-Sep	11:55:32	0.444	322	23-Sep	12:42:32	0.004
276	23-Sep	11:56:32	0.443	323	23-Sep	12:43:32	0.004
277	23-Sep	11:57:32	0.87	324	23-Sep	12:44:32	0.048
278	23-Sep	11:58:32	0.655	325	23-Sep	12:45:32	0.224
279	23-Sep	11:59:32	0.328	326	23-Sep	12:46:32	1.403
280	23-Sep	12:00:32	0.493	327	23-Sep	12:47:32	0.913
281	23-Sep	12:01:32	0.736	328	23-Sep	12:48:32	0.633
282	23-Sep	12:02:32	0.622	329	23-Sep	12:49:32	2.355
283	23-Sep	12:03:32	0.652	330	23-Sep	12:50:32	0.533
284	23-Sep	12:04:32	1.147	331	23-Sep	12:51:32	0.15
285	23-Sep	12:05:32	3.612	332	23-Sep	12:52:32	2.785
286	23-Sep	12:06:32	2.481	333	23-Sep	12:53:32	0.25
287	23-Sep	12:07:32	0.699	334	23-Sep	12:54:32	1.467
288	23-Sep	12:08:32	0.206	335	23-Sep	12:55:32	0.385
289	23-Sep	12:09:32	0.082	336	23-Sep	12:56:32	0.166
290	23-Sep	12:10:32	0.014	337	23-Sep	12:57:32	3.638
291	23-Sep	12:11:32	0.022	338	23-Sep	12:58:32	0.55
292	23-Sep	12:12:32	0.012	339	23-Sep	12:59:32	0.346
293	23-Sep	12:13:32	0.009	340	23-Sep	13:00:32	1.018
294	23-Sep	12:14:32	0.004	341	23-Sep	13:01:32	2.308
295	23-Sep	12:15:32	0.015	342	23-Sep	13:02:32	1.18
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
343	23-Sep	13:03:32	1.971	390	23-Sep	13:50:32	0.753

344	23-Sep	13:04:32	4.3	391	23-Sep	13:51:32	0.438
345	23-Sep	13:05:32	1.142	392	23-Sep	13:52:32	0.18
346	23-Sep	13:06:32	1.689	393	23-Sep	13:53:32	0.273
347	23-Sep	13:07:32	1.082	394	23-Sep	13:54:32	1.018
348	23-Sep	13:08:32	2.908	395	23-Sep	13:55:32	0.499
349	23-Sep	13:09:32	1.858	396	23-Sep	13:56:32	0.637
350	23-Sep	13:10:32	1.346	397	23-Sep	13:57:32	0.3
351	23-Sep	13:11:32	1.048	398	23-Sep	13:58:32	0.602
352	23-Sep	13:12:32	5.78	399	23-Sep	13:59:32	1.787
353	23-Sep	13:13:32	2.305	400	23-Sep	14:00:32	0.829
354	23-Sep	13:14:32	2.752	401	23-Sep	14:01:32	0.328
355	23-Sep	13:15:32	1.026	402	23-Sep	14:02:32	0.229
356	23-Sep	13:16:32	0.263	403	23-Sep	14:03:32	1.868
357	23-Sep	13:17:32	0.127	404	23-Sep	14:04:32	0.506
358	23-Sep	13:18:32	0.21	405	23-Sep	14:05:32	0.211
359	23-Sep	13:19:32	0.336	406	23-Sep	14:06:32	0.211
360	23-Sep	13:20:32	0.648	407	23-Sep	14:07:32	0.227
361	23-Sep	13:21:32	0.17	408	23-Sep	14:08:32	0.551
362	23-Sep	13:22:32	0.185	409	23-Sep	14:09:32	0.182
363	23-Sep	13:23:32	0.171	410	23-Sep	14:10:32	0.452
364	23-Sep	13:24:32	0.232	411	23-Sep	14:11:32	0.325
365	23-Sep	13:25:32	0.368	412	23-Sep	14:12:32	0.349
366	23-Sep	13:26:32	0.085	413	23-Sep	14:13:32	0.086
367	23-Sep	13:27:32	0.174	414	23-Sep	14:14:32	0.229
368	23-Sep	13:28:32	0.02	415	23-Sep	14:15:32	0.216
369	23-Sep	13:29:32	0.083	416	23-Sep	14:16:32	0.434
370	23-Sep	13:30:32	0.378	417	23-Sep	14:17:32	0.132
371	23-Sep	13:31:32	0.528	418	23-Sep	14:18:32	0.978
372	23-Sep	13:32:32	6.53	419	23-Sep	14:19:32	0.243
373	23-Sep	13:33:32	1.056	420	23-Sep	14:20:32	0.062
374	23-Sep	13:34:32	0.117	421	23-Sep	14:21:32	0.087
375	23-Sep	13:35:32	0.081	422	23-Sep	14:22:32	0.076
376	23-Sep	13:36:32	0.018	423	23-Sep	14:23:32	0.077
377	23-Sep	13:37:32	0.032	424	23-Sep	14:24:32	0.235
378	23-Sep	13:38:32	0.021	425	23-Sep	14:25:32	0.388
379	23-Sep	13:39:32	0.012	426	23-Sep	14:26:32	0.385
380	23-Sep	13:40:32	0.129	427	23-Sep	14:27:32	0.068
381	23-Sep	13:41:32	0.975	428	23-Sep	14:28:32	0.124
382	23-Sep	13:42:32	2.824	429	23-Sep	14:29:32	0.092
383	23-Sep	13:43:32	2.325	430	23-Sep	14:30:32	0.103
384	23-Sep	13:44:32	0.248	431	23-Sep	14:31:32	0.061
385	23-Sep	13:45:32	0.027	432	23-Sep	14:32:32	0.137
386	23-Sep	13:46:32	0.097	433	23-Sep	14:33:32	0.125
387	23-Sep	13:47:32	0.351	434	23-Sep	14:34:32	0.077
388	23-Sep	13:48:32	0.252	435	23-Sep	14:35:32	0.081
389	23-Sep	13:49:32	0.701	436	23-Sep	14:36:32	1.664
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
437	23-Sep	14:37:32	0.547	484	23-Sep	15:24:32	0.077

438	23-Sep	14:38:32	0.201	485	23-Sep	15:25:32	0.156
439	23-Sep	14:39:32	0.036	486	23-Sep	15:26:32	0.105
440	23-Sep	14:40:32	0.082	487	23-Sep	15:27:32	0.039
441	23-Sep	14:41:32	0.747	488	23-Sep	15:28:32	0.06
442	23-Sep	14:42:32	0.298	489	23-Sep	15:29:32	0.094
443	23-Sep	14:43:32	0.206	490	23-Sep	15:30:32	0.043
444	23-Sep	14:44:32	0.057	491	23-Sep	15:31:32	0.073
445	23-Sep	14:45:32	0.013	492	23-Sep	15:32:32	0.084
446	23-Sep	14:46:32	0.022	493	23-Sep	15:33:32	0.057
447	23-Sep	14:47:32	0.014	494	23-Sep	15:34:32	0.689
448	23-Sep	14:48:32	0.129	495	23-Sep	15:35:32	0.205
449	23-Sep	14:49:32	0.044	496	23-Sep	15:36:32	0.036
450	23-Sep	14:50:32	0.027	497	23-Sep	15:37:32	0.058
451	23-Sep	14:51:32	0.126	498	23-Sep	15:38:32	0.057
452	23-Sep	14:52:32	0.243	499	23-Sep	15:39:32	0.069
453	23-Sep	14:53:32	0.051	500	23-Sep	15:40:32	0.071
454	23-Sep	14:54:32	0.138	501	23-Sep	15:41:32	0.149
455	23-Sep	14:55:32	0.04	502	23-Sep	15:42:32	2.318
456	23-Sep	14:56:32	0.026	503	23-Sep	15:43:32	1.437
457	23-Sep	14:57:32	0.151	504	23-Sep	15:44:32	1.601
458	23-Sep	14:58:32	0.051	505	23-Sep	15:45:32	0.125
459	23-Sep	14:59:32	0.025	506	23-Sep	15:46:32	0.181
460	23-Sep	15:00:32	0.033	507	23-Sep	15:47:32	0.099
461	23-Sep	15:01:32	0.021	508	23-Sep	15:48:32	0.104
462	23-Sep	15:02:32	0.022	509	23-Sep	15:49:32	0.458
463	23-Sep	15:03:32	0.087	510	23-Sep	15:50:32	1.44
464	23-Sep	15:04:32	0.046	511	23-Sep	15:51:32	0.897
465	23-Sep	15:05:32	0.027	512	23-Sep	15:52:32	7.8
466	23-Sep	15:06:32	0.364	513	23-Sep	15:53:32	2.113
467	23-Sep	15:07:32	0.208	514	23-Sep	15:54:32	0.826
468	23-Sep	15:08:32	0.209	515	23-Sep	15:55:32	1.164
469	23-Sep	15:09:32	0.35	516	23-Sep	15:56:32	0.172
470	23-Sep	15:10:32	0.126	517	23-Sep	15:57:32	0.44
471	23-Sep	15:11:32	0.318	518	23-Sep	15:58:32	1.994
472	23-Sep	15:12:32	0.152	519	23-Sep	15:59:32	0.598
473	23-Sep	15:13:32	0.14	520	23-Sep	16:00:32	0.398
474	23-Sep	15:14:32	0.108	521	23-Sep	16:01:32	0.698
475	23-Sep	15:15:32	0.075	522	23-Sep	16:02:32	0.362
476	23-Sep	15:16:32	0.059	523	23-Sep	16:03:32	0.06
477	23-Sep	15:17:32	0.135	524	23-Sep	16:04:32	0.13
478	23-Sep	15:18:32	0.103	525	23-Sep	16:05:32	0.625
479	23-Sep	15:19:32	0.031	526	23-Sep	16:06:32	0.068
480	23-Sep	15:20:32	0.091	527	23-Sep	16:07:32	0.026
481	23-Sep	15:21:32	0.027	528	23-Sep	16:08:32	0.03
482	23-Sep	15:22:32	0.105	529	23-Sep	16:09:32	0.059
483	23-Sep	15:23:32	0.048	530	23-Sep	16:10:32	0.093
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
531	23-Sep	16:11:32	0.092	578	23-Sep	16:58:32	0.064

532	23-Sep 16:12:32	0.307
533	23-Sep 16:13:32	0.325
534	23-Sep 16:14:32	0.113
535	23-Sep 16:15:32	0.057
536	23-Sep 16:16:32	0.138
537	23-Sep 16:17:32	0.241
538	23-Sep 16:18:32	0.302
539	23-Sep 16:19:32	0.158
540	23-Sep 16:20:32	0.184
541	23-Sep 16:21:32	0.136
542	23-Sep 16:22:32	0.087
543	23-Sep 16:23:32	0.083
544	23-Sep 16:24:32	0.139
545	23-Sep 16:25:32	0.108
546	23-Sep 16:26:32	0.112
547	23-Sep 16:27:32	0.043
548	23-Sep 16:28:32	0.056
549	23-Sep 16:29:32	0.059
550	23-Sep 16:30:32	0.095
551	23-Sep 16:31:32	0.677
552	23-Sep 16:32:32	1.338
553	23-Sep 16:33:32	0.887
554	23-Sep 16:34:32	0.471
555	23-Sep 16:35:32	0.333
556	23-Sep 16:36:32	0.502
557	23-Sep 16:37:32	0.528
558	23-Sep 16:38:32	0.797
559	23-Sep 16:39:32	0.343
560	23-Sep 16:40:32	0.873
561	23-Sep 16:41:32	1.548
562	23-Sep 16:42:32	0.185
563	23-Sep 16:43:32	0.08
564	23-Sep 16:44:32	0.06
565	23-Sep 16:45:32	0.758
566	23-Sep 16:46:32	0.288
567	23-Sep 16:47:32	1.363
568	23-Sep 16:48:32	2.054
569	23-Sep 16:49:32	0.689
570	23-Sep 16:50:32	1.695
571	23-Sep 16:51:32	0.085
572	23-Sep 16:52:32	0.129
573	23-Sep 16:53:32	0.088
574	23-Sep 16:54:32	0.062
575	23-Sep 16:55:32	0.074
576	23-Sep 16:56:32	0.076
577	23-Sep 16:57:32	0.131
579	23-Sep 16:59:32	0.061
580	23-Sep 17:00:32	0.074
581	23-Sep 17:01:32	0.343
582	23-Sep 17:02:32	0.447
583	23-Sep 17:03:32	0.252
584	23-Sep 17:04:32	0.627
585	23-Sep 17:05:32	0.257
586	23-Sep 17:06:32	0.029
587	23-Sep 17:07:32	0.021
588	23-Sep 17:08:32	0.026
589	23-Sep 17:09:32	0.02
590	23-Sep 17:10:32	0.021
591	23-Sep 17:11:32	0.019
592	23-Sep 17:12:32	0.019
593	23-Sep 17:13:32	0.019
594	23-Sep 17:14:32	0.021
595	23-Sep 17:15:32	0.225
596	23-Sep 17:16:32	0.949
597	23-Sep 17:17:32	0.094
598	23-Sep 17:18:32	0.056

pDR-1000 S/N: 04881

User ID: DuPont Site PDR-3

Tag Number: 03
Number of logged points: 609
Start time and date: 07:18:23 23-Sep
Elapsed time: 10:09:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 15.597 mg/m³
Time at maximum: 17:04:57 Sep 23
Max STEL Concentration: 1.241 mg/m³
Time at max STEL: 17:08:53 Sep 23
Overall Avg Conc: 0.186 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	23-Sep	07:19:23	0.069	31	23-Sep	07:49:23	0.602
2	23-Sep	07:20:23	0.082	32	23-Sep	07:50:23	0.944
3	23-Sep	07:21:23	0.067	33	23-Sep	07:51:23	0.547
4	23-Sep	07:22:23	0.033	34	23-Sep	07:52:23	0.577
5	23-Sep	07:23:23	0.019	35	23-Sep	07:53:23	0.363
6	23-Sep	07:24:23	0.004	36	23-Sep	07:54:23	0.551
7	23-Sep	07:25:23	0.15	37	23-Sep	07:55:23	0.568
8	23-Sep	07:26:23	0.686	38	23-Sep	07:56:23	0.478
9	23-Sep	07:27:23	0.211	39	23-Sep	07:57:23	0.391
10	23-Sep	07:28:23	0.401	40	23-Sep	07:58:23	0.261
11	23-Sep	07:29:23	0.299	41	23-Sep	07:59:23	0.245
12	23-Sep	07:30:23	0.106	42	23-Sep	08:00:23	0.229
13	23-Sep	07:31:23	0.25	43	23-Sep	08:01:23	0.185
14	23-Sep	07:32:23	0.123	44	23-Sep	08:02:23	0.145
15	23-Sep	07:33:23	0.185	45	23-Sep	08:03:23	0.19
16	23-Sep	07:34:23	0.889	46	23-Sep	08:04:23	0.217
17	23-Sep	07:35:23	1.159	47	23-Sep	08:05:23	0.203
18	23-Sep	07:36:23	0.618	48	23-Sep	08:06:23	0.227
19	23-Sep	07:37:23	0.382	49	23-Sep	08:07:23	0.166
20	23-Sep	07:38:23	0.509	50	23-Sep	08:08:23	0.174
21	23-Sep	07:39:23	0.711	51	23-Sep	08:09:23	0.205
22	23-Sep	07:40:23	1.445	52	23-Sep	08:10:23	0.227
23	23-Sep	07:41:23	0.893	53	23-Sep	08:11:23	0.156
24	23-Sep	07:42:23	0.602	54	23-Sep	08:12:23	0.166
25	23-Sep	07:43:23	0.501	55	23-Sep	08:13:23	0.349
26	23-Sep	07:44:23	0.367	56	23-Sep	08:14:23	0.184
27	23-Sep	07:45:23	0.438	57	23-Sep	08:15:23	0.239
28	23-Sep	07:46:23	0.382	58	23-Sep	08:16:23	0.274
29	23-Sep	07:47:23	0.337	59	23-Sep	08:17:23	0.291
30	23-Sep	07:48:23	0.746	60	23-Sep	08:18:23	0.3
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
61	23-Sep	08:19:23	0.291	108	23-Sep	09:06:23	0.27

62	23-Sep	08:20:23	0.313	109	23-Sep	09:07:23	0.194
63	23-Sep	08:21:23	0.631	110	23-Sep	09:08:23	0.268
64	23-Sep	08:22:23	0.677	111	23-Sep	09:09:23	0.29
65	23-Sep	08:23:23	0.663	112	23-Sep	09:10:23	0.175
66	23-Sep	08:24:23	0.935	113	23-Sep	09:11:23	0.176
67	23-Sep	08:25:23	0.477	114	23-Sep	09:12:23	0.201
68	23-Sep	08:26:23	0.332	115	23-Sep	09:13:23	0.1
69	23-Sep	08:27:23	0.181	116	23-Sep	09:14:23	0.066
70	23-Sep	08:28:23	0.187	117	23-Sep	09:15:23	0.093
71	23-Sep	08:29:23	0.234	118	23-Sep	09:16:23	0.07
72	23-Sep	08:30:23	0.243	119	23-Sep	09:17:23	0.1
73	23-Sep	08:31:23	0.261	120	23-Sep	09:18:23	0.074
74	23-Sep	08:32:23	0.366	121	23-Sep	09:19:23	0.114
75	23-Sep	08:33:23	0.249	122	23-Sep	09:20:23	0.1
76	23-Sep	08:34:23	0.298	123	23-Sep	09:21:23	0.081
77	23-Sep	08:35:23	0.307	124	23-Sep	09:22:23	0.11
78	23-Sep	08:36:23	0.171	125	23-Sep	09:23:23	0.048
79	23-Sep	08:37:23	0.103	126	23-Sep	09:24:23	0.044
80	23-Sep	08:38:23	0.097	127	23-Sep	09:25:23	0.042
81	23-Sep	08:39:23	0.084	128	23-Sep	09:26:23	0.065
82	23-Sep	08:40:23	0.04	129	23-Sep	09:27:23	0.053
83	23-Sep	08:41:23	0.04	130	23-Sep	09:28:23	0.041
84	23-Sep	08:42:23	0.058	131	23-Sep	09:29:23	0.027
85	23-Sep	08:43:23	0.063	132	23-Sep	09:30:23	0.025
86	23-Sep	08:44:23	0.058	133	23-Sep	09:31:23	0.138
87	23-Sep	08:45:23	0.052	134	23-Sep	09:32:23	0.127
88	23-Sep	08:46:23	0.115	135	23-Sep	09:33:23	0.215
89	23-Sep	08:47:23	0.231	136	23-Sep	09:34:23	0.133
90	23-Sep	08:48:23	0.489	137	23-Sep	09:35:23	0.118
91	23-Sep	08:49:23	0.234	138	23-Sep	09:36:23	0.077
92	23-Sep	08:50:23	0.191	139	23-Sep	09:37:23	0.138
93	23-Sep	08:51:23	0.328	140	23-Sep	09:38:23	0.113
94	23-Sep	08:52:23	0.259	141	23-Sep	09:39:23	0.149
95	23-Sep	08:53:23	0.143	142	23-Sep	09:40:23	0.188
96	23-Sep	08:54:23	0.13	143	23-Sep	09:41:23	0.484
97	23-Sep	08:55:23	0.165	144	23-Sep	09:42:23	0.262
98	23-Sep	08:56:23	0.133	145	23-Sep	09:43:23	0.116
99	23-Sep	08:57:23	0.168	146	23-Sep	09:44:23	0.08
100	23-Sep	08:58:23	0.181	147	23-Sep	09:45:23	0.042
101	23-Sep	08:59:23	0.194	148	23-Sep	09:46:23	0.043
102	23-Sep	09:00:23	0.187	149	23-Sep	09:47:23	0.113
103	23-Sep	09:01:23	0.223	150	23-Sep	09:48:23	0.072
104	23-Sep	09:02:23	0.202	151	23-Sep	09:49:23	0.054
105	23-Sep	09:03:23	0.17	152	23-Sep	09:50:23	0.073
106	23-Sep	09:04:23	0.553	153	23-Sep	09:51:23	0.376
107	23-Sep	09:05:23	0.441	154	23-Sep	09:52:23	0.118
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
155	23-Sep	09:53:23	0.155	202	23-Sep	10:40:23	0.017

156	23-Sep	09:54:23	0.145	203	23-Sep	10:41:23	0.018
157	23-Sep	09:55:23	0.138	204	23-Sep	10:42:23	0.015
158	23-Sep	09:56:23	0.143	205	23-Sep	10:43:23	0.019
159	23-Sep	09:57:23	0.069	206	23-Sep	10:44:23	0.018
160	23-Sep	09:58:23	0.153	207	23-Sep	10:45:23	0.016
161	23-Sep	09:59:23	0.058	208	23-Sep	10:46:23	0.017
162	23-Sep	10:00:23	0.03	209	23-Sep	10:47:23	0.013
163	23-Sep	10:01:23	0.024	210	23-Sep	10:48:23	0.013
164	23-Sep	10:02:23	0.021	211	23-Sep	10:49:23	0.017
165	23-Sep	10:03:23	0.026	212	23-Sep	10:50:23	0.013
166	23-Sep	10:04:23	0.021	213	23-Sep	10:51:23	0.014
167	23-Sep	10:05:23	0.02	214	23-Sep	10:52:23	0.013
168	23-Sep	10:06:23	0.02	215	23-Sep	10:53:23	0.013
169	23-Sep	10:07:23	0.02	216	23-Sep	10:54:23	0.014
170	23-Sep	10:08:23	0.018	217	23-Sep	10:55:23	0.02
171	23-Sep	10:09:23	0.086	218	23-Sep	10:56:23	0.015
172	23-Sep	10:10:23	0.179	219	23-Sep	10:57:23	0.018
173	23-Sep	10:11:23	0.093	220	23-Sep	10:58:23	0.015
174	23-Sep	10:12:23	0.105	221	23-Sep	10:59:23	0.014
175	23-Sep	10:13:23	0.12	222	23-Sep	11:00:23	0.014
176	23-Sep	10:14:23	0.257	223	23-Sep	11:01:23	0.014
177	23-Sep	10:15:23	0.057	224	23-Sep	11:02:23	0.013
178	23-Sep	10:16:23	0.026	225	23-Sep	11:03:23	0.013
179	23-Sep	10:17:23	0.033	226	23-Sep	11:04:23	0.013
180	23-Sep	10:18:23	0.028	227	23-Sep	11:05:23	0.013
181	23-Sep	10:19:23	0.016	228	23-Sep	11:06:23	0.013
182	23-Sep	10:20:23	0.019	229	23-Sep	11:07:23	0.013
183	23-Sep	10:21:23	0.017	230	23-Sep	11:08:23	0.014
184	23-Sep	10:22:23	0.02	231	23-Sep	11:09:23	0.012
185	23-Sep	10:23:23	0.018	232	23-Sep	11:10:23	0.012
186	23-Sep	10:24:23	0.016	233	23-Sep	11:11:23	0.011
187	23-Sep	10:25:23	0.018	234	23-Sep	11:12:23	0.013
188	23-Sep	10:26:23	0.021	235	23-Sep	11:13:23	0.018
189	23-Sep	10:27:23	0.027	236	23-Sep	11:14:23	0.013
190	23-Sep	10:28:23	0.016	237	23-Sep	11:15:23	0.011
191	23-Sep	10:29:23	0.023	238	23-Sep	11:16:23	0.012
192	23-Sep	10:30:23	0.019	239	23-Sep	11:17:23	0.011
193	23-Sep	10:31:23	0.037	240	23-Sep	11:18:23	0.011
194	23-Sep	10:32:23	0.065	241	23-Sep	11:19:23	0.012
195	23-Sep	10:33:23	0.04	242	23-Sep	11:20:23	0.012
196	23-Sep	10:34:23	0.028	243	23-Sep	11:21:23	0.01
197	23-Sep	10:35:23	0.018	244	23-Sep	11:22:23	0.011
198	23-Sep	10:36:23	0.02	245	23-Sep	11:23:23	0.014
199	23-Sep	10:37:23	0.022	246	23-Sep	11:24:23	0.009
200	23-Sep	10:38:23	0.022	247	23-Sep	11:25:23	0.011
201	23-Sep	10:39:23	0.017	248	23-Sep	11:26:23	0.009
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
249	23-Sep	11:27:23	0.011	296	23-Sep	12:14:23	0.012

250	23-Sep	11:28:23	0.009	297	23-Sep	12:15:23	0.009
251	23-Sep	11:29:23	0.01	298	23-Sep	12:16:23	0.01
252	23-Sep	11:30:23	0.011	299	23-Sep	12:17:23	0.009
253	23-Sep	11:31:23	0.009	300	23-Sep	12:18:23	0.009
254	23-Sep	11:32:23	0.01	301	23-Sep	12:19:23	0.009
255	23-Sep	11:33:23	0.009	302	23-Sep	12:20:23	0.008
256	23-Sep	11:34:23	0.01	303	23-Sep	12:21:23	0.012
257	23-Sep	11:35:23	0.013	304	23-Sep	12:22:23	0.007
258	23-Sep	11:36:23	0.01	305	23-Sep	12:23:23	0.01
259	23-Sep	11:37:23	0.009	306	23-Sep	12:24:23	0.007
260	23-Sep	11:38:23	0.009	307	23-Sep	12:25:23	0.008
261	23-Sep	11:39:23	0.01	308	23-Sep	12:26:23	0.007
262	23-Sep	11:40:23	0.009	309	23-Sep	12:27:23	0.007
263	23-Sep	11:41:23	0.01	310	23-Sep	12:28:23	0.009
264	23-Sep	11:42:23	0.012	311	23-Sep	12:29:23	0.006
265	23-Sep	11:43:23	0.012	312	23-Sep	12:30:23	0.013
266	23-Sep	11:44:23	0.01	313	23-Sep	12:31:23	0.009
267	23-Sep	11:45:23	0.011	314	23-Sep	12:32:23	0.007
268	23-Sep	11:46:23	0.009	315	23-Sep	12:33:23	0.008
269	23-Sep	11:47:23	0.014	316	23-Sep	12:34:23	0.008
270	23-Sep	11:48:23	0.012	317	23-Sep	12:35:23	0.007
271	23-Sep	11:49:23	0.011	318	23-Sep	12:36:23	0.007
272	23-Sep	11:50:23	0.011	319	23-Sep	12:37:23	0.006
273	23-Sep	11:51:23	0.011	320	23-Sep	12:38:23	0.011
274	23-Sep	11:52:23	0.01	321	23-Sep	12:39:23	0.006
275	23-Sep	11:53:23	0.013	322	23-Sep	12:40:23	0.007
276	23-Sep	11:54:23	0.011	323	23-Sep	12:41:23	0.008
277	23-Sep	11:55:23	0.012	324	23-Sep	12:42:23	0.009
278	23-Sep	11:56:23	0.012	325	23-Sep	12:43:23	0.006
279	23-Sep	11:57:23	0.015	326	23-Sep	12:44:23	0.008
280	23-Sep	11:58:23	0.02	327	23-Sep	12:45:23	0.007
281	23-Sep	11:59:23	0.01	328	23-Sep	12:46:23	0.009
282	23-Sep	12:00:23	0.012	329	23-Sep	12:47:23	0.004
283	23-Sep	12:01:23	0.011	330	23-Sep	12:48:23	0.007
284	23-Sep	12:02:23	0.013	331	23-Sep	12:49:23	0.007
285	23-Sep	12:03:23	0.015	332	23-Sep	12:50:23	0.005
286	23-Sep	12:04:23	0.021	333	23-Sep	12:51:23	0.307
287	23-Sep	12:05:23	0.018	334	23-Sep	12:52:23	0.086
288	23-Sep	12:06:23	0.017	335	23-Sep	12:53:23	0.131
289	23-Sep	12:07:23	0.011	336	23-Sep	12:54:23	0.032
290	23-Sep	12:08:23	0.014	337	23-Sep	12:55:23	0.459
291	23-Sep	12:09:23	0.014	338	23-Sep	12:56:23	1.475
292	23-Sep	12:10:23	0.008	339	23-Sep	12:57:23	0.675
293	23-Sep	12:11:23	0.01	340	23-Sep	12:58:23	0.061
294	23-Sep	12:12:23	0.012	341	23-Sep	12:59:23	0.102
295	23-Sep	12:13:23	0.011	342	23-Sep	13:00:23	0.95
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
343	23-Sep	13:01:23	0.451	390	23-Sep	13:48:23	0.025

344	23-Sep	13:02:23	0.037	391	23-Sep	13:49:23	0.02
345	23-Sep	13:03:23	0.024	392	23-Sep	13:50:23	0.017
346	23-Sep	13:04:23	0.051	393	23-Sep	13:51:23	0.025
347	23-Sep	13:05:23	0.059	394	23-Sep	13:52:23	0.024
348	23-Sep	13:06:23	0.203	395	23-Sep	13:53:23	0.171
349	23-Sep	13:07:23	0.204	396	23-Sep	13:54:23	0.103
350	23-Sep	13:08:23	0.14	397	23-Sep	13:55:23	0.114
351	23-Sep	13:09:23	0.095	398	23-Sep	13:56:23	0.082
352	23-Sep	13:10:23	0.072	399	23-Sep	13:57:23	0.128
353	23-Sep	13:11:23	0.182	400	23-Sep	13:58:23	0.253
354	23-Sep	13:12:23	0.055	401	23-Sep	13:59:23	0.072
355	23-Sep	13:13:23	0.03	402	23-Sep	14:00:23	0.049
356	23-Sep	13:14:23	0.02	403	23-Sep	14:01:23	0.032
357	23-Sep	13:15:23	0.014	404	23-Sep	14:02:23	0.029
358	23-Sep	13:16:23	0.037	405	23-Sep	14:03:23	0.019
359	23-Sep	13:17:23	0.028	406	23-Sep	14:04:23	0.212
360	23-Sep	13:18:23	0.021	407	23-Sep	14:05:23	0.265
361	23-Sep	13:19:23	0.028	408	23-Sep	14:06:23	0.107
362	23-Sep	13:20:23	0.02	409	23-Sep	14:07:23	0.052
363	23-Sep	13:21:23	0.018	410	23-Sep	14:08:23	0.576
364	23-Sep	13:22:23	0.05	411	23-Sep	14:09:23	0.727
365	23-Sep	13:23:23	0.607	412	23-Sep	14:10:23	0.05
366	23-Sep	13:24:23	0.666	413	23-Sep	14:11:23	0.063
367	23-Sep	13:25:23	0.32	414	23-Sep	14:12:23	0.07
368	23-Sep	13:26:23	0.094	415	23-Sep	14:13:23	0.043
369	23-Sep	13:27:23	0.124	416	23-Sep	14:14:23	0.062
370	23-Sep	13:28:23	0.77	417	23-Sep	14:15:23	0.037
371	23-Sep	13:29:23	0.035	418	23-Sep	14:16:23	0.205
372	23-Sep	13:30:23	0.066	419	23-Sep	14:17:23	0.164
373	23-Sep	13:31:23	0.461	420	23-Sep	14:18:23	0.052
374	23-Sep	13:32:23	0.207	421	23-Sep	14:19:23	0.035
375	23-Sep	13:33:23	0.16	422	23-Sep	14:20:23	0.017
376	23-Sep	13:34:23	0.136	423	23-Sep	14:21:23	0.021
377	23-Sep	13:35:23	0.112	424	23-Sep	14:22:23	0.027
378	23-Sep	13:36:23	0.032	425	23-Sep	14:23:23	0.035
379	23-Sep	13:37:23	0.008	426	23-Sep	14:24:23	0.028
380	23-Sep	13:38:23	0.006	427	23-Sep	14:25:23	0.031
381	23-Sep	13:39:23	0.007	428	23-Sep	14:26:23	0.021
382	23-Sep	13:40:23	0.006	429	23-Sep	14:27:23	0.022
383	23-Sep	13:41:23	0.162	430	23-Sep	14:28:23	0.057
384	23-Sep	13:42:23	0.166	431	23-Sep	14:29:23	1.824
385	23-Sep	13:43:23	0.059	432	23-Sep	14:30:23	0.343
386	23-Sep	13:44:23	0.033	433	23-Sep	14:31:23	0.086
387	23-Sep	13:45:23	0.017	434	23-Sep	14:32:23	1.009
388	23-Sep	13:46:23	0.02	435	23-Sep	14:33:23	0.262
389	23-Sep	13:47:23	0.022	436	23-Sep	14:34:23	2.854
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
437	23-Sep	14:35:23	1.031	484	23-Sep	15:22:23	0.01

438	23-Sep	14:36:23	0.102	485	23-Sep	15:23:23	0.005
439	23-Sep	14:37:23	0.071	486	23-Sep	15:24:23	0.007
440	23-Sep	14:38:23	0.035	487	23-Sep	15:25:23	0.01
441	23-Sep	14:39:23	0.076	488	23-Sep	15:26:23	0.198
442	23-Sep	14:40:23	1.15	489	23-Sep	15:27:23	0.314
443	23-Sep	14:41:23	0.419	490	23-Sep	15:28:23	0.114
444	23-Sep	14:42:23	0.129	491	23-Sep	15:29:23	0.02
445	23-Sep	14:43:23	0.065	492	23-Sep	15:30:23	0.02
446	23-Sep	14:44:23	0.011	493	23-Sep	15:31:23	0.03
447	23-Sep	14:45:23	0.005	494	23-Sep	15:32:23	0.033
448	23-Sep	14:46:23	0.005	495	23-Sep	15:33:23	0.034
449	23-Sep	14:47:23	0.005	496	23-Sep	15:34:23	0.031
450	23-Sep	14:48:23	0.005	497	23-Sep	15:35:23	0.028
451	23-Sep	14:49:23	0.006	498	23-Sep	15:36:23	0.018
452	23-Sep	14:50:23	0.711	499	23-Sep	15:37:23	0.022
453	23-Sep	14:51:23	0.313	500	23-Sep	15:38:23	0.097
454	23-Sep	14:52:23	0.021	501	23-Sep	15:39:23	0.187
455	23-Sep	14:53:23	0.016	502	23-Sep	15:40:23	0.112
456	23-Sep	14:54:23	0.009	503	23-Sep	15:41:23	0.171
457	23-Sep	14:55:23	0.008	504	23-Sep	15:42:23	0.604
458	23-Sep	14:56:23	0.009	505	23-Sep	15:43:23	0.123
459	23-Sep	14:57:23	0.007	506	23-Sep	15:44:23	0.254
460	23-Sep	14:58:23	0.011	507	23-Sep	15:45:23	0.334
461	23-Sep	14:59:23	0.011	508	23-Sep	15:46:23	0.46
462	23-Sep	15:00:23	0.01	509	23-Sep	15:47:23	0.219
463	23-Sep	15:01:23	0.008	510	23-Sep	15:48:23	0.073
464	23-Sep	15:02:23	0.057	511	23-Sep	15:49:23	0.065
465	23-Sep	15:03:23	0.102	512	23-Sep	15:50:23	0.035
466	23-Sep	15:04:23	0.17	513	23-Sep	15:51:23	2.904
467	23-Sep	15:05:23	0.094	514	23-Sep	15:52:23	0.766
468	23-Sep	15:06:23	0.848	515	23-Sep	15:53:23	0.3
469	23-Sep	15:07:23	0.4	516	23-Sep	15:54:23	0.157
470	23-Sep	15:08:23	3.576	517	23-Sep	15:55:23	0.046
471	23-Sep	15:09:23	0.269	518	23-Sep	15:56:23	0.022
472	23-Sep	15:10:23	0.039	519	23-Sep	15:57:23	0.179
473	23-Sep	15:11:23	0.041	520	23-Sep	15:58:23	0.044
474	23-Sep	15:12:23	0.081	521	23-Sep	15:59:23	0.041
475	23-Sep	15:13:23	0.85	522	23-Sep	16:00:23	0.021
476	23-Sep	15:14:23	0.151	523	23-Sep	16:01:23	0.18
477	23-Sep	15:15:23	0.095	524	23-Sep	16:02:23	0.082
478	23-Sep	15:16:23	0.08	525	23-Sep	16:03:23	0.067
479	23-Sep	15:17:23	0.034	526	23-Sep	16:04:23	0.07
480	23-Sep	15:18:23	0.031	527	23-Sep	16:05:23	0.052
481	23-Sep	15:19:23	0.02	528	23-Sep	16:06:23	0.037
482	23-Sep	15:20:23	0.007	529	23-Sep	16:07:23	0.027
483	23-Sep	15:21:23	0.006	530	23-Sep	16:08:23	0.029
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
531	23-Sep	16:09:23	0.027	578	23-Sep	16:56:23	0.126

532	23-Sep 16:10:23	0.031	579	23-Sep 16:57:23	0.708
533	23-Sep 16:11:23	0.027	580	23-Sep 16:58:23	0.332
534	23-Sep 16:12:23	0.036	581	23-Sep 16:59:23	0.812
535	23-Sep 16:13:23	0.034	582	23-Sep 17:00:23	2.322
536	23-Sep 16:14:23	0.036	583	23-Sep 17:01:23	0.18
537	23-Sep 16:15:23	0.094	584	23-Sep 17:02:23	0.045
538	23-Sep 16:16:23	0.835	585	23-Sep 17:03:23	0.456
539	23-Sep 16:17:23	0.137	586	23-Sep 17:04:23	0.344
540	23-Sep 16:18:23	0.023	587	23-Sep 17:05:23	5.59
541	23-Sep 16:19:23	0.013	588	23-Sep 17:06:23	3.987
542	23-Sep 16:20:23	0.023	589	23-Sep 17:07:23	2.651
543	23-Sep 16:21:23	0.18	590	23-Sep 17:08:23	0.416
544	23-Sep 16:22:23	0.05	591	23-Sep 17:09:23	0.14
545	23-Sep 16:23:23	3.184	592	23-Sep 17:10:23	0.012
546	23-Sep 16:24:23	0.448	593	23-Sep 17:11:23	0.083
547	23-Sep 16:25:23	0.026	594	23-Sep 17:12:23	0.034
548	23-Sep 16:26:23	0.033	595	23-Sep 17:13:23	0.196
549	23-Sep 16:27:23	0.799	596	23-Sep 17:14:23	0.039
550	23-Sep 16:28:23	0.696	597	23-Sep 17:15:23	0.069
551	23-Sep 16:29:23	0.192	598	23-Sep 17:16:23	0.052
552	23-Sep 16:30:23	0.206	599	23-Sep 17:17:23	0.213
553	23-Sep 16:31:23	0.115	600	23-Sep 17:18:23	0.128
554	23-Sep 16:32:23	0.031	601	23-Sep 17:19:23	0.055
555	23-Sep 16:33:23	0.01	602	23-Sep 17:20:23	0.153
556	23-Sep 16:34:23	0.004	603	23-Sep 17:21:23	0.02
557	23-Sep 16:35:23	0.006	604	23-Sep 17:22:23	0.017
558	23-Sep 16:36:23	0.009	605	23-Sep 17:23:23	0.038
559	23-Sep 16:37:23	0.008	606	23-Sep 17:24:23	0.11
560	23-Sep 16:38:23	0.007	607	23-Sep 17:25:23	0.009
561	23-Sep 16:39:23	0.005	608	23-Sep 17:26:23	0.012
562	23-Sep 16:40:23	0.008	609	23-Sep 17:27:23	0.03
563	23-Sep 16:41:23	0.026			
564	23-Sep 16:42:23	0.228			
565	23-Sep 16:43:23	0.087			
566	23-Sep 16:44:23	0.044			
567	23-Sep 16:45:23	0.034			
568	23-Sep 16:46:23	0.039			
569	23-Sep 16:47:23	0.036			
570	23-Sep 16:48:23	0.029			
571	23-Sep 16:49:23	0.024			
572	23-Sep 16:50:23	0.03			
573	23-Sep 16:51:23	0.025			
574	23-Sep 16:52:23	0.025			
575	23-Sep 16:53:23	0.027			
576	23-Sep 16:54:23	0.478			
577	23-Sep 16:55:23	0.094			

September 26, 2002

pDR-1000 S/N: 04848
User ID: DuPont Site PDR-1
Tag Number: 04
Number of logged points: 453
Start time and date: 08:01:14 26-Sep
Elapsed time: 07:33:00
Logging period (sec): 60
Calibration Factor (%): 100
Max Display Concentration: 9.180 mg/m³
Time at maximum: 15:09:50 Sep 26
Max STEL Concentration: 0.199 mg/m³
Time at max STEL: 13:59:45 Sep 26
Overall Avg Conc: 0.029 mg/m³

Logged Data:

Point	Date	Time	Avg.(mg/m³)	Point	Date	Time	Avg.(mg/m³)
1	26-Sep	08:02:14	0.02	29	26-Sep	08:30:14	0.158
2	26-Sep	08:03:14	0.007	30	26-Sep	08:31:14	0.049
3	26-Sep	08:04:14	0.013	31	26-Sep	08:32:14	0.171
4	26-Sep	08:05:14	0.108	32	26-Sep	08:33:14	0
5	26-Sep	08:06:14	0.014	33	26-Sep	08:34:14	0
6	26-Sep	08:07:14	0.012	34	26-Sep	08:35:14	0
7	26-Sep	08:08:14	0.03	35	26-Sep	08:36:14	0
8	26-Sep	08:09:14	0.206	36	26-Sep	08:37:14	0
9	26-Sep	08:10:14	0	37	26-Sep	08:38:14	0.006
10	26-Sep	08:11:14	0.091	38	26-Sep	08:39:14	0.002
11	26-Sep	08:12:14	0.162	39	26-Sep	08:40:14	0
12	26-Sep	08:13:14	0.153	40	26-Sep	08:41:14	0.001
13	26-Sep	08:14:14	0.071	41	26-Sep	08:42:14	0
14	26-Sep	08:15:14	0.033	42	26-Sep	08:43:14	0
15	26-Sep	08:16:14	0.047	43	26-Sep	08:44:14	0
16	26-Sep	08:17:14	0.338	44	26-Sep	08:45:14	0.001
17	26-Sep	08:18:14	0.085	45	26-Sep	08:46:14	0.001
18	26-Sep	08:19:14	0.031	46	26-Sep	08:47:14	0
19	26-Sep	08:20:14	0.009	47	26-Sep	08:48:14	0.002
20	26-Sep	08:21:14	0.193	48	26-Sep	08:49:14	0.016
21	26-Sep	08:22:14	0.063	49	26-Sep	08:50:14	0.041
22	26-Sep	08:23:14	0.004	50	26-Sep	08:51:14	0
23	26-Sep	08:24:14	0.007	51	26-Sep	08:52:14	0
24	26-Sep	08:25:14	0.005	52	26-Sep	08:53:14	0
25	26-Sep	08:26:14	0.006	53	26-Sep	08:54:14	0.008
26	26-Sep	08:27:14	0.015	54	26-Sep	08:55:14	0.002
27	26-Sep	08:28:14	0.015	55	26-Sep	08:56:14	0
28	26-Sep	08:29:14	0.324	56	26-Sep	08:57:14	0
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
57	26-Sep	08:58:14	0.001	104	26-Sep	09:45:14	0

58	26-Sep	08:59:14	0.061	105	26-Sep	09:46:14	0
59	26-Sep	09:00:14	0.054	106	26-Sep	09:47:14	0.025
60	26-Sep	09:01:14	0.034	107	26-Sep	09:48:14	0.021
61	26-Sep	09:02:14	0.018	108	26-Sep	09:49:14	0
62	26-Sep	09:03:14	0	109	26-Sep	09:50:14	0.001
63	26-Sep	09:04:14	0	110	26-Sep	09:51:14	0
64	26-Sep	09:05:14	0	111	26-Sep	09:52:14	0
65	26-Sep	09:06:14	0	112	26-Sep	09:53:14	0
66	26-Sep	09:07:14	0	113	26-Sep	09:54:14	0
67	26-Sep	09:08:14	0	114	26-Sep	09:55:14	0.001
68	26-Sep	09:09:14	0	115	26-Sep	09:56:14	0.002
69	26-Sep	09:10:14	0.043	116	26-Sep	09:57:14	0
70	26-Sep	09:11:14	0.02	117	26-Sep	09:58:14	0.001
71	26-Sep	09:12:14	0.011	118	26-Sep	09:59:14	0.012
72	26-Sep	09:13:14	0.001	119	26-Sep	10:00:14	0.028
73	26-Sep	09:14:14	0.074	120	26-Sep	10:01:14	0.129
74	26-Sep	09:15:14	0.018	121	26-Sep	10:02:14	0.09
75	26-Sep	09:16:14	0.004	122	26-Sep	10:03:14	0
76	26-Sep	09:17:14	0.003	123	26-Sep	10:04:14	0.003
77	26-Sep	09:18:14	0.01	124	26-Sep	10:05:14	0.006
78	26-Sep	09:19:14	0.012	125	26-Sep	10:06:14	0.002
79	26-Sep	09:20:14	0.006	126	26-Sep	10:07:14	0.001
80	26-Sep	09:21:14	0.003	127	26-Sep	10:08:14	0
81	26-Sep	09:22:14	0.015	128	26-Sep	10:09:14	0
82	26-Sep	09:23:14	0.003	129	26-Sep	10:10:14	0.062
83	26-Sep	09:24:14	0.004	130	26-Sep	10:11:14	0.202
84	26-Sep	09:25:14	0.007	131	26-Sep	10:12:14	0.237
85	26-Sep	09:26:14	0.005	132	26-Sep	10:13:14	0.693
86	26-Sep	09:27:14	0.005	133	26-Sep	10:14:14	0.011
87	26-Sep	09:28:14	0.077	134	26-Sep	10:15:14	0.011
88	26-Sep	09:29:14	0.091	135	26-Sep	10:16:14	0.01
89	26-Sep	09:30:14	0	136	26-Sep	10:17:14	0.009
90	26-Sep	09:31:14	0	137	26-Sep	10:18:14	0.011
91	26-Sep	09:32:14	0.168	138	26-Sep	10:19:14	0.01
92	26-Sep	09:33:14	0	139	26-Sep	10:20:14	0.119
93	26-Sep	09:34:14	0	140	26-Sep	10:21:14	0.039
94	26-Sep	09:35:14	0.02	141	26-Sep	10:22:14	0.028
95	26-Sep	09:36:14	0.008	142	26-Sep	10:23:14	0.676
96	26-Sep	09:37:14	0	143	26-Sep	10:24:14	0.188
97	26-Sep	09:38:14	0.003	144	26-Sep	10:25:14	0.018
98	26-Sep	09:39:14	0.008	145	26-Sep	10:26:14	0.21
99	26-Sep	09:40:14	0.042	146	26-Sep	10:27:14	0.047
100	26-Sep	09:41:14	0.003	147	26-Sep	10:28:14	0.009
101	26-Sep	09:42:14	0.004	148	26-Sep	10:29:14	0.009
102	26-Sep	09:43:14	0.037	149	26-Sep	10:30:14	0.009
103	26-Sep	09:44:14	0.001	150	26-Sep	10:31:14	0.017
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
151	26-Sep	10:32:14	0.066	198	26-Sep	11:19:14	0.004

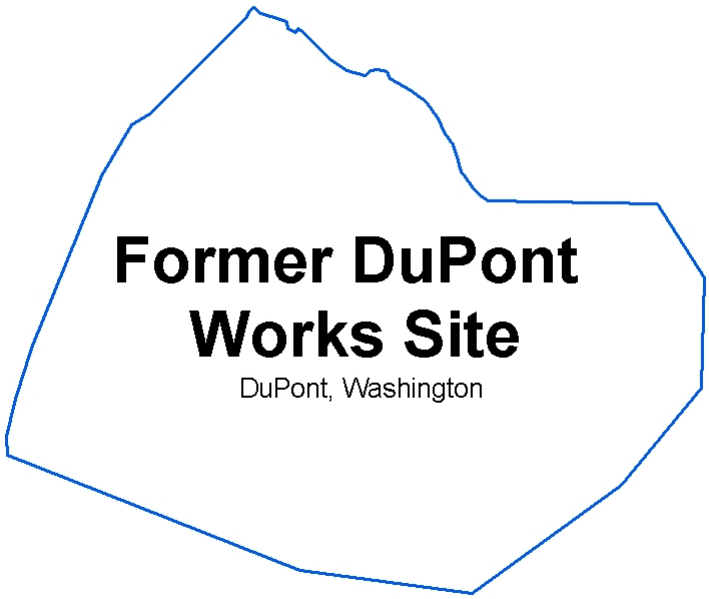
152	26-Sep	10:33:14	0.012	199	26-Sep	11:20:14	0.053
153	26-Sep	10:34:14	0.009	200	26-Sep	11:21:14	0.008
154	26-Sep	10:35:14	0.011	201	26-Sep	11:22:14	0.009
155	26-Sep	10:36:14	0.011	202	26-Sep	11:23:14	0.019
156	26-Sep	10:37:14	0.013	203	26-Sep	11:24:14	0.016
157	26-Sep	10:38:14	0.014	204	26-Sep	11:25:14	0.014
158	26-Sep	10:39:14	0.01	205	26-Sep	11:26:14	0.025
159	26-Sep	10:40:14	0.011	206	26-Sep	11:27:14	0.008
160	26-Sep	10:41:14	0.008	207	26-Sep	11:28:14	0.056
161	26-Sep	10:42:14	0.011	208	26-Sep	11:29:14	0.046
162	26-Sep	10:43:14	0.01	209	26-Sep	11:30:14	0.009
163	26-Sep	10:44:14	0.008	210	26-Sep	11:31:14	0.005
164	26-Sep	10:45:14	0.012	211	26-Sep	11:32:14	0.006
165	26-Sep	10:46:14	0.011	212	26-Sep	11:33:14	0.005
166	26-Sep	10:47:14	0.01	213	26-Sep	11:34:14	0.006
167	26-Sep	10:48:14	0.006	214	26-Sep	11:35:14	0.006
168	26-Sep	10:49:14	0.007	215	26-Sep	11:36:14	0.008
169	26-Sep	10:50:14	0.008	216	26-Sep	11:37:14	0.014
170	26-Sep	10:51:14	0.008	217	26-Sep	11:38:14	0.013
171	26-Sep	10:52:14	0.006	218	26-Sep	11:39:14	0.006
172	26-Sep	10:53:14	0.007	219	26-Sep	11:40:14	0.094
173	26-Sep	10:54:14	0.007	220	26-Sep	11:41:14	0.026
174	26-Sep	10:55:14	0.007	221	26-Sep	11:42:14	0.009
175	26-Sep	10:56:14	0.012	222	26-Sep	11:43:14	0.04
176	26-Sep	10:57:14	0.01	223	26-Sep	11:44:14	0.124
177	26-Sep	10:58:14	0.007	224	26-Sep	11:45:14	0.014
178	26-Sep	10:59:14	0.021	225	26-Sep	11:46:14	0.01
179	26-Sep	11:00:14	0.007	226	26-Sep	11:47:14	0.003
180	26-Sep	11:01:14	0.006	227	26-Sep	11:48:14	0.007
181	26-Sep	11:02:14	0.005	228	26-Sep	11:49:14	0.024
182	26-Sep	11:03:14	0.009	229	26-Sep	11:50:14	0.463
183	26-Sep	11:04:14	0.007	230	26-Sep	11:51:14	0.255
184	26-Sep	11:05:14	0.005	231	26-Sep	11:52:14	0.029
185	26-Sep	11:06:14	0.005	232	26-Sep	11:53:14	0.037
186	26-Sep	11:07:14	0.004	233	26-Sep	11:54:14	0.005
187	26-Sep	11:08:14	0.004	234	26-Sep	11:55:14	0.009
188	26-Sep	11:09:14	0.006	235	26-Sep	11:56:14	0.007
189	26-Sep	11:10:14	0.005	236	26-Sep	11:57:14	0.005
190	26-Sep	11:11:14	0.009	237	26-Sep	11:58:14	0.004
191	26-Sep	11:12:14	0.007	238	26-Sep	11:59:14	0.005
192	26-Sep	11:13:14	0.008	239	26-Sep	12:00:14	0.004
193	26-Sep	11:14:14	0.019	240	26-Sep	12:01:14	0.008
194	26-Sep	11:15:14	0.046	241	26-Sep	12:02:14	0.005
195	26-Sep	11:16:14	0.033	242	26-Sep	12:03:14	0.003
196	26-Sep	11:17:14	0.031	243	26-Sep	12:04:14	0.005
197	26-Sep	11:18:14	0.01	244	26-Sep	12:05:14	0.002
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
245	26-Sep	12:06:14	0.008	292	26-Sep	12:53:14	0.003

246	26-Sep	12:07:14	0.006	293	26-Sep	12:54:14	0.002
247	26-Sep	12:08:14	0.006	294	26-Sep	12:55:14	0.003
248	26-Sep	12:09:14	0.005	295	26-Sep	12:56:14	0.002
249	26-Sep	12:10:14	0.003	296	26-Sep	12:57:14	0.003
250	26-Sep	12:11:14	0.003	297	26-Sep	12:58:14	0.002
251	26-Sep	12:12:14	0.005	298	26-Sep	12:59:14	0.002
252	26-Sep	12:13:14	0.005	299	26-Sep	13:00:14	0.003
253	26-Sep	12:14:14	0.004	300	26-Sep	13:01:14	0.005
254	26-Sep	12:15:14	0.005	301	26-Sep	13:02:14	0.003
255	26-Sep	12:16:14	0.006	302	26-Sep	13:03:14	0.003
256	26-Sep	12:17:14	0.005	303	26-Sep	13:04:14	0.001
257	26-Sep	12:18:14	0.005	304	26-Sep	13:05:14	0.002
258	26-Sep	12:19:14	0.005	305	26-Sep	13:06:14	0.001
259	26-Sep	12:20:14	0.004	306	26-Sep	13:07:14	0.002
260	26-Sep	12:21:14	0.003	307	26-Sep	13:08:14	0.002
261	26-Sep	12:22:14	0.006	308	26-Sep	13:09:14	0.003
262	26-Sep	12:23:14	0.006	309	26-Sep	13:10:14	0.003
263	26-Sep	12:24:14	0.005	310	26-Sep	13:11:14	0.004
264	26-Sep	12:25:14	0.007	311	26-Sep	13:12:14	0.002
265	26-Sep	12:26:14	0.003	312	26-Sep	13:13:14	0.002
266	26-Sep	12:27:14	0.005	313	26-Sep	13:14:14	0.002
267	26-Sep	12:28:14	0.002	314	26-Sep	13:15:14	0.001
268	26-Sep	12:29:14	0.004	315	26-Sep	13:16:14	0.002
269	26-Sep	12:30:14	0.003	316	26-Sep	13:17:14	0.003
270	26-Sep	12:31:14	0.003	317	26-Sep	13:18:14	0.002
271	26-Sep	12:32:14	0.003	318	26-Sep	13:19:14	0.001
272	26-Sep	12:33:14	0.003	319	26-Sep	13:20:14	0.002
273	26-Sep	12:34:14	0.004	320	26-Sep	13:21:14	0.002
274	26-Sep	12:35:14	0.004	321	26-Sep	13:22:14	0.004
275	26-Sep	12:36:14	0.003	322	26-Sep	13:23:14	0.002
276	26-Sep	12:37:14	0.002	323	26-Sep	13:24:14	0.002
277	26-Sep	12:38:14	0.002	324	26-Sep	13:25:14	0.002
278	26-Sep	12:39:14	0.003	325	26-Sep	13:26:14	0.004
279	26-Sep	12:40:14	0.003	326	26-Sep	13:27:14	0.054
280	26-Sep	12:41:14	0.007	327	26-Sep	13:28:14	0.083
281	26-Sep	12:42:14	0.003	328	26-Sep	13:29:14	0.015
282	26-Sep	12:43:14	0.003	329	26-Sep	13:30:14	0.015
283	26-Sep	12:44:14	0.003	330	26-Sep	13:31:14	0.009
284	26-Sep	12:45:14	0.004	331	26-Sep	13:32:14	0.029
285	26-Sep	12:46:14	0.003	332	26-Sep	13:33:14	0.012
286	26-Sep	12:47:14	0.003	333	26-Sep	13:34:14	0.048
287	26-Sep	12:48:14	0.009	334	26-Sep	13:35:14	0.031
288	26-Sep	12:49:14	0.002	335	26-Sep	13:36:14	0.018
289	26-Sep	12:50:14	0.002	336	26-Sep	13:37:14	0.013
290	26-Sep	12:51:14	0.002	337	26-Sep	13:38:14	0.054
291	26-Sep	12:52:14	0.004	338	26-Sep	13:39:14	0.076
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
339	26-Sep	13:40:14	0.026	386	26-Sep	14:27:14	0.525

340	26-Sep	13:41:14	0.011	387	26-Sep	14:28:14	0.471
341	26-Sep	13:42:14	0.008	388	26-Sep	14:29:14	0.191
342	26-Sep	13:43:14	0.157	389	26-Sep	14:30:14	0.302
343	26-Sep	13:44:14	0.038	390	26-Sep	14:31:14	0.353
344	26-Sep	13:45:14	0.039	391	26-Sep	14:32:14	0.083
345	26-Sep	13:46:14	0.544	392	26-Sep	14:33:14	0.073
346	26-Sep	13:47:14	0.15	393	26-Sep	14:34:14	0.052
347	26-Sep	13:48:14	0.174	394	26-Sep	14:35:14	0
348	26-Sep	13:49:14	0.268	395	26-Sep	14:36:14	0.014
349	26-Sep	13:50:14	0.056	396	26-Sep	14:37:14	0.007
350	26-Sep	13:51:14	0.057	397	26-Sep	14:38:14	0.009
351	26-Sep	13:52:14	0.263	398	26-Sep	14:39:14	0.008
352	26-Sep	13:53:14	0.044	399	26-Sep	14:40:14	0.013
353	26-Sep	13:54:14	0.017	400	26-Sep	14:41:14	0.004
354	26-Sep	13:55:14	0.041	401	26-Sep	14:42:14	0.004
355	26-Sep	13:56:14	0.186	402	26-Sep	14:43:14	0
356	26-Sep	13:57:14	0.331	403	26-Sep	14:44:14	0.002
357	26-Sep	13:58:14	0.065	404	26-Sep	14:45:14	0.001
358	26-Sep	13:59:14	0.736	405	26-Sep	14:46:14	0.003
359	26-Sep	14:00:14	0.036	406	26-Sep	14:47:14	0.002
360	26-Sep	14:01:14	0.004	407	26-Sep	14:48:14	0
361	26-Sep	14:02:14	0.002	408	26-Sep	14:49:14	0.001
362	26-Sep	14:03:14	0.002	409	26-Sep	14:50:14	0
363	26-Sep	14:04:14	0.003	410	26-Sep	14:51:14	0
364	26-Sep	14:05:14	0.03	411	26-Sep	14:52:14	0
365	26-Sep	14:06:14	0.003	412	26-Sep	14:53:14	0
366	26-Sep	14:07:14	0.002	413	26-Sep	14:54:14	0
367	26-Sep	14:08:14	0.002	414	26-Sep	14:55:14	0
368	26-Sep	14:09:14	0.002	415	26-Sep	14:56:14	0
369	26-Sep	14:10:14	0.005	416	26-Sep	14:57:14	0
370	26-Sep	14:11:14	0.001	417	26-Sep	14:58:14	0
371	26-Sep	14:12:14	0.002	418	26-Sep	14:59:14	0
372	26-Sep	14:13:14	0.003	419	26-Sep	15:00:14	0
373	26-Sep	14:14:14	0.001	420	26-Sep	15:01:14	0
374	26-Sep	14:15:14	0.002	421	26-Sep	15:02:14	0
375	26-Sep	14:16:14	0.003	422	26-Sep	15:03:14	0
376	26-Sep	14:17:14	0.028	423	26-Sep	15:04:14	0
377	26-Sep	14:18:14	0.003	424	26-Sep	15:05:14	0
378	26-Sep	14:19:14	0.004	425	26-Sep	15:06:14	0
379	26-Sep	14:20:14	0.001	426	26-Sep	15:07:14	0
380	26-Sep	14:21:14	0.001	427	26-Sep	15:08:14	0
381	26-Sep	14:22:14	0.003	428	26-Sep	15:09:14	0.001
382	26-Sep	14:23:14	0.003	429	26-Sep	15:10:14	1.754
383	26-Sep	14:24:14	0.17	430	26-Sep	15:11:14	0.112
384	26-Sep	14:25:14	0.07	431	26-Sep	15:12:14	0.039
385	26-Sep	14:26:14	0.034	432	26-Sep	15:13:14	0.059
Point	**Date**	**Time**	**Avg.(mg/m³)**	**Point**	**Date**	**Time**	**Avg.(mg/m³)**
433	26-Sep	15:14:14	0.158				

434	26-Sep 15:15:14	0
435	26-Sep 15:16:14	0
436	26-Sep 15:17:14	0.01
437	26-Sep 15:18:14	0
438	26-Sep 15:19:14	0
439	26-Sep 15:20:14	0
440	26-Sep 15:21:14	0.001
441	26-Sep 15:22:14	0
442	26-Sep 15:23:14	0
443	26-Sep 15:24:14	0
444	26-Sep 15:25:14	0
445	26-Sep 15:26:14	0
446	26-Sep 15:27:14	0
447	26-Sep 15:28:14	0
448	26-Sep 15:29:14	0
449	26-Sep 15:30:14	0
450	26-Sep 15:31:14	0
451	26-Sep 15:32:14	0
452	26-Sep 15:33:14	0
453	26-Sep 15:34:14	0

Personal Air Monitoring Report – 2003



Prepared for:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared by:

PIONEER Technologies Corporation & West Shore Corporation, NW

January 2004

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION 1-1

SECTION 2 – SUMMARY OF ACTIVITIES 2-1

2.1 Action Level Calculations 2-1
2.2 Personal Air Monitoring 2-1
2.3 Real Time Air Monitoring 2-1

SECTION 3 – RESULTS 3-1

3.1 Personal Air Monitoring Results 3-1
3.2 Real -Time Air Monitoring Results 3-1

APPENDIX A – REAL-TIME AIR MONITORING RESULTS – 2002 ..... A-1

TABLES

Table 2-1 – Derivation of Site-specific Action Levels for 8-hour Time Weighted Exposures 2-2
Table 2-2 – Personal Air Sample Results 2-3

SECTION 1 – INTRODUCTION

Workplace air monitoring is an essential part of the Health and Safety Program at the former DuPont Works Site in DuPont, Washington. Such a program was implemented during 2003 for the following programs:

- Corrective action taken to excavate arsenic and lead contaminated soil on the entire site.
- Corrective Action taken to excavate arsenic and lead contaminated soils around foundations and previously removed narrow gauge railroad.
- Excavation of miscellaneous small units.
- Loading miscellaneous small unit stockpiles onto trucks to be hauled off site.
- Soil sampling

The monitoring program was established to assess airborne arsenic and lead concentrations as dust. During this program concentrations of lead and arsenic in soil may have been present at levels up to 10,000 mg/kg and 1,000 mg/kg, respectively.

To ensure that workers were not exposed to elevated levels of these contaminants, an air monitoring plan was prepared and implemented during excavation activities. This plan included provisions for both personal air monitoring and real-time air monitoring. Personal air samples were taken in the breathing zone of workers assumed to have the highest potential exposure, and real-time air samples were taken in areas adjacent to workers, where airborne particulate levels were assumed to be highest. The workers were informed of the results of the air monitoring at daily health and safety meetings.

SECTION 2 – SUMMARY OF ACTIVITIES

The results of the personal air monitoring and real-time air monitoring conducted during the interim source removal actions, clearing, and grubbing are presented below.

2.1 Action Level Calculations

Conservative air monitoring action levels were developed for lead and arsenic. It was assumed that concentration of lead in soil was 10,000 mg/kg and the concentration of arsenic in soil was 1,000 mg/kg for the purpose of calculating an action level. These concentrations are at least two times the expected highest concentration in the soil to be excavated. These concentrations were combined with the 8-hour time-weighted-average (TWA) permissible exposure levels (PEL) to determine site-specific airborne dust action levels. PELs are the highest average concentrations a worker may be exposed to for a 40-hour work week without experiencing any adverse health effects. Using the calculations presented in Table 2-1 the mini-ram concentration that would result in exposure to lead at the PEL was 5.0 mg/m^3 (assuming a soil concentration of 10,000 mg/kg lead). This level was also protective for exposure to arsenic. To provide an additional margin of safety continued measurements above 2.5 mg/m^3 (one half of the PEL) were set as the action level for instituting additional soil wetting to suppress dust, or if this was ineffective, to upgrade Personal Protective Equipment (PPE) to Level C.

2.2 Personal Air Monitoring

Personal air samples were collected throughout the duration of excavation activities. During excavation activities, individuals expected to receive the highest exposure were monitored during an entire work shift. The samples were analyzed for arsenic and lead by STL Labs, Fife, WA using the Environmental Protection Agency (EPA) Method SW 6020. The results of this analysis are presented in Table 2-2.

2.3 Real Time Air Monitoring

Real time air monitoring was conducted using a mini-ram (personal DataRAM™, model pDR-1000AN, Monitoring Instruments for the Environment, Inc.) in order to ensure that the PELs for arsenic and lead would not be exceeded. The mini-ram measures respirable particulate concentrations and was used throughout the duration of field activities. The frequency of sampling was determined based on the readings, changes in work patterns, or changes in soil conditions that could potentially result in increased dust emissions. The action level for the miniram was set at 2.5 mg/m^3 (one half of the PEL). Air measurements were recorded as one-minute averages, daily averages (corresponding to the logging period of the instrument), and short-term exposure levels (STELs), which are 15-minute average concentrations. Daily average concentrations were the values compared to the 2.5 mg/m^3 action level.

Table 2-1 – Derivation of Site-specific Action Levels for 8-hour Time Weighted Exposures

Action Level Concentration in Air (mg/m^3) = $\frac{\text{Occupational exposure limit (mg/m3) x 1,000,000 (mg/kg)}}{\text{Soil concentration (mg/kg) x safety factor}}$		
Parameter	**Value**	**Units**
Site-specific particulate Action Level for lead	2.5	mg/m^3
Occupational exposure Limit for lead (8-hour TWA)	0.05	mg/m^3
Current Maximum lead concentration in soil on site	10,000	mg/kg
Safety Factor	2	
Conversion Factor	1,000,000	mg/kg
Site-specific particulate Action Level for arsenic	250	mg/m^3
Occupational exposure Limit for arsenic (8-hour TWA)	0.5	mg/m^3
Current Maximum arsenic concentration in soil on site	1,000	mg/kg
Safety Factor	2	
Conversion Factor	1,000,000	mg/kg

Table 2-2 – Personal Air Sample Results

Date Sampled	Sample Number	Worker Activity	Arsenic Level[(1)] (*u*g/m^3)	Lead Level[(2)] (*u*g/m^3)
1-7-10-03	7/10/2003	Sampling	<0.063	0.128
2-7-10-03	7/10/2003	Ground	<0.0621	0.59
3-7-10-3	7/10/2003	Excavator	<0.0635	<0.0635
1-7-29-03	7/29/2003	Ground	<0.0619	0.424
2-7-29-03	7/29/2003	Ground	<0.0623	0.0783
3-7-29-03	7/29/2003	Sampling	<0.0623	0.287
1-9-10-03	9/10/2003	Off Road Truck	<0.266	<0.266
3-9-10-03	9/10/2003	Archaeologist	<0.285	<0.285
1-9-11-03	9/11/2003	Archaeologist	<0.34	<0.34
2-9-15-03	9/15/2003	Track Truck Open Cab	0.902	0.344
3-9-15-03	9/15/2003	Ground	<0.517	23.9
1-9-16-03	9/16/2003	Track Truck Open Cab	<0.523	<0.523
2-9-16-03	9/16/2003	Archaeologist	<0.521	<0.521
3-9-16-03	9/16/2003	Backhoe Open Cab	<0.469	0.792
1-9-17-03	9/17/2003	Track Truck Open Cab	0.677	<0.46
2-9-17-03	9/17/2003	Archaeologist	<0.479	<0.479
3-9-17-03	9/17/2003	Ground	<0.477	<0.477
1-9-18-03	9/18/2003	Dozer	<0.478	<0.478
2-9-18-03	9/18/2003	Track Truck Open Cab	3.93	1.21
3-9-18-03	9/18/2003	Archaeologist	<0.412	<0.412
1-9-2-03	9/2/2003	Track Truck Open Cab	10	2.98
2-9-2-03	9/2/2003	Dozer Open Cab	<0.611	<0.611
3-9-2-03	9/2/2003	Water Truck	<0.634	<0.634
1-9-24-03	9/24/2003	Track Truck Open Cab	1.85	1.04
2-9-24-03	9/24/2003	Water Truck Open Cab	<0.71	<0.71
3-9-24-03	9/24/2003	Archaeologist	<0.559	<0.559
1-9-25-03	9/25/2003	Dozer Open Cab	<0.487	<0.487
2-9-25-03	9/25/2003	Off Road Truck	<0.497	<0.497
3-9-25-03	9/25/2003	Off Road Truck	<0.456	<0.456
1-9-3-03	9/3/2003	Track Truck Open Cab	2.38	1.36
2-9-3-03	9/3/2003	Archaeologist	<0.535	<0.535
3-9-3-03	9/3/2003	Archaeologist	<0.526	<0.526
1-9-4-03	9/4/2003	Archaeologist	<0.637	<0.637
2-9-4-03	9/4/2003	Track Truck Open Cab	6.64	4.03
3-9-4-03	9/4/2003	Ground	<0.559	0.777
1-10-1-03	10/1/2003	Excavator Closed Cab	<0.461	<0.461
2-10-1-03	10/1/2003	Excavator Open Cab	<0.484	<0.484
3-10-1-03	10/1/2003	Ground	<0.482	4.77
1-10-15-3	10/15/2003	Track Truck Open Cab	<0.629	<0.629
2-10-15-3	10/15/2003	Ground	<0.765	<0.765
3-10-15-3	10/15/2003	Water Truck Open Cab	<0.686	<0.686

Table 2-2 – Personal Air Sample Results

Date Sampled	Sample Number	Worker Activity	Arsenic Level[1] (*u*g/m^3)	Lead Level[2] (*u*g/m^3)
1-10-29-3	10/29/2003	Excavator	<0.594	<0.594
2-10-29-3	10/29/2003	Dozer Open Cab	<0.532	<0.532
3-10-29-3	10/29/2003	Track Truck Open Cab	<0.629	<0.629
1-10-8-3	10/8/2003	Track Truck Open Cab	<0.68	<0.68
3-10-8-3	10/8/2003	Off Road Truck	<0.618	<0.618
1-11-6-3	11/6/2003	Off Road Truck	<0.515	<0.257
2-11-6-3	11/6/2003	Off Road Truck	<0.534	<0.267
3-11-6-3	11/6/2003	Dozer	<0.5	<0.25
1-7-10-03	7/10/2003	Sampling	<0.063	0.128
2-7-10-03	7/10/2003	Ground	<0.0621	0.59
3-7-10-3	7/10/2003	Excavator	<0.0635	<0.0635
1-7-29-03	7/29/2003	Ground	<0.0619	0.424
2-7-29-03	7/29/2003	Ground	<0.0623	0.0783
3-7-29-03	7/29/2003	Sampling	<0.0623	0.287
1-9-10-03	9/10/2003	Off Road Truck	<0.266	<0.266
3-9-10-03	9/10/2003	Archaeologist	<0.285	<0.285
1-9-11-03	9/11/2003	Archaeologist	<0.34	<0.34
2-9-15-03	9/15/2003	Track Truck Open Cab	0.902	0.344
3-9-15-03	9/15/2003	Ground	<0.517	23.9
1-9-16-03	9/16/2003	Track Truck Open Cab	<0.523	<0.523
2-9-16-03	9/16/2003	Archaeologist	<0.521	<0.521

NOTES:
[1]The 8-hour time weighted average PEL for arsenic is 500 ug/m^3.
[2]The 8-hour time weighted average PEL for lead is 50 ug/m^3.
[3]Values with a "<" sign indicate that the analyte was undetected in that sample. The value after the "<" sign is the sample detection limit.

SECTION 3 – RESULTS

3.1 Personal Air Monitoring Results

As shown in Table 2, all arsenic and lead levels were well below the Washington Industrial Safety and Health Administration (WISHA) PEL of 500 ug/m^3 for arsenic and 50 ug/m^3 for lead. The highest detected arsenic level was 10.0 ug/m^3, measured on an open-cab track truck operator, and the highest detected lead concentration was 23.9 ug/m^3, measured on a ground worker.

3.2 Real -Time Air Monitoring Results

During periods of heavy equipment operation and other times of maximum soil disturbance, continuous particulate readings were taken next to workers assumed to have the potential for maximum exposure. Workers chosen for monitoring included Heavy Equipment Operators, Archeologists and Ground People working adjacent to heavy equipment. A summary of the real-time air monitoring results is presented in Table 3-1. As shown in this table, there were no instances where the average air concentrations were above the 2.5 mg/m^3 action level. In the dry weather additional soil wetting was implemented to reduce airborne dust levels All average air concentrations were below the PEL of 5.0 (the maximum average concentration was 1.39 mg/m^3). All of the real-time sampling results are presented in Appendix A.

Table 3-1 – Real-Time Air Monitoring Results

Date	Average Concentration (mg/m^3)[1]	Activity of Person Sampled
6/09/2003	0.02	Excavator Operator
6/09/2003	0.21	Ground Worker
6/09/2003	0.14	Archaeologist
6/10/2003	0.01	Excavator Operator
6/10/2003	0.47	Ground Worker
6/10/2003	0.36	Archaeologist
6/18/2003	0.44	Archaeologist
6/18/2003	0.07	Excavator Operator
6/18/2003	0.12	Surveyor
6/19/2003	0.22	Ground Worker
6/19/2003	0.04	Sampling
7/02/2003	0.22	Ground Worker
7/02/2003	0.05	Excavator Operator
7/02/2003	0.21	Sampling and Decon
7/07/2003	0.42	Ground Worker
7/07/2003	0.05	Excavator Operator
7/07/2003	0.17	Off Road Truck Driver
7/08/2003	0.02	Surveyor
7/08/2003	0.19	Sampling
7/08/2003	0.16	Archaeologist
7/14/2003	0.16	Ground Worker
7/14/2003	0.13	Ground Worker
7/15/2003	0.07	Open Cab Water Truck Driver
7/15/2003	0.21	Ground Worker
7/22/2003	0.18	Ground Worker
7/22/2003	0.90	Ground Worker
7/28/2003	0.35	Sampler
7/28/2003	0.40	Ground Worker
7/31/2003	0.56	Ground Worker
7/31/2003	0.39	Ground Worker
8/06/2003	0.21	Ground Worker
8/06/2003	0.26	Ground Worker
8/07/2003	0.03	Excavator Operator
8/07/2003	0.02	Excavator Operator
8/18/2003	0.03	Forman
8/18/2003	0.32	Ground Worker
8/19/2003	0.21	Excavator Operator
8/19/2003	0.06	Ground Worker
8/20/2003	0.15	Open Cab Water Truck Driver
8/20/2003	0.44	Ground Worker and Dozer
8/28/2003	0.10	Dozer
9/02/2003	1.19	Track Truck Open Cab
9/03/2003	0.02	Track Truck Open Cab
9/04/2003	0.04	Track Truck Open Cab
9/08/2003	0.47	Track Truck Open Cab
9/08/2003	0.23	Track Truck Open Cab
9/09/2003	0.13	Track Truck Open Cab

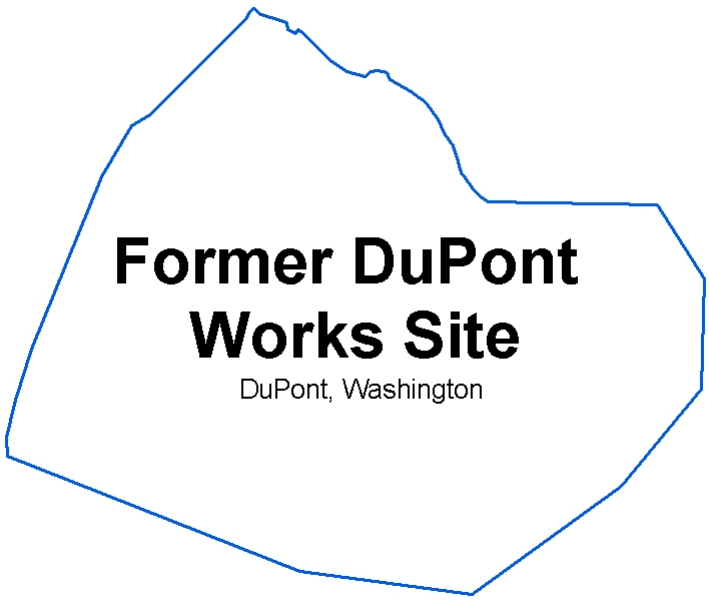
Date	Average Concentration (mg/m^3)[1]	Activity of Person Sampled
9/09/2003	0.06	Track Truck Open Cab
9/10/2003	0.04	Open Cab Dozer Operator
9/10/2003	0.15	Archaeologist
9/11/2003	0.04	Open Cab Track Truck Operator
9/15/2003	0.08	Not used out doors
9/15/2003	0.06	Ground Worker
9/16/2003	0.16	Open Cab Track Truck Operator
9/16/2003	0.12	Sampling
9/17/2003	0.33	Off Road Truck Driver
9/18/2003	0.14	Water Truck Open Cab
9/18/2003	0.36	Open Cab Dozer Operator
9/22/2003	0.40	Open Cab Track Truck Operator
9/22/2003	0.04	Dozer Operator
9/23/2003	0.35	Open Cab Track Truck Operator
9/23/2003	0.07	Water Truck Open Cab
9/24/2003	0.15	Open Cab Track Truck Operator
9/24/2003	1.39	Ground Worker
9/25/2003	0.08	Archaeologist
9/29/2003	0.20	Excavator Operator
9/30/2003	0.03	Ground Worker
10/01/2003	0.05	Archaeologist
10/01/2003	0.23	Excavator Operator
10/02/2003	0.29	Open Cab Excavator Operator
10/02/2003	0.02	Archaeologist
10/06/2003	0.06	Open Cab Track Truck Operator
10/06/2003	0.03	Ground Worker
10/07/2003	0.03	Archaeologist
10/08/2003	0.12	Track Dump Truck Operator
10/08/2003	0.04	Archaeologist
10/13/2003	0.18	Dozer Operator
10/13/2003	0.03	Ground Worker
10/14/2003	0.06	Open Cab Track Truck Operator
10/14/2003	0.02	Ground Worker
10/15/2003	0.05	Archaeologist
10/15/2003	0.05	Excavator Operator
10/20/2003	0.00	Loader Operator
10/20/2003	0.05	Off Road Truck Driver
10/27/2003	0.03	Loader Operator
10/27/2003	0.11	Open Cab Track Truck Operator
10/28/2003	0.03	Ground Worker
10/28/2003	0.02	Open Cab Excavator Operator
10/29/2003	0.12	Excavator Operator with Open Window
10/29/2003	0.07	Archaeologist
10/30/2003	0.20	Open Cab Dozer Operator
10/30/2003	0.03	Excavator Operator
11/03/2003	0.03	Ground Worker
11/03/2003	0.02	Archaeologist

[1]Concentration is the average respirable particulate concentration measured during the logging period of the miniram.

APPENDIX A – REAL-TIME AIR MONITORING RESULTS – 2003

A copy of all real time air monitoring data is presented in this appendix. These data were logged on a miniram portable respirable dust monitors. The data is presented in chronological order, as identified in Table 3-1. The overall average concentration presented in this appendix is different than that identified in Table 3-1. The miniram's internal average concentration presented in this appendix is inconsistent with the hand-calculated average of each day's one minute average. Table 3-1 presents the hand-calculated average. The appendix displays both the internally calculated average along with each minute average. Note the site-specific 8-hour TWA is 2.5 mg/m^3 and zero values are instances where the measured concentration was less than 0.001 mg/m^3.

Air Monitoring Report – PM_{10} 2002



Prepared for:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared by:

PIONEER Technologies Corporation & West Shore Corporation, NW

March 2003

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION 1-1

1.1 Introduction 1-1
1.2 Objectives 1-1

SECTION 2 – SUMMARY OF ACTIVITIES 2-1

2.1 Sampling Approach 2-1
2.1.1 Sampling Procedure 2-1
2.1.2 Sample Locations 2-1
2.1.3 Analytical Methods 2-1
2.2 Identification of Health-Based Standards 2-2
2.3 Preparation of Wind Rose Diagrams 2-2
2.3.1 Meteorological Data 2-2
2.3.2 Wind Rose Diagrams 2-2

SECTION 3 – RESULTS 3-1

3.1 PM_{10}, Arsenic, and Lead Sampling Results 3-1
3.2 Evaluation of Wind Speed and Wind Direction at the Site 3-1

SECTION 4 – CONCLUSIONS 4-1

REFERENCES 5-1

APPENDIX A – INSTRUMENT CALIBRATION AND SAMPLING PROCEDURES 5-1

APPENDIX B – ANALYTICAL METHODS 6-1

TABLES

Table 2-1 – Derivation of Health-Based Standard for Arsenic 2-4
Table 2-2 – Health-Based Concentrations 2-5
Table 3-1 – Particulate Sample Results 3-2

FIGURES

Figure 1-1 – Site Vicinity Map 1-2
Figure 2-1 – PM_{10} Air Monitor 2-6
Figure 2-2 – PM_{10} Monitor Locations 2-7
Figure 3-1 – Summary of PM_{10} Arsenic and Lead Data 3-4
Figure 3-2 – Average Wind Speed and Direction from January 1992 through August 2002 3-5
Figure 3-3 – Average Wind Speed and Direction during the Summer Months (June-August, 1992 - 2002) 3-6
Figure 3-4 – Average Wind Speed and Direction during the Sampling Month s (June-July 2002) 3-7

SECTION 1 – INTRODUCTION

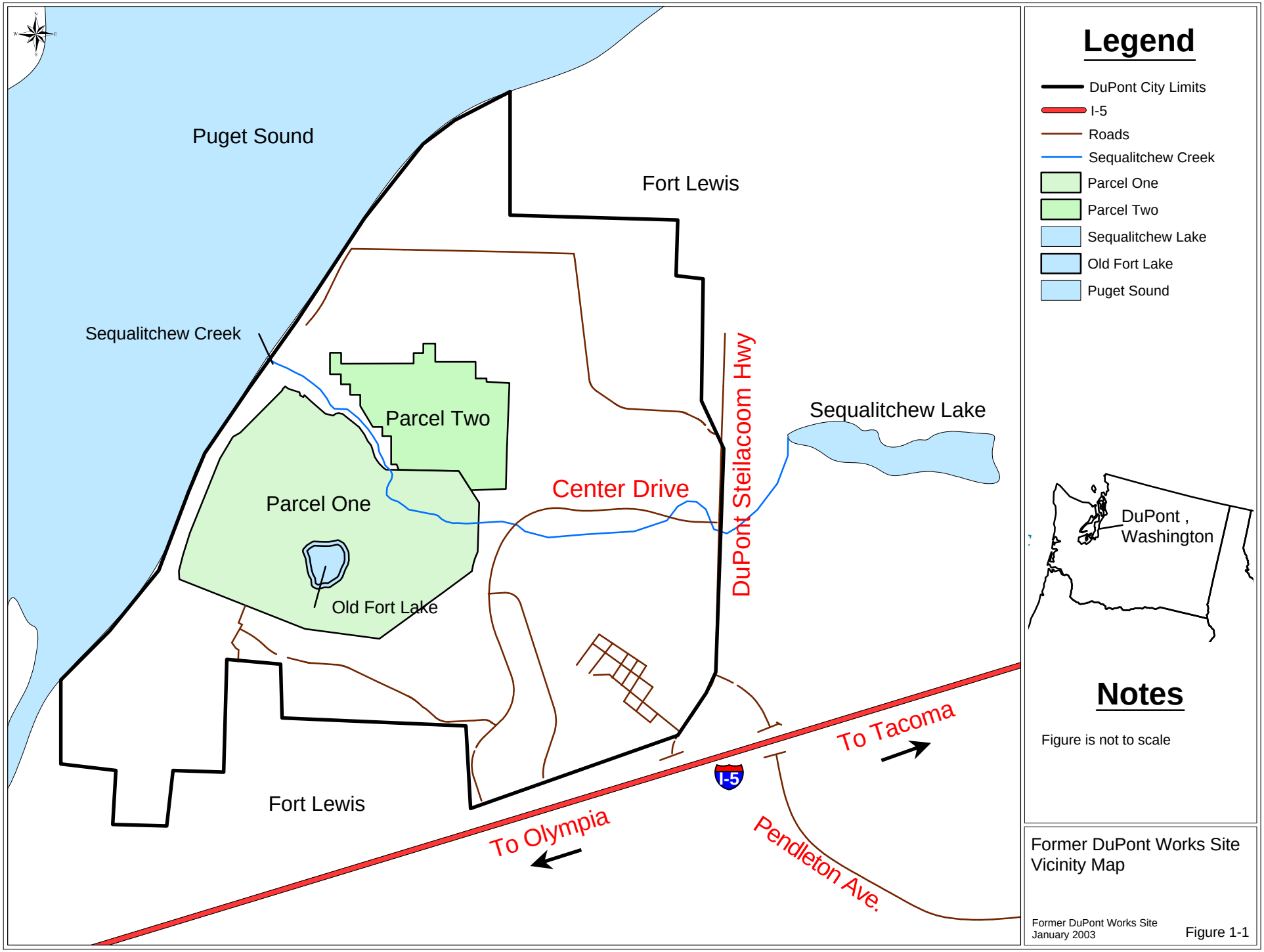
1.1 Introduction

This report presents the results of respirable airborne particulate (i.e., particulate matter less than 10 microns in size or PM_{10}) sampling that was conducted during the perimeter soil interim corrective action (ICA) at the former DuPont Works Site in DuPont, Washington between June 19 and July 12, 2002 (See Figure 1). This work was undertaken after Ecology approved the work plan (PIONEER and WSNW, 2002). The perimeter soil ICA involved excavation of 1 foot of contaminated soil along a 250-foot wide stretch of land adjacent to the South boundary of the Site. The PM_{10} sampling presented in this report was performed in addition to the work place air monitoring done to document worker protection. The purpose of the PM_{10} sampling was to document the effectiveness of engineering controls in limiting off-Site migration of particulate during on-Site excavation and remediation work.

1.2 Objectives

The objectives of the PM_{10} monitoring program were the following:

- Quantify levels of respirable particulate matter (PM_{10}) on-Site, along the property fence line, to serve as a worst-case surrogate for particulate levels that may migrate off-Site;
- Quantify the amount of arsenic and lead present in the PM_{10} samples;
- Compare sample results to health-based standards;
- Evaluate wind speed and wind directions at the Site during the sampling period; and
- Evaluate the effectiveness of engineering controls used at the Site to suppress dust.



Former DuPont Works Site
Vicinity Map

Former DuPont Works Site
January 2003

Figure 1-1

SECTION 2 – SUMMARY OF ACTIVITIES

2.1 Sampling Approach

The sampling approach, including sampling procedure, sample locations, and analytical methods are described below.

2.1.1 Sampling Procedure

Sampling for PM_{10} was conducted using Hi-Volume particulate samplers (GMW Model IP 10-8000 PM-10) obtained from Clean Air Engineering (See Figure 2-1). Prior to use in the field, these samplers were assembled, checked for leaks, and calibrated to identify the appropriate flow rate set point for each sampler. Information regarding the calibration of each individual sampler is contained in Appendix A.

Following calibration, the monitors were attached to wooden platforms and transported to the monitoring locations. At the start of the work shift every morning, the PM_{10} samplers were inspected and set up for the day. At the same time the previous day's samples were removed from the samplers and sent to Severn Trent Laboraties, Inc. (STL) for analysis. A generator was used to power the samplers. The procedure followed to inspect the samplers and set up for daily sampling is contained in Appendix A.

2.1.2 Sample Locations

PM_{10} samplers were set up along the south fence on the property boundary, approximately 250 feet apart. The daily sampler locations are presented in Figure 2-2. Samplers were located directly adjacent to excavation activities to enable measurement of "worst case" particulate levels. Samplers were moved regularly to stay adjacent to the excavation activities as they progressed along the property boundary. Due to the close proximity of the samplers to excavation activities, it is likely that the measured concentrations were markedly elevated over what would reasonably be expected to migrate off-Site. However, this sampling approach was adopted as a screening approach to identify what a "worst case" exposure would be. Depending on the size of the area to be excavated, 3 to 4 PM_{10} samplers were set up each day during excavation activities. Samples were collected on a 24-hour basis.

2.1.3 Analytical Methods

The sample filters were dessicated and weighed by STL and then placed in the sampler at the beginning of the sampling period. Specifically, the filters were pre-conditioned at a controlled temperature and relative humidity and were weighed in the laboratory prior to sample collection in the field. The sample filters were removed daily and sent to STL for analysis of PM_{10}, arsenic, and lead. Samples were analyzed in accordance with applicable EPA methods contained in 40 CFR Chapter 1, Part 50. Following sampling, the filters were weighed again at the laboratory. Using temperature and barometric pressure conditions measured during the sampling period, the total volume of air sampled in standard volume conditions was calculated. Based on the determination of total air volume, and pre-and post filter weight, PM_{10} was calculated. After PM_{10} was calculated, arsenic and lead levels were determined using EPA Method 6010. The EPA analytical methods used for PM_{10} and metals analysis are described in Appendix B.

2.2 Identification of Health-Based Standards

To ensure that airborne particulates generated during excavation and remediation activities did not pose a threat to the general population who might work or live adjacent to the Site, measured concentrations of PM_{10} (particles with diameter of 10 micrometers or less, that are able to penetrate into lungs), arsenic, and lead were compared to health-based concentrations. The air concentrations chosen were developed for protection of the general public, including potentially sensitive individuals such as children and the elderly.

The preferred health-based concentrations were the National Ambient Air Quality Standards (NAAQS), developed by the Environmental Protection Agency. Because there was not a NAAQS available for arsenic, a risk-based air quality concentration was determined based on the methodology presented in the Washington State Model Toxics Control Act (MTCA). The MTCA default exposure parameter values were developed to protect a resident who might receive continuous exposure for 30 years, and was therefore not directly applicable to off-Site exposure that might result from the shorter duration Site remediation activities, estimated to be a maximum duration of 1 year. Therefore, Site-specific exposure parameters were used to derive the health-based air concentration for arsenic. The factors and equation used to derive the health-based concentration for arsenic are shown in Table 2-1. The health-based concentrations used to evaluate the site data are presented in Table 2-2.

2.3 Preparation of Wind Rose Diagrams

Wind rose diagrams were used in this study to determine what the predominant wind speed and direction was during the sampling period. This information was then compared with both the typical wind speed and direction pattern present during summer months, and with the typical wind speed and direction pattern present over an entire year. To assess typical wind speed and direction patterns in the area of the Site, data collected from the area over a 10-year period was used. The meteorological data and the program used to generate the wind rose diagrams are discussed below.

2.3.1 Meteorological Data

Data used to prepare the wind rose diagrams was obtained from the National Oceanic and Atmospheric Administration (NOAA) National Data Center, National Environmental Satellite, Data and Information Service. The data consists of surface meteorological data collected from monitoring station #742060, located at McChord Air Force Base, in Tacoma, Washington. The data used in preparation of the wind rose diagrams consisted of average wind speed and direction data, taken hourly every day between January 1, 1992 and August 31, 2002. The data were obtained in TD-3280 format, and then reformatted to extract the information regarding station number, year, date, time, wind speed, and wind direction which was used to prepare the wind rose diagrams.

2.3.2 Wind Rose Diagrams

Wind rose diagrams were generated using EPA's WRPLOT Utility Program. A wind rose diagram prepared with this program depicts the frequency of occurrence of winds in each of 16 direction sectors (north, north-northeast, northeast, etc.) and six wind speed classes (ranges of knot speeds of 1-3, 4-6, 7-10, 11-16, 17-21, and >21) for a given location and time period. Also included in the wind rose diagram is the percent frequency of calm winds (defined as a wind

speed below the threshold of the wind instrument used at the monitoring station). Extensive documentation of the WRPLOT Utility Program can be found on EPA's Website at http://www.epa.gov/scram001/tt24.htm#relatedprograms.

Table 2-1 – Derivation of Health-Based Standard for Arsenic

$$Air\ Cleanup\ Level\ (ug/m^3) = \frac{Risk\ x\ ABW\ x\ AT\ x\ UCF}{CPF\ x\ BR\ x\ ABS\ x\ ED\ x\ EF}$$

Where:

Risk = The target acceptable cancer risk (1×10^{-6})
ABW = Average body weight during the time of exposure (70 kg, for an adult)
AT = Averaging time for carcinogens (75 years)
UCF = Unit conversion factor (1,000 *u*g/mg)
CPF = Cancer potency factor for arsenic [15.05 $(mg/kg\text{-}day)^{-1}$]
BR = Breathing Rate (20 m^3/day)
ABS = Inhalation Absorption Fraction (1.0 – unitless)
ED = Exposure Duration (1 year- Site Specific)
EF = Exposure Frequency (1.0 – unitless)

Resulting Health-Based Standard for Arsenic: 0.017 ug/m^3

Note:
Equation was taken from the Model Toxics Control Act (MTCA), Chapter 173-340-750(3)(B).

Table 2-2 – Health-Based Concentrations

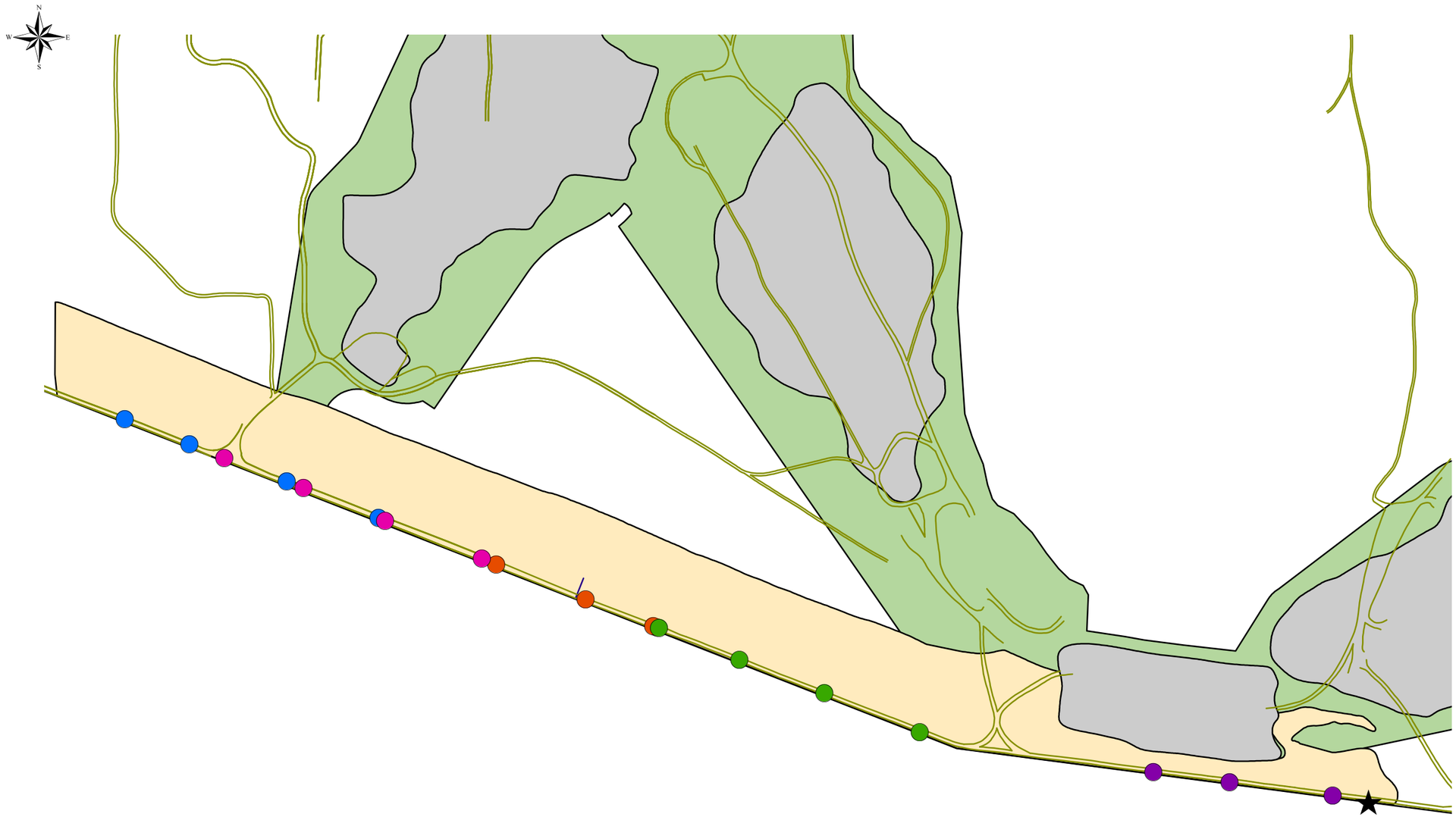
Contaminant	Health-Based Concentration (ug/m^3)	Source
Arsenic	0.017	Site-specific[1]
Lead	1.5	NAAQS[2]
PM_{10}	150	NAAQS[2]

Notes:

[1] Arsenic level was derived based on an assumed exposure duration of one year. All other exposure factors were based on MTCA default values (Chapter 173-340-750 (3)(B)).

[2] Value is from the National Ambient Air Quality Standards (NAAQS), and is both a primary and secondary standard established under the EPA's Clean Air Act, as amended in 1990. Primary Standards are established to protect public health, including the health of sensitive individuals, such as asthmatics, children, and the elderly. Secondary standards are established to protect the public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The value for lead is a quarterly average concentration; the value for PM_{10} is a 24-hour average concentration.

Figure 2-1 – PM_{10} Air Monitor

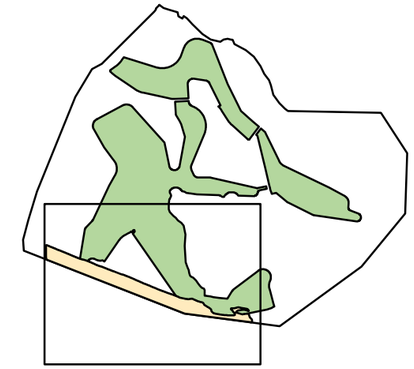


Legend

Starting Point Along Fence

PM10 Monitor Locations

- June 19 - June 24
- June 25 - June 26
- June 26 - July 1
- July 2 - July 10
- July 11
- Dirt Roads
- Midden 2-11-02
- Placement Areas 10-14-02
- Scrape Perimeter
- Golf Course Boundary
- Consent Decree Boundary



Notes

Starting oint along fence was identified for the purpose of locating where the monitors would be placed each day.

PM10 Monitor Locations

Former DuPont Works Site
March 2003

Figure 2-2

PIONEER TECHNOLOGIES CORPORATION

SECTION 3 – RESULTS

3.1 PM_{10}, Arsenic, and Lead Sampling Results

Particulate sampling results are shown in Table 3-1. As shown in this table, all PM_{10}, arsenic, and lead levels were below their associated health-based concentrations. Figure 3-1 presents a graphical summary of these data.

3.2 Evaluation of Wind Speed and Wind Direction at the Site

Wind speed and wind direction were evaluated by plotting meteorological data in wind rose diagrams, as described above. Wind rose diagrams were made to evaluate average wind speed and direction during the 2-month sampling period (June and July, 2002), during a typical three month summer season (i.e., June, July, and August), and over a typical year. Wind speed and direction were evaluated to determine if the sampling conducted during this perimeter soil ICA was successful in capturing a worst-case event, where wind direction and speed could contribute to maximum possible off-Site transport of particulate. For this evaluation, the following wind rose diagrams were prepared:

- A wind rose diagram presenting the average wind speed and direction for the period between January 1, 1992 and August 31, 2002. This 10-year period was used to define a "typical" annual pattern (Figure 3-2);

- A wind rose diagram presenting the average wind speed and direction for the summer months of June, July, and August for the years of 1992 through 2002. This 11-year period was used to define a "typical" summer pattern (Figure 3-3).

- A wind rose diagram presenting the average wind speed and direction during the June and July, 2002 sampling period (Figure 3-4).

Based on an evaluation of the wind rose diagrams, it can be seen that the wind speed and direction during the sampling period was a worst case scenario for off-Site particulate transport when compared to typical wind speed and direction patterns seen over a 12-month period, and over a 3-month summer period. During the sampling period, the wind direction was roughly 23 percent from the north, compared with an average of 18 percent from the north for a typical summer, and 14 percent from the north for a typical annual pattern. The nearest off-Site area that could potentially receive Site-generated particulate exposure is south of the Site, making wind flow from the north a worst case scenario. In addition, the amount of time when there were calms was also much lower during the sampling period (0.03%) than under normal summer conditions (3.3%).

Table 3-1 – Particulate Sample Results

Sample Date	Sample Number	Arsenic Level (ug/m^3)	Lead Level (ug/m^3)	PM_{10} Level (ug/m^3)
6/19/2002	DW-Metals-2	0.0004 U	0.0067	46.20
6/19/2002	DW-Metals-3	0.0027	0.0087	37.00
6/19/2002	DW-Metals-4	0.0004 U	0.0061	106.00
6/20/2002	DW-Metals-25	0.0032	0.0097	58.50
6/20/2002	DW-Metals-26	0.0058	0.0123	83.90
6/20/2002	DW-Metals-5	0.0049	0.0142	90.40
6/20/2002	DW-PM10-1	NA	NA	112.00
6/24/2002	DW-Metals-27	0.0033	0.0047	44.70
6/24/2002	DW-Metals-28	0.0004 U	0.0033	36.70
6/24/2002	DW-Metals-29	0.0071	0.0129	105.00
6/24/2002	DW-PM10-6	NA	NA	69.50
6/25/2002	DW-Metals-30	0.0024	0.0037	43.90
6/25/2002	DW-Metals-31	0.0024	0.0035	27.60
6/25/2002	DW-Metals-32	0.0031	0.0041	43.70
6/25/2002	DW-Metals-33	0.0040	0.0067	71.40
6/26/2002	DW-Metals-34	0.0019	0.0027	9.60
6/26/2002	DW-Metals-35	0.0019	0.0032	8.80
6/26/2002	DW-Metals-36	0.0014	0.0035	15.00
6/26/2002	DW-Metals-37	0.0009	0.0018	20.10
7/1/2002	DW-Metals-38	0.0008	0.0023	18.30
7/1/2002	DW-PM10-10	NA	NA	12.50
7/1/2002	DW-PM10-8	NA	NA	30.00
7/1/2002	DW-PM10-9	NA	NA	11.70
7/2/2002	DW-Metals-42	0.0113	0.0076 U	25.10
7/2/2002	DW-Metals-43	0.0089	0.007 U	103.00
7/2/2002	DW-Metals-44	0.0079	0.0065 U	61.50
7/2/2002	DW-Metals-45	0.0092	0.0071 U	14.60
7/3/2002	DW-Metals-46	0.0092	0.0078 U	29.60
7/3/2002	DW-Metals-47	0.0073 U	0.0073 U	95.00
7/3/2002	DW-Metals-48	0.0067	0.0067 U	63.00
7/3/2002	DW-Metals-49	0.0074 U	0.0074 U	28.70
7/8/2002	DW-Metals-50	0.0075 U	0.0075 U	6.40
7/8/2002	DW-Metals-51	0.0069 U	0.0069 U	14.90
7/8/2002	DW-Metals-52	0.0004	0.0065 U	12.40
7/8/2002	DW-Metals-53	0.0071 U	0.0071 U	10.80
7/9/2002	DW-Metals-54	0.0022	0.0049	70.40
7/9/2002	DW-Metals-55	0.0016	0.0070	99.50
7/9/2002	DW-Metals-56	0.0053	0.0041	52.30
7/9/2002	DW-Metals-57	0.0027	0.0074 U	53.70

Table 3-1 – Particulate Sample Results

Sample Date	Sample Number	Arsenic Level (ug/m^3)	Lead Level (ug/m^3)	PM_{10} Level (ug/m^3)
7/10/2002	DW-Metals-58	0.0078 U	0.0078 U	ND
7/10/2002	DW-Metals-59	0.0073 U	0.0073 U	32.50
7/10/2002	DW-Metals-60	0.0068 U	0.0068 U	13.40
7/10/2002	PM10-11	NA	NA	28.20
7/11/2002	DW-Metals-68	0.0073 U	0.0073 U	37.90
7/11/2002	DW-Metals-69	0.0068 U	0.0068 U	38.40
7/11/2002	DW-Metals-70	0.0075 U	0.0075 U	25.80
	Minimum	***0.000020***	***0.00033***	***6.4***
	Maximum	***0.011***	***0.014***	***112***
	Average[(1)]	***0.0030***	***0.0034***	***45***

Note:
Results with a "U" indicate that the analyte was not detected. The numerical value associated with the "U" is the sample quantitation limit.
[(1)]Average was calculated by assuming ½ of the detection limit for non-detected samples.

Figure 3-1 – Summary of PM_{10} Arsenic and Lead Data

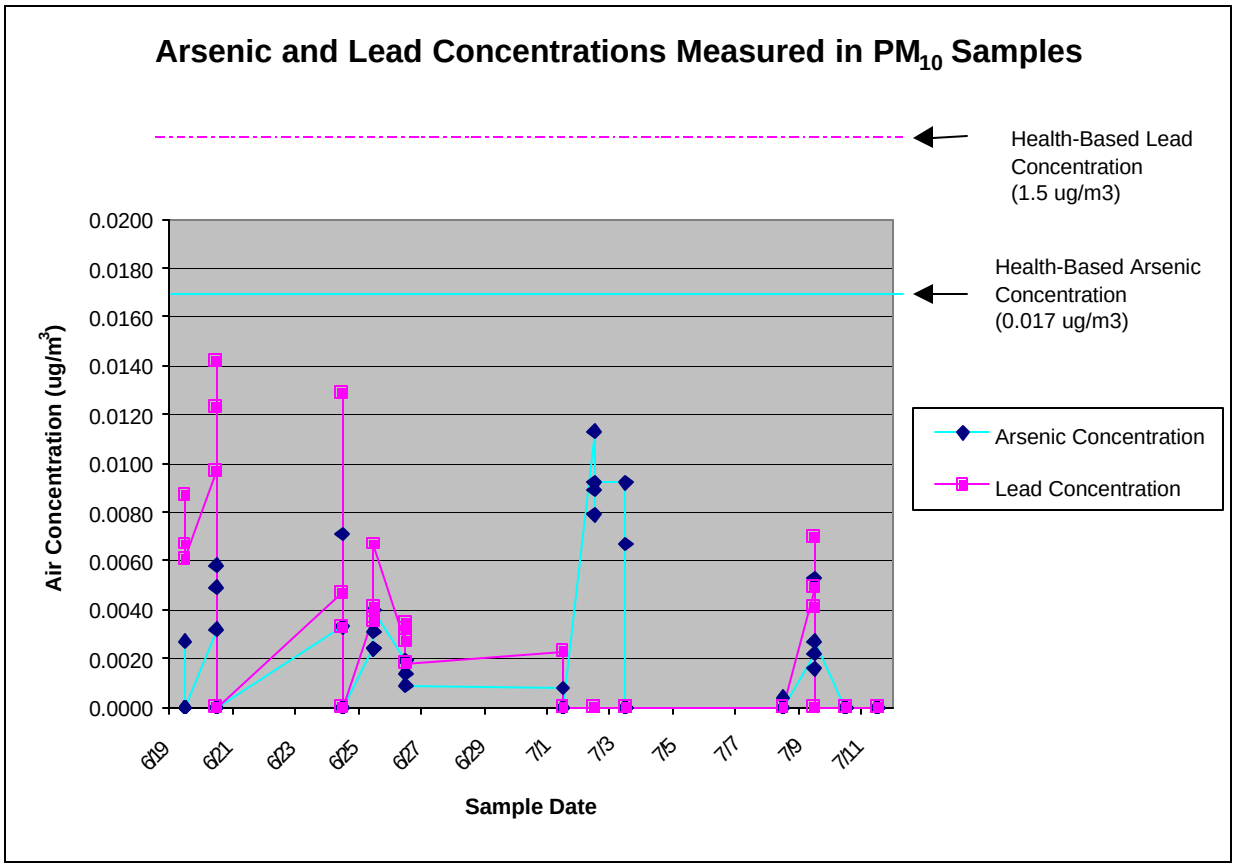


Figure 3-2 – Average Wind Speed and Direction from January 1992 through August 2002

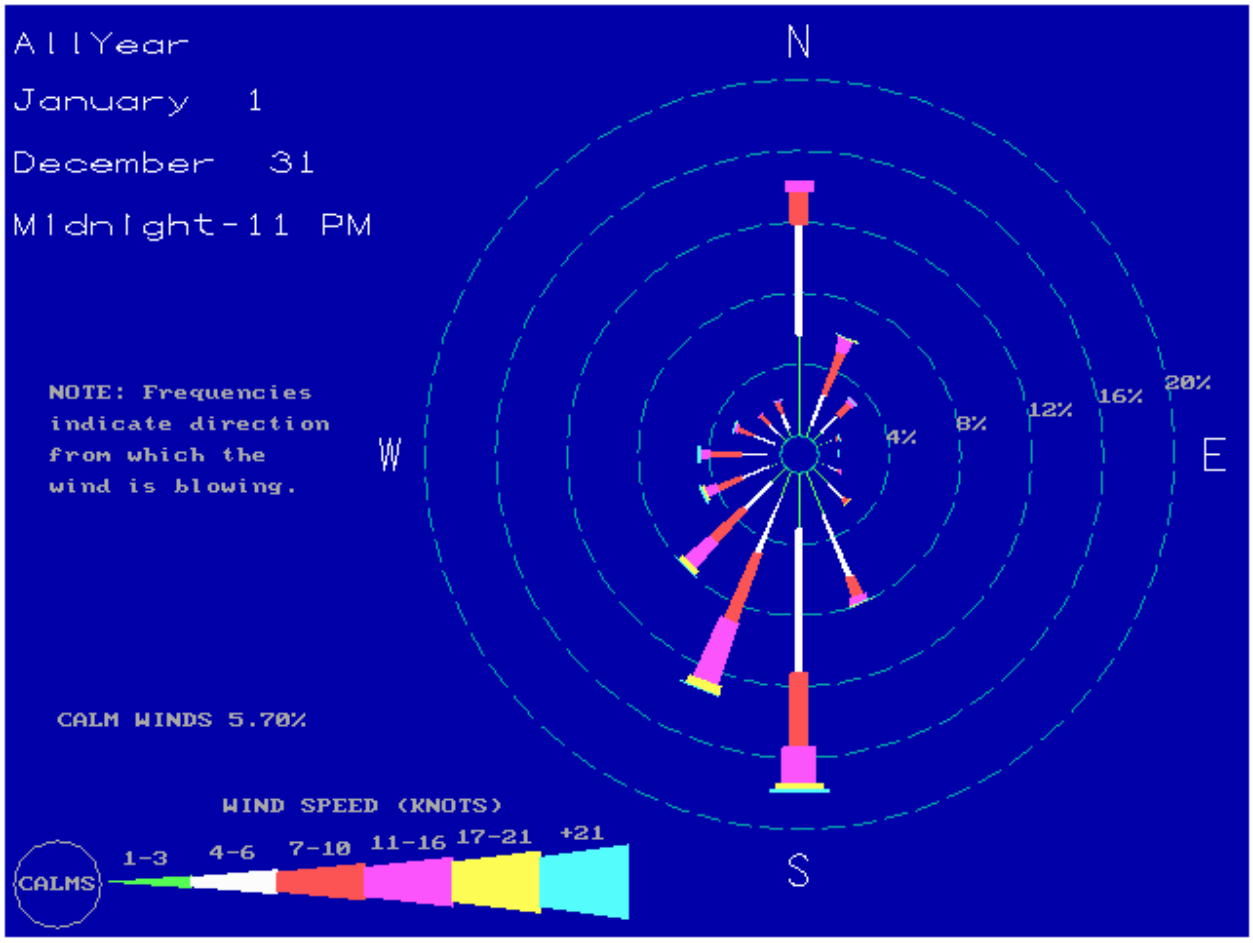


Figure 3-3 – Average Wind Speed and Direction during the Summer Months (June-August, 1992 - 2002)

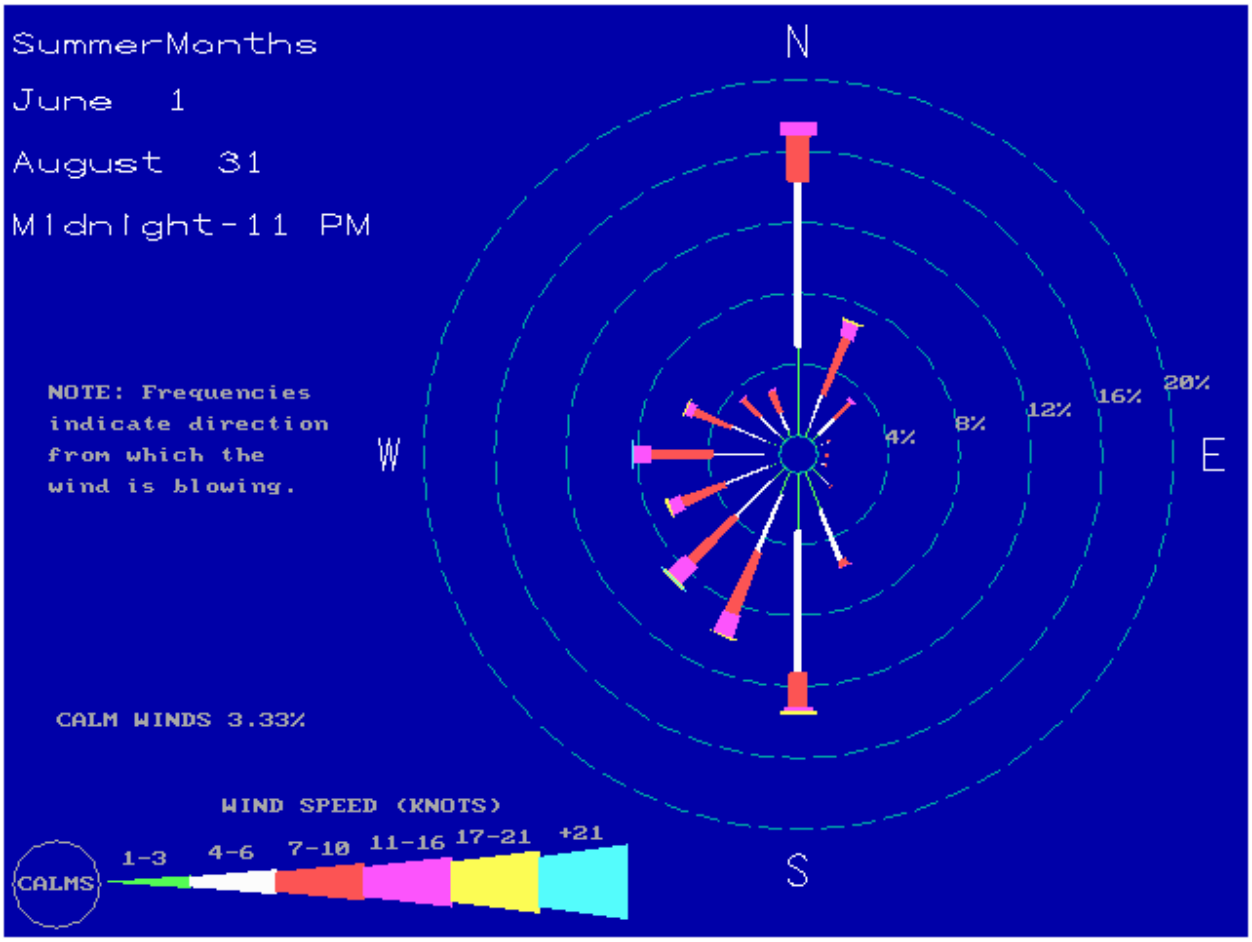
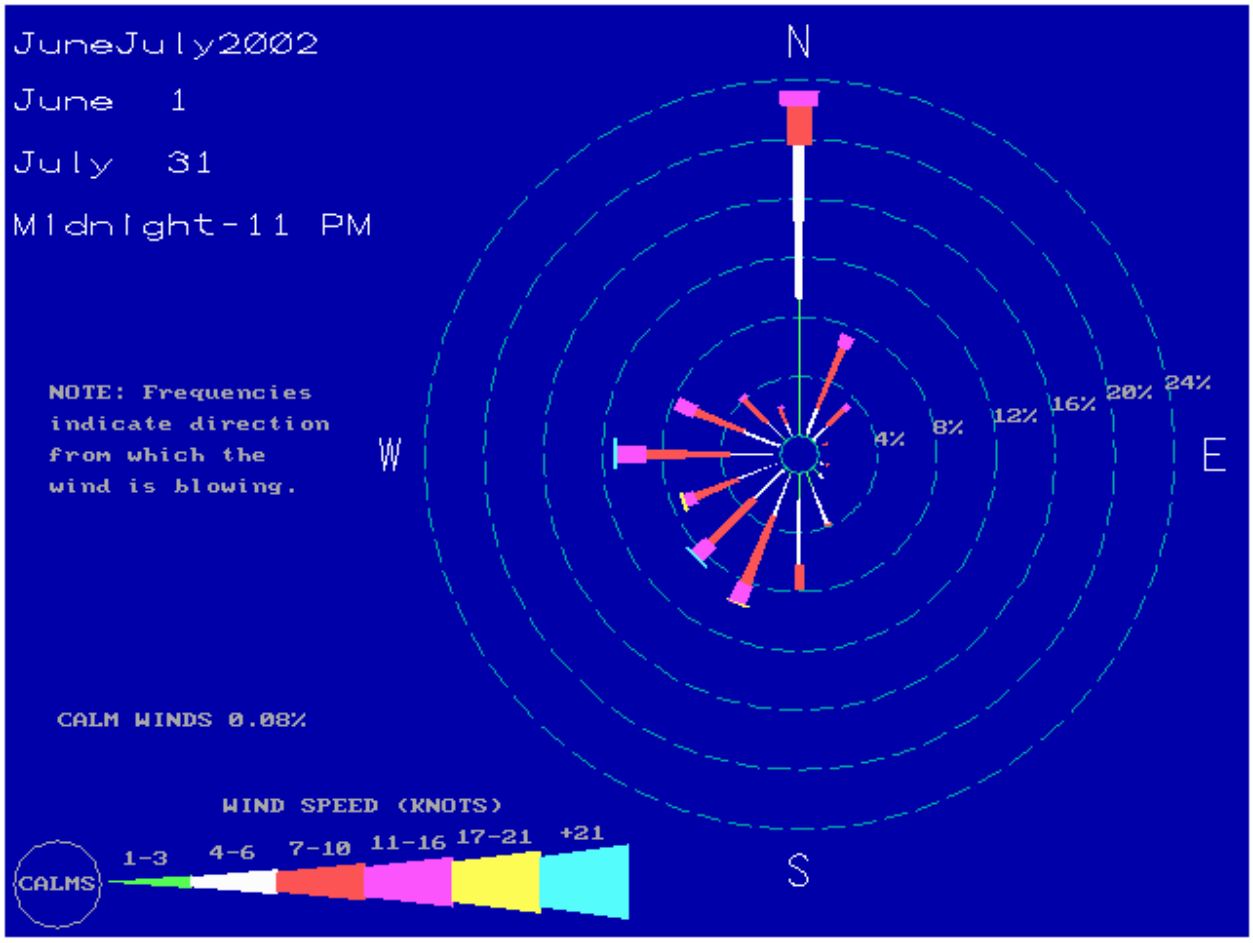


Figure 3-4 – Average Wind Speed and Direction during the Sampling Month s (June-July 2002)



SECTION 4 – CONCLUSIONS

Based on the sampling results and an evaluation of the wind speed and direction during the sampling period and other typical time periods, the following conclusions can be made:

- The engineering controls used during the perimeter interim corrective action were successful in limiting off-Site particulate transport (see Table 3-1).

- The location of the excavation activities as well as the wind speed and direction during the sampling period could be considered a "worst case" scenario, therefore it is unlikely that future excavation work will result in off-Site particulate levels that are of concern.

- The results from this program indicate negligible impacts to surrounding property from site dust even under "worst case" conditions. The highest concentration of lead (0.014 ppb) was an order of magnitude below the health-based concentration (1.5 ppb). The highest concentration of arsenic (0.011 ppb) was below the health-based concentration of 0.017 ppb and the average arsenic concentration over the period (0.0030 ppb) was more than a factor of 5 less than the health-based concentration.

REFERENCES

PIONEER and WSNW. PIONEER Technologies Corporation (PIONEER) and West Shore Corporation, NW (WSNW). November 2002. Perimeter Soil and Storm Water Runoff Overflow Pipeline Interim Corrective Action.

APPENDIX A – INSTRUMENT CALIBRATION AND SAMPLING PROCEDURES

MFG, Inc.
19203 36th Avenue W., Suite 101
Lynnwood, WA 98036-5707
425/ 921-4000
Fax: 921-4040

consulting
scientists and
engineers

November 27, 2002

Mr. Brad Grimsted
PIONEER Technologies Corporation
2612 Yelm Highway S.E., Suite B
Olympia, WA 98501- 4826

Dear Mr. Grimsted:

As you know, MFG, Inc. was retained by PIONEER Technologies Corporation (PIONEER), to provide assistance with an ambient air monitoring program during this past summer in Dupont, Washington. MFG's participation in the air monitoring program consisted of assembly and calibration of the air samplers, and training of PIONEER personnel to operate the samplers. This letter and attachments summarize MFG's involvement in the air monitoring program and provide documentation of calibration of the air samplers.

PIONEER rented four Hi-Volume particulate samplers (GMW Model IP 10-8000 PM-10) from Clean Air Engineering of Palatine, Illinois. These specific PM-10 samplers are mass flow controlled. That is, the actual flow rate is controlled with a reference sensing flow probe mounted in the funnel section of the filter holder. The electrical output of the flow probe is used to increase or decrease the electrical power to the motor to maintain a constant velocity during the filter exposure. The actual flow is critical for particle fractionation

MFG visited the Dupont site on June 18, 2002 to assemble, calibrate, and train PIONEER personnel on sampler operation. Following assembly of the samplers, MFG first performed a leak check and then with the use of a Thermo Andersen calibration orifice (Serial Number W43) calibrated each of the four PM-10 samplers.

Based on flow rates and sampler responses obtained during the calibrations and seasonal average temperature and pressure obtained from Olympia historical climate data, MFG provided PIONEER personnel with individual sampler seasonally adjusted flow rate set points.

Individual sampler calibration data sheets, flow control set points, Olympia historical climate data, and the W43 orifice calibration certification are attachments to this summary.

Please do not hesitate to call me if you have any questions.

Regards,

Kris Hansen

Kris Hansen
Environmental Specialist

Printed on recycled paper

Table 4.3 MFC Calibration Data Sheet

HVPM10 SAMPLER CALIBRATION DATA SHEET
MASS FLOW CONTROLLED UNIT

Sampler Location: #1 Date: 6-18-02

Conditions: Ta(K): 295 Pa(mmHg): 737

Ts(K): 298. Ps(mmHg): 760

Sampler Model: Gmw MFC Sampler S/N: 6714 Motor No:.

Orifice S/N: W43 Orifice Cal. Date: 4-19-02 Orifice Model: G2B35

Orifice Qa Cal. Relationship: m= 0.9774 b= -0.01226 r= 0.999613

Calibration Conducted by: KH

Cal. Point	Plate No.	Total ΔH20	Qa(orifice) flow rate m3/min	Sampler Response I	Corrected Response IC
1	N/A	9.5	2.01	62	39.2
2	N/A	8.6	1.91	60	38.0
3	N/A	7.1	1.74	55.5	35.1
4	N/A	5.8	1.57	49	31.0
5	N/A	4.3	1.35	42	26.6

Qa(orifice): = 1/m [√ΔH20(Ta/Pa)] - b]

IC = I (√(Ta/Pa))

Sampler's Qa Calibration Relationship:

Qa(orifice), x-axis, IC, y-axis

m= 3.89 b= 26.2 r= 0.9904

Set Point Flow Rate: 1.15 m³/min = 40.7 cfm

Sampler Seasonally Adjusted Calibration Relationship

ms = 6.304 bs= 42.46

ms = m /[√(Ts/Ps)]

bs = b /[√(Ts/Ps)]

Sampler Set Point: 36.8 cfm

Table 4.3 MFC Calibration Data Sheet

HVPM10 SAMPLER CALIBRATION DATA SHEET
MASS FLOW CONTROLLED UNIT

Sampler Location: #2 Date: 6-18-02

Conditions: Ta(K): 295 Pa(mmHg): 737

Ts(K): 298 Ps(mmHg): 760

Sampler Model: GMW MFC Sampler S/N: 6724 Motor No:.

Orifice S/N: W43 Orifice Cal. Date: 4-19-02 Orifice Model: G2835

Orifice Qa Cal. Relationship: m= 0.9774 b= -0.01226 r= 0.999613

Calibration Conducted by: KH

Cal. Point	Plate No.	Total ΔH20	Qa(orifice) flow rate m3/min	Sampler Response I	Corrected Response IC
1	N/A	8	1.843	60	37.96
2	N/A	6.8	1.70	56	35.43
3	N/A	5	1.4599	49	31.0
4	N/A	3.25	1.17947	40	25.31
5	N/A.	2	0.9279	32	20.25

Qa(orifice): = 1/m [√ΔH20(Ta/Pa)] - b]

IC = I [√(Ta/Pa)]

Sampler's Qa Calibration Relationship:

Qa(orifice), x-axis, IC, y-axis

m= 4.62637 b= 24.2212 r= 0.99328

Set Point Flow Rate: 1.15 m³/min = 40.7 cfm

Sampler Seasonally Adjusted Calibration Relationship

ms = 7.49 bs= 39.23

ms = m /[√(Ts/Ps)]

bs = b /[√(Ts/Ps)]

Sampler Set Point: 39.9 cfm

Table 4.3 MFC Calibration Data Sheet

HVPM10 SAMPLER CALIBRATION DATA SHEET
MASS FLOW CONTROLLED UNIT

Sampler Location: #3 Date: 6-18-02

Conditions: Ta(K): 295 Pa(mmHg): 737

Ts(K): 298 Ps(mmHg): 760

Sampler Model: GMW MFC Sampler S/N: 6519 Motor No:

Orifice S/N: W43 Orifice Cal. Date: 4-19-02 Orifice Model: G2835

Orifice Qa Cal. Relationship: m= 0.9774 b= -0.01226 r= 0.9996

Calibration Conducted by: KH

Cal. Point	Plate No.	Total ΔH20	Qa(orifice) flow rate m3/min	Sampler Response I	Corrected Response IC
1	N/A	9.2	1.98	65	41.1
2	N/A	7.4	1.77	60	37.96
3	N/A	6	1.60	55	34.8
4	N/A	4.8	1.43	50	31.63
5	N/A	3.4	1.21	43.5	27.52

Qa(orifice): = 1/m [$\sqrt{\Delta H20(Ta/Pa)}$ - b]

IC = I [$\sqrt{(Ta/Pa)}$]

Sampler's Qa Calibration Relationship:

Qa(orifice), x-axis, IC, y-axis

m= 3.70659 b= 31.8674 r= 0.9941

Set Point Flow Rate: 1.15 m3/min 40.7 cfm

Sampler Seasonally Adjusted Calibration Relationship

ms = 6.00 bs= 51.61

ms = m /[$\sqrt{(Ts/Ps)}$]

bs = b /[$\sqrt{(Ts/Ps)}$]

Sampler Set Point: 42.96 cfm

Table 4.3 MFC Calibration Data Sheet

HVPM10 SAMPLER CALIBRATION DATA SHEET
MASS FLOW CONTROLLED UNIT

Sampler Location: #4 Date: 6-18-02

Conditions: Ta(K): 295 Pa(mmHg): 737

Ts(K): 298 Ps(mmHg): 760

Sampler Model: Gmw MFC Sampler S/N: 5003 Motor No:.

Orifice S/N: W43 Orifice Cal. Date: 4-19-02 Orifice Model: G2835

Orifice Qa Cal. Relationship: m= 0.9774 b= -0.01226 r= 0.999613

Calibration Conducted by: KH

Cal. Point	Plate No.	Total ΔH20	Qa(orifice) flow rate m3/min	Sampler Response I	Corrected Response IC
1	N/A	9.3	1.99	64	40.49
2	N/A	7.7	1.81	59.5	37.64
3	N/A	6.5	1.66	54.5	34.48
4	N/A	5.3	1.50	50	31.63
5	N/A	4	1.31	43	27.21

Qa(orifice): = 1/m [√ΔH20(Ta/Pa)] - b]

IC = I [√(Ta/Pa)]

Sampler's Qa Calibration Relationship:

Qa(orifice), x-axis, IC, y-axis

m= 3.94289 b= 28.33459 r= 0.992948

Set Point Flow Rate: 1.15 m³/min 40.7 cfm

Sampler Seasonally Adjusted Calibration Relationship

ms = 6.39 bs= 45.90

ms = m /[√(Ts/Ps)]

bs = b /[√(Ts/Ps)]

Sampler Set Point: 39.46 cfm

Seasonal Average Flow Rate Calculations

seasonal temperature	ts	289 K
seasonal pressure	ps	758 mm Hg

ms=m/[(Ts/Ps)^.5]

bs=b/[(Ts/Ps)^.5]

Sampler 1

Slope m	Intercept b		
		ms	6.303667
3.892311	26.22028	bs	42.46421

Sampler 2

Slope m	Intercept b		
		ms	7.492485
4.626368	24.2219	bs	39.22779

Sampler 3

Slope m	Intercept b		
		ms	6.002888
3.70659	31.8674	bs	51.60982

Sampler 4

Slope m	Intercept b		
		ms	6.385592
3.942898	28.33459	bs	45.88837

Dupont Air Monitoring Flow Calculations
pn:9746
Jun-02

			mc	0.9774		Ta	295.3722	Deg K	m1	0.560091	Ts	289	ms	0.907077
			bc	-0.01226		Pa	762	mmHg	b1	0.00058	Ps	758	bs	0.00094
Sampler 1		SFR	1.14885306	SSP	1.034445	36.53108	**SSP alt**	**1.043039**	**36.83456**					
	I	I												
H2O drop	Dix (cfm)	Dix (m3/min)	Qa (m3/min)	IC	SQa									
9.5	62	1.75564449	1.97588933	1.09306	1.93446									
8.6	60	1.6990108	1.88057513	1.0578	1.872024									
7.1	55.5	1.57158499	1.70986524	0.978465	1.731545									
5.8	49	1.38752548	1.54662699	0.86387	1.52863									
4.3	42	1.18930756	1.33344133	0.74046	1.310106									

			mc	0.9774		Ta	295.3722	Deg K	m2	0.549769	Ts	289	ms	0.890361
			bc	-0.01226		Pa	762	mmHg	b2	0.06609	Ps	758	bs	0.107034
Sampler 2		SFR	1.14885306	SSP	1.120618	39.57425	**SSP alt**	**1.129928**	**39.90302**					
	I	I												
H2O drop	Dix (cfm)	Dix (m3/min)	Qa (m3/min)	IC	SQa									
8	60	1.6990108	1.81423319	1.0578	1.788013									
6.8	56	1.58574341	1.67361932	0.98728	1.660798									
5	49	1.38752548	1.43690426	0.86387	1.438171									
3.25	40	1.13267386	1.16089986	0.7052	1.151937									
2	32	0.90613909	0.91338834	0.56416	0.897507									

			mc	0.9774		Ta	295.3722	Deg K	m3	0.504339	Ts	289	ms	0.816786
			bc	-0.01226		Pa	762	mmHg	b3	0.171734	Ps	758	bs	0.278126
Sampler 3		SFR	1.14885306	SSP	1.206471	42.60611	**SSP alt**	**1.216493**	**42.96006**					
	I	I												
H2O drop	Dix (cfm)	Dix (m3/min)	Qa (m3/min)	IC	SQa									
9.2	65	1.84059503	1.94464045	1.14595	1.912947									
7.4	60	1.6990108	1.74535316	1.0578	1.739604									
6	55	1.55742656	1.57285254	0.96965	1.566261									
4.8	50	1.41584233	1.40812633	0.8815	1.392918									
3.4	43.5	1.23178283	1.18710147	0.766905	1.167572									

			mc	0.9774		Ta	295.3722	Deg K	m4	0.554738	Ts	289	ms	0.898408
			bc	-0.01226		Pa	762	mmHg	b4	0.052726	Ps	758	bs	0.085391
Sampler 4		SFR	1.14885306	SSP	1.108323	39.14004	**SSP alt**	**1.11753**	**39.4652**					
	I	I												
H2O drop	Dix (cfm)	Dix (m3/min)	Qa (m3/min)	IC	SQa									
9.3	64	1.81227818	1.9551126	1.12832	1.922163									
7.7	59.5	1.68485237	1.78012873	1.048985	1.780328									
6.5	54.5	1.54326814	1.63656464	0.960835	1.622733									
5.3	50	1.41584233	1.47901266	0.8815	1.480898									
4	43	1.2176244	1.28653049	0.75809	1.260266									

Andersen Instruments, Inc.

Orifice Transfer Standard Certification Worksheet

Date: 04/19/2002 **Rootsmeter S/N:** 9736553 **Ta:** 21.00 C
Operator: M. RALLS **Calibrator S/N:** W43 **Pa:** 749.8 mm Hg
Calibrator Model #: G28A **Placed in service:**

Run	Vol. Init. (m3)	Vol. Final (m3)	Δ Vol. (m3)	Δ Time (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1.00	2.00	1.00	1.230	4.48	1.50
2	3.00	4.00	1.00	0.974	7.29	2.50
3	5.00	6.00	1.00	0.884	8.78	3.00
4	7.00	8.00	1.00	0.816	10.09	3.50
5	9.00	10.00	1.00	0.615	17.56	6.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H(Ta/Pa)}$ (y-axis)
0.994	0.808	1.225	0.994	0.808	0.767
0.990	1.017	1.581	0.990	1.017	0.990
0.988	1.118	1.732	0.988	1.118	1.085
0.987	1.209	1.871	0.987	1.209	1.172
0.977	1.588	2.449	0.977	1.588	1.534
	m =	1.5604		m =	0.9774
	b =	-0.019572		b =	-0.012260
	r =	0.999613		r =	0.999613

Calculations

$$Vstd = \Delta Vol((Pa - \Delta P)/Pstd)(Tstd/Ta) \qquad Va = \Delta Vol((Pa - \Delta P)/Pa)$$

$$Qstd = Vstd/\Delta Time \qquad Qa = Va/\Delta Time$$

For subsequent flow rate calculations:

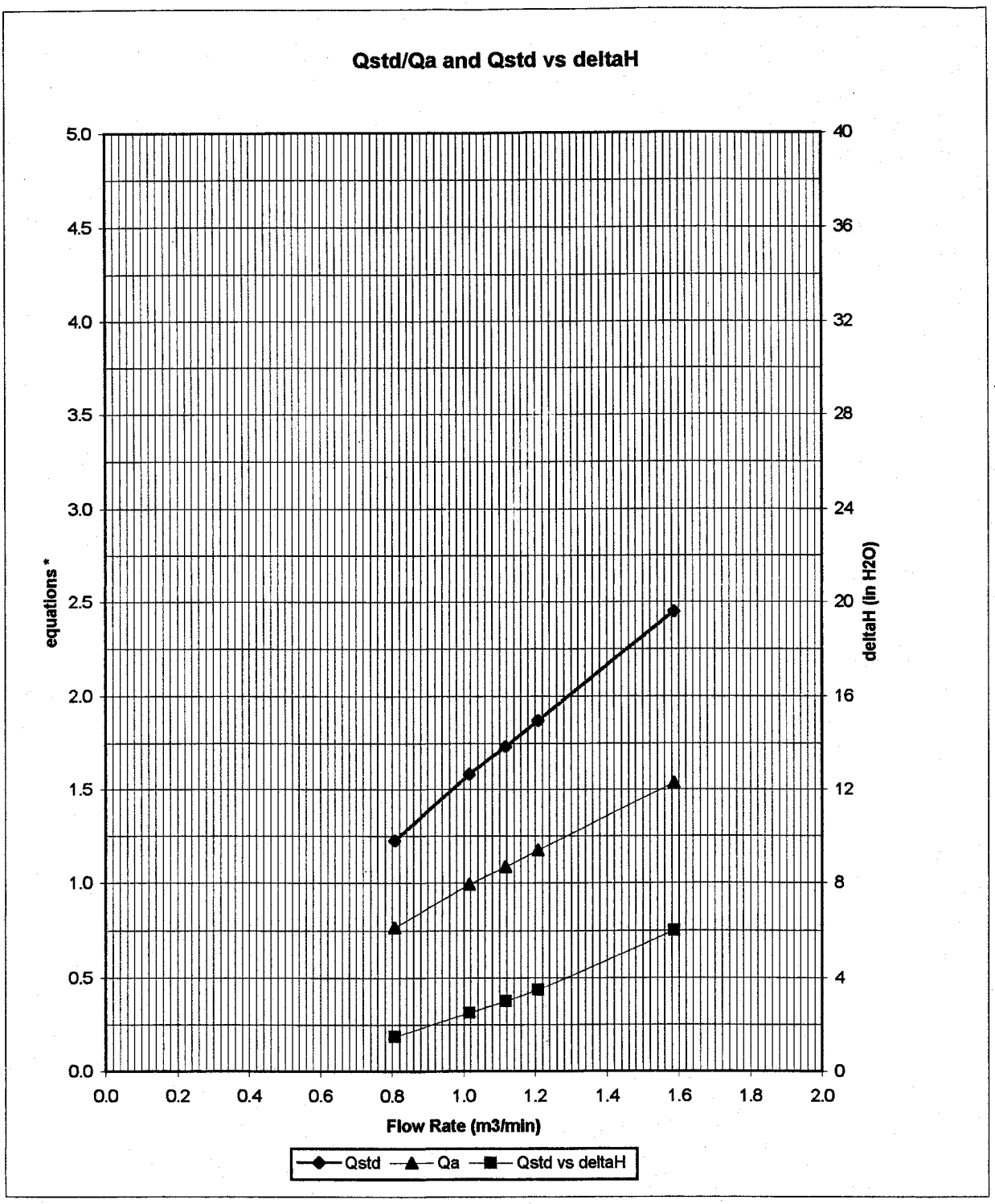
$$Qstd = 1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right) - b\right) \qquad Qa = 1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right) - b\right)$$

Standard Conditions:
Tstd: 298.18 ° K
Pstd: 760 mm Hg

where:
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (° K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

For additional information consult:
1. The Federal Register, Vol. 47, No.234, pp. 54896-54921, Dec. 6, 1982
2. Quality Assurance Handbook, Vol II (EPA 60074-77-277a), Section 2.11
3. Andersen Instruments, Inc. Instruction Manual

Notes:
1. Copies of this calibration are not kept on file.
2. EPA recommends calibrators should be recalibrated after one year of use.



*** y-axis equations:**

Qstd series: $\sqrt{\Delta H \left(\frac{P a}{P std}\right)\left(\frac{T std}{T a}\right)}$

Qa series: $\sqrt{(\Delta H\ (T a\ /\ P a))}$

OLYMPIA, WASHINGTON

NORMALS, MEANS, AND EXTREMES

LATITUDE: 46 Deg. 58 Min. N LONGITUDE: 122 Deg. 54 Min. W ELEVATION: FT. GRND 195 BARO 196 TIME ZONE: PACIFIC WBAN: 24227

	(a)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE (Deg. F)														
Normals														
-Daily Maximum		44.4	49.5	53.9	58.8	65.3	70.9	76.5	77.1	71.0	60.5	50.0	44.2	60.2
-Daily Minimum		31.6	32.7	33.6	36.2	41.0	46.4	49.2	49.5	44.7	38.8	35.0	32.1	39.2
-Monthly		38.0	41.1	43.8	47.5	53.2	58.7	62.9	63.3	57.9	49.7	42.5	38.2	49.7
Extremes														
-Record Highest	54	63	73	76	87	96	101	103	104	98	90	74	64	104
-Year		1942	1986	1995	1987	1983	1942	1941	1981	1988	1987	1949	1958	AUG 1981
-Record Lowest	54	-8	-1	9	23	25	30	35	33	25	20	- 1	-7	-8
-Year		1979	1972	1989	1975	1954	1976	1962	1973	1972	1971	1955	1983	JAN 1979
NORMAL DEGREE DAYS														
Heating (base 65 Deg. F)		837	669	657	125	36	201	96	102	222	474	67	831	5655
Cooling (base 65 Deg. F)		0	0	0	0	0	12	31	49	9	0	0	0	101
% OF POSSIBLE SUNSHINE														
MEAN SKY COVER(tenths)														
Sunrise - Sunset	51	8.7	8.4	8.0	7.8	7.2	6.9	5.5	5.8	6.1	7.7	8.6	8.8	7.5
MEAN NUMBER OF DAYS:														
Sunrise to Sunset														
-Clear	54	2.1	2.2	2.6	2.7	4.3	5.3	10.0	8.9	7.8	3.1	1.5	1.7	52.3
-Partly Cloudy	54	3.5	4.3	6.5	7.3	8.6	8.4	9.8	9.9	9.6	8.0	5.2	3.5	84.4
-Cloudy	54	25.3	21.8	21.9	19.9	18.2	16.3	11.2	12.2	12.6	19.9	23.3	25.8	228.5
Precipitation														
.01 inches or more	54	19.4	17.2	17.7	14.9	10.9	9.0	4.9	5.6	8.2	13.7	19.4	20.7	161.6
Snow, Ice Pellets, Hail														
1.0 inches or more	54	2.2	1.0	0.6	0..	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	5.2
Thunderstorms	52	0.1	0.2	0.3	0.6	0.8	0.6	0.5	0.8	0.8	0.4	0.3	0.1	5.3
Heavy Fog Visibility														
1/4 mile or less	52	9.6	8.3	7.9	5.1	3.1	2.2	3.1	5.4	9.4	13.8	10.9	10.3	89.1
Temperature Deg. F														
-Maximum														
90 Deg. F and above	36	0.0	0.0	0.0	0.0	0.1	0.7	2.4	2.4	0.6	0.*	0.0	0.0	6.3
32 Deg. F and below	36	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	2.7
-Minimum														
32 Deg. F and below	36	15.8	13.6	13.8	8.1	1.9	0.1	0.0	0.0	0.6	5.4	10.6	15.3	85.2
0 Deg. F and below	36	0.1	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4
AV. STATION PRES. (mb)	23	1010.7	1009.4	1008.4	1010.1	1009.9	1010.1	1010.6	1009.5	1009.8	1010.8	1009.8	1010.9	1010.0

PIONEER Technologies Corporation - AQ Monitoring Program

Removal/Loading of Filter and Inspection of PM10 Hi-Vol for Sampling

1. Inspect the overall integrity of the sampler for signs of tampering or damage.

2. Turn on the hi-vol by switching the timer switch to "on" and let the hi-vol warm up for 5 minutes. Connect the manometer to the external pressure tap. Record the external manometer reading on the envelope. Set timer switch to "off".

3. Check the hi-vol timer and record the timer hours. Note the status of the power failure light on the timer.

4. Open the PM10 head and latch the head in the open position.

5. Clean the area around the faceplate removing any foreign matter, such as dust or insects. It may be necessary to wipe the inside of the enclosure and area around the faceplate with a damp cloth to remove any excessive dust.

6. Remove the filter cartridge by loosening the 4 wing nuts allowing the wing nuts to swing out of the way.

7. Check the edges of the exposed filter for sharpness of field to identify leakage of the faceplate gasket. Inspect the gasket for integrity and replace if required

8. Filter handling should be performed with clean gloves or flat-tipped tweezers

   Remove exposed filter

   a. Remove large matter (large dirt particles, spider webs, or insects) with tweezers if sample integrity can be maintained. Removal of these objects or damage to the filter would not invalidate sample, but loss of part of the sample would void the filter and must be noted

   b. Carefully remove the exposed filter from the supporting screen by holding it gently at the ends (not at the corners). Fold the filter lengthwise so that the exposed portions are folded against each other (the filter ID should appear on the outside of the exposed filter). Now fold the filter width wise. Place the filter in the plastic sleeve and then place the plastic sleeve in the manila folder. Check that the filter ID matches the ID on the manila folder.

   c. Remove the Dickson chart from the chart recorder and place it in the manila folder.

   Load unexposed filter

   a. Remove the filter from the plastic bag and manila folder then inspect the clean, weighed and numbered filter received from the laboratory to ensure that the filter has not been damaged or soiled. Check that the filter ID matches the ID on the manila folder and the Dickson chart.

   b. Carefully center the new filter, rough side up (filter ID down), on the supporting screen. The filter should be aligned such that an airtight seal on the outer edge (about 1 cm) of the filter can be achieved

   c. Place a new Dickson chart in the chart recorder.

9. Secure the filter with the faceplate and 4 wing nuts with sufficient pressure to avoid air leakage, but do not overtighten the nuts

10. Close the PM10 head.

11. Fill out the removal section of the **PM10 Filter Tracking Form** checking to ensure that the exposed filter number and sampling period were correct. Note any unusual weather conditions that occurred during the run (dust storm, snow, fog, stagnation) and particularly record any activities that might have caused high PM10 levels (visual wind-blown dust, materials handling upwind, wood smoke, forest fire, slash burning, and any other local sources of particulate matter)

12. Check the hi-vol timer for the correct current & starting times. Record the timer hours

13. If not already connected, connect the manometer to the external pressure tap and switch the timer to the "on" position. Record the manometer reading. Set the timer switch to "timed" and ensure that hi-vol turns off.

14. Fill out the install portion of the **PM10 Filter Tracking Form** with the filter number, hi-vol ID, location, pressure readings, timer hours, and sampling period

15. Store the exposed filter in a safe, clean place until delivery to the lab

PM_{10} – Daily Sampling Form

Date _____ Person Sampling _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

Daily Temperature and Pressure Readings

(Take 3 readings per day)

Time	Temperature	Pressure (Inches of Hg)

APPENDIX B – ANALYTICAL METHODS

SEVERN TRENT STL

STL Seattle
5755 8th Street East
Tacoma, WA 98424

Tel: 253 922 2310
Fax: 253 922 5047
www.stl-inc.com

SOP NO.: 0200.10
DATE: November 15, 2002
AUTHOR: SPP

TITLE: Trace Metals Analysis by ICP

Approved By: _____ 11/15/02
Department Manager Date

Approved By: Lori Howard 11/15/02
Quality Assurance Manager Date

Copy No.: CC4

Issued To: B. Dee, Pioneer Technologies, Corp.

1.0 SCOPE AND APPLICATION

1.1 This SOP describes the procedure for analysis of trace metals in solution by ICP. Analysis request may be for dissolved metals, suspended metals, total metals, total recoverable metals, or TCLP leachate metals.

1.2 Routine target analytes and associated PQLs are provided in Tables 1.

2.0 REFERENCES

2.1 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Method 6010B.

2.2 USEPA Methods for the Determination of Metals in Environmental Samples, Supplement 1, EPA/600/R-94/111, May 1994, Method 200.7.

2.3 40CFR Part 136 Appendix C.

3.0 ASSOCIATED SOPS

3.1 0010.4, Use and Maintenance of Laboratory Glassware.

3.2 0204.3, Acid Digestion of Sediments, Sludges, and Soils.

3.3 0205.9, Water Digestion Procedure for Metals Analysis.

3.4 0206.16, Microwave Assisted Acid Digestion of Sediments, Sludges, and Soils.

3.5 0208.6, Acid Digestion of Oil.

3.6 0210.4, Toxicity Characteristic Leachate Procedure, EPA Method 1311.

3.7 0213.8, Acid Leaching of Earthenware.

3.8 0214.9, Acid Digestion of Paint Films or Chips: In-House Methodology.

3.9 0230.1, Use and Maintenance of the Perkin Elmer 3200DV Simultaneous ICP.

This Standard Operating Procedure has been prepared for the sole use of STL Seattle. This is a controlled document, intended as information only for the person or organization to which it has been issued.

4.0 DEFINITIONS

4.1 ICP = Inductively Coupled Plasma Spectrophotometry.

4.2 Dissolved metals = those metals that will pass through a 0.45 um membrane filter.

4.3 Suspended metals = those elements which are retained by a 0.45 um membrane filter.

4.4 Total metals = the concentration determined of an unfiltered sample after digestion; or, the sum of the dissolved plus suspended concentrations.

4.5 Total recoverable metals = the concentration determined of an unfiltered sample after treatment with hot, dilute mineral acid.

4.6 Method Detection Limit = the concentration equivalent of a metal analyte equal to three times the standard deviation of the results from seven replicates done on three non-consecutive days. The solution used to make these determinations is a standard that is three to five times the manufacturer's suggested IDL for that metal.

4.7 PQL = Practical Quantitation Limit.

4.8 SOP = Standard Operating Procedure.

5.0 PROCEDURE

5.1 SUMMARY

5.1.1 This method describes the simultaneous, multi-elemental determination of metals in solution by ICP. Samples, sample extracts, or sample digests are nebulized, and the resulting aerosols are injected into the plasma torch. Element-specific atomic line emission spectra are produced by radio frequency inductively coupled plasma. The spectra are dispersed by a grating spectrometer. The intensity of the lines are monitored by a charge-coupled device. Intensity of emission is directly related to the concentration of the analyte by comparison with standards. Emission lines used for each target analyte are provided as an attachment to this SOP.

5.2 INTERFERENCE.

5.2.1 Spectral interference: results from an overlap of spectral lines, molecular band spectra and background contribution from continuous, recombination phenomena or stray light. These interferences are described in detail in Method 6010B and should be reviewed if necessary.

5.2.2 Physical interference: resulting from viscosity or dissolved solids in the sample. In general, physical interferences must be diluted out; these interferences are described in detail in Method 6010B and should be reviewed if necessary.

5.2.3 Chemical interference: not significant with ICP. These interferences are described in detail in Method 6010B and should be reviewed if necessary.

5.3 SAMPLE HANDLING, PRESERVATION, AND HOLDING TIME REQUIREMENTS.

5.3.1 Samples are stored at $4^{o}C \pm 2^{o}C$, in the container received.

5.3.2 Holding time for analysis of samples for metals analysis is 6 months.

5.3.3 Dissolved samples should be filtered and preserved within 3 days of sampling.

5.4 EQUIPMENT

5.4.1 Simultaneous or Sequential ICP with background correction.

5.4.2 Computer controlled data system for ICP.

5.4.3 Volumetric flasks, 100 mL, 200 mL, 500 mL, 1000 mL.

5.4.4 Specimen cups with poly lids.

5.4.5 Disposable culture tubes, borosilicate glass.

5.5 REAGENTS/STANDARDS

5.5.1 ASTM Type II reagent water.

5.5.2 Leeman Labs, Inc., Plasma-Pure, Custom Multi-element Standards (calibrating standards). Standard Certificates attached for the three standards.

5.5.2.1 Preparation of calibration standards: Serial dilution of standards, in the following ratios:

4.0 mL each standard, dilute to 200 mL (High Standard);
0.8 mL each standard, dilute to 200 mL (Med. Standard);
0.4 mL each standard, dilute to 200 mL (Low Standard);
2.5 mL each standard, dilute to 500 mL (CCV Standard) *note: the CCV standard concentration varies within the calibration range.*

The final concentrations of each analyte in the high standard and the CCV standard are provided in tabular form as an Attachment to this SOP.

5.5.3 PLASMACHEM, matrix spiking standard. Concentrations provided in tabular form as an Attachment to this SOP.

5.5.4 PLASMACHEM, Standards A and AB (interference check standard). Concentrations provided in tabular form as an Attachment to this SOP.

5.5.5 Outside check standards. Check Standard 4 is at a concentration of 10 times the STL Seattle reporting limit. Check Standard 5 is at a concentration of 2 times the STL Seattle reporting limit. Specific analyte concentrations provided in tabular form as an Attachment to this SOP.

5.5.6 Argon gas, high purity grade.

5.5.7 Concentrated HCl.

5.5.8 Concentrated HNO3.

5.5.9 1:1 HCl.

5.5.9.1 Preparation: add 500 mLs of concentrated HCl to 400 mLs Type II water. Allow to cool, and dilute to 1 L with Type II water.

5.5.10 1:1 Nitric acid.

5.5.10.1 Preparation: add 500 mLs of concentrated HNO3 to 400 mLs Type II water. Allow to cool, dilute to 1 liter with Type II water.

5.5.11 Internal Standard solution. Add 0.5 mL each of 10,000 mg/L Lu, Sc, and Y to a 1-Liter volumetric flask. Dilute to volume with Type II water.

5.6 INSTRUMENT CALIBRATION

5.6.1 Initial Calibration Procedures. One instrument blank and three standards containing all analytes of interest are analyzed for initial calibration (analyte-specific concentrations). Standards are analyzed in triplicate, three readings for each analysis, and the results are averaged. A calibration curve is generated using the blank and the average values for the three standards. An initial calibration is performed as needed. An initial calibration verification (ICV) and initial calibration blank (ICB) standard are analyzed daily.

5.6.2 Continuing Calibration Procedures. A continuing calibration standard containing a mid-range concentration of each analyte is analyzed immediately after the ICV and ICB, after 10 samples, and at the end of the analytical sequence. The calculated concentration is compared to the actual concentration of the standard analytes. If QC criteria are not met, the standard is rerun, or a "curve update" is performed. An "update" is a linear adjustment of the curve using the highest concentration standard.

5.7 SAMPLE PREPARATION

5.7.1 Refer to the appropriate SOP (see section 3) for sample preparation.

5.8 SAMPLE ANALYSIS

5.8.1 Samples, sample leachates, and sample digests are provided to the analyst in specimen cups labeled with laboratory number.

5.8.2 Samples are poured into disposable culture tubes and placed in a rack for analysis.

5.8.3 Samples are nebulized and injected into the plasma torch. The solution concentrations are determined and reported as raw instrument data.

5.9 CALCULATIONS

5.9.1 Liquid samples, report as mg/L.

$$mg/L = (\text{instrument reading}) * (\text{final dilution})$$

5.9.2 Solid samples (except filters), report as mg/kg:

$$mg/kg = \frac{(\text{instrument reading}) * (\text{final dilution})}{(\text{sample weight}) (\text{percent solids})}$$

5.9.3 Filters, report as ug (or as ug/cm^3)

$$ug = (\text{instrument reading}) * (\text{final dilution})$$

$$ug/cm^3 = \frac{(\text{instrument reading}) * (\text{final dilution}) * (1000)}{(\text{air volume in L})}$$

5.10 QUALITY CONTROL

5.10.1 Initial calibration. Acceptance criterion is a curve with a minimum correlation coefficient of 0.995. The agreement between the replicate injections of each standard must be a relative standard deviation of less than or equal to 25. The ICV standard must agree within 10% of the true value for samples analyzed by EPA Method 6010B, or within 5% of the true value for samples analyzed by EPA Method 200.7.

5.10.2 Continuing calibration. Acceptance criteria is a percent difference (%D) of 10% between the calculated concentration of the continuing calibration standard and the true value of the standard

5.10.3 Interference check standards. Analyzed daily to ensure that the instrument is compensating for interferences; For analytical sequences associated with NPDES samples analyzed by Method 200.7 (as stated in 40CFR Part 136 Appendix C), the results should fall within 1.5 times the standard deviation of the mean value. For all other sequences the calculated concentrations of the analytes must agree within 20% of the true values.

5.10.4 External calibration check standard (Initial Calibration Verification, ICV). Immediately following the initial calibration, and at the beginning of each analysis batch or every 24 hours, an external calibration check standard is analyzed. The external calibration check must agree within 10% of the true value.

5.10.5 The associated method blank for each sample batch is analyzed and reported with the sample results.

5.10.6 Matrix spike or blank spike samples will be prepared with a minimum frequency of 5% of the samples. If there are fewer than 20 samples in a batch, at least one matrix spike sample should be prepared. Matrix spike solutions will contain all target analytes. Results from analysis of these

digest will be used to assess accuracy of the digestion and analysis procedure. For preparation, 2.0 mL of spiking solution is applied directly to a solid matrix, or 1.0 mL of spiking solution is added to a liquid matrix or a blank volume.

5.10.7 Duplicate samples will be prepared at a minimum frequency of 5% of the samples. If there are fewer than 20 samples in a batch, at least one duplicate sample should be prepared. Duplicate will be used to assess precision of the digestion and analysis procedure.

5.10.8 Inter-element correction factors are determined annually.

5.10.9 Linear calibration limits are analyzed on an annual basis.

5.10.10 Method detection limit studies are performed on an annual basis.

5.10.11 Where required by specific client or project (i.e., Corps of Engineers, Navy NFESC), one or more of the following quality control analyses will be performed:

5.10.11.1 Serial Dilution. A 1:5 dilution of the sample selected for batch QC is analyzed.

5.10.11.2 Post Digest Spike. The sample selected for batch QC is spiked after digestion at a concentration equivalent to the matrix spike concentration.

5.10.11.3 Method of Standard Additions. For samples analyzed under the Corps of Engineers Shell Document, whenever both the serial dilution analysis agreement and post digest spike recoveries are outside QC limits, sample results must be calculated based on the method of standard additions in accordance with Method 6010B.

5.11 METHOD PERFORMANCE

5.11.1 Accuracy is evaluated based on blank spike and matrix spike recovery. The recoveries of all spiked target analytes in blank spikes must be between 80 - 120% (85 – 115% for samples analyzed by method 200.7). The recoveries of all spiked target analytes in matrix spikes should be within 75 - 125% (50 – 150% for TCLP). Post digestion spike recoveries should be within 75 – 125% of the true value. Results for the serial dilution analysis should agree within 10% when compared to the original analysis for analytes that are at a concentration of 10 times the MDL after dilution, or matrix interference is suspected.

5.11.2 Precision Determination. Duplicate results should be within 20% for the water matrix and within 35% for all other matrices.

5.12 METHOD DETECTION LIMITS/REPORTING LIMITS/PRACTICAL QUANTITATION LIMITS

5.12.1 Method Detection Limit Studies are performed annually for each matrix. Detection limit study data are maintained in the QA files.

5.12.2 Table 1 includes reporting limits for routine target analytes.

5.13 MODIFICATIONS TO PUBLISHED METHODS

5.13.1.1 None.

6.0 HEALTH AND SAFETY/SPECIAL CONSIDERATIONS

6.1 Gloves and safety goggles should be worn during sample preparation and analysis.

7.0 NONCONFORMANCE AND CORRECTIVE ACTION

7.1 Any nonconformance encountered during sample preparation (e.g., insufficient sample volume or matrix-specific problems) should be documented in a laboratory nonconformance memorandum and appropriate corrective action taken.

7.2 If the client is contacted regarding sample nonconformance, a client contact is completed and placed in the master file.

8.0 RECORDS MANAGEMENT/DOCUMENTATION

8.1 Each digestion batch identifier and appropriate QA/QC should be recorded in thelogbook on the batch QC form for soils or waters. All analysis information should be recorded in the logbook on the worksheet form. Date and signature must accompany the recorded information.

8.2 A copy of the raw data is placed in the data file.

8.3 Logbooks are archived with the QC department when completed for permanent storage.

8.4 If client contact is required, a Client Contact Record is completed and maintained in the master file.

8.5 If nonconformance is observed during sample extraction or analysis, a nonconformance memorandum is completed; the memorandum is placed in the file, and a copy of the memorandum is given to the QA Manager.

9.0 WASTE MANAGEMENT AND POLLUTION PREVENTION

9.1 All laboratory waste must be handled in accordance with SOP 0036.6.

9.2 All laboratory procedures must comply with the policies set forth in STL Seattle's Pollution Prevention Plan.

Table 1. Analyte List and Reporting Limits for ICP Metals

	Reporting Limit	
	Soil	*Water*
Analyte	*mg/kg*	*mg/L*
Aluminum	10	0.10
Antimony	10	0.05
Arsenic	3	0.01
Barium	1	0.005
Beryllium	0.4	0.002
Boron	60	0.20
Cadmium	1	0.005
Calcium	200	1.0
Chromium	5	0.01
Cobalt	1	0.005
Copper	3	0.01
Iron	20	0.1
Lead	4	0.01
Magnesium	200	1.0
Manganese	1	0.01
Molybdenum	2	0.01
Nickel	2	0.01
Selenium	10	0.05
Silver	2	0.01
Sodium	500	1.0
Strontium	20	0.05
Thallium	4	0.02
Tin	20	0.05
Titanium	10	0.01
Vanadium	2	0.01
Zinc	4	0.01

ATTACHMENT 1

WAVELENGTHS AND CALIBRATION STANDARDS

Method Name: Initial-4 Point

Inst: Symbol, Wavelength, Name, and Function

Description : All Lines

Perkin Elmer Optima 3200DV ICP Method

Element	Wavelength nm	Name	Function
As	188.976	As 188.979	Analyte
As	193.692	As 193.696	Analyte
Ba	233.527	Ba 233.527	Analyte
Cd	226.494	Cd 226.502	Analyte
Cd	214.438	Cd 214.440	Analyte
Cr	267.701	Cr 267.716	Analyte
Pb	220.348	Pb 220.353	Analyte
Se	196.020	Se 196.026	Analyte
Se	203.985	Se 203.985	Analyte
Ag	328.059	Ag 328.068	Analyte
Ag	338.280	Ag 338.289	Analyte
Cu	327.381	Cu 327.393	Analyte
Cu	324.751	Cu 324.752	Analyte
Ni	231.598	Ni 231.604	Analyte
Zn	206.197	Zn 206.200	Analyte
Be	313.094	Be 313.107	Analyte
Sb	206.832	Sb 206.836	Analyte
Tl	190.800	Tl 190.801	Analyte
Co	228.622	Co 228.616	Analyte
Mn	257.614	Mn 257.610	Analyte
Mn	259.374	Mn 259.372	Analyte
Mn	260.570	Mn 260.568	Analyte
V	292.388	V 292.402	Analyte
K	766.531	K 766.490	Analyte
Na	330.233	Na 330.237	Analyte
Al	308.220	Al 308.215	Analyte
Al	394.406	Al 394.401	Analyte
Al	237.313	Al 237.313	Analyte
Fe	273.963	Fe 273.955	Analyte
Ca	315.887	Ca 315.887	Analyte
Mg	279.070	Mg 279.077	Analyte
Mo	202.025	Mo 202.031	Analyte
Si	251.617	Si 251.611	Analyte
Sr	232.238	Sr 232.235	Analyte
B	249.675	B 249.677	Analyte
Ti	334.942	Ti 334.940	Analyte
Sn	189.926	Sn 189.927	Analyte
Lu	261.535	Lu 261.542	Internal Standard
Sc	361.380	Sc 361.383	Internal Standard
Y	360.061	Y 360.073	Internal Standard

Inst: Spectrometer, Read Time, Replicates

Spectral Profiling: No Resolution: Normal

Read Delay Time (sec) : 10

Replicates : 3
Read Time : Auto Min Time : 1.000 sec Max Time: 20.000 sec

Method Name: Initial-4 Point

Survey and Auto Integration Spectral Windows

Element	Wavelength (nm)	Survey Lower	Survey Upper	Auto Lower	Auto Upper
As	188.976	188.941	189.028	188.941	189.028
As	193.692	193.658	193.747	193.658	193.747
Ba	233.527	233.432	233.596	233.432	233.596
Cd	226.494	226.456	226.615	226.456	226.615
Cd	214.438	214.245	214.500	214.245	214.500
Cr	267.701	267.537	267.791	267.537	267.791
Pb	220.348	220.309	220.410	220.309	220.410
Se	196.020	195.984	196.074	195.984	196.074
Se	203.985	203.950	204.044	203.950	204.044
Ag	328.059	328.002	328.153	328.002	328.153
Ag	338.280	338.221	338.377	338.221	338.377
Cu	327.381	327.328	327.478	327.328	327.478
Cu	324.751	324.686	324.836	324.686	324.836
Ni	231.598	231.558	231.664	231.558	231.664
Zn	206.197	206.107	206.252	206.107	206.252
Be	313.094	312.987	313.208	312.987	313.208
Sb	206.832	206.801	206.896	206.801	206.896
Tl	190.800	190.770	190.858	190.770	190.858
Co	228.622	228.577	228.682	228.577	228.682
Mn	257.614	257.563	257.807	257.563	257.807
Mn	259.374	259.328	259.447	259.328	259.447
Mn	260.570	260.521	260.640	260.521	260.640
V	292.388	292.341	292.475	292.341	292.475
K	766.531	766.360	766.713	766.360	766.713
Na	330.233	330.170	330.322	330.170	330.322
Al	308.220	308.163	308.305	308.163	308.305
Al	394.406	394.267	394.642	394.267	394.642
Al	237.313	237.271	237.380	237.271	237.380
Fe	273.963	273.909	274.035	273.909	274.035
Ca	315.887	315.824	315.969	315.824	315.969
Mg	279.070	279.023	279.151	279.023	279.151
Mo	202.025	201.991	202.083	201.991	202.083
Si	251.617	251.570	251.685	251.570	251.685
Sr	232.238	232.206	232.313	232.206	232.313
B	249.675	249.599	249.857	249.599	249.857
Ti	334.942	334.850	335.169	334.850	335.169
Sn	189.926	189.889	190.023	189.889	190.023
Lu	261.535	261.372	261.620	261.372	261.620
Sc	361.380	361.312	361.478	361.312	361.478
Y	360.061	360.000	360.165	360.000	360.165

Sampler: Plasma Parameters

Source Equilibration Delay : 20 sec
Plasma Aerosol Type : Wet
Nebulizer Start-up Conditions: Gradual

Plasma Params: Variable

F'n	Analyte	Plas L/min	Aux L/min	Neb L/min	Power Watts	View Dist	Plasma View
A	As 188.979	15	0.3	0.7	1500	15.0	Axial

Method Name: Initial-4 Point

A	As 193.696	15	0.3	0.7	1500	15.0	Axial
A	Ba 233.527	15	0.3	0.7	1500	15.0	Axial
A	Cd 226.502	15	0.3	0.7	1500	15.0	Axial
A	Cd 214.440	15	0.3	0.7	1500	15.0	Axial
A	Cr 267.716	15	0.3	0.7	1500	15.0	Axial
A	Pb 220.353	15	0.3	0.7	1500	15.0	Axial
A	Se 196.026	15	0.3	0.7	1500	15.0	Axial
A	Se 203.985	15	0.3	0.7	1500	15.0	Axial
A	Ag 328.068	15	0.3	0.7	1500	15.0	Axial
A	Ag 338.289	15	0.3	0.7	1500	15.0	Axial
A	Cu 327.393	15	0.3	0.7	1500	15.0	Axial
A	Cu 324.752	15	0.3	0.7	1500	15.0	Axial
A	Ni 231.604	15	0.3	0.7	1500	15.0	Axial
A	Zn 206.200	15	0.3	0.7	1500	15.0	Axial
A	Be 313.107	15	0.3	0.7	1500	15.0	Axial
A	Sb 206.836	15	0.3	0.7	1500	15.0	Axial
A	Tl 190.801	15	0.3	0.7	1500	15.0	Axial
A	Co 228.616	15	0.3	0.7	1500	15.0	Axial
A	Mn 257.610	15	0.3	0.7	1500	15.0	Axial
A	Mn 259.372	15	0.3	0.7	1500	15.0	Axial
A	Mn 260.568	15	0.3	0.7	1500	15.0	Axial
A	V 292.402	15	0.3	0.7	1500	15.0	Axial
A	K 766.490	15	0.3	0.7	1500	15.0	Radial
A	Na 330.237	15	0.3	0.7	1500	15.0	Radial
A	Al 308.215	15	0.3	0.7	1500	15.0	Axial
A	Al 394.401	15	0.3	0.7	1500	15.0	Axial
A	Al 237.313	15	0.3	0.7	1500	15.0	Axial
A	Fe 273.955	15	0.3	0.7	1500	15.0	Axial
A	Ca 315.887	15	0.3	0.7	1500	15.0	Radial
A	Mg 279.077	15	0.3	0.7	1500	15.0	Radial
A	Mo 202.031	15	0.3	0.7	1500	15.0	Axial
A	Si 251.611	15	0.3	0.7	1500	15.0	Axial
A	Sr 232.235	15	0.3	0.7	1500	15.0	Axial
A	B 249.677	15	0.3	0.7	1500	15.0	Axial
A	Ti 334.940	15	0.3	0.7	1500	15.0	Axial
A	Sn 189.927	15	0.3	0.7	1500	15.0	Axial
IS	Lu 261.542	15	0.3	0.7	1500	15.0	Axial
IS	Sc 361.383	15	0.3	0.7	1500	15.0	Axial
IS	Y 360.073	15	0.3	0.7	1500	15.0	Axial

Sampler: Peristatic Pump Parameters

Sample Flow Rate : 1.50 mL/min
Sample Flush Time(sec) : 20

Sampler: Wash Parameters

Wash Frequency : After every sample + extra time if sample concentrations exceed limits.
Wash Location : 0
Wash Rate(mL/min) : 2.40
Wash Time (sec) : 10

Method Name: Initial-4 Point

Analyte	Calibration Units	Concentration
As 188.979	mg/L	0.1
As 193.696	mg/L	0.1
Ba 233.527	mg/L	0.1
Cd 226.502	mg/L	0.1
Cd 214.440	mg/L	0.1
Cr 267.716	mg/L	0.1
Pb 220.353	mg/L	0.1
Se 196.026	mg/L	0.10
Se 203.985	mg/L	0.10
Ag 328.068	mg/L	0.10
Ag 338.289	mg/L	0.10
Cu 327.393	mg/L	0.1
Cu 324.752	mg/L	0.1
Ni 231.604	mg/L	0.1
Zn 206.200	mg/L	0.1
Be 313.107	mg/L	0.10
Sb 206.836	mg/L	0.1
Tl 190.801	mg/L	0.1
Co 228.616	mg/L	0.1
Mn 257.610	mg/L	0.1
Mn 259.372	mg/L	0.1
Mn 260.568	mg/L	0.1
V 292.402	mg/L	0.1
K 766.490	mg/L	5.0
Na 330.237	mg/L	5.0
Al 308.215	mg/L	0.1
Al 394.401	mg/L	0.1
Al 237.313	mg/L	0.1
Fe 273.955	mg/L	0.1
Ca 315.887	mg/L	0.1
Mg 279.077	mg/L	0.1
Mo 202.031	mg/L	0.1
Si 251.611	mg/L	1.0
Sr 232.235	mg/L	0.1
B 249.677	mg/L	0.1
Ti 334.940	mg/L	0.1
Sn 189.927	mg/L	0.1

Additional Wash Time (sec) : 50

Process: Peak Algorithms and Points/Peak

F'n	Analyte	Peak Algorithm	Pts/Peak
A	As 188.979	MSF	3
A	As 193.696	MSF	3
A	Ba 233.527	MSF	3
A	Cd 226.502	MSF	3
A	Cd 214.440	MSF	3
A	Cr 267.716	MSF	3
A	Pb 220.353	MSF	3
A	Se 196.026	MSF	3
A	Se 203.985	MSF	3
A	Ag 328.068	MSF	3
A	Ag 338.289	MSF	3

Method Name: Initial-4 Point

A	Cu 327.393	MSF	3
A	Cu 324.752	MSF	3
A	Ni 231.604	MSF	3
A	Zn 206.200	MSF	3
A	Be 313.107	MSF	3
A	Sb 206.836	MSF	3
A	Tl 190.801	MSF	3
A	Co 228.616	MSF	3
A	Mn 257.610	MSF	3
A	Mn 259.372	Peak Area	3
A	Mn 260.568	MSF	3
A	V 292.402	MSF	3
A	K 766.490	Peak Area	3
A	Na 330.237	Peak Ht.	3
A	Al 308.215	MSF	3
A	Al 394.401	MSF	3
A	Al 237.313	MSF	3
A	Fe 273.955	MSF	3
A	Ca 315.887	MSF	3
A	Mg 279.077	MSF	3
A	Mo 202.031	MSF	3
A	Si 251.611	Peak Area	3
A	Sr 232.235	MSF	3
A	B 249.677	MSF	3
A	Ti 334.940	MSF	3
A	Sn 189.927	MSF	3
IS	Lu 261.542	Peak Area	3
IS	Sc 361.383	Peak Area	3
IS	Y 360.073	Peak Area	3

Process: Spectral Overlap and Background Correction

F'n	Analyte	Overlap Correction	Background Correction	BGC1	BGC2
A	As 188.979	MSF	None		
A	As 193.696	MSF	None		
A	Ba 233.527	MSF	None		
A	Cd 226.502	MSF	None		
A	Cd 214.440	MSF	None		
A	Cr 267.716	MSF	None		
A	Pb 220.353	MSF	None		
A	Se 196.026	MSF	None		
A	Se 203.985	MSF	None		
A	Ag 328.068	MSF	None		
A	Ag 338.289	MSF	None		
A	Cu 327.393	MSF	None		
A	Cu 324.752	MSF	None		
A	Ni 231.604	MSF	None		
A	Zn 206.200	MSF	None		
A	Be 313.107	MSF	None		
A	Sb 206.836	MSF	None		
A	Tl 190.801	MSF	None		
A	Co 228.616	MSF	None		
A	Mn 257.610	MSF	None		
A	Mn 259.372	None	2-Point	-0.024	0.033
A	Mn 260.568	MSF	None		

Method Name: Initial-4 Point

A	V 292.402	MSF	None		
A	K 766.490	None	2-Point	-0.071	0.056
A	Na 330.237	None	2-Point	-0.012	0.009
A	Al 308.215	MSF	None		
A	Al 394.401	MSF	None		
A	Al 237.313	MSF	None		
A	Fe 273.955	MSF	None		
A	Ca 315.887	MSF	None		
A	Mg 279.077	MSF	None		
A	Mo 202.031	MSF	None		
A	Si 251.611	None	2-Point	-0.021	0.028
A	Sr 232.235	MSF	None		
A	B 249.677	MSF	None		
A	Ti 334.940	MSF	None		
A	Sn 189.927	MSF	None		
IS	Lu 261.542	None	2-Point	-0.027	0.028
IS	Sc 361.383	None	2-Point	-0.033	0.028
IS	Y 360.073	None	2-Point	-0.033	0.027

IEC Table : None MSF Table : 071201.msf

Process: Assign Internal Standards

Do Calib Blanks contain internal standards: Yes
Report apparent concentrations for internal standards: As a Percent

Analyte	Internal Standard	Conc	Units
As 188.979	Sc 361.383	100	mg/L
As 193.696	Sc 361.383	100	mg/L
Ba 233.527	Sc 361.383	100	mg/L
Cd 226.502	Sc 361.383	100	mg/L
Cd 214.440	Sc 361.383	100	mg/L
Cr 267.716	Sc 361.383	100	mg/L
Pb 220.353	Sc 361.383	100	mg/L
Se 196.026	Sc 361.383	100	mg/L
Se 203.985	Sc 361.383	100	mg/L
Ag 328.068	Sc 361.383	100	mg/L
Ag 338.289	Sc 361.383	100	mg/L
Cu 327.393	Sc 361.383	100	mg/L
Cu 324.752	Sc 361.383	100	mg/L
Ni 231.604	Sc 361.383	100	mg/L
Zn 206.200	Sc 361.383	100	mg/L
Be 313.107	Sc 361.383	100	mg/L
Sb 206.836	Sc 361.383	100	mg/L
Tl 190.801	Sc 361.383	100	mg/L
Co 228.616	Sc 361.383	100	mg/L
Mn 257.610	Sc 361.383	100	mg/L
Mn 259.372	Sc 361.383	100	mg/L
Mn 260.568	Sc 361.383	100	mg/L
V 292.402	Sc 361.383	100	mg/L
K 766.490	Sc 361.383	100	mg/L
Na 330.237	Sc 361.383	100	mg/L
Al 308.215	Sc 361.383	100	mg/L
Al 394.401	Sc 361.383	100	mg/L
Al 237.313	Sc 361.383	100	mg/L
Fe 273.955	Sc 361.383	100	mg/L
Ca 315.887	Sc 361.383	100	mg/L

Method Name: Initial-4 Point

Mg 279.077	Sc 361.383	100	mg/L
Mo 202.031	Sc 361.383	100	mg/L
Si 251.611	Sc 361.383	100	mg/L
Sr 232.235	Sc 361.383	100	mg/L
B 249.677	Sc 361.383	100	mg/L
Ti 334.940	Sc 361.383	100	mg/L
Sn 189.927	Sc 361.383	100	mg/L

Calib: Blank and Standard IDs and Autosampler Locations

		ID	A/S Location
Calib Blank	1	Calib Blank 1	1

		ID	A/S Location
Calib Std	1	Low Standard	6
Calib Std	2	Middle Standard	5
Calib Std	3	High Standard	2

Calib: Calibration Standard Units and Concentrations

Analyte	Calib Units	Low Standard	Middle Standard	High Standard
As 188.979	mg/L	2.00	4.00	20.0
As 193.696	mg/L	2.00	4.00	20.0
Ba 233.527	mg/L	0.20	0.40	2.00
Cd 226.502	mg/L	0.20	0.40	2.00
Cd 214.440	mg/L	0.20	0.40	2.00
Cr 267.716	mg/L	0.20	0.40	2.00
Pb 220.353	mg/L	2.00	4.00	20.0
Se 196.026	mg/L	2.00	4.00	20.0
Se 203.985	mg/L	2.00	4.00	20.0
Ag 328.068	mg/L	2.00	4.00	20.0
Ag 338.289	mg/L	2.00	4.00	20.0
Cu 327.393	mg/L	0.20	0.40	2.00
Cu 324.752	mg/L	0.20	0.40	2.00
Ni 231.604	mg/L	0.20	0.40	2.00
Zn 206.200	mg/L	0.20	0.40	2.00
Be 313.107	mg/L	0.20	0.40	2.00
Sb 206.836	mg/L	2.00	4.00	20.0
Tl 190.801	mg/L	2.00	4.00	20.0
Co 228.616	mg/L	0.20	0.40	2.00
Mn 257.610	mg/L	2.00	4.00	20.0
Mn 259.372	mg/L	2.00	4.00	20.0
Mn 260.568	mg/L	2.00	4.00	20.0
V 292.402	mg/L	0.20	0.40	2.00
K 766.490	mg/L	4.00	8.00	40.0
Na 330.237	mg/L	6.00	12.0	60.0
Al 308.215	mg/L	0.20	0.40	2.00
Al 394.401	mg/L	0.20	0.40	2.00
Al 237.313	mg/L	0.20	0.40	2.00
Fe 273.955	mg/L	0.20	0.40	2.00

Method Name: Initial-4 Point

Ca 315.887	mg/L	2.00	4.00	20.0
Mg 279.077	mg/L	2.00	4.00	20.0
Mo 202.031	mg/L	0.20	0.40	2.00
Si 251.611	mg/L	2.00	4.00	20.0
Sr 232.235	mg/L	2.00	4.00	20.0
B 249.677	mg/L	2.00	4.00	20.0
Ti 334.940	mg/L	0.20	0.40	2.00
Sn 189.927	mg/L	2.00	4.00	20.0

Calib: Calibration and Reagent Blank Usage

F'n	Element	Use Calib Blank	Subtract Reagent
A	As 188.979	Calib Blank 1	n/a
A	As 193.696	Calib Blank 1	n/a
A	Ba 233.527	Calib Blank 1	n/a
A	Cd 226.502	Calib Blank 1	n/a
A	Cd 214.440	Calib Blank 1	n/a
A	Cr 267.716	Calib Blank 1	n/a
A	Pb 220.353	Calib Blank 1	n/a
A	Se 196.026	Calib Blank 1	n/a
A	Se 203.985	Calib Blank 1	n/a
A	Ag 328.068	Calib Blank 1	n/a
A	Ag 338.289	Calib Blank 1	n/a
A	Cu 327.393	Calib Blank 1	n/a
A	Cu 324.752	Calib Blank 1	n/a
A	Ni 231.604	Calib Blank 1	n/a
A	Zn 206.200	Calib Blank 1	n/a
A	Be 313.107	Calib Blank 1	n/a
A	Sb 206.836	Calib Blank 1	n/a
A	Tl 190.801	Calib Blank 1	n/a
A	Co 228.616	Calib Blank 1	n/a
A	Mn 257.610	Calib Blank 1	n/a
A	Mn 259.372	Calib Blank 1	n/a
A	Mn 260.568	Calib Blank 1	n/a
A	V 292.402	Calib Blank 1	n/a
A	K 766.490	Calib Blank 1	n/a
A	Na 330.237	Calib Blank 1	n/a
A	Al 308.215	Calib Blank 1	n/a
A	Al 394.401	Calib Blank 1	n/a
A	Al 237.313	Calib Blank 1	n/a
A	Fe 273.955	Calib Blank 1	n/a
A	Ca 315.887	Calib Blank 1	n/a
A	Mg 279.077	Calib Blank 1	n/a
A	Mo 202.031	Calib Blank 1	n/a
A	Si 251.611	Calib Blank 1	n/a
A	Sr 232.235	Calib Blank 1	n/a
A	B 249.677	Calib Blank 1	n/a
A	Ti 334.940	Calib Blank 1	n/a
A	Sn 189.927	Calib Blank 1	n/a
IS	Lu 261.542	None	n/a
IS	Sc 361.383	None	n/a
IS	Y 360.073	None	n/a

Method Name: Initial-4 Point

Calib: Calibration Equation and Sample Units

F'n	Element	Calibration Equation	Sample Units	Max Decimal Places	Max Signif. Figures
A	As 188.979	Lin Thru 0	mg/L	4	4
A	As 193.696	Lin Thru 0	mg/L	4	4
A	Ba 233.527	Lin Thru 0	mg/L	4	4
A	Cd 226.502	Lin Thru 0	mg/L	4	4
A	Cd 214.440	Lin Thru 0	mg/L	4	4
A	Cr 267.716	Lin Thru 0	mg/L	4	4
A	Pb 220.353	Lin Thru 0	mg/L	4	4
A	Se 196.026	Lin Thru 0	mg/L	4	4
A	Se 203.985	Lin Thru 0	mg/L	4	4
A	Ag 328.068	Lin Thru 0	mg/L	4	4
A	Ag 338.289	Lin Thru 0	mg/L	4	4
A	Cu 327.393	Lin Thru 0	mg/L	4	4
A	Cu 324.752	Lin Thru 0	mg/L	4	4
A	Ni 231.604	Lin Thru 0	mg/L	4	4
A	Zn 206.200	Lin Thru 0	mg/L	4	4
A	Be 313.107	Lin Thru 0	mg/L	4	4
A	Sb 206.836	Lin Thru 0	mg/L	4	4
A	Tl 190.801	Lin Thru 0	mg/L	4	4
A	Co 228.616	Lin Thru 0	mg/L	4	4
A	Mn 257.610	Lin Thru 0	mg/L	4	4
A	Mn 259.372	Lin Thru 0	mg/L	4	4
A	Mn 260.568	Lin Thru 0	mg/L	4	4
A	V 292.402	Lin Thru 0	mg/L	4	4
A	K 766.490	Lin Thru 0	mg/L	4	4
A	Na 330.237	Lin Thru 0	mg/L	4	4
A	Al 308.215	Lin Thru 0	mg/L	4	4
A	Al 394.401	Lin Thru 0	mg/L	4	4
A	Al 237.313	Lin Thru 0	mg/L	4	4
A	Fe 273.955	Lin Thru 0	mg/L	4	4
A	Ca 315.887	Lin Thru 0	mg/L	4	4
A	Mg 279.077	Lin Thru 0	mg/L	4	4
A	Mo 202.031	Lin Thru 0	mg/L	4	4
A	Si 251.611	Lin Thru 0	mg/L	4	4
A	Sr 232.235	Lin Thru 0	mg/L	4	4
A	B 249.677	Lin Thru 0	mg/L	4	4
A	Ti 334.940	Lin Thru 0	mg/L	4	4
A	Sn 189.927	Lin Thru 0	mg/L	4	4
IS	Lu 261.542		mg/L	4	4
IS	Sc 361.383		mg/L	4	4
IS	Y 360.073		mg/L	4	4

Calib: Initial Calibration Options

When opening this method manually :

Use the calibrations curves in memory.

When using this method in a multimethod sequence:

* Start by constructing new calibration curves.

Method Name: Initial-4 Point

Start using the existing calibration curve set.
Start using the stored calibration curve set:

Calib : Multi Line Calibration

Not Enabled

Analyte Concentrations Added to Recovery Check Samples

Concentration Units: Sample

Analyte	Conc Units	Recovery Set1	Recovery Set2	Recovery Set3	Recovery Set4	Recovery Set5	Recovery Set6
As 188.979	mg/L						
As 193.696	mg/L						
Ba 233.527	mg/L						
Cd 226.502	mg/L						
Cd 214.440	mg/L						
Cr 267.716	mg/L						
Pb 220.353	mg/L						
Se 196.026	mg/L						
Se 203.985	mg/L						
Ag 328.068	mg/L						
Ag 338.289	mg/L						
Cu 327.393	mg/L						
Cu 324.752	mg/L						
Ni 231.604	mg/L						
Zn 206.200	mg/L						
Be 313.107	mg/L						
Sb 206.836	mg/L						
Tl 190.801	mg/L						
Co 228.616	mg/L						
Mn 257.610	mg/L						
Mn 259.372	mg/L						
Mn 260.568	mg/L						
V 292.402	mg/L						
K 766.490	mg/L						
Na 330.237	mg/L						
Al 308.215	mg/L						
Al 394.401	mg/L						
Al 237.313	mg/L						
Fe 273.955	mg/L						
Ca 315.887	mg/L						
Mg 279.077	mg/L						
Mo 202.031	mg/L						
Si 251.611	mg/L						
Sr 232.235	mg/L						
B 249.677	mg/L						
Ti 334.940	mg/L						
Sn 189.927	mg/L						

Method Name: Initial-4 Point

QC Sample Definition

QC	Sample ID	A/S Loc	Count as Sample	Subtract Reagent
QC 1	ICV	3	No	No
QC 2	CRDL	4	No	No
QC 3	HIGH-STD	2	No	No
QC 4	CCV	5	No	No
QC 5	CCB	0	No	No
QC 6	ICSA	7	No	No
QC 7	ICSAB	8	No	No
QC 8	ICB	1	No	No
QC 9	Rinse	0	No	No

QC Samples: Concentrations and Limits

QC 1: ICV Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	2.00	1.800	2.200
As 193.696	mg/L	2.00	1.800	2.200
Ba 233.527	mg/L	0.050	0.0450	0.0550
Cd 226.502	mg/L	0.200	0.1800	0.2200
Cd 214.440	mg/L	0.2	0.18	0.22
Cr 267.716	mg/L	0.100	0.0900	0.1100
Pb 220.353	mg/L	0.50	0.450	0.550
Se 196.026	mg/L	4.00	3.600	4.400
Se 203.985	mg/L	4.00	3.600	4.400
Ag 328.068	mg/L	1	0.9	1.1
Ag 338.289	mg/L	1	0.9	1.1
Cu 327.393	mg/L	0.2	0.18	0.22
Cu 324.752	mg/L	0.2	0.18	0.22
Ni 231.604	mg/L	0.4	0.36	0.44
Zn 206.200	mg/L	0.2	0.18	0.22
Be 313.107	mg/L	0.02	0.018	0.022
Sb 206.836	mg/L	4	3.6	4.4
Tl 190.801	mg/L	4	3.6	4.4
Co 228.616	mg/L	0.5	0.45	0.55
Mn 257.610	mg/L	5	4.5	5.5
Mn 259.372	mg/L	5	4.5	5.5
Mn 260.568	mg/L	5	4.5	5.5
V 292.402	mg/L	0.5	0.45	0.55
K 766.490	mg/L	10.0	9.00	11.00
Na 330.237	mg/L	5.0	4.50	5.50
Al 308.215	mg/L	2	1.8	2.2
Al 394.401	mg/L	2	1.8	2.2
Al 237.313	mg/L	2	1.8	2.2
Fe 273.955	mg/L	1	0.9	1.1
Ca 315.887	mg/L	5	4.5	5.5
Mg 279.077	mg/L	5	4.5	5.5
Mo 202.031	mg/L	0.5	0.45	0.55
Si 251.611	mg/L	5	4.5	5.5

Method Name: Initial-4 Point

Sr 232.235	mg/L	1	0.9	1.1
B 249.677	mg/L	5	4.5	5.5
Ti 334.940	mg/L	0.5	0.45	0.55
Sn 189.927	mg/L	5	4.5	5.5

QC 2: CRDL Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0.4	0.3	0.5
As 193.696	mg/L	0.4	0.3	0.5
Ba 233.527	mg/L	0.01	0.01	0.01
Cd 226.502	mg/L	0.04	0.03	0.05
Cd 214.440	mg/L	0.04	0.032	0.048
Cr 267.716	mg/L	0.02	0.02	0.02
Pb 220.353	mg/L	0.1	0.1	0.1
Se 196.026	mg/L	0.8	0.6	1.0
Se 203.985	mg/L	0.8	0.6	1.0
Ag 328.068	mg/L	0.2	0.16	0.24
Ag 338.289	mg/L	0.2	0.16	0.24
Cu 327.393	mg/L	0.04	0.03	0.05
Cu 324.752	mg/L	0.04	0.03	0.05
Ni 231.604	mg/L	0.08	0.06	0.10
Zn 206.200	mg/L	0.04	0.03	0.05
Be 313.107	mg/L	0.004	0.003	0.005
Sb 206.836	mg/L	0.8	0.6	1.0
Tl 190.801	mg/L	0.8	0.6	1.0
Co 228.616	mg/L	0.1	0.1	0.1
Mn 257.610	mg/L	1	0.8	1.2
Mn 259.372	mg/L	1	0.8	1.2
Mn 260.568	mg/L	1	0.8	1.2
V 292.402	mg/L	0.1	0.1	0.1
K 766.490	mg/L	2	2	2
Na 330.237	mg/L	1	1	1
Al 308.215	mg/L	0.4	0.3	0.5
Al 394.401	mg/L	0.4	0.3	0.5
Al 237.313	mg/L	0.4	0.3	0.5
Fe 273.955	mg/L	0.2	0.2	0.2
Ca 315.887	mg/L	1	1	1
Mg 279.077	mg/L	1	1	1
Mo 202.031	mg/L	0.1	0.1	0.1
Si 251.611	mg/L	1	1	1
Sr 232.235	mg/L	0.2	0.16	0.24
B 249.677	mg/L	1	0.8	1.2
Ti 334.940	mg/L	0.1	0.08	0.12
Sn 189.927	mg/L	1	0.8	1.2

QC 3: HIGH-STD Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	20.0	18.00	22.00
As 193.696	mg/L	20.0	18.00	22.00
Ba 233.527	mg/L	2.00	1.800	2.200
Cd 226.502	mg/L	2.00	1.800	2.200

Method Name: Initial-4 Point

Cd 214.440	mg/L	2	1.8	2.2
Cr 267.716	mg/L	2	2	2
Pb 220.353	mg/L	20.0	18.00	22.00
Se 196.026	mg/L	20.0	18.00	22.00
Se 203.985	mg/L	20.0	18.00	22.00
Ag 328.068	mg/L	20	18.0	22.0
Ag 338.289	mg/L	20	18.0	22.0
Cu 327.393	mg/L	2.00	1.800	2.200
Cu 324.752	mg/L	2.00	1.800	2.200
Ni 231.604	mg/L	2.00	1.800	2.200
Zn 206.200	mg/L	2.00	1.800	2.200
Be 313.107	mg/L	2.00	1.800	2.200
Sb 206.836	mg/L	20.0	18.00	22.00
Tl 190.801	mg/L	20.0	18.00	22.00
Co 228.616	mg/L	2.00	1.800	2.200
Mn 257.610	mg/L	20	18.0	22.0
Mn 259.372	mg/L	20	18.0	22.0
Mn 260.568	mg/L	20	18.0	22.0
V 292.402	mg/L	2.00	1.800	2.200
K 766.490	mg/L	40.0	36.00	44.00
Na 330.237	mg/L	60.0	54.00	66.00
Al 308.215	mg/L	2.00	1.800	2.200
Al 394.401	mg/L	2.00	1.800	2.200
Al 237.313	mg/L	2.00	1.800	2.200
Fe 273.955	mg/L	2.00	1.800	2.200
Ca 315.887	mg/L	20.0	18.00	22.00
Mg 279.077	mg/L	20.0	18.00	22.00
Mo 202.031	mg/L	2.00	1.800	2.200
Si 251.611	mg/L	20	18	22
Sr 232.235	mg/L	20	18.0	22.0
B 249.677	mg/L	20	18.0	22.0
Ti 334.940	mg/L	2	1.8	2.2
Sn 189.927	mg/L	20	18.0	22.0

QC 4: CCV Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	5.00	4.500	5.500
As 193.696	mg/L	5.00	4.500	5.500
Ba 233.527	mg/L	0.500	0.4500	0.5500
Cd 226.502	mg/L	0.5	0.45	0.55
Cd 214.440	mg/L	0.5	0.45	0.55
Cr 267.716	mg/L	0.500	0.4500	0.5500
Pb 220.353	mg/L	5.00	4.500	5.500
Se 196.026	mg/L	5.00	4.500	5.500
Se 203.985	mg/L	5.00	4.500	5.500
Ag 328.068	mg/L	5	4.5	5.5
Ag 338.289	mg/L	5	4.5	5.5
Cu 327.393	mg/L	0.5	0.45	0.55
Cu 324.752	mg/L	0.500	0.4500	0.5500
Ni 231.604	mg/L	0.500	0.4500	0.5500
Zn 206.200	mg/L	0.500	0.4500	0.5500
Be 313.107	mg/L	0.5	0.45	0.55
Sb 206.836	mg/L	5.00	4.500	5.500
Tl 190.801	mg/L	5.00	4.500	5.500
Co 228.616	mg/L	0.500	0.4500	0.5500

Method Name: Initial-4 Point

Mn 257.610	mg/L	5	4.5	5.5
Mn 259.372	mg/L	5	4.5	5.5
Mn 260.568	mg/L	5	4.5	5.5
V 292.402	mg/L	0.500	0.4500	0.5500
K 766.490	mg/L	10.00	9.000	11.000
Na 330.237	mg/L	15.00	13.500	16.500
Al 308.215	mg/L	0.500	0.4500	0.5500
Al 394.401	mg/L	0.5	0.45	0.55
Al 237.313	mg/L	0.5	0.45	0.55
Fe 273.955	mg/L	0.500	0.4500	0.5500
Ca 315.887	mg/L	5.00	4.500	5.500
Mg 279.077	mg/L	5.00	4.500	5.500
Mo 202.031	mg/L	0.500	0.4500	0.5500
Si 251.611	mg/L	5.00	4.500	5.500
Sr 232.235	mg/L	5	4.5	5.5
B 249.677	mg/L	5	4.5	5.5
Ti 334.940	mg/L	0.5	0.45	0.55
Sn 189.927	mg/L	5	4.5	5.5

QC 5: CCB Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-1	1
As 193.696	mg/L	0	-1	1
Ba 233.527	mg/L	0	-1	1
Cd 226.502	mg/L	0	-1	1
Cd 214.440	mg/L	0	-1	1
Cr 267.716	mg/L	0	-1	1
Pb 220.353	mg/L	0	-1	1
Se 196.026	mg/L	0	-1	1
Se 203.985	mg/L	0	-1	1
Ag 328.068	mg/L	0	-1	1
Ag 338.289	mg/L	0	-1	1
Cu 327.393	mg/L	0	-1	1
Cu 324.752	mg/L	0	-1	1
Ni 231.604	mg/L	0	-1	1
Zn 206.200	mg/L	0	-1	1
Be 313.107	mg/L	0	-1	1
Sb 206.836	mg/L	0	-1	1
Tl 190.801	mg/L	0	-1	1
Co 228.616	mg/L	0	-1	1
Mn 257.610	mg/L	0	-1	1
Mn 259.372	mg/L	0	-1	1
Mn 260.568	mg/L	0	-1	1
V 292.402	mg/L	0	-1	1
K 766.490	mg/L	0	-1	1
Na 330.237	mg/L	0	-1	1
Al 308.215	mg/L	0	-1	1
Al 394.401	mg/L	0	-1	1
Al 237.313	mg/L	0	-1	1
Fe 273.955	mg/L	0	-1	1
Ca 315.887	mg/L	0	-1	1
Mg 279.077	mg/L	0	-1	1
Mo 202.031	mg/L	0	-1	1
Si 251.611	mg/L	0	-1	1
Sr 232.235	mg/L	0	-1	1

Method Name: Initial-4 Point

B 249.677	mg/L	0	-1	1
Ti 334.940	mg/L	0	-1	1
Sn 189.927	mg/L	0	-1	1

QC 6: ICSA Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-0.1	0.1
As 193.696	mg/L	0	-0.1	0.1
Ba 233.527	mg/L	0	-0.1	0.1
Cd 226.502	mg/L	0	-0.1	0.1
Cd 214.440	mg/L	0	-0.1	0.1
Cr 267.716	mg/L	0	-0.1	0.1
Pb 220.353	mg/L	0	-0.1	0.1
Se 196.026	mg/L	0	-0.1	0.1
Se 203.985	mg/L	0	-0.1	0.1
Ag 328.068	mg/L	0	-0.1	0.1
Ag 338.289	mg/L	0	-0.1	0.1
Cu 327.393	mg/L	0	-0.1	0.1
Cu 324.752	mg/L	0	-0.1	0.1
Ni 231.604	mg/L	0	-0.1	0.1
Zn 206.200	mg/L	0	-0.1	0.1
Be 313.107	mg/L	0	-0.1	0.1
Sb 206.836	mg/L	0	-0.1	0.1
Tl 190.801	mg/L	0	-0.1	0.1
Co 228.616	mg/L	0	-0.1	0.1
Mn 257.610	mg/L	0	-0.1	0.1
Mn 259.372	mg/L	0	-0.1	0.1
Mn 260.568	mg/L	0	-0.1	0.1
V 292.402	mg/L	0	-0.1	0.1
K 766.490	mg/L	0	-1	1
Na 330.237	mg/L	100	80	120
Al 308.215	mg/L	120	96	144
Al 394.401	mg/L	120	96	144
Al 237.313	mg/L	120	96	144
Fe 273.955	mg/L	500	400	600
Ca 315.887	mg/L	600	480	720
Mg 279.077	mg/L	300	280	360
Mo 202.031	mg/L	0	-0.1	0.1
Si 251.611	mg/L	0	-1	1
Sr 232.235	mg/L	0	-5	5
B 249.677	mg/L	0	-1	1
Ti 334.940	mg/L	0	-1	1
Sn 189.927	mg/L	0	-1	1

QC 7: ICSAB Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	10	8	12
As 193.696	mg/L	10	8	12
Ba 233.527	mg/L	3	2	4
Cd 226.502	mg/L	3	2	4
Cd 214.440	mg/L	3	2.4	3.6

Method Name: Initial-4 Point

Cr 267.716	mg/L	3	2	4
Pb 220.353	mg/L	10	8	12
Se 196.026	mg/L	5	4	6
Se 203.985	mg/L	5	4	6
Ag 328.068	mg/L	3	2	4
Ag 338.289	mg/L	3	2.4	3.6
Cu 327.393	mg/L	3	2.4	3.6
Cu 324.752	mg/L	3	2	4
Ni 231.604	mg/L	3	2	4
Zn 206.200	mg/L	3	2	4
Be 313.107	mg/L	1	1	1
Sb 206.836	mg/L	10	8	12
Tl 190.801	mg/L	10	8	12
Co 228.616	mg/L	3	2	4
Mn 257.610	mg/L	2	1.6	2.4
Mn 259.372	mg/L	2	1.6	2.4
Mn 260.568	mg/L	2	1.6	2.4
V 292.402	mg/L	3	2	4
K 766.490	mg/L	200	160	240
Na 330.237	mg/L	100	80	120
Al 308.215	mg/L	120	96	144
Al 394.401	mg/L	120	96	144
Al 237.313	mg/L	120	96	144
Fe 273.955	mg/L	500	400	600
Ca 315.887	mg/L	600	480	720
Mg 279.077	mg/L	300	240	360
Mo 202.031	mg/L	3	2	4
Si 251.611	mg/L	2.3	1.84	2.76
Sr 232.235	mg/L	0	-5	5
B 249.677	mg/L	5	4.0	6.0
Ti 334.940	mg/L	10	8.0	12.0
Sn 189.927	mg/L	0	-1	1

QC 8: ICB Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-0.1	0.1
As 193.696	mg/L	0	-0.1	0.1
Ba 233.527	mg/L	0	-0.1	0.1
Cd 226.502	mg/L	0	-0.1	0.1
Cd 214.440	mg/L	0	-0.1	0.1
Cr 267.716	mg/L	0	-0.1	0.1
Pb 220.353	mg/L	0	-0.1	0.1
Se 196.026	mg/L	0	-0.1	0.1
Se 203.985	mg/L	0	-0.1	0.1
Ag 328.068	mg/L	0	-0.1	0.1
Ag 338.289	mg/L	0	-0.1	0.1
Cu 327.393	mg/L	0	-0.1	0.1
Cu 324.752	mg/L	0	-0.1	0.1
Ni 231.604	mg/L	0	-0.1	0.1
Zn 206.200	mg/L	0	-0.1	0.1
Be 313.107	mg/L	0	-0.1	0.1
Sb 206.836	mg/L	0	-0.1	0.1
Tl 190.801	mg/L	0	-0.1	0.1
Co 228.616	mg/L	0	-0.1	0.1
Mn 257.610	mg/L	0	-0.1	0.1

Method Name: Initial-4 Point

Mn 259.372	mg/L	0	-0.1	0.1
Mn 260.568	mg/L	0	-0.1	0.1
V 292.402	mg/L	0	-0.1	0.1
K 766.490	mg/L	0	-1	1
Na 330.237	mg/L	0	-1	1
Al 308.215	mg/L	0	-0.1	0.1
Al 394.401	mg/L	0	-0.1	0.1
Al 237.313	mg/L	0	-0.1	0.1
Fe 273.955	mg/L	0	-0.1	0.1
Ca 315.887	mg/L	0	-0.1	0.1
Mg 279.077	mg/L	0	-0.1	0.1
Mo 202.031	mg/L	0	-0.1	0.1
Si 251.611	mg/L	0	-0.1	0.1
Sr 232.235	mg/L	0	-0.1	0.1
B 249.677	mg/L	0	-1	1
Ti 334.940	mg/L	0	-0.1	0.1
Sn 189.927	mg/L	0	-0.1	0.1

QC 9: Rinse Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-0.1	0.1
As 193.696	mg/L	0	-0.1	0.1
Ba 233.527	mg/L	0	-0.1	0.1
Cd 226.502	mg/L	0	-0.1	0.1
Cd 214.440	mg/L	0	-0.1	0.1
Cr 267.716	mg/L	0	-0.1	0.1
Pb 220.353	mg/L	0	-0.1	0.1
Se 196.026	mg/L	0	-0.1	0.1
Se 203.985	mg/L	0	-0.1	0.1
Ag 328.068	mg/L	0	-0.1	0.1
Ag 338.289	mg/L	0	-0.1	0.1
Cu 327.393	mg/L	0	-0.1	0.1
Cu 324.752	mg/L	0	-0.1	0.1
Ni 231.604	mg/L	0	-0.1	0.1
Zn 206.200	mg/L	0	-0.1	0.1
Be 313.107	mg/L	0	-0.1	0.1
Sb 206.836	mg/L	0	-0.1	0.1
Tl 190.801	mg/L	0	-0.1	0.1
Co 228.616	mg/L	0	-0.1	0.1
Mn 257.610	mg/L	0	-0.1	0.1
Mn 259.372	mg/L	0	-0.1	0.1
Mn 260.568	mg/L	0	-0.1	0.1
V 292.402	mg/L	0	-0.1	0.1
K 766.490	mg/L	0	-0.1	0.1
Na 330.237	mg/L	0	-0.1	0.1
Al 308.215	mg/L	0	-0.1	0.1
Al 394.401	mg/L	0	-0.1	0.1
Al 237.313	mg/L	0	-0.1	0.1
Fe 273.955	mg/L	0	-0.1	0.1
Ca 315.887	mg/L	0	-0.1	0.1
Mg 279.077	mg/L	0	-0.1	0.1
Mo 202.031	mg/L	0	-0.1	0.1
Si 251.611	mg/L	0	-0.1	0.1
Sr 232.235	mg/L	0	-0.1	0.1
B 249.677	mg/L	0	-0.1	0.1

Method Name: Initial-4 Point

Ti 334.940	mg/L	0	-0.1	0.1
Sn 189.927	mg/L	0	-0.1	0.1

Schedule for QC Analyses

ID	QC Sample	After InitCal	After Recal	Periodic	Freq	AtEnd
QC1	ICV	No	No	No	1	No
QC2	CRDL	No	No	No	1	No
QC3	HIGH-STD	No	No	No	1	No
QC4	CCV	No	No	No	1	No
QC5	CCB	No	No	No	1	No
QC6	ICSA	No	No	No	1	No
QC7	ICSAB	No	No	No	1	No
QC8	ICB	No	No	No	1	No
QC9	Rinse	No	No	No	1	No

Periodic timing of Analyses

Frequency : Same for all QC's : 1

Failure Actions for After-Calibration QC's

QC	Sample ID	Times to Retry QC	When All Tries Fail	Additional Message
QC1	(Not Scheduled)			
QC2	(Not Scheduled)			
QC3	(Not Scheduled)			
QC4	(Not Scheduled)			
QC5	(Not Scheduled)			
QC6	(Not Scheduled)			
QC7	(Not Scheduled)			
QC8	(Not Scheduled)			
QC9	(Not Scheduled)			

Failure Actions for Periodic QC's

QC	Sample ID	Times to Retry QC	When All Tries Fail	Additional Message
QC1	(Not Scheduled)			
QC2	(Not Scheduled)			
QC3	(Not Scheduled)			
QC4	(Not Scheduled)			
QC5	(Not Scheduled)			
QC6	(Not Scheduled)			
QC7	(Not Scheduled)			
QC8	(Not Scheduled)			
QC9	(Not Scheduled)			

Failure Action for At-End QC's

Method Name: Initial-4 Point

QC	Sample ID	Times to Retry QC	When All Tries Fail	Additional Message
QC1	(Not Scheduled)			
QC2	(Not Scheduled)			
QC3	(Not Scheduled)			
QC4	(Not Scheduled)			
QC5	(Not Scheduled)			
QC6	(Not Scheduled)			
QC7	(Not Scheduled)			
QC8	(Not Scheduled)			
QC9	(Not Scheduled)			

Maximum Retries After QC Failure

After a group of standards or unknowns has been reanalyzed 1 times, then Continue

---

Options :

Include in Results Display and Printed Log:

Headers:
 * Analysis Header
   Method Header (Short)
 * Sample Header (Start each sample on a new page)

Sample Data Items:

Auto Integration Report	* Analysis List
Replicate Data	* Calibration Summary
* Means and Statistics	Matrix Test Reports

Save with Results
 * Spectral Data
 * Copy of Method

Remarks

Air Monitoring Report – PM_{10} 2003

Prepared for:

The Weyerhaeuser Company **and** **E.I. duPont de Nemours and Company**

Prepared by:

PIONEER Technologies Corporation & West Shore Corporation, NW

January 2004

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION 1-1

1.1 Introduction 1-1
1.2 Objectives 1-1

SECTION 2 – SUMMARY OF ACTIVITIES 2-1

2.1 Sampling Approach 2-1
2.1.1 Sampling Procedure 2-1
2.1.2 Sample Locations 2-1
2.1.3 Analytical Methods 2-1
2.2 Identification of Health-Based Standards 2-1

SECTION 3 – RESULTS 3-1

3.1 Arsenic, and Lead Sampling Results 3-1

SECTION 4 – CONCLUSIONS 4-1

REFERENCES 5-1

APPENDIX A – INSTRUMENT CALIBRATION AND SAMPLING PROCEDURES 5-1

APPENDIX B – ANALYTICAL METHODS 6-1

TABLES

Table 2-1 – Derivation of Health-Based Standard for Arsenic 2-2
Table 2-2 – Health-Based Concentrations 2-3
Table 3-1 - Arsenic and Lead Sampling Results 3-2

FIGURES

Figure 2-1 – PM_{10} Air Monitor 2-4
Figure 2-2 – PM_{10} Monitor Locations 2-5

SECTION 1 – INTRODUCTION

1.1 Introduction

This report presents the results of arsenic and lead analysis performed on respirable airborne particulate (i.e., particulate matter less than 10 microns in size or PM_{10}) sampling that was conducted during soil interim corrective actions (ICA) at the former DuPont Works Site in DuPont, Washington between August 18 and November 14, 2003. The soil ICAs involved excavation of 1 foot of contaminated soil at various locations across the entire site. The PM_{10} sampling presented in this report was performed in addition to the work place air monitoring done to document worker protection. The purpose of the PM_{10} sampling was to supplement sampling conducted in 2002 (PIONEER and WSNW, 2003), and provide additional documentation of the effectiveness of engineering controls in limiting generation of respirable airborne particulate during on-Site excavation and remediation work.

1.2 Objectives

The objectives of the PM_{10} monitoring program were the following:

- Quantify the amount of arsenic and lead present in the PM_{10} samples;
- Compare sample results to health-based standards; and
- Evaluate the effectiveness of engineering controls used at the Site to suppress dust.

SECTION 2 – SUMMARY OF ACTIVITIES

2.1 Sampling Approach

The sampling approach, including sampling procedure, sample locations, and analytical methods are described below.

2.1.1 Sampling Procedure

Sampling for PM_{10} was conducted using Hi-Volume particulate samplers (GMW Model IP 10-8000 PM-10) obtained from MFG Incorporated (See Figure 2-1). Prior to use in the field, these samplers were assembled, checked for leaks, and calibrated to identify the appropriate flow rate set point for each sampler. Information regarding the calibration of each individual sampler is contained in Appendix A.

Following calibration, the monitors were attached to wooden platforms and transported to the monitoring locations. At the start of the work shift every morning, the PM_{10} samplers were inspected and set up for the day. At the same time the previous day's samples were removed from the samplers and sent to Severn Trent Laboraties, Inc. (STL) for analysis. A generator was used to power the samplers. The procedure followed to inspect the samplers and set up for daily sampling is contained in Appendix A.

2.1.2 Sample Locations

PM_{10} samplers were set up adjacent to daily excavation activities. The daily sampler locations are presented in Figure 2-2. Samplers were located directly adjacent to excavation activities to enable measurement of "worst case" particulate levels. Samplers were moved regularly to stay adjacent to the excavation activities as they progressed along the property boundary. Depending on the size of the area to be excavated, 1 to 2 PM_{10} samplers were set up each day during excavation activities. Samples were collected on a 24-hour basis.

2.1.3 Analytical Methods

The sample filters were dessicated and weighed by STL and then placed in the sampler at the beginning of the sampling period. Specifically, the filters were pre-conditioned at a controlled temperature and relative humidity and were weighed in the laboratory prior to sample collection in the field. The sample filters were removed daily and sent to STL for analysis of arsenic and lead. Samples were analyzed in accordance with applicable EPA methods contained in 40 CFR Chapter 1, Part 50. Following sampling, the filters were weighed again at the laboratory. Using temperature, barometric pressure conditions, and the differential pressure of the filter averaged during the sampling period, the total volume of air sampled in standard volume conditions was calculated. Based on the determination of total air volume, and pre-and post filter weight, PM_{10} was calculated. After PM_{10} was calculated, arsenic and lead levels were determined using EPA Method 6010. The EPA analytical methods used for metals analysis are described in Appendix B.

2.2 Identification of Health-Based Standards

To ensure that arsenic and lead-containing particulates generated during excavation and remediation activities did not pose a threat to site workers or to the general population who might

work or live adjacent to the Site, measured concentrations of arsenic and lead were compared to health-based concentrations. The air concentrations chosen were developed for protection of the general public, including potentially sensitive individuals such as children and the elderly.

The preferred health-based concentrations were the National Ambient Air Quality Standards (NAAQS), developed by the Environmental Protection Agency. Because there was not a NAAQS available for arsenic, a risk-based air quality concentration was determined based on the methodology presented in the Washington State Model Toxics Control Act (MTCA). The MTCA default exposure parameter values were developed to protect a resident who might receive continuous exposure for 30 years, and was therefore not directly applicable to off-Site exposure that might result from the shorter duration Site remediation activities, estimated to be a maximum duration of 1 year. Therefore, Site-specific exposure parameters were used to derive the health-based air concentration for arsenic. The factors and equation used to derive the health-based concentration for arsenic are shown in Table 2-1. The health-based concentrations used to evaluate the site data are presented in Table 2-2.

Table 2-1 – Derivation of Health-Based Standard for Arsenic

$$Air\ Cleanup\ Level\ (ug/m^3) = \frac{Risk\ x\ ABW\ x\ AT\ x\ UCF}{CPF\ x\ BR\ x\ ABS\ x\ ED\ x\ EF}$$

Where:

- Risk = The target acceptable cancer risk (1×10^{-6})
- ABW = Average body weight during the time of exposure (70 kg, for an adult)
- AT = Averaging time for carcinogens (75 years)
- UCF = Unit conversion factor (1,000 *u*g/mg)
- CPF = Cancer potency factor for arsenic [15.05 $(mg/kg\text{-}day)^{-1}$]
- BR = Breathing Rate (20 m^3/day)
- ABS = Inhalation Absorption Fraction (1.0 – unitless)
- ED = Exposure Duration (1 year- Site Specific)
- EF = Exposure Frequency (1.0 – unitless)

Resulting Health-Based Standard for Arsenic: 0.017 ug/m^3

Note:
Equation was taken from the Model Toxics Control Act (MTCA), Chapter 173-340-750(3)(B).

Table 2-2 – Health-Based Concentrations

Contaminant	Health-Based Concentration (ug/m^3)	Source
Arsenic	0.017	Site-specific[1]
Lead	1.5	NAAQS[2]

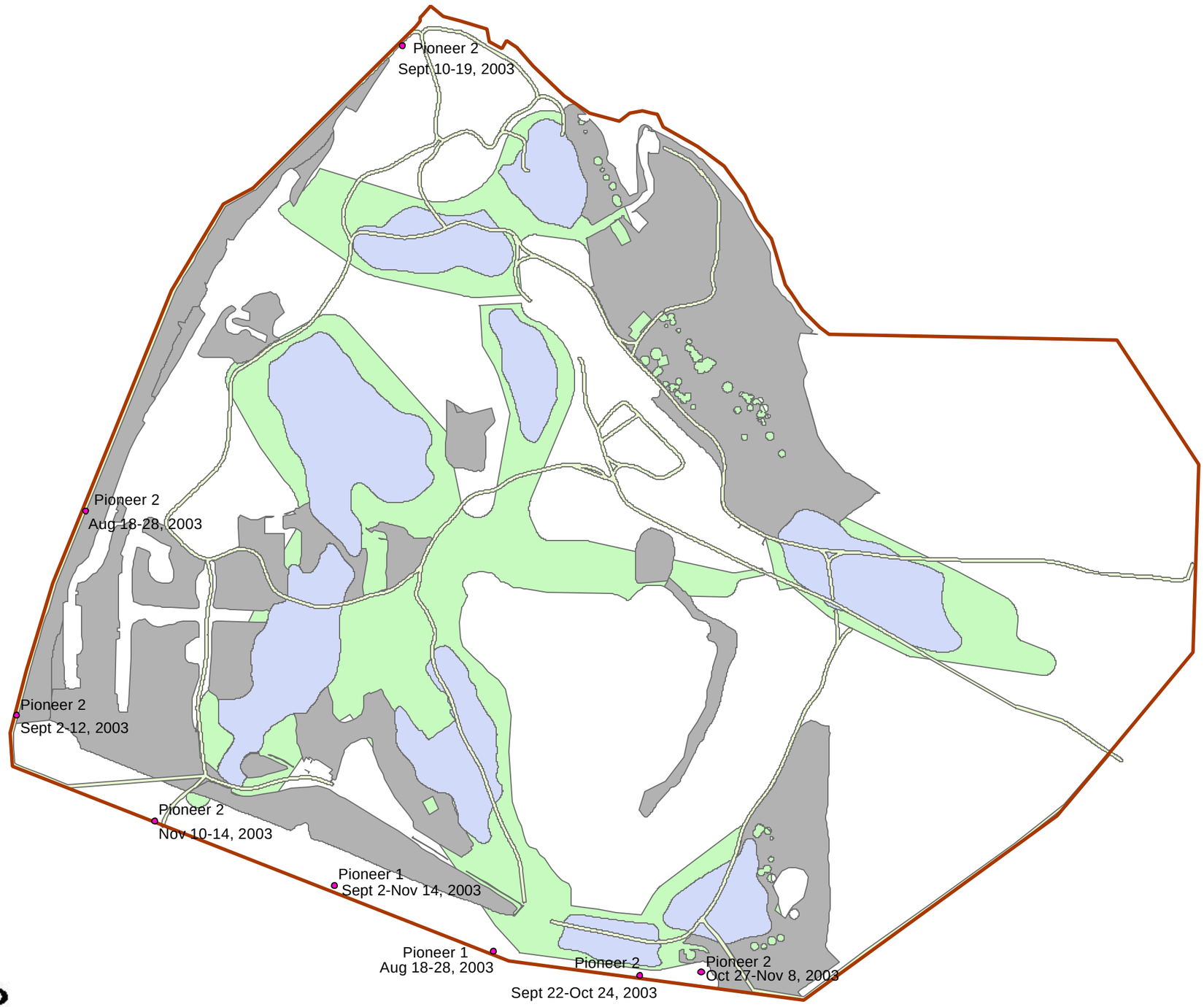
Notes:

[1] Arsenic level was derived based on an assumed exposure duration of one year. All other exposure factors were based on MTCA default values (Chapter 173-340-750 (3)(B)).

[2] Value is from the National Ambient Air Quality Standards (NAAQS), and is both a primary and secondary standard established under the EPA's Clean Air Act, as amended in 1990. Primary Standards are established to protect public health, including the health of sensitive individuals, such as asthmatics, children, and the elderly. Secondary standards are established to protect the public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The value for lead is a quarterly average concentration.

Figure 2-1 – PM_{10} Air Monitor

Figure 2-2 – PM_{10} Monitor Locations



Legend

- PM10 Locations 2003
- Consent Decree Boundary
- Roads
- Placement Area
- Mass Excavations as of Nov 8th
- golf course footprint

Notes

PM 10 Monitor Locations

Former DuPont Works Site
March 2007

Figure2-2

SECTION 3 – RESULTS

3.1 Arsenic, and Lead Sampling Results

Arsenic and lead sampling results are shown in Table 3-1. As shown in this table, arsenic and lead were not detected in any of the samples, and the quantitation limits for all samples were below the associated health-based concentrations of arsenic and lead.

Table 3-1 - Arsenic and Lead Sampling Results

Laboratory Number	Sample Number	Date Sampled	Arsenic Results (*ug*/std m^3)	Lead Results (*ug*/std m^3)
115581	Air-P1-7048911	8/19/2003	0.007 U	0.007 U
115581	Air-P2-7048912	8/19/2003	0.007 U	0.007 U
115618	Air-P1-7048913	8/20/2003	0.006 U	0.006 U
115618	Air-P2-7048914	8/20/2003	0.006 U	0.006 U
115685	Air-P1-7048915	8/21/2003	0.005 U	0.005 U
115685	Air-P2-7048916	8/21/2003	0.005 U	0.005 U
115685	Air-P1-7048917	8/21/2003	0.004 U	0.004 U
115775	Air-P1-7048919	8/26/2003	0.006 U	0.006 U
115775	Air-P1-7048920	8/27/2003	0.006 U	0.006 U
115775	Air-P2-7048921	8/27/2003	0.006 U	0.006 U
115775	Air-P1-7048902	8/28/2003	0.006 U	0.006 U
115775	Air-P2-7048903	8/29/2003	0.006 U	0.006 U
115922	7048904	9/3/2003	0.0067 U	0.0067 U
115922	7048905	9/3/2003	0.0067 U	0.0067 U
115930	7048906	9/4/2003	0.007 U	0.007 U
115930	7048907	9/4/2003	0.007 U	0.007 U
115983	7048908	9/5/2003	0.006 U	0.006 U
115983	7048909	9/5/2003	0.006 U	0.006 U
115991	7048910	9/8/2003	0.007 U	0.007 U
115991	7048921	9/8/2003	0.007 U	0.007 U
116047	7048922	9/10/2003	0.006 U	0.006 U
116047	7048923	9/10/2003	0.006 U	0.006 U
116071	7048924	9/11/2003	0.006 U	0.006 U
116071	7048925	9/11/2003	0.006 U	0.006 U
116121	7048926	9/12/2003	0.006 U	0.006 U
116121	7048927	9/12/2003	0.006 U	0.006 U
116195	7048929	9/16/2003	0.008 U	0.008 U
116195	7048928	9/16/2003	0.006 U	0.006 U
116278	7048931	9/17/2003	0.006 U	0.006 U
116278	7048930	9/17/2003	0.006 U	0.006 U
116284	7048932	9/18/2003	0.006 U	0.006 U
116284	7048933	9/18/2003	0.006 U	0.006 U
116382	7048934	9/19/2003	0.006 U	0.006 U
116382	7048935	9/19/2003	0.006 U	0.006 U
116382	7048936	9/23/2003	0.006 U	0.006 U
116382	7048937	9/23/2003	0.006 U	0.006 U
116545	7048942	9/26/2003	0.0066 U	0.0066 U
116545	7048938	9/24/2003	0.0066 U	0.0066 U

Table 3-1 - Arsenic and Lead Sampling Results

Laboratory Number	Sample Number	Date Sampled	Arsenic Results (*u*g/std m^3)	Lead Results (*u*g/std m^3)
116545	7048939	9/24/2003	0.0066 U	0.0066 U
116545	7048940	9/25/2003	0.0065 U	0.0065 U
116545	7048941	9/25/2003	0.0066 U	0.0066 U
116629	7048943	9/30/2003	0.0066 U	0.0066 U
116629	7048944	10/1/2003	0.0066 U	0.0066 U
116629	7048945	10/2/2003	0.0066 U	0.0066 U
117261	7048946	10/24/2003	0.006 U	0.006 U
117261	7048947	10/24/2003	0.006 U	0.006 U
117261	7048948	10/28/2003	0.006 U	0.006 U
117261	7048949	10/28/2003	0.006 U	0.006 U
117516	7048950	11/6/2003	0.006 U	0.006 U
117516	7048953	11/7/2003	0.006 U	0.008 U
117516	7048955	11/6/2003	0.007 U	0.008 U
117516	7048954	11/6/2003	0.007 U	0.008 U
117713	7048956	11/11/2003	0.007 U	0.007 U
117713	7048957	11/11/2003	0.007 U	0.007 U
117713	7048958	11/12/2003	0.006 U	0.006 U
117713	7048959	11/12/2003	0.006 U	0.006 U
117713	7048960	11/13/2003	0.006 U	0.006 U
117713	7048961	11/13/2003	0.006 U	0.006 U
117713	7048962	11/14/2003	0.006 U	0.006 U
117713	7048963	11/14/2003	0.006 U	0.006 U

Note:
Results with a "U" indicate that the analyte was not detected. The numerical value associated with the "U" is the sample quantitation limit.

SECTION 4 – CONCLUSIONS

Based on the sampling results the following conclusions can be made:

- Arsenic and lead were not detected in any samples collected during these ICAs, and the detection limits for each sample were well below the health-based concentrations.
- The engineering controls used during the interim corrective actions were successful in limiting particulate generation.

REFERENCES

PIONEER and WSNW. PIONEER Technologies Corporation (PIONEER) and West Shore Corporation, NW (WSNW). March 2003. Air Monitoring Report – PM_{10} 2002. Former DuPont Works Site, DuPont, Washington.

APPENDIX A – INSTRUMENT CALIBRATION AND SAMPLING PROCEDURES

MFG, Inc.
19203 36th Avenue W., Suite 101
Lynnwood, WA 98036-5772
425/ 921-4000
Fax: 921-4040

consulting
scientists and
engineers

December 15, 2003

Mr. Brad Grimsted
PIONEER Technologies Corporation
2612 Yelm Highway S.E., Suite B
Olympia, WA 98501- 4826

Dear Mr. Grimsted:

As you know, MFG, Inc. (MFG) was retained by PIONEER Technologies Corporation (PIONEER), to provide assistance with an ambient air-monitoring program during this past summer and fall in Dupont, Washington. MFG's participation in the air-monitoring program consisted of delivery, assembly, and calibration of the air samplers, as well as training of PIONEER personnel in the operation of the samplers. This letter and attachments summarize MFG's involvement in the air-monitoring program and provide documentation of air sampler calibration.

Air Sampler Description

Two General Metal Works Hi-Volume particulate samplers (GMW Model GUV-15H PM-10) were utilized for this air-monitoring program. The particulate samplers operate by a simple filtration process. A known volume of air is drawn through a quartz-fiber filter. Before passing through the filter, particles larger than 10 micrometers in mass-mean diameter are aerodynamically removed. The smaller particulate matter (PM-10) is then collected on the filter. Under laboratory conditions, the filter is weighed before and after sampling to determine the mass of PM-10 particles in the volume of air sampled. The mass is then divided by the volume of air to determine the concentration, usually expressed in micrograms per cubic meter ($\mu g/m^3$).

The air volume is an important part of this process. The high volume-sampling device requires over 50,000 cubic feet of air to be drawn through the sampler during the 24-hour period. It is critical that this volume be known to a high degree of accuracy. Equally important is the requirement that the rate of air flow through the sampler be maintained at a constant level so that all portions of the 24-hour sampling period are treated equally. Consequently, strict controls are placed on the air flow through a sampler. Theses controls fall into two categories: time control and flow rate control.

The sampling time in the air samplers are controlled by a Graseby/Anderson digital timer. This timer records the actual duration of the filter exposure. Two separate records of sampler operation and duration are provided, so that the operator can verify that the sample was actually taken as scheduled: digital timer and a Dickson chart recorder. A mechanical dial timer provides a record of the hours of pump operation, and a Dickson chart recorder provides a record of

Printed on recycled paper

pressure drop in the sampler, indicative of flow through the system. The Dickson charts were changed for each sample and then transmitted to the laboratory, along with the filters, as a positive indication of sampler operation.

A volumetric-flow controller controls sampler flow rate. The natural tendency for all filtration devices is to reduce flow rate as particulate matter increases and the pressure drop increases across the filter. To offset this effect, the air is drawn through a critical orifice to maintain constant airflow. The pressure drop across the critical orifice is so high that flow has already passed the critical point and further changes in pressure drop do not cause any change in flow rate. The actual flow is critical for particle fractionation.

In addition to the timers, chart recorders, and flow controllers, measurements of pressure drop are made by the operator before and after each sampling event to determine the flow rate for each sampling period, which varies slightly with temperature and barometric pressure. Based on flow rates and local temperature and pressure readings from Olympia, PIONEER personnel calculated concentration data.

Site Visits

MFG visited the Dupont site on July 9, 2003 to assemble, calibrate, and train PIONEER personnel on sampler operation. Following assembly of the samplers, MFG first performed a leak check and then with the use of a Thermo Andersen calibration orifice (Serial Number W43) calibrated the PM-10 samplers.

On September 30, 2003 a second visit by MFG was conducted to perform motor maintenance on the samplers. Following the maintenance, MFG performed a flow audit of the samplers.

The third and final visit to the site occurred on November 24, 2003 marking the completion of the air-monitoring program. The samplers were audited, cleaned, and dismantled.

Individual sampler calibration data sheets and the W43 orifice calibration certification are attachments to this summary. Please do not hesitate to call me if you have any questions 425.921.4000.

Regards,

Kris Hansen

Kris Hansen
Environmental Specialist

Project: Pioneer Tech.

PN: 9746 2003

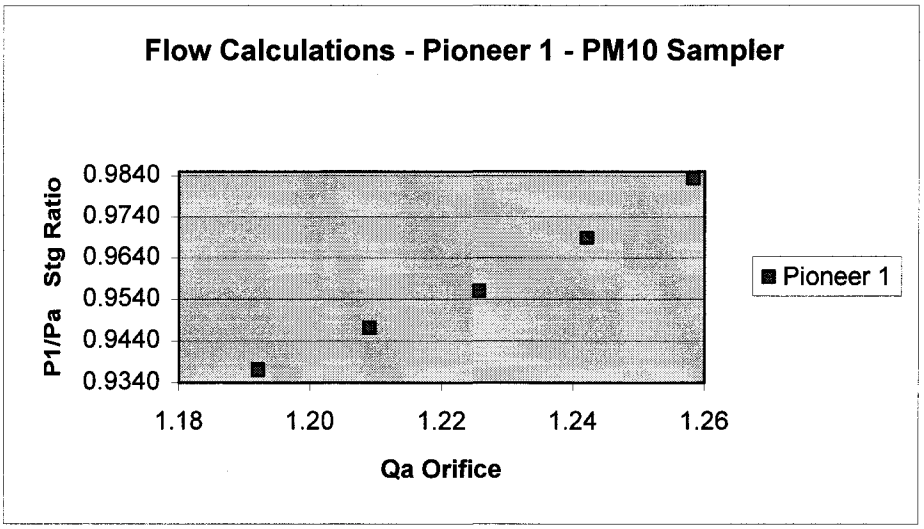
Sampler ID Pioneer 1 (P-1297)

Date:7/9/03

Qa Orifice={[dH20 (Ta/Pa)]1/2 - b}{1/m}

Ta	Temp K	292	W43 m	0.97378
Pa	Bp mm Hg	760	W43 b	-0.00121

Point	Orifice Press. Drop Manometer In H20	Sampler Stag. Press Manometer In H20	Qa Orifice m3/min	Stagnation Pressure mm Hg	Absolute Stg Pressure Pa - dPstg mm Hg	Stagnation Pressure Ratio P1/Pa mm Hg	Qa Orifice (Ta)^0.5
1	3.9	6.8	1.2583	12.7	747.3	0.9833	0.0736
2	3.8	12.7	1.2421	23.7	736.3	0.9688	0.0727
3	3.7	17.9	1.2256	33.4	726.6	0.9560	0.0717
4	3.6	21.5	1.2090	40.2	719.8	0.9472	0.0708
5	3.5	25.6	1.1921	47.8	712.2	0.9371	0.0698
6	0	0	0.0012	0.0	760.0	1.0000	0.0001



Correlation	0.99413756
Slope	11.7626985
Y-intercept	0.11493774

Project: Pioneer Tech.

PN: 9746 2003

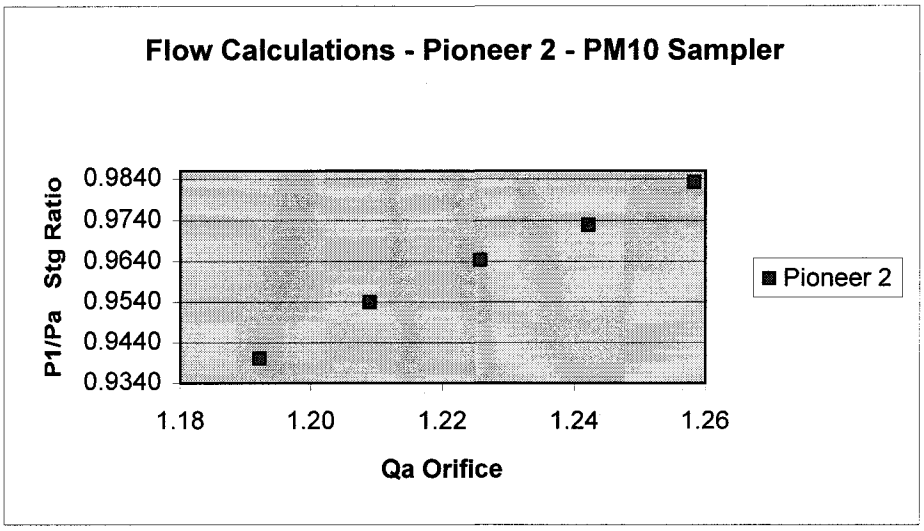
Sampler ID Pioneer 2 (P-1202)

Date:7/9/03

Qa Orifice={[dH20 (Ta/Pa)]1/2 - b}{1/m}

Ta	Temp K	292	W43 m	0.97378
Pa	Bp mm Hg	760	W43 b	-0.00121

Point	Orifice Press. Drop Manometer In H20	Sampler Stag. Press Manometer In H20	Qa Orifice m3/min	Stagnation Pressure mm Hg	Absolute Stg Pressure Pa - dPstg mm Hg	Stagnation Pressure Ratio P1/Pa mm Hg	Qa Orifice (Ta)^0.5
1	3.9	6.8	1.2583	12.7	747.3	0.9833	0.0736
2	3.8	11	1.2421	20.5	739.5	0.9730	0.0727
3	3.7	14.5	1.2256	27.1	732.9	0.9644	0.0717
4	3.6	18.7	1.2090	34.9	725.1	0.9540	0.0708
5	3.5	24.4	1.1921	45.6	714.4	0.9400	0.0698
6	0	0	0.0012	0.0	760.0	1.0000	0.0001



Correlation	0.99659269
Slope	10.8900499
Y-intercept	0.18199001

CLIENT	PIONEER TECHNOLOGIES	DATE	9/30/2003
SITE	DUPONT - Pioneer 1	TIME	1200 PST
MODEL	GMW-PM10-VFC	Pa (mm Hg)	760
S/N	P-1297	Ta (deg K)	299
OPERATOR	B.DOE		

Orifice S/N W43 Orifice Calibration Date 4/7/2003

Orifice Calibration Eq. 1/0.97378(dH * Ta/Pa)^0.5 - (-0.00121)

Orif(dH2O) 3.90 Qa(Audit) a 1.2732 (m3/min)

	WITH ORIFICE		WITHOUT ORIFICE	
Stagnation Pressure (dPstg)	12.5	(mm Hg)	27.4	(mm Hg)
Absolute Stagnation Pressure (P1)	747.5	(mm Hg)	732.6	(mm Hg)
Stagnation Pressure Ratio (P1/Pa)	0.984		0.964	
Qa(Sampler) c	1.283	(m3/min)	1.255	(m3/min)

Audit Flow Rate Percent Difference d	0.77 %
Qa(Corrected Sampler) e	1.2453 (m3/min)
Design Flow Rate Percent Difference f	9.91 %

a Qa(Audit) is calcualted by substituting dH20 into Orifice Equation where Tstd = 298.2 deg K and Pstd = 760 mm Hg

b P1 = Pa - dPstg Note: (mm Hg) = 25.4 * {dPstg(in H2O)/13.6}

c Determine Qa(Sampler) from "LOOK-UP" Table (or from alternate calib. equation relationship)

d QC % Difference = [{Qa(Sampler - Qa(Orifice)}/Qa(Orifice)] * 1where Qa(Sampler) is measured with the orifice installed

e Qa(Corrected Sampler) = Qa(Sampler) * [(100 - QC % diff)/100] where Qa(Sampler) is measured without the orifice installed

f Design Flow Rate % Difference = [{Qa(Corrected Sampler) - 1.133}/1.133] * 100

CLIENT	PIONEER TECHNOLOGIES	DATE	9/30/2003
SITE	DUPONT - Pioneer 2	TIME	1115 pst
MODEL	GMW-PM10-VFC	Pa (mm Hg)	760
S/N	P-1202	Ta (deg K)	299
OPERATOR	B.DOE		

Orifice S/N W43 Orifice Calibration Date 4/7/2003

Orifice Calibration Eq. 1/0.97378(dH * Ta/Pa)^0.5 - (-0.00121)

Orif(dH2O) 3.80 Qa(Audit) a 1.2568 (m3/min)

	WITH ORIFICE		WITHOUT ORIFICE	
Stagnation Pressure (dPstg)	12.7	(mm Hg)	27.3	(mm Hg)
Absolute Stagnation Pressure (P1)	747.3	(mm Hg)	732.7	(mm Hg)
Stagnation Pressure Ratio (P1/Pa)	0.983		0.964	
Qa(Sampler) c	1.285	(m3/min)	1.258	(m3/min)

Audit Flow Rate Percent Difference d	2.24 %
Qa(Corrected Sampler) e	1.2298 (m3/min)
Design Flow Rate Percent Difference f	8.55 %

a Qa(Audit) is calcualted by substituting dH20 into Orifice Equation where Tstd = 298.2 deg K and Pstd = 760 mm Hg

b P1 = Pa - dPstg Note: (mm Hg) = 25.4 * {dPstg(in H2O)/13.6}

c Determine Qa(Sampler) from "LOOK-UP" Table (or from alternate calib. equation relationship)

d QC % Difference = [{Qa(Sampler - Qa(Orifice)}/Qa(Orifice)] * 1where Qa(Sampler) is measured with the orifice installed

e Qa(Corrected Sampler) = Qa(Sampler) * [(100 - QC % diff)/100] where Qa(Sampler) is measured without the orifice installed

f Design Flow Rate % Difference = [{Qa(Corrected Sampler) - 1.133}/1.133] * 100

CLIENT	PIONEER TECHNOLOGIES	DATE	11/24/2003
SITE	DUPONT - Pioneer 1	TIME	1200 PST
MODEL	GMW-PM10-VFC	Pa (mm Hg)	760
S/N	P-1297	Ta (deg K)	280
OPERATOR	B.DOE		

Orifice S/N W43 Orifice Calibration Date 4/7/2003

Orifice Calibration Eq. 1/0.97378(dH * Ta/Pa)^0.5 - (-0.00121)

Orif(dH2O) 3.80 Qa(Audit) a 1.2163 (m3/min)

	WITH ORIFICE		WITHOUT ORIFICE	
Stagnation Pressure (dPstg)	12.5	(mm Hg)	24.3	(mm Hg)
Absolute Stagnation Pressure (P1)	747.5	(mm Hg)	735.7	(mm Hg)
Stagnation Pressure Ratio (P1/Pa)	0.984		0.968	
Qa(Sampler) c	1.246	(m3/min)	1.224	(m3/min)

Audit Flow Rate Percent Difference d	2.44 %
Qa(Corrected Sampler) e	1.1941 (m3/min)
Design Flow Rate Percent Difference f	5.40 %

a Qa(Audit) is calcualted by substituting dH20 into Orifice Equation where Tstd = 298.2 deg K and Pstd = 760 mm Hg

b P1 = Pa - dPstg Note: (mm Hg) = 25.4 * {dPstg(in H2O)/13.6}

c Determine Qa(Sampler) from "LOOK-UP" Table (or from alternate calib. equation relationship)

d QC % Difference = [{Qa(Sampler - Qa(Orifice)}/Qa(Orifice)] * 1where Qa(Sampler) is measured with the orifice installed

e Qa(Corrected Sampler) = Qa(Sampler) * [(100 - QC % diff)/100] where Qa(Sampler) is measured without the orifice installed

f Design Flow Rate % Difference = [{Qa(Corrected Sampler) - 1.133}/1.133] * 100

CLIENT	PIONEER TECHNOLOGIES	DATE	11/24/2003
SITE	DUPONT - Pioneer 2	TIME	1230 pst
MODEL	GMW-PM10-VFC	Pa (mm Hg)	760
S/N	P-1202	Ta (deg K)	280
OPERATOR	B.DOE		

Orifice S/N W43 Orifice Calibration Date 4/7/2003

Orifice Calibration Eq. 1/0.97378(dH * Ta/Pa)^0.5 - (-0.00121)

Orif(dH2O) 3.90 Qa(Audit) a 1.2322 (m3/min)

	WITH ORIFICE		WITHOUT ORIFICE	
Stagnation Pressure (dPstg)	12.7	(mm Hg)	24.3	(mm Hg)
Absolute Stagnation Pressure (P1)	747.3	(mm Hg)	735.7	(mm Hg)
Stagnation Pressure Ratio (P1/Pa)	0.983		0.968	
Qa(Sampler) c	1.246	(m3/min)	1.227	(m3/min)

Audit Flow Rate Percent Difference d	1.12 %
Qa(Corrected Sampler) e	1.2133 (m3/min)
Design Flow Rate Percent Difference f	7.08 %

a Qa(Audit) is calcualted by substituting dH20 into Orifice Equation where Tstd = 298.2 deg K and Pstd = 760 mm Hg

b P1 = Pa - dPstg Note: (mm Hg) = 25.4 * {dPstg(in H2O)/13.6}

c Determine Qa(Sampler) from "LOOK-UP" Table (or from alternate calib. equation relationship)

d QC % Difference = [{Qa(Sampler - Qa(Orifice)}/Qa(Orifice)] * 1where Qa(Sampler) is measured with the orifice installed

e Qa(Corrected Sampler) = Qa(Sampler) * [(100 - QC % diff)/100] where Qa(Sampler) is measured without the orifice installed

f Design Flow Rate % Difference = [{Qa(Corrected Sampler) - 1.133}/1.133] * 100

TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5028A

Date - Apr 07, 2003 Rootsmeter S/N 9833620 Ta (K) - 292
Operator Tisch Orifice I.D. - W43 Pa (mm) - 749.3

PLATE OR VDC #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.2680	4.3	1.50
2	NA	NA	1.00	0.9730	7.2	2.50
3	NA	NA	1.00	0.8880	8.6	3.00
4	NA	NA	1.00	0.8230	10.0	3.50
5	NA	NA	1.00	0.6220	17.2	6.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0004	0.7889	1.2285		0.9942	0.7841	0.7646
0.9965	1.0241	1.5860		0.9904	1.0178	0.9870
0.9946	1.1200	1.7374		0.9885	1.1132	1.0812
0.9927	1.2062	1.8766		0.9866	1.1988	1.1679
0.9831	1.5805	2.4570		0.9770	1.5708	1.5291
Qstd slope (m) =		1.55510		Qa slope (m) =		0.97378
intercept (b) =		-0.00194		intercept (b) =		-0.00121
coefficient (r) =		0.99994		coefficient (r) =		0.99994
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

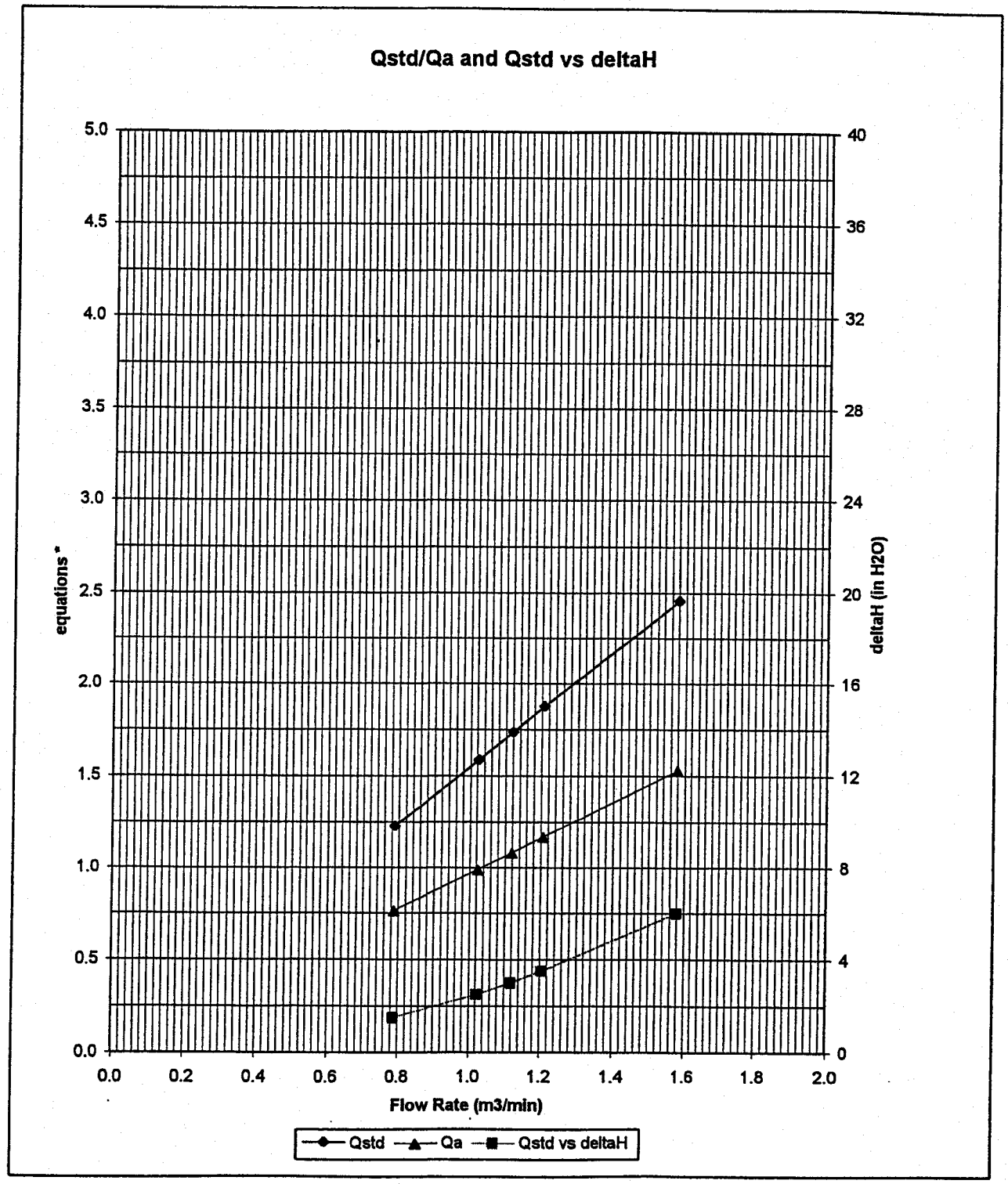
Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT



*** y-axis equations:**

Qstd series: $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$

Qa series: $\sqrt{(\Delta H\ (Ta\ /\ Pa))}$

#W43

OLYMPIA, WASHINGTON

NORMALS, MEANS, AND EXTREMES

LATITUDE: 46 Deg. 58 Min. N LONGITUDE: 122 Deg. 54 Min. W ELEVATION: FT. GRND 195 BARO 196 TIME ZONE: PACIFIC WBAN: 24227

	(a)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE (Deg. F)														
Normals														
-Daily Maximum		44.4	49.5	53.9	58.8	65.3	70.9	76.5	77.1	71.0	60.5	50.0	44.2	60.2
-Daily Minimum		31.6	32.7	33.6	36.2	41.0	46.4	49.2	49.5	44.7	38.8	35.0	32.1	39.2
-Monthly		38.0	41.1	43.8	47.5	53.2	58.7	62.9	63.3	57.9	49.7	42.5	38.2	49.7
Extremes														
-Record Highest	54	63	73	76	87	96	101	103	104	98	90	74	64	104
-Year		1942	1986	1995	1987	1983	1942	1941	1981	1988	1987	1949	1958	AUG 1981
-Record Lowest	54	-8	-1	9	23	25	30	35	33	25	20	- 1	-7	-8
-Year		1979	1972	1989	1975	1954	1976	1962	1973	1972	1971	1955	1983	JAN 1979
NORMAL DEGREE DAYS														
Heating (base 65 Deg. F)		837	669	657	125	36	201	96	102	222	474	67	831	5655
Cooling (base 65 Deg. F)		0	0	0	0	0	12	31	49	9	0	0	0	101
% OF POSSIBLE SUNSHINE														
MEAN SKY COVER(tenths)														
Sunrise - Sunset	51	8.7	8.4	8.0	7.8	7.2	6.9	5.5	5.8	6.1	7.7	8.6	8.8	7.5
MEAN NUMBER OF DAYS:														
Sunrise to Sunset														
-Clear	54	2.1	2.2	2.6	2.7	4.3	5.3	10.0	8.9	7.8	3.1	1.5	1.7	52.3
-Partly Cloudy	54	3.5	4.3	6.5	7.3	8.6	8.4	9.8	9.9	9.6	8.0	5.2	3.5	84.4
-Cloudy	54	25.3	21.8	21.9	19.9	18.2	16.3	11.2	12.2	12.6	19.9	23.3	25.8	228.5
Precipitation														
.01 inches or more	54	19.4	17.2	17.7	14.9	10.9	9.0	4.9	5.6	8.2	13.7	19.4	20.7	161.6
Snow, Ice Pellets, Hail														
1.0 inches or more	54	2.2	1.0	0.6	0..	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	5.2
Thunderstorms	52	0.1	0.2	0.3	0.6	0.8	0.6	0.5	0.8	0.8	0.4	0.3	0.1	5.3
Heavy Fog Visibility														
1/4 mile or less	52	9.6	8.3	7.9	5.1	3.1	2.2	3.1	5.4	9.4	13.8	10.9	10.3	89.1
Temperature Deg. F														
-Maximum														
90 Deg. F and above	36	0.0	0.0	0.0	0.0	0.1	0.7	2.4	2.4	0.6	0.*	0.0	0.0	6.3
32 Deg. F and below	36	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	2.7
-Minimum														
32 Deg. F and below	36	15.8	13.6	13.8	8.1	1.9	0.1	0.0	0.0	0.6	5.4	10.6	15.3	85.2
0 Deg. F and below	36	0.1	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4
AV. STATION PRES. (mb)	23	1010.7	1009.4	1008.4	1010.1	1009.9	1010.1	1010.6	1009.5	1009.8	1010.8	1009.8	1010.9	1010.0

PIONEER Technologies Corporation - AQ Monitoring Program

Removal/Loading of Filter and Inspection of PM10 Hi-Vol for Sampling

1. Inspect the overall integrity of the sampler for signs of tampering or damage.

2. Turn on the hi-vol by switching the timer switch to "on" and let the hi-vol warm up for 5 minutes. Connect the manometer to the external pressure tap. Record the external manometer reading on the envelope. Set timer switch to "off".

3. Check the hi-vol timer and record the timer hours. Note the status of the power failure light on the timer.

4. Open the PM10 head and latch the head in the open position.

5. Clean the area around the faceplate removing any foreign matter, such as dust or insects. It may be necessary to wipe the inside of the enclosure and area around the faceplate with a damp cloth to remove any excessive dust.

6. Remove the filter cartridge by loosening the 4 wing nuts allowing the wing nuts to swing out of the way.

7. Check the edges of the exposed filter for sharpness of field to identify leakage of the faceplate gasket. Inspect the gasket for integrity and replace if required

8. Filter handling should be performed with clean gloves or flat-tipped tweezers

   Remove exposed filter

   a. Remove large matter (large dirt particles, spider webs, or insects) with tweezers if sample integrity can be maintained. Removal of these objects or damage to the filter would not invalidate sample, but loss of part of the sample would void the filter and must be noted

   b. Carefully remove the exposed filter from the supporting screen by holding it gently at the ends (not at the corners). Fold the filter lengthwise so that the exposed portions are folded against each other (the filter ID should appear on the outside of the exposed filter). Now fold the filter width wise. Place the filter in the plastic sleeve and then place the plastic sleeve in the manila folder. Check that the filter ID matches the ID on the manila folder.

   c. Remove the Dickson chart from the chart recorder and place it in the manila folder.

   Load unexposed filter

   a. Remove the filter from the plastic bag and manila folder then inspect the clean, weighed and numbered filter received from the laboratory to ensure that the filter has not been damaged or soiled. Check that the filter ID matches the ID on the manila folder and the Dickson chart.

   b. Carefully center the new filter, rough side up (filter ID down), on the supporting screen. The filter should be aligned such that an airtight seal on the outer edge (about 1 cm) of the filter can be achieved

   c. Place a new Dickson chart in the chart recorder.

9. Secure the filter with the faceplate and 4 wing nuts with sufficient pressure to avoid air leakage, but do not overtighten the nuts

10. Close the PM10 head.

11. Fill out the removal section of the **PM10 Filter Tracking Form** checking to ensure that the exposed filter number and sampling period were correct. Note any unusual weather conditions that occurred during the run (dust storm, snow, fog, stagnation) and particularly record any activities that might have caused high PM10 levels (visual wind-blown dust, materials handling upwind, wood smoke, forest fire, slash burning, and any other local sources of particulate matter)

12. Check the hi-vol timer for the correct current & starting times. Record the timer hours

13. If not already connected, connect the manometer to the external pressure tap and switch the timer to the "on" position. Record the manometer reading. Set the timer switch to "timed" and ensure that hi-vol turns off.

14. Fill out the install portion of the **PM10 Filter Tracking Form** with the filter number, hi-vol ID, location, pressure readings, timer hours, and sampling period

15. Store the exposed filter in a safe, clean place until delivery to the lab

PM_{10} – Daily Sampling Form

Date _____ Person Sampling _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

PM_{10} Monitor Number _____ Sample Number _____

Time On _____ Pump Hour _____ Filter Changed ☐

Time Off _____ Date _____ Pump Hour _____ Chart Recorder Changed ☐

Total Minutes _____ Head Cleaned ☐

Location of Monitor _____

Daily Temperature and Pressure Readings

(Take 3 readings per day)

Time	Temperature	Pressure (Inches of Hg)

APPENDIX B – ANALYTICAL METHODS

SEVERN TRENT STL

STL Seattle
5755 8th Street East
Tacoma, WA 98424

Tel: 253 922 2310
Fax: 253 922 5047
www.stl-inc.com

SOP NO.: 0200.10
DATE: November 15, 2002
AUTHOR: SPP

TITLE: Trace Metals Analysis by ICP

Approved By: _____ 11/15/02
Department Manager Date

Approved By: Lori Howard 11/15/02
Quality Assurance Manager Date

Copy No.: CC4

Issued To: B. Dee, Pioneer Technologies, Corp.

1.0 SCOPE AND APPLICATION

1.1 This SOP describes the procedure for analysis of trace metals in solution by ICP. Analysis request may be for dissolved metals, suspended metals, total metals, total recoverable metals, or TCLP leachate metals.

1.2 Routine target analytes and associated PQLs are provided in Tables 1.

2.0 REFERENCES

2.1 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Method 6010B.

2.2 USEPA Methods for the Determination of Metals in Environmental Samples, Supplement 1, EPA/600/R-94/111, May 1994, Method 200.7.

2.3 40CFR Part 136 Appendix C.

3.0 ASSOCIATED SOPS

3.1 0010.4, Use and Maintenance of Laboratory Glassware.

3.2 0204.3, Acid Digestion of Sediments, Sludges, and Soils.

3.3 0205.9, Water Digestion Procedure for Metals Analysis.

3.4 0206.16, Microwave Assisted Acid Digestion of Sediments, Sludges, and Soils.

3.5 0208.6, Acid Digestion of Oil.

3.6 0210.4, Toxicity Characteristic Leachate Procedure, EPA Method 1311.

3.7 0213.8, Acid Leaching of Earthenware.

3.8 0214.9, Acid Digestion of Paint Films or Chips: In-House Methodology.

3.9 0230.1, Use and Maintenance of the Perkin Elmer 3200DV Simultaneous ICP.

This Standard Operating Procedure has been prepared for the sole use of STL Seattle. This is a controlled document, intended as information only for the person or organization to which it has been issued.

4.0 DEFINITIONS

4.1 ICP = Inductively Coupled Plasma Spectrophotometry.

4.2 Dissolved metals = those metals that will pass through a 0.45 um membrane filter.

4.3 Suspended metals = those elements which are retained by a 0.45 um membrane filter.

4.4 Total metals = the concentration determined of an unfiltered sample after digestion; or, the sum of the dissolved plus suspended concentrations.

4.5 Total recoverable metals = the concentration determined of an unfiltered sample after treatment with hot, dilute mineral acid.

4.6 Method Detection Limit = the concentration equivalent of a metal analyte equal to three times the standard deviation of the results from seven replicates done on three non-consecutive days. The solution used to make these determinations is a standard that is three to five times the manufacturer's suggested IDL for that metal.

4.7 PQL = Practical Quantitation Limit.

4.8 SOP = Standard Operating Procedure.

5.0 PROCEDURE

5.1 SUMMARY

5.1.1 This method describes the simultaneous, multi-elemental determination of metals in solution by ICP. Samples, sample extracts, or sample digests are nebulized, and the resulting aerosols are injected into the plasma torch. Element-specific atomic line emission spectra are produced by radio frequency inductively coupled plasma. The spectra are dispersed by a grating spectrometer. The intensity of the lines are monitored by a charge-coupled device. Intensity of emission is directly related to the concentration of the analyte by comparison with standards. Emission lines used for each target analyte are provided as an attachment to this SOP.

5.2 INTERFERENCE.

5.2.1 Spectral interference: results from an overlap of spectral lines, molecular band spectra and background contribution from continuous, recombination phenomena or stray light. These interferences are described in detail in Method 6010B and should be reviewed if necessary.

5.2.2 Physical interference: resulting from viscosity or dissolved solids in the sample. In general, physical interferences must be diluted out; these interferences are described in detail in Method 6010B and should be reviewed if necessary.

5.2.3 Chemical interference: not significant with ICP. These interferences are described in detail in Method 6010B and should be reviewed if necessary.

5.3 SAMPLE HANDLING, PRESERVATION, AND HOLDING TIME REQUIREMENTS.

5.3.1 Samples are stored at $4^{o}C \pm 2^{o}C$, in the container received.

5.3.2 Holding time for analysis of samples for metals analysis is 6 months.

5.3.3 Dissolved samples should be filtered and preserved within 3 days of sampling.

5.4 EQUIPMENT

5.4.1 Simultaneous or Sequential ICP with background correction.

5.4.2 Computer controlled data system for ICP.

5.4.3 Volumetric flasks, 100 mL, 200 mL, 500 mL, 1000 mL.

5.4.4 Specimen cups with poly lids.

5.4.5 Disposable culture tubes, borosilicate glass.

5.5 REAGENTS/STANDARDS

5.5.1 ASTM Type II reagent water.

5.5.2 Leeman Labs, Inc., Plasma-Pure, Custom Multi-element Standards (calibrating standards). Standard Certificates attached for the three standards.

5.5.2.1 Preparation of calibration standards: Serial dilution of standards, in the following ratios:

4.0 mL each standard, dilute to 200 mL (High Standard);
0.8 mL each standard, dilute to 200 mL (Med. Standard);
0.4 mL each standard, dilute to 200 mL (Low Standard);
2.5 mL each standard, dilute to 500 mL (CCV Standard) *note: the CCV standard concentration varies within the calibration range.*

The final concentrations of each analyte in the high standard and the CCV standard are provided in tabular form as an Attachment to this SOP.

5.5.3 PLASMACHEM, matrix spiking standard. Concentrations provided in tabular form as an Attachment to this SOP.

5.5.4 PLASMACHEM, Standards A and AB (interference check standard). Concentrations provided in tabular form as an Attachment to this SOP.

5.5.5 Outside check standards. Check Standard 4 is at a concentration of 10 times the STL Seattle reporting limit. Check Standard 5 is at a concentration of 2 times the STL Seattle reporting limit. Specific analyte concentrations provided in tabular form as an Attachment to this SOP.

5.5.6 Argon gas, high purity grade.

5.5.7 Concentrated HCl.

5.5.8 Concentrated HNO3.

5.5.9 1:1 HCl.

5.5.9.1 Preparation: add 500 mLs of concentrated HCl to 400 mLs Type II water. Allow to cool, and dilute to 1 L with Type II water.

5.5.10 1:1 Nitric acid.

5.5.10.1 Preparation: add 500 mLs of concentrated HNO3 to 400 mLs Type II water. Allow to cool, dilute to 1 liter with Type II water.

5.5.11 Internal Standard solution. Add 0.5 mL each of 10,000 mg/L Lu, Sc, and Y to a 1-Liter volumetric flask. Dilute to volume with Type II water.

5.6 INSTRUMENT CALIBRATION

5.6.1 Initial Calibration Procedures. One instrument blank and three standards containing all analytes of interest are analyzed for initial calibration (analyte-specific concentrations). Standards are analyzed in triplicate, three readings for each analysis, and the results are averaged. A calibration curve is generated using the blank and the average values for the three standards. An initial calibration is performed as needed. An initial calibration verification (ICV) and initial calibration blank (ICB) standard are analyzed daily.

5.6.2 Continuing Calibration Procedures. A continuing calibration standard containing a mid-range concentration of each analyte is analyzed immediately after the ICV and ICB, after 10 samples, and at the end of the analytical sequence. The calculated concentration is compared to the actual concentration of the standard analytes. If QC criteria are not met, the standard is rerun, or a "curve update" is performed. An "update" is a linear adjustment of the curve using the highest concentration standard.

5.7 SAMPLE PREPARATION

5.7.1 Refer to the appropriate SOP (see section 3) for sample preparation.

5.8 SAMPLE ANALYSIS

5.8.1 Samples, sample leachates, and sample digests are provided to the analyst in specimen cups labeled with laboratory number.

5.8.2 Samples are poured into disposable culture tubes and placed in a rack for analysis.

5.8.3 Samples are nebulized and injected into the plasma torch. The solution concentrations are determined and reported as raw instrument data.

5.9 CALCULATIONS

5.9.1 Liquid samples, report as mg/L.

$$mg/L = (\text{instrument reading}) * (\text{final dilution})$$

5.9.2 Solid samples (except filters), report as mg/kg:

$$mg/kg = \frac{(\text{instrument reading}) * (\text{final dilution})}{(\text{sample weight}) (\text{percent solids})}$$

5.9.3 Filters, report as ug (or as ug/cm^3)

$$ug = (\text{instrument reading}) * (\text{final dilution})$$

$$ug/cm^3 = \frac{(\text{instrument reading}) * (\text{final dilution}) * (1000)}{(\text{air volume in L})}$$

5.10 QUALITY CONTROL

5.10.1 Initial calibration. Acceptance criterion is a curve with a minimum correlation coefficient of 0.995. The agreement between the replicate injections of each standard must be a relative standard deviation of less than or equal to 25. The ICV standard must agree within 10% of the true value for samples analyzed by EPA Method 6010B, or within 5% of the true value for samples analyzed by EPA Method 200.7.

5.10.2 Continuing calibration. Acceptance criteria is a percent difference (%D) of 10% between the calculated concentration of the continuing calibration standard and the true value of the standard

5.10.3 Interference check standards. Analyzed daily to ensure that the instrument is compensating for interferences; For analytical sequences associated with NPDES samples analyzed by Method 200.7 (as stated in 40CFR Part 136 Appendix C), the results should fall within 1.5 times the standard deviation of the mean value. For all other sequences the calculated concentrations of the analytes must agree within 20% of the true values.

5.10.4 External calibration check standard (Initial Calibration Verification, ICV). Immediately following the initial calibration, and at the beginning of each analysis batch or every 24 hours, an external calibration check standard is analyzed. The external calibration check must agree within 10% of the true value.

5.10.5 The associated method blank for each sample batch is analyzed and reported with the sample results.

5.10.6 Matrix spike or blank spike samples will be prepared with a minimum frequency of 5% of the samples. If there are fewer than 20 samples in a batch, at least one matrix spike sample should be prepared. Matrix spike solutions will contain all target analytes. Results from analysis of these

digest will be used to assess accuracy of the digestion and analysis procedure. For preparation, 2.0 mL of spiking solution is applied directly to a solid matrix, or 1.0 mL of spiking solution is added to a liquid matrix or a blank volume.

5.10.7 Duplicate samples will be prepared at a minimum frequency of 5% of the samples. If there are fewer than 20 samples in a batch, at least one duplicate sample should be prepared. Duplicate will be used to assess precision of the digestion and analysis procedure.

5.10.8 Inter-element correction factors are determined annually.

5.10.9 Linear calibration limits are analyzed on an annual basis.

5.10.10 Method detection limit studies are performed on an annual basis.

5.10.11 Where required by specific client or project (i.e., Corps of Engineers, Navy NFESC), one or more of the following quality control analyses will be performed:

5.10.11.1 Serial Dilution. A 1:5 dilution of the sample selected for batch QC is analyzed.

5.10.11.2 Post Digest Spike. The sample selected for batch QC is spiked after digestion at a concentration equivalent to the matrix spike concentration.

5.10.11.3 Method of Standard Additions. For samples analyzed under the Corps of Engineers Shell Document, whenever both the serial dilution analysis agreement and post digest spike recoveries are outside QC limits, sample results must be calculated based on the method of standard additions in accordance with Method 6010B.

5.11 METHOD PERFORMANCE

5.11.1 Accuracy is evaluated based on blank spike and matrix spike recovery. The recoveries of all spiked target analytes in blank spikes must be between 80 - 120% (85 – 115% for samples analyzed by method 200.7). The recoveries of all spiked target analytes in matrix spikes should be within 75 - 125% (50 – 150% for TCLP). Post digestion spike recoveries should be within 75 – 125% of the true value. Results for the serial dilution analysis should agree within 10% when compared to the original analysis for analytes that are at a concentration of 10 times the MDL after dilution, or matrix interference is suspected.

5.11.2 Precision Determination. Duplicate results should be within 20% for the water matrix and within 35% for all other matrices.

5.12 METHOD DETECTION LIMITS/REPORTING LIMITS/PRACTICAL QUANTITATION LIMITS

5.12.1 Method Detection Limit Studies are performed annually for each matrix. Detection limit study data are maintained in the QA files.

5.12.2 Table 1 includes reporting limits for routine target analytes.

5.13 MODIFICATIONS TO PUBLISHED METHODS

5.13.1.1 None.

6.0 HEALTH AND SAFETY/SPECIAL CONSIDERATIONS

6.1 Gloves and safety goggles should be worn during sample preparation and analysis.

7.0 NONCONFORMANCE AND CORRECTIVE ACTION

7.1 Any nonconformance encountered during sample preparation (e.g., insufficient sample volume or matrix-specific problems) should be documented in a laboratory nonconformance memorandum and appropriate corrective action taken.

7.2 If the client is contacted regarding sample nonconformance, a client contact is completed and placed in the master file.

8.0 RECORDS MANAGEMENT/DOCUMENTATION

8.1 Each digestion batch identifier and appropriate QA/QC should be recorded in thelogbook on the batch QC form for soils or waters. All analysis information should be recorded in the logbook on the worksheet form. Date and signature must accompany the recorded information.

8.2 A copy of the raw data is placed in the data file.

8.3 Logbooks are archived with the QC department when completed for permanent storage.

8.4 If client contact is required, a Client Contact Record is completed and maintained in the master file.

8.5 If nonconformance is observed during sample extraction or analysis, a nonconformance memorandum is completed; the memorandum is placed in the file, and a copy of the memorandum is given to the QA Manager.

9.0 WASTE MANAGEMENT AND POLLUTION PREVENTION

9.1 All laboratory waste must be handled in accordance with SOP 0036.6.

9.2 All laboratory procedures must comply with the policies set forth in STL Seattle's Pollution Prevention Plan.

Table 1. Analyte List and Reporting Limits for ICP Metals

	Reporting Limit	
	Soil	*Water*
Analyte	*mg/kg*	*mg/L*
Aluminum	10	0.10
Antimony	10	0.05
Arsenic	3	0.01
Barium	1	0.005
Beryllium	0.4	0.002
Boron	60	0.20
Cadmium	1	0.005
Calcium	200	1.0
Chromium	5	0.01
Cobalt	1	0.005
Copper	3	0.01
Iron	20	0.1
Lead	4	0.01
Magnesium	200	1.0
Manganese	1	0.01
Molybdenum	2	0.01
Nickel	2	0.01
Selenium	10	0.05
Silver	2	0.01
Sodium	500	1.0
Strontium	20	0.05
Thallium	4	0.02
Tin	20	0.05
Titanium	10	0.01
Vanadium	2	0.01
Zinc	4	0.01

ATTACHMENT 1

WAVELENGTHS AND CALIBRATION STANDARDS

Method Name: Initial-4 Point

Inst: Symbol, Wavelength, Name, and Function

Description : All Lines

Perkin Elmer Optima 3200DV ICP Method

Element	Wavelength nm	Name	Function
As	188.976	As 188.979	Analyte
As	193.692	As 193.696	Analyte
Ba	233.527	Ba 233.527	Analyte
Cd	226.494	Cd 226.502	Analyte
Cd	214.438	Cd 214.440	Analyte
Cr	267.701	Cr 267.716	Analyte
Pb	220.348	Pb 220.353	Analyte
Se	196.020	Se 196.026	Analyte
Se	203.985	Se 203.985	Analyte
Ag	328.059	Ag 328.068	Analyte
Ag	338.280	Ag 338.289	Analyte
Cu	327.381	Cu 327.393	Analyte
Cu	324.751	Cu 324.752	Analyte
Ni	231.598	Ni 231.604	Analyte
Zn	206.197	Zn 206.200	Analyte
Be	313.094	Be 313.107	Analyte
Sb	206.832	Sb 206.836	Analyte
Tl	190.800	Tl 190.801	Analyte
Co	228.622	Co 228.616	Analyte
Mn	257.614	Mn 257.610	Analyte
Mn	259.374	Mn 259.372	Analyte
Mn	260.570	Mn 260.568	Analyte
V	292.388	V 292.402	Analyte
K	766.531	K 766.490	Analyte
Na	330.233	Na 330.237	Analyte
Al	308.220	Al 308.215	Analyte
Al	394.406	Al 394.401	Analyte
Al	237.313	Al 237.313	Analyte
Fe	273.963	Fe 273.955	Analyte
Ca	315.887	Ca 315.887	Analyte
Mg	279.070	Mg 279.077	Analyte
Mo	202.025	Mo 202.031	Analyte
Si	251.617	Si 251.611	Analyte
Sr	232.238	Sr 232.235	Analyte
B	249.675	B 249.677	Analyte
Ti	334.942	Ti 334.940	Analyte
Sn	189.926	Sn 189.927	Analyte
Lu	261.535	Lu 261.542	Internal Standard
Sc	361.380	Sc 361.383	Internal Standard
Y	360.061	Y 360.073	Internal Standard

Inst: Spectrometer, Read Time, Replicates

Spectral Profiling: No Resolution: Normal

Read Delay Time (sec) : 10

Replicates : 3
Read Time : Auto Min Time : 1.000 sec Max Time: 20.000 sec

Method Name: Initial-4 Point

Survey and Auto Integration Spectral Windows

Element	Wavelength (nm)	Survey Lower	Survey Upper	Auto Lower	Auto Upper
As	188.976	188.941	189.028	188.941	189.028
As	193.692	193.658	193.747	193.658	193.747
Ba	233.527	233.432	233.596	233.432	233.596
Cd	226.494	226.456	226.615	226.456	226.615
Cd	214.438	214.245	214.500	214.245	214.500
Cr	267.701	267.537	267.791	267.537	267.791
Pb	220.348	220.309	220.410	220.309	220.410
Se	196.020	195.984	196.074	195.984	196.074
Se	203.985	203.950	204.044	203.950	204.044
Ag	328.059	328.002	328.153	328.002	328.153
Ag	338.280	338.221	338.377	338.221	338.377
Cu	327.381	327.328	327.478	327.328	327.478
Cu	324.751	324.686	324.836	324.686	324.836
Ni	231.598	231.558	231.664	231.558	231.664
Zn	206.197	206.107	206.252	206.107	206.252
Be	313.094	312.987	313.208	312.987	313.208
Sb	206.832	206.801	206.896	206.801	206.896
Tl	190.800	190.770	190.858	190.770	190.858
Co	228.622	228.577	228.682	228.577	228.682
Mn	257.614	257.563	257.807	257.563	257.807
Mn	259.374	259.328	259.447	259.328	259.447
Mn	260.570	260.521	260.640	260.521	260.640
V	292.388	292.341	292.475	292.341	292.475
K	766.531	766.360	766.713	766.360	766.713
Na	330.233	330.170	330.322	330.170	330.322
Al	308.220	308.163	308.305	308.163	308.305
Al	394.406	394.267	394.642	394.267	394.642
Al	237.313	237.271	237.380	237.271	237.380
Fe	273.963	273.909	274.035	273.909	274.035
Ca	315.887	315.824	315.969	315.824	315.969
Mg	279.070	279.023	279.151	279.023	279.151
Mo	202.025	201.991	202.083	201.991	202.083
Si	251.617	251.570	251.685	251.570	251.685
Sr	232.238	232.206	232.313	232.206	232.313
B	249.675	249.599	249.857	249.599	249.857
Ti	334.942	334.850	335.169	334.850	335.169
Sn	189.926	189.889	190.023	189.889	190.023
Lu	261.535	261.372	261.620	261.372	261.620
Sc	361.380	361.312	361.478	361.312	361.478
Y	360.061	360.000	360.165	360.000	360.165

Sampler: Plasma Parameters

Source Equilibration Delay : 20 sec
Plasma Aerosol Type : Wet
Nebulizer Start-up Conditions: Gradual

Plasma Params: Variable

F'n	Analyte	Plas L/min	Aux L/min	Neb L/min	Power Watts	View Dist	Plasma View
A	As 188.979	15	0.3	0.7	1500	15.0	Axial

Method Name: Initial-4 Point

A	As 193.696	15	0.3	0.7	1500	15.0	Axial
A	Ba 233.527	15	0.3	0.7	1500	15.0	Axial
A	Cd 226.502	15	0.3	0.7	1500	15.0	Axial
A	Cd 214.440	15	0.3	0.7	1500	15.0	Axial
A	Cr 267.716	15	0.3	0.7	1500	15.0	Axial
A	Pb 220.353	15	0.3	0.7	1500	15.0	Axial
A	Se 196.026	15	0.3	0.7	1500	15.0	Axial
A	Se 203.985	15	0.3	0.7	1500	15.0	Axial
A	Ag 328.068	15	0.3	0.7	1500	15.0	Axial
A	Ag 338.289	15	0.3	0.7	1500	15.0	Axial
A	Cu 327.393	15	0.3	0.7	1500	15.0	Axial
A	Cu 324.752	15	0.3	0.7	1500	15.0	Axial
A	Ni 231.604	15	0.3	0.7	1500	15.0	Axial
A	Zn 206.200	15	0.3	0.7	1500	15.0	Axial
A	Be 313.107	15	0.3	0.7	1500	15.0	Axial
A	Sb 206.836	15	0.3	0.7	1500	15.0	Axial
A	Tl 190.801	15	0.3	0.7	1500	15.0	Axial
A	Co 228.616	15	0.3	0.7	1500	15.0	Axial
A	Mn 257.610	15	0.3	0.7	1500	15.0	Axial
A	Mn 259.372	15	0.3	0.7	1500	15.0	Axial
A	Mn 260.568	15	0.3	0.7	1500	15.0	Axial
A	V 292.402	15	0.3	0.7	1500	15.0	Axial
A	K 766.490	15	0.3	0.7	1500	15.0	Radial
A	Na 330.237	15	0.3	0.7	1500	15.0	Radial
A	Al 308.215	15	0.3	0.7	1500	15.0	Axial
A	Al 394.401	15	0.3	0.7	1500	15.0	Axial
A	Al 237.313	15	0.3	0.7	1500	15.0	Axial
A	Fe 273.955	15	0.3	0.7	1500	15.0	Axial
A	Ca 315.887	15	0.3	0.7	1500	15.0	Radial
A	Mg 279.077	15	0.3	0.7	1500	15.0	Radial
A	Mo 202.031	15	0.3	0.7	1500	15.0	Axial
A	Si 251.611	15	0.3	0.7	1500	15.0	Axial
A	Sr 232.235	15	0.3	0.7	1500	15.0	Axial
A	B 249.677	15	0.3	0.7	1500	15.0	Axial
A	Ti 334.940	15	0.3	0.7	1500	15.0	Axial
A	Sn 189.927	15	0.3	0.7	1500	15.0	Axial
IS	Lu 261.542	15	0.3	0.7	1500	15.0	Axial
IS	Sc 361.383	15	0.3	0.7	1500	15.0	Axial
IS	Y 360.073	15	0.3	0.7	1500	15.0	Axial

Sampler: Peristatic Pump Parameters

Sample Flow Rate : 1.50 mL/min
Sample Flush Time(sec) : 20

Sampler: Wash Parameters

Wash Frequency : After every sample + extra time if sample concentrations exceed limits.
Wash Location : 0
Wash Rate(mL/min) : 2.40
Wash Time (sec) : 10

Method Name: Initial-4 Point

Analyte	Calibration Units	Concentration
As 188.979	mg/L	0.1
As 193.696	mg/L	0.1
Ba 233.527	mg/L	0.1
Cd 226.502	mg/L	0.1
Cd 214.440	mg/L	0.1
Cr 267.716	mg/L	0.1
Pb 220.353	mg/L	0.1
Se 196.026	mg/L	0.10
Se 203.985	mg/L	0.10
Ag 328.068	mg/L	0.10
Ag 338.289	mg/L	0.10
Cu 327.393	mg/L	0.1
Cu 324.752	mg/L	0.1
Ni 231.604	mg/L	0.1
Zn 206.200	mg/L	0.1
Be 313.107	mg/L	0.10
Sb 206.836	mg/L	0.1
Tl 190.801	mg/L	0.1
Co 228.616	mg/L	0.1
Mn 257.610	mg/L	0.1
Mn 259.372	mg/L	0.1
Mn 260.568	mg/L	0.1
V 292.402	mg/L	0.1
K 766.490	mg/L	5.0
Na 330.237	mg/L	5.0
Al 308.215	mg/L	0.1
Al 394.401	mg/L	0.1
Al 237.313	mg/L	0.1
Fe 273.955	mg/L	0.1
Ca 315.887	mg/L	0.1
Mg 279.077	mg/L	0.1
Mo 202.031	mg/L	0.1
Si 251.611	mg/L	1.0
Sr 232.235	mg/L	0.1
B 249.677	mg/L	0.1
Ti 334.940	mg/L	0.1
Sn 189.927	mg/L	0.1

Additional Wash Time (sec) : 50

Process: Peak Algorithms and Points/Peak

F'n	Analyte	Peak Algorithm	Pts/Peak
A	As 188.979	MSF	3
A	As 193.696	MSF	3
A	Ba 233.527	MSF	3
A	Cd 226.502	MSF	3
A	Cd 214.440	MSF	3
A	Cr 267.716	MSF	3
A	Pb 220.353	MSF	3
A	Se 196.026	MSF	3
A	Se 203.985	MSF	3
A	Ag 328.068	MSF	3
A	Ag 338.289	MSF	3

Method Name: Initial-4 Point

A	Cu 327.393	MSF	3
A	Cu 324.752	MSF	3
A	Ni 231.604	MSF	3
A	Zn 206.200	MSF	3
A	Be 313.107	MSF	3
A	Sb 206.836	MSF	3
A	Tl 190.801	MSF	3
A	Co 228.616	MSF	3
A	Mn 257.610	MSF	3
A	Mn 259.372	Peak Area	3
A	Mn 260.568	MSF	3
A	V 292.402	MSF	3
A	K 766.490	Peak Area	3
A	Na 330.237	Peak Ht.	3
A	Al 308.215	MSF	3
A	Al 394.401	MSF	3
A	Al 237.313	MSF	3
A	Fe 273.955	MSF	3
A	Ca 315.887	MSF	3
A	Mg 279.077	MSF	3
A	Mo 202.031	MSF	3
A	Si 251.611	Peak Area	3
A	Sr 232.235	MSF	3
A	B 249.677	MSF	3
A	Ti 334.940	MSF	3
A	Sn 189.927	MSF	3
IS	Lu 261.542	Peak Area	3
IS	Sc 361.383	Peak Area	3
IS	Y 360.073	Peak Area	3

Process: Spectral Overlap and Background Correction

F'n	Analyte	Overlap Correction	Background Correction	BGC1	BGC2
A	As 188.979	MSF	None		
A	As 193.696	MSF	None		
A	Ba 233.527	MSF	None		
A	Cd 226.502	MSF	None		
A	Cd 214.440	MSF	None		
A	Cr 267.716	MSF	None		
A	Pb 220.353	MSF	None		
A	Se 196.026	MSF	None		
A	Se 203.985	MSF	None		
A	Ag 328.068	MSF	None		
A	Ag 338.289	MSF	None		
A	Cu 327.393	MSF	None		
A	Cu 324.752	MSF	None		
A	Ni 231.604	MSF	None		
A	Zn 206.200	MSF	None		
A	Be 313.107	MSF	None		
A	Sb 206.836	MSF	None		
A	Tl 190.801	MSF	None		
A	Co 228.616	MSF	None		
A	Mn 257.610	MSF	None		
A	Mn 259.372	None	2-Point	-0.024	0.033
A	Mn 260.568	MSF	None		

Method Name: Initial-4 Point

A	V 292.402	MSF	None		
A	K 766.490	None	2-Point	-0.071	0.056
A	Na 330.237	None	2-Point	-0.012	0.009
A	Al 308.215	MSF	None		
A	Al 394.401	MSF	None		
A	Al 237.313	MSF	None		
A	Fe 273.955	MSF	None		
A	Ca 315.887	MSF	None		
A	Mg 279.077	MSF	None		
A	Mo 202.031	MSF	None		
A	Si 251.611	None	2-Point	-0.021	0.028
A	Sr 232.235	MSF	None		
A	B 249.677	MSF	None		
A	Ti 334.940	MSF	None		
A	Sn 189.927	MSF	None		
IS	Lu 261.542	None	2-Point	-0.027	0.028
IS	Sc 361.383	None	2-Point	-0.033	0.028
IS	Y 360.073	None	2-Point	-0.033	0.027

IEC Table : None MSF Table : 071201.msf

Process: Assign Internal Standards

Do Calib Blanks contain internal standards: Yes
Report apparent concentrations for internal standards: As a Percent

Analyte	Internal Standard	Conc	Units
As 188.979	Sc 361.383	100	mg/L
As 193.696	Sc 361.383	100	mg/L
Ba 233.527	Sc 361.383	100	mg/L
Cd 226.502	Sc 361.383	100	mg/L
Cd 214.440	Sc 361.383	100	mg/L
Cr 267.716	Sc 361.383	100	mg/L
Pb 220.353	Sc 361.383	100	mg/L
Se 196.026	Sc 361.383	100	mg/L
Se 203.985	Sc 361.383	100	mg/L
Ag 328.068	Sc 361.383	100	mg/L
Ag 338.289	Sc 361.383	100	mg/L
Cu 327.393	Sc 361.383	100	mg/L
Cu 324.752	Sc 361.383	100	mg/L
Ni 231.604	Sc 361.383	100	mg/L
Zn 206.200	Sc 361.383	100	mg/L
Be 313.107	Sc 361.383	100	mg/L
Sb 206.836	Sc 361.383	100	mg/L
Tl 190.801	Sc 361.383	100	mg/L
Co 228.616	Sc 361.383	100	mg/L
Mn 257.610	Sc 361.383	100	mg/L
Mn 259.372	Sc 361.383	100	mg/L
Mn 260.568	Sc 361.383	100	mg/L
V 292.402	Sc 361.383	100	mg/L
K 766.490	Sc 361.383	100	mg/L
Na 330.237	Sc 361.383	100	mg/L
Al 308.215	Sc 361.383	100	mg/L
Al 394.401	Sc 361.383	100	mg/L
Al 237.313	Sc 361.383	100	mg/L
Fe 273.955	Sc 361.383	100	mg/L
Ca 315.887	Sc 361.383	100	mg/L

Method Name: Initial-4 Point

Mg 279.077	Sc 361.383	100	mg/L
Mo 202.031	Sc 361.383	100	mg/L
Si 251.611	Sc 361.383	100	mg/L
Sr 232.235	Sc 361.383	100	mg/L
B 249.677	Sc 361.383	100	mg/L
Ti 334.940	Sc 361.383	100	mg/L
Sn 189.927	Sc 361.383	100	mg/L

Calib: Blank and Standard IDs and Autosampler Locations

		ID	A/S Location
Calib Blank	1	Calib Blank 1	1

		ID	A/S Location
Calib Std	1	Low Standard	6
Calib Std	2	Middle Standard	5
Calib Std	3	High Standard	2

Calib: Calibration Standard Units and Concentrations

Analyte	Calib Units	Low Standard	Middle Standard	High Standard
As 188.979	mg/L	2.00	4.00	20.0
As 193.696	mg/L	2.00	4.00	20.0
Ba 233.527	mg/L	0.20	0.40	2.00
Cd 226.502	mg/L	0.20	0.40	2.00
Cd 214.440	mg/L	0.20	0.40	2.00
Cr 267.716	mg/L	0.20	0.40	2.00
Pb 220.353	mg/L	2.00	4.00	20.0
Se 196.026	mg/L	2.00	4.00	20.0
Se 203.985	mg/L	2.00	4.00	20.0
Ag 328.068	mg/L	2.00	4.00	20.0
Ag 338.289	mg/L	2.00	4.00	20.0
Cu 327.393	mg/L	0.20	0.40	2.00
Cu 324.752	mg/L	0.20	0.40	2.00
Ni 231.604	mg/L	0.20	0.40	2.00
Zn 206.200	mg/L	0.20	0.40	2.00
Be 313.107	mg/L	0.20	0.40	2.00
Sb 206.836	mg/L	2.00	4.00	20.0
Tl 190.801	mg/L	2.00	4.00	20.0
Co 228.616	mg/L	0.20	0.40	2.00
Mn 257.610	mg/L	2.00	4.00	20.0
Mn 259.372	mg/L	2.00	4.00	20.0
Mn 260.568	mg/L	2.00	4.00	20.0
V 292.402	mg/L	0.20	0.40	2.00
K 766.490	mg/L	4.00	8.00	40.0
Na 330.237	mg/L	6.00	12.0	60.0
Al 308.215	mg/L	0.20	0.40	2.00
Al 394.401	mg/L	0.20	0.40	2.00
Al 237.313	mg/L	0.20	0.40	2.00
Fe 273.955	mg/L	0.20	0.40	2.00

Method Name: Initial-4 Point

Ca 315.887	mg/L	2.00	4.00	20.0
Mg 279.077	mg/L	2.00	4.00	20.0
Mo 202.031	mg/L	0.20	0.40	2.00
Si 251.611	mg/L	2.00	4.00	20.0
Sr 232.235	mg/L	2.00	4.00	20.0
B 249.677	mg/L	2.00	4.00	20.0
Ti 334.940	mg/L	0.20	0.40	2.00
Sn 189.927	mg/L	2.00	4.00	20.0

Calib: Calibration and Reagent Blank Usage

F'n	Element	Use Calib Blank	Subtract Reagent
A	As 188.979	Calib Blank 1	n/a
A	As 193.696	Calib Blank 1	n/a
A	Ba 233.527	Calib Blank 1	n/a
A	Cd 226.502	Calib Blank 1	n/a
A	Cd 214.440	Calib Blank 1	n/a
A	Cr 267.716	Calib Blank 1	n/a
A	Pb 220.353	Calib Blank 1	n/a
A	Se 196.026	Calib Blank 1	n/a
A	Se 203.985	Calib Blank 1	n/a
A	Ag 328.068	Calib Blank 1	n/a
A	Ag 338.289	Calib Blank 1	n/a
A	Cu 327.393	Calib Blank 1	n/a
A	Cu 324.752	Calib Blank 1	n/a
A	Ni 231.604	Calib Blank 1	n/a
A	Zn 206.200	Calib Blank 1	n/a
A	Be 313.107	Calib Blank 1	n/a
A	Sb 206.836	Calib Blank 1	n/a
A	Tl 190.801	Calib Blank 1	n/a
A	Co 228.616	Calib Blank 1	n/a
A	Mn 257.610	Calib Blank 1	n/a
A	Mn 259.372	Calib Blank 1	n/a
A	Mn 260.568	Calib Blank 1	n/a
A	V 292.402	Calib Blank 1	n/a
A	K 766.490	Calib Blank 1	n/a
A	Na 330.237	Calib Blank 1	n/a
A	Al 308.215	Calib Blank 1	n/a
A	Al 394.401	Calib Blank 1	n/a
A	Al 237.313	Calib Blank 1	n/a
A	Fe 273.955	Calib Blank 1	n/a
A	Ca 315.887	Calib Blank 1	n/a
A	Mg 279.077	Calib Blank 1	n/a
A	Mo 202.031	Calib Blank 1	n/a
A	Si 251.611	Calib Blank 1	n/a
A	Sr 232.235	Calib Blank 1	n/a
A	B 249.677	Calib Blank 1	n/a
A	Ti 334.940	Calib Blank 1	n/a
A	Sn 189.927	Calib Blank 1	n/a
IS	Lu 261.542	None	n/a
IS	Sc 361.383	None	n/a
IS	Y 360.073	None	n/a

Method Name: Initial-4 Point

Calib: Calibration Equation and Sample Units

F'n	Element	Calibration Equation	Sample Units	Max Decimal Places	Max Signif. Figures
A	As 188.979	Lin Thru 0	mg/L	4	4
A	As 193.696	Lin Thru 0	mg/L	4	4
A	Ba 233.527	Lin Thru 0	mg/L	4	4
A	Cd 226.502	Lin Thru 0	mg/L	4	4
A	Cd 214.440	Lin Thru 0	mg/L	4	4
A	Cr 267.716	Lin Thru 0	mg/L	4	4
A	Pb 220.353	Lin Thru 0	mg/L	4	4
A	Se 196.026	Lin Thru 0	mg/L	4	4
A	Se 203.985	Lin Thru 0	mg/L	4	4
A	Ag 328.068	Lin Thru 0	mg/L	4	4
A	Ag 338.289	Lin Thru 0	mg/L	4	4
A	Cu 327.393	Lin Thru 0	mg/L	4	4
A	Cu 324.752	Lin Thru 0	mg/L	4	4
A	Ni 231.604	Lin Thru 0	mg/L	4	4
A	Zn 206.200	Lin Thru 0	mg/L	4	4
A	Be 313.107	Lin Thru 0	mg/L	4	4
A	Sb 206.836	Lin Thru 0	mg/L	4	4
A	Tl 190.801	Lin Thru 0	mg/L	4	4
A	Co 228.616	Lin Thru 0	mg/L	4	4
A	Mn 257.610	Lin Thru 0	mg/L	4	4
A	Mn 259.372	Lin Thru 0	mg/L	4	4
A	Mn 260.568	Lin Thru 0	mg/L	4	4
A	V 292.402	Lin Thru 0	mg/L	4	4
A	K 766.490	Lin Thru 0	mg/L	4	4
A	Na 330.237	Lin Thru 0	mg/L	4	4
A	Al 308.215	Lin Thru 0	mg/L	4	4
A	Al 394.401	Lin Thru 0	mg/L	4	4
A	Al 237.313	Lin Thru 0	mg/L	4	4
A	Fe 273.955	Lin Thru 0	mg/L	4	4
A	Ca 315.887	Lin Thru 0	mg/L	4	4
A	Mg 279.077	Lin Thru 0	mg/L	4	4
A	Mo 202.031	Lin Thru 0	mg/L	4	4
A	Si 251.611	Lin Thru 0	mg/L	4	4
A	Sr 232.235	Lin Thru 0	mg/L	4	4
A	B 249.677	Lin Thru 0	mg/L	4	4
A	Ti 334.940	Lin Thru 0	mg/L	4	4
A	Sn 189.927	Lin Thru 0	mg/L	4	4
IS	Lu 261.542		mg/L	4	4
IS	Sc 361.383		mg/L	4	4
IS	Y 360.073		mg/L	4	4

Calib: Initial Calibration Options

When opening this method manually :

Use the calibrations curves in memory.

When using this method in a multimethod sequence:

* Start by constructing new calibration curves.

Method Name: Initial-4 Point

Start using the existing calibration curve set.
Start using the stored calibration curve set:

Calib : Multi Line Calibration

Not Enabled

Analyte Concentrations Added to Recovery Check Samples

Concentration Units: Sample

Analyte	Conc Units	Recovery Set1	Recovery Set2	Recovery Set3	Recovery Set4	Recovery Set5	Recovery Set6
As 188.979	mg/L						
As 193.696	mg/L						
Ba 233.527	mg/L						
Cd 226.502	mg/L						
Cd 214.440	mg/L						
Cr 267.716	mg/L						
Pb 220.353	mg/L						
Se 196.026	mg/L						
Se 203.985	mg/L						
Ag 328.068	mg/L						
Ag 338.289	mg/L						
Cu 327.393	mg/L						
Cu 324.752	mg/L						
Ni 231.604	mg/L						
Zn 206.200	mg/L						
Be 313.107	mg/L						
Sb 206.836	mg/L						
Tl 190.801	mg/L						
Co 228.616	mg/L						
Mn 257.610	mg/L						
Mn 259.372	mg/L						
Mn 260.568	mg/L						
V 292.402	mg/L						
K 766.490	mg/L						
Na 330.237	mg/L						
Al 308.215	mg/L						
Al 394.401	mg/L						
Al 237.313	mg/L						
Fe 273.955	mg/L						
Ca 315.887	mg/L						
Mg 279.077	mg/L						
Mo 202.031	mg/L						
Si 251.611	mg/L						
Sr 232.235	mg/L						
B 249.677	mg/L						
Ti 334.940	mg/L						
Sn 189.927	mg/L						

Method Name: Initial-4 Point

QC Sample Definition

QC	Sample ID	A/S Loc	Count as Sample	Subtract Reagent
QC 1	ICV	3	No	No
QC 2	CRDL	4	No	No
QC 3	HIGH-STD	2	No	No
QC 4	CCV	5	No	No
QC 5	CCB	0	No	No
QC 6	ICSA	7	No	No
QC 7	ICSAB	8	No	No
QC 8	ICB	1	No	No
QC 9	Rinse	0	No	No

QC Samples: Concentrations and Limits

QC 1: ICV Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	2.00	1.800	2.200
As 193.696	mg/L	2.00	1.800	2.200
Ba 233.527	mg/L	0.050	0.0450	0.0550
Cd 226.502	mg/L	0.200	0.1800	0.2200
Cd 214.440	mg/L	0.2	0.18	0.22
Cr 267.716	mg/L	0.100	0.0900	0.1100
Pb 220.353	mg/L	0.50	0.450	0.550
Se 196.026	mg/L	4.00	3.600	4.400
Se 203.985	mg/L	4.00	3.600	4.400
Ag 328.068	mg/L	1	0.9	1.1
Ag 338.289	mg/L	1	0.9	1.1
Cu 327.393	mg/L	0.2	0.18	0.22
Cu 324.752	mg/L	0.2	0.18	0.22
Ni 231.604	mg/L	0.4	0.36	0.44
Zn 206.200	mg/L	0.2	0.18	0.22
Be 313.107	mg/L	0.02	0.018	0.022
Sb 206.836	mg/L	4	3.6	4.4
Tl 190.801	mg/L	4	3.6	4.4
Co 228.616	mg/L	0.5	0.45	0.55
Mn 257.610	mg/L	5	4.5	5.5
Mn 259.372	mg/L	5	4.5	5.5
Mn 260.568	mg/L	5	4.5	5.5
V 292.402	mg/L	0.5	0.45	0.55
K 766.490	mg/L	10.0	9.00	11.00
Na 330.237	mg/L	5.0	4.50	5.50
Al 308.215	mg/L	2	1.8	2.2
Al 394.401	mg/L	2	1.8	2.2
Al 237.313	mg/L	2	1.8	2.2
Fe 273.955	mg/L	1	0.9	1.1
Ca 315.887	mg/L	5	4.5	5.5
Mg 279.077	mg/L	5	4.5	5.5
Mo 202.031	mg/L	0.5	0.45	0.55
Si 251.611	mg/L	5	4.5	5.5

Method Name: Initial-4 Point

Sr 232.235	mg/L	1	0.9	1.1
B 249.677	mg/L	5	4.5	5.5
Ti 334.940	mg/L	0.5	0.45	0.55
Sn 189.927	mg/L	5	4.5	5.5

QC 2: CRDL Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0.4	0.3	0.5
As 193.696	mg/L	0.4	0.3	0.5
Ba 233.527	mg/L	0.01	0.01	0.01
Cd 226.502	mg/L	0.04	0.03	0.05
Cd 214.440	mg/L	0.04	0.032	0.048
Cr 267.716	mg/L	0.02	0.02	0.02
Pb 220.353	mg/L	0.1	0.1	0.1
Se 196.026	mg/L	0.8	0.6	1.0
Se 203.985	mg/L	0.8	0.6	1.0
Ag 328.068	mg/L	0.2	0.16	0.24
Ag 338.289	mg/L	0.2	0.16	0.24
Cu 327.393	mg/L	0.04	0.03	0.05
Cu 324.752	mg/L	0.04	0.03	0.05
Ni 231.604	mg/L	0.08	0.06	0.10
Zn 206.200	mg/L	0.04	0.03	0.05
Be 313.107	mg/L	0.004	0.003	0.005
Sb 206.836	mg/L	0.8	0.6	1.0
Tl 190.801	mg/L	0.8	0.6	1.0
Co 228.616	mg/L	0.1	0.1	0.1
Mn 257.610	mg/L	1	0.8	1.2
Mn 259.372	mg/L	1	0.8	1.2
Mn 260.568	mg/L	1	0.8	1.2
V 292.402	mg/L	0.1	0.1	0.1
K 766.490	mg/L	2	2	2
Na 330.237	mg/L	1	1	1
Al 308.215	mg/L	0.4	0.3	0.5
Al 394.401	mg/L	0.4	0.3	0.5
Al 237.313	mg/L	0.4	0.3	0.5
Fe 273.955	mg/L	0.2	0.2	0.2
Ca 315.887	mg/L	1	1	1
Mg 279.077	mg/L	1	1	1
Mo 202.031	mg/L	0.1	0.1	0.1
Si 251.611	mg/L	1	1	1
Sr 232.235	mg/L	0.2	0.16	0.24
B 249.677	mg/L	1	0.8	1.2
Ti 334.940	mg/L	0.1	0.08	0.12
Sn 189.927	mg/L	1	0.8	1.2

QC 3: HIGH-STD Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	20.0	18.00	22.00
As 193.696	mg/L	20.0	18.00	22.00
Ba 233.527	mg/L	2.00	1.800	2.200
Cd 226.502	mg/L	2.00	1.800	2.200

Method Name: Initial-4 Point

Cd 214.440	mg/L	2	1.8	2.2
Cr 267.716	mg/L	2	2	2
Pb 220.353	mg/L	20.0	18.00	22.00
Se 196.026	mg/L	20.0	18.00	22.00
Se 203.985	mg/L	20.0	18.00	22.00
Ag 328.068	mg/L	20	18.0	22.0
Ag 338.289	mg/L	20	18.0	22.0
Cu 327.393	mg/L	2.00	1.800	2.200
Cu 324.752	mg/L	2.00	1.800	2.200
Ni 231.604	mg/L	2.00	1.800	2.200
Zn 206.200	mg/L	2.00	1.800	2.200
Be 313.107	mg/L	2.00	1.800	2.200
Sb 206.836	mg/L	20.0	18.00	22.00
Tl 190.801	mg/L	20.0	18.00	22.00
Co 228.616	mg/L	2.00	1.800	2.200
Mn 257.610	mg/L	20	18.0	22.0
Mn 259.372	mg/L	20	18.0	22.0
Mn 260.568	mg/L	20	18.0	22.0
V 292.402	mg/L	2.00	1.800	2.200
K 766.490	mg/L	40.0	36.00	44.00
Na 330.237	mg/L	60.0	54.00	66.00
Al 308.215	mg/L	2.00	1.800	2.200
Al 394.401	mg/L	2.00	1.800	2.200
Al 237.313	mg/L	2.00	1.800	2.200
Fe 273.955	mg/L	2.00	1.800	2.200
Ca 315.887	mg/L	20.0	18.00	22.00
Mg 279.077	mg/L	20.0	18.00	22.00
Mo 202.031	mg/L	2.00	1.800	2.200
Si 251.611	mg/L	20	18	22
Sr 232.235	mg/L	20	18.0	22.0
B 249.677	mg/L	20	18.0	22.0
Ti 334.940	mg/L	2	1.8	2.2
Sn 189.927	mg/L	20	18.0	22.0

QC 4: CCV Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	5.00	4.500	5.500
As 193.696	mg/L	5.00	4.500	5.500
Ba 233.527	mg/L	0.500	0.4500	0.5500
Cd 226.502	mg/L	0.5	0.45	0.55
Cd 214.440	mg/L	0.5	0.45	0.55
Cr 267.716	mg/L	0.500	0.4500	0.5500
Pb 220.353	mg/L	5.00	4.500	5.500
Se 196.026	mg/L	5.00	4.500	5.500
Se 203.985	mg/L	5.00	4.500	5.500
Ag 328.068	mg/L	5	4.5	5.5
Ag 338.289	mg/L	5	4.5	5.5
Cu 327.393	mg/L	0.5	0.45	0.55
Cu 324.752	mg/L	0.500	0.4500	0.5500
Ni 231.604	mg/L	0.500	0.4500	0.5500
Zn 206.200	mg/L	0.500	0.4500	0.5500
Be 313.107	mg/L	0.5	0.45	0.55
Sb 206.836	mg/L	5.00	4.500	5.500
Tl 190.801	mg/L	5.00	4.500	5.500
Co 228.616	mg/L	0.500	0.4500	0.5500

Method Name: Initial-4 Point

Mn 257.610	mg/L	5	4.5	5.5
Mn 259.372	mg/L	5	4.5	5.5
Mn 260.568	mg/L	5	4.5	5.5
V 292.402	mg/L	0.500	0.4500	0.5500
K 766.490	mg/L	10.00	9.000	11.000
Na 330.237	mg/L	15.00	13.500	16.500
Al 308.215	mg/L	0.500	0.4500	0.5500
Al 394.401	mg/L	0.5	0.45	0.55
Al 237.313	mg/L	0.5	0.45	0.55
Fe 273.955	mg/L	0.500	0.4500	0.5500
Ca 315.887	mg/L	5.00	4.500	5.500
Mg 279.077	mg/L	5.00	4.500	5.500
Mo 202.031	mg/L	0.500	0.4500	0.5500
Si 251.611	mg/L	5.00	4.500	5.500
Sr 232.235	mg/L	5	4.5	5.5
B 249.677	mg/L	5	4.5	5.5
Ti 334.940	mg/L	0.5	0.45	0.55
Sn 189.927	mg/L	5	4.5	5.5

QC 5: CCB Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-1	1
As 193.696	mg/L	0	-1	1
Ba 233.527	mg/L	0	-1	1
Cd 226.502	mg/L	0	-1	1
Cd 214.440	mg/L	0	-1	1
Cr 267.716	mg/L	0	-1	1
Pb 220.353	mg/L	0	-1	1
Se 196.026	mg/L	0	-1	1
Se 203.985	mg/L	0	-1	1
Ag 328.068	mg/L	0	-1	1
Ag 338.289	mg/L	0	-1	1
Cu 327.393	mg/L	0	-1	1
Cu 324.752	mg/L	0	-1	1
Ni 231.604	mg/L	0	-1	1
Zn 206.200	mg/L	0	-1	1
Be 313.107	mg/L	0	-1	1
Sb 206.836	mg/L	0	-1	1
Tl 190.801	mg/L	0	-1	1
Co 228.616	mg/L	0	-1	1
Mn 257.610	mg/L	0	-1	1
Mn 259.372	mg/L	0	-1	1
Mn 260.568	mg/L	0	-1	1
V 292.402	mg/L	0	-1	1
K 766.490	mg/L	0	-1	1
Na 330.237	mg/L	0	-1	1
Al 308.215	mg/L	0	-1	1
Al 394.401	mg/L	0	-1	1
Al 237.313	mg/L	0	-1	1
Fe 273.955	mg/L	0	-1	1
Ca 315.887	mg/L	0	-1	1
Mg 279.077	mg/L	0	-1	1
Mo 202.031	mg/L	0	-1	1
Si 251.611	mg/L	0	-1	1
Sr 232.235	mg/L	0	-1	1

Method Name: Initial-4 Point

B 249.677	mg/L	0	-1	1
Ti 334.940	mg/L	0	-1	1
Sn 189.927	mg/L	0	-1	1

QC 6: ICSA Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-0.1	0.1
As 193.696	mg/L	0	-0.1	0.1
Ba 233.527	mg/L	0	-0.1	0.1
Cd 226.502	mg/L	0	-0.1	0.1
Cd 214.440	mg/L	0	-0.1	0.1
Cr 267.716	mg/L	0	-0.1	0.1
Pb 220.353	mg/L	0	-0.1	0.1
Se 196.026	mg/L	0	-0.1	0.1
Se 203.985	mg/L	0	-0.1	0.1
Ag 328.068	mg/L	0	-0.1	0.1
Ag 338.289	mg/L	0	-0.1	0.1
Cu 327.393	mg/L	0	-0.1	0.1
Cu 324.752	mg/L	0	-0.1	0.1
Ni 231.604	mg/L	0	-0.1	0.1
Zn 206.200	mg/L	0	-0.1	0.1
Be 313.107	mg/L	0	-0.1	0.1
Sb 206.836	mg/L	0	-0.1	0.1
Tl 190.801	mg/L	0	-0.1	0.1
Co 228.616	mg/L	0	-0.1	0.1
Mn 257.610	mg/L	0	-0.1	0.1
Mn 259.372	mg/L	0	-0.1	0.1
Mn 260.568	mg/L	0	-0.1	0.1
V 292.402	mg/L	0	-0.1	0.1
K 766.490	mg/L	0	-1	1
Na 330.237	mg/L	100	80	120
Al 308.215	mg/L	120	96	144
Al 394.401	mg/L	120	96	144
Al 237.313	mg/L	120	96	144
Fe 273.955	mg/L	500	400	600
Ca 315.887	mg/L	600	480	720
Mg 279.077	mg/L	300	280	360
Mo 202.031	mg/L	0	-0.1	0.1
Si 251.611	mg/L	0	-1	1
Sr 232.235	mg/L	0	-5	5
B 249.677	mg/L	0	-1	1
Ti 334.940	mg/L	0	-1	1
Sn 189.927	mg/L	0	-1	1

QC 7: ICSAB Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	10	8	12
As 193.696	mg/L	10	8	12
Ba 233.527	mg/L	3	2	4
Cd 226.502	mg/L	3	2	4
Cd 214.440	mg/L	3	2.4	3.6

Method Name: Initial-4 Point

Cr 267.716	mg/L	3	2	4
Pb 220.353	mg/L	10	8	12
Se 196.026	mg/L	5	4	6
Se 203.985	mg/L	5	4	6
Ag 328.068	mg/L	3	2	4
Ag 338.289	mg/L	3	2.4	3.6
Cu 327.393	mg/L	3	2.4	3.6
Cu 324.752	mg/L	3	2	4
Ni 231.604	mg/L	3	2	4
Zn 206.200	mg/L	3	2	4
Be 313.107	mg/L	1	1	1
Sb 206.836	mg/L	10	8	12
Tl 190.801	mg/L	10	8	12
Co 228.616	mg/L	3	2	4
Mn 257.610	mg/L	2	1.6	2.4
Mn 259.372	mg/L	2	1.6	2.4
Mn 260.568	mg/L	2	1.6	2.4
V 292.402	mg/L	3	2	4
K 766.490	mg/L	200	160	240
Na 330.237	mg/L	100	80	120
Al 308.215	mg/L	120	96	144
Al 394.401	mg/L	120	96	144
Al 237.313	mg/L	120	96	144
Fe 273.955	mg/L	500	400	600
Ca 315.887	mg/L	600	480	720
Mg 279.077	mg/L	300	240	360
Mo 202.031	mg/L	3	2	4
Si 251.611	mg/L	2.3	1.84	2.76
Sr 232.235	mg/L	0	-5	5
B 249.677	mg/L	5	4.0	6.0
Ti 334.940	mg/L	10	8.0	12.0
Sn 189.927	mg/L	0	-1	1

QC 8: ICB Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-0.1	0.1
As 193.696	mg/L	0	-0.1	0.1
Ba 233.527	mg/L	0	-0.1	0.1
Cd 226.502	mg/L	0	-0.1	0.1
Cd 214.440	mg/L	0	-0.1	0.1
Cr 267.716	mg/L	0	-0.1	0.1
Pb 220.353	mg/L	0	-0.1	0.1
Se 196.026	mg/L	0	-0.1	0.1
Se 203.985	mg/L	0	-0.1	0.1
Ag 328.068	mg/L	0	-0.1	0.1
Ag 338.289	mg/L	0	-0.1	0.1
Cu 327.393	mg/L	0	-0.1	0.1
Cu 324.752	mg/L	0	-0.1	0.1
Ni 231.604	mg/L	0	-0.1	0.1
Zn 206.200	mg/L	0	-0.1	0.1
Be 313.107	mg/L	0	-0.1	0.1
Sb 206.836	mg/L	0	-0.1	0.1
Tl 190.801	mg/L	0	-0.1	0.1
Co 228.616	mg/L	0	-0.1	0.1
Mn 257.610	mg/L	0	-0.1	0.1

Method Name: Initial-4 Point

Mn 259.372	mg/L	0	-0.1	0.1
Mn 260.568	mg/L	0	-0.1	0.1
V 292.402	mg/L	0	-0.1	0.1
K 766.490	mg/L	0	-1	1
Na 330.237	mg/L	0	-1	1
Al 308.215	mg/L	0	-0.1	0.1
Al 394.401	mg/L	0	-0.1	0.1
Al 237.313	mg/L	0	-0.1	0.1
Fe 273.955	mg/L	0	-0.1	0.1
Ca 315.887	mg/L	0	-0.1	0.1
Mg 279.077	mg/L	0	-0.1	0.1
Mo 202.031	mg/L	0	-0.1	0.1
Si 251.611	mg/L	0	-0.1	0.1
Sr 232.235	mg/L	0	-0.1	0.1
B 249.677	mg/L	0	-1	1
Ti 334.940	mg/L	0	-0.1	0.1
Sn 189.927	mg/L	0	-0.1	0.1

QC 9: Rinse Concentration Units: Calibration

Analyte	Units	Conc	Lower Limit	Upper Limit
As 188.979	mg/L	0	-0.1	0.1
As 193.696	mg/L	0	-0.1	0.1
Ba 233.527	mg/L	0	-0.1	0.1
Cd 226.502	mg/L	0	-0.1	0.1
Cd 214.440	mg/L	0	-0.1	0.1
Cr 267.716	mg/L	0	-0.1	0.1
Pb 220.353	mg/L	0	-0.1	0.1
Se 196.026	mg/L	0	-0.1	0.1
Se 203.985	mg/L	0	-0.1	0.1
Ag 328.068	mg/L	0	-0.1	0.1
Ag 338.289	mg/L	0	-0.1	0.1
Cu 327.393	mg/L	0	-0.1	0.1
Cu 324.752	mg/L	0	-0.1	0.1
Ni 231.604	mg/L	0	-0.1	0.1
Zn 206.200	mg/L	0	-0.1	0.1
Be 313.107	mg/L	0	-0.1	0.1
Sb 206.836	mg/L	0	-0.1	0.1
Tl 190.801	mg/L	0	-0.1	0.1
Co 228.616	mg/L	0	-0.1	0.1
Mn 257.610	mg/L	0	-0.1	0.1
Mn 259.372	mg/L	0	-0.1	0.1
Mn 260.568	mg/L	0	-0.1	0.1
V 292.402	mg/L	0	-0.1	0.1
K 766.490	mg/L	0	-0.1	0.1
Na 330.237	mg/L	0	-0.1	0.1
Al 308.215	mg/L	0	-0.1	0.1
Al 394.401	mg/L	0	-0.1	0.1
Al 237.313	mg/L	0	-0.1	0.1
Fe 273.955	mg/L	0	-0.1	0.1
Ca 315.887	mg/L	0	-0.1	0.1
Mg 279.077	mg/L	0	-0.1	0.1
Mo 202.031	mg/L	0	-0.1	0.1
Si 251.611	mg/L	0	-0.1	0.1
Sr 232.235	mg/L	0	-0.1	0.1
B 249.677	mg/L	0	-0.1	0.1

Method Name: Initial-4 Point

Ti 334.940	mg/L	0	-0.1	0.1
Sn 189.927	mg/L	0	-0.1	0.1

Schedule for QC Analyses

ID	QC Sample	After InitCal	After Recal	Periodic	Freq	AtEnd
QC1	ICV	No	No	No	1	No
QC2	CRDL	No	No	No	1	No
QC3	HIGH-STD	No	No	No	1	No
QC4	CCV	No	No	No	1	No
QC5	CCB	No	No	No	1	No
QC6	ICSA	No	No	No	1	No
QC7	ICSAB	No	No	No	1	No
QC8	ICB	No	No	No	1	No
QC9	Rinse	No	No	No	1	No

Periodic timing of Analyses

Frequency : Same for all QC's : 1

Failure Actions for After-Calibration QC's

QC	Sample ID	Times to Retry QC	When All Tries Fail	Additional Message
QC1	(Not Scheduled)			
QC2	(Not Scheduled)			
QC3	(Not Scheduled)			
QC4	(Not Scheduled)			
QC5	(Not Scheduled)			
QC6	(Not Scheduled)			
QC7	(Not Scheduled)			
QC8	(Not Scheduled)			
QC9	(Not Scheduled)			

Failure Actions for Periodic QC's

QC	Sample ID	Times to Retry QC	When All Tries Fail	Additional Message
QC1	(Not Scheduled)			
QC2	(Not Scheduled)			
QC3	(Not Scheduled)			
QC4	(Not Scheduled)			
QC5	(Not Scheduled)			
QC6	(Not Scheduled)			
QC7	(Not Scheduled)			
QC8	(Not Scheduled)			
QC9	(Not Scheduled)			

Failure Action for At-End QC's

Method Name: Initial-4 Point

QC	Sample ID	Times to Retry QC	When All Tries Fail	Additional Message
QC1	(Not Scheduled)			
QC2	(Not Scheduled)			
QC3	(Not Scheduled)			
QC4	(Not Scheduled)			
QC5	(Not Scheduled)			
QC6	(Not Scheduled)			
QC7	(Not Scheduled)			
QC8	(Not Scheduled)			
QC9	(Not Scheduled)			

Maximum Retries After QC Failure

After a group of standards or unknowns has been reanalyzed 1 times, then Continue

---

Options :

Include in Results Display and Printed Log:

Headers:
 * Analysis Header
   Method Header (Short)
 * Sample Header (Start each sample on a new page)

Sample Data Items:

Auto Integration Report	* Analysis List
Replicate Data	* Calibration Summary
* Means and Statistics	Matrix Test Reports

Save with Results
 * Spectral Data
 * Copy of Method

Remarks

APPENDIX H

SITE DEED RESTRICTIONS

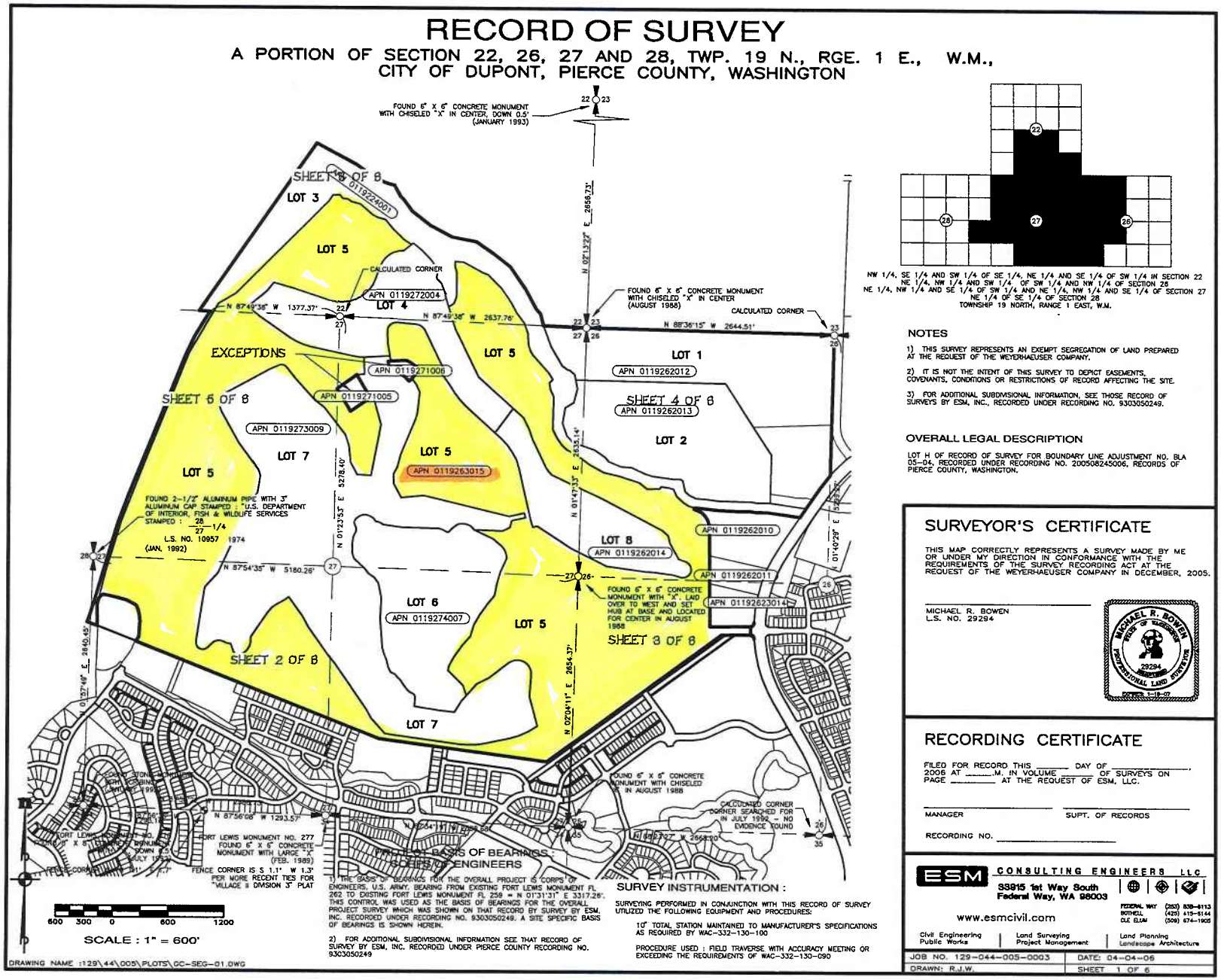
APPENDIX H FIGURE INDEX

Site Deed Restrictions

Figure	Title
COMMERCIAL - LOT 5	Restrictions for Commercial Lot 5
COMMERCIAL - LOT C	Restrictions for Commercial Lot C
GOLF COURSE - DECLARATION OF RESTRICTIVE COVENANT EXHIBIT D	Restrictions for Golf Course Exhibit D
GOLF COURSE - DECLARATION OF RESTRICTIVE COVENANT	Restrictions for Golf Course
GOLF COURSE – RECORD OF SURVEY	Golf Course Record of Survey
GOLF COURSE – RECORDING COVER SHEET	Golf Course Recording Cover Sheet
HISTORIC WITH CAP - 404	Historic with Cap -404 Restrictions
HISTORIC WITH CAP - HISTORICAL	Historical with Cap Restrictions
HISTORIC WITH CAP - MIDDEN	Historic with Cap – Midden Restrictions

RECORD OF SURVEY

A PORTION OF SECTION 22, 26, 27 AND 28, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



NW 1/4, SE 1/4 AND SW 1/4 OF SE 1/4, NE 1/4 AND SE 1/4 OF SW 1/4 IN SECTION 22
NE 1/4, NW 1/4 AND SW 1/4 OF SW 1/4 AND NW 1/4 OF SECTION 26
NE 1/4, NW 1/4 AND SE 1/4 OF SW 1/4 AND NE 1/4, NW 1/4 AND SE 1/4 OF SECTION 27
NE 1/4 OF SE 1/4 OF SECTION 28
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NOTES

1) THIS SURVEY REPRESENTS AN EXEMPT SEGREGATION OF LAND PREPARED AT THE REQUEST OF THE WEYERHAEUSER COMPANY.

2) IT IS NOT THE INTENT OF THIS SURVEY TO DEPICT EASEMENTS, COVENANTS, CONDITIONS OR RESTRICTIONS OF RECORD AFFECTING THE SITE.

3) FOR ADDITIONAL SUBDIVISIONAL INFORMATION, SEE THOSE RECORD OF SURVEYS BY ESM, INC., RECORDED UNDER RECORDING NO. 9303050249.

OVERALL LEGAL DESCRIPTION

LOT H OF RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT NO. BLA 05-04, RECORDED UNDER RECORDING NO. 200508245006, RECORDS OF PIERCE COUNTY, WASHINGTON.

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WEYERHAEUSER COMPANY IN DECEMBER, 2005.

MICHAEL R. BOWEN
L.S. NO. 29294

MICHAEL R. BOWEN — STATE OF WASHINGTON — 29294 — REGISTERED PROFESSIONAL LAND SURVEYOR — EXPIRES 1-10-07

RECORDING CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 2006 AT _____ M. IN VOLUME _____ OF SURVEYS ON PAGE _____ AT THE REQUEST OF ESM, LLC.

MANAGER

SUPT. OF RECORDS

RECORDING NO. _____

ESM CONSULTING ENGINEERS LLC
33915 1st Way South
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-8144
OLE ELUM (509) 674-1905
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-005-0003 | DATE: 04-04-06
DRAWN: R.J.W. | SHEET 1 OF 6

COMMERCIAL (LOT 5)

* for explanatory purposes, do not record this sheet.

Name & Return Address:

Polly McNeill
Summit Law Group
315 Fifth Ave S Suite 1000
Seattle, WA 98104

Document Title(s) Declaration of Restrictive Covenant – Commercial
Grantor -- Weyerhaeuser Company
Grantee -- State of Washington, Department of Ecology
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Portion of Lot 5 of that Record of Survey recorded under Recording No. 200601275001, Records of Pierce County, Washington Complete Legal Description in Exhibit A of the Document
Auditor's Reference Number -200601275001
Assessor's Property Tax Parcel/Account Number - 0119263015
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein. I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. _____ Signature of Requesting Party (Required for non-standard recordings only)

DECLARATION OF RESTRICTIVE COVENANT

COMMERCIAL

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 this _____ day of _____, 2006, by the Weyerhaeuser Company ("Weyerhaeuser"), its successors and assigns, and the State of Washington, Department of Ecology ("Department of Ecology"), and its successors and assigns.

The undersigned, Weyerhaeuser, covenants that it is the fee owner of real property in Pierce County, Washington, legally described in Exhibit A and depicted in Exhibit B, attached hereto and incorporated herein by this reference ("Property").

The Property is within an area commonly referred to as "Parcel One" of the "Former DuPont Works Site" that was the subject of work to clean up the Property ("Remedial Action") under the Washington Model Toxics Control Act ("MTCA"), Chapter 70.105D RCW. The Remedial Action is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Weyerhaeuser Company and E.I. DuPont de Nemours and Company* (Thurston County Cause No. 03-2-10484-7), in attachments to the Decree and in documents referenced in the Decree, including without limitation the Cleanup Action Plan attached to the Consent Decree as Exhibit A, and incorporated therein by reference. The Cleanup Action Plan is on file and available for inspection at the Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47775, Olympia, WA 98504-7775. The boundary of Parcel One is depicted in Exhibit B, attached hereto.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations at some portions of the Property of hazardous substances which exceed the soil and groundwater cleanup levels specified in MTCA for unrestricted land uses. The Remedial Action resulted in removal of all hazardous substances which exceed site specific remediation levels, as established by the Department of Ecology, for commercial land use. Large sections of the Property were remediated with resulting chemical concentrations below the soil and groundwater cleanup levels specified under MTCA for unrestricted land uses. As a result, individual parcels may contain different levels of residual contamination, if any. This Restrictive Covenant applies to all of the Property, regardless of whether residual contamination remains or not.

Weyerhaeuser makes the following declaration as to limitations, conditions, restrictions, and uses to which the Property may be put and specifies that such declarations shall run with the land as provided by law and shall be binding on Weyerhaeuser, its successors and assigns, and any and all parties and persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter, "Owner").

Section 1: Restrictions on Use of Property. The Property may be developed and used only for commercial use as allowed under the City of DuPont zoning regulations and Comprehensive Land Use Plan and under MTCA; provided, however that the Property shall not be developed and used for any of the following: residential uses, schools, daycares, parks, recreational uses (with the exception of potential future golf course expansion), or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 2: Restrictions on Activities. The Owner may maintain and develop the Property consistent with this Restrictive Covenant. Normal construction and maintenance for permitted development is not restricted by this Section. Maintenance of any impervious surfaces is expressly permitted without prior approval so long as appropriate health and safety protocols are followed. For development activities permitted under this Restrictive Covenant, excavated soils must be managed properly and unless put back in place must be either placed in an area within the boundaries of the Former DuPont Works Site, or disposed off-site in accordance with applicable regulations. Excavated soils shall be managed to minimize exposure to workers and other adults, including but not limited to the use of best management practices to control dust and surface water runoff; and to prevent exposure to children. Any activity on the Property that could interfere with the continued protection of human health and the environment is prohibited without prior written approval from the Department of Ecology.

Section 3: Change of Use. The Owner must notify and obtain approval from the Department of Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. The Department of Ecology may approve any inconsistent use only after public notice and comment; provided, however, in no event may any change in use be approved that would allow for residential uses, schools, daycares, parks, recreational uses (with the exception of potential future golf course expansion), or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 4: Notice of Conveyance. The Owner must give thirty (30) days' advance written notice to the Department of Ecology of the Owner's intent to convey any interest in the Property. Within thirty (30) days of the date any instrument conveying a fee title interest is executed, grantor must provide the Department of Ecology with a certified true copy of the instrument and, if it has been recorded in the public land records, its recording reference. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5: Leasehold Interests. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6: Recordation. Within thirty (30) days of the date of execution, the Owner shall record this Restrictive Covenant with the Pierce County Assessor's Office, and provide evidence of recordation to the Department of Ecology.

Section 7: Notice Requirement. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE PUBLIC LAND RECORDS ON _____, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY THE STATE OF WASHINGTON.

Section 8: Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give the other shall be in writing and shall be served personally or sent by first class mail postage prepaid, addresses as follows:

To Weyerhaeuser:

Director, Environmental Affairs
Mail Stop EC2 2C1
P.O. Box 9777
Federal Way, WA 98063-9777

To the Department of Ecology:

Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775

Section 9: Groundwater Withdrawal. The Owner of the Property must not permit withdrawal of groundwater from the Property for drinking water purposes, unless authorized by the Department of Ecology. Withdrawal of groundwater from monitoring wells for the purpose of extracting samples for analysis is expressly permitted.

Section 10: Access. The Owner shall allow authorized representatives of the Department of Ecology, E.I. DuPont de Nemours Company and Weyerhaeuser the right to enter the Property at reasonable times for the purposes of monitoring compliance with the terms of this Restrictive Covenant, evaluating the Remedial Action, taking samples, inspecting remedial actions conducted at the Property, and inspecting records that are related to the Remedial Action.

Section 11: No Public Access and Use. No right of access or use by the general public to any portion of the Property is conveyed by this Restrictive Covenant.

Section 12: Enforcement. Weyerhaeuser, the E.I. DuPont de Nemours Company, and the Department of Ecology shall each have the right, but not the obligation, to enforce the terms of this Restrictive Covenant by resort to specific performance or any legal process; provided, however, that no provision of this Restrictive Covenant shall be construed or intended to impose any obligations, by law or by contract, on the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to take action to enforce said restrictions. Neither the right nor authority of the Department of Ecology and Weyerhaeuser and E.I. DuPont de Nemours Company to enforce this Restrictive Covenant nor a decision made to exercise or not to exercise such authority to right shall give rise to any duty or responsibility on the party of the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to exercise or not exercise

this right on behalf of any Party or other person or entity. All remedies available hereunder shall be in addition to any and all remedies at law or in equity, including MTCA. Any forbearance, delay or omission to exercise the enforcement rights under this Restrictive Covenant in the event of a breach of any term of this Restrictive Covenant shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this Restrictive Covenant. Should legal counsel be employed to enforce this Restrictive Covenant, all costs incurred in such enforcement, including reasonable attorneys' fees shall be paid by the Owner found to be in violation.

Section 13: No Third Party Beneficiary. This Restrictive Covenant is intended for the sole and exclusive benefit of the Parties hereto and their respective successors and assigns, including all current and future owners of any portion or interest in the property. The Parties to this Restrictive Covenant expressly do not intend to benefit any other person or entity, and expressly do not intend to create any third-party beneficiaries to any provision of this Restrictive Covenant, including but not limited to any enforcement provisions.

Section 14: Run with the Land. To the extent that this Restrictive Covenant is construed as a restrictive covenant, it shall run with the land, and shall be binding on the Owners, their successors and assigns, of all or any portion of the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the property owner without adequate and complete provision for the continued observation of this Restrictive Covenant.

Section 15: Severability. Invalidation of any provision or application of a provision of this Restrictive Covenant by any court shall not affect any other provisions or applications.

Section 16: Easement in Gross. To the extent that this Restrictive Covenant creates a negative easement, it shall be construed as an easement in gross for the sole benefit of Weyerhaeuser, without whose consent it cannot be released, modified or amended.

Section 17: Reserved Rights. Weyerhaeuser reserves unto itself and its successors and assigns all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, and rights granted herein.

Weyerhaeuser Company has caused this Restrictive Covenant to be signed in its name.

EXECUTED this _____ day of _____, 2006.

WEYERHAEUSER COMPANY

By:

_____
Richard E. Hanson
Executive Vice President and Chief
Operating Officer

STATE OF WASHINGTON)
) ss.
County of _____)

On this ____ day of _____, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Richard E. Hanson, known to be the Executive Vice President and Chief Operating Officer of Weyerhaeuser Company, the corporation that executed the foregoing Restrictive Covenant, and acknowledged the said Restrictive Covenant to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said Restrictive Covenant.

WITNESS my hand and official seal hereto affixed the day and year written above.

NOTARY PUBLIC in and for the State of
Washington. My commission expires:

_____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

By: Dated: _____

_____
Mike Blum
Project Coordinator

Attachments: Exhibit A – Legal description of Property
Exhibit B – Depiction of Property & Parcel One Boundary

Weyerhaeuser company
Job No. 129-044-004-0960
July 13, 2006

EXHIBIT "A"

LEGAL DESCRIPTION FOR COMMERCIAL PROPERTY LOT 5

That portion of Lot 5 of that Record of Survey as recorded under Recording No. 200601275001, Records of Pierce County, Washington, being more particularly described as follows:

BEGINNING at the southwesterly corner of Lot C of that Record of Survey for Boundary Line Adjustment No. 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington, said point being on the easterly line of said Lot 5;

THENCE along the boundary of said Lot 5 the following courses:

N 00°23'40" W, 1044.01 feet;

Northwesterly 282.64 feet along the arc of a tangent curve to the left, having a radius of 205.00 feet, through a central angle of 78°59'48";

N 47°56'54" E, 18.37 feet;

N 72°03'32" W, 71.78 feet;

N 61°13'57" W, 62.70 feet;

N 47°38'05" W, 103.73 feet;

N 22°41'31" W, 82.14 feet;

N 73°54'16" W, 55.51 feet;

N 84°05'26" W, 82.17 feet;

S 32°18'51" W, 21.44 feet;

S 86°21'14" W, 135.81 feet;

N 50°58'05" W, 108.58 feet;

N 72°38'29" W, 226.91 feet;

N 77°20'02" W, 170.54 feet;

N 60°41'16" W, 162.72 feet;

N 53°43'56" W, 129.34 feet;

S 76°15'11" W, 48.33 feet;

N 24°28'05" W, 65.64 feet;

N 62°11'03" W, 69.39 feet;

N 49°11'02" W, 72.59 feet;

N 34°19'20" W, 87.42 feet;

N 27°00'43" W, 112.04 feet;

N 01°08'02" E, 348.96 feet;

N 25°53'50" W, 76.38 feet;

N 08°22'48" W, 74.15 feet;

N 41°59'44" E, 49.87 feet;

N 32°06'13" W, 81.14 feet;

N 41°57'59" W, 249.15 feet;

N 30°01'42" W, 57.79 feet;

N 17°00'17" W, 67.26 feet;

N 03°10'56" W, 116.95 feet;

N 19°23'11" W, 114.21 feet;

N 37°43'37" W, 131.19 feet;

N 27°35'16" W, 110.33 feet;

N 34°44'19" W, 192.77 feet;

N 44°06'36" W, 209.71 feet;

N 69°47'20" W, 57.28 feet;

N 62°04'20" W, 238.38 feet;

N 86°54'00" W, 90.44 feet;

S 02°30'42" W, 54.76 feet;

S 18°46'20" E, 48.92 feet;

S 01°08'04" E, 259.31 feet;

S 13°59'53" W, 37.81 feet;

S 26°36'28" W, 52.16 feet;

S 57°50'23" W, 65.15 feet;

S 16°34'41" E, 181.17 feet;

S 21°40'37" E, 90.38 feet;

S 26°19'57" E, 538.06 feet;

S 48°17'00" E, 494.85 feet;

S 49°30'18" E, 147.46 feet;

S 25°54'00" E, 151.25 feet;

S 17°21'24" E, 100.97 feet;

S 25°54'00" E, 335.37 feet to a point of curvature;

Southeasterly 138.57 feet along the arc of a tangent curve to the left, having a radius of 200.00 feet, through a central angle of 39°41'50" to a point of tangency;

S 65°35'50" E, 529.87 feet;

S 62°49'08" E, 741.68 feet;

S 45°41'54" E, 81.88 feet;

S 13°45'38" E, 77.59 feet;

S 29°10'09" E, 194.08 feet;

S 69°18'07" E, 85.62 feet to a point of curvature;

Southerly 228.93 feet along the arc of a tangent curve to the right, having a radius of 85.00 feet, through a central angle of 154°18'53" to a point of tangency;

S 85°00'47" W, 29.23 feet;

N 72°47'23" W, 91.61 feet;

N 81°53'23" W, 209.98 feet;

N 88°10'01" W, 91.46 feet;

N 81°53'23" W, 414.44 feet;

N 63°30'49" W, 428.82 feet;

N 57°19'38" W, 422.82 feet;

S 76°43'36" W, 45.22 feet to a point of curvature;

Northerly 79.32 feet along the arc of a non-tangent curve to the right, having a radius of 805.00 feet, the radius point of which bears N 71°04'53" E, through a central angle of 05°38'43" to a point of tangency;

N 13°16'24" W, 548.75 feet to a point of curvature;

Northwesterly 385.68 feet along the arc of a tangent curve to the left, having a radius of 635.00 feet, through a central angle of 34°47'58" to a point of tangency;

N 48°04'22" W, 523.81 feet to a point of curvature;

Northwesterly 162.45 feet along the arc of a tangent curve to the right, having a radius of 585.00 feet, through a central angle of 15°54'36" a point of tangency;

N 32°09'46" W, 113.83 feet to a point of curvature;

Northwesterly 174.60 feet along the arc of a tangent curve to the left, having a radius of 635.00 feet, through a central angle of 15°45'13";

N 63°32'48" E, 56.76 feet;

N 26°27'59" W, 460.91 feet to a point of curvature;

Northwesterly 101.12 feet along the arc of a tangent curve to the left, having a radius of 100.00 feet, through a central angle of 57°56'20" a point of tangency;

N 84°24'20" W, 222.05 feet to a point of curvature;

Southwesterly 154.70 feet along the arc of a tangent curve to the left, having a radius of 90.00 feet, through a central angle of 98°29'05" a point of tangency;

S 02°53'25" E, 125.62 feet;

S 09°33'57" E, 187.71 feet to the northerly line of Tract X of City of DuPont Boundary Line Adjustment No. 06-01;

THENCE along said northerly line, N 87°03'49" E, 61.01 feet to a point of curvature;

THENCE continuing along said northerly line, easterly 121.45 feet along the arc of a tangent curve to the right, having a radius of 585.00 feet, through a central angle of 11°53'42";

THENCE continuing along said northerly line, S 62°41'22" E, 31.22 feet;

THENCE continuing along said northerly line, S 51°34'13" E, 112.06 feet to the northeasterly corner thereof;

THENCE along the easterly line thereof, S 33°19'39" W, 49.33 feet;

THENCE continuing along said easterly line, S 34°39'09" W, 65.84 feet;

THENCE continuing along said easterly line, S 47°24'39" W, 5.46 feet to a point of curvature;

THENCE along said boundary of Lot 5 the following courses:

Southeasterly 165.38 feet along the arc of a non-tangent curve to the right, having a radius of 436.11 feet, the radius point of which bears S 49°22'37" W, through a central angle of 21°43'38";

S 05°50'08" W, 181.88 feet to a point of curvature;

Southwesterly 117.19 feet along the arc a tangent curve to the right, having a radius of 400.00 feet, through a central angle of 16°47'09" to a point of tangency;

S 22°37'17" W, 398.44 feet;

S 15°43'09" W, 133.40 feet;

S 25°19'49" W, 93.32 feet;

S 00°43'27" E, 100.08 feet;

S 29°11'26" E, 164.00 feet;

N 84°26'24" E, 245.21 feet;

S 76°36'33" E, 937.25 feet;

N 77°36'29" E, 167.78 feet;

S 13°16'24" E, 49.96 feet;

S 77°36'29" W, 150.83 feet;

S 15°14'23" W, 72.75 feet;

S 64°19'18" W, 83.57 feet;

N 88°16'43" W, 303.65 feet;

S 64°21'54" E, 223.18 feet;

S 49°41'56" E, 119.97 feet to a point of curvature;

Southeasterly 138.30 feet along the arc of a tangent curve to the right, having a radius of 146.00 feet, through a central angle of 54°16'33";

S 23°48'06" W, 160.93 feet;

S 17°09'55" W, 139.32 feet;

S 09°33'25" W, 119.20 feet;

S 40°23'29" W, 111.59 feet;

S 35°51'20" W, 148.44 feet;

S 29°29'59" W, 124.16 feet;

S 17°18'08" W, 128.18 feet;

S 42°08'22" W, 120.33 feet;

S 36°27'52" W, 157.90 feet;

S 30°12'01" W, 104.49 feet;

S 12°03'04" W, 56.58 feet;

S 45°28'03" E, 229.60 feet;

S 19°19'41" E, 110.15 feet;

N 41°25'32" E, 167.25 feet;

N 65°00'28" E, 140.16 feet;

N 52°43'29" E, 268.42 feet to a point of curvature;

Southeasterly 347.28 feet along the arc of a tangent curve to the right, having a radius of 149.85 feet, through a central angle of 132°46'59" to a point of tangency;

S 05°30'28" W, 220.14 feet;

S 15°08'48" E, 327.52 feet to a point of curvature;

Southwesterly 325.57 feet along the arc of a non-tangent curve to the right, having a radius of 803.50 feet, the radius point of which bears N 35°06'13" W, through a central angle of 23°12'56" to a point of tangency;

S 78°06'43" W, 267.16 feet to a point of curvature;

Westerly 271.60 feet along the arc of a tangent curve to the right, having a radius of 803.50 feet, through a central angle of 19°22'02" to a point of tangency;

N 82°31'15" W, 730.94 feet to a point of curvature;

Westerly 75.00 feet along the arc of a tangent curve to the right, having a radius of 803.50 feet, through a central angle of 05°20'54";

N 42°02'47" W, 220.77 feet;

N 28°52'29" W, 100.00 feet;

N 34°41'59" W, 600.00 feet;

N 40°24'37" W, 100.50 feet;

N 34°41'59" W, 368.52 feet;

N 30°21'01" W, 131.86 feet;

N 34°41'59" W, 251.74 feet to a point of curvature;

Southwesterly 65.76 feet along the arc of a non-tangent curve to the right, having a radius of 330.00 feet, the radius point of which bears N 39°14'32" W, through a central angle of 11°25'00" to a point of tangency;

S 62°10'28" W, 78.56 feet to a point of curvature;

Southwesterly 130.82 feet along the arc of a tangent curve to the left, having a radius of 270.00 feet, through a central angle of 27°45'37";

S 34°24'51" W, 323.30 feet to a point of curvature;

Southwesterly 242.17 feet along the arc of a non-tangent curve to the right, having a radius of 182.00 feet, the radius point of which bears S 82°00'39" W, through a central angle of 76°14'20";

S 87°10'18" W, 29.22 feet;

N 56°09'54" W, 47.00 feet;

N 20°07'21" W, 101.52 feet to a point of curvature;

Westerly 59.48 feet along the arc of a non-tangent curve to the right, having a radius of 145.00 feet, the radius point of which bears N 01°32'01" E, through a central angle of 23°30'14";

N 64°57'45" W, 22.09 feet to a point of curvature;

Westerly 132.33 feet along the arc of a tangent curve to the left, having a radius of 110.00 feet, through a central angle of 68°55'34" to a point of tangency;

S 46°06'40" W, 63.66 feet to a point of curvature;

Northwesterly 187.15 feet along the arc of a tangent curve to the right, having a radius of 75.00 feet, through a central angle of 142°58'19" a point of tangency;

N 09°05'00" E, 555.18 feet to a point of curvature;

Northeasterly 60.72 feet along the arc of a tangent curve to the right, having a radius of 100.00 feet, through a central angle of 34°47'14";

N 43°52'13" E, 158.11 feet to a point of curvature;

Northeasterly 33.21 feet along the arc of a tangent curve to the left, having a radius of 100.00 feet, through a central angle of 19°01'38" to a point of tangency;

N 24°50'35" E, 710.45 feet;

N 30°21'12" E, 219.74 feet;

N 10°17'29" E, 171.52 feet to a point of curvature;

Northwesterly 131.59 feet along the arc of a non-tangent curve to the left, having a radius of 250.00 feet, the radius point of which bears S 80°13'47" W, through a central angle of 30°09'33" to a point of tangency;

N 39°55'47" W, 52.98 feet;

N 36°12'43" W, 246.04 feet;

N 29°05'24" W, 387.34 feet to a point of curvature;

Northeasterly 219.81 feet along the arc of a tangent curve to the right, having a radius of 139.00 feet, through a central angle of 90°36'22" to a point of tangency;

N 61°30'58" E, 534.99 feet;

N 68°01'18" E, 104.37 feet to a point of curvature;

Easterly 83.42 feet along the arc of a tangent curve to the right, having a radius of 65.00 feet, through a central angle of 73°32'09" to a point of tangency;

S 38°26'33" E, 158.23 feet;

S 41°49'46" E, 300.00 feet;

S 51°50'37" E, 130.33 feet;

S 38°12'37" E, 359.02 feet;

S 18°10'10" E, 126.85 feet;

S 06°29'53" E, 174.67 feet;

S 27°21'48" E, 147.67 feet;

S 86°31'16" E, 147.51 feet;

N 11°09'53" E, 554.34 feet;

N 16°18'51" W, 244.73 feet;

N 26°29'43" W, 62.03 feet;

S 56°44'03" W, 21.48 feet to the southeasterly corner of Lot F of said Record of Survey for Boundary Line Adjustment No. 05-04;

THENCE along the southerly line of said Lot F, S 56°44'03" W, 256.04 feet to the southwesterly corner thereof;

THENCE along westerly line, N 31°00'04" W, 276.59 feet to the northwesterly corner thereof;

THENCE along northerly line, N 55°19'07" E, 258.48 feet to the northeasterly corner thereof;

THENCE continuing along said boundary of Lot 5 the following couses:

N 86°34'55" E, 82.88 feet;

N 03°25'05" W, 182.34 feet to a point of curvature;

Westerly 124.54 feet along the arc of a non-tangent curve to the right, having a radius of 585.00 feet, the radius point of which bears N 00°08'39" E, through a central angle of 12°11'51";

N 77°39'29" W, 456.47 feet to a point of curvature;

Northwesterly 222.74 feet along the arc of a tangent curve to the right, having a radius of 585.00 feet, through a central angle of 21°48'54" to a point of tangency;

N 55°50'35" W, 408.94 feet to a point of curvature;

Northwesterly 113.59 feet along the arc of a tangent curve to the right, having a radius of 585.00 feet, through a central angle of 11°07'31" to a point of tangency;

N 44°43'05" W, 17.83 feet to a point of curvature;

Northerly 39.36 feet along the arc of a tangent curve to the right, having a radius of 24.50 feet, through a central angle of 92°03'03" to a point of compound curvature;

Northeasterly 109.25 feet along the arc of a tangent curve to the right, having a radius of 803.50 feet, through a central angle of 07°47'24" to a point of tangency;

N 55°07'22" E, 27.06 feet to a point of curvature;

Northeasterly 197.47 feet along the arc of a tangent curve to the left, having a radius of 525.00 feet, through a central angle of 21°33'05" to a point of tangency;

N 33°34'17" E, 14.74 feet;

S 74°27'00" E, 198.15 feet;

S 71°37'30" E, 427.99 feet to a point of curvature;

Northeasterly 593.69 feet along the arc of a tangent curve to the left, having a radius of 385.50 feet, through a central angle of 88°14'17" to a point of tangency;

N 20°08'13" E, 138.72 feet to a point of curvature;

Northeasterly 325.13 feet along the arc of a tangent curve to the right, having a radius of 258.92 feet, through a central angle of 71°56'45";

N 53°19'12" E, 102.46 feet;

N 55°23'05" W, 100.50 feet;

N 45°37'04" W, 145.55 feet;

N 41°26'58" W, 143.56 feet;

N 74°19'50" W, 88.60 feet;

N 61°23'35" W, 54.32 feet;

N 49°20'32" W, 172.29 feet;

N 76°18'47" W, 101.33 feet;

N 53°19'45" W, 50.25 feet;

N 85°39'27" W, 55.90 feet;

N 35°43'38" W, 42.79 feet;

S 89°24'52" W, 74.82 feet;

S 35°14'22" W, 87.77 feet;

S 45°13'22" W, 289.07 feet;

S 45°12'00" W, 422.25 feet;

S 45°09'55" W, 679.34 feet;

S 60°43'52" W, 203.50 feet;

S 30°51'20" W, 610.41 feet;

S 22°09'51" W, 622.04 feet;

S 21°59'37" W, 533.32 feet;

S 22°01'36" W, 762.71 feet;

S 16°58'17" W, 557.84 feet;

S 14°35'52" W, 298.84 feet;

N 38°07'53" E, 40.48 feet;

N 66°03'43" E, 25.83 feet;

S 80°53'28" E, 27.29 feet;

S 78°58'25" E, 65.92 feet;

S 76°11'44" E, 69.47 feet;

S 75°24'01" E, 49.34 feet;

S 68°26'48" E, 2.87 feet;

S 70°56'46" E, 28.76 feet;

S 65°42'50" E, 60.54 feet;

S 64°20'03" E, 46.53 feet;

S 49°14'55" E, 30.69 feet;

S 21°20'30" E, 44.53 feet;

S 13°59'00" E, 58.49 feet;

S 02°15'32" E, 66.52 feet;

S 03°27'44" W, 154.97 feet;

S 04°38'26" W, 15.50 feet to a point of curvature;

Southwesterly 26.53 feet along the arc of a tangent curve to the right, having a radius of 25.00 feet, through a central angle of 60°48'41" to a point of reverse curvature;

Southwesterly 21.39 feet along the arc of a tangent curve to the left, having a radius of 40.00 feet, through a central angle of 30°38'25";

THENCE leaving said boundary, S 68°35'05" E, 2797.61 feet;

THENCE S 82°31'15" E, 1797.29 feet;

THENCE N 54°01'20" E, 1898.35 feet;

THENCE N 39°34'58" E, 413.73 feet to the southerly line of said Lot C;

THENCE along said southerly line, S 89°36'20" W, 60.98 feet to the POINT OF BEGINNING;

See attached Exhibit "B".

Written by: R.J.W.
Checked by: M.R.B.
I:\ESM-JOBS\129\44\004\Documents\129044-32.Doc

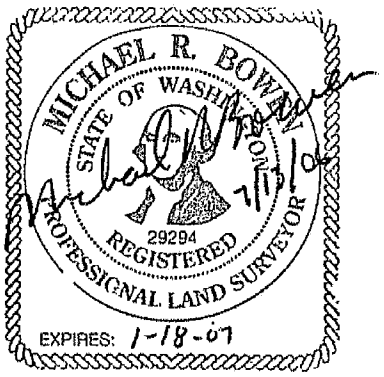
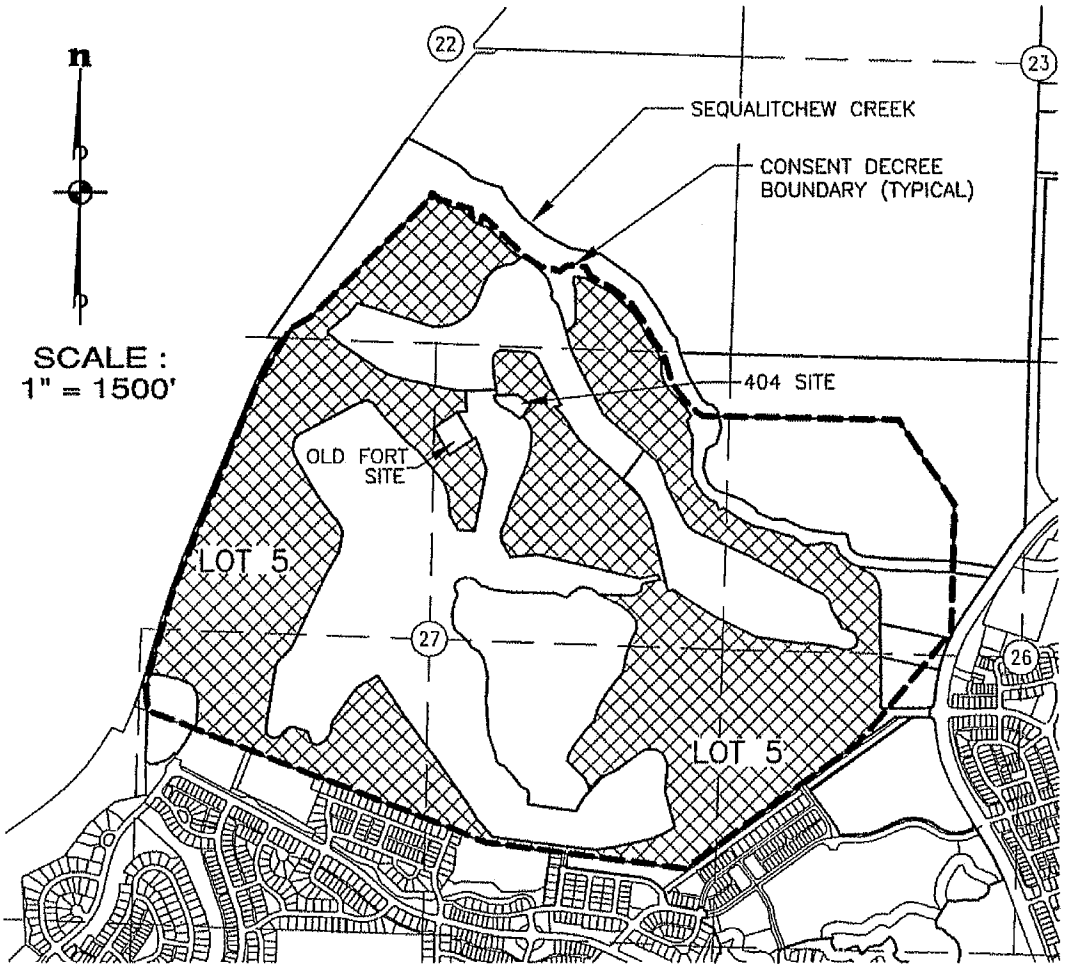


EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR COMMERCIAL PROPERTY – LOT 5

A PORTION OF SECTIONS 22, 26, 27, 28 AND 35, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



LEGEND

SUBJECT AREA

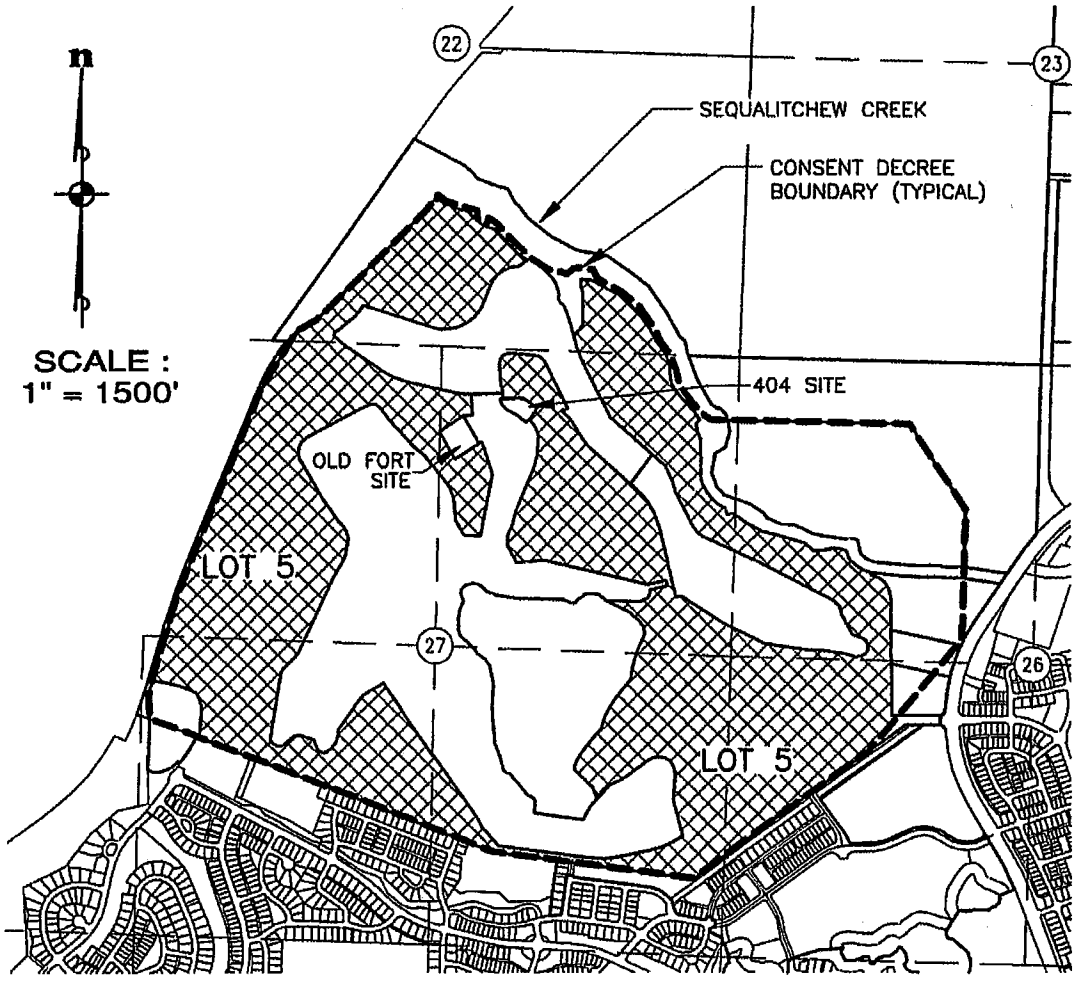
ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-10.DWG
DATE : 06-12-06
DRAWN : MRB/RJW
SHEET 1 OF 1

EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR COMMERCIAL PROPERTY – LOT 5

A PORTION OF SECTIONS 22, 26, 27, 28 AND 35, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



LEGEND

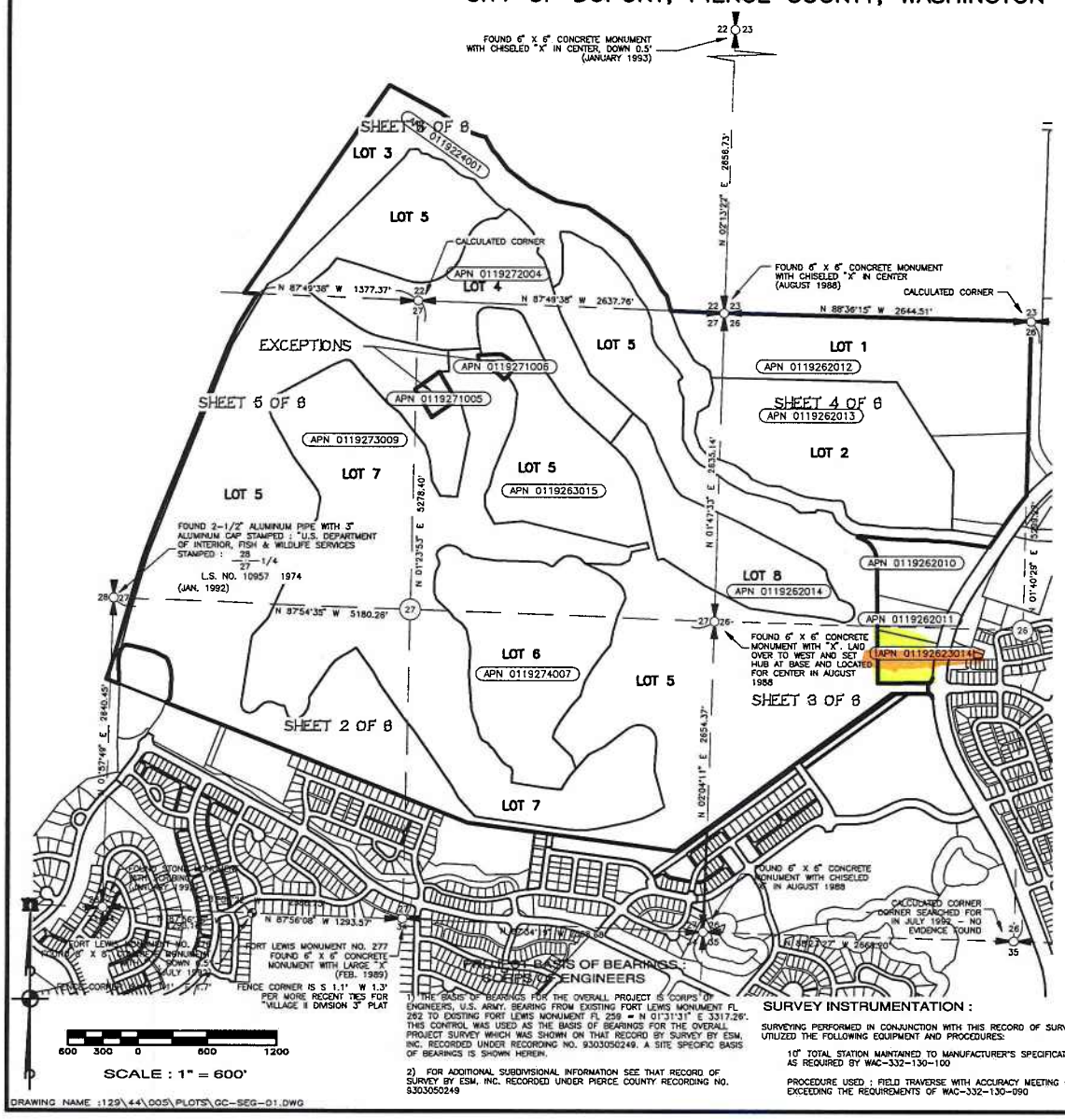
SUBJECT AREA

ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-10.DWG
DATE : 06-12-06
DRAWN : MRB/RJW
SHEET 1 OF 1

RECORD OF SURVEY

A PORTION OF SECTION 22, 26, 27 AND 28, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



DRAWING NAME :129\44\005\PLOTS\GC-SEG-01.DWG

1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY, BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

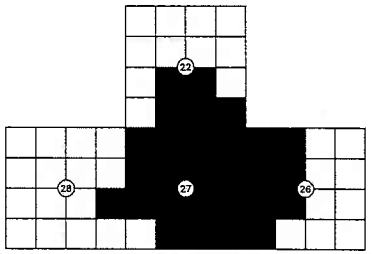
2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THAT RECORD OF SURVEY BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NO. 9303050249

SURVEY INSTRUMENTATION :

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC-332-130-100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC-332-130-090



NW 1/4, SE 1/4 AND SW 1/4 OF SE 1/4, NE 1/4 AND SE 1/4 OF SW 1/4 IN SECTION 22
NE 1/4, NW 1/4 AND SW 1/4 OF SW 1/4 AND NW 1/4 OF SECTION 26
NE 1/4, NW 1/4 AND SE 1/4 OF SW 1/4 AND NE 1/4, NW 1/4 AND SE 1/4 OF SECTION 27
NE 1/4 OF SE 1/4 OF SECTION 28
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NOTES

1) THIS SURVEY REPRESENTS AN EXEMPT SEGREGATION OF LAND PREPARED AT THE REQUEST OF THE WEYERHAEUSER COMPANY.

2) IT IS NOT THE INTENT OF THIS SURVEY TO DEPICT EASEMENTS, COVENANTS, CONDITIONS OR RESTRICTIONS OF RECORD AFFECTING THE SITE.

3) FOR ADDITIONAL SUBDIVISIONAL INFORMATION, SEE THOSE RECORD OF SURVEYS BY ESM, INC., RECORDED UNDER RECORDING NO. 9303050249.

OVERALL LEGAL DESCRIPTION

LOT H OF RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT NO. BLA 05-04, RECORDED UNDER RECORDING NO. 200508245006, RECORDS OF PIERCE COUNTY, WASHINGTON.

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WEYERHAEUSER COMPANY IN DECEMBER, 2005.

MICHAEL R. BOWEN
L.S. NO. 29294

MICHAEL R. BOWEN — STATE OF WASHINGTON — 29294 — REGISTERED PROFESSIONAL LAND SURVEYOR — 1-19-07

RECORDING CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 2005 AT _____.M. IN VOLUME _____ OF SURVEYS ON PAGE _____ AT THE REQUEST OF ESM, LLC.

MANAGER

SUPT. OF RECORDS

RECORDING NO. _____

ESM CONSULTING ENGINEERS LLC
33915 1st Way South
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-8113
BOTHELL (425) 415-8144
CLE ELUM (509) 674-1905
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-005-0003 | DATE: 04-04-06
DRAWN: R.J.W. | SHEET 1 OF 6

(* for explanatory purposes; do not record this sheet.)

COMMERCIAL (LOT C)

Name & Return Address:

Polly McNeill
Summit Law Group
315 Fifth Ave S Suite 1000
Seattle, WA 98104

Document Title(s) Declaration of Restrictive Covenant – Commercial
Grantor - Weyerhaeuser Company
Grantee - State of Washington, Department of Ecology
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Portion of Lot C of that Record of Survey for Boundary Line Adjustment No. 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington Complete Legal Description in Exhibit A of the Document
Auditor's Reference Number -200508245006
Assessor's Property Tax Parcel/Account Number - 0119263014
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein. I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. _____ Signature of Requesting Party (Required for non-standard recordings only)

DECLARATION OF RESTRICTIVE COVENANT

COMMERCIAL

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 this _____ day of _____, 2006, by the Weyerhaeuser Company ("Weyerhaeuser"), its successors and assigns, and the State of Washington, Department of Ecology ("Department of Ecology"), and its successors and assigns.

The undersigned, Weyerhaeuser, covenants that it is the fee owner of real property in Pierce County, Washington, legally described in Exhibit A and depicted in Exhibit B, attached hereto and incorporated herein by this reference ("Property").

The Property is within an area commonly referred to as "Parcel One" of the "Former DuPont Works Site" that was the subject of work to clean up the Property ("Remedial Action") under the Washington Model Toxics Control Act ("MTCA"), Chapter 70.105D RCW. The Remedial Action is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Weyerhaeuser Company and E.I. DuPont de Nemours and Company* (Thurston County Cause No. 03-2-10484-7), in attachments to the Decree and in documents referenced in the Decree, including without limitation the Cleanup Action Plan attached to the Consent Decree as Exhibit A, and incorporated therein by reference. The Cleanup Action Plan is on file and available for inspection at the Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47775, Olympia, WA 98504-7775. The boundary of Parcel One is depicted in Exhibit B, attached hereto.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations at some portions of the Property of hazardous substances which exceed the soil and groundwater cleanup levels specified in MTCA for unrestricted land uses. The Remedial Action resulted in removal of all hazardous substances which exceed site specific remediation levels, as established by the Department of Ecology, for commercial land use. Large sections of the Property were remediated with resulting chemical concentrations below the soil and groundwater cleanup levels specified under MTCA for unrestricted land uses. As a result, individual parcels may contain different levels of residual contamination, if any. This Restrictive Covenant applies to all of the Property, regardless of whether residual contamination remains or not.

Weyerhaeuser makes the following declaration as to limitations, conditions, restrictions, and uses to which the Property may be put and specifies that such declarations shall run with the land as provided by law and shall be binding on Weyerhaeuser, its successors and assigns, and any and all parties and persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter, "Owner").

Section 1: Restrictions on Use of Property. The Property may be developed and used only for commercial use as allowed under the City of DuPont zoning regulations and Comprehensive Land Use Plan and under MTCA; provided, however that the Property shall not be developed and used for any of the following: residential uses, schools, daycares, parks, recreational uses (with the exception of potential future golf course expansion), or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 2: Restrictions on Activities. The Owner may maintain and develop the Property consistent with this Restrictive Covenant. Normal construction and maintenance for permitted development is not restricted by this Section. Maintenance of any impervious surfaces is expressly permitted without prior approval so long as appropriate health and safety protocols are followed. For development activities permitted under this Restrictive Covenant, excavated soils must be managed properly and unless put back in place must be either placed in an area within the boundaries of the Former DuPont Works Site, or disposed off-site in accordance with applicable regulations. Excavated soils shall be managed to minimize exposure to workers and other adults, including but not limited to the use of best management practices to control dust and surface water runoff; and to prevent exposure to children. Any activity on the Property that could interfere with the continued protection of human health and the environment is prohibited without prior written approval from the Department of Ecology.

Section 3: Change of Use. The Owner must notify and obtain approval from the Department of Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. The Department of Ecology may approve any inconsistent use only after public notice and comment; provided, however, in no event may any change in use be approved that would allow for residential uses, schools, daycares, parks, recreational uses (with the exception of potential future golf course expansion), or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 4: Notice of Conveyance. The Owner must give thirty (30) days' advance written notice to the Department of Ecology of the Owner's intent to convey any interest in the Property. Within thirty (30) days of the date any instrument conveying a fee title interest is executed, grantor must provide the Department of Ecology with a certified true copy of the instrument and, if it has been recorded in the public land records, its recording reference. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5: Leasehold Interests. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6: Recordation. Within thirty (30) days of the date of execution, the Owner shall record this Restrictive Covenant with the Pierce County Assessor's Office, and provide evidence of recordation to the Department of Ecology.

Section 7: Notice Requirement. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE PUBLIC LAND RECORDS ON _____, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY THE STATE OF WASHINGTON.

Section 8: Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give the other shall be in writing and shall be served personally or sent by first class mail postage prepaid, addresses as follows:

To Weyerhaeuser:

Director, Environmental Affairs
Mail Stop EC2 2C1
P.O. Box 9777
Federal Way, WA 98063-9777

To the Department of Ecology:

Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775

Section 9: Groundwater Withdrawal. The Owner of the Property must not permit withdrawal of groundwater from the Property for drinking water purposes, unless authorized by the Department of Ecology. Withdrawal of groundwater from monitoring wells for the purpose of extracting samples for analysis is expressly permitted.

Section 10: Access. The Owner shall allow authorized representatives of the Department of Ecology, E.I. DuPont de Nemours Company and Weyerhaeuser the right to enter the Property at reasonable times for the purposes of monitoring compliance with the terms of this Restrictive Covenant, evaluating the Remedial Action, taking samples, inspecting remedial actions conducted at the Property, and inspecting records that are related to the Remedial Action.

Section 11: No Public Access and Use. No right of access or use by the general public to any portion of the Property is conveyed by this Restrictive Covenant.

Section 12: Enforcement. Weyerhaeuser, the E.I. DuPont de Nemours Company, and the Department of Ecology shall each have the right, but not the obligation, to enforce the terms of this Restrictive Covenant by resort to specific performance or any legal process; provided, however, that no provision of this Restrictive Covenant shall be construed or intended to impose any obligations, by law or by contract, on the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to take action to enforce said restrictions. Neither the right nor authority of the Department of Ecology and Weyerhaeuser and E.I. DuPont de Nemours Company to enforce this Restrictive Covenant nor a decision made to exercise or not to exercise such authority to right shall give rise to any duty or responsibility on the party of the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to exercise or not exercise

this right on behalf of any Party or other person or entity. All remedies available hereunder shall be in addition to any and all remedies at law or in equity, including MTCA. Any forbearance, delay or omission to exercise the enforcement rights under this Restrictive Covenant in the event of a breach of any term of this Restrictive Covenant shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this Restrictive Covenant. Should legal counsel be employed to enforce this Restrictive Covenant, all costs incurred in such enforcement, including reasonable attorneys' fees shall be paid by the Owner found to be in violation.

Section 13: No Third Party Beneficiary. This Restrictive Covenant is intended for the sole and exclusive benefit of the Parties hereto and their respective successors and assigns, including all current and future owners of any portion or interest in the property. The Parties to this Restrictive Covenant expressly do not intend to benefit any other person or entity, and expressly do not intend to create any third-party beneficiaries to any provision of this Restrictive Covenant, including but not limited to any enforcement provisions.

Section 14: Run with the Land. To the extent that this Restrictive Covenant is construed as a restrictive covenant, it shall run with the land, and shall be binding on the Owners, their successors and assigns, of all or any portion of the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the property owner without adequate and complete provision for the continued observation of this Restrictive Covenant.

Section 15: Severability. Invalidation of any provision or application of a provision of this Restrictive Covenant by any court shall not affect any other provisions or applications.

Section 16: Easement in Gross. To the extent that this Restrictive Covenant creates a negative easement, it shall be construed as an easement in gross for the sole benefit of Weyerhaeuser, without whose consent it cannot be released, modified or amended.

Section 17: Reserved Rights. Weyerhaeuser reserves unto itself and its successors and assigns all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, and rights granted herein.

Weyerhaeuser Company has caused this Restrictive Covenant to be signed in its name.

EXECUTED this _____ day of _____, 2006.

WEYERHAEUSER COMPANY

By:

_____
Richard E. Hanson
Executive Vice President and Chief
Operating Officer

STATE OF WASHINGTON)
) ss.
County of _____)

On this ____ day of _____, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Richard E. Hanson, known to be the Executive Vice President and Chief Operating Officer of Weyerhaeuser Company, the corporation that executed the foregoing Restrictive Covenant, and acknowledged the said Restrictive Covenant to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said Restrictive Covenant.

WITNESS my hand and official seal hereto affixed the day and year written above.

NOTARY PUBLIC in and for the State of
Washington. My commission expires:

_____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

By: Dated: _____

_____
Mike Blum
Project Coordinator

Attachments: Exhibit A – Legal description of Property
Exhibit B – Depiction of Property & Parcel One Boundary

Weyerhaeuser Company
Job No. 129-044-004-0960
June 12, 2006

EXHIBIT A

LEGAL DESCRIPTION FOR COMMERCIAL PROPERTY – LOT C

That portion of Lot C of that Record of Survey for Boundary Line Adjustment No. 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington, being more particularly described as follows:

BEGINNING at the southwesterly corner of said Lot C;

THENCE along the westerly line of said Lot C, N 00°23'40" W, 456.73 feet to the northwesterly corner thereof;

THENCE along the northerly line of said Lot C, S 77°30'36" E, 382.09 feet;

THENCE S 39°34'58" W, 484.84 feet to the southerly line of said Lot C;

THENCE along said southerly line, S 89°36'20" W, 60.98 feet to the POINT OF BEGINNING;

EXCEPT that portion of said Lot C, being more particularly described as follows:

COMMENCING at the southwesterly corner of said Lot C;

THENCE along the westerly line of said Lot C, N 00°23'40" W, 278.09 feet;

THENCE N 89°36'20" E, 6.07 feet to the True Point of Beginning;

THENCE N 07°48'51" W, 8.26 feet;

THENCE N 04°28'53" E, 13.72 feet;

THENCE N 30°54'18" E, 38.80 feet;

THENCE N 33°05'16" E, 55.62 feet;

THENCE N 30°52'32" E, 48.96 feet;

THENCE N 36°31'17" E, 8.60 feet;

THENCE N 77°17'41" E, 7.65 feet;

THENCE S 66°55'41" E, 15.13 feet;

THENCE S 55°39'21" E, 61.22 feet;

THENCE S 53°12'20" E, 60.25 feet;

THENCE S 56°00'58" E, 45.38 feet;

THENCE S 10°23'38" E, 9.36 feet;

THENCE S 16°46'56" W, 11.03 feet;

THENCE S 42°16'12" W, 46.84 feet;

THENCE S 33°01'45" W, 53.33 feet;

THENCE S 39°12'24" W, 44.10 feet;

THENCE S 71°20'05" W, 10.18 feet;

THENCE N 77°43'05" W, 10.06 feet;

THENCE N 53°04'56" W, 40.11 feet;

THENCE N 60°32'42" W, 60.50 feet;

THENCE N 63°10'10" W, 10.84 feet;

THENCE N 56°08'17" W, 34.33 feet;

THENCE N 44°18'19" W, 8.53 feet to the True Point of Beginning;

See attached Exhibit "B".

Written by: R.J.W.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\DOCUMENTS\129044-29.DOC

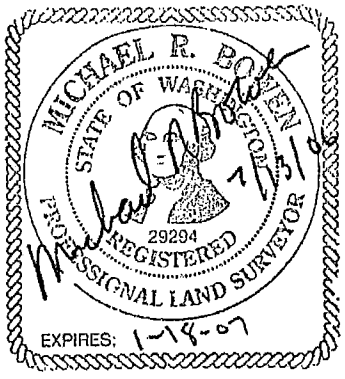
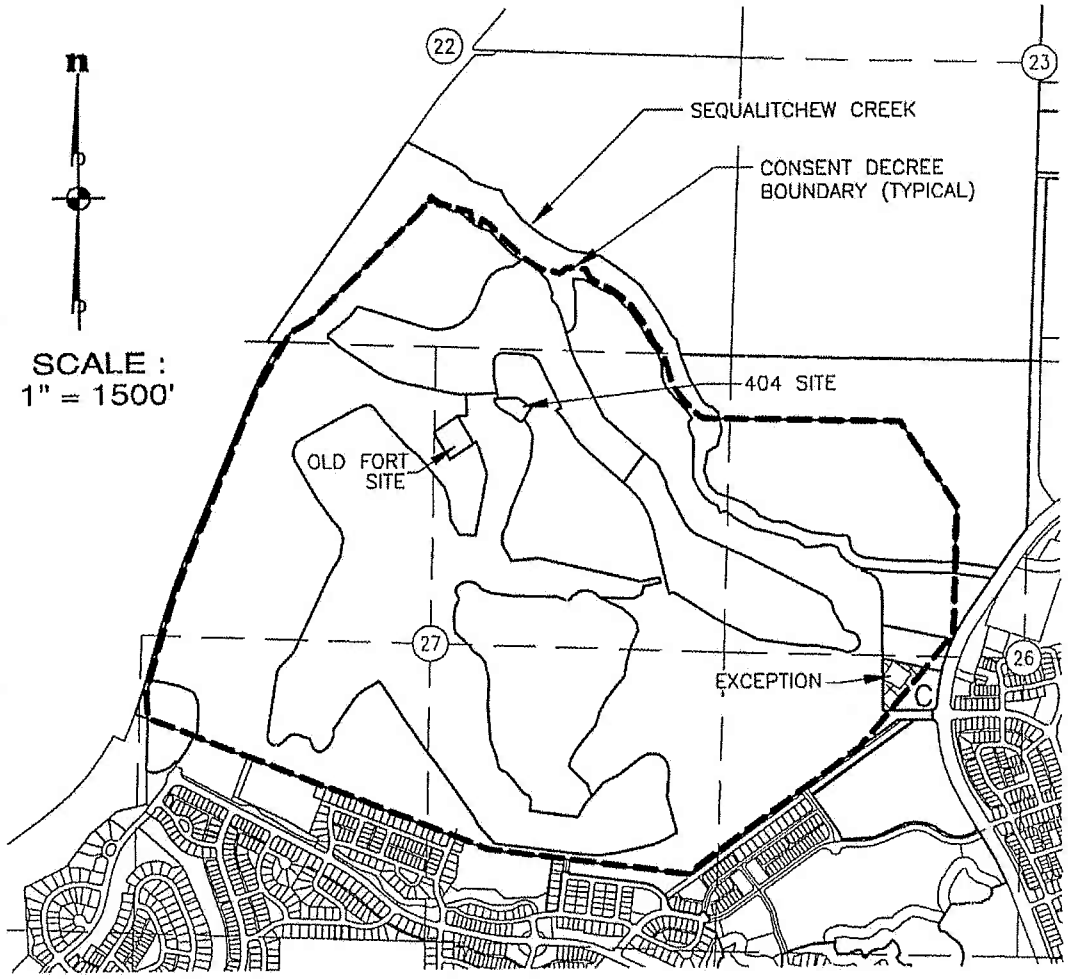


EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR
COMMERCIAL PROPERTY – LOT C

A PORTION OF SECTIONS 22, 26, 27, 28 AND 35, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



LEGEND

SUBJECT AREA

ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-13.DWG
DATE : 06-12-06
DRAWN : MRB/RJW
SHEET 1 OF 1

DECLARATION OF RESTRICTIVE COVENANT

GOLF COURSE

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 this _____ day of _____, 2006, by the Weyerhaeuser Company ("Weyerhaeuser"), its successors and assigns, and the State of Washington, Department of Ecology ("Department of Ecology"), and its successors and assigns.

The undersigned, Weyerhaeuser, covenants that it is the fee owner of real property in Pierce County, Washington, legally described in Exhibit A and depicted in Exhibit B, attached hereto and incorporated herein by this reference ("Property").

The Property is within an area commonly referred to as "Parcel One" of the "Former DuPont Works Site" that was the subject of work to clean up the Property ("Remedial Action") under the Washington Model Toxics Control Act ("MTCA"), Chapter 70.105D RCW. The Remedial Action is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Weyerhaeuser Company and E.I. DuPont de Nemours and Company* (Thurston County Cause No. 03-2-10484-7), in attachments to the Decree and in documents referenced in the Decree, including without limitation the Cleanup Action Plan attached to the Consent Decree as Exhibit A, and incorporated therein by reference. The Cleanup Action Plan is on file and available for inspection at the Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47775, Olympia, WA 98504-7775. The boundary of Parcel One is depicted in Exhibit B, attached hereto.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations at portions of the Property of hazardous substances which exceed the soil and groundwater cleanup levels specified in MTCA for unrestricted land uses.

Weyerhaeuser makes the following declaration as to limitations, conditions, restrictions, and uses to which the Property may be put and specifies that such declarations shall run with the land as provided by law and shall be binding on Weyerhaeuser, its successors and assigns, and any and all parties and persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter, "Owner").

Section 1: Restrictions on Use of Property. The Property may be developed and used only for a golf course and related amenities, such as roadways, parking, club house facilities, a golf museum, training facility, conference center, banquet facility, meeting rooms, and offices, to the extent permitted under the City of DuPont zoning regulations and Comprehensive Land Use Plan and under MTCA; provided, however that the Property shall not be developed and used for any of the following: residential uses, schools, daycares, parks, recreational uses (with the exception of golf course uses), or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 2: Restrictions on Activities. The Owner may maintain and develop the Property consistent with its intended use as a golf course and related amenities. Normal construction and maintenance activities for golf course development are not restricted by this Section. Maintenance of any impervious surfaces is expressly permitted without prior approval so long as appropriate health and safety protocols are followed. For development activities permitted under this Restrictive Covenant, excavated soils must be managed properly and unless put back in place, must be either placed in an area within the boundaries of the Former DuPont Works Site, or disposed off-site in accordance with applicable regulations; provided, however, that any excavated soils removed from the areas identified in Exhibit C and discussed in Section 3 below that cannot be put back in place **must** be disposed off-site in accordance with applicable regulations. Excavated soils shall be managed to minimize exposure to workers and other adults, including but not limited to the use of best management practices to control dust and surface water runoff; and to prevent exposure to children. Any activity on the Property that could interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited without prior written approval from the Department of Ecology.

Section 3: Protection of Residual Contaminants. The Owner shall not penetrate, alter, damage, remove or breach in any manner the durable, permeable, engineered material ("Cap") installed over contaminated soils at various places throughout the Property; nor remove or excavate any contaminated soils below the Cap in any manner that may result in the release of or exposure to hazardous substances without prior written approval from the Department of Ecology. Only plants with shallow roots that will not penetrate the Cap are allowed to be installed and maintained above the Cap. The locations of the Property where contaminated soil has a Cap over it, as well as the elevations and contours of the Caps themselves, are described in Exhibit C, attached hereto and incorporated herein by this reference.

Section 3.1: Cap Integrity. Specifically, the Owner shall not perform or allow any person to perform any of the following activities through or under the Cap:

a. drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface of the Cap beyond its load bearing capability, piercing the surface with a rod, spike or similar item other than for the repair of in-place drainage lines which were installed in clean, imported gravels and do not require special handling; or

b. excavation or removal of loam, peat, sand, gravel, rock, or any other mineral or natural resource; or

c. planting of large trees or other vegetation the roots of which would breach the Cap; or

d. any other activity which penetrates, breaches, or disturbs the structural integrity of the Cap without first obtaining the express written consent of the Department of Ecology.

Section 3.2: Emergency or Accidental Damage to Cap. If it becomes necessary to excavate below or penetrate the Cap as part of a response to an emergency (e.g. repairing utility lines or responding to a fire or flood) or if the Cap is accidentally breached for any reason, the requirements of the previous subsection may be suspended, provided that the Owner:

a. notifies the Department of Ecology and Weyerhaeuser of such emergency or accident as soon as possible but no more than twenty-four hours after learning of such emergency or accident; and

b. limits the actual disturbance involved in such excavation or breach to the minimum reasonably necessary to adequately respond to the emergency.

Section 4: Change of Use. The Owner must notify and obtain approval from the Department of Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. The Department of Ecology may approve any inconsistent use only after public notice and comment; provided, however, in no event may any change in use be approved that would allow for residential uses, schools, daycares, parks, recreational uses (with the exception of golf course uses), or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 5: Notice of Conveyance. The Owner must give thirty (30) days' advance written notice to the Department of Ecology of the Owner's intent to convey any interest in the Property. Within thirty (30) days of the date any instrument conveying a fee title interest is executed, grantor must provide the Department of Ecology with a certified true copy of the instrument and, if it has been recorded in the public land records, its recording reference. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 6: Leasehold Interests. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 7: Recordation. Within thirty (30) days of the date of execution, the Owner shall record this Restrictive Covenant with the Pierce County Assessor's Office, and provide evidence of recordation to the Department of Ecology.

Section 8: Notice Requirement. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE PUBLIC LAND RECORDS ON _____, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY THE STATE OF WASHINGTON.

Section 9: Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give the other shall be in writing and shall be served personally or sent by first class mail postage prepaid, addresses as follows:

To Weyerhaeuser:

Director, Environmental Affairs
Mail Stop EC2 2C1
P.O. Box 9777
Federal Way, WA 98063-9777

To the Department of Ecology:

Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775

Section 10: Groundwater Withdrawal. The Owner of the Property must not permit withdrawal of groundwater from the Property for drinking water purposes, unless authorized by the Department of Ecology. Withdrawal of groundwater from monitoring wells for the purpose of extracting samples for analysis, and withdrawal and application of irrigation water for golf course maintenance are expressly permitted.

Section 11: Access. The Owner shall allow authorized representatives of the Department of Ecology, E.I. DuPont de Nemours Company and Weyerhaeuser the right to enter the Property at reasonable times for the purposes of monitoring compliance with the terms of this Restrictive Covenant, evaluating the Remedial Action, taking samples, inspecting remedial actions conducted at the Property, and inspecting records that are related to the Remedial Action.

Section 12: No Public Access and Use. No right of access or use by the general public to any portion of the Property is conveyed by this Restrictive Covenant.

Section 13: Enforcement. Weyerhaeuser, the E.I. DuPont de Nemours Company, and the Department of Ecology shall each have the right, but not the obligation, to enforce the terms of this Restrictive Covenant by resort to specific performance or any legal process; provided, however, that no provision of this Restrictive Covenant shall be construed or intended to impose any obligations, by law or by contract, on the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to take action to enforce said restrictions. Neither the right nor authority of the Department of Ecology and Weyerhaeuser and E.I. DuPont de Nemours Company to enforce this Restrictive Covenant nor a decision made to exercise or not to exercise such authority to right shall give rise to any duty or responsibility on the party of the Department

of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to exercise or not exercise this right on behalf of any Party or other person or entity. All remedies available hereunder shall be in addition to any and all remedies at law or in equity, including MTCA. Any forbearance, delay or omission to exercise the enforcement rights under this Restrictive Covenant in the event of a breach of any term of this Restrictive Covenant shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this Restrictive Covenant. Should legal counsel be employed to enforce this Restrictive Covenant, all costs incurred in such enforcement, including reasonable attorneys' fees shall be paid by the Owner found to be in violation.

Section 14: No Third Party Beneficiary. This Restrictive Covenant is intended for the sole and exclusive benefit of the Parties hereto and their respective successors and assigns, including all current and future owners of any portion or interest in the property. The Parties to this Restrictive Covenant expressly do not intend to benefit any other person or entity, and expressly do not intend to create any third-party beneficiaries to any provision of this Restrictive Covenant, including but not limited to any enforcement provisions.

Section 15: Run with the Land. To the extent that this Restrictive Covenant is construed as a restrictive covenant, it shall run with the land, and shall be binding on the Owners, their successors and assigns, of all or any portion of the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the property owner without adequate and complete provision for the continued observation of this Restrictive Covenant.

Section 16: Severability. Invalidation of any provision or application of a provision of this Restrictive Covenant by any court shall not affect any other provisions or applications.

Section 17: Easement in Gross. To the extent that this Restrictive Covenant creates a negative easement, it shall be construed as an easement in gross for the sole benefit of Weyerhaeuser, without whose consent it cannot be released, modified or amended.

Section 18: Reserved Rights. Weyerhaeuser reserves unto itself and its successors and assigns all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, and rights granted herein.

Weyerhaeuser Company has caused this Restrictive Covenant to be signed in its name.

EXECUTED this _____ day of _____, 2006.

WEYERHAEUSER COMPANY

By:

_____
Richard E. Hanson
Executive Vice President and Chief
Operating Officer

STATE OF WASHINGTON)
) ss.
County of _____)

On this ____ day of _____, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Richard E. Hanson, known to be the Executive Vice President and Chief Operating Officer of Weyerhaeuser Company, the corporation that executed the foregoing Restrictive Covenant, and acknowledged the said Restrictive Covenant to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said Restrictive Covenant.

WITNESS my hand and official seal hereto affixed the day and year written above.

NOTARY PUBLIC in and for the State of
Washington. My commission expires:

_____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

By: Dated: _____

_____
Mike Blum
Project Coordinator

Attachments: Exhibit A – Legal description of Property
Exhibit B – Depiction of Property
Exhibit C – Legal description of Placement Areas in Golf Course

ESM CONSULTING ENGINEERS LLC

Weyerhaeuser Company
Job No. 129-044-004-0960
May 25, 2006

EXHIBIT A

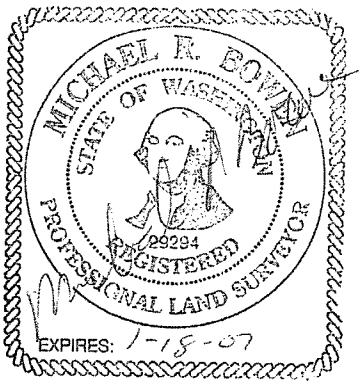
LEGAL DESCRIPTION FOR GOLF COURSE PROPERTY

Lots 4, 7 and 8 of that Record of Survey recorded under Recording No. 200601275001, Records of Pierce County, Washington.

See attached Exhibit "B".

Written by: R.J.W.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\DOCUMENTS\129044-25.DOC



5/25/06

33915 1st Way South
Suite 200
Federal Way, WA 98003

Tel (253) 838 6113
Fax (253) 838 7104
Toll Free (800) 345 5694

Bothell (425) 415 6144
Cle Elum (509) 674 1905
www.esmcivil.com

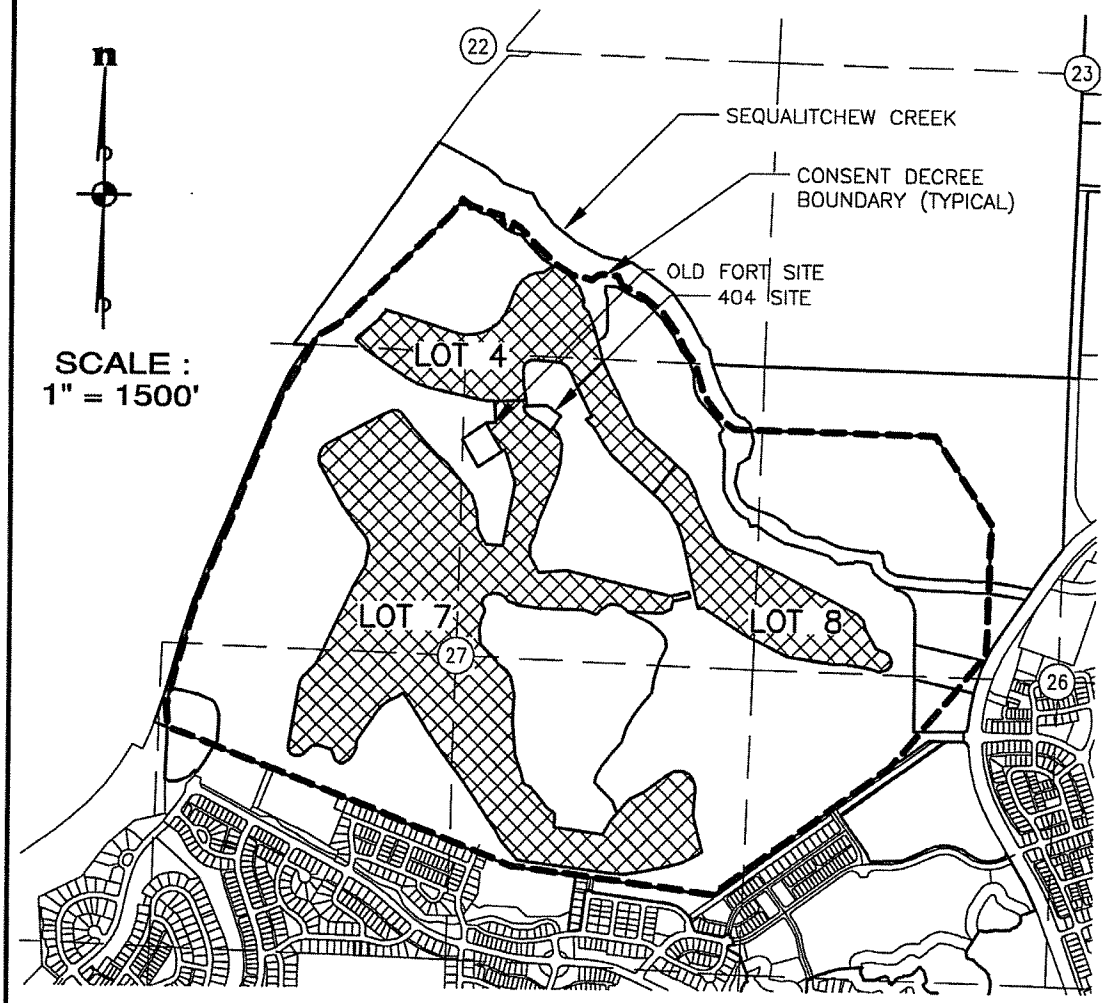
Civil Engineering
Project Management
Land Surveying

Land Planning
Public Works
Landscape Architecture

EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR GOLF COURSE PROPERTY

A PORTION OF SECTIONS 22, 26, 27, 28 AND 35, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



LEGEND

SUBJECT AREA

ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-07.DWG
DATE : 05-19-06
DRAWN : MRB
SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 1A

That portion of the southeast quarter of Section 22, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 5278.39 feet to the north quarter corner thereof;

THENCE continuing N 01°23'53" E, 357.73 feet;

THENCE S 88°36'07" E, 357.88 feet to the TRUE POINT OF BEGINNING;

THENCE S 32°21'53" E, 64.68 feet;

THENCE S 34°01'10" E, 14.64 feet;

THENCE S 31°33'43" E, 49.83 feet;

THENCE S 32°22'06" E, 37.25 feet;

THENCE S 46°05'59" E, 257.76 feet;

THENCE S 70°25'00" E, 80.77 feet;

THENCE S 83°37'16" E, 30.13 feet;

THENCE S 86°07'15" E, 67.80 feet;

THENCE N 39°19'22" E, 92.41 feet;

THENCE N 23°08'53" E, 67.79 feet;

THENCE N 08°36'08" E, 102.51 feet;

THENCE N 12°53'41" W, 57.04 feet;

THENCE N 20°48'25" W, 119.95 feet;

THENCE N 11°36'35" W, 56.09 feet;

THENCE N 24°09'58" W, 50.46 feet;

THENCE N 32°40'09" W, 78.62 feet;

THENCE N 08°19'14" W, 48.36 feet;

THENCE N 69°41'56" W, 106.08 feet;

THENCE S 82°30'51" W, 48.75 feet;

THENCE S 57°55'53" W, 45.94 feet;

THENCE S 40°00'49" W, 50.51 feet;

THENCE S 08°28'51" E, 39.90 feet;

THENCE S 21°43'19" W, 75.81 feet;

THENCE S 41°31'52" W, 86.72 feet;

THENCE S 79°36'40" W, 37.00 feet;

THENCE S 65°33'22" W, 32.98 feet;

THENCE S 75°30'55" W, 37.59 feet;

THENCE S 21°28'09" W, 28.31 feet to the TRUE POINT OF BEGINNING.

Containing 5.1 acres, more or less.

See attached Exhibit "PA-1A".

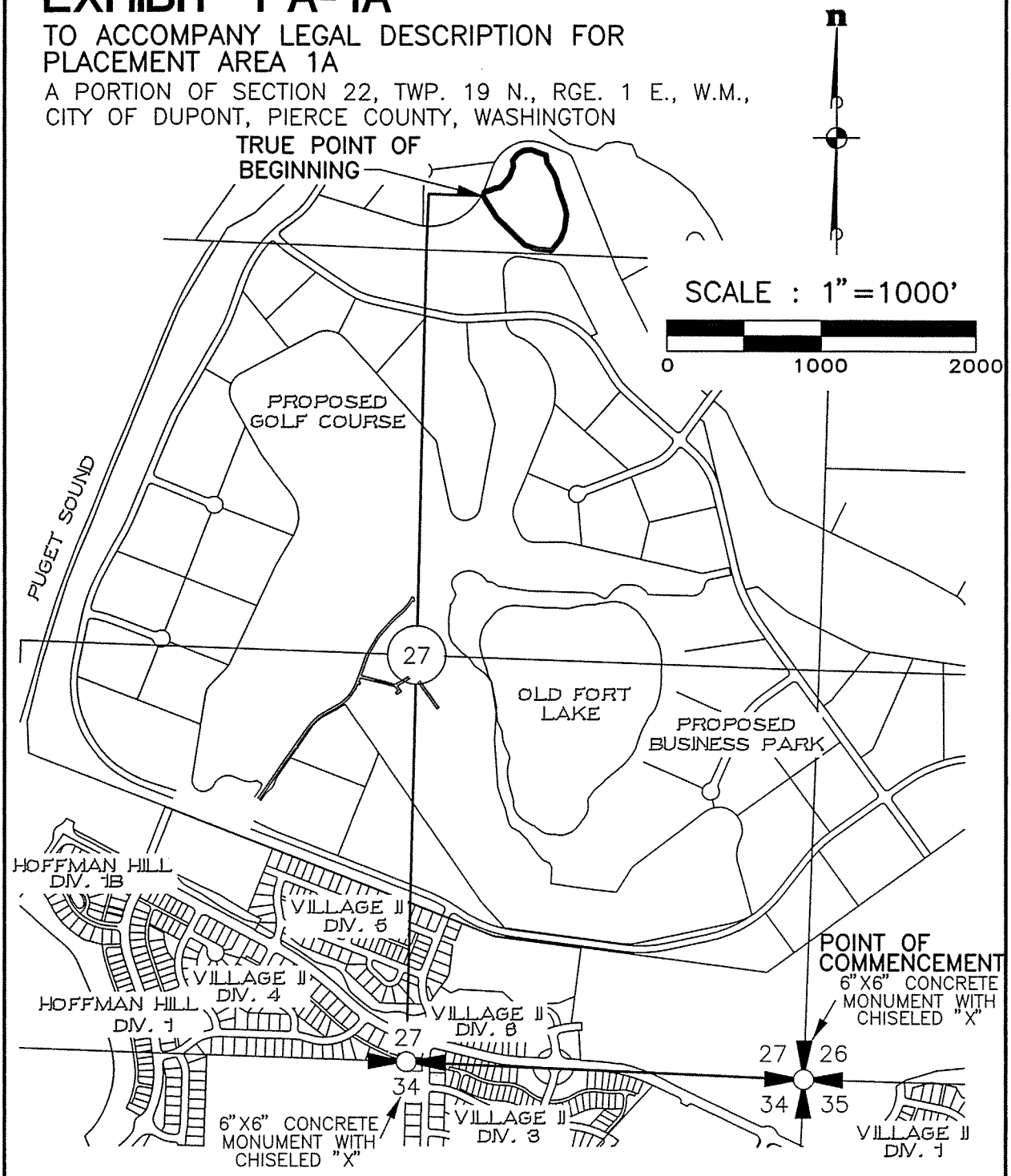
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 1A.doc

EXHIBIT "PA-1A"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 1A

A PORTION OF SECTION 22, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

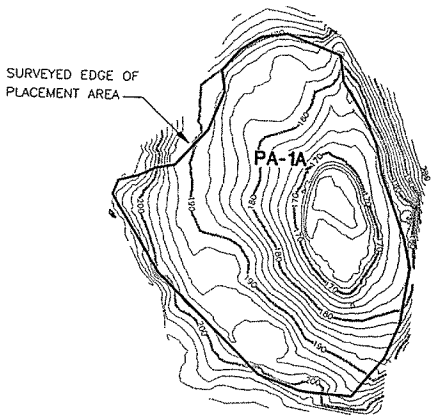
www.esmcivil.com

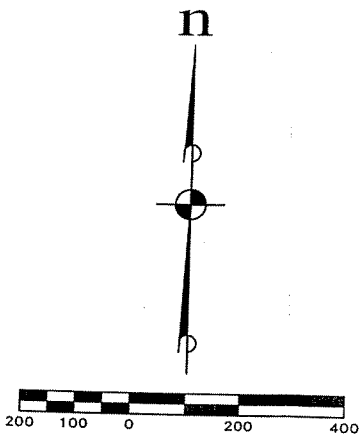
Civil Engineering | Public Works
Land Surveying | Project Management
Land Planning | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-1A
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

EXHIBIT D





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"). ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 24, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 1A" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 1A

ESM CONSULTING ENGINEERS, LLC
11714 NE Creek Parkway N.
Suite 101
Bothell, WA 98011
(253) 838-6113
(425) 415-0744
www.esmcivil.com
Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

JOB NO. 131-044-004
DATE: 6-07-04
DRAWN: JPC
SHEET 1 OF 1
DRAWING: Dsh-PA-1A.DWG

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION FOR PLACEMENT AREA 1B

Those portions of the southwest quarter and of the southeast quarter of Section 22, and of the northwest quarter and of the northeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 4997.37 feet to the TRUE POINT OF BEGINNING;

THENCE N 84°13'35" E, 41.78 feet;

THENCE N 69°56'47" E, 99.33 feet;

THENCE S 84°18'17" E, 45.14 feet;

THENCE S 68°10'12" E, 103.67 feet;

THENCE S 75°43'08" E, 53.41 feet;

THENCE N 87°09'22" E, 60.09 feet;

THENCE N 59°25'42" E, 58.61 feet;

THENCE N 28°50'30" E, 37.20 feet;

THENCE N 17°59'19" E, 54.29 feet;

THENCE N 00°52'51" E, 32.16 feet;

THENCE N 15°30'22" W, 57.12 feet;

THENCE N 36°06'24" W, 75.99 feet;

THENCE N 40°00'52" W, 129.25 feet;

THENCE N 56°02'00" W, 44.01 feet;

THENCE S 83°41'48" W, 184.29 feet;

THENCE N 82°23'08" W, 80.75 feet;

THENCE N 72°57'58" W, 153.76 feet;

THENCE S 78°52'41" W, 48.13 feet;

THENCE S 65°13'05" W, 53.46 feet;

THENCE S 54°10'56" W, 57.23 feet;

THENCE S 44°53'11"W, 48.90 feet;

THENCE S 57°46'31" W, 51.03 feet;

THENCE N 85°32'16" W, 88.70 feet;

THENCE S 71°05'35" W, 38.23 feet;

THENCE S 32°23'44" W, 59.09 feet;

THENCE S 07°09'00" W, 50.40 feet;

THENCE S 10°15'40" E, 31.27 feet;

THENCE S 38°37'25" E, 46.73 feet;

THENCE S 47°37'42" E, 60.24 feet;

THENCE S 56°53'37" E, 51.28 feet;

THENCE S 72°14'37" E, 46.67 feet;

THENCE S 85°20'13" E, 115.12 feet;

THENCE S 82°24'28" E, 129.68 feet;

THENCE N 89°01'41" E, 79.55 feet;

THENCE N 84°13'35" E, 9.35 feet to the TRUE POINT OF BEGINNING.

Containing 6.96 acres, more or less.

See attached Exhibit "PA-1B".

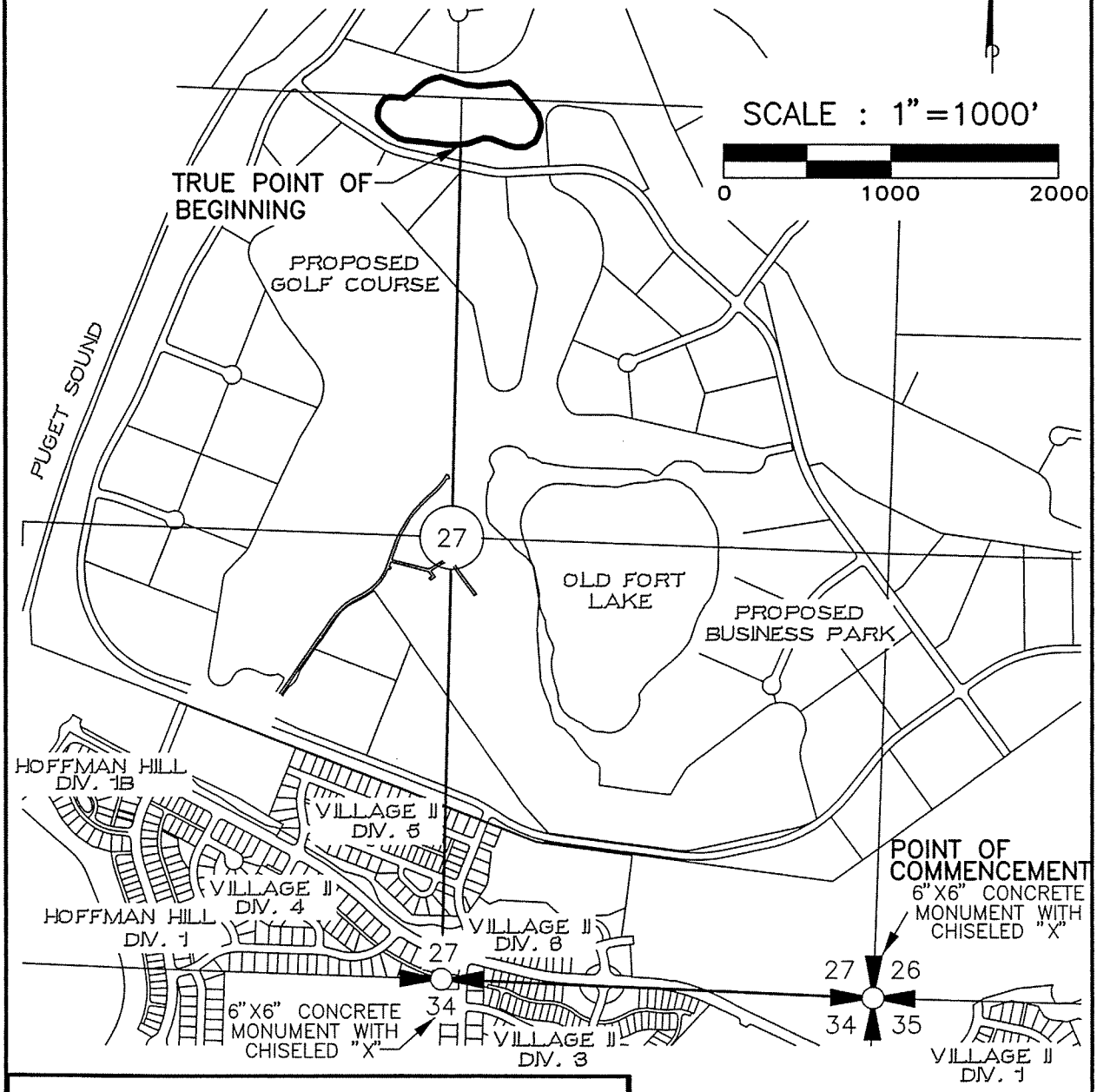
Written by: J.P.C.
Checked by: D.W.A.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 1B.doc

EXHIBIT "PA-1B"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 1B

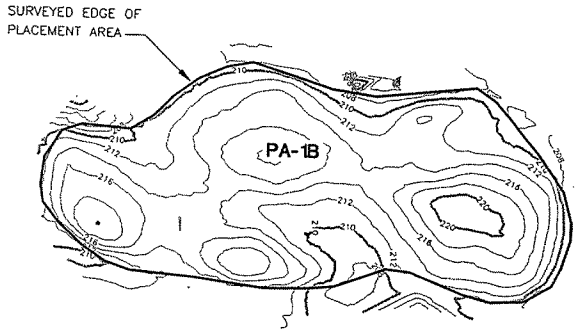
A PORTION OF SECTIONS 22 AND 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

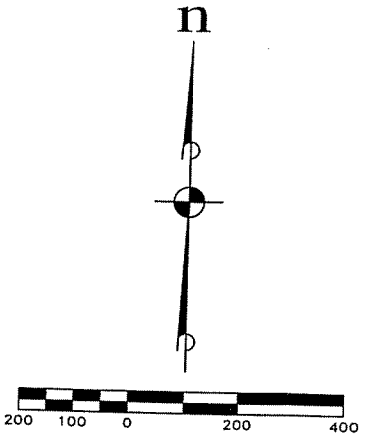


ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-1B
DATE : 05-27-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHWEST QUARTER AND OF THE SOUTHEAST QUARTER OF SECTION 22, AND OF THE NORTHEAST QUARTER AND OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"). ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 25, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 1B" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 1B

ESM CONSULTING ENGINEERS, LLC
11724 No. Creek Parkway N | Suite 101 | Bothell, WA 98011
FEDERAL WAY (253) 838-6113 | BOTHELL (425) 415-8144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 131-044-004 | DATE: 4-02-04
DRAWN: JPC | SHEET 1 OF 1

DRAWING: DWG-PA-1B.DWG

ESM CONSULTING ENGINEERS LLC

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 2

That portion of the northwest quarter of Section 26 and of the northeast quarter of Section 27, Township 19 North, Range 1 East, W.M., in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 50°51'29" E, 4229.67 feet to the TRUE POINT OF BEGINNING;

THENCE N 30°20'51" E, 33.37 feet;

THENCE N 01°23'41" E, 33.14 feet;

THENCE N 10°13'15" W, 81.49 feet;

THENCE N 27°51'53" W, 36.42 feet;

THENCE N 27°36'54" W, 46.35 feet;

THENCE N 22°59'07" W, 82.15 feet;

THENCE N 09°16'12" W, 55.28 feet;

THENCE N 02°27'55" W, 146.27 feet;

720 South 348th Street
Federal Way, WA 98003
Tel (253) 838 6113
Fax (253) 838 7104
www.esmcivil.com
Tacoma (253) 927 0619
Seattle (206) 623 5911
Bremerton (360) 792 3375

THENCE N 67°34'49" W, 72.05 feet;

THENCE N 48°40'50" W, 43.99 feet;

THENCE N 68°55'10" W, 25.17 feet;

THENCE N 69°52'37" W, 119.86 feet;

THENCE N 58°56'40" W, 139.57 feet;

THENCE N 70°49'15" W, 235.48 feet;

THENCE N 35°09'57" W, 47.19 feet;

THENCE N 56°03'49" W, 119.28 feet;

THENCE N 69°10'55" W, 120.92 feet;

THENCE N 84°48'31" W, 54.17 feet;

THENCE S 42°26'38" W, 55.94 feet;

THENCE S 37°52'22" W, 153.88 feet;

THENCE S 05°12'17" E, 69.87 feet;

THENCE S 17°20'36" E, 90.27 feet;

THENCE S 32°12'06" E, 126.24 feet;

THENCE S 44°36'38" E, 101.11 feet;

THENCE S 56°19'01" E, 162.36 feet;

THENCE S 65°34'42" E, 91.46 feet;

THENCE S 84°51'30" E, 53.04 feet;

THENCE S 49°41'44" E, 60.71 feet;

THENCE S 34°15'32" E, 49.63 feet;

THENCE S 60°47'23" E, 108.77 feet;

THENCE S 78°33'24" E, 49.92 feet;

THENCE S 38°06'05" E, 72.41 feet;

THENCE S 64°20'56" E, 39.49 feet;

THENCE S 72°28'14" E, 141.44 feet;

THENCE S 84°20'08" E, 67.83 feet;

THENCE N 82°09'29" E, 76.78 feet;

THENCE S 77°19'46" E, 67.65 feet, to the TRUE POINT OF BEGINNING.

Containing 11.84 acres, more or less.

See attached Exhibit "PA-2".

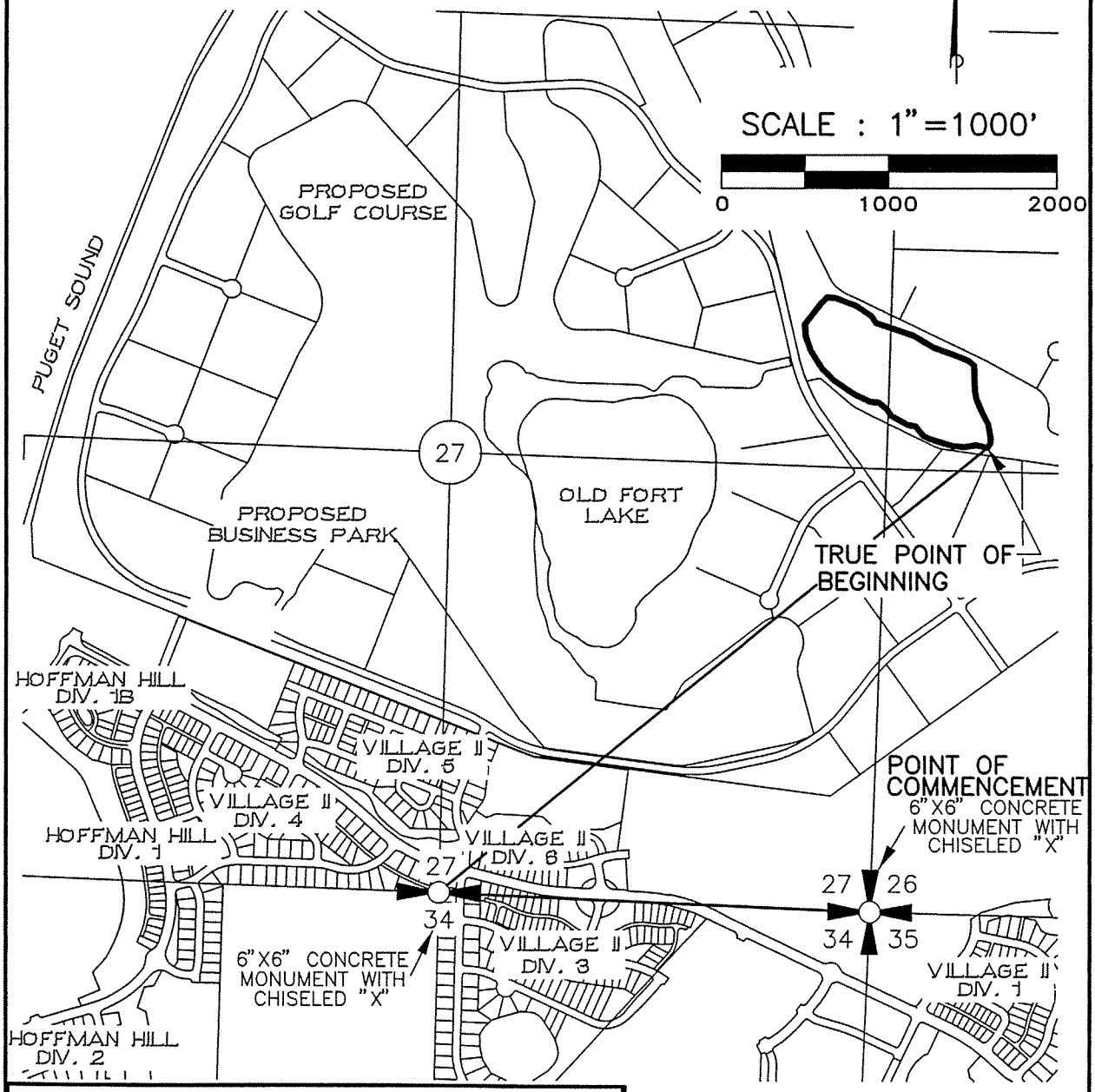
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 2.doc

EXHIBIT "PA-2"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 2

A PORTION OF SECTION 26 AND 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

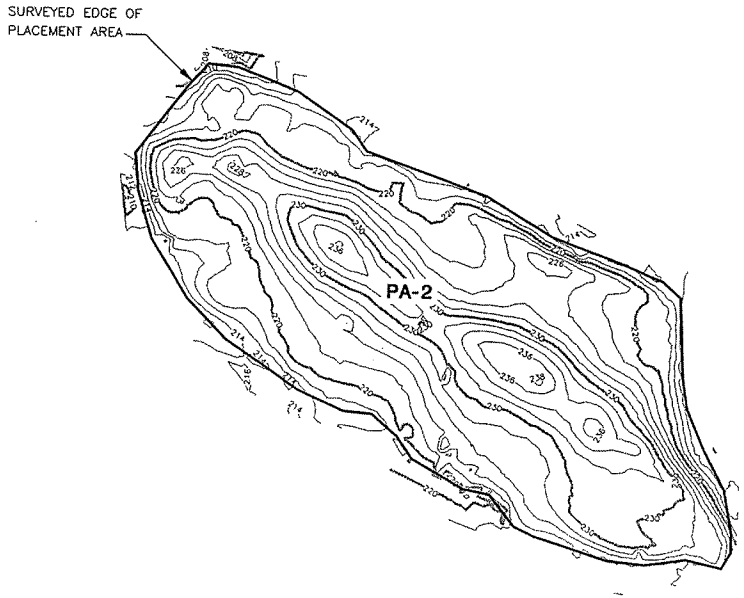
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

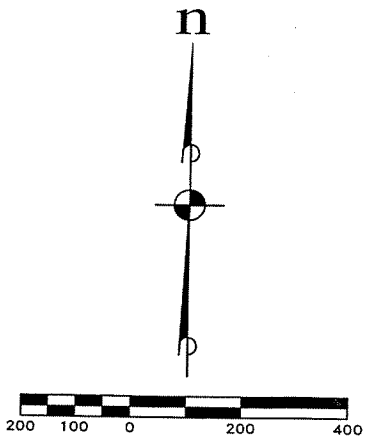
www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-2
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE NORTHWEST QUARTER OF SECTION 26, AND OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"). ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAY 2004.
2. EQUIPMENT USED: TOPCON HIPER LITE DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 2" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 2

ESM CONSULTING ENGINEERS, LLC
11714 No. Creek Parkway N. Suite 101 Bothell, WA 98011
(253) 858-6113 (425) 415-8144
FEDERAL WAY BOTHELL
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

DRAWING: CDH-PA-2.DWG
JOB NO.: 173-044-004
DRAWN: JPC
DATE: 6-02-04
SHEET 1 OF 1

DuPont Consent Decree Area
Job No. 129-044-004-800
June 2, 2004

LEGAL DESCRIPTION FOR PLACEMENT AREA 3A

That portion of the southeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 43°41'39" E, 1255.23 feet to the TRUE POINT OF BEGINNING

THENCE S 73°48'05" E, 179.94 feet;

THENCE S 60°55'57" E, 86.05 feet;

THENCE S 82°56'07" E, 108.08 feet;

THENCE S 78°20'30" E, 85.51 feet;

THENCE S 85°12'50" E, 186.34 feet;

THENCE N 07°24'41" E, 42.77 feet;

THENCE N 16°24'36" W, 71.75 feet;

THENCE N 17°24'41" E, 41.87 feet;

THENCE N 08°54'22" W, 104.79 feet;

THENCE N 37°17'01" W, 38.20 feet;

THENCE N 85°21'26" W, 167.30 feet;

THENCE N 82°53'50" W, 299.54 feet;

THENCE S 65°52'16" W, 85.05 feet;

THENCE S 16°37'17" W, 128.17 feet;

THENCE S 06°54'49" W, 40.27 feet to the TRUE POINT OF BEGINNING.

Containing 3.54 acres, more or less.

See attached Exhibit "PA-3A".

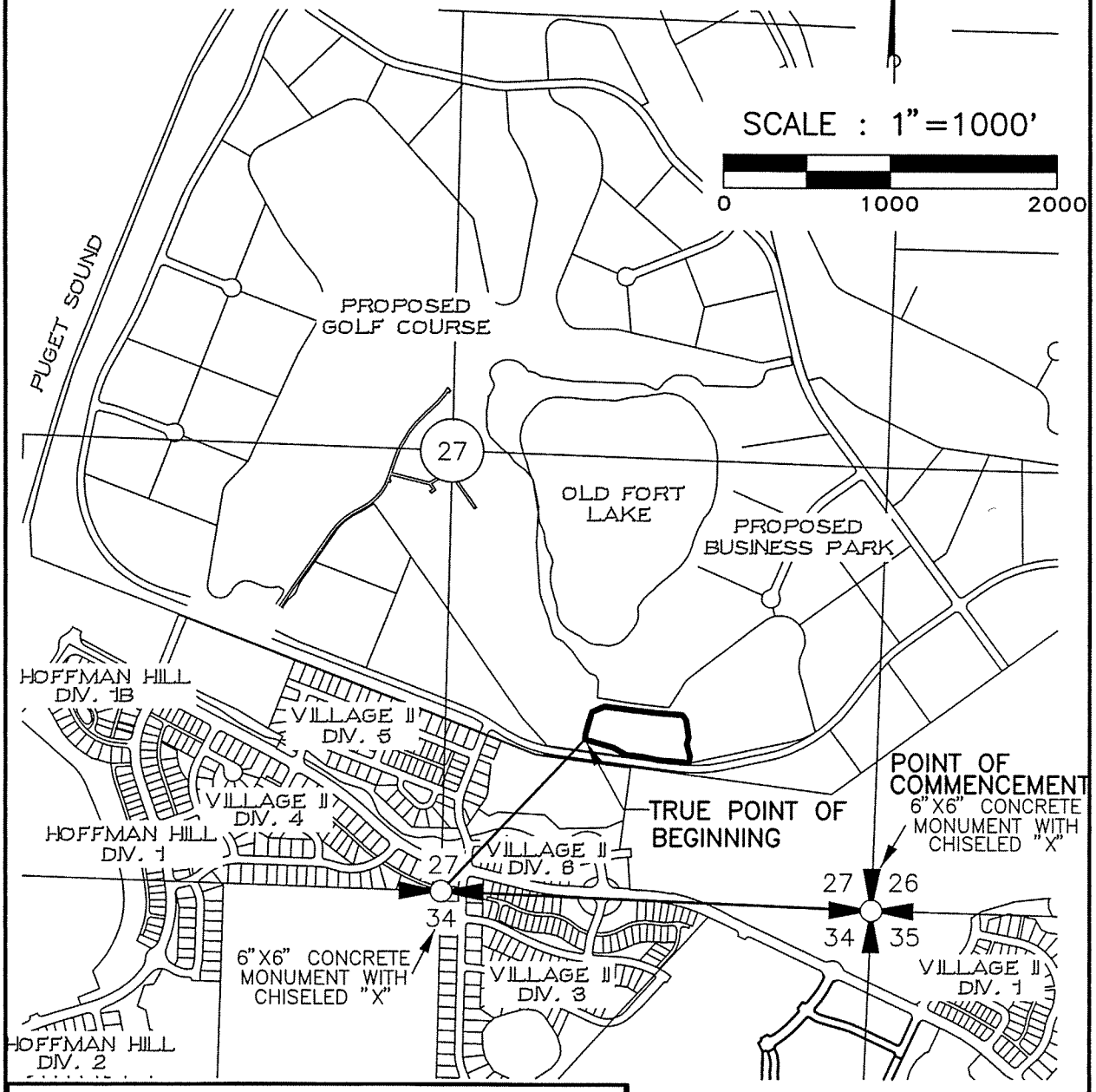
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 3A.doc

EXHIBIT "PA-3A"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 3A

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

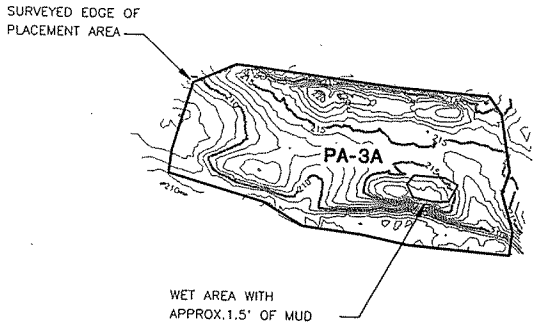
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

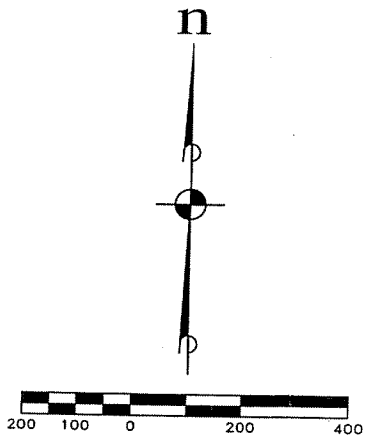
www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-3A
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: FEB. 25 – MAR. 1, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 3A" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 3A

ESM CONSULTING ENGINEERS, LLC
11714 No. Creek Parkway N. | Suite 101 | Bothell, WA 98011
(253) 838-6113 (425) 415-0516
FEDERAL WAY BOTHELL
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 123-004-004 DATE: 4-02-04
DRAWN: JPC SHEET 1 OF 1
DRAWING: DU-PA-3A.DWG

ESM CONSULTING ENGINEERS LLC

DuPont Consent Decree Area
Job No. 129-044-004-800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 3B

That portion of the southeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 56°03'25" E, 1840.75 feet to the TRUE POINT OF BEGINNING;

THENCE S 73°33'46" E, 78.77 feet;

THENCE S 73°28'31" E, 79.01 feet;

THENCE S 71°41'07" E, 74.65 feet;

THENCE S 51°54'59" E, 54.30 feet;

THENCE S 06°13'56" W, 1.08 feet;

THENCE S 88°33'53" E, 106.93 feet;

THENCE N 71°43'22" E, 112.33 feet;

THENCE N 80°57'21" E, 88.51 feet;

720 South 348th Street
Federal Way, WA 98003
Tel (253) 838 6113
Fax (253) 838 7104
www.esmcivil.com
Tacoma (253) 927 0619
Seattle (206) 623 5911
Bremerton (360) 792 3375
Civil Engineering
Project Management
Land Surveying
Land Planning
Public Works

THENCE N 69°21'51" E, 42.46 feet;

THENCE N 44°58'07" E, 44.09 feet;

THENCE N 05°04'48" W, 91.48 feet;

THENCE N 22°10'15" W, 64.86 feet;

THENCE N 10°12'26" E, 44.14 feet;

THENCE N 30°24'41" W, 140.38 feet;

THENCE N 08°33'47" E, 95.37 feet;

THENCE N 16°47'53" E, 66.02 feet;

THENCE N 16°52'26" W, 42.18 feet;

THENCE N 49°50'43" W, 18.22 feet;

THENCE N 66°08'24" W, 46.22 feet;

THENCE S 63°04'04" W, 49.52 feet;

THENCE S 29°36'18" W, 94.14 feet;

THENCE S 56°46'47" W, 85.39 feet;

THENCE S 33°58'07" W, 75.17 feet;

THENCE S 64°11'08" W, 36.64 feet;

THENCE N 82°31'00" W, 51.96 feet;

THENCE S 54°38'22" W, 93.68 feet;

THENCE S 53°26'14" W, 120.64 feet;

THENCE S 34°11'38" W, 130.15 feet;

THENCE S 20°44'31" E, 82.90 feet to the TRUE POINT OF BEGINNING.

Containing 5.68 acres, more or less.

See attached Exhibit "PA-3B".

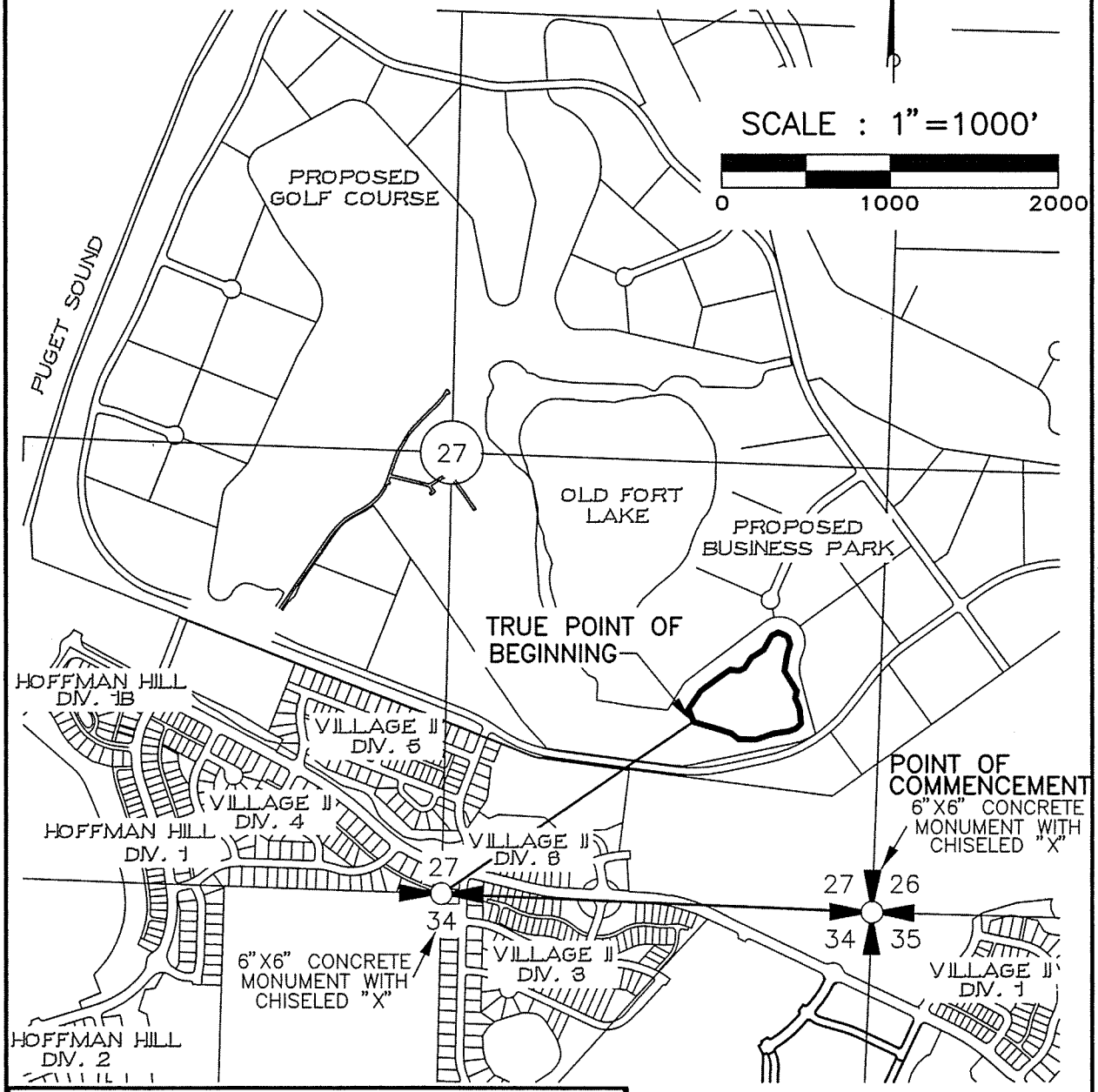
Written by: J.P.C.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 3B.doc

EXHIBIT "PA-3B"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 3B

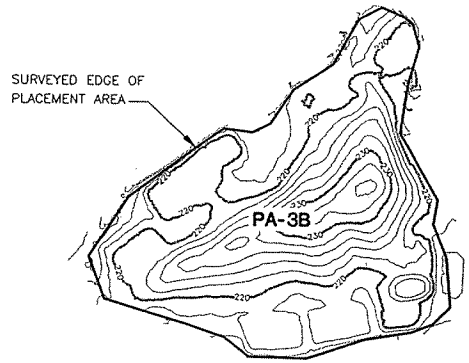
A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

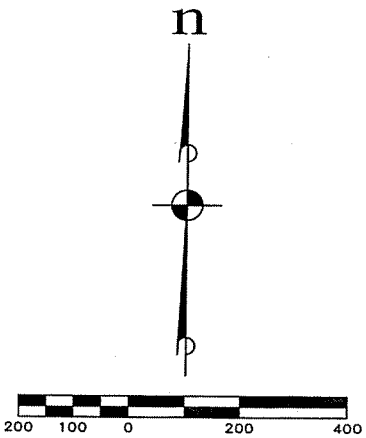


ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-3B
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 22, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 3B" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 3B

ESM CONSULTING ENGINEERS LLC
11714 No. Creek Parkway N. Suite 101
Bothell, WA 98011
www.esmcivil.com
TODAL WA (253) 838-6113
BOTHELL (425) 415-8144
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 139-004-004 | DATE: 4-02-04
DRAWN: JK | SHEET 1 OF 1

DRAWING: EXH-PA-3B.DWG

DuPont Consent Decree Area
Job No. 129-044-004-800
June 2, 2004

LEGAL DESCRIPTION
FOR
PLACEMENT AREA 4

Those portions of the southwest quarter and of the southeast quarter and of the northeast quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 1890.27 feet to the TRUE POINT OF BEGINNING;

THENCE S 62°13'38" E, 178.24 feet;

THENCE S 28°47'34" E, 103.21 feet;

THENCE S 06°00'53" E, 57.16 feet;

THENCE S 39°22'29" E, 172.09 feet;

THENCE S 85°14'29" E, 56.79 feet;

THENCE N 52°45'43" E, 50.50 feet;

THENCE N 06°17'42" W, 47.12 feet;

THENCE N 06°13'04" W, 87.97 feet;

THENCE N 22°37'08" E, 88.08 feet;

THENCE N 40°21'56" E, 62.22 feet;

THENCE N 13°38'20" E, 103.10 feet;

THENCE N 00°30'51" W, 74.94 feet;

THENCE N 57°32'56" W, 27.34 feet;

THENCE S 88°52'16" W, 20.10 feet;

THENCE N 02°49'47" W, 202.79 feet;

THENCE N 11°41'13" W, 35.06 feet;

THENCE N 29°30'29" W, 227.04 feet;

THENCE N 10°41'20" W, 50.58 feet;

THENCE N 40°04'38" W, 65.54 feet;

THENCE N 13°17'43" W, 69.80 feet;

THENCE N 41°09'14" W, 135.73 feet;

THENCE N 53°36'41" W, 56.92 feet;

THENCE S 52°41'50" W, 86.68 feet;

THENCE S 19°36'43" W, 42.74 feet;

THENCE S 31°51'38" W, 57.59 feet;

THENCE S 12°33'34" E, 30.24 feet;

THENCE S 37°21'56" E, 146.88 feet;

THENCE S 52°22'02" E, 45.21 feet;

THENCE S 04°38'39" E, 31.76 feet;

THENCE S 20°49'15" E, 121.65 feet;

THENCE S 52°50'58" W, 185.77 feet;

THENCE N 30°41'39" W, 46.14 feet;

THENCE N 63°03'08" W, 63.13 feet;

THENCE N 34°37'07" W, 145.76 feet;

THENCE N 79°13'46" W, 37.91 feet;

THENCE S 18°26'09" W, 70.06 feet;

THENCE S 10°47'51" E, 92.62 feet;

THENCE S 00°07'47" E, 74.10 feet;

THENCE S 33°52'37" E, 95.34 feet;

THENCE S 40°46'52" E, 70.82 feet;

THENCE S 18°22'08" E, 100.05 feet;

THENCE S 62°13'38" E, 34.35 feet to the TRUE POINT OF BEGINNING.

Containing: 9.13 acres, more or less.

See attached Exhibit "PA-4".

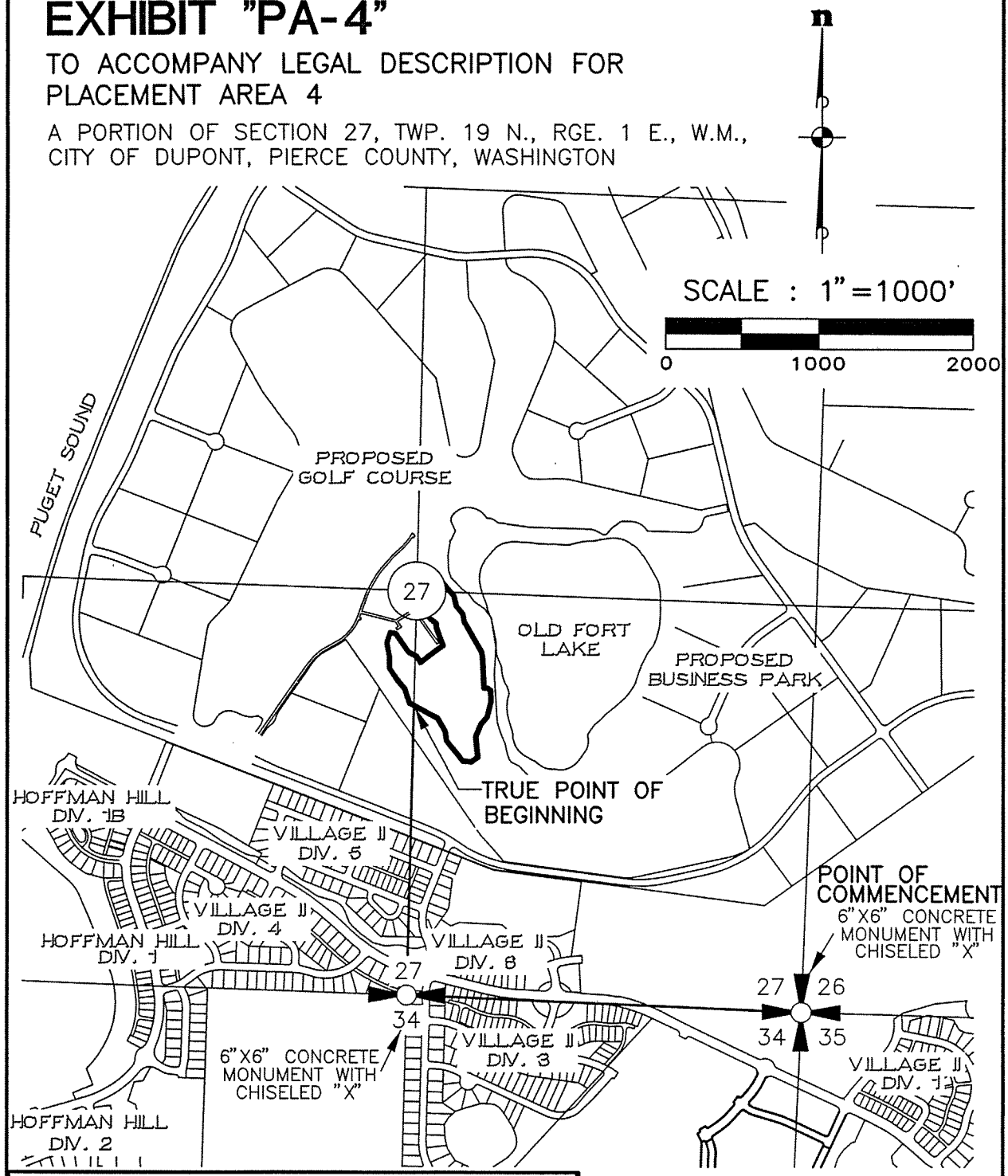
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 4.doc

EXHIBIT "PA-4"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 4

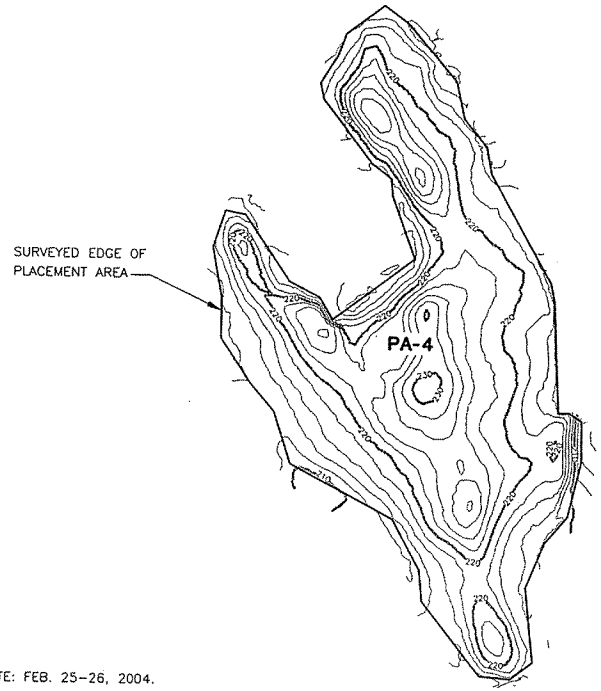
A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

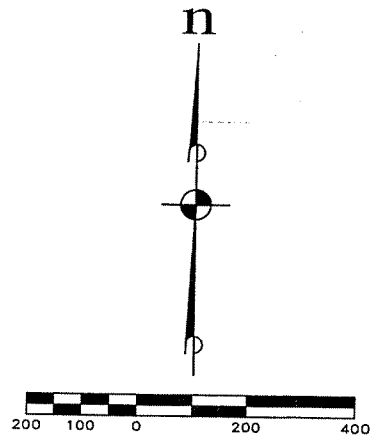


ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Public Works
Land Surveying | Project Management
Land Planning | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-4
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHWEST QUARTER AND OF THE SOUTHEAST QUARTER AND OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: FEB. 25-26, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 4" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 4

ESM CONSULTING ENGINEERS, LLC
11714 No. Creek Parkway N. | Suite 101 | Bothell, WA 98011
FEDERAL WAY (253) 838-6113 | BOTHELL (425) 415-0444
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 134-004-001 | DATE: 4-01-04
DRAWN: JPC | SHEET 1 OF 1

DRAWING: D04-PA4-ENC

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION FOR PLACEMENT AREA 5

Those portions of the southwest quarter and of the northwest quarter of Section 27, Township 19 North, Range 1 East, Willamette Meridian, in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE N 29°31'59" W, 2147.37 feet to the TRUE POINT OF BEGINNING;

THENCE N 31°32'00" E, 77.79 feet;

THENCE N 23°35'03" W, 66.87 feet;

THENCE N 09°15'44" E, 36.65 feet;

THENCE N 45°45'40" E, 61.98 feet;

THENCE N 78°06'03" E, 48.84 feet;

THENCE N 36°20'39" E, 44.00 feet;

THENCE N 15°18'13" E, 90.90 feet;

THENCE N 53°50'05" E, 108.06 feet;

THENCE N 52°25'31" E, 43.55 feet;

THENCE N 70°58'51" E, 58.24 feet;

THENCE N 89°48'16" E, 56.30 feet;

THENCE N 37°23'45" E, 143.98 feet;

THENCE N 44°56'43" E, 90.16 feet;

THENCE N 23°11'16" E, 132.84 feet;

THENCE N 05°09'11" E, 152.33 feet;

THENCE N 04°11'06" E, 77.30 feet;

THENCE N 03°57'53" W, 49.57 feet;

THENCE N 26°46'10" E, 57.22 feet;

THENCE N 07°11'58" W, 58.25 feet;

THENCE N 23°31'24" E, 145.89 feet;

THENCE N 10°48'25" E, 26.39 feet;

THENCE N 16°53'17" W, 30.42 feet;

THENCE N 37°21'34" W, 87.86 feet;

THENCE N 37°56'39" W, 114.48 feet;

THENCE N 73°56'19" W, 35.17 feet;

THENCE S 26°37'27" W, 47.34 feet;

THENCE S 32°28'16" W, 54.79 feet;

THENCE S 25°24'03" W, 83.41 feet;

THENCE S 64°41'07" W, 29.28 feet;

THENCE N 71°46'36" W, 32.87 feet;

THENCE N 35°38'28" W, 35.58 feet;

THENCE N 86°53'56" W, 32.40 feet;

THENCE S 83°32'52" W, 34.39 feet;

THENCE S 31°06'15" W, 39.19 feet;

THENCE S 00°01'34" E, 50.52 feet;

THENCE S 02°32'32" E, 101.38 feet;

THENCE S 23°22'07" W, 39.76 feet;

THENCE S 73°04'32" W, 72.97 feet;

THENCE S 23°21'32" W, 76.20 feet;

THENCE S 23°48'35" W, 92.17 feet;

THENCE S 45°41'57" W, 50.20 feet;

THENCE S 20°42'36" W, 52.26 feet;

THENCE S 10°14'32" W, 86.16 feet;

THENCE S 01°44'54" E, 112.40 feet;

THENCE S 04°01'02" W, 65.13 feet;

THENCE S 34°44'54" W, 53.37 feet;

THENCE S 65°51'15" W, 54.35 feet;

THENCE S 87°08'08" W, 114.71 feet;

THENCE S 00°41'00" E, 152.05 feet;

THENCE S 46°59'53" E, 104.12 feet;

THENCE S 02°33'25" W, 49.57 feet;

THENCE S 30°56'59" W, 141.63 feet;

THENCE S 12°46'25" W, 53.31 feet;

THENCE S 30°55'41" E, 38.88 feet;

THENCE S 56°36'23" E, 106.61 feet;

THENCE S 84°55'31" E, 35.69 feet to the TRUE POINT OF BEGINNING.

Containing 12.47 acres, more or less.

See attached Exhibit "PA-5".

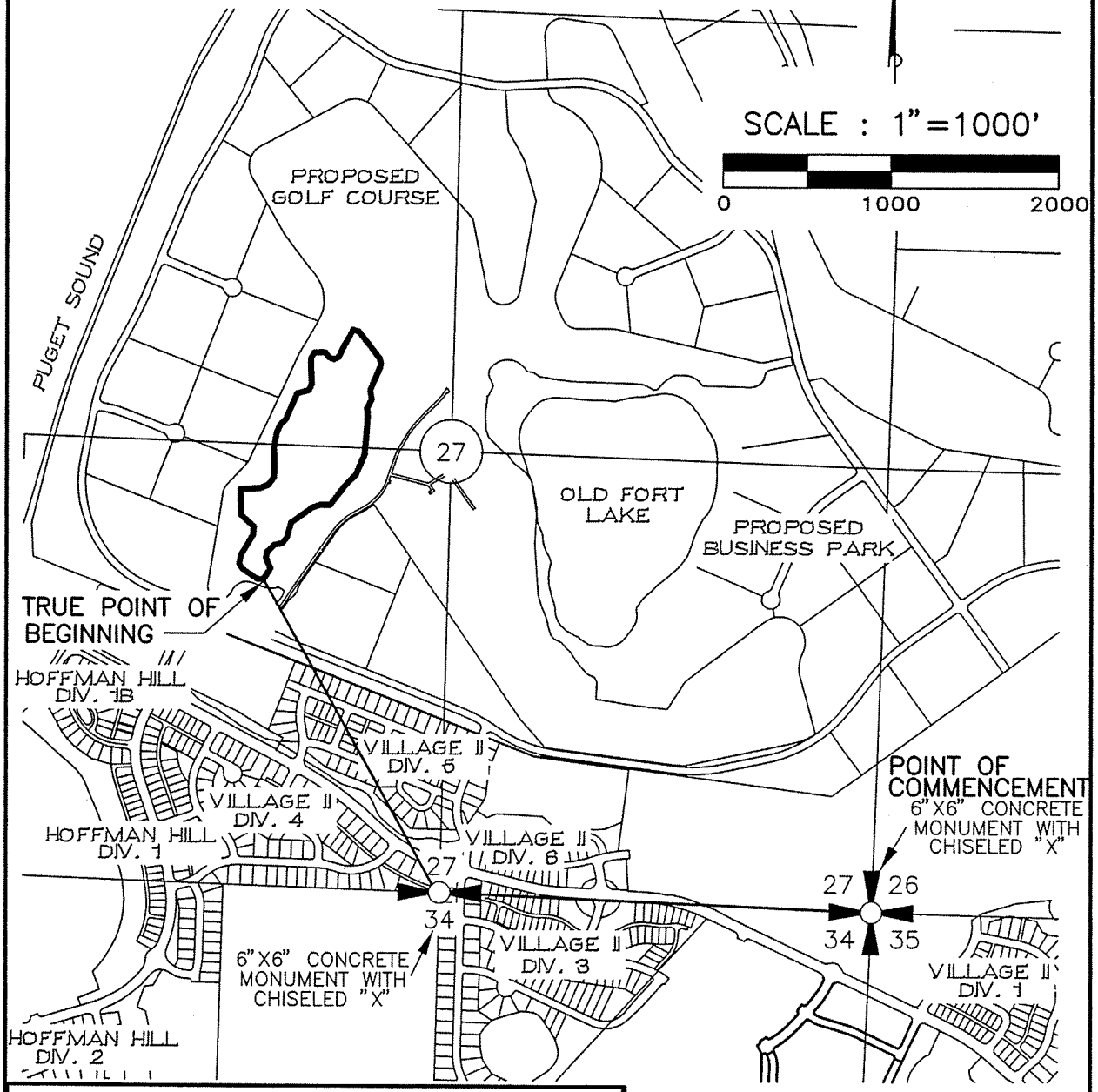
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 5.doc

EXHIBIT "PA-5"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 5

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

www.esmcivil.com

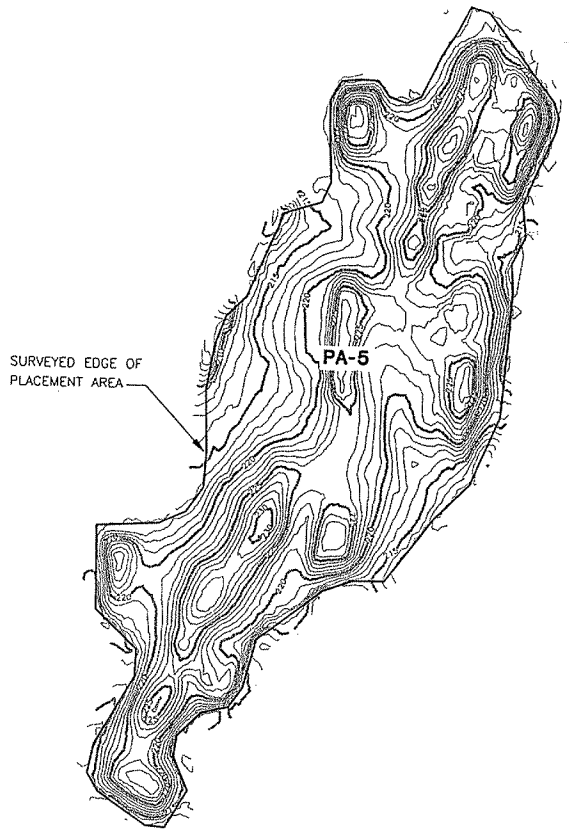
Civil Engineering
Public Works

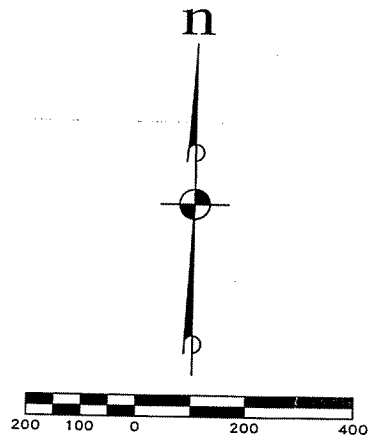
Land Surveying
Project Management

Land Planning
Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-5
DATE : 06-02-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE SOUTHWEST QUARTER AND OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: FEB. 24-25, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 5" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 5

ESM CONSULTING ENGINEERS, LLC
11714 Ne. Creek Parkway N.
Suite 101
Bothell, WA 98011
(253) 838-6113
(253) 838-8448
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 139-044-004
DRAWN: JPC
DATE: 8-02-04
SHEET 1 OF 1

DRAWING: DWG-PA-5.DWG

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

LEGAL DESCRIPTION FOR PLACEMENT AREA 6

That portion of the northeast quarter and of the northwest quarter of Section 27, Township 19 North, Range 1 East, W.M., in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of Section 27 of said Township 19 North, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 3703.57 feet to the TRUE POINT OF BEGINNING;

THENCE N 35°17'01" E, 25.89 feet;

THENCE N 00°18'10" W, 42.41 feet;

THENCE N 25°19'22" W, 62.99 feet;

THENCE N 13°41'45" W, 51.31 feet;

THENCE N 16°18'43" E, 53.95 feet;

THENCE N 29°00'51" E, 45.53 feet;

THENCE N 04°32'31" W, 60.35 feet;

THENCE N 26°01'02" W, 52.47 feet;

720 South 348th Street
Federal Way, WA 98003
Tel (253) 838 6113
Fax (253) 838 7104
www.esmcivil.com
Tacoma (253) 927 0619
Seattle (206) 623 5911
Bremerton (360) 792 3375

THENCE N 36°26'46" W, 51.07 feet;

THENCE N 69°32'53" W, 94.89 feet;

THENCE N 72°51'07" W, 53.24 feet;

THENCE N 49°51'30" W, 162.19 feet;

THENCE N 39°17'32" W, 53.96 feet;

THENCE N 54°48'42" W, 51.17 feet;

THENCE N 45°58'40" W, 56.64 feet;

THENCE N 29°00'03" W, 102.24 feet;

THENCE N 53°08'50" W, 97.61 feet;

THENCE N 08°41'14" W, 39.89 feet;

THENCE N 44°50'13" W, 94.45 feet;

THENCE N 85°00'39" W, 58.52 feet;

THENCE S 57°59'22" W, 54.30 feet;

THENCE S 66°56'06" W, 114.14 feet;

THENCE S 46°05'18" W, 95.87 feet;

THENCE S 53°31'16" W, 87.02 feet;

THENCE S 04°53'05" W, 103.61 feet;

THENCE S 00°38'08" E, 93.44 feet;

THENCE S 36°39'50" E, 111.54 feet;

THENCE S 17°45'53" E, 220.59 feet;

THENCE S 38°17'29" E, 53.26 feet;

THENCE S 02°51'47" E, 44.02 feet;

THENCE S 23°12'40" E, 58.08 feet;

THENCE S 10°43'06" E, 114.33 feet;

THENCE S 02°57'04" W, 66.79 feet;

THENCE S 26°43'41" E, 41.56 feet;

THENCE S 37°17'12" E, 51.98 feet;

THENCE S 46°25'12" E, 154.43 feet;

THENCE S 44°19'04" E, 100.28 feet;

THENCE S 60°12'58" E, 77.73 feet;

THENCE N 45°36'45" E, 27.64 feet;

THENCE N 00°40'07" E, 81.92 feet;

THENCE N 06°31'17" E, 55.46 feet;

THENCE N 15°27'09" W, 64.61 feet;

THENCE N 39°40'50" W, 55.76 feet;

THENCE N 15°22'37" W, 69.84 feet;

THENCE N 08°44'27" E, 87.17 feet;

THENCE N 34°59'45" E, 29.17 feet;

THENCE N 81°56'35" E, 31.18 feet;

THENCE S 66°57'54" E, 35.45 feet;

THENCE S 43°43'32" E, 75.65 feet;

THENCE S 58°38'35" E, 86.48 feet;

THENCE S 87°12'25" E, 55.24 feet;

THENCE N 79°43'30" E, 106.52 feet;

THENCE N 58°11'12" E, 61.61 feet;

THENCE N 50°06'43" E, 55.49 feet;

THENCE N 35°17'01" E, 12.12 feet to the TRUE POINT OF BEGINNING.

Containing: 16.6 acres, more or less.

See attached Exhibit "PA-6".

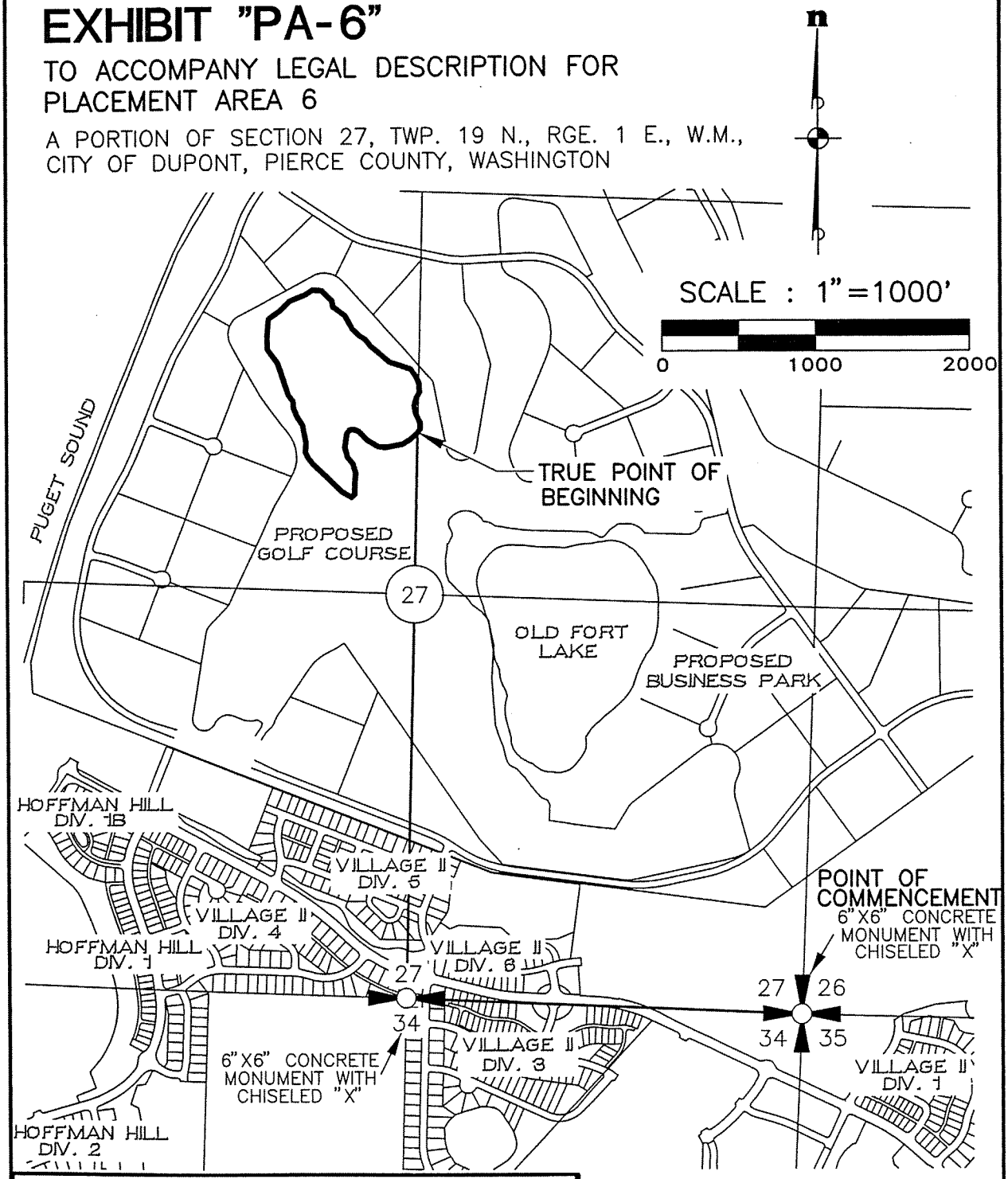
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 6.doc

EXHIBIT "PA-6"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 6

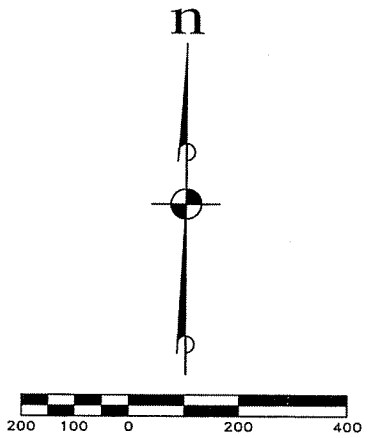
A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Public Works
Land Surveying | Project Management
Land Planning | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-6
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE NORTHEAST QUARTER AND OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.



SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: APRIL 1, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 6" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 6

ESM CONSULTING ENGINEERS, LLC
11714 No. Creek Parkway N. | Suite 101 | Bothell, WA 98011
(425) 415-0551 | (425) 415-0311
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO: 123-044-004 | DATE: 6-4-04
DRAWN: JPC | SHEET 1 OF 1

DRAWING: EXH-PA-6.DWG

DuPont Consent Decree Area
Job No. 129-044-004-0800
June 2, 2004

EXHIBIT "A"

LEGAL DESCRIPTION FOR PLACEMENT AREA 7

That portion of the northeast quarter Section 27, Township 19 North, Range 1 East, Willamette Meridian., in Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southeast corner of said Section 27, being a 6" x 6" concrete monument with a chiseled "X" as shown on that Record of Survey by ESM, Inc. recorded under Pierce County Recording No. 9303050249;

THENCE along the south line of the southeast quarter of said Section 27, N 87°34'19" W, 2588.68 feet to the south quarter corner thereof, being a 6" x 6" concrete monument with a chiseled "X" as shown on said Record of Survey;

THENCE along the north-south centerline of said Section 27, N 01°23'53" E, 3986.79 feet;

THENCE S 88°36'07" E, 637.27 feet to the TRUE POINT OF BEGINNING;

THENCE N 30°12'00" E, 66.61 feet;

THENCE N 23°34'40" E, 164.84 feet;

THENCE N 27°48'04" E, 52.37 feet;

THENCE N 01°07'45" E, 193.19 feet;

THENCE N 23°41'28" W, 221.27 feet;

THENCE N 53°27'00" W, 101.80 feet;

THENCE N 61°09'44" W, 61.16 feet;

THENCE N 36°23'18" W, 82.59 feet;

THENCE N 89°49'36" W, 43.66 feet;

THENCE S 82°56'41" W, 78.86 feet;

THENCE S 13°47'53" W, 66.23 feet;

THENCE S 17°58'08" E, 50.58 feet;

THENCE S 33°45'48" E, 72.97 feet;

THENCE S 07°09'41" E, 159.32 feet;

THENCE S 14°04'25" E, 73.65 feet;

THENCE S 29°06'44" E, 49.57 feet;

THENCE S 17°21'33" E, 138.77 feet;

THENCE S 12°32'43" E, 122.80 feet;

THENCE S 22°37'29" E, 70.56 feet;

THENCE S 50°25'28" E, 41.83 feet;

THENCE S 78°22'12" E, 38.59 feet, to the TRUE POINT OF BEGINNING.

Containing 4.38 acres, more or less.

See attached Exhibit "PA-7".

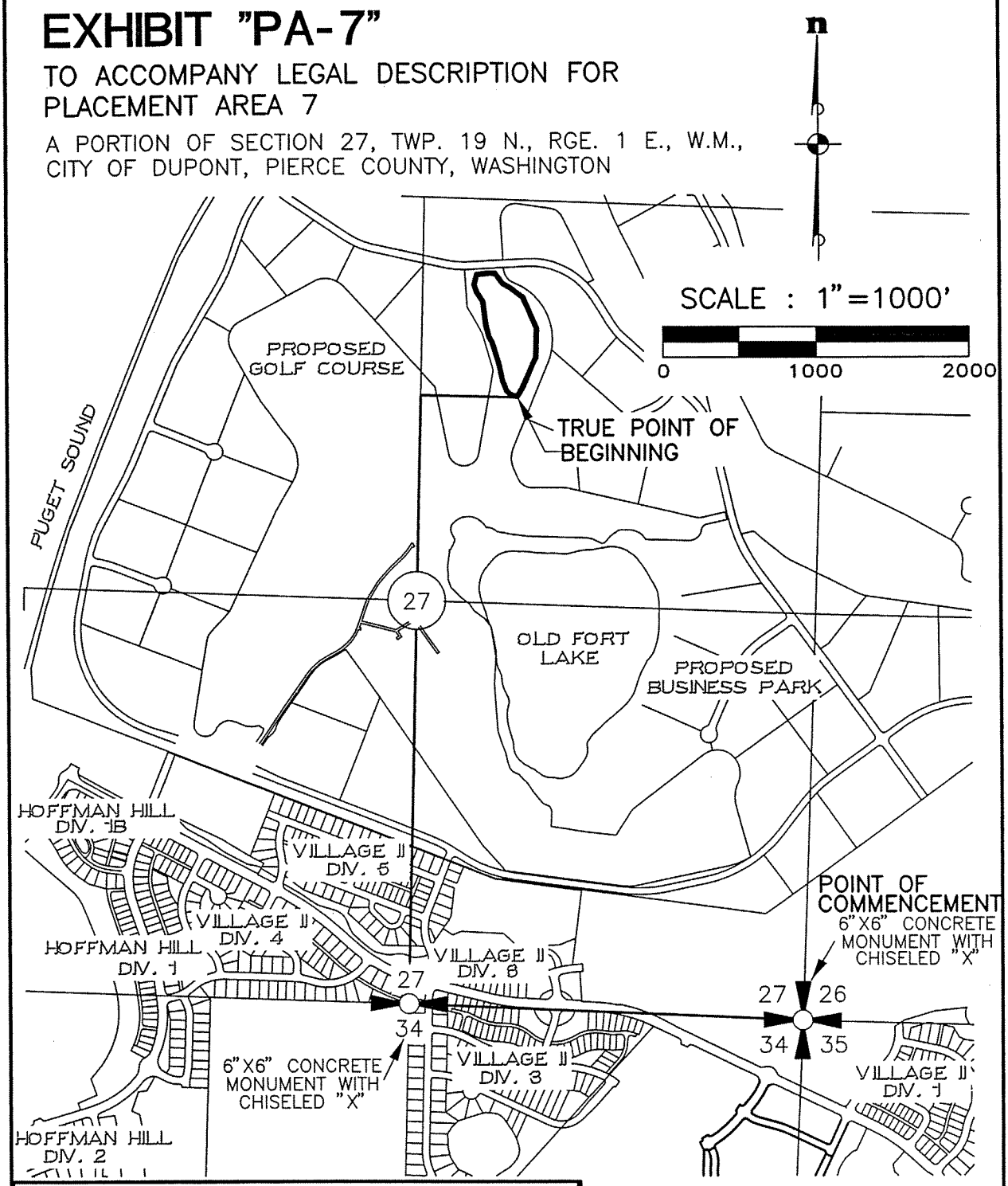
Written by: D.W.A.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\Documents\Consent Decree Area\CONSENT 7.doc

EXHIBIT "PA-7"

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREA 7

A PORTION OF SECTION 27, TWP. 19 N., RGE. 1 E., W.M.,
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

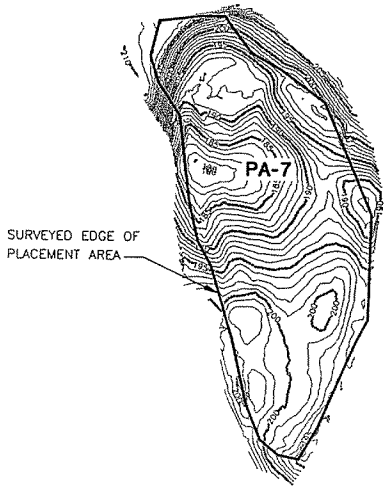
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

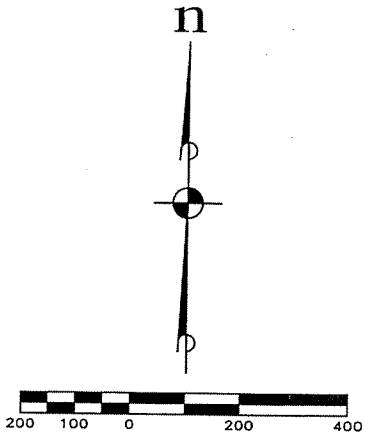
www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-7
DATE : 05-28-04
DRAWN : JPC
SHEET 1 OF 1

A PORTION OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.





SCALE 1" = 200'

HORIZONTAL DATUM: NAD 27
PROJECT BASIS OF BEARINGS :

THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY HOLDING THE BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THE CORPS WORK IS REPRESENTED AS BEING ON WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 27. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249.

VERTICAL DATUM: NGVD 29

VERTICAL DATUM IS BASED ON FILE NO. 15-104 NATIONAL GEODETIC VERTICAL DATUM, 1929.

B.M.

HDA-5, ELEVATION = 218.69 R.R. SPIKE IN TWIN 30" FIRS 40' SOUTH OF ℄ OF STEILACOOM-DUPONT ROAD, AND 70' WEST OF ℄ OF 7th STREET.

T.B.M.

CHISLED "L" IN NORTHEAST CORNER OF HISTORICAL MONUMENT @ OLD FORT SITE 1833 FORT SITE ("HUDSONS1"), ELEVATION = 215.80

NOTES

1. SURVEY DATE: MAR. 1-4, 2004.
2. EQUIPMENT USED: LEICA SYSTEM 500 DUAL FREQUENCY RECEIVERS USING RTK.
3. FOR SITE LOCATION, REFER TO "LEGAL DESCRIPTION FOR PLACEMENT AREA 1A" BY ESM.

WEYERHAEUSER COMPANY

DUPONT CONSENT DECREE AREA

PLACEMENT AREA 7

ESM CONSULTING ENGINEERS, LLC
11724 No. Creek Parkway N. | Suite 101 | Bothell, WA 98011
www.esmcivil.com
(253) 858-6113 (425) 415-8144
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

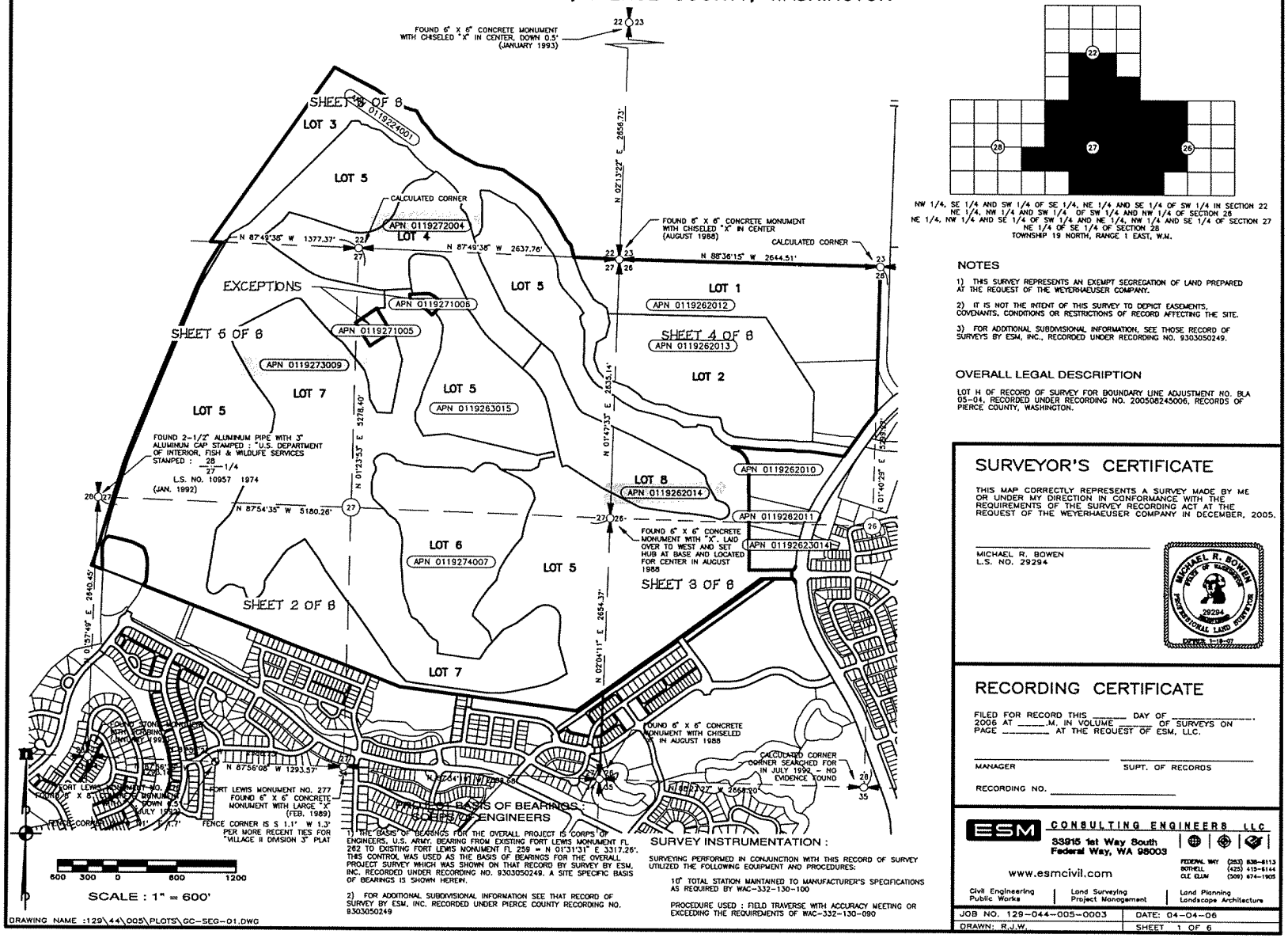
JOB NO. 131-044-004 | DATE: 6-03-04
DRAWN: JPC | SHEET 1 OF 1
DRAWING: EDH-PA-7.DWG

(* for explanatory purposes; do not record this sheet)

GOLF COURSE

RECORD OF SURVEY

A PORTION OF SECTION 22, 26, 27 AND 28, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



PRINCIPAL BASIS OF BEARINGS : CORPS OF ENGINEERS

1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY, BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THAT RECORD OF SURVEY BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NO. 9303050249

SURVEY INSTRUMENTATION :

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC-332-130-100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC-332-130-090

NW 1/4, SE 1/4 AND SW 1/4 OF SE 1/4, NE 1/4 AND SE 1/4 OF SW 1/4 IN SECTION 22
NE 1/4, NW 1/4 AND SW 1/4 OF SW 1/4 AND NW 1/4 OF SECTION 26
NE 1/4, NW 1/4 AND SE 1/4 OF SW 1/4 AND NE 1/4, NW 1/4 AND SE 1/4 OF SECTION 27
NE 1/4 OF SE 1/4 OF SECTION 28
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NOTES

1) THIS SURVEY REPRESENTS AN EXEMPT SEGREGATION OF LAND PREPARED AT THE REQUEST OF THE WEYERHAEUSER COMPANY.

2) IT IS NOT THE INTENT OF THIS SURVEY TO DEPICT EASEMENTS, COVENANTS, CONDITIONS OR RESTRICTIONS OF RECORD AFFECTING THE SITE.

3) FOR ADDITIONAL SUBDIVISIONAL INFORMATION, SEE THOSE RECORD OF SURVEYS BY ESM, INC., RECORDED UNDER RECORDING NO. 9303050249.

OVERALL LEGAL DESCRIPTION

LOT H OF RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT NO. BLA 05-04, RECORDED UNDER RECORDING NO. 200508245006, RECORDS OF PIERCE COUNTY, WASHINGTON.

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WEYERHAEUSER COMPANY IN DECEMBER, 2005.

MICHAEL R. BOWEN
L.S. NO. 29294

MICHAEL R. BOWEN — STATE OF WASHINGTON — 29294 — REGISTERED PROFESSIONAL LAND SURVEYOR — EXPIRES 1-18-07

RECORDING CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 2006 AT _____ M. IN VOLUME _____ OF SURVEYS ON PAGE _____ AT THE REQUEST OF ESM, LLC.

MANAGER

SUPT. OF RECORDS

RECORDING NO. _____

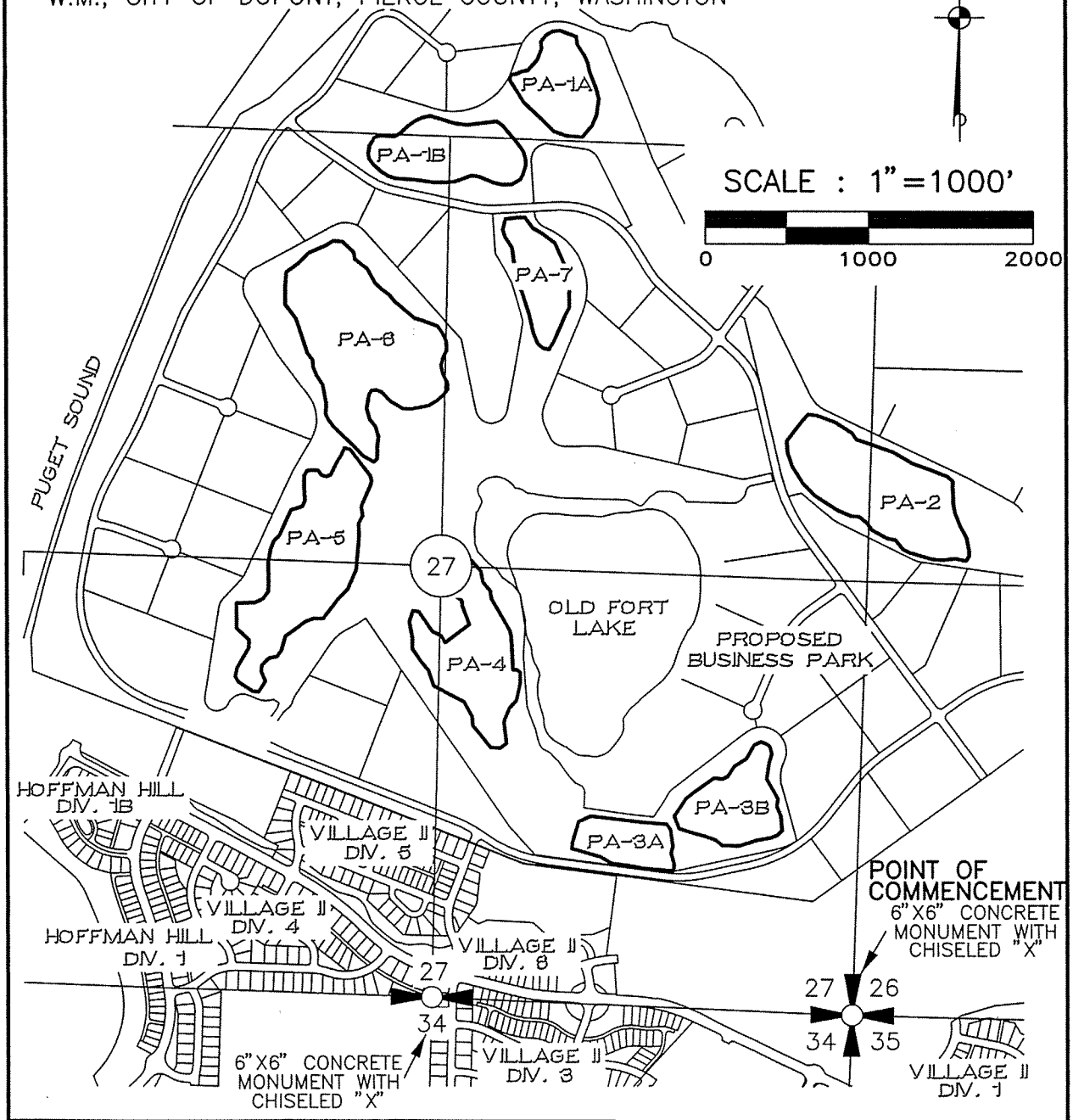
ESM CONSULTING ENGINEERS LLC
33915 1st Way South
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-8144
CLE ELUM (509) 674-1905
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-005-0003 | DATE: 04-04-06
DRAWN: R.J.W. | SHEET 1 OF 6

EXHIBIT KEY

TO ACCOMPANY LEGAL DESCRIPTION FOR PLACEMENT AREAS

A PORTION OF SECTIONS 22, 26 AND 27, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



ESM CONSULTING ENGINEERS LLC

720 S. 348th Street
Federal Way, WA 98003

FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144

www.esmcivil.com

Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0800
DRAWING NAME : EXH-PA-COVER
DATE : 06-01-04
DRAWN : JPC
SHEET 1 OF 1

GOLF COURSE PAs

(* For explanatory purposes; do not record this sheet)

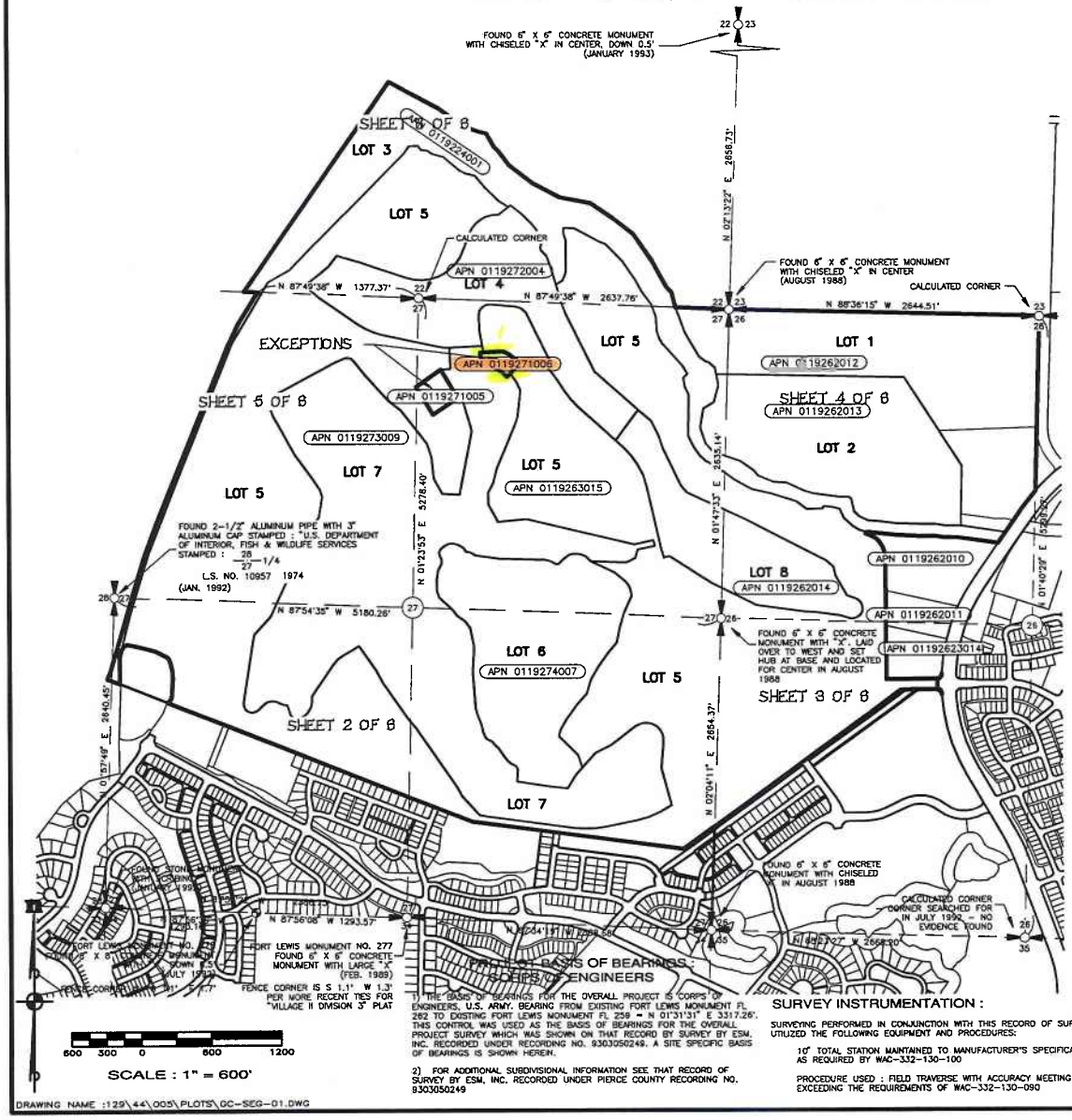
Name & Return Address:

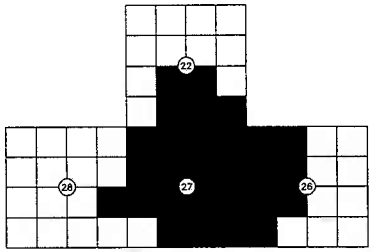
Polly L. McNeill, Esq.
Summit Law Group
315 Fifth Ave S, Suite 1000
Seattle, WA 98104

Document Title(s) Declaration of Restrictive Covenant – Golf Course
Grantor -- Weyerhaeuser Company
Grantee -- State of Washington, Department of Ecology
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Lots 4,7 and 8 of that Record of Survey recorded under Recording No. 200601275001, Records of Pierce County, Washington Complete Legal Description in Exhibit A of the Document
Auditor's Reference Number -- 200601275001
Assessor's Property Tax Parcel/Account Number(s) – 0119272004, 0119273009, and 0119262014
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein. I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. _____ Signature of Requesting Party (Required for non-standard recordings only)

RECORD OF SURVEY

A PORTION OF SECTION 22, 26, 27 AND 28, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON





NW 1/4, SE 1/4 AND SW 1/4 OF SE 1/4, NE 1/4 AND SE 1/4 OF SW 1/4 IN SECTION 22
NE 1/4, NW 1/4 AND SW 1/4 OF SW 1/4 AND NW 1/4 OF SECTION 26
NE 1/4, NW 1/4 AND SE 1/4 OF SW 1/4 AND NE 1/4, NW 1/4 AND SE 1/4 OF SECTION 27
NE 1/4 OF SE 1/4 OF SECTION 28
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NOTES

1) THIS SURVEY REPRESENTS AN EXEMPT SEGREGATION OF LAND PREPARED AT THE REQUEST OF THE WEYERHAEUSER COMPANY.

2) IT IS NOT THE INTENT OF THIS SURVEY TO DEPICT EASEMENTS, COVENANTS, CONDITIONS OR RESTRICTIONS OF RECORD AFFECTING THE SITE.

3) FOR ADDITIONAL SUBDIVISIONAL INFORMATION, SEE THOSE RECORD OF SURVEYS BY ESM, INC., RECORDED UNDER RECORDING NO. 9303050249.

OVERALL LEGAL DESCRIPTION

LOT H OF RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT NO. BLA 05-04, RECORDED UNDER RECORDING NO. 200508245006, RECORDS OF PIERCE COUNTY, WASHINGTON.

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WEYERHAEUSER COMPANY IN DECEMBER, 2005.

MICHAEL R. BOWEN
L.S. NO. 29294

MICHAEL R. BOWEN — STATE OF WASHINGTON — 29294 — REGISTERED PROFESSIONAL LAND SURVEYOR — 5-18-07

RECORDING CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 2006 AT _____M. IN VOLUME _____ OF SURVEYS ON PAGE _____ AT THE REQUEST OF ESM, LLC.

MANAGER _____ SUPT. OF RECORDS _____

RECORDING NO. _____

SURVEY INSTRUMENTATION :

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

10" TOTAL STATION MAINTANNED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC-332-130-100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC-332-130-090

1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY. BEARING FROM EXISTING FORT LEWIS MONUMENT FL 282 TO EXISTING FORT LEWIS MONUMENT FL 258 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THAT RECORD OF SURVEY BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NO. 9303050249

ESM CONSULTING ENGINEERS LLC
33915 1st Way South
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-0144
CLE ELUM (509) 674-1905
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-005-0003 | DATE: 04-04-06
DRAWN: R.J.W. | SHEET 1 OF 6

(*for explanatory purposes, do not record this sheet.)

HISTORIC WITH CAP (404)

Name & Return Address:

Polly McNeill
Summit Law Group
315 Fifth Ave S Suite 1000
Seattle, WA 98104

Document Title(s) Declaration of Restrictive Covenant –Historical Property With Cap (404)
Grantor - Weyerhaeuser Company
Grantee - State of Washington, Department of Ecology
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Tract X of that Record of Survey for Boundary Line Adjustment No. 06-01, recorded under Recording No. 200608225007, Records of Pierce County, Washington Complete Legal Description in Exhibit A of the Document
Auditor's Reference Number – Recording No. 200608225007
Assessor's Property Tax Parcel/Account Number(s) – 0119271006
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein. I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. _____ Signature of Requesting Party (Required for non-standard recordings only)

DECLARATION OF RESTRICTIVE COVENANT

HISTORICAL PROPERTY (WITH CAP)

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 this _____ day of _____, 2006, by the Weyerhaeuser Company ("Weyerhaeuser"), its successors and assigns, and the State of Washington, Department of Ecology ("Department of Ecology"), and its successors and assigns.

The undersigned, Weyerhaeuser, covenants that it is the fee owner of real property in Pierce County, Washington, legally described in Exhibit A and depicted in Exhibit B, attached hereto and incorporated herein by this reference ("Property"). See Exhibit B for illustrative purpose only. For specific boundaries rely on above legal description.

The Property is within an area commonly referred to as "Parcel One" of the "Former DuPont Works Site" that was the subject of work to clean up the Property ("Remedial Action") under the Washington Model Toxics Control Act ("MTCA"), Chapter 70.105D RCW. The Remedial Action is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Weyerhaeuser Company and E.I. DuPont de Nemours and Company* (Thurston County Cause No. 03-2-10484-7), in attachments to the Decree and in documents referenced in the Decree, including without limitation the Cleanup Action Plan attached to the Consent Decree as Exhibit A, and incorporated therein by reference. The Cleanup Action Plan is on file and available for inspection at the Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47775, Olympia, WA 98504-7775. A legal description of Parcel One is attached as Exhibit C, and a nonbinding illustration of the site's boundaries is shown on Exhibit B.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations at portions of the Property of hazardous substances which exceed the soil and groundwater cleanup levels specified in MTCA for unrestricted land uses.

Weyerhaeuser makes the following declaration as to limitations, conditions, restrictions, and uses to which the Property may be put and specifies that such declarations shall run with the land as provided by law and shall be binding on Weyerhaeuser, its successors and assigns, and any and all parties and persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter, "Owner").

Section 1: Restrictions on Use of Property. The Property is a culturally-significant site. Development and use of the Property, if any, (a) shall be subject to prior approval and express permission of the Washington Department of Archaeology and Historical Preservation, the Nisqually Indian Tribe and the Department of Ecology; (b) shall be only as allowed under the City of DuPont zoning regulations and Comprehensive Land Use Plan and under MTCA; and (c) shall in no event be developed and used for any of the following: residential uses, schools, daycares, parks, recreational uses, or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 2: Restrictions on Activities. The Owner may maintain the Property consistent with its preservation as a culturally-significant site. Notification of any excavation, whether accidental or authorized by the Department of Ecology, must be provided to the Department of Archaeological and Historical Preservation and the Nisqually Indian Tribe. Maintenance of any impervious surfaces is expressly permitted without notice so long as appropriate health and safety protocols are followed. For development activities permitted under this Restrictive Covenant, excavated soils must be managed properly and unless put back in place, must be either placed in an area within the boundaries of the Former DuPont Works Site (including but not limited to the parcel on which this Restrictive Covenant is recorded), or disposed off-site in accordance with applicable regulations; provided, however, that any excavated soils removed from the areas identified in Exhibit C and discussed in Section 3 below that cannot be put back in place **must** be disposed off-site in accordance with applicable regulations. Excavated soils shall be managed to minimize exposure to workers and other adults, including but not limited to the use of best management practices to control dust and surface water runoff; and to prevent exposure to children. Any activity on the Property that could interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited without prior written approval from the Department of Ecology.

Section 3: Protection of Residual Contaminants. The Owner shall not penetrate, alter, damage, remove or breach in any manner the durable, permeable, engineered material ("Cap") installed over contaminated soils at various places throughout the Property; nor remove or excavate any contaminated soils below the Cap in any manner that may result in the release of or exposure to hazardous substances without prior written approval from the Department of Ecology. Only plants with shallow roots that will not penetrate the Cap are allowed to be installed and maintained above the Cap. The locations of the Property where contaminated soil has a Cap over it, as well as the elevations and contours of the Caps themselves, are described in Exhibit C, attached hereto and incorporated herein by this reference.

Section 3.1: Cap Integrity: Specifically, the Owner shall not perform or allow any person to perform any of the following activities through or under the Cap:

a. drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface of the Cap beyond its load bearing capability, piercing the surface with a rod, spike or similar item; or

b. excavation or removal of loam, peat, sand, gravel, rock, or any other mineral or natural resource; or

c. planting of large trees or other vegetation the roots of which would breach the Cap; or

d. any other activity which penetrates, breaches, or disturbs the structural integrity of the Cap without first obtaining the express written consent of the Department of Ecology.

Section 3.2: Emergency or Accidental Damage to Cap. If it becomes necessary to excavate below or penetrate the Cap as part of a response to an emergency (e.g. repairing utility lines or responding to a fire or flood) or if the Cap is accidentally breached for any reason, the requirements of the previous subsection may be suspended, provided that the Owner:

a. notifies the Department of Ecology and Weyerhaeuser of such emergency or accident as soon as possible but no more than twenty-four hours after learning of such emergency or accident; and

b. notifies the Washington Office of Archaeology and Historical Preservation and the Nisqually Indian Tribe as soon as possible but no more than forty-eight hours after learning of such emergency or accident; and

c. limits the actual disturbance involved in such excavation or breach to the minimum reasonably necessary to adequately respond to the emergency.

Section 4: Change of Use. The Owner must notify and obtain approval from the Department of Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. The Department of Ecology may approve any inconsistent use only after public notice and comment; provided however, in no event may any change in use be approved that would allow for residential uses, schools, daycares, parks, recreational uses, or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 5: Notice of Conveyance. The Owner must give thirty (30) days' advance written notice to the Department of Ecology of the Owner's intent to convey any interest in the Property. Within thirty (30) days of the date any instrument conveying a fee title interest is executed, grantor must provide the Department of Ecology with a certified true copy of the instrument and, if it has been recorded in the public land records, its recording reference. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 6: Leasehold Interests. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 7: Recordation. Within thirty (30) days of the date of execution, the Owner shall record this Restrictive Covenant with the Pierce County Assessor's Office, and provide evidence of recordation to the Department of Ecology.

Section 8: Notice Requirement. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE PUBLIC LAND RECORDS ON _____, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY THE STATE OF WASHINGTON.

Section 9: Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give the other shall be in writing and shall be served personally or sent by first class mail postage prepaid, addresses as follows:

To Weyerhaeuser:

Director, Environmental Affairs
Mail Stop EC2 2C1
P.O. Box 9777
Federal Way, WA 98063-9777

To the Department of Ecology:

Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775

Section 10: Groundwater Withdrawal. The Owner of the Property must not permit withdrawal of groundwater from the Property for drinking water purposes, unless authorized by the Department of Ecology. Withdrawal of groundwater from monitoring wells for the purpose of extracting samples for analysis is expressly permitted.

Section 11: Access. The Owner shall allow authorized representatives of the Department of Ecology, E.I. DuPont de Nemours Company and Weyerhaeuser the right to enter the Property at reasonable times for the purpose of monitoring compliance with the terms of this Restrictive Covenant, `evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 12: No Public Access and Use. No right of access or use by the general public to any portion of the Property is conveyed by this Restrictive Covenant.

Section 13: Enforcement. Weyerhaeuser, the E.I. DuPont de Nemours Company, and the Department of Ecology shall each have the right, but not the obligation, to enforce the terms of this Restrictive Covenant by resort to specific performance or any legal process; provided, however, that no provision of this Restrictive Covenant shall be construed or intended to impose any obligations, by law or by contract, on the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to take action to enforce said restrictions. Neither the right nor authority of the Department of Ecology and Weyerhaeuser and E.I. DuPont de Nemours

Company to enforce this Restrictive Covenant nor a decision made to exercise or not to exercise such authority to right shall give rise to any duty or responsibility on the party of the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to exercise or not exercise this right on behalf of any Party or other person or entity. All remedies available hereunder shall be in addition to any and all remedies at law or in equity, including MTCA. Any forbearance, delay or omission to exercise the enforcement rights under this Restrictive Covenant in the event of a breach of any term of this Restrictive Covenant shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this Restrictive Covenant. Should legal counsel be employed to enforce this Restrictive Covenant, all costs incurred in such enforcement, including reasonable attorneys' fees shall be paid by the Owner found to be in violation.

Section 14: No Third Party Beneficiary. This Restrictive Covenant is intended for the sole and exclusive benefit of the Parties hereto and their respective successors and assigns, including all current and future owners of any portion or interest in the property. The Parties to this Restrictive Covenant expressly do not intend to benefit any other person or entity, and expressly do not intend to create any third-party beneficiaries to any provision of this Restrictive Covenant, including but not limited to any enforcement provisions.

Section 15: Run with the Land. To the extent that this Restrictive Covenant is construed as a restrictive covenant, it shall run with the land, and shall be binding on the Owners, their successors and assigns, of all or any portion of the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the property owner without adequate and complete provision for the continued observation of this Restrictive Covenant.

Section 16: Severability. Invalidation of any provision or application of a provision of this Restrictive Covenant by any court shall not affect any other provisions or applications.

Section 17: Easement in Gross. To the extent that this Restrictive Covenant creates a negative easement, it shall be construed as an easement in gross for the sole benefit of Weyerhaeuser Company, without whose consent it cannot be released, modified or amended.

Section 18: Reserved Rights. Weyerhaeuser reserves unto itself and its successors and assigns all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, and rights granted herein.

Weyerhaeuser Company has caused this Restrictive Covenant to be signed in its name.

EXECUTED this _____ day of _____, 2006.

WEYERHAEUSER COMPANY

By: _____

Name: Richard E. Hanson
Title: Executive Vice President and Chief Operating Officer

STATE OF WASHINGTON)
: ss.
County of _____)

On this ____ day of _____, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Richard E. Hanson, known to be the Executive Vice President and Chief Operating Officer of Weyerhaeuser Company, the corporation that executed the foregoing Restrictive Covenant, and acknowledged the said Restrictive Covenant to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said Restrictive Covenant.

WITNESS my hand and official seal hereto affixed the day and year written above.

NOTARY PUBLIC in and for the State of Washington. My commission expires:

_____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
By: Dated: _____

_____
Name of Person Acknowledging Receipt

_____
Title

Attachments: Exhibit A – Legal description of Property
Exhibit B – Depiction of Property
Exhibit C – Legal description of Placement Areas

ESM CONSULTING ENGINEERS LLC

Weyerhaeuser Company
Job No. 129-044-004-0960
September 22, 2006

EXHIBIT A

LEGAL DESCRIPTION FOR HISTORICAL PROPERTY (WITH CAP)

Tract X of City of Dupont Boundary Line Adjustment No. BLA 06-01, recorded under Recording No. 200608225007, Records of Pierce County, Washington, situate in Section 27, Township 19 North, Range 1 East, W.M., City of Dupont, Pierce County, Washington.

See attached Exhibit "B".

Written by: R.J.W.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\DOCUMENTS\129044-33.DOC

33915 1st Way South
Suite 200
Federal Way, WA 98003

Tel (253) 838 6113
Fax (253) 838 7104
Toll Free (800) 345 5694

Bothell (425) 415 6144
Cle Elum (509) 674 1905
www.esmcivil.com

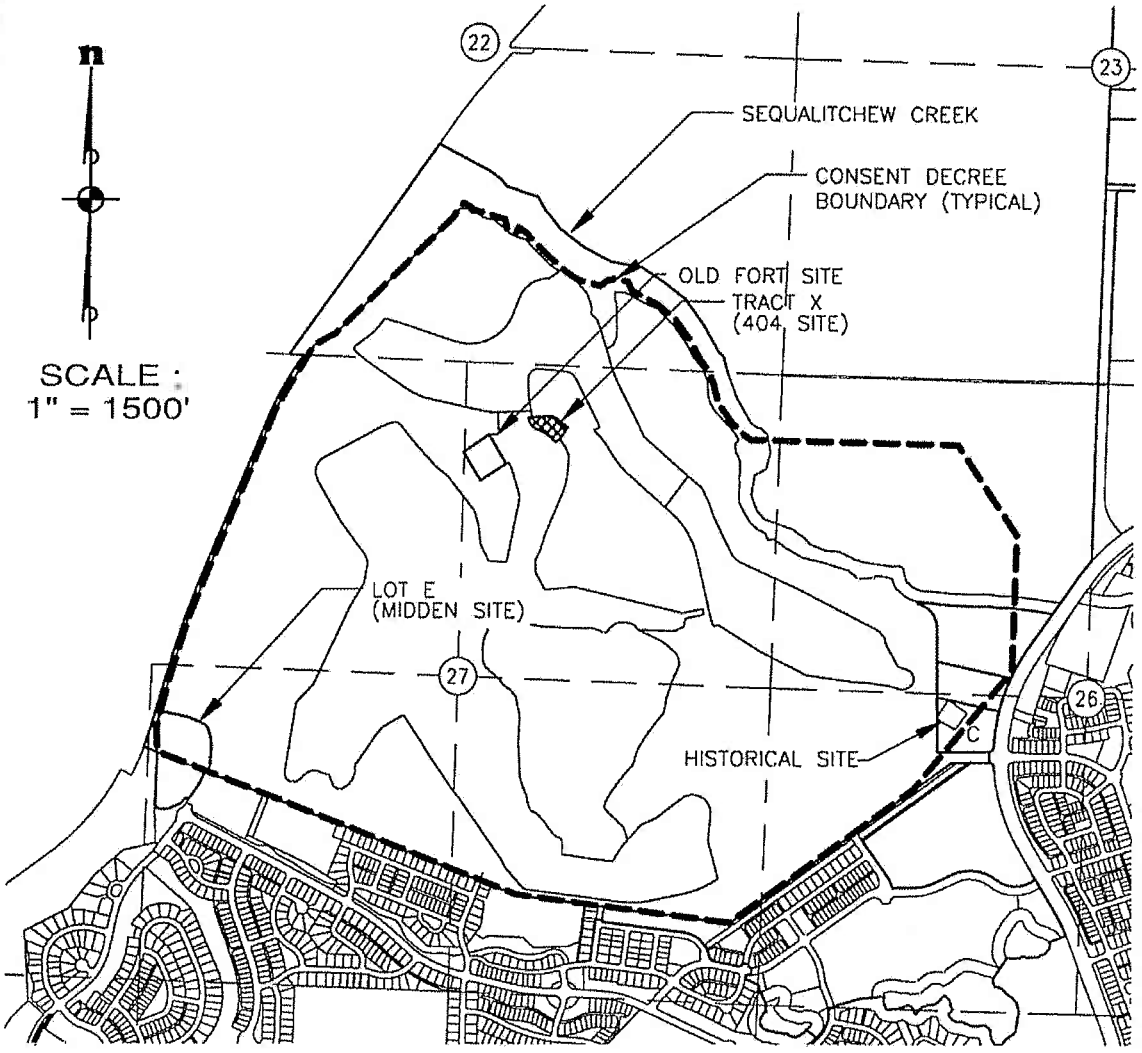
Civil Engineering
Project Management
Land Surveying

Land Planning
Public Works
Landscape Architecture

EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR HISTORICAL PROPERTY (WITH CAP)

A PORTION OF THE NE QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



SCALE :
1" = 1500'

LEGEND

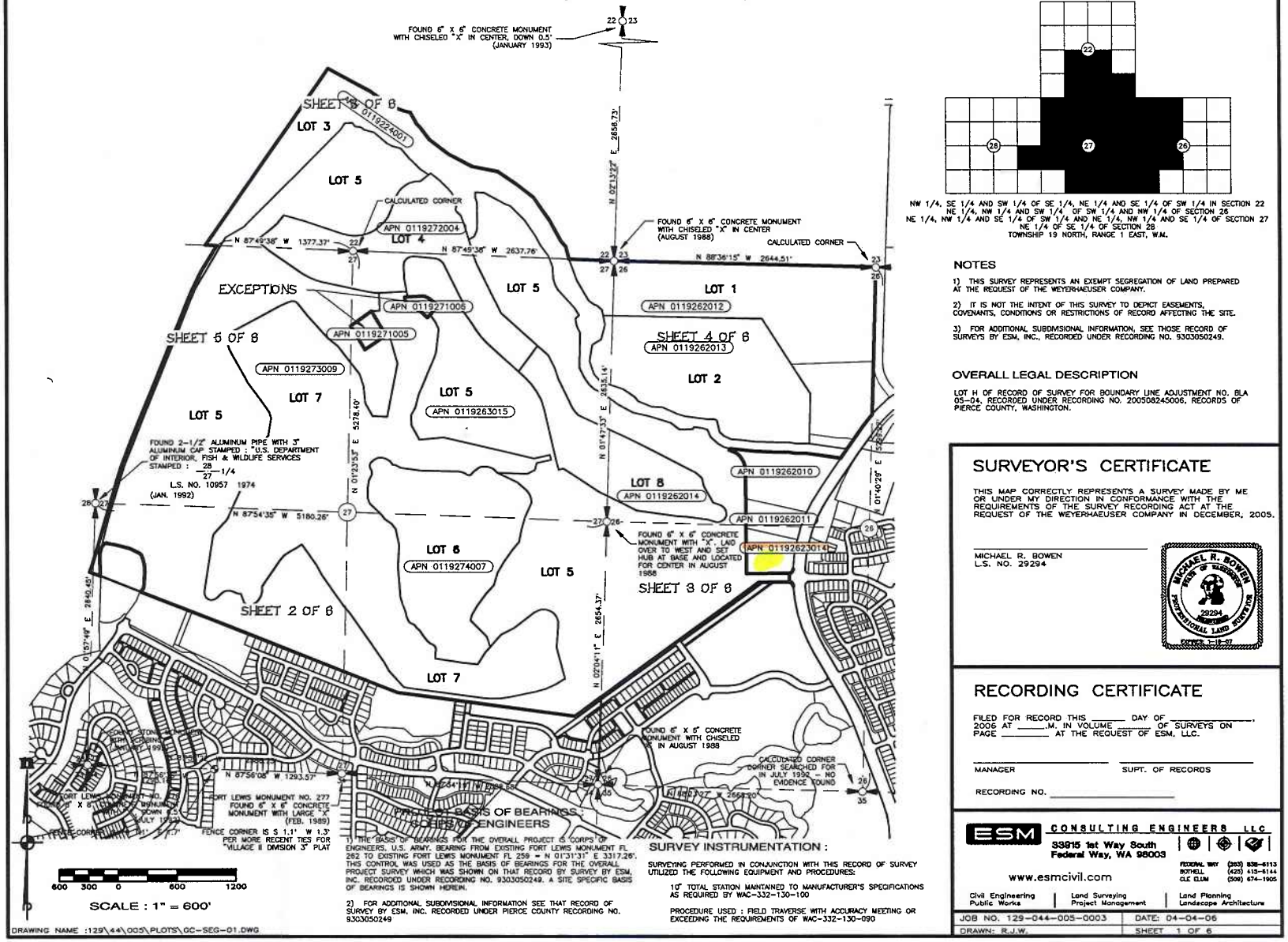
SUBJECT AREA

ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-15.DWG
DATE : 09-22-06
DRAWN : MRB/RJW
SHEET 1 OF 1

RECORD OF SURVEY

A PORTION OF SECTION 22, 26, 27 AND 28, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



1) THE BASIS OF BEARINGS FOR THE OVERALL PROJECT IS CORPS OF ENGINEERS, U.S. ARMY, BEARING FROM EXISTING FORT LEWIS MONUMENT FL 262 TO EXISTING FORT LEWIS MONUMENT FL 259 = N 01°31'31" E 3317.26'. THIS CONTROL WAS USED AS THE BASIS OF BEARINGS FOR THE OVERALL PROJECT SURVEY WHICH WAS SHOWN ON THAT RECORD BY SURVEY BY ESM, INC. RECORDED UNDER RECORDING NO. 9303050249. A SITE SPECIFIC BASIS OF BEARINGS IS SHOWN HEREIN.

2) FOR ADDITIONAL SUBDIVISIONAL INFORMATION SEE THAT RECORD OF SURVEY BY ESM, INC. RECORDED UNDER PIERCE COUNTY RECORDING NO. 9303050249

SURVEY INSTRUMENTATION :

SURVEYING PERFORMED IN CONJUNCTION WITH THIS RECORD OF SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES:

10" TOTAL STATION MAINTAINED TO MANUFACTURER'S SPECIFICATIONS AS REQUIRED BY WAC-332-130-100

PROCEDURE USED : FIELD TRAVERSE WITH ACCURACY MEETING OR EXCEEDING THE REQUIREMENTS OF WAC-332-130-090

NW 1/4, SE 1/4 AND SW 1/4 OF SE 1/4, NE 1/4 AND SE 1/4 OF SW 1/4 IN SECTION 22
NE 1/4, NW 1/4 AND SW 1/4 OF SW 1/4 AND NW 1/4 OF SECTION 26
NE 1/4, NW 1/4 AND SE 1/4 OF SW 1/4 AND NE 1/4, NW 1/4 AND SE 1/4 OF SECTION 27
NE 1/4 OF SE 1/4 OF SECTION 28
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NOTES

1) THIS SURVEY REPRESENTS AN EXEMPT SEGREGATION OF LAND PREPARED AT THE REQUEST OF THE WEYERHAEUSER COMPANY.

2) IT IS NOT THE INTENT OF THIS SURVEY TO DEPICT EASEMENTS, COVENANTS, CONDITIONS OR RESTRICTIONS OF RECORD AFFECTING THE SITE.

3) FOR ADDITIONAL SUBDIVISIONAL INFORMATION, SEE THOSE RECORD OF SURVEYS BY ESM, INC., RECORDED UNDER RECORDING NO. 9303050249.

OVERALL LEGAL DESCRIPTION

LOT H OF RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT NO. BLA 05-04, RECORDED UNDER RECORDING NO. 200508245006, RECORDS OF PIERCE COUNTY, WASHINGTON.

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WEYERHAEUSER COMPANY IN DECEMBER, 2005.

MICHAEL R. BOWEN
L.S. NO. 29294

STATE OF WASHINGTON · MICHAEL R. BOWEN · 29294 · REGISTERED PROFESSIONAL LAND SURVEYOR · DATE 6-19-07

RECORDING CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 2006 AT _____ M. IN VOLUME _____ OF SURVEYS ON PAGE _____ AT THE REQUEST OF ESM, LLC.

MANAGER _____ SUPT. OF RECORDS _____

RECORDING NO. _____

ESM CONSULTING ENGINEERS LLC
33815 1st Way South
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-0144
CLE ELUM (509) 674-1905
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-005-0003 | DATE: 04-04-06
DRAWN: R.J.W. | SHEET 1 OF 6

Historic With Cap ("Historical" for explanatory purposes; do not record this sheet.)

Name & Return Address:

Polly McNeill
Summit Law Group
315 Fifth Ave S Suite 1000
Seattle, WA 98104

Document Title(s) Declaration of Restrictive Covenant –Historical Property With Cap (Historical)
Grantor – Weyerhaeuser Company
Grantee – State of Washington, Department of Ecology
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Portion of Lot C of that Record of Survey for Boundary Line Adjustment No. 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington Complete Legal Description in Exhibit A of the Document
Auditor's Reference Number – Recording No. 200508245006
Assessor's Property Tax Parcel/Account Number(s) – 0119263014
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein. I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. _____ Signature of Requesting Party (Required for non-standard recordings only)

DECLARATION OF RESTRICTIVE COVENANT

HISTORICAL PROPERTY (WITH CAP)

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 this _____ day of _____, 2006, by the Weyerhaeuser Company ("Weyerhaeuser"), its successors and assigns, and the State of Washington, Department of Ecology ("Department of Ecology"), and its successors and assigns.

The undersigned, Weyerhaeuser, covenants that it is the fee owner of real property in Pierce County, Washington, legally described in Exhibit A and depicted in Exhibit B, attached hereto and incorporated herein by this reference ("Property"). See Exhibit B for illustrative purpose only. For specific boundaries rely on above legal description.

The Property is within an area commonly referred to as "Parcel One" of the "Former DuPont Works Site" that was the subject of work to clean up the Property ("Remedial Action") under the Washington Model Toxics Control Act ("MTCA"), Chapter 70.105D RCW. The Remedial Action is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Weyerhaeuser Company and E.I. DuPont de Nemours and Company* (Thurston County Cause No. 03-2-10484-7), in attachments to the Decree and in documents referenced in the Decree, including without limitation the Cleanup Action Plan attached to the Consent Decree as Exhibit A, and incorporated therein by reference. The Cleanup Action Plan is on file and available for inspection at the Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47775, Olympia, WA 98504-7775. A legal description of Parcel One is attached as Exhibit C, and a nonbinding illustration of the site's boundaries is shown on Exhibit B.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations at portions of the Property of hazardous substances which exceed the soil and groundwater cleanup levels specified in MTCA for unrestricted land uses.

Weyerhaeuser makes the following declaration as to limitations, conditions, restrictions, and uses to which the Property may be put and specifies that such declarations shall run with the land as provided by law and shall be binding on Weyerhaeuser, its successors and assigns, and any and all parties and persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter, "Owner").

Section 1: Restrictions on Use of Property. The Property is a culturally-significant site. Development and use of the Property, if any, (a) shall be subject to prior approval and express permission of the Washington Department of Archaeology and Historical Preservation, the Nisqually Indian Tribe and the Department of Ecology; (b) shall be only as allowed under the City of DuPont zoning regulations and Comprehensive Land Use Plan and under MTCA; and (c) shall in no event be developed and used for any of the following: residential uses, schools, daycares, parks, recreational uses, or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 2: Restrictions on Activities. The Owner may maintain the Property consistent with its preservation as a culturally-significant site. Notification of any excavation, whether accidental or authorized by the Department of Ecology, must be provided to the Department of Archaeological and Historical Preservation and the Nisqually Indian Tribe. Maintenance of any impervious surfaces is expressly permitted without notice so long as appropriate health and safety protocols are followed. For development activities permitted under this Restrictive Covenant, excavated soils must be managed properly and unless put back in place, must be either placed in an area within the boundaries of the Former DuPont Works Site (including but not limited to the parcel on which this Restrictive Covenant is recorded), or disposed off-site in accordance with applicable regulations; provided, however, that any excavated soils removed from the areas identified in Exhibit C and discussed in Section 3 below that cannot be put back in place **must** be disposed off-site in accordance with applicable regulations. Excavated soils shall be managed to minimize exposure to workers and other adults, including but not limited to the use of best management practices to control dust and surface water runoff; and to prevent exposure to children. Any activity on the Property that could interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited without prior written approval from the Department of Ecology.

Section 3: Protection of Residual Contaminants. The Owner shall not penetrate, alter, damage, remove or breach in any manner the durable, permeable, engineered material ("Cap") installed over contaminated soils at various places throughout the Property; nor remove or excavate any contaminated soils below the Cap in any manner that may result in the release of or exposure to hazardous substances without prior written approval from the Department of Ecology. Only plants with shallow roots that will not penetrate the Cap are allowed to be installed and maintained above the Cap. The locations of the Property where contaminated soil has a Cap over it, as well as the elevations and contours of the Caps themselves, are described in Exhibit C, attached hereto and incorporated herein by this reference.

Section 3.1: Cap Integrity: Specifically, the Owner shall not perform or allow any person to perform any of the following activities through or under the Cap:

a. drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface of the Cap beyond its load bearing capability, piercing the surface with a rod, spike or similar item; or

b. excavation or removal of loam, peat, sand, gravel, rock, or any other mineral or natural resource; or

c. planting of large trees or other vegetation the roots of which would breach the Cap; or

d. any other activity which penetrates, breaches, or disturbs the structural integrity of the Cap without first obtaining the express written consent of the Department of Ecology.

Section 3.2: Emergency or Accidental Damage to Cap. If it becomes necessary to excavate below or penetrate the Cap as part of a response to an emergency (e.g. repairing utility lines or responding to a fire or flood) or if the Cap is accidentally breached for any reason, the requirements of the previous subsection may be suspended, provided that the Owner:

a. notifies the Department of Ecology and Weyerhaeuser of such emergency or accident as soon as possible but no more than twenty-four hours after learning of such emergency or accident; and

b. notifies the Washington Office of Archaeology and Historical Preservation and the Nisqually Indian Tribe as soon as possible but no more than forty-eight hours after learning of such emergency or accident; and

c. limits the actual disturbance involved in such excavation or breach to the minimum reasonably necessary to adequately respond to the emergency.

Section 4: Change of Use. The Owner must notify and obtain approval from the Department of Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. The Department of Ecology may approve any inconsistent use only after public notice and comment; provided however, in no event may any change in use be approved that would allow for residential uses, schools, daycares, parks, recreational uses, or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 5: Notice of Conveyance. The Owner must give thirty (30) days' advance written notice to the Department of Ecology of the Owner's intent to convey any interest in the Property. Within thirty (30) days of the date any instrument conveying a fee title interest is executed, grantor must provide the Department of Ecology with a certified true copy of the instrument and, if it has been recorded in the public land records, its recording reference. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 6: Leasehold Interests. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 7: Recordation. Within thirty (30) days of the date of execution, the Owner shall record this Restrictive Covenant with the Pierce County Assessor's Office, and provide evidence of recordation to the Department of Ecology.

Section 8: Notice Requirement. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE PUBLIC LAND RECORDS ON _____, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY THE STATE OF WASHINGTON.

Section 9: Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give the other shall be in writing and shall be served personally or sent by first class mail postage prepaid, addresses as follows:

To Weyerhaeuser:

Director, Environmental Affairs
Mail Stop EC2 2C1
P.O. Box 9777
Federal Way, WA 98063-9777

To the Department of Ecology:

Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775

Section 10: Groundwater Withdrawal. The Owner of the Property must not permit withdrawal of groundwater from the Property for drinking water purposes, unless authorized by the Department of Ecology. Withdrawal of groundwater from monitoring wells for the purpose of extracting samples for analysis is expressly permitted.

Section 11: Access. The Owner shall allow authorized representatives of the Department of Ecology, E.I. DuPont de Nemours Company and Weyerhaeuser the right to enter the Property at reasonable times for the purpose of monitoring compliance with the terms of this Restrictive Covenant, `evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 12: No Public Access and Use. No right of access or use by the general public to any portion of the Property is conveyed by this Restrictive Covenant.

Section 13: Enforcement. Weyerhaeuser, the E.I. DuPont de Nemours Company, and the Department of Ecology shall each have the right, but not the obligation, to enforce the terms of this Restrictive Covenant by resort to specific performance or any legal process; provided, however, that no provision of this Restrictive Covenant shall be construed or intended to impose any obligations, by law or by contract, on the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to take action to enforce said restrictions. Neither the right nor authority of the Department of Ecology and Weyerhaeuser and E.I. DuPont de Nemours

Company to enforce this Restrictive Covenant nor a decision made to exercise or not to exercise such authority to right shall give rise to any duty or responsibility on the party of the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to exercise or not exercise this right on behalf of any Party or other person or entity. All remedies available hereunder shall be in addition to any and all remedies at law or in equity, including MTCA. Any forbearance, delay or omission to exercise the enforcement rights under this Restrictive Covenant in the event of a breach of any term of this Restrictive Covenant shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this Restrictive Covenant. Should legal counsel be employed to enforce this Restrictive Covenant, all costs incurred in such enforcement, including reasonable attorneys' fees shall be paid by the Owner found to be in violation.

Section 14: No Third Party Beneficiary. This Restrictive Covenant is intended for the sole and exclusive benefit of the Parties hereto and their respective successors and assigns, including all current and future owners of any portion or interest in the property. The Parties to this Restrictive Covenant expressly do not intend to benefit any other person or entity, and expressly do not intend to create any third-party beneficiaries to any provision of this Restrictive Covenant, including but not limited to any enforcement provisions.

Section 15: Run with the Land. To the extent that this Restrictive Covenant is construed as a restrictive covenant, it shall run with the land, and shall be binding on the Owners, their successors and assigns, of all or any portion of the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the property owner without adequate and complete provision for the continued observation of this Restrictive Covenant.

Section 16: Severability. Invalidation of any provision or application of a provision of this Restrictive Covenant by any court shall not affect any other provisions or applications.

Section 17: Easement in Gross. To the extent that this Restrictive Covenant creates a negative easement, it shall be construed as an easement in gross for the sole benefit of Weyerhaeuser Company, without whose consent it cannot be released, modified or amended.

Section 18: Reserved Rights. Weyerhaeuser reserves unto itself and its successors and assigns all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, and rights granted herein.

Weyerhaeuser Company has caused this Restrictive Covenant to be signed in its name.

EXECUTED this _____ day of _____, 2006.

WEYERHAEUSER COMPANY

By: _____

Name: Richard E. Hanson
Title: Executive Vice President and Chief Operating Officer

STATE OF WASHINGTON)
: ss.
County of _____)

On this ____ day of _____, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Richard E. Hanson, known to be the Executive Vice President and Chief Operating Officer of Weyerhaeuser Company, the corporation that executed the foregoing Restrictive Covenant, and acknowledged the said Restrictive Covenant to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said Restrictive Covenant.

WITNESS my hand and official seal hereto affixed the day and year written above.

NOTARY PUBLIC in and for the State of Washington. My commission expires:

_____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

By: _____ Dated: _____

_____
Name of Person Acknowledging Receipt

_____
Title

Attachments: Exhibit A – Legal description of Property
Exhibit B – Depiction of Property
Exhibit C – Legal description of Placement Areas

Weyerhaeuser Company
Job No. 129-044-004-0960
September 22, 2006

EXHIBIT A

LEGAL DESCRIPTION FOR HISTORICAL PROPERTY (WITH CAP)

That portion of Lot C of City of Dupont Boundary Line Adjustment No. BLA 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington, situate in Section 26, Township 19 North, Range 1 East, W.M., City of Dupont, Pierce County, Washington, being more particularly described as follows:

COMMENCING at the southwesterly corner of said Lot C;

THENCE along the westerly line of said Lot C, N 00°23'40" W, 278.09 feet;

THENCE N 89°36'20" E, 6.07 feet to the True Point of Beginning;

THENCE N 07°48'51" W, 8.26 feet;

THENCE N 04°28'53" E, 13.72 feet;

THENCE N 30°54'18" E, 38.80 feet;

THENCE N 33°05'16" E, 55.62 feet;

THENCE N 30°52'32" E, 48.96 feet;

THENCE N 36°31'17" E, 8.60 feet;

THENCE N 77°17'41" E, 7.65 feet;

THENCE S 66°55'41" E, 15.13 feet;

THENCE S 55°39'21" E, 61.22 feet;

THENCE S 53°12'20" E, 60.25 feet;

THENCE S 56°00'58" E, 45.38 feet;

THENCE S 10°23'38" E, 9.36 feet;

THENCE S 16°46'56" W, 11.03 feet;

THENCE S 42°16'12" W, 46.84 feet;

THENCE S 33°01'45" W, 53.33 feet;

THENCE S 39°12'24" W, 44.10 feet;

THENCE S 71°20'05" W, 10.18 feet;

THENCE N 77°43'05" W, 10.06 feet;

THENCE N 53°04'56" W, 40.11 feet;

THENCE N 60°32'42" W, 60.50 feet;

THENCE N 63°10'10" W, 10.84 feet;

THENCE N 56°08'17" W, 34.33 feet;

THENCE N 44°18'19" W, 8.53 feet to the True Point of Beginning;

See attached Exhibit "B".

Written by: R.J.W.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\DOCUMENTS\129044-35.DOC

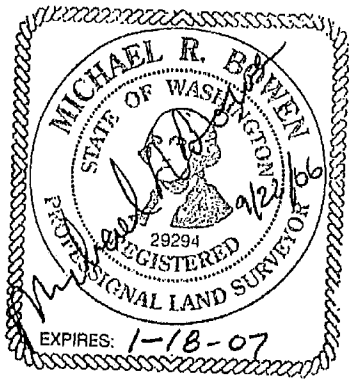
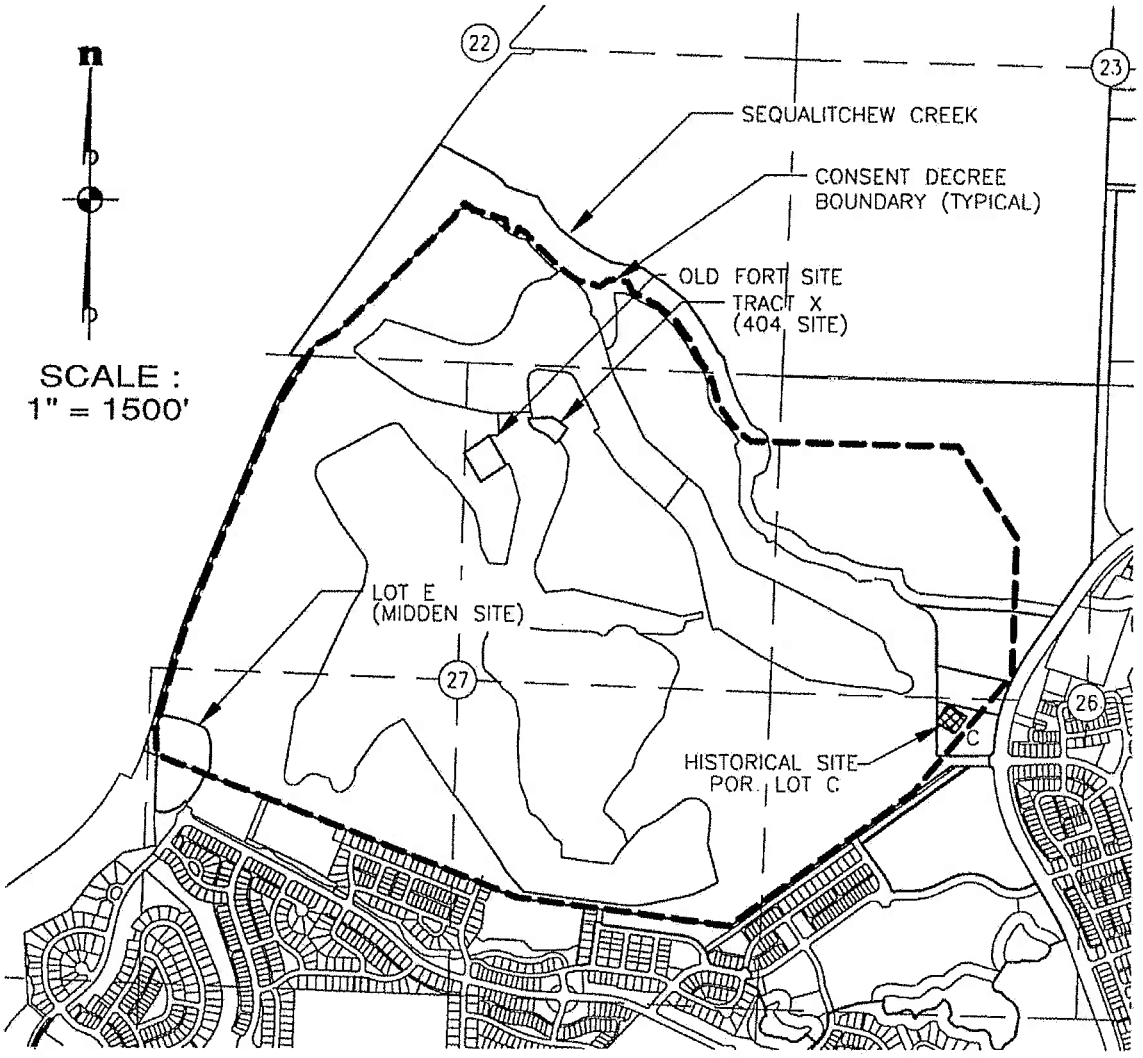


EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR HISTORICAL PROPERTY (WITH CAP)

A PORTION OF THE SW QUARTER OF SECTION 26, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



LEGEND

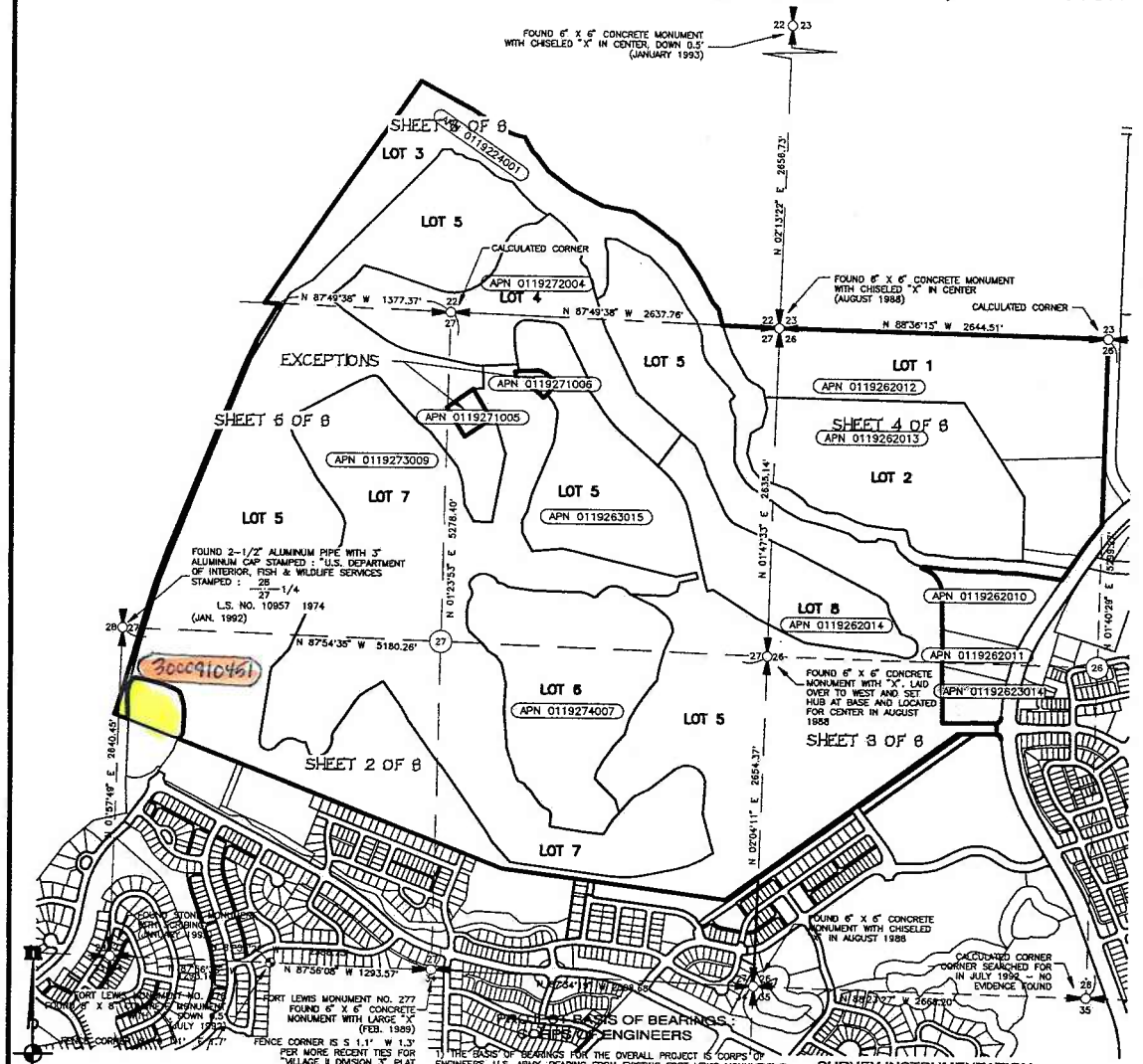
SUBJECT AREA

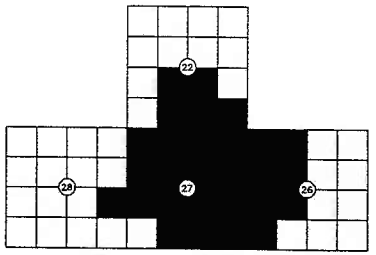
ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-17.DWG
DATE : 09-22-06
DRAWN : MRB/RJW
SHEET 1 OF 1

RECORD OF SURVEY

A PORTION OF SECTION 22, 26, 27 AND 28, TWP. 19 N., RGE. 1 E., W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON





NW 1/4, SE 1/4 AND SW 1/4 OF SE 1/4, NE 1/4 AND SE 1/4 OF SW 1/4 IN SECTION 22
NE 1/4, NW 1/4 AND SW 1/4 OF SW 1/4 AND NW 1/4 OF SECTION 26
NE 1/4, NW 1/4 AND SE 1/4 OF SW 1/4 AND NE 1/4, NW 1/4 AND SE 1/4 OF SECTION 27
NE 1/4 OF SE 1/4 OF SECTION 28
TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M.

NOTES

1) THIS SURVEY REPRESENTS AN EXEMPT SEGREGATION OF LAND PREPARED AT THE REQUEST OF THE WEYERHAEUSER COMPANY.

2) IT IS NOT THE INTENT OF THIS SURVEY TO DEPICT EASEMENTS, COVENANTS, CONDITIONS OR RESTRICTIONS OF RECORD AFFECTING THE SITE.

3) FOR ADDITIONAL SUBDIVISIONAL INFORMATION, SEE THOSE RECORD OF SURVEYS BY ESM, INC., RECORDED UNDER RECORDING NO. 9303050249.

OVERALL LEGAL DESCRIPTION

LOT H OF RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT NO. BLA 05-04, RECORDED UNDER RECORDING NO. 200508245006, RECORDS OF PIERCE COUNTY, WASHINGTON.

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF THE WEYERHAEUSER COMPANY IN DECEMBER, 2005.

MICHAEL R. BOWEN
L.S. NO. 29294

MICHAEL R. BOWEN — STATE OF WASHINGTON — 29294 — REGISTERED PROFESSIONAL LAND SURVEYOR — EXPIRES: 1-16-07

RECORDING CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 2006 AT _____.M. IN VOLUME _____ OF SURVEYS ON PAGE _____ AT THE REQUEST OF ESM, LLC.

MANAGER — SUPT. OF RECORDS

RECORDING NO. _____

ESM CONSULTING ENGINEERS LLC
33915 1st Way South
Federal Way, WA 98003
www.esmcivil.com
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
CLE ELUM (509) 674-1905
Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

JOB NO. 129-044-005-0003 | DATE: 04-04-06
DRAWN: R.J.W. | SHEET 1 OF 6

(Historic with cap ("Midden") for explanatory purposes; do not record this sheet.)

Name & Return Address:

Polly McNeill
Summit Law Group
315 Fifth Ave S Suite 1000
Seattle, WA 98104

Document Title(s) Declaration of Restrictive Covenant –Historical Property With Cap (Midden)
Grantor – Weyerhaeuser Company
Grantee – State of Washington, Department of Ecology
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Portion of Lot E of that Record of Survey for Boundary Line Adjustment No. 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington Complete Legal Description in Exhibit A of the Document
Auditor's Reference Number – Recording No. 200508245006
Assessor's Property Tax Parcel/Account Number(s) – 3000910451
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein. I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document. _____ Signature of Requesting Party (Required for non-standard recordings only)

DECLARATION OF RESTRICTIVE COVENANT

HISTORICAL PROPERTY (WITH CAP)

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 this _____ day of _____, 2006, by the Weyerhaeuser Company ("Weyerhaeuser"), its successors and assigns, and the State of Washington, Department of Ecology ("Department of Ecology"), and its successors and assigns.

The undersigned, Weyerhaeuser, covenants that it is the fee owner of real property in Pierce County, Washington, legally described in Exhibit A and depicted in Exhibit B, attached hereto and incorporated herein by this reference ("Property").

The Property is within an area commonly referred to as "Parcel One" of the "Former DuPont Works Site" that was the subject of work to clean up the Property ("Remedial Action") under the Washington Model Toxics Control Act ("MTCA"), Chapter 70.105D RCW. The Remedial Action is described in the Consent Decree entered in *State of Washington, Department of Ecology v. Weyerhaeuser Company and E.I. DuPont de Nemours and Company* (Thurston County Cause No. 03-2-10484-7), in attachments to the Decree and in documents referenced in the Decree, including without limitation the Cleanup Action Plan attached to the Consent Decree as Exhibit A, and incorporated therein by reference. The Cleanup Action Plan is on file and available for inspection at the Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47775, Olympia, WA 98504-7775. The boundary of Parcel One is depicted in Exhibit B, attached hereto.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations at portions of the Property of hazardous substances which exceed the soil and groundwater cleanup levels specified in MTCA for unrestricted land uses.

Weyerhaeuser makes the following declaration as to limitations, conditions, restrictions, and uses to which the Property may be put and specifies that such declarations shall run with the land as provided by law and shall be binding on Weyerhaeuser, its successors and assigns, and any and all parties and persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter, "Owner").

Section 1: Restrictions on Use of Property. The Property is a culturally-significant site. Development and use of the Property, if any, (a) shall be subject to prior approval and express permission of the Washington Department of Archaeology and Historical Preservation, the Nisqually Indian Tribe and the Department of Ecology; (b) shall be only as allowed under the City of DuPont zoning regulations and Comprehensive Land Use Plan and under MTCA; and (c) shall in no event be developed and used for any of the following: residential uses, schools, daycares, parks, recreational uses, or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 2: Restrictions on Activities. The Owner may maintain the Property consistent with its preservation as a culturally-significant site. Notification of any excavation, whether accidental or authorized by the Department of Ecology, must be provided to the Department of Archaeological and Historical Preservation and the Nisqually Indian Tribe. Maintenance of any impervious surfaces is expressly permitted without notice so long as appropriate health and safety protocols are followed. For development activities permitted under this Restrictive Covenant, excavated soils must be managed properly and unless put back in place, must be either placed in an area within the boundaries of the Former DuPont Works Site, or disposed off-site in accordance with applicable regulations; provided, however, that any excavated soils removed from the area discussed in Section 3 below that cannot be put back in place **must** be disposed off-site in accordance with applicable regulations. Excavated soils shall be managed to minimize exposure to workers and other adults, including but not limited to the use of best management practices to control dust and surface water runoff; and to prevent exposure to children. Any activity on the Property that could interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited without prior written approval from the Department of Ecology.

Section 3: Protection of Residual Contaminants. The Owner shall not penetrate, alter, damage, remove or breach in any manner the durable, permeable, engineered material ("Cap") installed over contaminated soils on the entire Property; nor remove or excavate any contaminated soils below the Cap in any manner that may result in the release of or exposure to hazardous substances without prior written approval from the Department of Ecology. Only plants with shallow roots that will not penetrate the Cap are allowed to be installed and maintained above the Cap.

Section 3.1: Cap Integrity: Specifically, the Owner shall not perform or allow any person to perform any of the following activities through or under the Cap:

a. drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface of the Cap beyond its load bearing capability, piercing the surface with a rod, spike or similar item; or

b. excavation or removal of loam, peat, sand, gravel, rock, or any other mineral or natural resource; or

c. planting of large trees or other vegetation the roots of which would breach the Cap; or

d. any other activity which penetrates, breaches, or disturbs the structural integrity of the Cap without first obtaining the express written consent of the Department of Ecology.

Section 3.2: Emergency or Accidental Damage to Cap. If it becomes necessary to excavate below or penetrate the Cap as part of a response to an emergency (e.g. repairing utility lines or responding to a fire or flood) or if the Cap is accidentally breached for any reason, the requirements of the previous subsection may be suspended, provided that the Owner:

a. notifies the Department of Ecology and Weyerhaeuser of such emergency or accident as soon as possible but no more than twenty-four hours after learning of such emergency or accident; and

b. notifies the Washington Office of Archaeology and Historical Preservation and the Nisqually Indian Tribe as soon as possible but no more than forty-eight hours after learning of such emergency or accident; and

c. limits the actual disturbance involved in such excavation or breach to the minimum reasonably necessary to adequately respond to the emergency.

Section 4: Change of Use. The Owner must notify and obtain approval from the Department of Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. The Department of Ecology may approve any inconsistent use only after public notice and comment; provided however, in no event may any change in use be approved that would allow for residential uses, schools, daycares, parks, recreational uses, or any other use in which the likelihood of children having sustained access to soils can be reasonably anticipated.

Section 5: Notice of Conveyance. The Owner must give thirty (30) days' advance written notice to the Department of Ecology of the Owner's intent to convey any interest in the Property. Within thirty (30) days of the date any instrument conveying a fee title interest is executed, grantor must provide the Department of Ecology with a certified true copy of the instrument and, if it has been recorded in the public land records, its recording reference. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 6: Leasehold Interests. The Owner must restrict leases to uses and activities consistent with this Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 7: Recordation. Within thirty (30) days of the date of execution, the Owner shall record this Restrictive Covenant with the Pierce County Assessor's Office, and provide evidence of recordation to the Department of Ecology.

Section 8: Notice Requirement. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases, and mortgages a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO THE EFFECT OF A RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE PUBLIC LAND RECORDS ON _____, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY THE STATE OF WASHINGTON.

Section 9: Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give the other shall be in writing and shall be served personally or sent by first class mail postage prepaid, addresses as follows:

To Weyerhaeuser:

Director, Environmental Affairs
Mail Stop EC2 2C1
P.O. Box 9777
Federal Way, WA 98063-9777

To the Department of Ecology:

Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775

Section 10: Groundwater Withdrawal. The Owner of the Property must not permit withdrawal of groundwater from the Property for drinking water purposes, unless authorized by the Department of Ecology. Withdrawal of groundwater from monitoring wells for the purpose of extracting samples for analysis is expressly permitted.

Section 11: Access. The Owner shall allow authorized representatives of the Department of Ecology, E.I. DuPont de Nemours Company and Weyerhaeuser the right to enter the Property at reasonable times for the purpose of monitoring compliance with the terms of this Restrictive Covenant, `evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 12: No Public Access and Use. No right of access or use by the general public to any portion of the Property is conveyed by this Restrictive Covenant.

Section 13: Enforcement. Weyerhaeuser, the E.I. DuPont de Nemours Company, and the Department of Ecology shall each have the right, but not the obligation, to enforce the terms of this Restrictive Covenant by resort to specific performance or any legal process; provided, however, that no provision of this Restrictive Covenant shall be construed or intended to impose any obligations, by law or by contract, on the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to take action to enforce said restrictions. Neither the right nor

authority of the Department of Ecology and Weyerhaeuser and E.I. DuPont de Nemours Company to enforce this Restrictive Covenant nor a decision made to exercise or not to exercise such authority to right shall give rise to any duty or responsibility on the party of the Department of Ecology or Weyerhaeuser or E.I. DuPont de Nemours Company to exercise or not exercise this right on behalf of any Party or other person or entity. All remedies available hereunder shall be in addition to any and all remedies at law or in equity, including MTCA. Any forbearance, delay or omission to exercise the enforcement rights under this Restrictive Covenant in the event of a breach of any term of this Restrictive Covenant shall not be deemed to be a waiver of such term or of any subsequent breach of the same or any other term, or of any of the rights under this Restrictive Covenant. Should legal counsel be employed to enforce this Restrictive Covenant, all costs incurred in such enforcement, including reasonable attorneys' fees shall be paid by the Owner found to be in violation.

Section 14: No Third Party Beneficiary. This Restrictive Covenant is intended for the sole and exclusive benefit of the Parties hereto and their respective successors and assigns, including all current and future owners of any portion or interest in the property. The Parties to this Restrictive Covenant expressly do not intend to benefit any other person or entity, and expressly do not intend to create any third-party beneficiaries to any provision of this Restrictive Covenant, including but not limited to any enforcement provisions.

Section 15: Run with the Land. To the extent that this Restrictive Covenant is construed as a restrictive covenant, it shall run with the land, and shall be binding on the Owners, their successors and assigns, of all or any portion of the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the property owner without adequate and complete provision for the continued observation of this Restrictive Covenant.

Section 16: Severability. Invalidation of any provision or application of a provision of this Restrictive Covenant by any court shall not affect any other provisions or applications.

Section 17: Easement in Gross. To the extent that this Restrictive Covenant creates a negative easement, it shall be construed as an easement in gross for the sole benefit of Weyerhaeuser Company, without whose consent it cannot be released, modified or amended.

Section 18: Reserved Rights. Weyerhaeuser reserves unto itself and its successors and assigns all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, and rights granted herein.

Weyerhaeuser Company has caused this Restrictive Covenant to be signed in its name.

EXECUTED this _____ day of _____, 2006.

WEYERHAEUSER COMPANY

By:

_____
Richard E. Hanson
Executive Vice President and Chief
Operating Officer

STATE OF WASHINGTON)
) ss.
County of _____)

On this ____ day of _____, 2006, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Richard E. Hanson, known to be the Executive Vice President and Chief Operating Officer of Weyerhaeuser Company, the corporation that executed the foregoing Restrictive Covenant, and acknowledged the said Restrictive Covenant to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said Restrictive Covenant.

WITNESS my hand and official seal hereto affixed the day and year written above.

NOTARY PUBLIC in and for the State of
Washington. My commission expires:

_____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

By: Dated: _____

_____
Mike Blum
Project Coordinator

Attachments: Exhibit A – Legal description of Property
Exhibit B – Depiction of Property & Parcel One Boundary

Weyerhaeuser Company
Job No. 129-044-004-0960
September 22, 2006

EXHIBIT A

LEGAL DESCRIPTION FOR HISTORICAL PROPERTY (WITH CAP)

That portion of Lot E of City of Dupont Boundary Line Adjustment No. BLA 05-04, recorded under Recording No. 200508245006, Records of Pierce County, Washington, situate in Section 27, Township 19 North, Range 1 East, W.M., City of Dupont, Pierce County, Washington, being more particularly described as follows:

BEGINNING at the southwesterly corner of said Lot E;

THENCE along the westerly line of said Lot E, N 02°00'35" E, 428.58 feet;

THENCE continuing along said westerly line N 01°58'53" W, 22.63 feet;

THENCE continuing along said westerly line N 02°50'07" W, 5.48 feet to the TRUE POINT OF BEGINNING;

THENCE continuing along said westerly line and along the northerly and easterly line thereof, the following described bearings and distances;

N 02°50'07" W, 47.35 feet;

N 02°47'33" W, 64.96 feet;

N 02°32'53" W, 74.54 feet;

N 06°05'01" E, 41.82 feet;

N 14°07'08" E, 61.88 feet;

N 38°07'53" E, 40.48 feet;

N 66°03'43" E, 25.83 feet;

S 80°53'28" E, 27.29 feet;

S 78°58'25" E, 65.92 feet;

S 76°11'44" E, 69.47 feet;

S 75°24'01" E, 49.34 feet;

S 68°26'48" E, 2.87 feet;

S 70°56'46" E, 28.76 feet;

S 65°42'50" E, 60.54 feet;

S 64°20'03" E, 46.53 feet;

S 49°14'55" E, 30.69 feet;

S 21°20'30" E, 44.53 feet;

S 13°59'00" E, 58.49 feet;

S 02°15'32" E, 66.52 feet;

S 03°27'44" W, 154.97 feet;

S 04°38'26" W, 15.50 feet to a point of curvature;

southerly 26.53 feet along the arc of a tangent curve to the right, having a radius of 25.00 feet, through a central angle of 60°48'41" to a point of reverse curvature;

southerly 21.39 feet along the arc of a tangent curve to the left, having a radius of 40.00 feet, through a central angle of 30°38'25";

THENCE N 68°35'05" W, 438.26 feet to the TRUE POINT OF BEGINNING.

See attached Exhibit "B".

Written by: R.J.W.
Checked by: M.R.B.

I:\ESM-JOBS\129\44\004\DOCUMENTS\129044-34.DOC

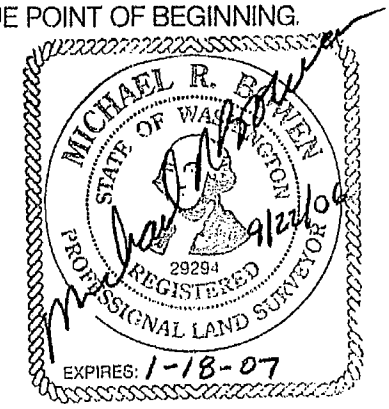
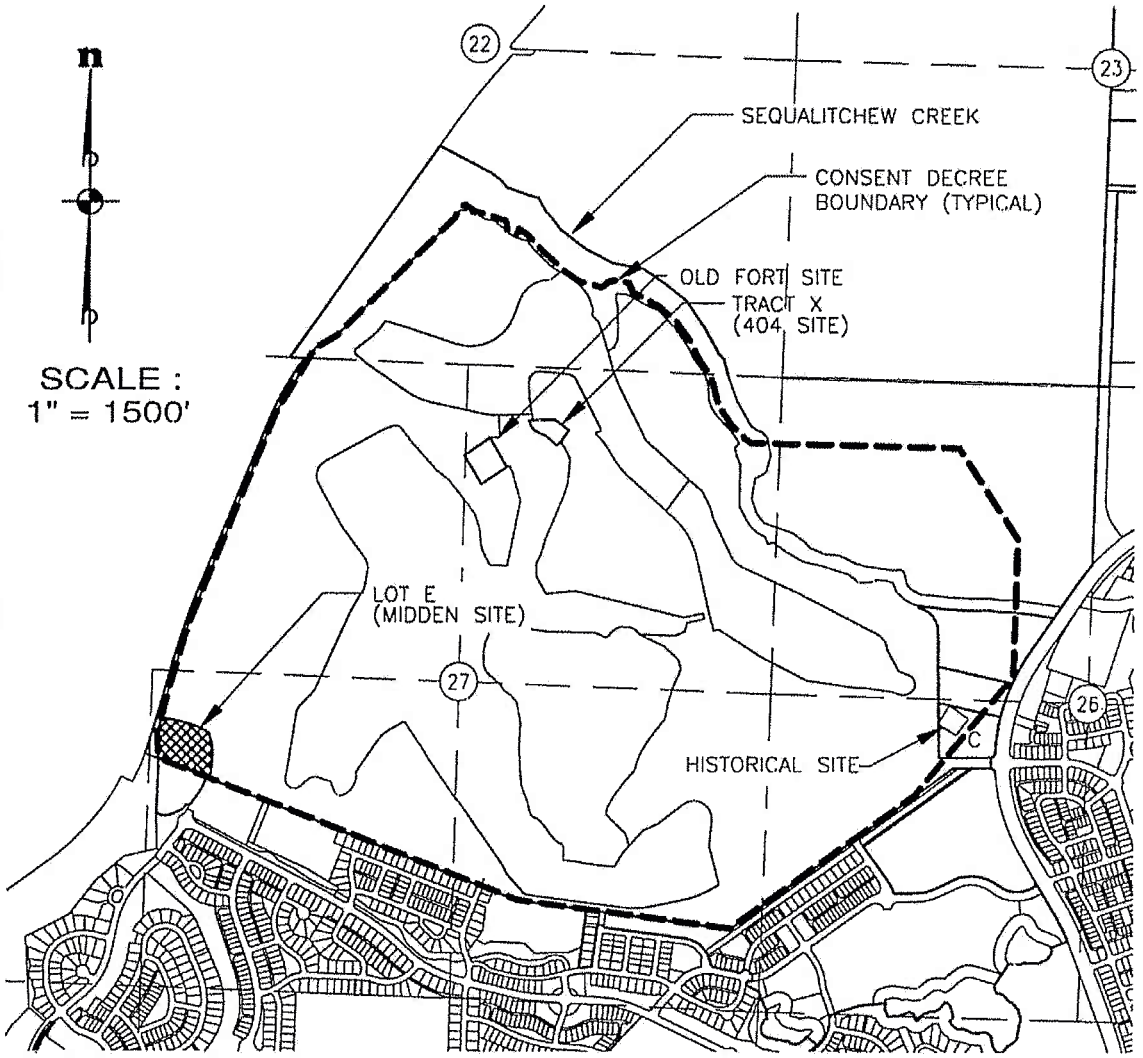


EXHIBIT "B"

TO ACCOMPANY LEGAL DESCRIPTION FOR HISTORICAL PROPERTY (WITH CAP)

A PORTION OF THE SW QUARTER OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 EAST, W.M., CITY OF DUPONT, PIERCE COUNTY, WASHINGTON



LEGEND

SUBJECT AREA

ESM CONSULTING ENGINEERS LLC
720 S. 348th Street
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
BOTHELL (425) 415-6144
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

JOB NO. 129-044-004-0960
DWG: 129\44\004\EXHIBITS\SR-16.DWG
DATE : 09-22-06
DRAWN : MRB/RJW
SHEET 1 OF 1