enviros®

Prepared for:

Washington Department of Ecology

Site Location:

South Third Street and Adams Street
Yakima, Washington

Ecology Work Assignment # ENV-014

REMEDIAL ACTION AND FEASIBILITY STUDY

Nu-Way Cleaners
801 South Third Street
Yakima, Washington

June 30, 1996 ***E1/950109***

ENVIROS INCORPORATED 25 CENTRAL WAY SUITE 210 KIRKLAND, WA 98033-6156 TEL 206 / 827-5525 FAX 206 / 827-3299

TABLE OF CONTENTS

1. INTRODUCTION

The Washington State Department of Ecology (Ecology) Central Regional Office (CRO) contracted with Enviros, Inc. (Enviros) to provide assistance in completing an interim cleanup action and limited feasibility study at the Nu-Way Cleaners site in Yakima, Washington. The site is located at 801 South Third Street on the southeast corner of the intersection of Adams Street and South Third Street (see Figure 1, Vicinity Map). This work was authorized under Ecology Work Assignment Number ENV-014.

This report constitutes the deliverable required under Task 6-Interim Remedial Action, Task 7-Groundwater Monitoring, and Task 8-Limited Feasibility Study.

1.1 Purpose and Objectives

The Nu-Way Cleaners site was first investigated by EPA's contractor, Ecology and Environment, Inc. in 1989. During the course of that investigation and subsequent investigations, it was determined that the site had confirmed soil and groundwater contamination from over thirty volatile and semi-volatile compounds. Three on-site underground storage tanks (USTs) and two sumps have been identified as potential sources of contamination in addition to site activities that may have contributed additional contaminants through other pathways.

The purpose of the current scope of work is to obtain additional information concerning the release and subsurface migration of contaminants, with particular emphasis on perchloroethylene (PCE, also known as tetrachloroethene), and to perform a source reduction by removing all known USTs and sumps. The primary objective of the interim remedial action at the Nu-Way site was to mitigate the potential contribution from this site to PCE contamination of groundwater in the Yakima Railroad Area (YRRA).

1.2 Regulatory Authority

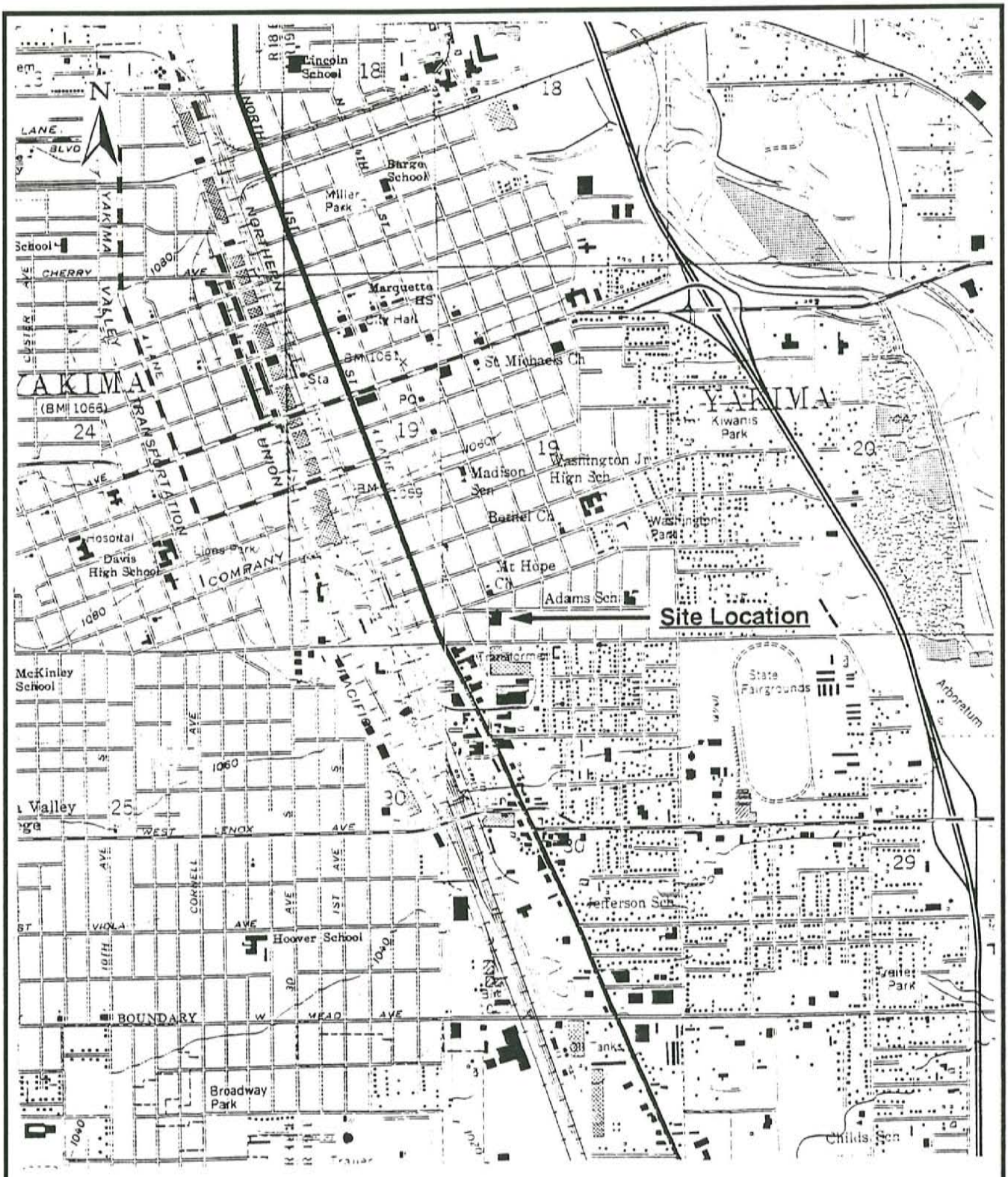
The Washington Department of Ecology (Ecology) has the regulatory authority to identify, investigate, and cleanup facilities where hazardous substances have come to be located under Chapter 70.105D RCW, "Model Toxics Control Act--Cleanup Washington Administrative Code". It is by that authority and on behalf of Ecology that Enviros performed the current work.

1.3 Previous Investigations

Prior to the 1995 investigation performed by Enviros on behalf of Ecology, little information had been obtained regarding the nature and extent of contamination at the Nu-Way Cleaners site. The only site investigation targeted specifically at the Nu-Way site prior to 1995 was performed by Ecology and Environment, Inc. in 1990 on behalf of the EPA. A summary of the findings of the various reports which discuss the Nu-Way Cleaners site and vicinity are given below:

Ecology and Environment, *Yakima Soil Gas Study,* December, 1989. The presence of low level PCE-contamination in the groundwater of the shallow aquifer beneath Yakima, Washington prompted the Region 10 EPA Comprehensive Environmental Response and Liability Act (CERCLA) program to initiate a study to locate source areas of contamination. This study involved soil vapor and groundwater sampling in the Yakima Railroad Area. During the course of this investigation, Nu-Way Cleaners was identified as a potential source area of PCE contamination.

Ecology and Environment, *Site Inspection Report for Nu-Way Cleaners*, January, 1990. Two samples were collected for analysis in conjunction with a Site Inspection Report



Source: U.S.G.S. 7.5x15 Minute Quadrangle Maps of Yakima East and West, Washington, dated 1953 and revised 1985.

Scale: 1" : 2,083'

Figure 1. Vicinity Map of the Nu-Way Cleaners Site Located at 801 South 3rd Street, Yakima, Yakima County, Washington.

enviros®
E1/950109

Drawn By: AIS Date: 5/15/96

Approved By: [signature] Date: 5/17/96

for Nu-Way Cleaners. One sample was collected from a sump on the subject property and another was collected from a nearby park for comparison with background levels of contaminants. The sample collected from the sump contained highly elevated concentrations of more than thirty volatile and semi-volatile organic compounds, including PCE. Further evidence indicated that it was likely that these contaminants had been released to groundwater beneath the site, however this was not confirmed during the course of this investigation.

Washington State Department of Ecology, *Site Hazard Assessment for Nu-Way Cleaners*, August, 1991. A Site Hazard Assessment (SHA) was performed by Ecology as required by the Model Toxics Control Act (MTCA). This SHA was based upon the report prepared by Ecology and Environment, Inc. (1990) for the subject property in addition to available reports on climate, groundwater, health and other pertinent information. The result of this SHA was a ranking of "1" on the Washington Ranking Method (WARM), with "1" indicating the highest assessed risk to human health and the environment.

URS Consultants, Inc., *Site Inspection Prioritization for Nu-Way Cleaners*, September, 1993. A Site Inspection Prioritization (SIP) was prepared on behalf of the EPA. This report is a review of available information for the site at that time for determination of whether the site is eligible for further investigation under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). No conclusions are drawn in this report.

Enviros, Inc., *Field Work Report for Nu-Way Cleaners*, June, 1995. A two-phased site investigation was performed, including a soil vapor survey, installation of three groundwater monitoring wells, and excavation of two test pits. PCE was detected in varying concentrations in soil vapor underlying the site, and documentation of monitoring well installation and test pit excavation was provided. Due to constraints of time and budget, results of laboratory analysis of soil and groundwater samples were not presented in this report.

2. SITE BACKGROUND

As noted above, the project site was initially investigated by EPA's contractor, Ecology and Environment, in 1989 and 1990. This investigation concluded that the site had very likely contaminated the shallow groundwater in the vicinity of the site and that contaminants included over thirty volatile and semi-volatile organic compounds. An SHA was subsequently performed by Ecology that ranked the site at "1" on the WARM scale in 1991. The current site owner, Mr. Wallace Munly, was informed of his status as a Potentially Liable Party (PLP) for contamination of the Yakima Railroad Area later in 1991. An enforcement order was filed in February 1992 that named Nu-Way Cleaners. In October 1993, URS Consultants performed a Site Inspection Prioritization, and in November 1993 EPA decided to pursue no further action (NFA) under the Superfund Program. An Enforcement Order for performance of a remedial investigation (RI) was filed naming Nu-Way Cleaners in September 1994. The site owner did not pursue the RI at his own initiative; Ecology therefore directed Enviros to perform a site investigation in 1995 so that Ecology could use the resultant data, in conjunction with data collected from previous site investigations, to complete an RI. After Ecology review of data from the 1995 investigation, it was determined that an interim cleanup action was warranted, and that sufficient data be obtained so that a feasibility study could be performed.

2.1 Location and Land Use

The site is located in the SW 1/4 of the SE 1/4 of Section 19, Township 13 N., Range 19 E., near downtown Yakima, Washington. The site is situated on the southeast corner of the intersection of Adams Street and South Third Street in an area of mixed commercial and residential development. The business route of Interstate 97 (First Street) passes approximately 500 feet west of the site.

2.2 Past Owner/Operators

According to the historical information included in the Site Inspection Report (Ecology and Environment, 1990) the subject site has been operated as a dry cleaners since the 1950s. From 1950 to 1971 the site was owned and operated sequentially by Mr. Don Dunn and Mr. Johnny Duncan. Use of the site prior to the 1950s has not yet been thoroughly investigated.

2.3 Present Owner/Operator

Since 1971 the site has been owned and operated by Mr. Wallace Munly. Additional uses of the site at the time of the Site Inspection Report in 1990 included vehicle maintenance in the garage area and leather dying. During the 1995 Enviros investigation, dry cleaning and laundering activities were apparent, however, it did not appear that vehicle maintenance and leather dying practices were ongoing. Mr. Munly continued to operate the site during the field work portion of this investigation.

2.4 Site Vicinity

Adjacent properties include an auto repair shop to the north across Adams Street, a bowling alley and tavern to the west across South Third Street, a residence directly to the south, and a church adjoining to the east. In general there is residential development to the north, east, and south of the site, with commercial development to the west and increasing several blocks to the south.

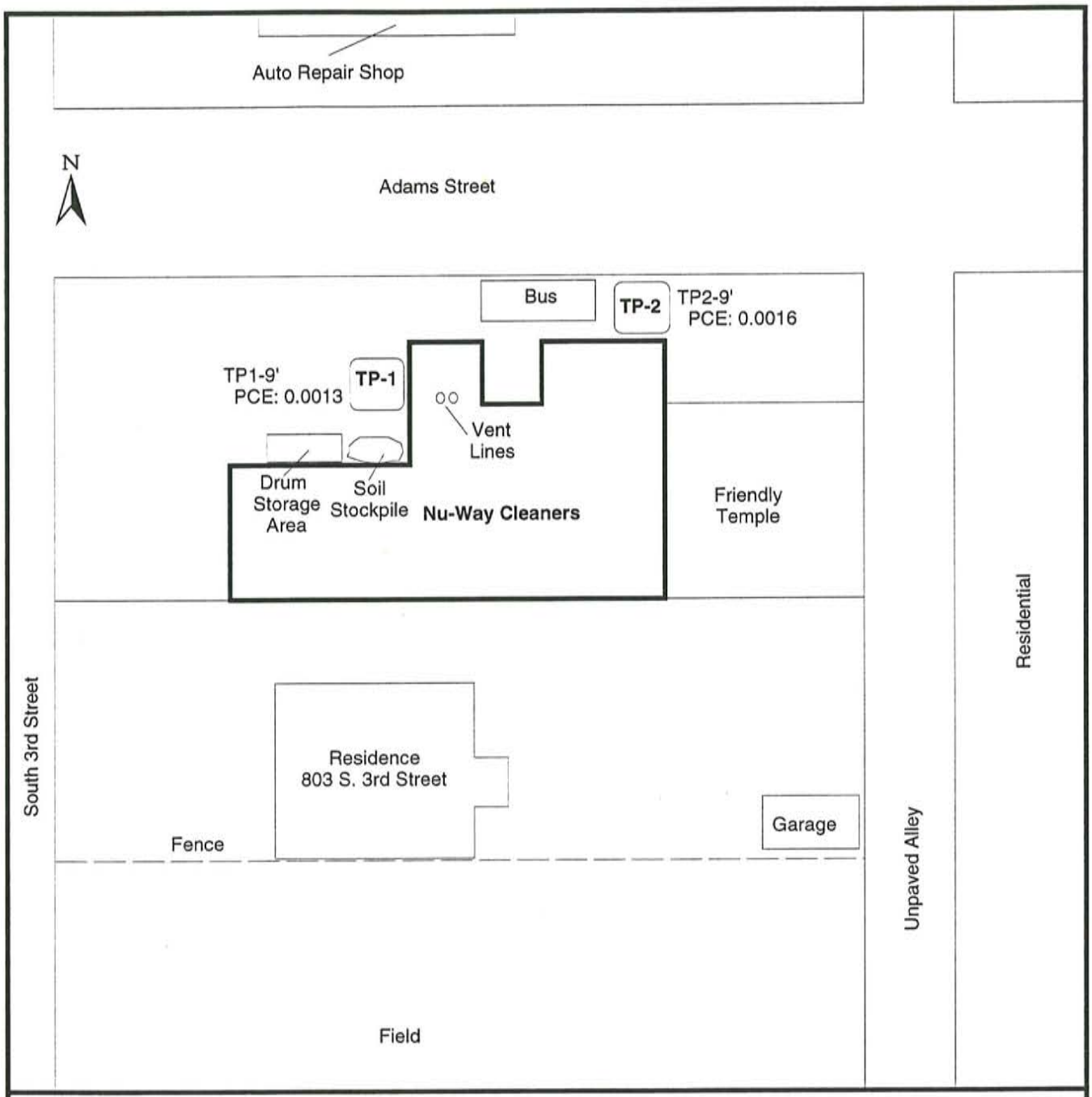
2.5 Results of 1995 Soil and Groundwater Investigation

Enviros collected several soil samples from the three soil borings and two test pits excavated in the 1995 investigation. Results of the subsequent analyses have been provided to Enviros by Ecology, and summary results are shown in Figures 2 and 3. Complete laboratory reports from Ecology's Manchester Laboratory are attached to this report as Appendix D.

Enviros installed three groundwater monitoring wells at or in the immediate vicinity of the subject property during a soil and groundwater investigation of the site performed in June 1995 (Enviros, Field Work Report, June 30, 1995). Well locations were selected after review of all available information regarding groundwater depth and flow direction and in consultation with the Ecology project manager.

Enviros collected soil samples during drilling by driving a stainless steel split spoon sampler at various depths. Due to the frequent occurrence of medium to large cobbles in shallow soils, however, in most cases insufficient sample volume was obtained to submit for laboratory analysis. For boreholes MW-2 and MW-3, the only samples submitted for analysis were soil samples collected from the air-rotary drill cuttings. Note that all sample results shown in Figure 3 are well below the MTCA Method A cleanup level of 0.5 mg/kg for PCE.

Details regarding well installation and development were reported in the Field Work Report. However, due to limitations of time and budget, information regarding groundwater quality was



Legend:

TP-1 Test Pit Locations.

TP1-9' Test Pit Sample Names and Analytical Results.
PCE: 0.0013

PCE - perchloroethylene

All results are given in milligrams per kilogram (mg/kg)

Scale: 1" = 30'

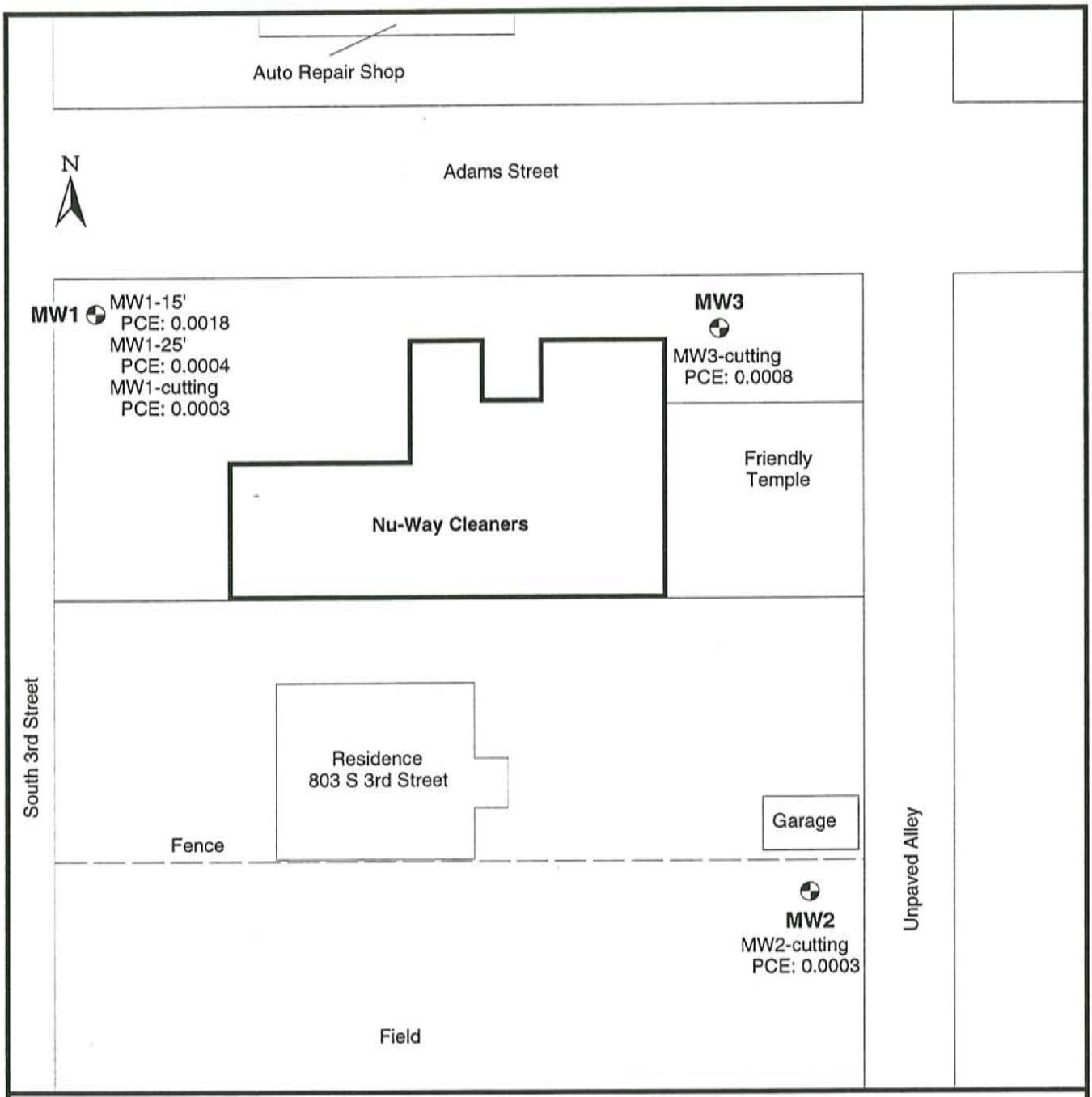
0' 15' 30'

Figure 2. Test Pit Locations and Analytical Results for Soil Samples Collected at the Nu-Way Cleaners Site on 6/9/95. 801 South 3rd Street, Yakima, Yakima County, Washington.

enviros®
E1/950109

Drawn By: AIS Date: 5/15/96

Approved By: TGS Date: 5/17/96



Legend:

MW2

Monitoring Well Location, Sample Name and Analytical Result.

MW1-15'
PCE: ND

PCE - perchloroethylene

All results are given in milligrams per kilogram (mg/kg)

Scale: 1" = 30'

0' 15' 30'

Figure 3. Sampling Locations and Analytical Results for Soil Samples Collected from Soil Borings at the Nu-Way Cleaners Site on 6/8/95.
801 South 3rd Street, Yakima, Yakima County, Washington.

enviros®
E1/950109

Drawn By: AIS Date: 5/15/96

Approved By: Date: 8/7/96

not incorporated into the 1995 report. Summary data regarding groundwater quality for the 1995 sampling event and the most recent groundwater sampling event are reported, including a comparison to MTCA cleanup levels, in Section 4.3, below. Complete laboratory reports from Ecology's Manchester Laboratory are attached to this report as Appendix D.

Depth to groundwater on June 9, 1995 ranged from 14.40 feet in MW-1 to 15.15 feet in MW-2, with a groundwater elevation ranging from 1029.06 feet above mean sea level in MW-2 to 1029.60 feet above mean sea level in MW-1. The general direction of groundwater flow in this unconfined aquifer was estimated to be toward the southeast at the time of sampling, based upon the piezometric surface derived from the above measurements. The inferred groundwater flow gradient is 0.003 feet per foot.

3. SOURCE REDUCTION - SOIL INVESTIGATION

The April 1996 field work included both source reduction and data collection. Task 6 involved removal of two sumps and three underground storage tanks (USTs), as well as the associated soil sampling for confirmational and disposal purposes. Task 7 included the collection and analysis of groundwater samples from the three monitoring wells installed by Enviros in 1995.

3.1 Demolition and Source Removal

On April 4, 1996 and April 5, 1996, Mr. Trenton G. Smith and Mr. Stephen D. Hoedemaker of Enviros were present at the subject site to oversee demolition of two sheds adjoining the Nu-Way building and the excavation and removal of existing sumps and underground storage tanks. Enviros contracted with Lewis Construction of Union Gap, Washington to perform the demolition and removal work.

Two small sheds adjoining the north wall of the Nu-Way Cleaners facility structure were demolished in order to provide access to the USTs. Demolition debris was immediately removed from the site. A total of 7.98 tons of demolition debris was disposed off-site.

The first UST (UST #1, as shown in Figure 4) was located adjacent to the Nu-Way Cleaners boiler room, and was formerly used to supply heating oil to the boiler (the boiler has now been retrofitted and burns natural gas rather than oil). The total capacity of UST #1 was approximately 500 gallons, and 275 gallons of unused heating fuel were pumped from the tank prior to removal. The condition of UST #1 was quite poor, with severe corrosion throughout, and several large holes (up to 1.5 inches in diameter) were noted upon removal. The fuel in UST #1 was field-tested for chlorinated compounds using a colorimetric test kit. No indication of contamination with chlorinated compounds was observed, so the fuel was recycled to an oil distribution facility.

The two solvent USTs (UST #2 and UST #3) were located approximately fifteen feet west of UST #1. The age of these tanks is uncertain, although it is known that they were installed prior to Mr. Munly's ownership in 1971. Mr. Munly discontinued use of the tanks several years ago and now stores his solvent in a 55-gallon drum inside the Nu-Way building.

The second UST (UST #2) was formerly used to store used solvent for purposes of recycling the solvent back into the dry cleaning process. According to Mr. Munly, the only solvent ever used on-site is Stoddard Solvent (a blend of mineral spirits). The total capacity of UST #2 was approximately 650 gallons, and 500 gallons of solvent were pumped from the tank prior to removal. The condition of UST #2 was quite good; some corrosion was apparent, but the integrity of the tank did not appear to be compromised. A sample of the solvent was collected for subsequent laboratory analysis.

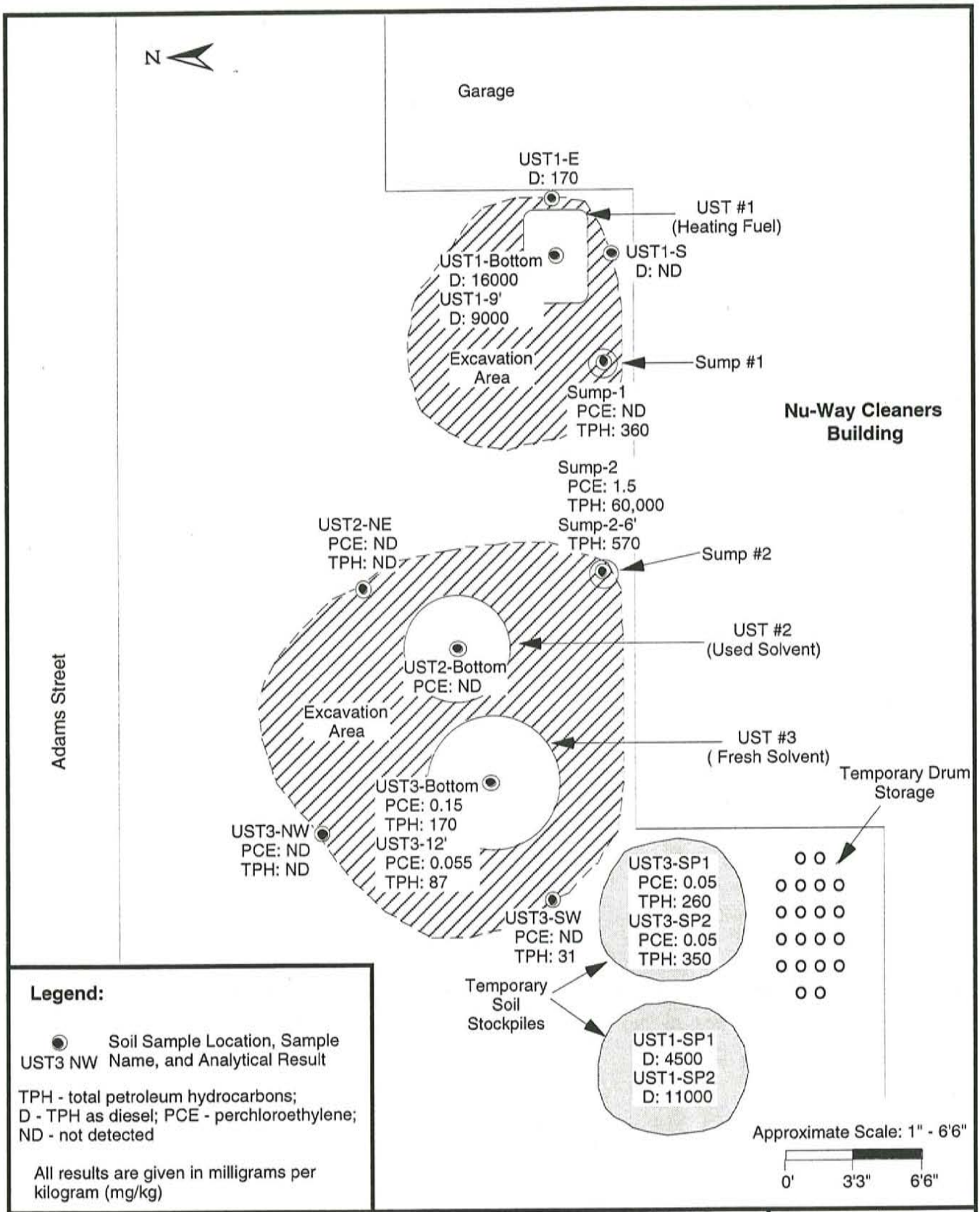


Figure 4. Locations and Analytical Results for Soil Samples Collected at the Nu-Way Cleaners Site on 4/4/96 and 4/5/96.
801 South 3rd Street, Yakima, Yakima County, Washington .

enviros®
E1/950109

Drawn By: AIS Date: 4/15/96

Approved By: TGS Date: 5/17/96

The third UST (UST #3) was located to the west of UST #2 (see Figure 4), and was formerly used to store fresh solvent prior to use in the dry cleaning process. The total capacity of UST #3 was approximately 1000 gallons, and no product was present in the tank prior to removal. The condition of UST #3 was similar to that of UST #2.

The first sump (Sump #1) was not identified in previous investigations, but was discovered during demolition activities. This sump was located adjacent to UST #1 (see Figure 4) and consisted of an open-ended concrete pipe approximately eighteen inches in diameter and three feet in length, installed vertically in the subsurface and covered with an unsecured steel plate. Trash and debris were present in the sump prior to removal, and an organic odor of decay was noted.

The second sump (Sump #2) was the sump identified in previous investigations and the location from which a sample was collected by Ecology and Environment in 1990. This sump was located outside the dry cleaning room, near UST #2, and consisted of a rusted-out 55-gallon drum installed vertically in the subsurface. A floor drain from the dry cleaning room was plumbed into the sump, and past practices at Nu-Way Cleaners reportedly included washing down the floor with solvent, resulting in periodic subsurface releases of volatile organic compounds (VOCs). Trash and debris were present in the sump prior to removal, and an organic solvent-like odor was noted. The pipe draining from the building interior was cut off at the wall capped prior to backfilling the excavation.

3.2 Excavation of Contaminated Soils

Following removal of USTs and sumps, the excavations were screened for hydrocarbon contamination with a portable photoionization detector (PID). Soils which yielded high PID readings and/or were visibly contaminated were excavated, segregated according to source area, and stored temporarily in stockpiles and/or drums. Excavation continued laterally and vertically until either the indications of contamination became negligible or until additional excavation activities would have threatened the structural integrity of the Nu-Way Cleaners building.

Three primary sources of soil contamination were identified during the course of the field activities: UST #1, UST #3, and Sump #2. UST #1 apparently released heating oil to the subsurface through holes in the tank shell, and some evidence of historical overfilling (degraded asphalt, staining) was also noted. UST #3 appeared to be intact, and the associated soil contamination is most likely the result of historical overfilling. Sump #2 apparently served as a direct pathway for periodic subsurface releases of solvent due to the past practice of flushing solvent into the nearby floor drain.

No evidence of leakage associated with UST #2 was noted. This is probably due to the quality of tank construction. In addition, UST #2 was filled and emptied entirely with underground piping operated from inside the Nu-Way building, and therefore surface spills commonly associated with tank filling activities did not occur. Historical use of Sump #1 is not known, but low PID readings (see Table 2, below) and a lack of plumbing (i.e., no associated drains or fill pipes) indicated that VOC contamination in this sump was not extensive.

Excavated soil was stored on-site pending receipt of laboratory results, then transported to off-site disposal facilities. Approximately 31 tons of soil from around UST #1 and UST #3 were transported to Anderson Petroleum-Contaminated Soils (PCS) Treatment Facility in Yakima, Washington. Four 55-gallon drums of soil were excavated from the former location of Sump #2. One sample from this material contained PCE above MTCA Method A cleanup levels, so the four drums were transported to the Roosevelt Landfill in Klickitat County, Washington.

Due to the close proximity of the source areas to the Nu-Way Cleaners building, some residual soil contamination was not excavated because additional excavation might have undermined the foundation of the building. This decision was made in close consultation with Ecology, after taking into consideration the potential risks and incremental benefits of additional excavation. In order to facilitate future in-situ remediation efforts, if such efforts are deemed necessary, Enviros installed a 4-inch diameter PVC slotted (0.028-inch apertures) vertical riser in the former location of UST-3 (at the location of sample UST-3 BOTTOM) prior to backfilling the excavations with imported fill material. The riser was secured with a padlock and will be covered with a flush-mounted steel well monument set in concrete prior to issuance of a final report.

3.3 Sampling Rationale and Locations

The number and location of soil samples were determined in the field based on field observations and in accordance with Department of Ecology guidelines. In general, post-excavation soil samples were collected from areas where field screening indicated likely contamination. In the cases of the excavations around UST #3 and Sump #2, it was not possible to safely collect soil samples from the southern sidewalls, but samples from the floor of the excavation can be considered representative of the concentrations remaining in place. A brief summary of rationale and observations for each soil sample is provided below. Sample locations are shown in Figure 4.

- Sample UST-1 BOTTOM was collected from the floor of the excavation in the former location of UST #1. This sample was collected at a depth of six feet below ground surface prior to excavation of contaminated soils, and may be considered representative of stockpiled soils which were disposed off-site.

- Sample UST-1 S was collected from the south sidewall of the excavation near the former location of UST #1 at a depth of four feet below ground surface.

- Sample UST-1 E was collected from the east sidewall of the excavation near the former location of UST #1 at a depth of four feet below ground surface.

- Sample UST-1 9' was collected from the floor of the excavation in the former location of UST #1. This sample was collected at a depth of nine feet below ground surface following excavation of contaminated soils, and may be considered representative of soils that could not be excavated due to their proximity to the Nu-Way building. The soils in this area were visibly discolored by weathered petroleum hydrocarbons, and contamination appeared to extend both vertically to depths greater than nine feet and horizontally to the south and east under the building. The area of visually apparent contamination prior to placement of backfill was relatively small, covering approximately 10-15 square feet of exposed area.

- Sample UST-1 SP1 was collected from the stockpiled soil excavated from the former location of UST #1. This sample may be considered representative of soils which were disposed off-site.

- Sample UST-1 SP2 was collected from the stockpiled soil excavated from the former location of UST #1. This sample may be considered representative of soils which were disposed off-site.

- Sample UST-2 BOTTOM was collected from the floor of the excavation in the former location of UST #2 at a depth of ten feet below ground surface. Field screening did not indicate soil contamination in this area of the excavation, so no additional excavation was

performed. Therefore, this sample may be considered representative of soils remaining in place.

- Sample UST-2 NE was collected from the northeast sidewall of the excavation in the former location of UST #2 at a depth of six feet below ground surface. Field screening did not indicate soil contamination in this area of the excavation, so no additional excavation was performed. Therefore, this sample may be considered representative of soils remaining in place.

- Sample UST-3 BOTTOM was collected from the floor of the excavation in the former location of UST #3. This sample was collected at a depth of ten feet below ground surface prior to excavation of contaminated soils, and may be considered representative of stockpiled soils which were disposed off-site. Visibly contaminated soils in the south sidewall of this excavation could not be excavated or sampled without threatening the integrity of the building foundation, but it is likely that soils with similar contaminant concentrations similar to sample UST-3 BOTTOM remain in place beneath the building.

- Sample UST-3 SW was collected from the southwest sidewall of the excavation in the former location of UST #3. This sample was collected at a depth of seven feet below ground surface following excavation of contaminated soils, and may be considered representative of soils remaining in place.

- Sample UST-3 NW was collected from the northwest sidewall of the excavation in the former location of UST #3 at a depth of seven feet below ground surface. Field screening did not indicate soil contamination in this area of the excavation, so no additional excavation was performed. Therefore, this sample may be considered representative of soils remaining in place.

- Sample UST-3 12' was collected from the floor of the excavation in the former location of UST #3. This sample was collected at a depth of twelve feet below ground surface following excavation of contaminated soils, and may be considered representative of soils remaining in place.

- Sample UST-3 SP1 was collected from the stockpiled soil excavated from the former location of UST #3. This sample may be considered representative of soils which were disposed off-site.

- Sample UST-3 SP2 was collected from the stockpiled soil excavated from the former location of UST #3. This sample may be considered representative of soils which were disposed off-site.

- Sample SUMP-1 was collected from the floor of the excavation in the former location of Sump #1 at a depth of three feet below ground surface. Field screening did not indicate soil contamination in this area of the excavation (odors of decaying organic material were noted, but PID readings were very low), so no additional excavation was performed. Therefore, this sample may be considered representative of soils remaining in place.

- Sample SUMP-2 was collected from the floor of the excavation in the former location of Sump #2. This sample was collected at a depth of three feet below ground surface prior to excavation of contaminated soils, and may be considered representative of stockpiled soils which were disposed off-site. Because visibly contaminated soils in the south sidewall of this excavation could not be excavated or sampled without threatening the integrity of the building foundation, it is likely that soils with similar concentrations of contaminants remain in place beneath the building.

- Sample SUMP-2 6' was collected from the floor of the excavation in the former location of Sump #2. This sample was collected at a depth of six feet below ground surface following excavation of contaminated soils, and may be considered representative of soils remaining in place.

3.4 Methodology

Enviros collected soil samples from the excavations for test pits for field screening and laboratory analysis. Samples were collected from each excavation and were screened in the field. The samples were screened in the field for volatile organics using a portable photoionization detector (PID). Other observations, including olfactory and visual characteristics were also recorded.

Soil samples were collected from discrete locations where field screening indicated to be within zones of highest residual contaminant concentrations. Each sample was collected and immediately containerized using new disposable latex gloves to minimize the potential for cross-contamination between samples. Samples were collected directly from the excavations or stockpiles when possible. A backhoe was used to assist with sample collection when excavation depths exceeded four feet.

A photoionization detector (PID) was used to assess the presence of volatile organic compounds in the soils during excavation and at the time of collection of each laboratory sample. Each field screening sample was sealed in a plastic bag for approximately five minutes to allow headspace gases to reach equilibrium. The PID probe was then inserted into the bag, and the maximum reading was recorded in a field notebook.

Each laboratory sample was packed into a pre-cleaned 125-mL glass container and sealed with a plastic, teflon®-lined lid. Filled sample containers were labeled, cooled to 4 degrees C, and packed in insulated containers with coolant medium. A numbering system was used to identify each sample collected for chemical analysis. The purpose was to provide a tracking system to facilitate the retrieval of data on each sample. The sample identification numbers allocated for this sampling effort were used on sample labels, sample tracking forms, chain-of-custody records, and all other applicable documentation used during the sampling activity. At the conclusion of field activities, Enviros delivered the soil samples to OnSite Environmental, Inc. in Redmond, Washington for analysis.

3.5 Results of Product and Soil Analyses

The product sample collected from the used solvent tank, UST #2, was delivered to OnSite Environmental in Redmond, Washington for analysis. A tabulated summary of the results of the laboratory analysis of the product sample is presented below. Complete laboratory reports are attached as Appendix B.

Table 1
Results of UST #2 Product Analysis

Analyte	Result
Acetone	410
Toluene	160
PCE	510
2-Hexanone	260
Ethylbenzene	130
m,p-Xylene	1000
o-Xylene	880

Notes:
Sample analyzed for volatile organic contaminants by EPA Method 8260.
All concentrations reported in mg/l.
Analytes not detected at or above method detection limit are not included.

Soil samples were delivered to OnSite Environmental in Redmond, Washington for analysis. A tabulated summary of the results of the laboratory analysis for soil samples is presented below.

Table 2
Results of Soil Analyses

Sample ID	Depth[1]	PID[2]	PCE[3]	TPH[4]	Suspected Contaminant
UST-1 BOTTOM	6	216	NA	**16000**[5]	Heating Oil
UST-1 S	4	7	NA	ND[5]	Heating Oil
UST-1 E	4	3	NA	170[5]	Heating Oil
UST-1 9'	9	269	NA	**9000**[5]	Heating Oil
UST-1 SP1	-	231	NA	**4500**[5]	Heating Oil
UST-1 SP2	-	231	NA	**11000**[5]	Heating Oil
UST-2 BOTTOM	10	28	ND	**420**[6]	Stoddard Solvent
UST-2 NE	6	5	ND	ND[6]	Stoddard Solvent
UST-3 BOTTOM	10	197	0.15	170[6]	Stoddard Solvent
UST-3 SW	7	6	ND	31[6]	Stoddard Solvent
UST-3 NW	7	9	ND	ND[6]	Stoddard Solvent
UST-3 12'	12	277	0.055	87[6]	Stoddard Solvent
UST-3 SP1	-	521	0.05	**260**[6]	Stoddard Solvent
UST-3 SP2	-	521	0.05	**350**[6]	Stoddard Solvent
SUMP-1	3	5	ND	**360**[6]	Unknown
SUMP-2	3	1879	**1.5**	**60000**[6]	Stoddard Solvent
SUMP-2 6'	6	441	0.077	**570**[6]	Stoddard Solvent
MTCA Method A Cleanup Level	-	-	0.5	200	-

NA: Not analyzed.
ND: Not detected at or above method detection limit.
1: Approximate depths of sample collection are reported in feet below ground surface.
2: Total organic vapor content of sample headspace as measured with portable photoionization detector (PID). Results are reported in parts per million (µl/l) as isobutylene.
3: Perchloroethylene (PCE) concentrations are reported in mg/kg.
4: Total Petroleum Hydrocarbons (TPH) concentrations are reported in mg/kg.
5: TPH by Ecology Method WTPH-D (extended range) for diesel-range hydrocarbons.
6: TPH by Ecology Method WTPH-418.1 for hydrocarbon mixtures.

3.6 Interpretation of Product and Soil Sampling Results

The results of product analysis are consistent with a mineral spirits-based solvent such as Stoddard Solvent. It is likely that PCE was added to the solvent blend in order to enhance the effectiveness of the solvent as a cleaning agent. This is also consistent with the relatively low levels of PCE observed in site soils and groundwater, in spite of the site history of poor housekeeping and improper waste disposal.

The soil sampling results indicate that the source reduction activities were successful in reducing the amount petroleum-contaminated soils at the Nu-Way facility. Three USTs and two sumps were removed, and 32 tons of contaminated soil were excavated and removed from the site. Unfortunately, it was not feasible to excavate all contaminated materials due to the proximity of the source areas to the Nu-Way Cleaners building. In addition, some organic analytes were detected in concentrations greater than might have been suggested by field screening data.

A review of the analytical results indicates that in several soil samples the MTCA Method A cleanup level of 200 mg/kg for TPH was exceeded, and in one sample the MTCA Method A cleanup level of 0.5 mg/kg for PCE was exceeded. Other analytes were detected, but none of these exceeded MTCA Method A or Method B soil cleanup levels.

Soils which were excavated and removed from the Nu-Way site had TPH concentrations as high as 60,000 mg/kg and PCE concentrations as high as 1.5 mg/kg, but typical concentrations were much lower.

Contaminant concentrations in soils which remain on-site could not be completely ascertained due to concern for the structural integrity of the Nu-Way building. Sidewall samples in two areas of suspected contamination (near Sump #2 and UST #3) could not be collected without posing a threat to the building. The maximum concentrations remaining in these areas are likely to be comparable, however, to samples SUMP-2 and UST-3 BOTTOM, which were collected from areas close to the maximum extent of excavation. Sample UST-1-9' may be considered representative of soils left in place beneath the building near UST #1.

In two areas, field screening indicated that contaminant levels were low, but laboratory results for samples from these areas indicated TPH above the MTCA Method A cleanup level. It should be noted that direct correlation is not to be expected between these two methods--field screening with a portable photoionization detector merely provides a semi-quantitative concentration of organic vapors in the sample headspace, while laboratory analysis provides more reliable data by physically extracting the contaminants with solvents, then quantifying the extract with spectrophotometry or chromatography. Nevertheless, when used in conjunction with other field observations, PID headspace analysis is a fairly reliable predictor of relative concentrations of volatile organic contaminants.

Sample UST-2 BOTTOM was collected from the excavation floor immediately following the removal of UST #2. Sample SUMP-1 was collected from the excavation floor immediately following removal of Sump #1. PID readings for these two samples were relatively low (28 ppm and 5 ppm, respectively) and visual and olfactory observations did not indicate the presence of TPH contamination. It is possible that non-petroleum organic matter in the soils acted as an interference in the infrared spectrophotometric (IR) method, yielding artificially high results. Such interferences often occur when complex organics are present in the sample, due to the non-specific nature of the single-wavelength IR method (EPA Method 418.1) and the shortcomings of the silica gel cleanup protocol intended to remove non-petroleum organic compounds from the sample extract. This is particularly likely for sample SUMP-1, in which field observations included visible debris and an odor of decaying organic matter. Another possible explanation for these apparent discrepancies is heterogeneity of the contaminant in the soil matrix. For example,

the PID reading of 28 ppm for sample UST-2 BOTTOM does not correlate well with the laboratory result of 420 mg/kg TPH. This might reflect actual differences in contaminant levels between the sample collected for headspace analysis in the field and the sample collected for subsequent laboratory analysis. The soils in these two areas were not excavated and remain in place.

3.7 Generated Waste

The following types of potentially hazardous wastes were generated during the source reduction work:

- Demolition debris;
- Heating Oil;
- Used dry-cleaning solvent;
- Petroleum-contaminated soils (PCS);
- PCE-contaminated soils (TCS); and
- Decontamination fluids.

Some wastes also remained on-site from the 1995 investigation conducted by Enviros. These consisted of drill cuttings from boreholes, excess soils from test pit excavation, decontamination fluids, and discharge water generated during well purging. A review of analytical data indicated that none of the soils from the 1995 investigation were contaminated at or above MTCA Method A cleanup levels, so these soils were used as backfill in the UST excavations.

Demolition debris from the two small sheds adjoining the north wall of the Nu-Way Cleaners facility was removed from the site immediately. A total of 7.98 tons of demolition debris was disposed off-site.

All heating oil pumped from UST #1 was removed from the site immediately and recycled to a fuel distribution facility. All solvent pumped from UST #2 was removed from the site immediately and delivered to a recycling facility.

Soils were segregated according to source area (i.e., UST #1, UST #3, and Sump #2) and stored on-site pending laboratory analysis and disposal authorization. On May 10, 1996, soils associated with UST #1 and UST #3 (approximately 31 tons PCS) were hauled to the Anderson PCS Treatment Facility in Yakima, Washington; soils associated with Sump #2 (four 55-gallon drums TCS) were disposed at the Roosevelt Landfill in Klickitat County, Washington. Wastewater was discharged to the municipal sanitary sewer system and is further described in Section 4.4, below. Permits and documentation of disposal are attached to this report as Appendix C.

4. GROUNDWATER INVESTIGATION

4.1 Well Sampling

Upon arrival at the site on April 5, 1996, the Enviros field team opened all wells and conducted a round of water level measurements using an electronic well probe. Measurements of the depth to the water table in each well were taken from the north side of the top of each casing. In addition, the total depths of the wells were measured from the same point. The volume of water within

each casing was calculated from this information to determine the appropriate volume to remove during purging. The probe was decontaminated between measurements to prevent any potential for cross contamination.

Depth to groundwater on April 5, 1996 ranged from 17.80 feet in MW-3 to 19.17 feet in MW-1, with a groundwater elevation ranging from 1024.83 feet above mean sea level in MW-1 to 1026.03 feet above mean sea level in MW-3.

Water level and survey data from the 1995 and 1996 groundwater sampling events are summarized in Table 3, below.

Table 3: Monitoring Well and Groundwater Elevations

Well Designation	Depth to Bottom of Well from TOC	TOC Elevation	Depth to GW from TOC		GW Elevation	
			6/9/95	4/5/96	6/9/95	4/5/96
MW-1	24.40	1044.00	14.40	19.17	1029.60	1024.83
MW-2	24.10	1044.21	15.15	18.34	1029.06	1025.87
MW-3	23.97	1043.83	14.51	17.80	1029.32	1026.03

Notes:
All measurements reported in feet.
TOC: Top of well casing.
GW: Groundwater (i.e., water table)

Prior to sampling of each well, the wells were purged with a Teflon® bailer. Water in MW-1 and MW-3 were turbid, even after purging. In contrast, groundwater from MW-2 was relatively clear. The bailed water was monitored for temperature, pH, and conductivity during bailing, and development ceased either when these readings stabilized, or when four well volumes were removed. All purged water was contained in labeled 55-gallon drums, sealed and stored on-site for disposal by Lewis Construction pending results of the chemical analyses.

For groundwater sampling, a sufficient volume of water was extracted for each sample to fill two pre-cleaned 40-ml glass VOA vials with plastic, Teflon®-lined lids. All sample containers were labeled, chilled to 4 degrees C, packed in insulated containers with a coolant medium, and transferred to OnSite Environmental Inc., an Ecology-approved analytical laboratory.

Quality control checks of both field sampling and laboratory sample analysis were used to assess and document data quality and to identify discrepancies in the measurement process that need correction. A trip blank and field duplicate of MW-2 were used as QC checks on the precision of sample collection and handling procedures. The trip blank was prepared from distilled water. All sample containers, preservation methods, and holding times were conducted in accordance with quality control requirements for the analytical methods specified.

4.2 Analytical Testing

All groundwater samples generated during this phase of the investigation were released to OnSite Environmental under proper chain-of-custody procedures. Analysis of water samples was for volatile organic contaminants (VOCs) and samples were packed accordingly.

Analysis of water samples was by the following analytical method:

- U.S. EPA Method 8260 - Volatile Organic Compounds by GC/MS determines a number of purgeable organic compounds from water or soil matrices. The method

also allows for the tentative identification of compounds (TICs) and quantification of compounds not specifically referenced in the methods list of targets. This method is applicable to soil or water samples.

4.3 Groundwater Analytical Data

Perchloroethylene (PCE), also known as tetrachloroethene, was the primary contaminant of concern in this study due to the historic widespread presence of PCE in the groundwater in the Yakima Railroad Area. The analytical method used for the groundwater samples, Method 8260, quantified not only PCE, but other volatile organic compounds that may be present.

4.3.1 Perchloroethylene Results

Data from the June 9, 1995 groundwater sampling event indicate that the concentration of PCE in samples collected ranged from 5.4 µg/L (ppb) in MW-1 to 7.5 µg/L in MW-2. PCE concentrations in all samples were above the MTCA Method A Cleanup Level of 5.0 µg/L.

Compared to the 1995 results, data from the April 5, 1996 groundwater sampling event indicate the presence of lower concentrations of PCE in all wells, with a non-detectable result reported for MW-2. The concentration of PCE in MW-1 decreased to 2.7 µg/L and the concentration in MW-3 decreased to 0.85 µg/L. These two values were below the practical quantitation limit for the analytical method and are thus flagged with a "J". All of the sample results were below the MTCA Method A Cleanup level for PCE. Tabulated results of groundwater analytical data are presented in Table 4, below, and shown in Figure 5.

Table 4: Results of PCE Groundwater Analysis

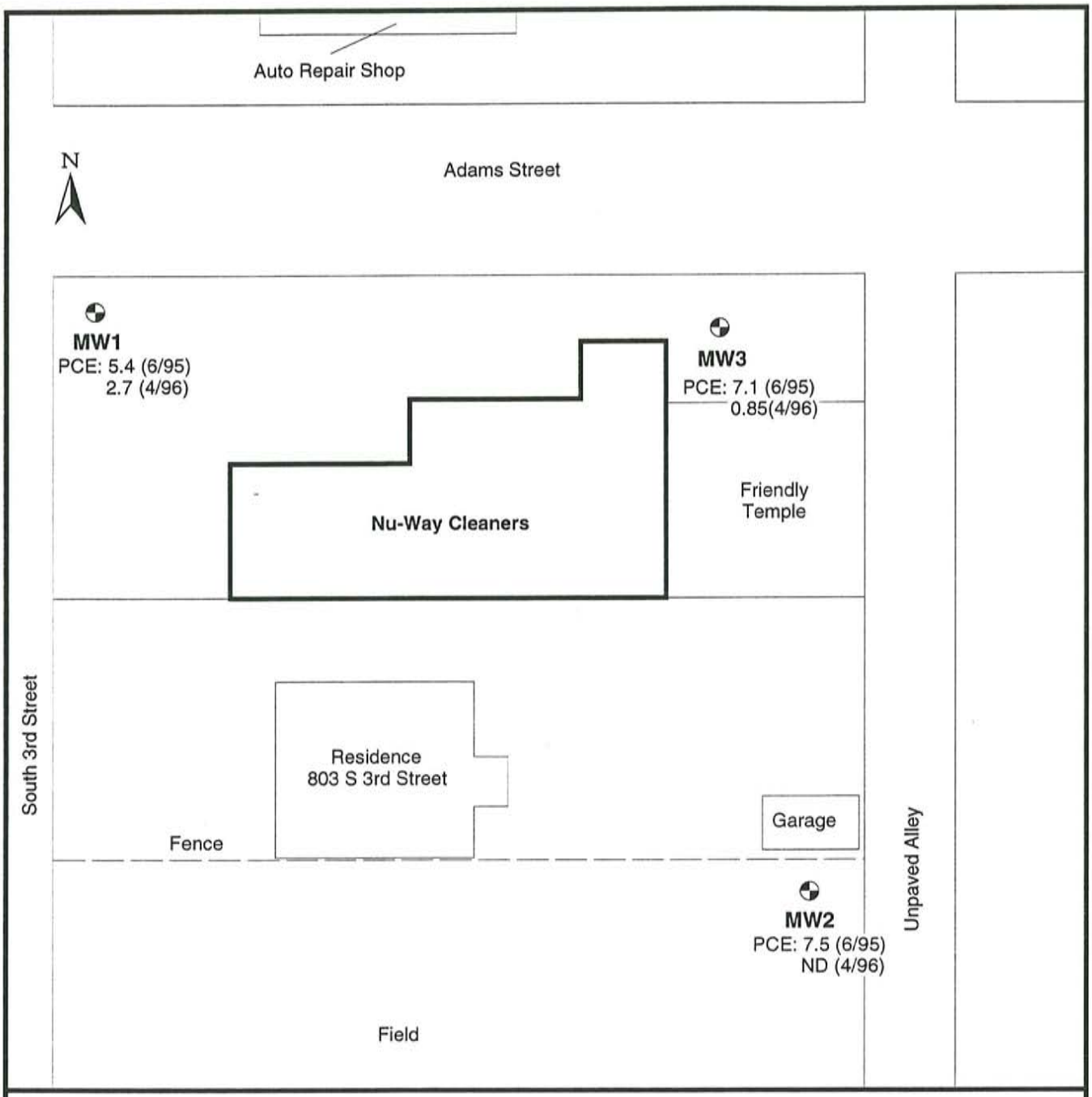
Sample ID	PCE (6/9/95)	PCE (4/5/96)
MW-1	**5.4**	2.7 J
MW-2	**7.5**	ND
MW-3	**7.1**	0.85 J
MTCA Method A Cleanup Level	5.0	5.0

PCE concentrations are reported in µg/L.
Results in **bold** indicate exceedances of MTCA Method A Cleanup Level.
J: Reported value below the Practical Quantitation Limit

4.3.2 Other Analytes

Using EPA Method 8260, OnSite Environmental Inc. analyzed the groundwater samples, the trip blank, and the method blank for 58 volatile organic compounds. Of these 58 compounds, only methylene chloride, chloroform, and PCE were detected in any of the well samples (see Table 5, below). The trip blank contained methylene chloride, chloroform, and toluene; and the method blank contained no detectable concentrations of any compounds. Also, the duplicate sample of MW-2 contained no concentrations of any compounds at or above method detection limits.

The presence of methylene chloride, chloroform, and toluene in the trip blank may be due to either laboratory or field contamination. Sources of field contamination might include the solvent present in UST #2 (this solvent contained parts per million levels of toluene, but no detectable levels of methylene chloride or chloroform), or the distilled water used as a water source for the trip blank (it is not unusual to find trihalomethanes such as chloroform in drinking water). Laboratory contamination is also a likely possible explanation for the presence of these analytes in the trip blank, in spite of the absence of the same compounds in method blank. Methylene chloride is a common extraction solvent in environmental laboratories, and cross-



Legend:

MW2
PCE: ND

Monitoring Well Locations and Analytical Results.

PCE - perchloroethylene
ND - not detected

All results are given in micrograms per liter (µg/L)

Scale: 1" = 30'

0' 15' 30'

Figure 5. Groundwater Sampling Analytical Results for the Nu-Way Cleaner Site. 801 South 3rd Street, Yakima, Yakima County, Washington.

enviros®
E1/950109

Drawn By: AIS Date: 5/15/96

Approved By: TGS Date: 5/17/96

contamination is a common problem. Toluene is also used in laboratories, most often as a calibration standard but occasionally also as an extraction solvent. As mentioned above, chloroform is a common disinfection by-product found in drinking water, and laboratories often find it necessary to treat water with activated carbon to remove such contaminants prior to use in dilution or method blanks. Because gas chromatography samples are typically processed sequentially, and the sources of cross-contamination mentioned above are likely to be temporally sporadic, the suspected contaminants will not necessarily be seen in the method blank.

All detected contaminants were well below their respective MTCA Method A or Method B Cleanup Levels. The reported concentrations of Methylene Chloride and Chloroform in groundwater from two wells may be attributable to laboratory or field contamination and not to the presence of those compounds in the groundwater. This conclusion is supported by the presence of these compounds in the trip blank. A review of the data quality control issues will be explained further in Section 6.

Table 5: Results of Groundwater Analyses for All *Detected* Analytes April 5, 1996 Sampling Event

Sample ID	Methylene Chloride	Chloroform	Toluene	PCE
MW-1	0.98 J	2.1 J	ND	2.7 J
MW-2	0.69 J	ND	ND	ND
MW-3	ND	ND	ND	0.85 J
MW-2 (duplicate)	ND	ND	ND	ND
Trip Blank	1.1 J	3.2 J	0.6 J	ND
MTCA Cleanup Level	5.0	7.17*	40.0	5.0

* Indicates use of Method B Cleanup Level where Method A is not available.
All concentrations are reported in µg/L.
J: Reported value below the Practical Quantitation Limit.
ND: Compound not detected at or above method detection limit.

4.4 Generated Waste

The following types of potentially hazardous wastes were generated during the groundwater monitoring work:

- Discharge water generated during well purging; and
- Decontamination fluids.

These fluids were combined with decontamination fluids from source reduction activities (described in Section 3, above) and wastewater from the 1995 investigation, for a total volume of approximately 100 gallons. The combined wastewater was disposed to the City of Yakima sanitary sewer. The wastewater discharge permit is attached to this report as Appendix C.

5. DISCUSSION

5.1 Residual Soil Contamination

As discussed in Section 3.6 above, field observations and laboratory analysis indicate that most soil contamination remaining at the Nu-Way site is located beneath the Nu-Way building. Assuming there are no other source areas (e.g., spills inside the building or in other areas of the

site), it is likely that residual solvent contamination is limited in amount, and probably attenuates significantly at depths approaching the water table.

Residual heating oil concentrations, however, remained quite high (9,000 mg/kg) at a depth of nine feet below ground surface, and there is some potential for relatively high soil TPH levels to the depth of the water table (approximately 15-20 feet below ground surface).

It is possible that additional source areas may be present on or around the Nu-Way facility. In the 1995 Enviros investigation (see Figure 2 excerpted from the Enviros 1995 Field Work Report and included in Appendix D), a soil vapor survey at the Nu-Way site indicated a somewhat dispersed and non-uniform pattern of PCE contamination, rather than a uniform concentration gradient emanating from the UST area. A review of groundwater quality data (see Section 5.3, below), however, does not seem to indicate extensive site contamination with volatile organic contaminants (VOCs).

5.2 Hydrogeology

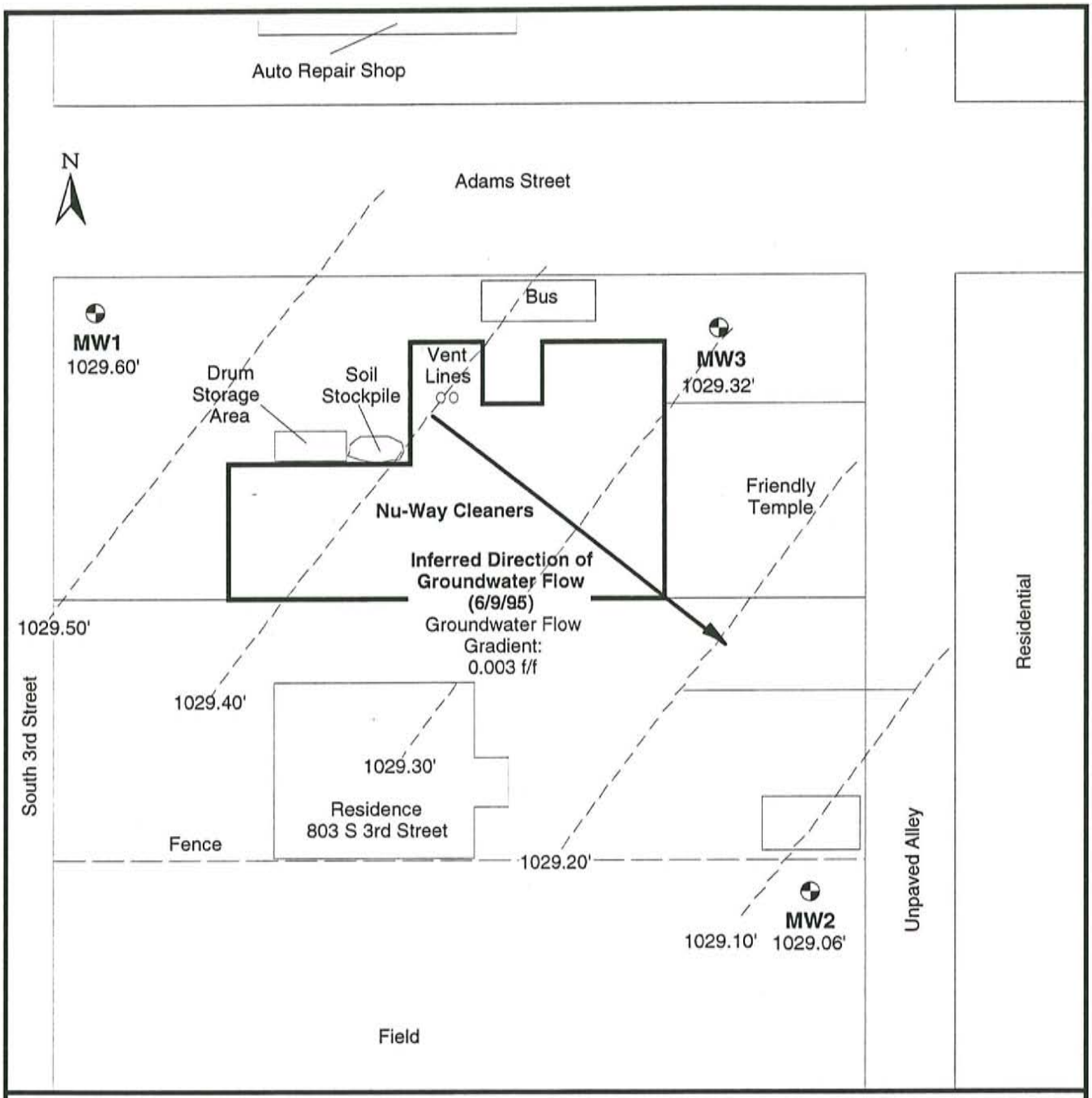
The unsaturated zone on the site is composed of coarse-grained alluvial sand with cobbles up to 1 foot in diameter. During the soil excavation for the interim remedial action, no finer-grained units were observed which might prevent downward migration of contamination. In this unconfined situation, any surface or near-surface releases would migrate to the groundwater table present at about 15 to 20 feet below the ground surface.

In the Yakima area this upper aquifer is the uppermost unit of an alluvial aquifer system with three principal unconsolidated coarse-grained units (Ecology and Environment, 1990). These three aquifer units are thought to be hydraulically unconnected to the next deepest aquifer.

The Yakima River, located about 1 mile east of the Nu-Way site, is the nearest significant surface water body. The river flows in a southerly direction. At its closest point to the site, the elevation at the surface of the river is about 40 feet below the ground surface at Nu-Way, or about 20 to 25 feet below the groundwater table at Nu-Way. In the riparian area, river water and groundwater interaction is dependent on daily and seasonal fluctuations, with groundwater discharging to the river during low flow periods, and river water recharging the groundwater during periods of high river flow. Other sources of groundwater fluctuations include: infiltration of rainfall or irrigation water, extraction of groundwater for water supply, and evapotranspiration.

Groundwater elevations in the vicinity of the project site have dropped as much as 4.77 feet since the 1995 sampling. The current scope of work did not include an evaluation of recent conditions to determine the specific factors contributing to the dramatic fluctuations of the groundwater table in the vicinity of the project site over the past year. Changes in groundwater elevations from the 1995 sampling to the current sampling event were presented in Table 3.

The water level measurements taken by Enviros on June 9, 1995 and April 5, 1996 were used to evaluate the piezometric surface to assess groundwater flow directions and gradient. Based upon an evaluation of the piezometric surface, the inferred groundwater flow direction in June 1995 was to the southeast (Figure 6). The groundwater gradient in the vicinity of the site was estimated at 0.003 ft/ft. During the most recent sampling in April, 1996, the general direction of groundwater flow is toward the west-southwest (Figure 7). The calculated groundwater flow gradient was 0.01 feet per foot. The April, 1996 groundwater gradient and flow direction represent a substantial change from the June 9, 1995 sampling event. This change in the gradient and flow direction was not anticipated because the area-wide flow direction is generally toward the Yakima River to the southeast. There is uncertainty regarding the affect that this change may have on the migration of contaminants in the groundwater. However, it was not within the



Legend:

MW2 1029.32' — Monitoring Well Locations with groundwater elevation on June 9, 1995.

1029.10' — Inferred Groundwater hydraulic head contour

All elevations are fiven in feet above mean sea level.

Scale: 1" = 30'

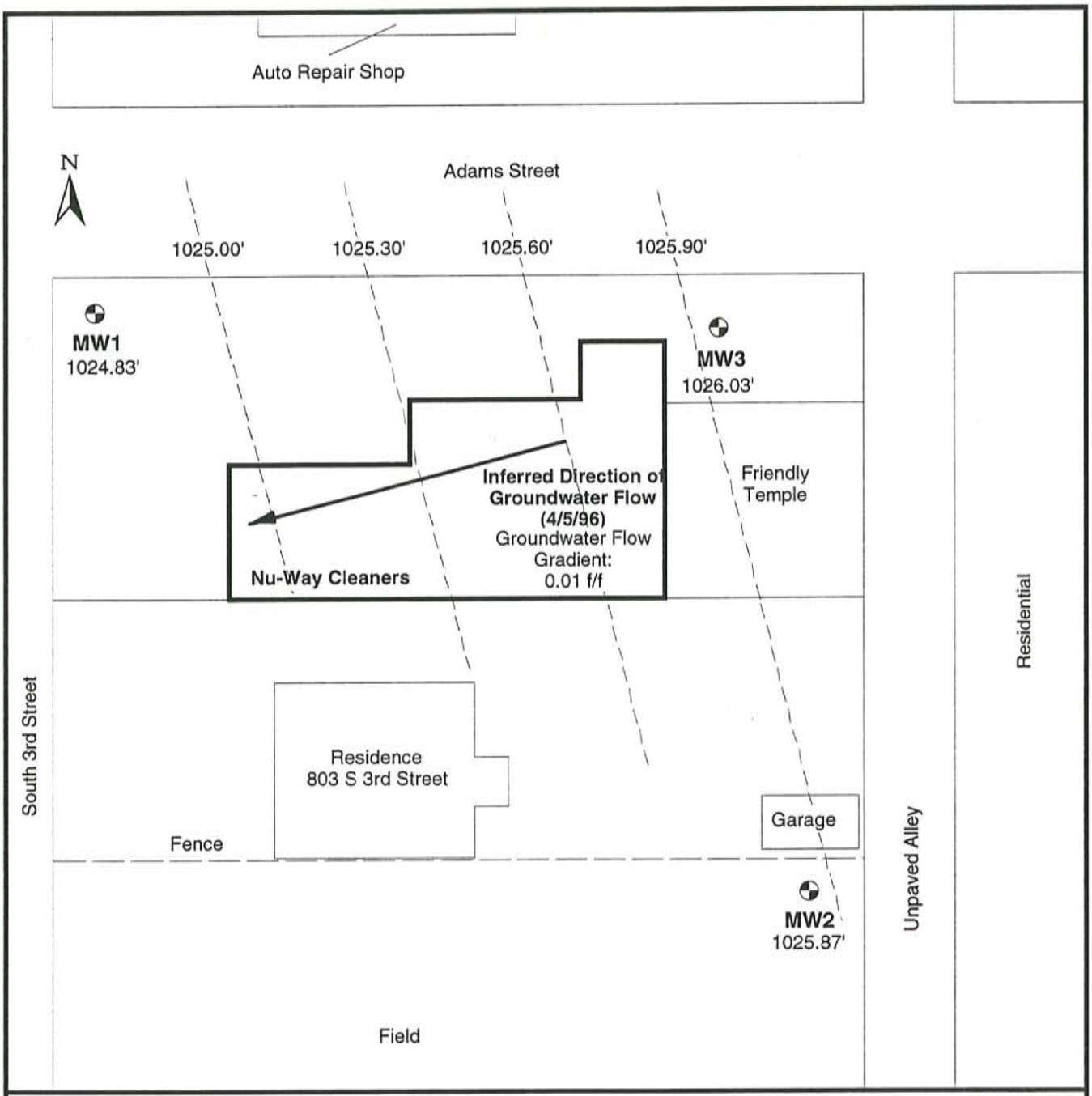
0' 15' 30'

Figure 6. Inferred Groundwater Flow Direction as measured on 6/9/95 for the Nu-Way Cleaners Site. 801 South 3rd Street, Yakima, Yakima County, Washington.

enviros®
E1/950109

Drawn By: AIS Date: 5/15/96

Approved By: TGS Date: 5/17/96



Legend:

MW2 1025.87' — Monitoring Well Locations with groundwater elevation on April 5, 1996.

1025.00' — Inferred Groundwater hydraulic head contour

All elevations are given in feet above mean sea level.

Scale: 1" = 30'

0' 15' 30'

Figure 7. Inferred Groundwater Flow Direction as measured on 4/5/96 for the Nu-Way Cleaners Site. 801 South 3rd Street, Yakima, Yakima County, Washington.

enviros®
E1/950109

Drawn By: AIS Date: 5/15/96

Approved By: TGS Date: 5/17/96

current scope of work to establish the specific factors associated with this change of gradient, and the possible effects that these changes may have.

Flow velocities were not evaluated as part of the current project, but are reported to be between 0.4 and 40 feet per day (Ecology & Environment, 1990).

5.3 Groundwater Quality

Recent analysis of the groundwater from the three monitoring wells indicate concentrations of PCE have decreased since June, 1995. Perchloroethylene results from all three wells in 1995 were above the MTCA Method A level of 5.0 µg/L; however, the 1996 sampling indicates that all three are below the Method A level.

Several possible factors may have contributed to the decline in the groundwater concentrations: 1) a decrease within the past year of PCE released to the unsaturated and saturated zones, 2) dilution or flushing of contaminant concentrations in the groundwater by recent high rainfall and subsequent flooding, 3) the groundwater flow direction has changed and the wells are no longer directly downgradient of the source area, or 4) the PCE in the unsaturated zone may be undergoing biodegradation or volatilization and diffusion, thereby creating a reduction in the contaminant source.

Inasmuch as the groundwater sampling in the most recent event occurred concurrently with the removal of the USTs and the contaminated soils, the interim remedial actions conducted could not have had an effect on the groundwater quality. The other factors may have had some contribution, although it is difficult to speculate on their relative degrees of impact. It is likely that the owner of the facility decreased releases to the soils of floor washing solvents, and it is likely that the contaminants entrained in the coarse-grained unsaturated zone soils have undergone some volatilization. Degradation of the PCE to the daughter compounds trichloroethene, dichloroethene, and vinyl chloride is not apparent based on the chemical analyses. Dilution or flushing of the contaminants may have occurred over the past year because the Yakima region has been subjected to abnormally high rainfall and flooding. However, the current groundwater table does not reflect, and does not necessarily have to reflect, a high recharge situation that might have occurred within the past year.

Finally, there is a possibility, based on the apparent change in the groundwater flow direction, that none of the three wells are optimally placed directly downgradient of the source. This situation could be a concern if the PCE concentrations in the groundwater had originally been significantly higher, or if there was a groundwater supply well nearby toward the west southwest. However, since these are not relevant factors, and in light of the substantial source area reduction that occurred during the interim remedial action, there is probably no need for corrective actions such as the installation of an additional downgradient monitoring well. Should conditions change such that a major new release occurs or the groundwater use is modified, an additional well placed in the west-southwest portion of the site should be considered.

6. QUALITY ASSURANCE / QUALITY CONTROL

6.1 General

The objective of a quality assurance plan is to limit the amount of error introduced into the data through sampling, handling and analysis procedures. Error is controlled, in part, through the establishment of sampling and handling protocols, which have been described elsewhere in this report. This section addresses methods of identifying and controlling error in the analytical results. The ultimate goal is to control the total error in the data. The element of quality

assurance is summarized as follows: Implementation of standard operating procedures for field sampling, sample custody, equipment operation and calibration, laboratory sample analysis, data reduction and data reporting that will provide consistency and thoroughness of data generation.

6.2 Sample Handling

As indicated above, all samples collected were labeled in the field, cooled, packed and shipped to the selected analytical laboratory for testing. A numbering system was used to identify each sample collected for chemical analysis. The purpose was to provide a tracking system to facilitate the retrieval of data on each sample. The sample identification numbers allocated for this sampling effort were used on sample labels, sample tracking forms, chain-of-custody records, and all other applicable documentation used during the sampling activity.

6.3 Personnel and Equipment Decontamination

Decontamination of field equipment, such as sampling spoons, water level indicators, and trowels, decontamination consisted of a six step procedure, as follows:

1) Wash in soapy water, using Liquinox or other similar cleaning agent;
2) Rinse in tap water;
3) A second wash in soapy water;
4) Rinse in distilled water;
5) Rinse in 10% methanol solution; and
6) Rinse in distilled water.

Field personnel wore disposable latex gloves during sampling, which were discarded after the collection of each sample.

6.4 Equipment Calibration

Equipment calibration, operation, and maintenance was performed on a regular basis for all applicable field equipment. In general, this involved calibrating and operating the equipment each day according to the manufacturer's specifications and instructions.

6.5 Quality Control Samples

Quality control checks of both field sampling and laboratory sample analysis were used to assess and document data quality and to identify discrepancies in the measurement process that might need correction. The collection and analysis of trip blanks and field replicates (or duplicates) were used as QC checks on the representativeness of the environmental samples, and the precision of sample collection and handling procedures. To eliminate bias and identify contamination due to laboratory preparation procedures, a blank was prepared from distilled water. In addition, all sample containers, preservation methods, and holding times were conducted in accordance with quality control requirements for the analytical methods specified.

- **Trip blank** A trip blank was used to assess contamination by volatile organics through diffusion that may have been introduced into the sample containers during sample transport and storage. The trip blank was prepared by Enviros, transported to the sampling site with the other sample containers, and then returned to the testing laboratory for analysis along with the samples collected during the sampling event. The trip blanks remained unopened while in the possession of Enviros.

- **Field replicate** A field replicate was collected to assess variability in groundwater quality and laboratory precision. A field replicate was collected in conjunction with the sampling of well MW-2.

In addition to the QC samples identified above, the analytical laboratory uses a series of control samples. The QA/QC procedures used by OnSite Environmental, Inc. are assumed to be the laboratory's standard procedures and in full compliance with industry standards for laboratory QA/QC. However, Enviros did not review their QA/QC procedures for independent verification.

7. FEASIBILITY STUDY CLEANUP ACTION ALTERNATIVES

In accordance with WAC 173-340-350, Enviros has evaluated four cleanup action alternatives for the Nu-Way Cleaners site. They include Additional Demolition and Excavation, In-Situ Vapor Extraction, Groundwater Monitoring, and No Further Action. A brief description of each is provided below. The various alternatives are not intended to be mutually exclusive; some combination of these actions might be feasible.

7.1 Alternative No. 1: Additional Demolition and Excavation

In this alternative, additional excavation of contaminated soil would be performed. This would require additional demolition and/or shoring of the Nu-Way building. Although such action might reduce the potential threat to groundwater from these remaining source areas, the building demolition and associated disruption of Nu-Way Cleaners business activities would probably be prohibitively expensive and disproportionate to the benefit gained in reduced risk to human health and the environment. This alternative does not appear to be practicable at this time.

7.2 Alternative No. 2: In-Situ Vapor Extraction

This alternative would be less invasive than the additional excavation option, but would require more time to implement. In-situ vapor extraction would induce a flow in subsurface soil vapor by installing and operating a blower which would pull a vacuum through a subsurface piping system, removing VOCs without excavation or disruption of facility operation. A pilot study is generally necessary to determine effective soil permeabilities and radii of influence for various flow rates. Such a pilot study and the subsequent remediation would be greatly facilitated by the use of the existing riser installed for this purpose by Enviros during the 1996 cleanup action. The primarily sandy soils at the Nu-Way site are conducive to in-situ remediation, but the disturbed (backfilled) soils near the contaminated areas are likely to act as preferential flow zones. An impermeable surface barrier such as asphalt or a synthetic membrane would help to mitigate this phenomenon. In-situ vapor extraction would complete the site cleanup with minimal disruption of the Nu-Way facility.

7.3 Alternative No. 3: Groundwater Monitoring

This option would entail ongoing monitoring of site groundwater. While no active site cleanup would be performed, groundwater monitoring would provide Ecology with current information regarding groundwater quality. It is likely that groundwater quality would gradually improve as natural attenuation removes VOCs from groundwater, but it is possible that new spills or changes in site conditions might degrade groundwater quality over time. In this case, information obtained from groundwater monitoring could be used as an early warning system that could aid Ecology in protecting human health and the environment. As discussed in Section 5.3, it may be necessary to install an additional downgradient monitoring well if the hydraulic gradient remains west-southwest as observed in the most recent monitoring event.

7.4 Alternative No. 4: No Further Action

This option is the least invasive and the least expensive of the four alternatives. "No Further Action" could be combined with placement of an impermeable cover and/or institutional controls. An impermeable cover installed over the affected area would prevent the infiltration and percolation of rainwater through remaining zones of contaminated soil. Institutional controls might include deed restrictions limiting groundwater use and requiring additional cleanup prior to redevelopment of the site.

7.5 Estimated Costs of Remedial Action Alternatives

Estimated costs for the four remedial action alternatives are given in Table 6, below. Detailed summaries are attached to this report as Appendix E. These costs do not include administrative costs which may be incurred by Ecology.

Table 6: Estimated Cost of Remedial Action Alternatives

Alternative No.	Estimated Cost
1: Additional Demolition & Excavation	$86,850
2: In-Situ Vapor Extraction	$76,200
3: Groundwater Monitoring	
quarterly monitoring for 2 years	$28,860
tri-annual monitoring for 3 years	$32,280
semi-annual monitoring for 5 years	$35,700
4: No Further Action	$3,600

8. CONCLUSIONS AND RECOMMENDATIONS

Enviros recommends that a combination of Alternative No. 3 (Groundwater Monitoring) and Alternative No. 4 (No Further Action) be implemented and that these actions undergo review at a frequency as yet to be determined.

In order to continue to monitor groundwater quality and safeguard human health and the environment, the three existing shallow wells should be monitored for VOCs and TPH. Furthermore, an impermeable asphalt surface should be installed in the (former) area of excavation to prevent infiltration and percolation of surface water which could mobilize residual contaminants and pose a threat to groundwater quality. Institutional controls such as deed restrictions should also be put in place in order to limit use of site groundwater and to protect human health and the environment in the case of site redevelopment. Such controls should further require that additional soil excavation and cleanup be performed in the case that the existing building is demolished or substantially remodeled.

9. LIMITATIONS

The findings and conclusions documented in this report have been prepared in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with services contracted between Enviros and Client.

No warranty is expressly stated or implied in this report with regard to the condition of the substrate and groundwater at and/or below the surface of the property with the exception of the soil samples collected and parameters analyzed in this assessment. Due to natural variability of the soil matrix and subsurface geologic and hydrogeologic conditions, the sampling performed at the site may not be indicative of general site conditions and potential soil contamination in other areas of the property. Therefore, Enviros cannot guarantee the general conditions of subsurface soils on the property or specify an absence of contamination in potential soil sampling locations not addressed in this assessment.

This report reflects our professional opinions, interpretations, recommendations and observations of property conditions on the days of the assessment only, and does not cover any other conditions subsequently found on the property that were not visible during the assessment. The scope of this limited environmental assessment does not include a formal review of compliance with federal, state and local environmental regulations.

Enviros appreciates the opportunity to be of service to Ecology on this project.

Respectfully Submitted:

Enviros Incorporated

Trenton G. Smith, P.E.
Project Manager
(206) 828-2524

Kathleen S. Goodman, R.G.
Program Manager
(206) 828-2503

cc: Tony Valero
Ann Thompson
File: E1/950109

10. REFERENCES

Ecology and Environment, Inc., December 1989. "Yakima Soil Gas Study, Yakima, Washington."

Ecology and Environment, Inc., January 1990. "Site Inspection Report for Nu-Way Cleaners."

Enviros, Inc., June 1995. "Field Work Report for Nu-Way Cleaners."

URS Consultants, Inc., September 1993. "Site Inspection Prioritization for Nu-Way Cleaners."

Washington State Department of Ecology, August 1991. "Site Hazard Assessment for Nu-Way Cleaners."

APPENDIX A: PHOTOGRAPHS

Photo 1. View southeast of site at completion excavation and backfill activities.

Photo 2. Two sumps along north wall of building (Sump #1 at left and Sump #2 at right).

Photo 3. UST #1(note holes).

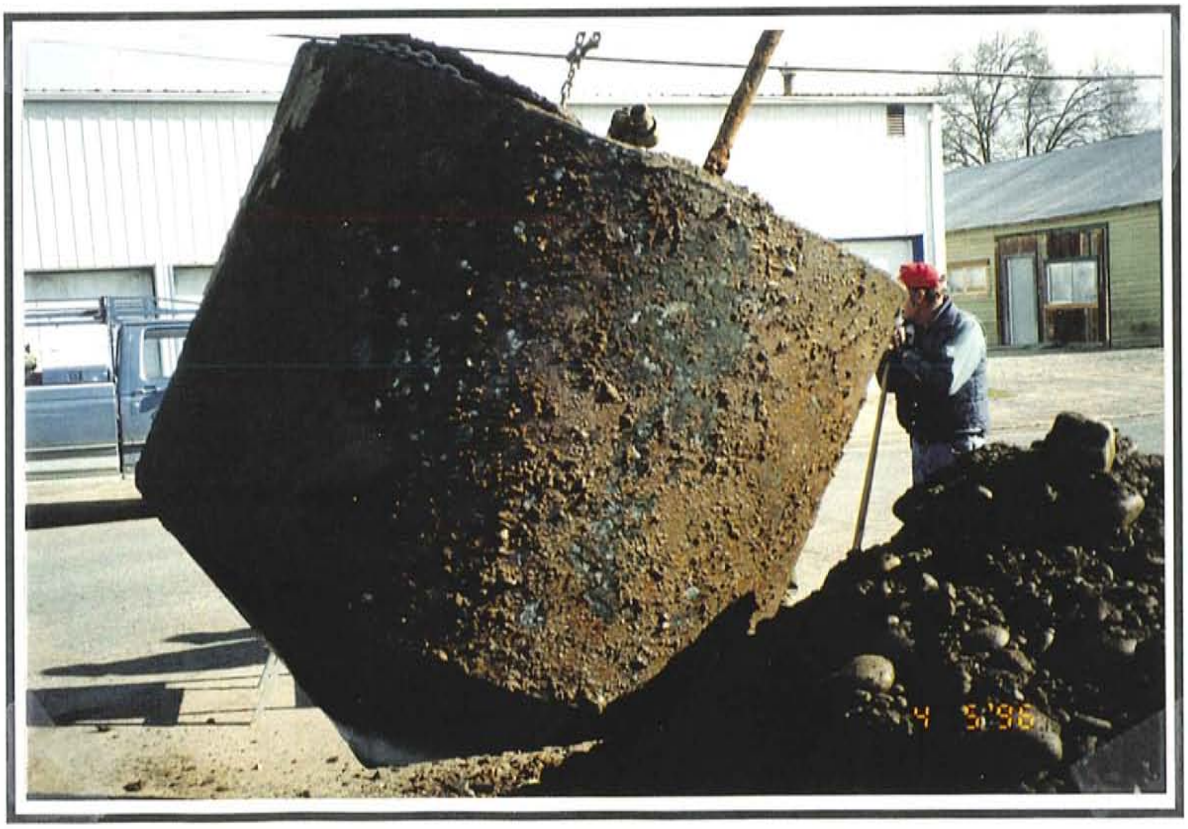


Photo 4. UST #3.

Photo 5. View east of UST #1 excavation prior to excavation of petroleum-contaminated soil.

Photo 6. UST #1 sidewall.

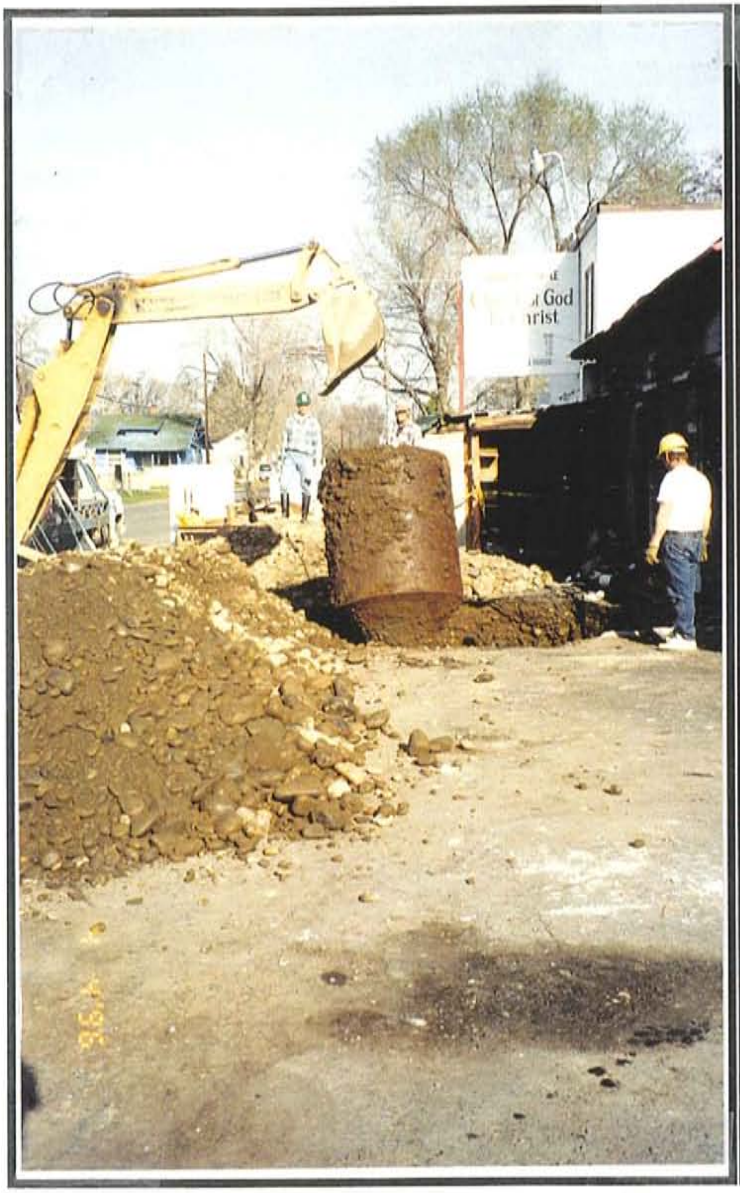


Photo 7. UST #2 being removed from excavation.

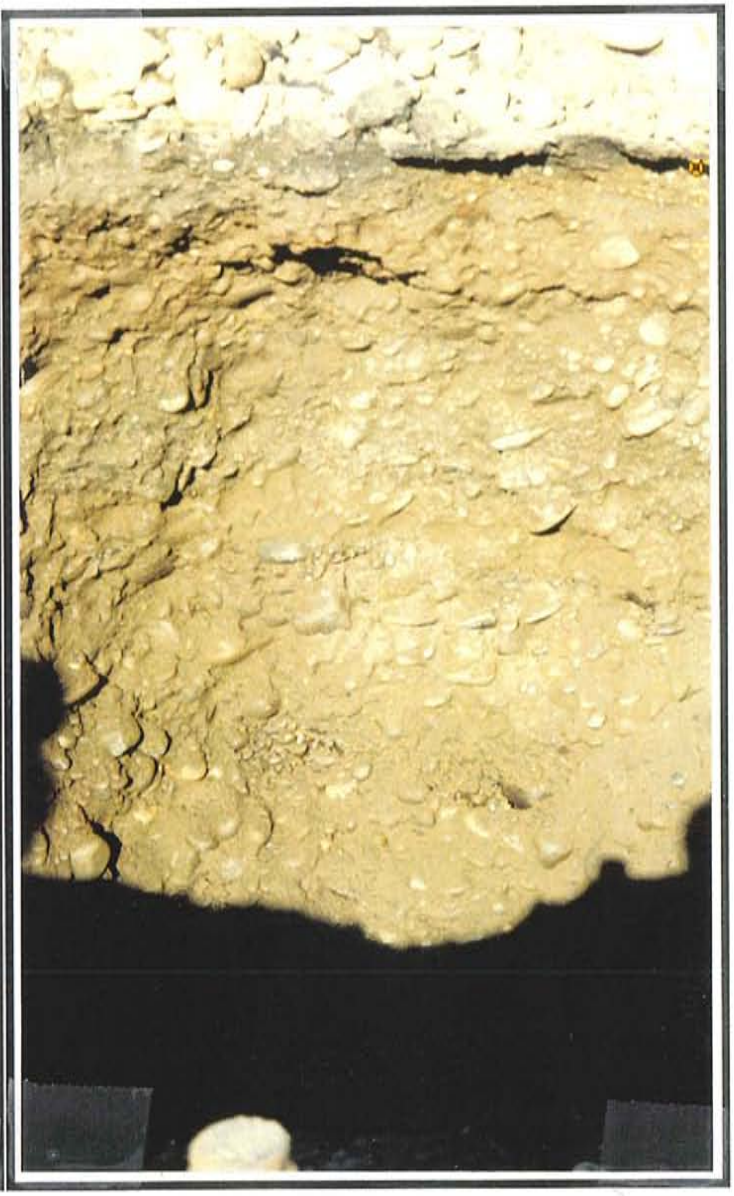


Photo 8. UST #2 sidewall.

Photo 9. Sump #1 (at right) after removal.

Photo 10. Sump #2 after removal.

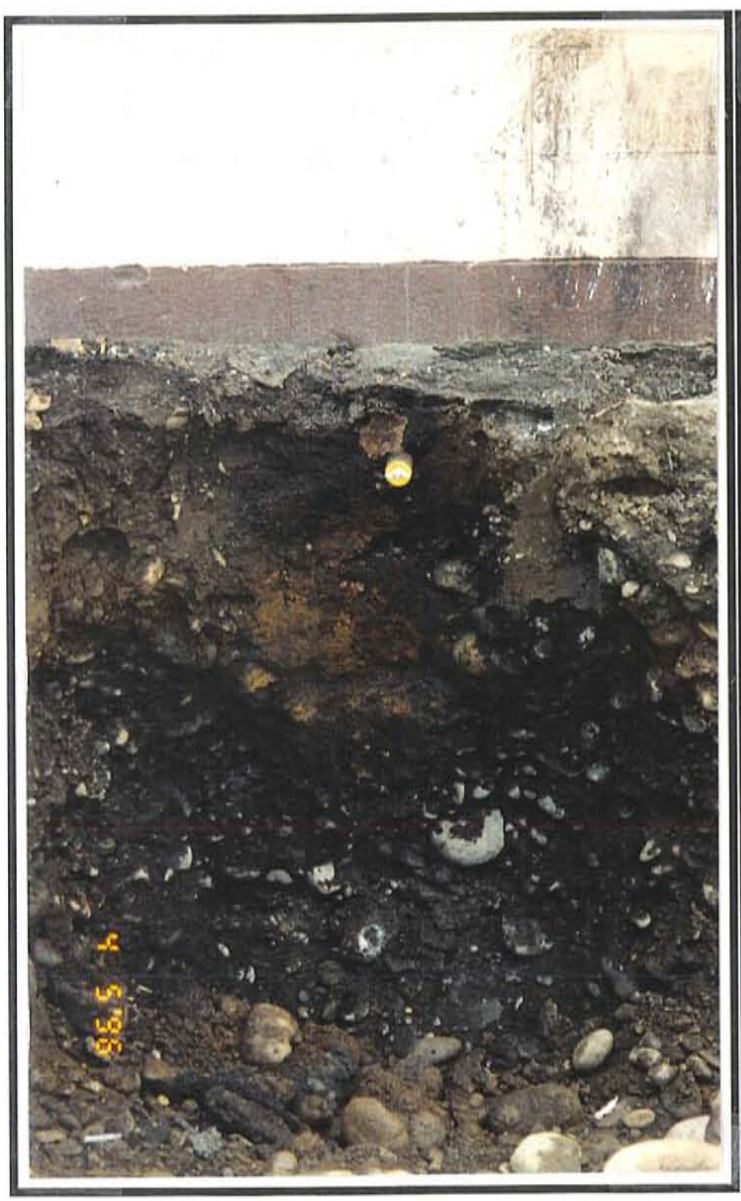


Photo 11. Sump #2 sidewall.

Photo 12. UST #3 excavation sidewall.

APPENDIX B: ANALYTICAL REPORTS

OnSite Environmental Inc.

April 15, 1996

Trent Smith
Enviros, Inc.
25 Central Way, Suite 210
Kirkland, WA 98033-6156

Re: Analytical Data for Project E1/950109
Laboratory Reference No. 9604-020

Dear Trent:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on April 8, 1996.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

Andy Bay FOR
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (206) 883-3881 • Fax (206) 885-4603

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH-HCID

Date Extracted: 4-9-96
Date Analyzed: 4-9-96

Matrix: Soil

Client ID	Lab ID	GC Characterization	o-terphenyl Surrogate Recovery	Flags
Sump-1	04-020-1	**Gasoline range hydrocarbons** **Diesel range hydrocarbons** **Oil range hydrocarbons**	141%	
UST-3 Bottom	04-020-10	**Gasoline range hydrocarbons** <50 ppm Diesel range hydrocarbons **Oil range hydrocarbons**	141%	
Sump-2	04-020-16	**Gasoline range hydrocarbons** <250 ppm Diesel range hydrocarbons **Oil range hydrocarbons**	---	S

S - Surrogate recovery data not available due to the necessary dilution of the sample.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted: 4-9-96
Date Analyzed: 4-9-96

Matrix: Soil

Lab ID: **MB0409S1**

	GC Characterization	o-terphenyl Surrogate Recovery	Flags
Method Blank	<20 ppm Gasoline range hydrocarbons <50 ppm Diesel range hydrocarbons <100 ppm Oil range hydrocarbons	143%	

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH-D (extended)

Date Extracted: 4-8-96
Date Analyzed: 04-8&9-96

Matrix: Soil
Units: mg/Kg (ppm)

Client ID	Lab ID	Dilution Factor	Total Petroleum Hydrocarbons	Surrogate Recovery*	Flags	MRL
UST-1 BOTTOM	04-020-3	5.0	**16000**	---	S,L	125
UST-1 SOUTH	04-020-4	1.0	**ND**	108%	L	25
UST-1 EAST	04-020-5	1.0	**170**	109%	L	25
UST-1 9'	04-020-6	5.0	**9000**	---	S,L	125
UST-1 SP1	04-020-7	1.0	**4500**	---	F,L	25
UST-1 SP2	04-020-8	5.0	**11000**	---	S,L	125

* o-Terphenyl
S - Surrogate recovery data not available due to the necessary dilution of the sample.
L - Quantitated from C7-C34 as diesel fuel #2.
F - Surrogate recovery data not available due to the high concentration in the sample.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH-D
METHOD BLANK QUALITY CONTROL

Date Extracted: 4-08-96
Date Analyzed: 4-08-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0408S1

	Dilution Factor	Total Petroleum Hydrocarbons	Surrogate Recovery*	Flags	MRL
Method Blank	1.0	ND	98%	L	25

* o-Terphenyl
L - Quantitated from C7-C34 as diesel fuel #2.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH-D
DUPLICATE QUALITY CONTROL

Date Extracted: 4-08-96
Date Analyzed: 4-08-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 04-020-4

	Dilution Factor	Total Petroleum Hydrocarbons	Surrogate Recovery*	Flags	MRL
Sample	1.0	ND	108%		25
Duplicate	1.0	ND	112%		25
RPD		NA			

* o-Terphenyl

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH-D
SPIKE BLANK QUALITY CONTROL

Date Extracted: 4-08-96
Date Analyzed: 4-08-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: SB0408S1

	Dilution Factor	Total Petroleum Hydrocarbons	Percent Recovery	Surrogate Recovery*	Flags	MRL
Spike Blank @ 100 ppm	1.0	88.6	89%	109%		25
Spike Blank Duplicate	1.0	93.3	93%	112%		25
RPD		5.2%				

* o-Terphenyl

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8240
page 1 of 2

Date Extracted:	4-11-96
Date Analyzed:	4-11-96
Matrix:	Product
Units:	ug/L (ppb)
Lab ID:	04-020-18
Client ID:	**PRODUCT-1**
Dilution Factor:	100000.0

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		500000
Chloromethane	ND		500000
Vinyl Chloride	ND		500000
Bromomethane	ND		500000
Chloroethane	ND		500000
Trichlorofluoromethane	ND		500000
1,1-Dichloroethene	ND		500000
Acetone	410000	J	500000
Iodomethane	ND		500000
Carbon disulfide	ND		500000
Methylene Chloride	ND		500000
(trans) 1,2-Dichloroethene	ND		500000
Acrylonitrile	ND		500000
1,1-Dichloroethane	ND		500000
Vinyl Acetate	ND		500000
2-Butanone	ND		500000
Chloroform	ND		500000
1,1,1-Trichloroethane	ND		500000
Carbon Tetrachloride	ND		500000
Benzene	ND		500000
1,2-Dichloroethane	ND		500000
Trichloroethene	ND		500000
1,2-Dichloropropane	ND		500000

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8240
page 2 of 2

Lab ID: 04-020-18
Client ID: PRODUCT-1

Dilution Factor: 100000.0

Compound	Results	Flags	PQL
Dibromomethane	ND		500000
Bromodichloromethane	ND		500000
2-Chloroethyl vinyl ether	ND		500000
(cis) 1,3-Dichloropropene	ND		500000
4-Methyl-2-pentanone	ND		500000
Toluene	160000	J	500000
(trans) 1,3-Dichloropropene	ND		500000
Ethyl methacrylate	ND		500000
1,1,2-Trichloroethane	ND		500000
Tetrachloroethene	510000		500000
2-Hexanone	260000	J	500000
Dibromochloromethane	ND		500000
Chlorobenzene	ND		500000
Ethylbenzene	130000	J	500000
m,p-Xylene	1000000		1000000
o-Xylene	880000		500000
Styrene	ND		500000
Bromoform	ND		500000
cis-1,4-Dichloro-2-butene	ND		500000
1,1,2,2-Tetrachloroethane	ND		500000
1,2,3-Trichloropropane	ND		500000
trans-1,4-Dichloro-2-butene	ND		500000

Surrogate	Percent Recovery		Control Limits
1,2-Dichloroethane-d4	104		76-114
Toluene-d8	99		88-110
4-Bromofluorobenzene	127	*	86-115

*-Surrogate recovery outside control limits due to matrix interference.
J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8240
METHOD BLANK QUALITY CONTROL
page 1 of 2

Date Extracted:	4-11-96
Date Analyzed:	4-11-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0411W1
Dilution Factor:	1.0

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Acetone	ND		5.0
Iodomethane	ND		5.0
Carbon disulfide	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		5.0
Acrylonitrile	ND		5.0
1,1-Dichloroethane	ND		5.0
Vinyl Acetate	ND		5.0
2-Butanone	ND		5.0
Chloroform	ND		5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8240
METHOD BLANK QUALITY CONTROL
page 2 of 2

Lab ID: MB0411W1

Dilution Factor: 1.0

Compound	Results	Flags	PQL
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
2-Chloroethyl vinyl ether	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0
Toluene	ND		5.0
(trans) 1,3-Dichloropropene	ND		5.0
Ethyl methacrylate	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	ND		5.0
2-Hexanone	ND		5.0
Dibromochloromethane	ND		5.0
Chlorobenzene	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
cis-1,4-Dichloro-2-butene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
trans-1,4-Dichloro-2-butene	ND		5.0

Surrogate	Percent Recovery	Control Limits
1,2-Dichloroethane-d4	98	76-114
Toluene-d8	98	88-110
4-Bromofluorobenzene	113	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-1
Client ID:	**SUMP-1**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.29
Chloromethane	ND		0.29
Vinyl Chloride	ND		0.29
Bromomethane	ND		0.29
Chloroethane	ND		0.29
Trichlorofluoromethane	ND		0.29
1,1-Dichloroethene	ND		0.29
Methylene Chloride	ND		0.29
(trans) 1,2-Dichloroethene	ND		0.29
1,1-Dichloroethane	ND		0.29
2,2-Dichloropropane	ND		0.29
(cis) 1,2-Dichloroethene	ND		0.29
Chloroform	ND		0.29
1,1,1-Trichloroethane	ND		0.29
Carbon Tetrachloride	ND		0.29
1,1-Dichloropropene	ND		0.29
Benzene	ND		0.29
1,2-Dichloroethane	ND		0.29
Trichloroethene	ND		0.29
1,2-Dichloropropane	ND		0.29
Dibromomethane	ND		0.29
Bromodichloromethane	ND		0.29
(cis) 1,3-Dichloropropene	ND		0.29
Toluene	ND		0.29
(trans) 1,3-Dichloropropene	ND		0.29
1,1,2-Trichloroethane	ND		0.29
Tetrachloroethene	ND		0.29
1,3-Dichloropropane	ND		0.29

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-1
Client ID: SUMP-1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.29
1,2-Dibromoethane	ND		0.29
Chlorobenzene	ND		0.29
1,1,1,2-Tetrachloroethane	ND		0.29
Ethylbenzene	ND		0.29
m,p-Xylene	ND		0.57
o-Xylene	ND		0.29
Styrene	ND		0.29
Bromoform	ND		0.29
Isopropylbenzene	ND		0.29
Bromobenzene	ND		0.29
1,1,2,2-Tetrachloroethane	ND		0.29
1,2,3-Trichloropropane	ND		0.29
n-Propylbenzene	ND		0.29
2-Chlorotoluene	ND		0.29
4-Chlorotoluene	ND		0.29
1,3,5-Trimethylbenzene	ND		0.29
tert-Butylbenzene	ND		0.29
1,2,4-Trimethylbenzene	ND		0.29
sec-Butylbenzene	ND		0.29
1,3-Dichlorobenzene	ND		0.29
p-Isopropyltoluene	ND		0.29
1,4-Dichlorobenzene	ND		0.29
1,2-Dichlorobenzene	ND		0.29
n-Butylbenzene	ND		0.29
1,2-Dibromo-3-chloropropane	ND		0.29
1,2,4-Trichlorobenzene	ND		0.29
Hexachlorobutadiene	ND		0.29
Naphthalene	ND		0.29
1,2,3-Trichlorobenzene	ND		0.29

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	100	80-120
Toluene-d8	91	81-117
4-Bromofluorobenzene	97	74-121

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-2
Client ID:	**UST-2 BOTTOM**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.27
Chloromethane	ND		0.27
Vinyl Chloride	ND		0.27
Bromomethane	ND		0.27
Chloroethane	ND		0.27
Trichlorofluoromethane	ND		0.27
1,1-Dichloroethene	ND		0.27
Methylene Chloride	ND		0.27
(trans) 1,2-Dichloroethene	ND		0.27
1,1-Dichloroethane	ND		0.27
2,2-Dichloropropane	ND		0.27
(cis) 1,2-Dichloroethene	ND		0.27
Chloroform	ND		0.27
1,1,1-Trichloroethane	ND		0.27
Carbon Tetrachloride	ND		0.27
1,1-Dichloropropene	ND		0.27
Benzene	ND		0.27
1,2-Dichloroethane	ND		0.27
Trichloroethene	ND		0.27
1,2-Dichloropropane	ND		0.27
Dibromomethane	ND		0.27
Bromodichloromethane	ND		0.27
(cis) 1,3-Dichloropropene	ND		0.27
Toluene	ND		0.27
(trans) 1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.27
Tetrachloroethene	ND		0.27
1,3-Dichloropropane	ND		0.27

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-2
Client ID: UST-2 BOTTOM

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.27
1,2-Dibromoethane	ND		0.27
Chlorobenzene	ND		0.27
1,1,1,2-Tetrachloroethane	ND		0.27
Ethylbenzene	ND		0.27
m,p-Xylene	ND		0.55
o-Xylene	ND		0.27
Styrene	ND		0.27
Bromoform	ND		0.27
Isopropylbenzene	ND		0.27
Bromobenzene	ND		0.27
1,1,2,2-Tetrachloroethane	ND		0.27
1,2,3-Trichloropropane	ND		0.27
n-Propylbenzene	ND		0.27
2-Chlorotoluene	ND		0.27
4-Chlorotoluene	ND		0.27
1,3,5-Trimethylbenzene	ND		0.27
tert-Butylbenzene	ND		0.27
1,2,4-Trimethylbenzene	ND		0.27
sec-Butylbenzene	ND		0.27
1,3-Dichlorobenzene	ND		0.27
p-Isopropyltoluene	ND		0.27
1,4-Dichlorobenzene	ND		0.27
1,2-Dichlorobenzene	ND		0.27
n-Butylbenzene	ND		0.27
1,2-Dibromo-3-chloropropane	ND		0.27
1,2,4-Trichlorobenzene	ND		0.27
Hexachlorobutadiene	ND		0.27
Naphthalene	ND		0.27
1,2,3-Trichlorobenzene	ND		0.27

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	107	80-120
Toluene-d8	94	81-117
4-Bromofluorobenzene	101	74-121

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-9
Client ID:	**UST-2 NE**
Dilution Factor:	50

Compound	**Results**	**Flags**	**PQL**
Dichlorodifluoromethane	ND		0.30
Chloromethane	ND		0.30
Vinyl Chloride	ND		0.30
Bromomethane	ND		0.30
Chloroethane	ND		0.30
Trichlorofluoromethane	ND		0.30
1,1-Dichloroethene	ND		0.30
Methylene Chloride	ND		0.30
(trans) 1,2-Dichloroethene	ND		0.30
1,1-Dichloroethane	ND		0.30
2,2-Dichloropropane	ND		0.30
(cis) 1,2-Dichloroethene	ND		0.30
Chloroform	ND		0.30
1,1,1-Trichloroethane	ND		0.30
Carbon Tetrachloride	ND		0.30
1,1-Dichloropropene	ND		0.30
Benzene	ND		0.30
1,2-Dichloroethane	ND		0.30
Trichloroethene	ND		0.30
1,2-Dichloropropane	ND		0.30
Dibromomethane	ND		0.30
Bromodichloromethane	ND		0.30
(cis) 1,3-Dichloropropene	ND		0.30
Toluene	ND		0.30
(trans) 1,3-Dichloropropene	ND		0.30
1,1,2-Trichloroethane	ND		0.30
Tetrachloroethene	ND		0.30
1,3-Dichloropropane	ND		0.30

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-9
Client ID: UST-2 NE

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.30
1,2-Dibromoethane	ND		0.30
Chlorobenzene	ND		0.30
1,1,1,2-Tetrachloroethane	ND		0.30
Ethylbenzene	ND		0.30
m,p-Xylene	ND		0.60
o-Xylene	ND		0.30
Styrene	ND		0.30
Bromoform	ND		0.30
Isopropylbenzene	ND		0.30
Bromobenzene	ND		0.30
1,1,2,2-Tetrachloroethane	ND		0.30
1,2,3-Trichloropropane	ND		0.30
n-Propylbenzene	ND		0.30
2-Chlorotoluene	ND		0.30
4-Chlorotoluene	ND		0.30
1,3,5-Trimethylbenzene	ND		0.30
tert-Butylbenzene	ND		0.30
1,2,4-Trimethylbenzene	ND		0.30
sec-Butylbenzene	ND		0.30
1,3-Dichlorobenzene	ND		0.30
p-Isopropyltoluene	ND		0.30
1,4-Dichlorobenzene	ND		0.30
1,2-Dichlorobenzene	ND		0.30
n-Butylbenzene	ND		0.30
1,2-Dibromo-3-chloropropane	ND		0.30
1,2,4-Trichlorobenzene	ND		0.30
Hexachlorobutadiene	ND		0.30
Naphthalene	ND		0.30
1,2,3-Trichlorobenzene	ND		0.30

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	86	80-120
Toluene-d8	84	81-117
4-Bromofluorobenzene	91	74-121

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-10
Client ID:	**UST-3 BOTTOM**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.29
Chloromethane	ND		0.29
Vinyl Chloride	ND		0.29
Bromomethane	ND		0.29
Chloroethane	ND		0.29
Trichlorofluoromethane	ND		0.29
1,1-Dichloroethene	ND		0.29
Methylene Chloride	0.04	J	0.29
(trans) 1,2-Dichloroethene	ND		0.29
1,1-Dichloroethane	ND		0.29
2,2-Dichloropropane	ND		0.29
(cis) 1,2-Dichloroethene	ND		0.29
Chloroform	ND		0.29
1,1,1-Trichloroethane	ND		0.29
Carbon Tetrachloride	ND		0.29
1,1-Dichloropropene	ND		0.29
Benzene	ND		0.29
1,2-Dichloroethane	ND		0.29
Trichloroethene	ND		0.29
1,2-Dichloropropane	ND		0.29
Dibromomethane	ND		0.29
Bromodichloromethane	ND		0.29
(cis) 1,3-Dichloropropene	ND		0.29
Toluene	ND		0.29
(trans) 1,3-Dichloropropene	ND		0.29
1,1,2-Trichloroethane	ND		0.29
Tetrachloroethene	0.15	J	0.29
1,3-Dichloropropane	ND		0.29

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-10
Client ID: UST-3 BOTTOM

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.29
1,2-Dibromoethane	ND		0.29
Chlorobenzene	ND		0.29
1,1,1,2-Tetrachloroethane	ND		0.29
Ethylbenzene	0.12	J	0.29
m,p-Xylene	0.64		0.57
o-Xylene	0.73		0.29
Styrene	ND		0.29
Bromoform	ND		0.29
Isopropylbenzene	0.24	J	0.29
Bromobenzene	ND		0.29
1,1,2,2-Tetrachloroethane	ND		0.29
1,2,3-Trichloropropane	ND		0.29
n-Propylbenzene	0.76		0.29
2-Chlorotoluene	ND		0.29
4-Chlorotoluene	ND		0.29
1,3,5-Trimethylbenzene	1.8		0.29
tert-Butylbenzene	ND		0.29
1,2,4-Trimethylbenzene	4		0.29
sec-Butylbenzene	0.23	J	0.29
1,3-Dichlorobenzene	ND		0.29
p-Isopropyltoluene	0.24	J	0.29
1,4-Dichlorobenzene	ND		0.29
1,2-Dichlorobenzene	ND		0.29
n-Butylbenzene	0.95		0.29
1,2-Dibromo-3-chloropropane	ND		0.29
1,2,4-Trichlorobenzene	ND		0.29
Hexachlorobutadiene	ND		0.29
Naphthalene	ND		0.29
1,2,3-Trichlorobenzene	ND		0.29

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	100	80-120
Toluene-d8	91	81-117
4-Bromofluorobenzene	113	74-121

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-11
Client ID:	**UST-3 SW**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.28
Chloromethane	ND		0.28
Vinyl Chloride	ND		0.28
Bromomethane	ND		0.28
Chloroethane	ND		0.28
Trichlorofluoromethane	ND		0.28
1,1-Dichloroethene	ND		0.28
Methylene Chloride	ND		0.28
(trans) 1,2-Dichloroethene	ND		0.28
1,1-Dichloroethane	ND		0.28
2,2-Dichloropropane	ND		0.28
(cis) 1,2-Dichloroethene	ND		0.28
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.28
Carbon Tetrachloride	ND		0.28
1,1-Dichloropropene	ND		0.28
Benzene	ND		0.28
1,2-Dichloroethane	ND		0.28
Trichloroethene	ND		0.28
1,2-Dichloropropane	ND		0.28
Dibromomethane	ND		0.28
Bromodichloromethane	ND		0.28
(cis) 1,3-Dichloropropene	ND		0.28
Toluene	ND		0.28
(trans) 1,3-Dichloropropene	ND		0.28
1,1,2-Trichloroethane	ND		0.28
Tetrachloroethene	ND		0.28
1,3-Dichloropropane	ND		0.28

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-11
Client ID: UST-3 SW

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.28
1,2-Dibromoethane	ND		0.28
Chlorobenzene	ND		0.28
1,1,1,2-Tetrachloroethane	ND		0.28
Ethylbenzene	ND		0.28
m,p-Xylene	ND		0.56
o-Xylene	ND		0.28
Styrene	ND		0.28
Bromoform	ND		0.28
Isopropylbenzene	ND		0.28
Bromobenzene	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.28
1,2,3-Trichloropropane	ND		0.28
n-Propylbenzene	ND		0.28
2-Chlorotoluene	ND		0.28
4-Chlorotoluene	ND		0.28
1,3,5-Trimethylbenzene	ND		0.28
tert-Butylbenzene	ND		0.28
1,2,4-Trimethylbenzene	ND		0.28
sec-Butylbenzene	ND		0.28
1,3-Dichlorobenzene	ND		0.28
p-Isopropyltoluene	ND		0.28
1,4-Dichlorobenzene	ND		0.28
1,2-Dichlorobenzene	ND		0.28
n-Butylbenzene	ND		0.28
1,2-Dibromo-3-chloropropane	ND		0.28
1,2,4-Trichlorobenzene	ND		0.28
Hexachlorobutadiene	ND		0.28
Naphthalene	ND		0.28
1,2,3-Trichlorobenzene	ND		0.28

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	100	80-120
Toluene-d8	93	81-117
4-Bromofluorobenzene	100	74-121

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-12
Client ID:	**UST-3 NW**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.27
Chloromethane	ND		0.27
Vinyl Chloride	ND		0.27
Bromomethane	ND		0.27
Chloroethane	ND		0.27
Trichlorofluoromethane	ND		0.27
1,1-Dichloroethene	ND		0.27
Methylene Chloride	ND		0.27
(trans) 1,2-Dichloroethene	ND		0.27
1,1-Dichloroethane	ND		0.27
2,2-Dichloropropane	ND		0.27
(cis) 1,2-Dichloroethene	ND		0.27
Chloroform	ND		0.27
1,1,1-Trichloroethane	ND		0.27
Carbon Tetrachloride	ND		0.27
1,1-Dichloropropene	ND		0.27
Benzene	ND		0.27
1,2-Dichloroethane	ND		0.27
Trichloroethene	ND		0.27
1,2-Dichloropropane	ND		0.27
Dibromomethane	ND		0.27
Bromodichloromethane	ND		0.27
(cis) 1,3-Dichloropropene	ND		0.27
Toluene	ND		0.27
(trans) 1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.27
Tetrachloroethene	ND		0.27
1,3-Dichloropropane	ND		0.27

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-12
Client ID: UST-3 NW

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.27
1,2-Dibromoethane	ND		0.27
Chlorobenzene	ND		0.27
1,1,1,2-Tetrachloroethane	ND		0.27
Ethylbenzene	ND		0.27
m,p-Xylene	ND		0.54
o-Xylene	ND		0.27
Styrene	ND		0.27
Bromoform	ND		0.27
Isopropylbenzene	ND		0.27
Bromobenzene	ND		0.27
1,1,2,2-Tetrachloroethane	ND		0.27
1,2,3-Trichloropropane	ND		0.27
n-Propylbenzene	ND		0.27
2-Chlorotoluene	ND		0.27
4-Chlorotoluene	ND		0.27
1,3,5-Trimethylbenzene	ND		0.27
tert-Butylbenzene	ND		0.27
1,2,4-Trimethylbenzene	ND		0.27
sec-Butylbenzene	ND		0.27
1,3-Dichlorobenzene	ND		0.27
p-Isopropyltoluene	ND		0.27
1,4-Dichlorobenzene	ND		0.27
1,2-Dichlorobenzene	ND		0.27
n-Butylbenzene	ND		0.27
1,2-Dibromo-3-chloropropane	ND		0.27
1,2,4-Trichlorobenzene	ND		0.27
Hexachlorobutadiene	ND		0.27
Naphthalene	ND		0.27
1,2,3-Trichlorobenzene	ND		0.27

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	103	80-120
Toluene-d8	94	81-117
4-Bromofluorobenzene	99	74-121

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-13
Client ID:	**UST-3 12'**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.27
Chloromethane	ND		0.27
Vinyl Chloride	ND		0.27
Bromomethane	ND		0.27
Chloroethane	ND		0.27
Trichlorofluoromethane	ND		0.27
1,1-Dichloroethene	ND		0.27
Methylene Chloride	ND		0.27
(trans) 1,2-Dichloroethene	ND		0.27
1,1-Dichloroethane	ND		0.27
2,2-Dichloropropane	ND		0.27
(cis) 1,2-Dichloroethene	ND		0.27
Chloroform	ND		0.27
1,1,1-Trichloroethane	ND		0.27
Carbon Tetrachloride	ND		0.27
1,1-Dichloropropene	ND		0.27
Benzene	ND		0.27
1,2-Dichloroethane	ND		0.27
Trichloroethene	ND		0.27
1,2-Dichloropropane	ND		0.27
Dibromomethane	ND		0.27
Bromodichloromethane	ND		0.27
(cis) 1,3-Dichloropropene	ND		0.27
Toluene	ND		0.27
(trans) 1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.27
Tetrachloroethene	0.055	J	0.27
1,3-Dichloropropane	ND		0.27

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-13
Client ID: UST-3 12'

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.27
1,2-Dibromoethane	ND		0.27
Chlorobenzene	ND		0.27
1,1,1,2-Tetrachloroethane	ND		0.27
Ethylbenzene	0.067	J	0.27
m,p-Xylene	0.25	J	0.55
o-Xylene	0.33		0.27
Styrene	ND		0.27
Bromoform	ND		0.27
Isopropylbenzene	0.12	J	0.27
Bromobenzene	ND		0.27
1,1,2,2-Tetrachloroethane	ND		0.27
1,2,3-Trichloropropane	ND		0.27
n-Propylbenzene	0.43		0.27
2-Chlorotoluene	ND		0.27
4-Chlorotoluene	ND		0.27
1,3,5-Trimethylbenzene	1		0.27
tert-Butylbenzene	ND		0.27
1,2,4-Trimethylbenzene	2.4		0.27
sec-Butylbenzene	0.13	J	0.27
1,3-Dichlorobenzene	ND		0.27
p-Isopropyltoluene	0.15	J	0.27
1,4-Dichlorobenzene	ND		0.27
1,2-Dichlorobenzene	ND		0.27
n-Butylbenzene	0.56		0.27
1,2-Dibromo-3-chloropropane	ND		0.27
1,2,4-Trichlorobenzene	ND		0.27
Hexachlorobutadiene	ND		0.27
Naphthalene	ND		0.27
1,2,3-Trichlorobenzene	ND		0.27

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	98	80-120
Toluene-d8	93	81-117
4-Bromofluorobenzene	104	74-121

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-14
Client ID:	**UST-3 SP1**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.27
Chloromethane	ND		0.27
Vinyl Chloride	ND		0.27
Bromomethane	ND		0.27
Chloroethane	ND		0.27
Trichlorofluoromethane	ND		0.27
1,1-Dichloroethene	ND		0.27
Methylene Chloride	ND		0.27
(trans) 1,2-Dichloroethene	ND		0.27
1,1-Dichloroethane	ND		0.27
2,2-Dichloropropane	ND		0.27
(cis) 1,2-Dichloroethene	ND		0.27
Chloroform	ND		0.27
1,1,1-Trichloroethane	ND		0.27
Carbon Tetrachloride	ND		0.27
1,1-Dichloropropene	ND		0.27
Benzene	ND		0.27
1,2-Dichloroethane	ND		0.27
Trichloroethene	ND		0.27
1,2-Dichloropropane	ND		0.27
Dibromomethane	ND		0.27
Bromodichloromethane	ND		0.27
(cis) 1,3-Dichloropropene	ND		0.27
Toluene	ND		0.27
(trans) 1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.27
Tetrachloroethene	0.05	J	0.27
1,3-Dichloropropane	ND		0.27

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-14
Client ID: UST-3 SP1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.27
1,2-Dibromoethane	ND		0.27
Chlorobenzene	ND		0.27
1,1,1,2-Tetrachloroethane	ND		0.27
Ethylbenzene	0.038	J	0.27
m,p-Xylene	0.062	J	0.54
o-Xylene	0.24	J	0.27
Styrene	ND		0.27
Bromoform	ND		0.27
Isopropylbenzene	0.089	J	0.27
Bromobenzene	ND		0.27
1,1,2,2-Tetrachloroethane	ND		0.27
1,2,3-Trichloropropane	ND		0.27
n-Propylbenzene	0.31		0.27
2-Chlorotoluene	ND		0.27
4-Chlorotoluene	ND		0.27
1,3,5-Trimethylbenzene	0.82		0.27
tert-Butylbenzene	ND		0.27
1,2,4-Trimethylbenzene	0.46		0.27
sec-Butylbenzene	0.12	J	0.27
1,3-Dichlorobenzene	ND		0.27
p-Isopropyltoluene	0.14	J	0.27
1,4-Dichlorobenzene	ND		0.27
1,2-Dichlorobenzene	ND		0.27
n-Butylbenzene	0.55		0.27
1,2-Dibromo-3-chloropropane	ND		0.27
1,2,4-Trichlorobenzene	ND		0.27
Hexachlorobutadiene	ND		0.27
Naphthalene	ND		0.27
1,2,3-Trichlorobenzene	ND		0.27

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	95	80-120
Toluene-d8	95	81-117
4-Bromofluorobenzene	104	74-121

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-15
Client ID:	**UTS-3 SP2**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.27
Chloromethane	ND		0.27
Vinyl Chloride	ND		0.27
Bromomethane	ND		0.27
Chloroethane	ND		0.27
Trichlorofluoromethane	ND		0.27
1,1-Dichloroethene	ND		0.27
Methylene Chloride	ND		0.27
(trans) 1,2-Dichloroethene	ND		0.27
1,1-Dichloroethane	ND		0.27
2,2-Dichloropropane	ND		0.27
(cis) 1,2-Dichloroethene	ND		0.27
Chloroform	ND		0.27
1,1,1-Trichloroethane	ND		0.27
Carbon Tetrachloride	ND		0.27
1,1-Dichloropropene	ND		0.27
Benzene	ND		0.27
1,2-Dichloroethane	ND		0.27
Trichloroethene	ND		0.27
1,2-Dichloropropane	ND		0.27
Dibromomethane	ND		0.27
Bromodichloromethane	ND		0.27
(cis) 1,3-Dichloropropene	ND		0.27
Toluene	ND		0.27
(trans) 1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.27
Tetrachloroethene	0.05	J	0.27
1,3-Dichloropropane	ND		0.27

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-15
Client ID: UTS-3 SP2

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.27
1,2-Dibromoethane	ND		0.27
Chlorobenzene	ND		0.27
1,1,1,2-Tetrachloroethane	ND		0.27
Ethylbenzene	0.042	J	0.27
m,p-Xylene	0.076	J	0.54
o-Xylene	0.26	J	0.27
Styrene	ND		0.27
Bromoform	ND		0.27
Isopropylbenzene	0.09	J	0.27
Bromobenzene	ND		0.27
1,1,2,2-Tetrachloroethane	ND		0.27
1,2,3-Trichloropropane	ND		0.27
n-Propylbenzene	0.31		0.27
2-Chlorotoluene	ND		0.27
4-Chlorotoluene	ND		0.27
1,3,5-Trimethylbenzene	0.8		0.27
tert-Butylbenzene	ND		0.27
1,2,4-Trimethylbenzene	0.7		0.27
sec-Butylbenzene	0.11	J	0.27
1,3-Dichlorobenzene	ND		0.27
p-Isopropyltoluene	0.13	J	0.27
1,4-Dichlorobenzene	ND		0.27
1,2-Dichlorobenzene	ND		0.27
n-Butylbenzene	0.47		0.27
1,2-Dibromo-3-chloropropane	ND		0.27
1,2,4-Trichlorobenzene	ND		0.27
Hexachlorobutadiene	ND		0.27
Naphthalene	ND		0.27
1,2,3-Trichlorobenzene	ND		0.27

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	94	80-120
Toluene-d8	92	81-117
4-Bromofluorobenzene	103	74-121

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted: 4-09-96
Date Analyzed: 4-09-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 04-020-16
Client ID: SUMP-2

Dilution Factor: 50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.40
Chloromethane	ND		0.40
Vinyl Chloride	ND		0.40
Bromomethane	ND		0.40
Chloroethane	ND		0.40
Trichlorofluoromethane	ND		0.40
1,1-Dichloroethene	ND		0.40
Methylene Chloride	0.1	J	0.40
(trans) 1,2-Dichloroethene	ND		0.40
1,1-Dichloroethane	ND		0.40
2,2-Dichloropropane	ND		0.40
(cis) 1,2-Dichloroethene	ND		0.40
Chloroform	ND		0.40
1,1,1-Trichloroethane	ND		0.40
Carbon Tetrachloride	ND		0.40
1,1-Dichloropropene	ND		0.40
Benzene	ND		0.40
1,2-Dichloroethane	ND		0.40
Trichloroethene	ND		0.40
1,2-Dichloropropane	ND		0.40
Dibromomethane	ND		0.40
Bromodichloromethane	ND		0.40
(cis) 1,3-Dichloropropene	ND		0.40
Toluene	ND		0.40
(trans) 1,3-Dichloropropene	ND		0.40
1,1,2-Trichloroethane	ND		0.40
Tetrachloroethene	1.5		0.40
1,3-Dichloropropane	ND		0.40

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-16
Client ID: SUMP-2

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.40
1,2-Dibromoethane	ND		0.40
Chlorobenzene	ND		0.40
1,1,1,2-Tetrachloroethane	ND		0.40
Ethylbenzene	ND		0.40
m,p-Xylene	0.85		0.79
o-Xylene	0.72		0.40
Styrene	ND		0.40
Bromoform	ND		0.40
Isopropylbenzene	ND		0.40
Bromobenzene	ND		0.40
1,1,2,2-Tetrachloroethane	ND		0.40
1,2,3-Trichloropropane	ND		0.40
n-Propylbenzene	ND		0.40
2-Chlorotoluene	ND		0.40
4-Chlorotoluene	ND		0.40
1,3,5-Trimethylbenzene	4.7		0.40
tert-Butylbenzene	0.23	J	0.40
1,2,4-Trimethylbenzene	0.66		0.40
sec-Butylbenzene	0.17	J	0.40
1,3-Dichlorobenzene	ND		0.40
p-Isopropyltoluene	0.48		0.40
1,4-Dichlorobenzene	ND		0.40
1,2-Dichlorobenzene	ND		0.40
n-Butylbenzene	1.9		0.40
1,2-Dibromo-3-chloropropane	ND		0.40
1,2,4-Trichlorobenzene	ND		0.40
Hexachlorobutadiene	ND		0.40
Naphthalene	0.52		0.40
1,2,3-Trichlorobenzene	ND		0.40

Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	68	*	80-120
Toluene-d8	51	*	81-117
4-Bromofluorobenzene	238	*	74-121

J - The value reported was below the practical quantitation limit. The value is an estimate.
* Surrogate recovery outside control limits due to matrix interference.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
METHOD BLANK QUALITY CONTROL
page 1 of 2

Date Extracted:	4-09-96
Date Analyzed:	4-09-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0409S1
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.25
Chloromethane	ND		0.25
Vinyl Chloride	ND		0.25
Bromomethane	ND		0.25
Chloroethane	ND		0.25
Trichlorofluoromethane	ND		0.25
1,1-Dichloroethene	ND		0.25
Methylene Chloride	ND		0.25
(trans) 1,2-Dichloroethene	ND		0.25
1,1-Dichloroethane	ND		0.25
2,2-Dichloropropane	ND		0.25
(cis) 1,2-Dichloroethene	ND		0.25
Chloroform	ND		0.25
1,1,1-Trichloroethane	ND		0.25
Carbon Tetrachloride	ND		0.25
1,1-Dichloropropene	ND		0.25
Benzene	ND		0.25
1,2-Dichloroethane	ND		0.25
Trichloroethene	ND		0.25
1,2-Dichloropropane	ND		0.25
Dibromomethane	ND		0.25
Bromodichloromethane	ND		0.25
(cis) 1,3-Dichloropropene	ND		0.25
Toluene	ND		0.25
(trans) 1,3-Dichloropropene	ND		0.25
1,1,2-Trichloroethane	ND		0.25
Tetrachloroethene	ND		0.25
1,3-Dichloropropane	ND		0.25

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
METHOD BLANK QUALITY CONTROL
page 2 of 2

Lab ID: MB0409S1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.25
1,2-Dibromoethane	ND		0.25
Chlorobenzene	ND		0.25
1,1,1,2-Tetrachloroethane	ND		0.25
Ethylbenzene	ND		0.25
m,p-Xylene	ND		0.50
o-Xylene	ND		0.25
Styrene	ND		0.25
Bromoform	ND		0.25
Isopropylbenzene	ND		0.25
Bromobenzene	ND		0.25
1,1,2,2-Tetrachloroethane	ND		0.25
1,2,3-Trichloropropane	ND		0.25
n-Propylbenzene	ND		0.25
2-Chlorotoluene	ND		0.25
4-Chlorotoluene	ND		0.25
1,3,5-Trimethylbenzene	ND		0.25
tert-Butylbenzene	ND		0.25
1,2,4-Trimethylbenzene	ND		0.25
sec-Butylbenzene	ND		0.25
1,3-Dichlorobenzene	ND		0.25
p-Isopropyltoluene	ND		0.25
1,4-Dichlorobenzene	ND		0.25
1,2-Dichlorobenzene	ND		0.25
n-Butylbenzene	ND		0.25
1,2-Dibromo-3-chloropropane	ND		0.25
1,2,4-Trichlorobenzene	ND		0.25
Hexachlorobutadiene	ND		0.25
Naphthalene	ND		0.25
1,2,3-Trichlorobenzene	ND		0.25

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	100	80-120
Toluene-d8	99	81-117
4-Bromofluorobenzene	101	74-121

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
SB/SBD QUALITY CONTROL

Date Extracted: 3-25-96
Date Analyzed: 3-25-96

Matrix: Soil
Units: mg/Kg (ppm)

Dilution Factor: 50

Lab ID: SB0325S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	RPD
1,1-Dichloroethene	2.50	2.47	99	2.45	98	0.78
Benzene	2.50	2.46	99	2.51	100	1.9
Trichloroethene	2.50	1.83	73	1.86	74	1.5
Toluene	2.50	2.36	95	2.46	98	3.9
Chlorobenzene	2.50	2.32	93	2.38	95	2.7

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-10-96
Date Analyzed:	4-10-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	04-020-19
Client ID:	**TRIP BLANK**
Dilution Factor:	1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Methylene Chloride	1.1	J	5.0
(trans) 1,2-Dichloroethene	ND		5.0
1,1-Dichloroethane	ND		5.0
2,2-Dichloropropane	ND		5.0
(cis) 1,2-Dichloroethene	ND		5.0
Chloroform	3.2	J	5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
1,1-Dichloropropene	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
Toluene	0.6	J	5.0
(trans) 1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	ND		5.0
1,3-Dichloropropane	ND		5.0

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-19
Client ID: TRIP BLANK

Dilution Factor: 1

Compound	Results	Flags	PQL
Dibromochloromethane	ND		5.0
1,2-Dibromoethane	ND		5.0
Chlorobenzene	ND		5.0
1,1,1,2-Tetrachloroethane	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
Isopropylbenzene	ND		5.0
Bromobenzene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
n-Propylbenzene	ND		5.0
2-Chlorotoluene	ND		5.0
4-Chlorotoluene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0
tert-Butylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0
sec-Butylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0
p-Isopropyltoluene	ND		5.0
1,4-Dichlorobenzene	ND		5.0
1,2-Dichlorobenzene	ND		5.0
n-Butylbenzene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Naphthalene	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	98	86-118
Toluene-d8	93	88-110
4-Bromofluorobenzene	103	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-10-96
Date Analyzed:	4-10-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	04-020-20
Client ID:	**MW-1 GW**
Dilution Factor:	1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Methylene Chloride	0.98	J	5.0
(trans) 1,2-Dichloroethene	ND		5.0
1,1-Dichloroethane	ND		5.0
2,2-Dichloropropane	ND		5.0
(cis) 1,2-Dichloroethene	ND		5.0
Chloroform	2.1	J	5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
1,1-Dichloropropene	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
Toluene	ND		5.0
(trans) 1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	2.7	J	5.0
1,3-Dichloropropane	ND		5.0

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-20
Client ID: MW-1 GW

Dilution Factor: 1

Compound	Results	Flags	PQL
Dibromochloromethane	ND		5.0
1,2-Dibromoethane	ND		5.0
Chlorobenzene	ND		5.0
1,1,1,2-Tetrachloroethane	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
Isopropylbenzene	ND		5.0
Bromobenzene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
n-Propylbenzene	ND		5.0
2-Chlorotoluene	ND		5.0
4-Chlorotoluene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0
tert-Butylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0
sec-Butylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0
p-Isopropyltoluene	ND		5.0
1,4-Dichlorobenzene	ND		5.0
1,2-Dichlorobenzene	ND		5.0
n-Butylbenzene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Naphthalene	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	103	86-118
Toluene-d8	97	88-110
4-Bromofluorobenzene	110	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-10-96
Date Analyzed:	4-10-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	04-020-21
Client ID:	**MW-2 GW**
Dilution Factor:	1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Methylene Chloride	0.69	J	5.0
(trans) 1,2-Dichloroethene	ND		5.0
1,1-Dichloroethane	ND		5.0
2,2-Dichloropropane	ND		5.0
(cis) 1,2-Dichloroethene	ND		5.0
Chloroform	ND		5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
1,1-Dichloropropene	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
Toluene	ND		5.0
(trans) 1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	ND		5.0
1,3-Dichloropropane	ND		5.0

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-21
Client ID: MW-2 GW

Dilution Factor: 1

Compound	Results	Flags	PQL
Dibromochloromethane	ND		5.0
1,2-Dibromoethane	ND		5.0
Chlorobenzene	ND		5.0
1,1,1,2-Tetrachloroethane	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
Isopropylbenzene	ND		5.0
Bromobenzene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
n-Propylbenzene	ND		5.0
2-Chlorotoluene	ND		5.0
4-Chlorotoluene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0
tert-Butylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0
sec-Butylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0
p-Isopropyltoluene	ND		5.0
1,4-Dichlorobenzene	ND		5.0
1,2-Dichlorobenzene	ND		5.0
n-Butylbenzene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Naphthalene	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	102	86-118
Toluene-d8	95	88-110
4-Bromofluorobenzene	106	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-10-96
Date Analyzed:	4-10-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	04-020-22
Client ID:	**MW-3 GW**
Dilution Factor:	1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		5.0
1,1-Dichloroethane	ND		5.0
2,2-Dichloropropane	ND		5.0
(cis) 1,2-Dichloroethene	ND		5.0
Chloroform	ND		5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
1,1-Dichloropropene	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
Toluene	ND		5.0
(trans) 1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	0.85	J	5.0
1,3-Dichloropropane	ND		5.0

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-22
Client ID: MW-3 GW

Dilution Factor: 1

Compound	Results	Flags	PQL
Dibromochloromethane	ND		5.0
1,2-Dibromoethane	ND		5.0
Chlorobenzene	ND		5.0
1,1,1,2-Tetrachloroethane	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
Isopropylbenzene	ND		5.0
Bromobenzene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
n-Propylbenzene	ND		5.0
2-Chlorotoluene	ND		5.0
4-Chlorotoluene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0
tert-Butylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0
sec-Butylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0
p-Isopropyltoluene	ND		5.0
1,4-Dichlorobenzene	ND		5.0
1,2-Dichlorobenzene	ND		5.0
n-Butylbenzene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Naphthalene	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	99	86-118
Toluene-d8	95	88-110
4-Bromofluorobenzene	102	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-10-96
Date Analyzed:	4-10-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	04-020-23
Client ID:	**DUPLICATE**
Dilution Factor:	1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		5.0
1,1-Dichloroethane	ND		5.0
2,2-Dichloropropane	ND		5.0
(cis) 1,2-Dichloroethene	ND		5.0
Chloroform	ND		5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
1,1-Dichloropropene	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
Toluene	ND		5.0
(trans) 1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	ND		5.0
1,3-Dichloropropane	ND		5.0

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-23
Client ID: DUPLICATE

Dilution Factor: 1

Compound	Results	Flags	PQL
Dibromochloromethane	ND		5.0
1,2-Dibromoethane	ND		5.0
Chlorobenzene	ND		5.0
1,1,1,2-Tetrachloroethane	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
Isopropylbenzene	ND		5.0
Bromobenzene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
n-Propylbenzene	ND		5.0
2-Chlorotoluene	ND		5.0
4-Chlorotoluene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0
tert-Butylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0
sec-Butylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0
p-Isopropyltoluene	ND		5.0
1,4-Dichlorobenzene	ND		5.0
1,2-Dichlorobenzene	ND		5.0
n-Butylbenzene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Naphthalene	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	99	86-118
Toluene-d8	91	88-110
4-Bromofluorobenzene	100	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
METHOD BLANK QUALITY CONTROL
page 1 of 2

Date Extracted:	4-10-96
Date Analyzed:	4-10-96
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0410W1
Dilution Factor:	1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		5.0
Chloromethane	ND		5.0
Vinyl Chloride	ND		5.0
Bromomethane	ND		5.0
Chloroethane	ND		5.0
Trichlorofluoromethane	ND		5.0
1,1-Dichloroethene	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		5.0
1,1-Dichloroethane	ND		5.0
2,2-Dichloropropane	ND		5.0
(cis) 1,2-Dichloroethene	ND		5.0
Chloroform	ND		5.0
1,1,1-Trichloroethane	ND		5.0
Carbon Tetrachloride	ND		5.0
1,1-Dichloropropene	ND		5.0
Benzene	ND		5.0
1,2-Dichloroethane	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Dibromomethane	ND		5.0
Bromodichloromethane	ND		5.0
(cis) 1,3-Dichloropropene	ND		5.0
Toluene	ND		5.0
(trans) 1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
Tetrachloroethene	ND		5.0
1,3-Dichloropropane	ND		5.0

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
METHOD BLANK QUALITY CONTROL
page 2 of 2

Lab ID: MB0410W1

Dilution Factor: 1

Compound	Results	Flags	PQL
Dibromochloromethane	ND		5.0
1,2-Dibromoethane	ND		5.0
Chlorobenzene	ND		5.0
1,1,1,2-Tetrachloroethane	ND		5.0
Ethylbenzene	ND		5.0
m,p-Xylene	ND		10
o-Xylene	ND		5.0
Styrene	ND		5.0
Bromoform	ND		5.0
Isopropylbenzene	ND		5.0
Bromobenzene	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0
n-Propylbenzene	ND		5.0
2-Chlorotoluene	ND		5.0
4-Chlorotoluene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0
tert-Butylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0
sec-Butylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0
p-Isopropyltoluene	ND		5.0
1,4-Dichlorobenzene	ND		5.0
1,2-Dichlorobenzene	ND		5.0
n-Butylbenzene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0
Hexachlorobutadiene	ND		5.0
Naphthalene	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	97	86-118
Toluene-d8	96	88-110
4-Bromofluorobenzene	105	86-115

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
MS/MSD QUALITY CONTROL

Date Extracted: 4-02-96
Date Analyzed: 4-02-96

Matrix: Water
Units: ug/L (ppb)

Dilution Factor: 1

Lab ID: 03-101-6

Compound	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery		RPD
1,1-Dichloroethene	50.0	53.6	107	53.1	106		0.94
Benzene	50.0	52.4	105	54.9	110		4.7
Trichloroethene	50.0	55.8	106	58.8	112	**	5.5
Toluene	50.0	43.3	87	45.3	91		4.5
Chlorobenzene	50.0	46.1	92	48.2	96		4.5

** Compound is outside control limits.

Date of Report: April 15, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

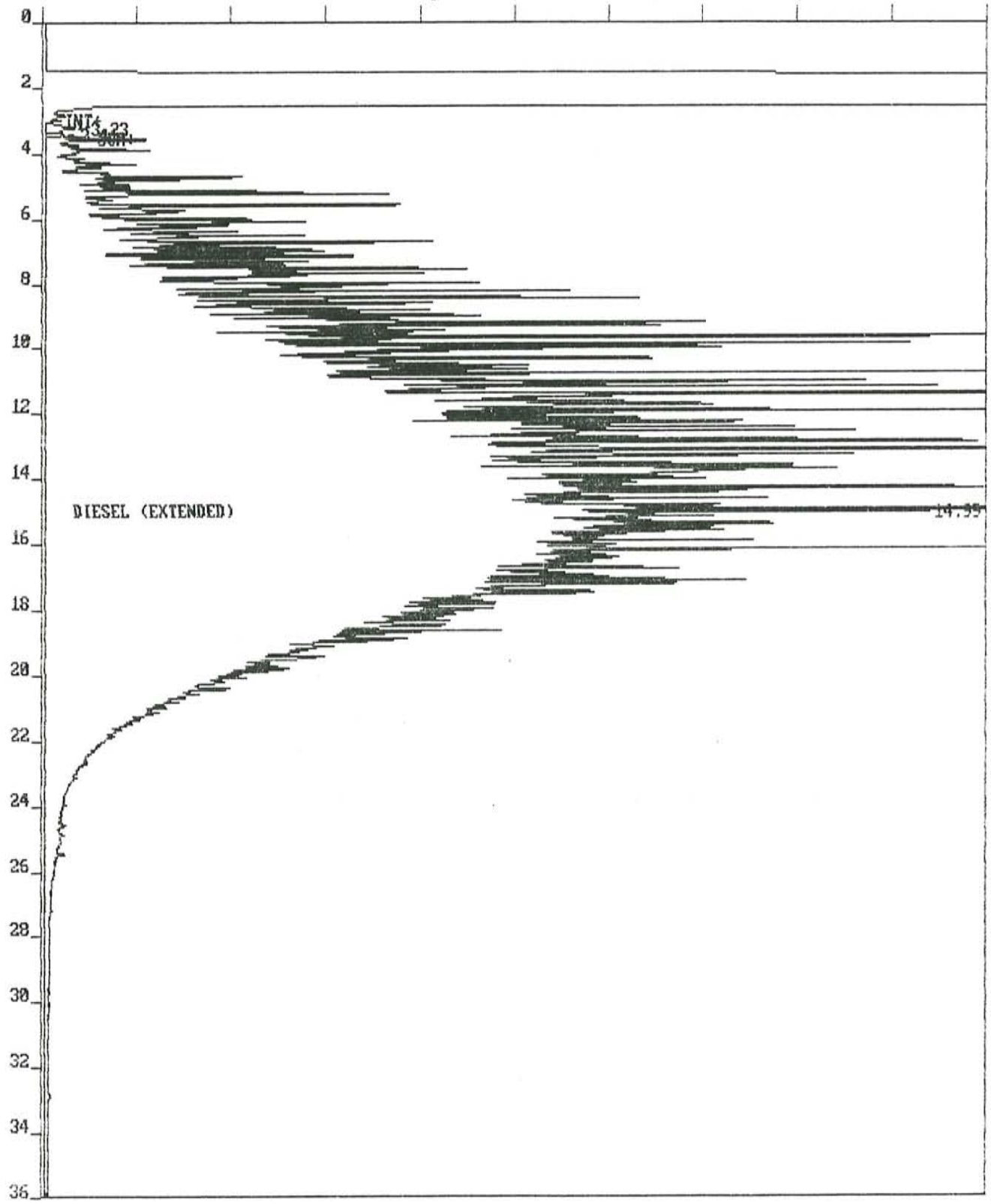
Date Analyzed: 4-8-96

% MOISTURE

Client ID	% Moisture
SUMP-1	13
UST-2 BOTTOM	9.0
UST-1 BOTTOM	18
UST-1 S	14
UST-1 E	5.0
UST-1 9'	19
UST-1 SP1	12
UST-1 SP2	12
UST-2 NE	16
UST-3 BOTTOM	13
UST-3 SW	10
UST-3 NW	8.0
UST-3 12'	9.0
UST-3 SP1	8.0
UST-3 SP2	8.0
SUMP-2	37

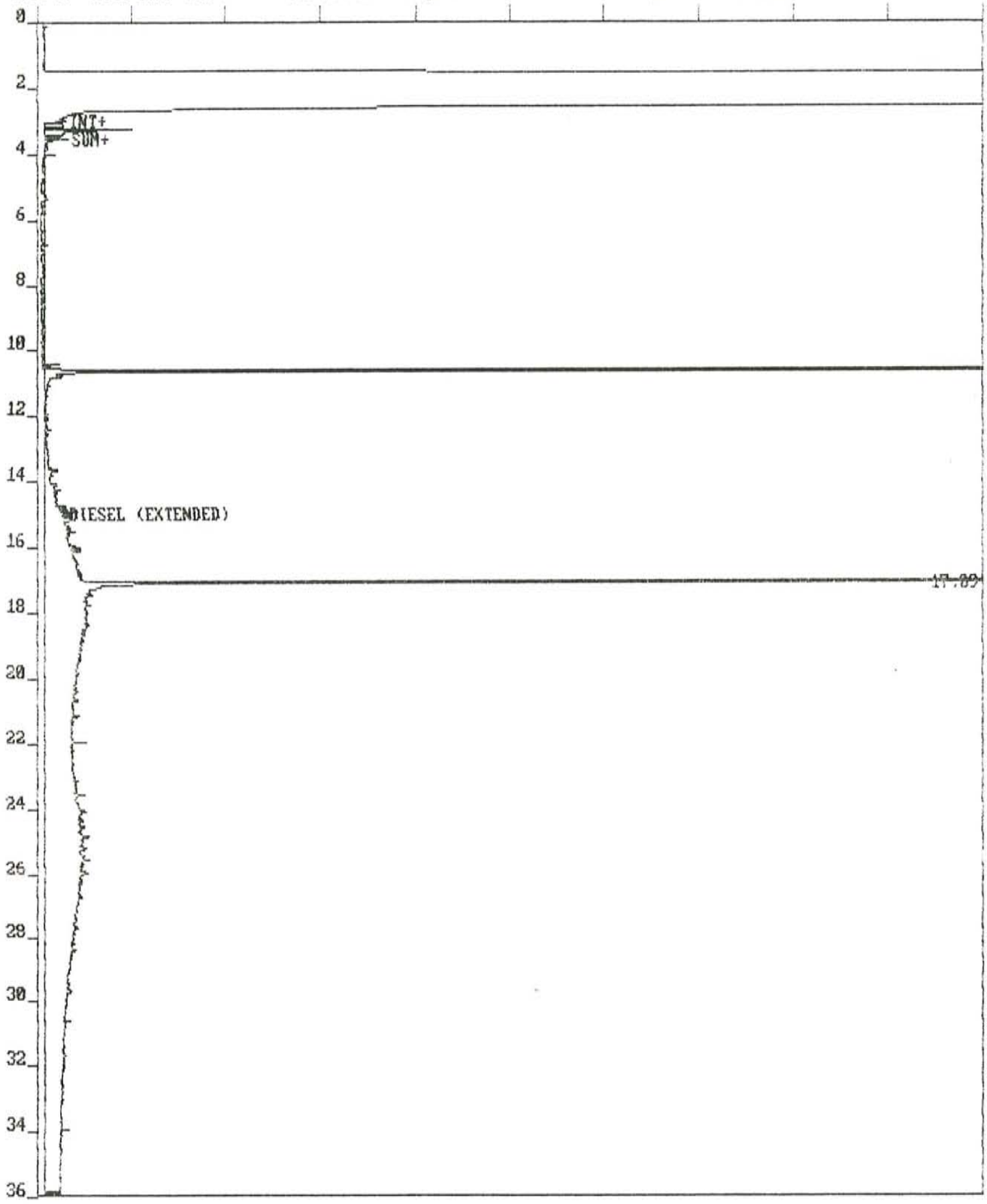
File=C:\CP\DATA1\0409D2.02R Sample name=04-020-3 1:5 Date printed= 04-08-1996 Time= 13:10:12

0.00 to 36.00 min. Low Y = 0.61462 mv High Y = 10.61462 mv Span = 10.00000 mv



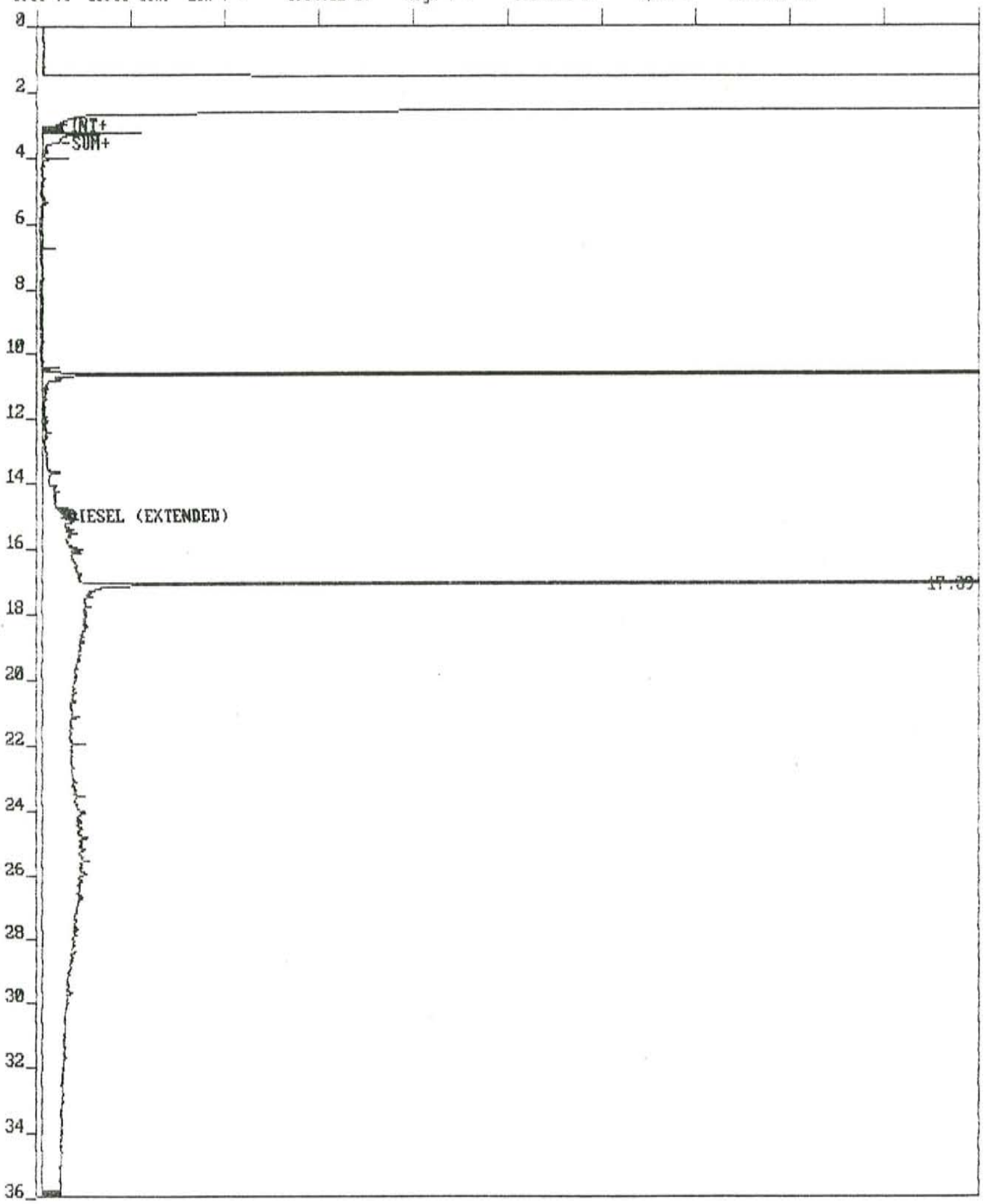
File=C:\CP\DATA1\040802.09R Sample name=04-020-4 Date printed= 04-08-1996 Time= 10:12:52

0.00 to 36.00 min. Low Y = 0.64969 av High Y = 1.64969 av Span = 1.00000 av



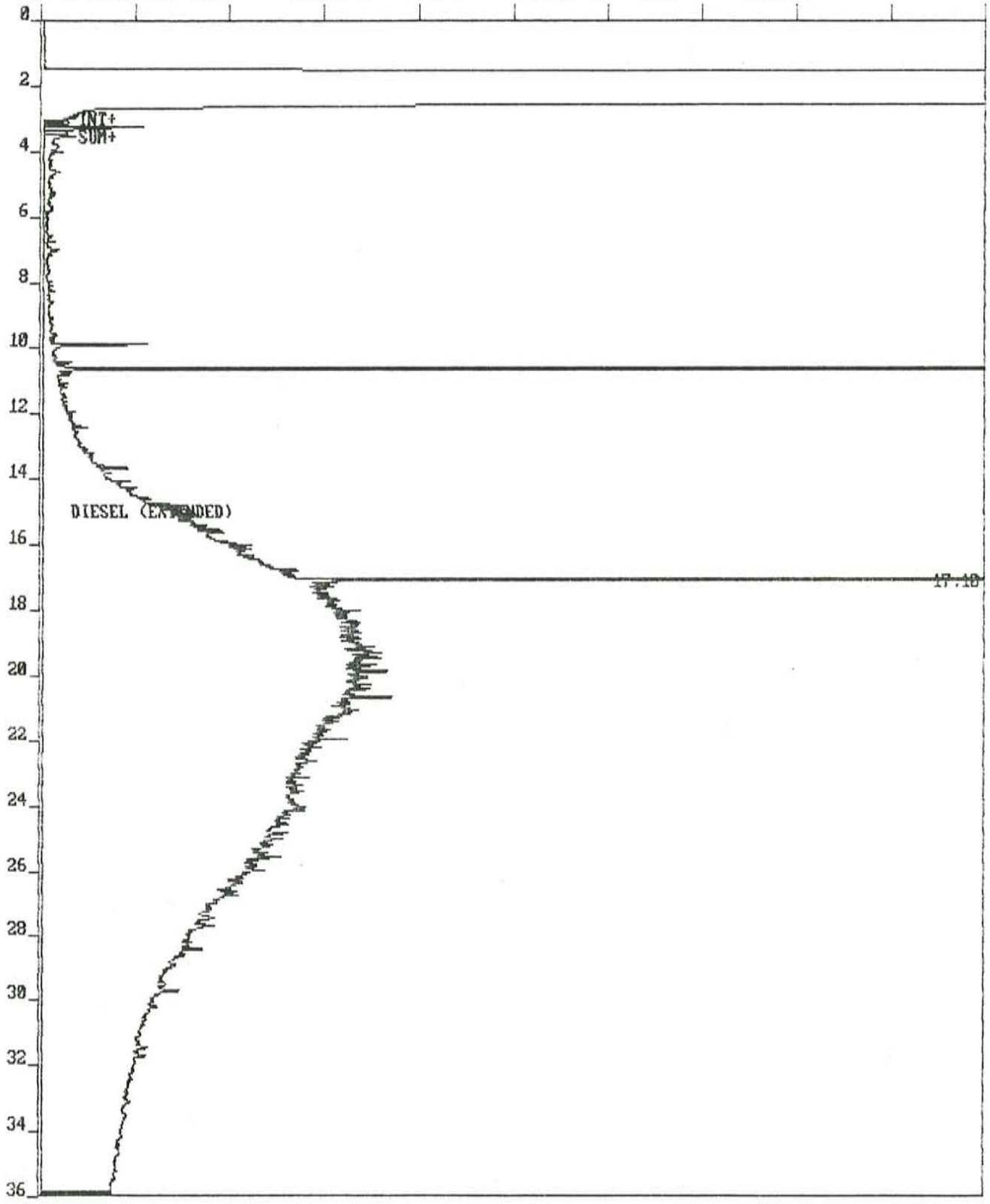
File=C:\CP\DATA1\0408D2.10R Sample name=04-020-4 DUP Date printed= 04-08-1996 Time= 10:13:33

0.00 to 36.00 min. Low Y = 0.64932 mv High Y = 1.64932 mv Span = 1.00000 mv



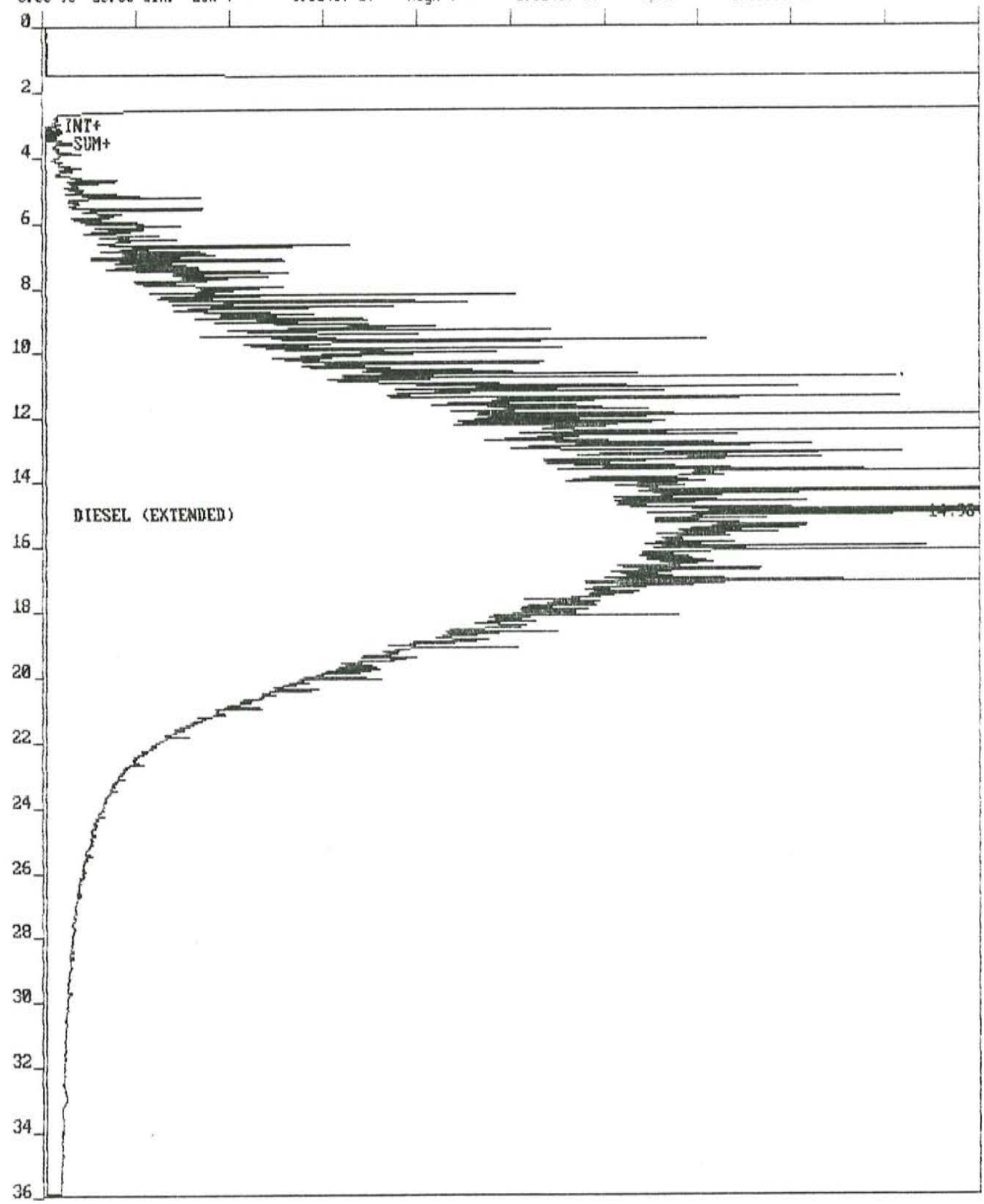
File=C:\CP\DATA1\0408D2.17R Sample name=04-020-S Date printed= 04-08-1996 Time= 10:18:57

0.00 to 36.00 min. Low Y = 0.65159 mv High Y = 1.65159 mv Span = 1.00000 mv



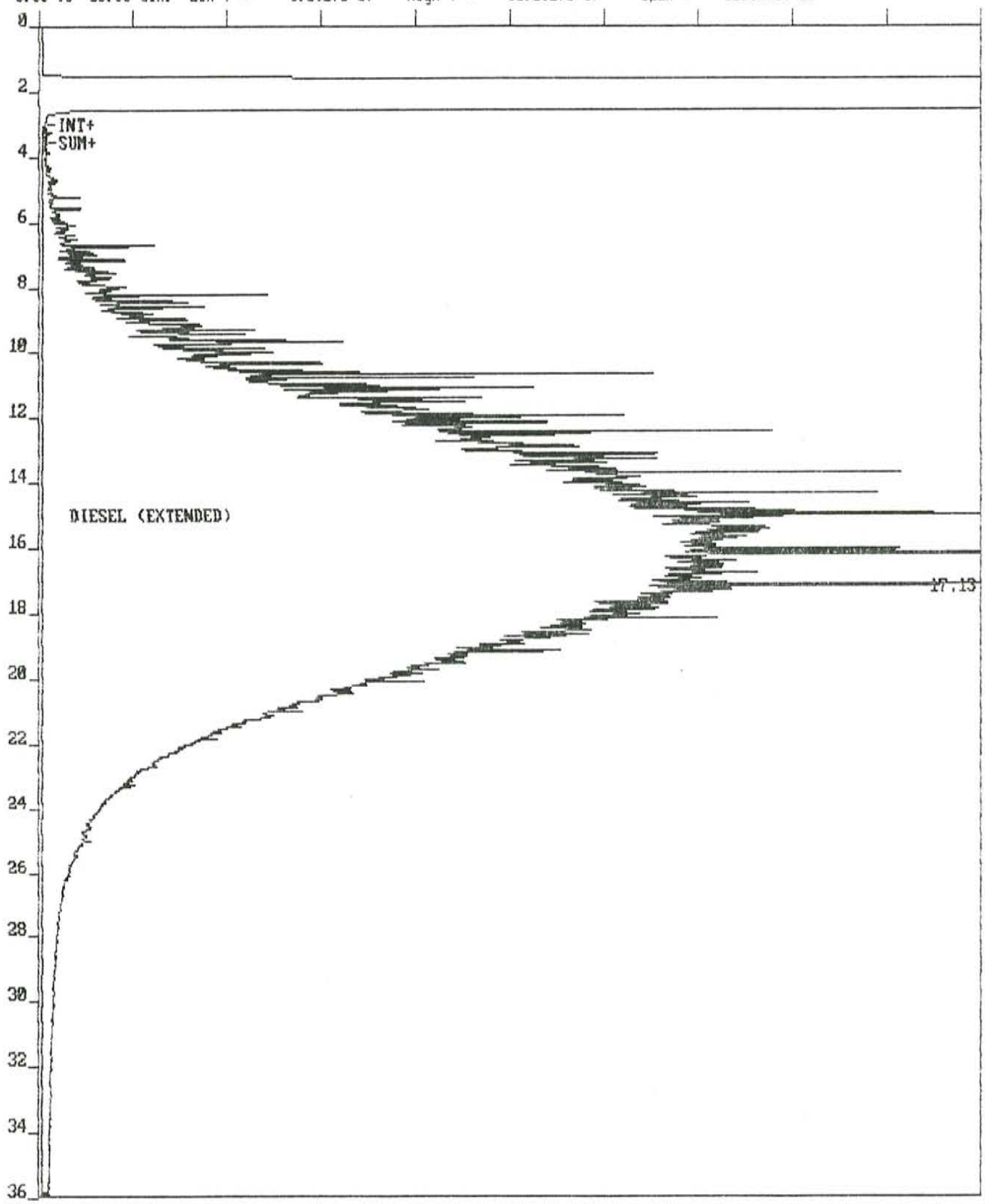
File=C:\CP\DATA1\0408D2.21R Sample name=04-020-6 1:5 Date printed= 04-08-1996 Time= 10:25:03

0.00 to 36.00 min. Low Y = 0.63467 mv High Y = 5.63467 mv Span = 5.00000 mv



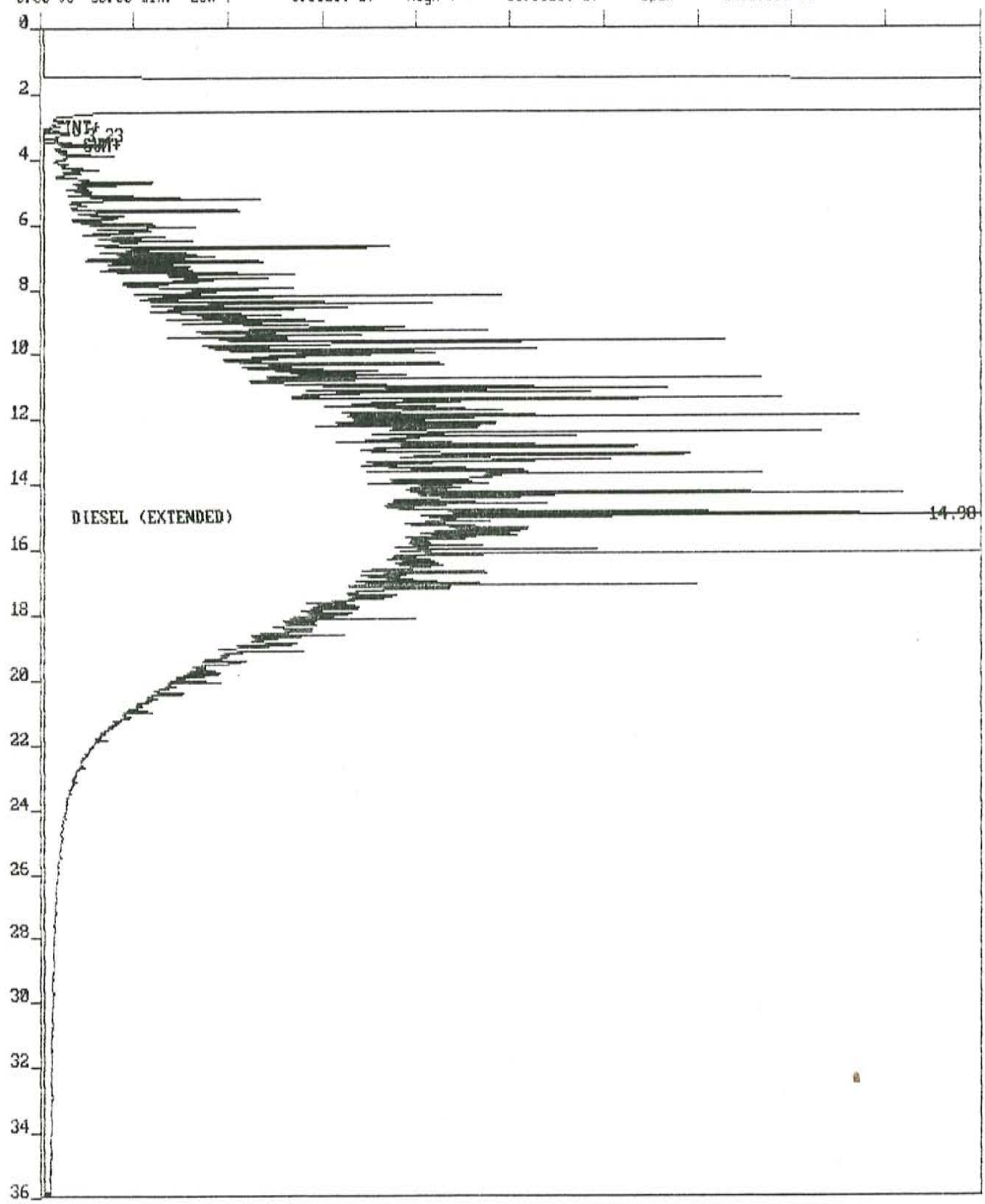
File=C:\CP\DATA1\0408D2.19R Sample name=04-0E0-7 Date printed= 04-08-1996 Time= 10:21:22

0.00 to 36.00 min. Low Y = 0.59275 mv High Y = 15.59275 mv Span = 15.00000 mv



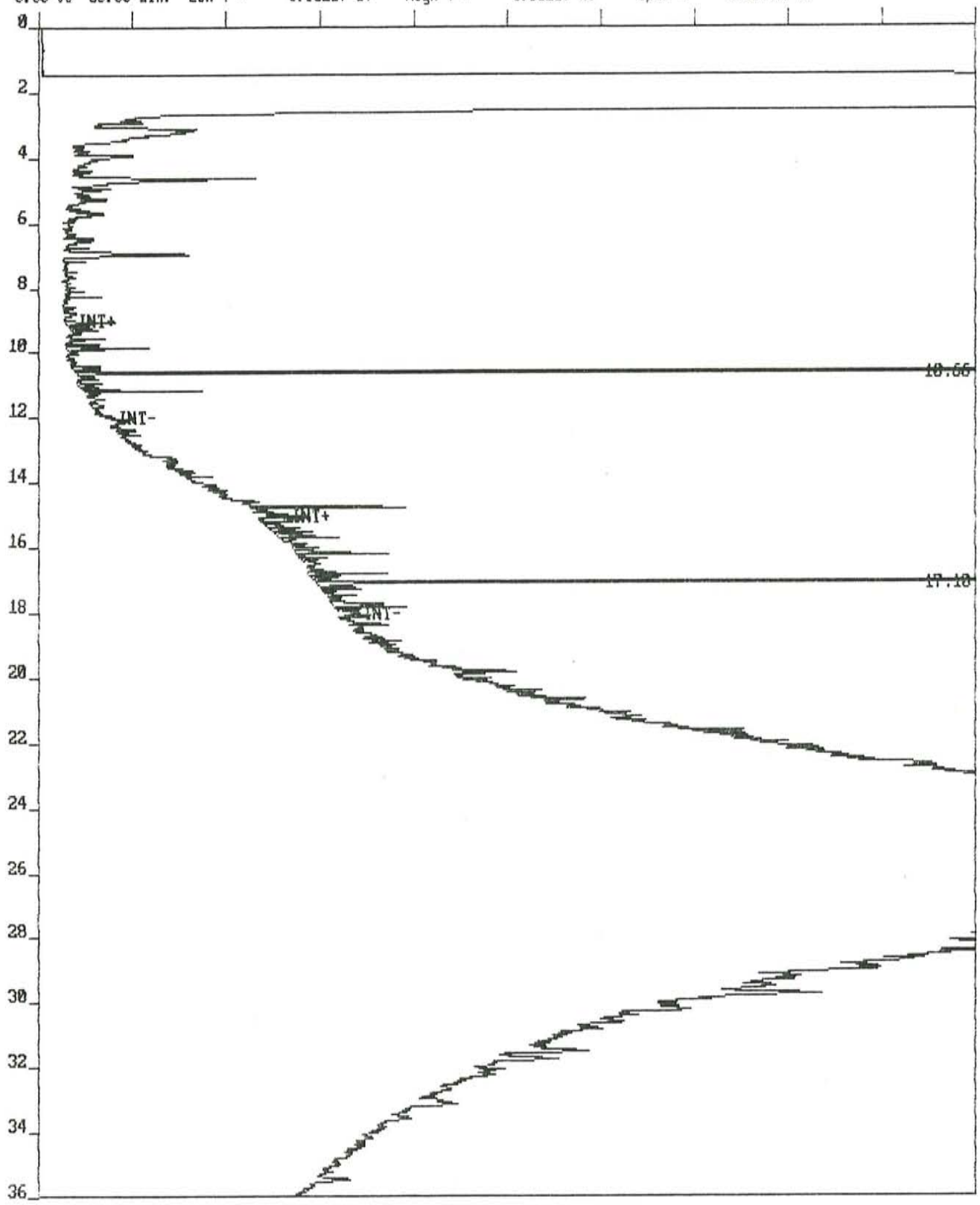
File=C:\CP\DATA1\0408D2.23R Sample name=04-020-3 1:5 Date printed= 04-08-1996 Time= 10:27:06

0.00 to 36.00 min. Low Y = 0.61519 mv High Y = 10.61519 mv Span = 10.00000 mv



File=C:\CP\DATA1\0409D2.05R Sample name=04-020-1 HC Date printed= 04-15-1996 Time= 13:15:39

0.00 to 36.00 min. Low Y = 0.65237 mv High Y = 1.65237 mv Span = 1.00000 mv



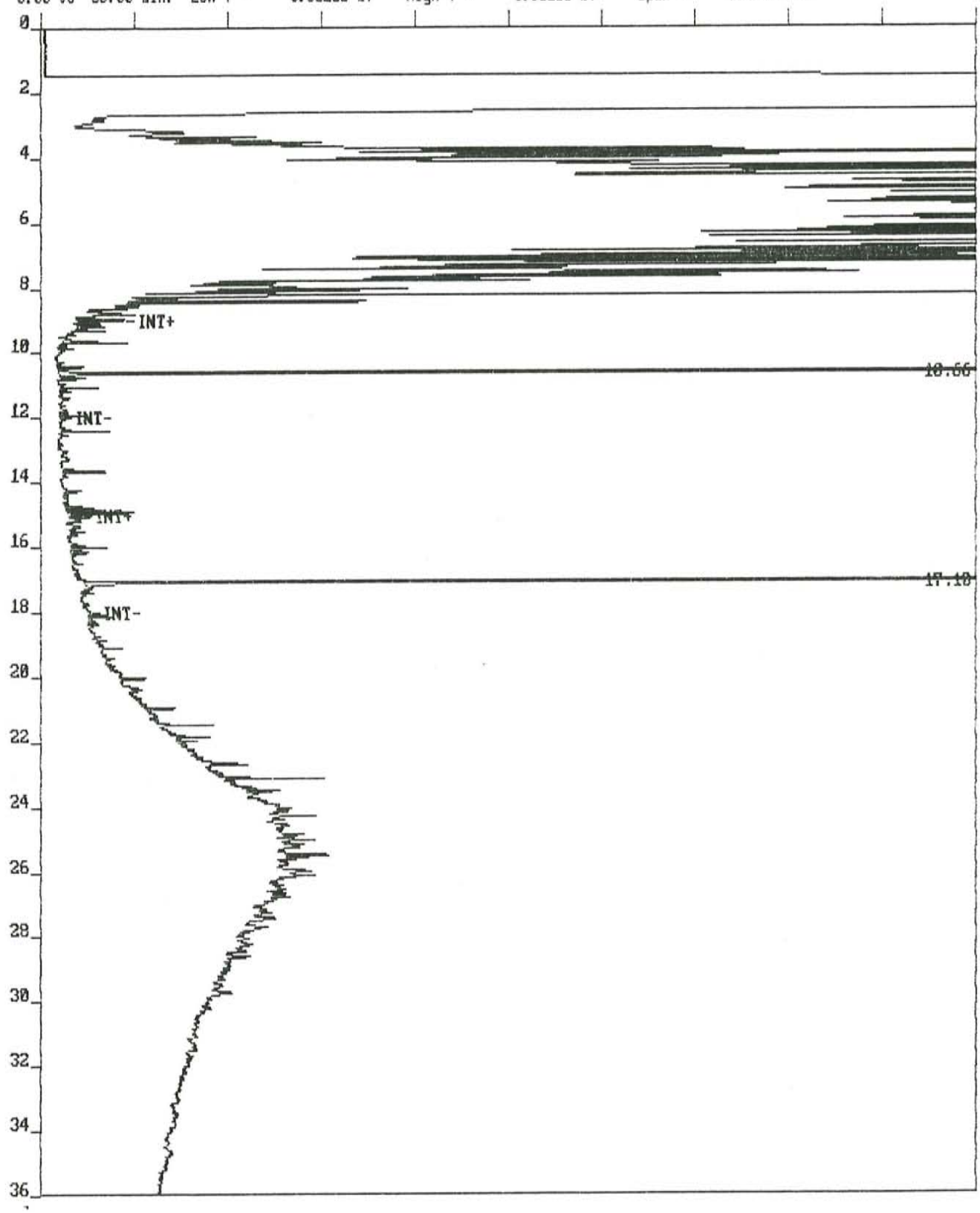
C:\CP\DATA1\Q26F1232.BNC
Data file = C:\CP\DATA1\0409D2.05R
Date stamp = 04/08/96 Time = 15:15:44
Sample name = 04-020-1 HC
Collected on APR 8, 1996 14:39:45 from port # 2
Operator = JMC
Reference file name = Q26F1232b#9804
Instrument = com port 2
Method name = C:\CP\DATA1\SURRD2.MET version # 24
Date method last modified = 04/07/96 Time = 11:15:16
Calibration file = C:\CP\DATA1\01020TD2.CAL version # 3
Date cal file last modified = 01/22/96 Time = 15:11:44
Run time = 36.00 minutes Area reject = 10000
Amount injected = 1 Dilution Factor = 1
Sample Weight = 1 Internal Standard Amount = 1
Sampling rate = 5 per second
Peak detect threshold = 0 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 12944 Version = 5.05 For On Site Envir.
Today's date = 04-15-1996 Time = 13:16:37

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
8	10.657	2-FLOUROBIPHENYL	12.2565	46.4948%	15,745.9	44.155%	VB	0.028	9,493.58	46.1801%
21	17.097	O-TERPHENYL	14.1045	53.5052%	19,914.6	55.845%	VV	0.030	11,064.13	53.8199%

Total area = 35660.55 Total amount = 26.36095 Sample units = PPM Total height = 20557.71

File=C:\CP\DATA1\0409D2.07R Sample name=04-020-10 HC Date printed= 04-15-1996 Time= 13:16:45

0.00 to 36.00 min. Low Y = 0.65258 mv High Y = 1.65258 mv Span = 1.00000 mv



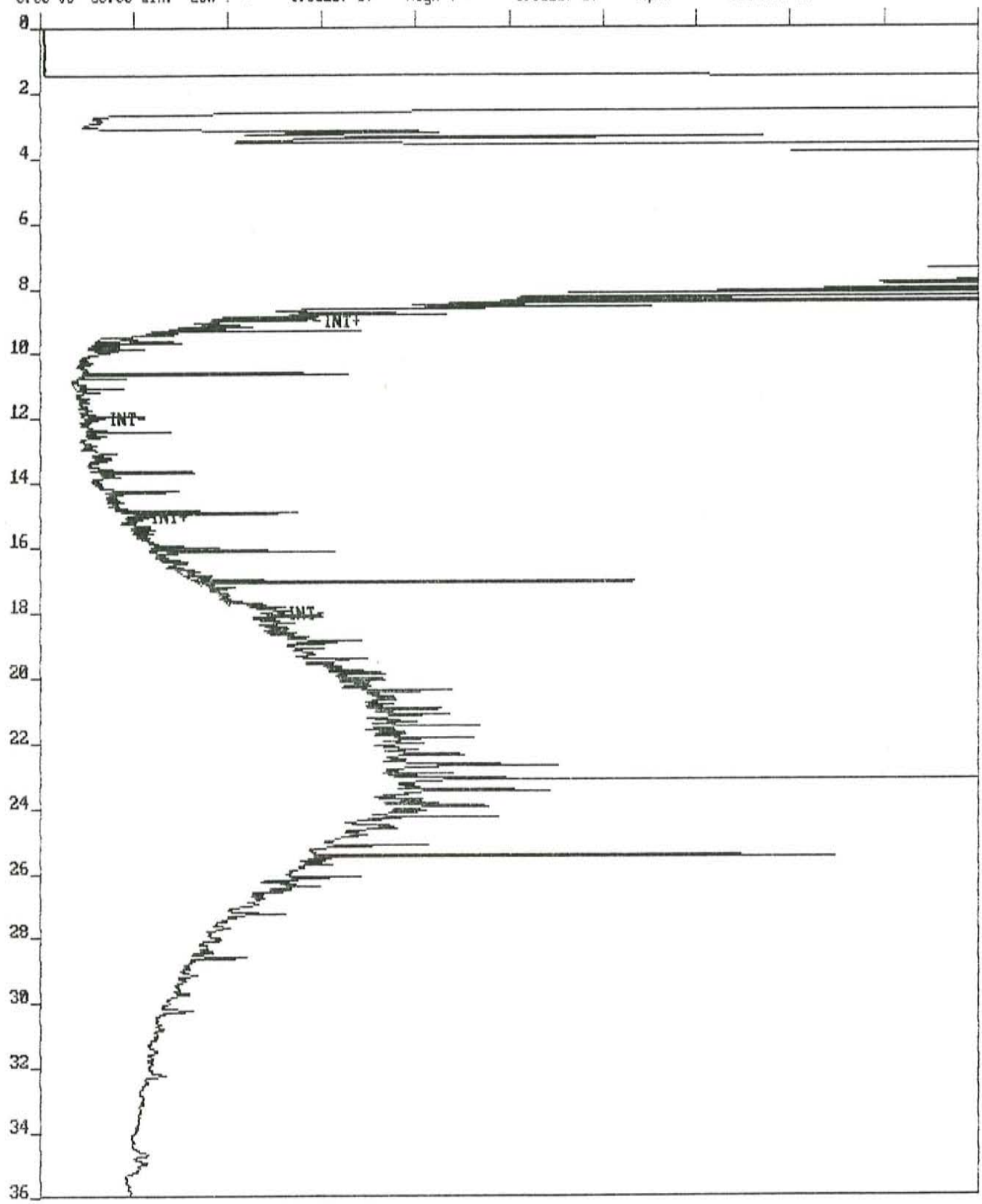
C:\CP\DATA1\Q26F284A.BNC
Data file = C:\CP\DATA1\0409D2.07R
Date stamp = 04/08/96 Time = 16:50:00
Sample name = 04-020-10 HC
Collected on APR 8, 1996 16:14:00 from port # 2
Operator = JMC
Reference file name = Q26F284Ab#9806
Instrument = com port 2
Method name = C:\CP\DATA1\SURRD2.MET version # 24
Date method last modified = 04/07/96 Time = 11:15:16
Calibration file = C:\CP\DATA1\01020TD2.CAL version # 3
Date cal file last modified = 01/22/96 Time = 15:11:44
Run time = 36.00 minutes Area reject = 1000
Amount injected = 1 Dilution Factor = 1
Sample Weight = 1 Internal Standard Amount = 1
Sampling rate = 5 per second
Peak detect threshold = 0 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 12944 Version = 5.05 For On Site Envir.
Today's date = 04-15-1996 Time = 13:17:43

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
7	10.657	2-FLOUROBIPHENYL	12.3899	46.7203%	15,926.3	44.391%	BB	0.028	9,593.47	47.1128%
11	17.100	O-TERPHENYL	14.1294	53.2797%	19,950.7	55.609%	BB	0.031	10,769.28	52.8872%

Total area = 35876.93 Total amount = 26.51937 Sample units = PPM Total height = 20362.74

File=C:\CP\DATA1\0409D2.09R Sample name=04-020-16 HC 1:10 Date printed= 04-15-1996 Time= 13:17:51

0.00 to 36.00 min. Low Y = 0.65287 mv High Y = 1.65287 mv Span = 1.00000 mv



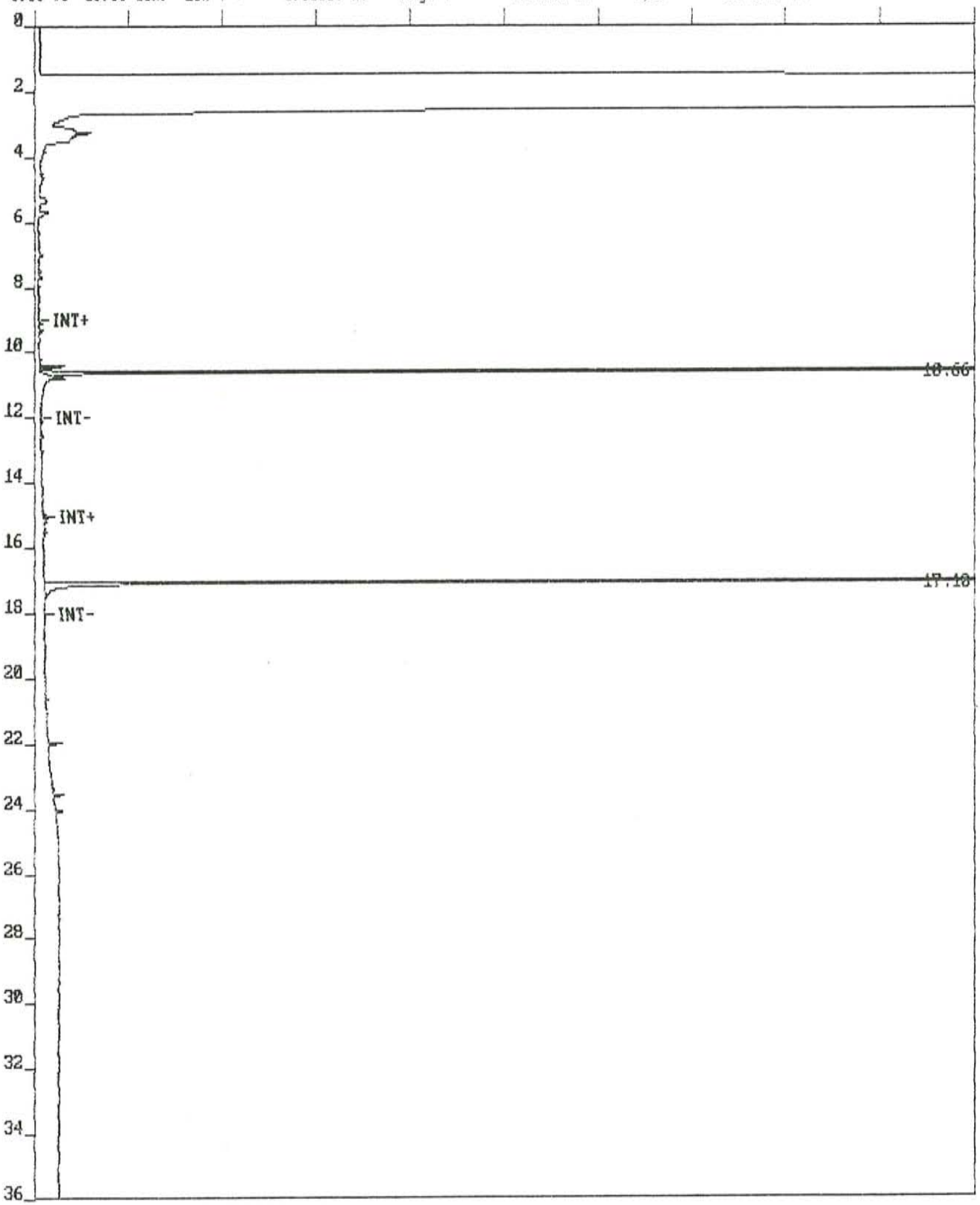
C:\CP\DATA1\Q26F3E3F.BNC
Data file = C:\CP\DATA1\0409D2.09R
Date stamp = 04/08/96 Time = 18:23:42
Sample name = 04-020-16 HC 1:10
Collected on APR 8, 1996 17:47:42 from port # 2
Operator = JMC
Reference file name = Q26F3E3Fb#9808
Instrument = com port 2
Method name = C:\CP\DATA1\SURRD2.MET version # 24
Date method last modified = 04/07/96 Time = 11:15:16
Calibration file = C:\CP\DATA1\0102OTD2.CAL version # 3
Date cal file last modified = 01/22/96 Time = 15:11:44
Run time = 36.00 minutes Area reject = 1000
Amount injected = 1 Dilution Factor = 1
Sample Weight = 1 Internal Standard Amount = 1
Sampling rate = 5 per second
Peak detect threshold = 0 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 12944 Version = 5.05 For On Site Envir.
Today's date = 04-15-1996 Time = 13:18:48

PK Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %

Total area = 0 Total amount = 0 Sample units = PPM Total height = 0

File=C:\CP\DATA1\0409D2.04R Sample name=MB040951 HC Date printed= 04-15-1996 Time= 13:14:57

0.00 to 36.00 min. Low Y = 0.65039 mv High Y = 1.65039 mv Span = 1.00000 mv



C:\CP\DATA1\Q26F0731.BNC
Data file = C:\CP\DATA1\0409D2.04R
Date stamp = 04/08/96 Time = 14:28:48
Sample name = MB0409S1 HC
Collected on APR 8, 1996 13:52:48 from port # 2
Operator = JMC
Reference file name = Q26F0731b#9803
Instrument = com port 2
Method name = C:\CP\DATA1\SURRD2.MET version # 24
Date method last modified = 04/07/96 Time = 11:15:16
Calibration file = C:\CP\DATA1\0102OTD2.CAL version # 3
Date cal file last modified = 01/22/96 Time = 15:11:44
Run time = 36.00 minutes Area reject = 1000
Amount injected = 1 Dilution Factor = 1
Sample Weight = 1 Internal Standard Amount = 1
Sampling rate = 5 per second
Peak detect threshold = 0 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 12944 Version = 5.05 For On Site Envir.
Today's date = 04-15-1996 Time = 13:15:32

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
2	10.657	2-FLOUROBIPHENYL	11.8401	45.3438%	15,183.3	42.964%	BB	0.028	9,198.32	45.9374%
3	17.100	O-TERPHENYL	14.2717	54.6562%	20,156.1	57.036%	BB	0.031	10,825.26	54.0626%

Total area = 35339.4 Total amount = 26.11185 Sample units = PPM Total height = 20023.58

OnSite
Environmental Inc.
Analytical Testing and Mobile Laboratory Services

April 23, 1996

Trent Smith
Enviros, Inc.
25 Central Way, Suite 210
Kirkland, WA 98033-6156

Re: Analytical Data for Project E1/950109
Laboratory Reference No. 9604-020

Dear Trent:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on April 8, 1996.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

Andy Bay
Project Chemist

Enclosures

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 1 of 2

Date Extracted:	4-18-96
Date Analyzed:	4-19-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	04-020-17
Client ID:	**SUMP-2 6'**
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.30
Chloromethane	ND		0.30
Vinyl Chloride	ND		0.30
Bromomethane	ND		0.30
Chloroethane	ND		0.30
Trichlorofluoromethane	ND		0.30
1,1-Dichloroethene	ND		0.30
Methylene Chloride	ND		0.30
(trans) 1,2-Dichloroethene	ND		0.30
1,1-Dichloroethane	ND		0.30
2,2-Dichloropropane	ND		0.30
(cis) 1,2-Dichloroethene	ND		0.30
Chloroform	ND		0.30
1,1,1-Trichloroethane	ND		0.30
Carbon Tetrachloride	ND		0.30
1,1-Dichloropropene	ND		0.30
Benzene	ND		0.30
1,2-Dichloroethane	ND		0.30
Trichloroethene	ND		0.30
1,2-Dichloropropane	ND		0.30
Dibromomethane	ND		0.30
Bromodichloromethane	ND		0.30
(cis) 1,3-Dichloropropene	ND		0.30
Toluene	ND		0.30
(trans) 1,3-Dichloropropene	ND		0.30
1,1,2-Trichloroethane	ND		0.30
Tetrachloroethene	0.077	J	0.30
1,3-Dichloropropane	ND		0.30

J - The value reported was below the practical quantitation limit. The value is an estimate.

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
page 2 of 2

Lab ID: 04-020-17
Client ID: SUMP-2 6'

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.30
1,2-Dibromoethane	ND		0.30
Chlorobenzene	ND		0.30
1,1,1,2-Tetrachloroethane	ND		0.30
Ethylbenzene	ND		0.30
m,p-Xylene	ND		0.60
o-Xylene	ND		0.30
Styrene	ND		0.30
Bromoform	ND		0.30
Isopropylbenzene	ND		0.30
Bromobenzene	ND		0.30
1,1,2,2-Tetrachloroethane	ND		0.30
1,2,3-Trichloropropane	ND		0.30
n-Propylbenzene	ND		0.30
2-Chlorotoluene	ND		0.30
4-Chlorotoluene	ND		0.30
1,3,5-Trimethylbenzene	0.061	J	0.30
tert-Butylbenzene	ND		0.30
1,2,4-Trimethylbenzene	0.050	J	0.30
sec-Butylbenzene	ND		0.30
1,3-Dichlorobenzene	ND		0.30
p-Isopropyltoluene	ND		0.30
1,4-Dichlorobenzene	ND		0.30
1,2-Dichlorobenzene	ND		0.30
n-Butylbenzene	0.033	J	0.30
1,2-Dibromo-3-chloropropane	ND		0.30
1,2,4-Trichlorobenzene	ND		0.30
Hexachlorobutadiene	ND		0.30
Naphthalene	ND		0.30
1,2,3-Trichlorobenzene	ND		0.30

Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	78	*	80-120
Toluene-d8	81		81-117
4-Bromofluorobenzene	102		74-121

J - The value reported was below the practical quantitation limit. The value is an estimate.
* Surrogate recovery data outside control limits due to matrix effects.

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
METHOD BLANK QUALITY CONTROL
page 1 of 2

Date Extracted:	4-18-96
Date Analyzed:	4-19-96
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0418S1
Dilution Factor:	50

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.25
Chloromethane	ND		0.25
Vinyl Chloride	ND		0.25
Bromomethane	ND		0.25
Chloroethane	ND		0.25
Trichlorofluoromethane	ND		0.25
1,1-Dichloroethene	ND		0.25
Methylene Chloride	ND		0.25
(trans) 1,2-Dichloroethene	ND		0.25
1,1-Dichloroethane	ND		0.25
2,2-Dichloropropane	ND		0.25
(cis) 1,2-Dichloroethene	ND		0.25
Chloroform	ND		0.25
1,1,1-Trichloroethane	ND		0.25
Carbon Tetrachloride	ND		0.25
1,1-Dichloropropene	ND		0.25
Benzene	ND		0.25
1,2-Dichloroethane	ND		0.25
Trichloroethene	ND		0.25
1,2-Dichloropropane	ND		0.25
Dibromomethane	ND		0.25
Bromodichloromethane	ND		0.25
(cis) 1,3-Dichloropropene	ND		0.25
Toluene	ND		0.25
(trans) 1,3-Dichloropropene	ND		0.25
1,1,2-Trichloroethane	ND		0.25
Tetrachloroethene	ND		0.25
1,3-Dichloropropane	ND		0.25

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
METHOD BLANK QUALITY CONTROL
page 2 of 2

Lab ID: MB0418S1

Dilution Factor: 50

Compound	Results	Flags	PQL
Dibromochloromethane	ND		0.25
1,2-Dibromoethane	ND		0.25
Chlorobenzene	ND		0.25
1,1,1,2-Tetrachloroethane	ND		0.25
Ethylbenzene	ND		0.25
m,p-Xylene	ND		0.5
o-Xylene	ND		0.25
Styrene	ND		0.25
Bromoform	ND		0.25
Isopropylbenzene	ND		0.25
Bromobenzene	ND		0.25
1,1,2,2-Tetrachloroethane	ND		0.25
1,2,3-Trichloropropane	ND		0.25
n-Propylbenzene	ND		0.25
2-Chlorotoluene	ND		0.25
4-Chlorotoluene	ND		0.25
1,3,5-Trimethylbenzene	ND		0.25
tert-Butylbenzene	ND		0.25
1,2,4-Trimethylbenzene	ND		0.25
sec-Butylbenzene	ND		0.25
1,3-Dichlorobenzene	ND		0.25
p-Isopropyltoluene	ND		0.25
1,4-Dichlorobenzene	ND		0.25
1,2-Dichlorobenzene	ND		0.25
n-Butylbenzene	ND		0.25
1,2-Dibromo-3-chloropropane	ND		0.25
1,2,4-Trichlorobenzene	ND		0.25
Hexachlorobutadiene	ND		0.25
Naphthalene	ND		0.25
1,2,3-Trichlorobenzene	ND		0.25

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	93	80-120
Toluene-d8	94	81-117
4-Bromofluorobenzene	101	74-121

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

EPA 8260
MS/MSD QUALITY CONTROL

Date Extracted: 4-18-96
Date Analyzed: 4-19-96

Matrix: Soil
Units: mg/Kg (ppm)

Dilution Factor: 50

Lab ID: 04-020-17

Compound	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	RPD
1,1-Dichloroethene	2.50	1.72	69	1.79	72	4.1
Benzene	2.50	1.82	73	1.94	78	6.4
Trichloroethene	2.50	1.52	61	1.57	63	3.3
Toluene	2.50	2.07	82	2.12	84	2.3
Chlorobenzene	2.50	2.04	82	2.10	84	2.9

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1

Date Extracted: 04-19-96
Date Analyzed: 04-19-96

Matrix: Soil
Units: mg/Kg (ppm)

Client ID	Lab ID	Dilution Factor	Total Petroleum Hydrocarbons	Flags	PQL
SUMP-1	04-020-1	5.0	**360**		29
UST-2 NE	04-020-9	5.0	**ND**		30
UST-3 BOTTOM	04-020-10	5.0	**170**		29
UST-3 SW	04-020-11	5.0	**31**		28
UST-3 NW	04-020-12	5.0	**ND**		27
UST-3 12'	04-020-13	5.0	**87**		27
UST-3 SP1	04-020-14	5.0	**260**		27
UST-3 SP2	04-020-15	5.0	**350**		27
SUMP-2	04-020-16	200	**60000**		1600
SUMP-2 6'	04-020-17	5.0	**570**		30

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1
METHOD BLANK QUALITY CONTROL

Date Extracted: 4-19-96
Date Analyzed: 4-19-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0419S1

	Dilution Factor	Total Petroleum Hydrocarbons	Flags	PQL
Method Blank	5.0	ND		25

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1
DUPLICATE QUALITY CONTROL

Date Extracted: 4-05-96
Date Analyzed: 4-05-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 04-014-1

	Dilution Factor	Total Petroleum Hydrocarbons	Flags	PQL
Sample	5.0	ND		25
Duplicate	5.0	ND		25
RPD		NA		

Date of Report: April 23, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

Date Analyzed: 4-18-96

% MOISTURE

Client ID	% Moisture
SUMP-2 6'	16

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

May 6, 1996

Trent Smith
Enviros, Inc.
25 Central Way, Suite 210
Kirkland, WA 98033-6156

Re: Analytical Data for Project E1/950109
Laboratory Reference No. 9604-020

Dear Trent:

Enclosed are the results of the analyses, and associated quality control data, of samples submitted on April 8, 1996.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

Andy Bay
Project Chemist

Enclosures

14924 NE 31st Circle • Redmond, WA 98052 • (206) 883-3881 • Fax (206) 885-4603

Date of Report: May 6, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1

Date Extracted: 04-29-96
Date Analyzed: 04-29-96

Matrix: Soil
Units: mg/Kg (ppm)

Client ID	Lab ID	Dilution Factor	Total Petroleum Hydrocarbons	Flags	PQL
UST-2 BOTTOM	04-020-2	5.0	**420**		27

Date of Report: May 6, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1
METHOD BLANK QUALITY CONTROL

Date Extracted: 4-29-96
Date Analyzed: 4-29-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0429S1

	Dilution Factor	Total Petroleum Hydrocarbons	Flags	PQL
Method Blank	5.0	ND		25

Date of Report: May 6, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1
DUPLICATE QUALITY CONTROL

Date Extracted: 4-22-96
Date Analyzed: 4-22-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 04-049-1

	Dilution Factor	Total Petroleum Hydrocarbons	Flags	PQL
Sample	5.0	ND		25
Duplicate	5.0	ND		25
RPD		NA		

Date of Report: May 6, 1996
Samples Submitted: April 8, 1996
Lab Traveler: 04-020
Project: E1/950109

WTPH 418.1
SB/SBD QUALITY CONTROL

Date Extracted: 4-22-96
Date Analyzed: 4-22-96

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: SB0422S1

	Dilution Factor	Total Petroleum Hydrocarbons	Percent Recovery	Flags	PQL
Spike Blank @ 100 ppm	5.0	98.2	98		25
Spike Blank Duplicate	5.0	98.2	98		25
RPD		0.0%			

Chain Of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (206) 885-4603 • **Phone: (206) 883-3881**

Company: ENVIROS INC.
Project No: E1/9501.09
Project Name: NUKAY
Project Manager: TRENT SMITH

Turn Around Time (Check One): ☐ Same Day ☐ 24 Hours ☐ 48 Hours ☒ Standard ☐ (other)

Project Chemist: HAB

Laboratory No. 04-020

Requested Analysis

No.	Sample Identification	Date Sampled	Time Sampled	Matrix	Cont	WTPH-HCID	WTPH-G/BTEX	WTPH-D (extended)	WTPH-418.1	Volatiles by 8240/624	Volatiles by 8260	Chlorinated Volatiles by 8240/8260/624	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8080/608	Total RCRA Metals (8)	TCLP Metals	+ 8260							% Moisture
1	SUMP-1	4/4/96		S	1	X			⊗									X							X
2	UST-2 BOTTOM	4/4/96		S	1				⊗									X							X
3	UST-1 BOTTOM	4/5/96						X																	X
4	UST-1 S							X																	
5	UST-1 E							X																	
6	UST-1 9'							X																	
7	UST-1 SP1							X																	
8	UST-1 SP2							X																	
9	UST-2 NE								⊗									X							
10	UST-3 BOTTOM					X			⊗									X							
11	UST-3 SW								⊗									X							
12	UST-3 NW								⊗									X							

RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM ENVIROS INC.	TIME 11:40	FIRM OSE.	TIME 11:45
RELINQUISHED BY	DATE	RECEIVED BY	DATE
FIRM	TIME	FIRM	TIME
REVIEWED BY		DATE REVIEWED	

COMMENTS:
* BEST DETECTION FOR VC + PCE DEGRADATION PRODUCTS -- NEED NON-CHLORINATEDS
+ NEED ALL CHROMATOGRAMS
⊗ Added per T. Smith Request 4/18/96 HAB

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain Of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (206) 885-4603 • **Phone: (206) 883-3881**

Company: ENVIROS INC
Project No: EI/950109
Project Name: NUWAY
Project Manager: Trent Smith

Turnaround Requested (Check One): ☐ Same Day ☐ 24 Hours ☐ 48 Hours ☒ Standard ☐ ______ (other)

Project Chemist: AAB

Laboratory No. 04-020

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	WTPH-HCID	WTPH-G/BTEX	WTPH-D	WTPH-418.1	Volatiles by 8240/624	Volatiles by 8260	Chlorinated Volatiles by 8240/8260/624	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8080/608	Total RCRA Metals (8)	TCLP Metals	* 8260	ARCHIVE	% Moisture
13	UST-3 12'	4/5/96		S	1				⊗									X		X
14	UST-3 SP1	↓		↓	↓				⊗									X		↓
15	UST-3 SP2	↓		↓	↓				⊗									X		↓
16	SUMP-2	↓		↓	↓	X			⊗									X		X
17	SUMP 2 GI	↓		↓	↓				⊗									⊗	X	⊗
18	PRODUCT-1	4/4/96		L	1					X								~~X~~		~~X~~
19	TRIP BLANK	4/3/96		L	1													X		
20	MW-1 GW	4/5/96			2													X		
21	MW-2 GW	↓		↓	2													X		
22	MW-3 GW	↓		↓	2													X		
23	~~[illegible]~~ DUPLICATE	↓		↓	2													X		

Relinquished by	Date	Received by	Date
[signature]	4/8/96	Teresa Hanson	4/8/96
Firm: ENVIROS INC.	Time: 11:40	Firm: OSE.	Time: 11:45
Relinquished by	Date	Received by	Date
Firm	Time	Firm	Time
Reviewed by		Date Reviewed	

COMMENTS:
* SEE p. 1
⊗ Added per T. Smith request 4/18/96 AAB

APPENDIX C: DISPOSAL PERMITS AND DOCUMENTS

Certification No. 96-1199
Billing Acct. No. 12309
71

BILL OF LADING
INDUSTRIAL WASTE

REGIONAL DISPOSAL COMPANY
200 - 112th Avenue NE, Suite 300
Bellevue, WA 98004
Telephone: (206) 646-2400 / Fax: (206) 646-2440

This Bill of Lading augments the Master Service Agreement ("Agreement") entered into by Enviros, Inc. ("Customer") and Regional Disposal Company ("RDC") on 4/26/96 (date). The terms herein are made a part of the Agreement. In the event of conflict between this Bill of Lading and the Agreement, the terms of the Agreement prevail.

RDC hereby authorizes the Wastes ("Waste") described in Certification No. 96-1199, signed by Customer on 4/26/96 (date), for disposal at Roosevelt Regional Landfill. Customer shall present a copy of this Bill of Lading with each shipment delivered.

Location of Waste: Yakima WA

Method of Shipment: Truck - Enviros, Inc.

Additional Fees (e.g., laboratory fees, transportation fees, special handling fees, etc. If none, so state):

$10.00 per drum for tipping & disposal

PERFORMANCE DATE

FOR RDC TRANSPORTATION: Customer shall make the Waste available for shipment no later than N/A (date). RDC shall transport the Waste no later than N/A (date), unless RDC notifies the Customer in writing that Waste transport shall be suspended or canceled due to RDC's exercise of its right to inspect or analyze the Waste (as provided in the Agreement).

FOR CUSTOMER TRANSPORTATION: Customer shall begin delivery of the Waste at [*check one*];

X Roosevelt Regional Landfill. no MRO. Seattle Transfer Station located at Third and Lander.

Waste delivery shall begin no later than 4/26/96 (date), and shall complete delivery of the Waste no later than 5/26/96 (date), unless RDC notifies Customer in writing to suspend or cancel the waste delivery due to RDC's exercise of its right to inspect or analyze the Waste (As provided in the Agreement).

CUSTOMER	REGIONAL DISPOSAL COMPANY
Enviros, Inc Consultant for Wash. Dept. of Ecology	Michelle R Dobbs
Signature	Signature
Kathleen Goodman - prog mgr.	Michelle R. Dobbs - Sales Coordinator
Kathleen Goodman - Principal	
Printed Name and Title	Printed Name and Title
4/29/96	4/29/96
Date	Date

ALL TRUCKS MUST HAVE A COPY OF THIS BILL OF LADING WHEN DELIVERING WASTE TO THE TRANSFER STATION OR TO THE LANDFILL.

Revised: 1/26/96

TOTAL P.05

APPENDIX C: DISPOSAL PERMITS AND DOCUMENTS

CITY OF YAKIMA

WASTEWATER DIVISION
DEPARTMENT OF ENGINEERING & UTILITIES
FAX (509) 575-6116 SCAN 278-6077
2220 E. VIOLA, YAKIMA, WASHINGTON 98901

Wastewater 575-6078
Engineering..... 575-6111
Water/Irrigation 575-6154

Permit No.CY9602

AUTHORIZATION TO DISCHARGE

In accordance with the provisions of Yakima Municipal Code Chapter 7.65 " SEWER USE AND PRETREATMENT REGULATIONS"

Industry Name: Enviros
Location Address: 801 S 3rd St, Yakima
Mailing Address: 25 Central Way Suite 210, Kirkland WA 98033
Site Name: Nu Way Cleaners
is hereby authorized to discharge groundwater and well development water from the above named facility into the City of Yakima sewer system in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in this authorization.

Amount of Discharge: 50,000 gallons

Parameter	Daily Maximums	Monthly Average
See Attached		

All discharges authorized herein shall be consistent with the terms and conditions of this authorization. The discharge of any pollutant more frequently or at a level in excess of that authorized shall constitute a violation of this authorization.

This authorization must be posted in a conspicuous place at the job site where the discharge is taking place. The discharge will be into the sanitary sewer system at the location address above.

Failure to comply with the provisions listed herein can result in authorization revocation and/ or fines and administrative actions that can include fines of from $1,000 to $10,000 per day of violation, civil litigation, criminal prosecution, and suspension of sewer services.

This authorization shall become effective on May 8, 1996 and expire at midnight on May 7, 1997.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this date, an application must be filed for reissuance of this authorization in accordance with the requirements of the City of Yakima Municipal Code Chapter 7.65, a minimum of 90 days prior to the expiration date.

By: Pete Hobbs
Environmental Analyst

Issued this 8th day of May, 1996
cc: Rick Frye WDOE
City Attorney

CITY OF YAKIMA

WASTEWATER DIVISION
DEPARTMENT OF ENGINEERING & UTILITIES
FAX (509) 575-6116 SCAN 278-6077
2220 E. VIOLA, YAKIMA, WASHINGTON 98901

Wastewater 575-6078
Engineering..... 575-6111
Water/Irrigation 575-6154

City of Yakima
Pretreatment Program
Discharge Limits

Material	Daily Maximum Concentration (mg/L)
Arsenic (As)	5.0
Barium (Ba)	100.0
Benzene	0.5
Beryllium (Be)	1.0
Cadmium (Cd)	1.0
Carbon Tetrachloride	0.5
Chlorobenzene	100.0
Chloroform	6.0
Chromium (Cr)	5.0
Copper (Cu)	2.0
o-Cresol	200.0
m-Cresol	200.0
p-Cresol	200.0
Cyanide (total) (CN)	1.5
1,4-Dichlorobenzene	7.5
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
2,4-Dinitrotolulene	0.13
Ethylbenzene	1.4
Hexachlorobenzene	0.13
Hexachloro-1,3-butadiene	0.5
Lead (Pb)	1.5
Mercury (Hg)	0.2
Methylene Chloride	1.7
Methyl Ethyl Ketone	200.0
Nickel (Ni)	2.0
Nitrobenzene	2.0
Pentachlorophenol	2.0
Selenium (Se)	1.0
Silver (Ag)	5.0
Tetrachloroethylene	0.7
Toluene	1.4
Trichloroethylene	0.5
2,4,5-Trichlorophenol	300.0
2,4,6-Trichlorophenol	2.0
Vinyl Chloride	0.2
Xylene	1.4
Zinc (Zn)	5.0

Certification No. 96-1199
Billing Acct. No. 123009
71

BILL OF LADING
INDUSTRIAL WASTE

REGIONAL DISPOSAL COMPANY
200 - 112th Avenue NE, Suite 300
Bellevue, WA 98004
Telephone: (206) 646-2400 / Fax: (206) 646-2440

This Bill of Lading augments the Master Service Agreement ("Agreement") entered into by Enviros, Inc. ("Customer") and Regional Disposal Company ("RDC") on 4/26/96 (date). The terms herein are made a part of the Agreement. In the event of conflict between this Bill of Lading and the Agreement, the terms of the Agreement prevail.

RDC hereby authorizes the Wastes ("Waste") described in Certification No. 96-1199, signed by Customer on 4/26/96 (date), for disposal at Roosevelt Regional Landfill. Customer shall present a copy of this Bill of Lading with each shipment delivered.

Location of Waste: Yakima, WA

Method of Shipment: Truck - Enviros, Inc.

Additional Fees (e.g., laboratory fees, transportation fees, special handling fees, etc. If none, so state):

$10.00 per drum for tipping & disposal

PERFORMANCE DATE

FOR RDC TRANSPORTATION: Customer shall make the Waste available for shipment no later than N/A (date). RDC shall transport the Waste no later than N/A (date), unless RDC notifies the Customer in writing that Waste transport shall be suspended or canceled due to RDC's exercise of its right to inspect or analyze the Waste (as provided in the Agreement).

FOR CUSTOMER TRANSPORTATION: Customer shall begin delivery of the Waste at [*check one*]:

☒ Roosevelt Regional Landfill   ☐ NO MRO. Seattle Transfer Station located at Third and Lander. KG

Waste delivery shall begin no later than 4/26/96 (date), and shall complete delivery of the Waste no later than 5/26/96 (date), unless RDC notifies Customer in writing to suspend or cancel the waste delivery due to RDC's exercise of its right to inspect or analyze the Waste (As provided in the Agreement).

CUSTOMER	REGIONAL DISPOSAL COMPANY
Enviros, Inc., Consultant for Wash. Dept. of Ecology / Kathleen Goodman, prog mgr. (Signature)	Michelle R Dobbs (Signature)
Kathleen Goodman, Principal (Printed Name and Title)	Michelle R. Dobbs - Sales Coordinator (Printed Name and Title)
4/29/96 (Date)	4/29/96 (Date)

ALL TRUCKS MUST HAVE A COPY OF THIS BILL OF LADING WHEN DELIVERING WASTE TO THE TRANSFER STATION OR TO THE LANDFILL.

Revised: 1/26/96

7. **Restrictions on Transportation Routes.** The Landfill's permits preclude trucking of Landfill-bound wastes via US 97 between Toppenish and Goldendale, and via routes through the Columbia River Gorge National Scenic Area (unless the IW originates in these areas). To comply with these restrictions, neither Customer nor RDC shall transport Customer's IW by truck on these routes.

8. **Term and Notices.** This Agreement shall remain in effect until canceled. Either party may cancel with or without cause upon thirty days written notice. All notice provided to RDC under this Agreement shall be by US mail to RDC (Attn.: Contract Administrator), 200 - 112th Avenue NE, Suite 300, Bellevue, WA 98004. All notices or correspondence due to Customer under this Agreement shall be by US mail to:

X Name: Kathleen Goodman (Please Print) Principal (Title)

X Address: 25 Central Way, #210 Kirkland WA 98033 (Street, City, State, Zip)

X Telephone: (206) 827-5525 Fax (206 827-3299

9. **Unenforceability.** If any provision contained in this Agreement is held to be unenforceable by a court of law or equity, this Agreement shall be construed as if such provision did not exist, and the unenforceability of such provision shall not be held to render any other provision of this Agreement unenforceable.

10. **Cost or Attorney Fees.** If either Party finds it necessary to retain an attorney to interpret or enforce this Agreement as a result of any default or breach of this Agreement, the prevailing party shall be entitled to recover, in addition to all other relief, all attorney fees, costs and expenses incurred by the prevailing party in connection with such default or breach.

11. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Washington.

12. **Entire Agreement.** This Agreement and any related signed Certificates or Bill of Lading forms constitutes the entire agreement between Customer and RDC relating to the transport or disposal of IW and supersedes any and all prior agreements, whether written or oral, that may exist between Customer and RDC. This Agreement shall control in the event of conflict with terms which may be contained in Certification or Bill of Lading forms signed by RDC or Customer prior to or subsequent to this Agreement.

CUSTOMER	REGIONAL DISPOSAL COMPANY
X Enviros, Inc, Consultant for the Wash. Dept of Ecology C/O Kathleen Goodman, Proj. Mgr. (Signature)	Michelle R. Dobbs (Signature)
X Kathleen Goodman Principal (Printed Name and Title)	Michelle R. Dobbs - Sales Coordinator (Printed Name and Title)
X 4/29/96 (Date)	4/29/96 (Date)

Revised: 2/95

LOAD TICKET

ANDERSON

Rock & Demolition Pits
Petroleum Contaminated Soils Site
Topsoil ~ Shale ~ Crushed Rock

№ 6102

41 Rocky Top Road
Yakima, WA 98908

Bus. (509) 965-3621
Fax (509) 965-8656

CERTIFIED PUBLIC SCALE

21,980

Name E. E. Lewis Const
Address

Phone Home
Office

P.O. #
Job # Mu. Way Cleanup
Hauled by Tim Pedersen

Date	Sold by	Cash	Charge	Received by
4/14/96				

WEIGHT TICKET #	TIME	TRUCK NO.	QUANTITY	PRODUCT	UNIT PRICE	AMOUNT
	0854	1 #1	- 10 cu yds	Wood		
		2		Demolition	05.00	50.00
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		TOTAL				

DATE BILLED

3309

CUSTOMER AGREES TO PAY (a) A LATE CHARGE OF 1.5% PER MONTH IF ACCOUNT IS NOT PAID WITHIN 10 DAYS OF INVOICE, AND (b) ATTORNEY'S FEES INCURRED IN COLLECTION.

"Speed"

LEWIS CONSTRUCTION
2802 SOUTH 1st AVENUE
UNION GAP, WASHINGTON 98903
PHONE (509) 966-4911
Contractors Reg. No. LE-WI-SC-253-LE

June 3, 1996

Nu-Way Cleaners
801 S. 3rd Street
Yakima, WA 98901

This certifies that 500 gallons of cleaning solvent was pumped from underground tanks at the above location. This material was transported to Lewis Construction, 2802 S. 1st. Avenue, where it will be recycled as parts cleaner.

Thank You,

Earl E. Lewis

Earl E. Lewis
Owner

Joe Hall Construction Inc.

JO-EH-AC-259 RT
MEMBER PEI
5303 PACIFIC HWY E. #276
FIFE, WA 98424

(206) 922-6815
(206) 838-1027

DATE April 8, 1996

NAME Nu-Way Cleaners

ADDRESS 801 S. 3rd Street
Yakima, WA 98901

REFERENCE: Clean Tank Certification #W000-788

One (1) 1,250 gallon tank
One (1) 550 gallon tank
One (1) 285 gallon tank
One (1) 500 gallon tank

Degas open and clean tank's stated above for safe transport and scrap, to Northwest Truck and salvage Company, Union Gap, WA

Thanks,

Hall Const.

Don Geck

Yakima Office
P.O. Box 477
Selah, WA
98942
Phone # 697-4858

PETROLEUM SYSTEM ENGINEERING

CONSULTING CONSTRUCTION & TANK TESTING

REGIONAL DISPOSAL CO.

P.O. Box 338
Roosevelt, WA 99356

TICKET NUMBER 245302 *** COMPLETED WEIGHT TICKET ***

TRUCK ID: HU5785 ACCOUNT: 12309 Environs, INC

25 Central Way
Kirkland, WA 98033-

COMMODITY: 71 Industrial Waste
SOURCE: Yakima, WA
JOB ID: 96-1199
CONTAINER #: SEAL #:

CUSTOMER TICKET #: CUSTOMER WEIGHT: 0 LBS
COMMENTS:

	WEIGHT	TIME	DATE	
IN:	10440 LBS	10:02	05/13/96	NET
OUT:	7220 LBS	10:42	05/13/96	WEIGHT: 3220 LBS / 1.610 TONS

Weighmaster: JILL Driver:

X
CUSTOMER SIGNATURE

I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

Recycled

DRIVER COPY

APPENDIX D: RESULTS OF 1995 INVESTIGATION

995

Soil
copies

Manchester Environmental Laboratory

7411 Beach Dr E. Port Orchard Washington 98366

CASE NARRATIVE

Subject: Nuway Cleaners
Samples: 95248136 - 143
Case No. 115995
Officer: Mark Peterschmidt
By: Greg Perez
Organics Analysis Unit

VOLATILE ORGANIC ANALYSIS

SUMMARY:

Sample 248138 was not suitable for volatile organic analysis. The composition of this sample was comprised of large pieces of gravel and small rocks. These could not be weighed into a purge vessel in any representative way. An attempt was made at analysis which was not conclusive and was not reported.

No analytical problems were encountered with any of the other soil samples.

ANALYTICAL METHODS:

Volatile organic compounds were analyzed using Manchester modification of the EPA Method 8260 purge-trap procedure with capillary GC/MS analysis. Normal QA/QC procedures were performed on the samples.

BLANKS:

Low levels of certain target compounds were detected in the laboratory blanks. If the concentrations of the compounds in the sample are greater than or equal to five times the concentrations of the compounds in the associated method blank, they are considered native to the sample.

SURROGATES:

Surrogate recoveries were within acceptable limits for the sediment samples..

HOLDING TIMES:

The sediment samples were analyzed within the recommended 14 day holding time.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE:

Any target compounds not within acceptable QC limits for both percent recovery and Relative Percent Differences (RPD) have been qualified as estimates.

DATA QUALIFIER CODES:

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248136 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: TP-1-9' **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.8	U	Ethylbenzene	1.8	U
Chloromethane	1.8	U	m & p-Xylene	3.6	U
Vinyl Chloride	1.8	U	o-Xylene	1.8	U
Bromomethane	1.8	U	Total Xylenes	5.4	U
Chloroethane	1.8	U	Benzene, Ethenyl-(Styrene)	1.8	U
Trichlorofluoromethane	1.8	UJ	Bromoform	1.8	U
Acetone	17	UJ	Isopropylbenzene (Cumene)	1.8	U
1,1-Dichloroethene	1.8	U	Ethane, 1,1,2,2-Tetrachloro-	1.8	U
Carbon Disulfide	1.8	UJ	1,2,3-Trichloropropane	1.8	U
Methylene Chloride	1.8	UJ	Bromobenzene	1.8	U
Trans-1,2-Dichloroethene	1.8	U	n-Propylbenzene	1.8	U
1,1-Dichloroethane	1.8	U	2-Chlorotoluene	1.8	U
2-Butanone	9	U	1,3,5-Trimethylbenzene	1.8	U
Cis-1,2-Dichloroethene	1.8	U	4-Chlorotoluene	1.8	U
2,2-Dichloropropane	1.8	U	Tert-Butylbenzene	1.8	U
Bromochloromethane	1.8	U	1,2,4-Trimethylbenzene	1.8	U
Chloroform	1.4	UJ	Sec-Butylbenzene	1.8	U
1,1,1-Trichloroethane	1.8	U	p-Isopropyltoluene	1.8	U
1,1-Dichloropropene	1.8	U	1,3-Dichlorobenzene	1.8	U
Carbon Tetrachloride	1.8	U	1,4-Dichlorobenzene	1.8	U
1,2-Dichloroethane	1.8	U	Butylbenzene	1.8	U
Benzene	1.8	U	1,2-Dichlorobenzene	1.8	U
Trichloroethene	1.8	U	1,2-Dibromo-3-Chloropropane	3.6	U
1,2-Dichloropropane	1.8	U	1,2,4-Trichlorobenzene	3.6	U
Dibromomethane	1.8	U	Hexachlorobutadiene	3.6	U
Bromodichloromethane	1.8	U	Naphthalene	9	UJ
Cis-1,3-Dichloropropene	1.9	U	1,2,3-Trichlorobenzene	9	U
4-Methyl-2-Pentanone	1.8	U			
Toluene	1.8	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.7	U			
1,1,2-Trichloroethane	1.8	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1.8	U	**Fluorobenzene**	**99**	**%**
2-Hexanone	3.6	UJ	**D8-Toluene**	**100**	**%**
Tetrachloroethene	**1.3**	**J**	**p-Bromofluorobenzene**	**98**	**%**
Dibromochloromethane	1.8	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1.8	U			
Chlorobenzene	1.8	U			
Ethane, 1,1,1,2-Tetrachloro-	1.8	U			

Authorized By: D. Norton Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248137 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: TP-2-9' **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.6	U	Ethylbenzene	1.6	U
Chloromethane	1.6	U	m & p-Xylene	3.2	U
Vinyl Chloride	1.6	U	o-Xylene	1.6	U
Bromomethane	1.6	U	Total Xylenes	4.8	U
Chloroethane	1.6	U	Benzene, Ethenyl-(Styrene)	1.6	U
Trichlorofluoromethane	1.6	UJ	Bromoform	1.6	U
Acetone	13	UJ	Isopropylbenzene (Cumene)	1.6	U
1,1-Dichloroethene	1.6	U	Ethane, 1,1,2,2-Tetrachloro-	1.6	U
Carbon Disulfide	1.6	UJ	1,2,3-Trichloropropane	1.6	U
Methylene Chloride	1.6	UJ	Bromobenzene	1.6	U
Trans-1,2-Dichloroethene	1.6	U	n-Propylbenzene	1.6	U
1,1-Dichloroethane	1.6	U	2-Chlorotoluene	1.6	U
2-Butanone	9	UJ	1,3,5-Trimethylbenzene	1.6	U
Cis-1,2-Dichloroethene	1.6	U	4-Chlorotoluene	1.6	U
2,2-Dichloropropane	1.6	U	Tert-Butylbenzene	1.6	U
Bromochloromethane	1.6	U	1,2,4-Trimethylbenzene	1.6	U
Chloroform	1.6	UJ	Sec-Butylbenzene	1.6	U
1,1,1-Trichloroethane	1.6	U	p-Isopropyltoluene	1.6	U
1,1-Dichloropropene	1.6	U	1,3-Dichlorobenzene	1.6	U
Carbon Tetrachloride	1.6	U	1,4-Dichlorobenzene	1.6	U
1,2-Dichloroethane	1.6	U	Butylbenzene	1.6	U
Benzene	1.6	U	1,2-Dichlorobenzene	1.6	U
Trichloroethene	1.6	U	1,2-Dibromo-3-Chloropropane	3.2	U
1,2-Dichloropropane	1.6	U	1,2,4-Trichlorobenzene	3.2	U
Dibromomethane	1.6	U	Hexachlorobutadiene	3.2	U
Bromodichloromethane	1.6	U	Naphthalene	8	UJ
Cis-1,3-Dichloropropene	1.7	U	1,2,3-Trichlorobenzene	8	U
4-Methyl-2-Pentanone	1.6	U			
Toluene	1.6	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.5	U			
1,1,2-Trichloroethane	1.6	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1.6	U	**Fluorobenzene**	**99**	**%**
2-Hexanone	3.2	UJ	**D8-Toluene**	**100**	**%**
Tetrachloroethene	1.6	U	**p-Bromofluorobenzene**	**97**	**%**
Dibromochloromethane	1.6	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1.6	U			
Chlorobenzene	1.6	U			
Ethane, 1,1,1,2-Tetrachloro-	1.6	U			

Authorized By: D. Norton Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners — LIMS Project ID: 1931-95

Sample: 95248137 (Matrix Spike - LMX1) — Date Received: 06/13/95 — Method: SW8260
Field ID: TP-2-9' — Matrix: Sediment/Soil
Project Officer: Mark Peterschmidt — Date Analyzed: 06/22/95 — Units: % Recovery

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	69		Ethylbenzene	88	
Chloromethane	86		m & p-Xylene	85	
Vinyl Chloride	86		o-Xylene	92	
Bromomethane	91		Total Xylenes	87	
Chloroethane	91		Benzene, Ethenyl-(Styrene)	82	
Trichlorofluoromethane	78		Bromoform	100	
Acetone	160		Isopropylbenzene (Cumene)	95	
1,1-Dichloroethene	99		Ethane, 1,1,2,2-Tetrachloro-	93	
Carbon Disulfide	78		1,2,3-Trichloropropane	93	
Methylene Chloride	110		Bromobenzene	90	
Trans-1,2-Dichloroethene	96		n-Propylbenzene	89	
1,1-Dichloroethane	95		2-Chlorotoluene	88	
2-Butanone	42		1,3,5-Trimethylbenzene	84	
Cis-1,2-Dichloroethene	97		4-Chlorotoluene	84	
2,2-Dichloropropane	95		Tert-Butylbenzene	92	
Bromochloromethane	100		1,2,4-Trimethylbenzene	82	
Chloroform	90		Sec-Butylbenzene	84	
1,1,1-Trichloroethane	92		p-Isopropyltoluene	81	
1,1-Dichloropropene	91		1,3-Dichlorobenzene	80	
Carbon Tetrachloride	94		1,4-Dichlorobenzene	79	
1,2-Dichloroethane	82		Butylbenzene	68	
Benzene	95		1,2-Dichlorobenzene	78	
Trichloroethene	99		1,2-Dibromo-3-Chloropropane	110	
1,2-Dichloropropane	97		1,2,4-Trichlorobenzene	57	
Dibromomethane	91		Hexachlorobutadiene	68	
Bromodichloromethane	92		Naphthalene	88	
Cis-1,3-Dichloropropene	91		1,2,3-Trichlorobenzene	72	
4-Methyl-2-Pentanone	99				
Toluene	92		Surrogate Recoveries		
Trans-1,3-Dichloropropene	83				
1,1,2-Trichloroethane	95		1,2-Dichloroethane-D4	88	%
1,3-Dichloropropane	93		Fluorobenzene	98	%
2-Hexanone	99		D8-Toluene	99	%
Tetrachloroethene	90		p-Bromofluorobenzene	92	%
Dibromochloromethane	93		D4-1,2-Dichlorobenzene	100	%
1,2-Dibromoethane (EDB)	88				
Chlorobenzene	89				
Ethane, 1,1,1,2-Tetrachloro-	95				

Authorized By: D. Hopkins — Release Date: 8/15/95 — Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248137 **(Matrix Spike - LMX2)** **Date Received:** 06/13/95 **Method:** SW8260
Field ID: TP-2-9' **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** % Recovery

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	74		Ethylbenzene	91	
Chloromethane	89		m & p-Xylene	89	
Vinyl Chloride	87		o-Xylene	96	
Bromomethane	95		Total Xylenes	92	
Chloroethane	88		Benzene, Ethenyl-(Styrene)	81	
Trichlorofluoromethane	78		Bromoform	100	
Acetone	180		Isopropylbenzene (Cumene)	94	
1,1-Dichloroethene	99		Ethane, 1,1,2,2-Tetrachloro-	100	
Carbon Disulfide	84		1,2,3-Trichloropropane	97	
Methylene Chloride	110		Bromobenzene	96	
Trans-1,2-Dichloroethene	99		n-Propylbenzene	94	
1,1-Dichloroethane	98		2-Chlorotoluene	92	
2-Butanone	55		1,3,5-Trimethylbenzene	87	
Cis-1,2-Dichloroethene	98		4-Chlorotoluene	84	
2,2-Dichloropropane	100		Tert-Butylbenzene	95	
Bromochloromethane	100		1,2,4-Trimethylbenzene	76	
Chloroform	92		Sec-Butylbenzene	86	
1,1,1-Trichloroethane	95		p-Isopropyltoluene	81	
1,1-Dichloropropene	92		1,3-Dichlorobenzene	85	
Carbon Tetrachloride	95		1,4-Dichlorobenzene	80	
1,2-Dichloroethane	81		Butylbenzene	72	
Benzene	98		1,2-Dichlorobenzene	85	
Trichloroethene	100		1,2-Dibromo-3-Chloropropane	110	
1,2-Dichloropropane	100		1,2,4-Trichlorobenzene	68	
Dibromomethane	92		Hexachlorobutadiene	69	
Bromodichloromethane	92		Naphthalene	100	
Cis-1,3-Dichloropropene	92		1,2,3-Trichlorobenzene	80	
4-Methyl-2-Pentanone	110				
Toluene	94		**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	85				
1,1,2-Trichloroethane	94		1,2-Dichloroethane-D4	86	%
1,3-Dichloropropane	95		Fluorobenzene	98	%
2-Hexanone	110		D8-Toluene	98	%
Tetrachloroethene	94		p-Bromofluorobenzene	92	%
Dibromochloromethane	99		D4-1,2-Dichlorobenzene	96	%
1,2-Dibromoethane (EDB)	94				
Chlorobenzene	92				
Ethane, 1,1,1,2-Tetrachloro-	100				

Authorized By: D. Khatt [signature] Release Date: 8/15/95 Page: 3

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248139
Field ID: MW1-15'
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/22/95

Method: SW8260
Matrix: Sediment/Soil
Units: ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.8	U	Ethylbenzene	1.8	U
Chloromethane	1.8	U	**m & p-Xylene**	**.6**	**J**
Vinyl Chloride	1.8	U	**o-Xylene**	**.4**	**J**
Bromomethane	1.8	U	**Total Xylenes**	**1**	**J**
Chloroethane	1.8	U	Benzene, Ethenyl-(Styrene)	1.8	U
Trichlorofluoromethane	1.8	UJ	Bromoform	1.8	U
Acetone	22	UJ	Isopropylbenzene (Cumene)	1.8	U
1,1-Dichloroethene	1.8	U	Ethane, 1,1,2,2-Tetrachloro-	1.8	U
Carbon Disulfide	1.8	UJ	1,2,3-Trichloropropane	1.8	U
Methylene Chloride	1.8	UJ	Bromobenzene	1.8	U
Trans-1,2-Dichloroethene	1.8	U	n-Propylbenzene	1.8	U
1,1-Dichloroethane	1.8	U	2-Chlorotoluene	1.8	U
2-Butanone	9.2	UJ	1,3,5-Trimethylbenzene	1.8	U
Cis-1,2-Dichloroethene	1.8	U	4-Chlorotoluene	1.8	U
2,2-Dichloropropane	1.8	U	Tert-Butylbenzene	1.8	U
Bromochloromethane	1.8	U	**1,2,4-Trimethylbenzene**	**.8**	**J**
Chloroform	1.8	UJ	Sec-Butylbenzene	1.8	U
1,1,1-Trichloroethane	1.8	U	p-Isopropyltoluene	1.8	U
1,1-Dichloropropene	1.8	U	1,3-Dichlorobenzene	1.8	U
Carbon Tetrachloride	1.8	U	1,4-Dichlorobenzene	1.8	U
1,2-Dichloroethane	1.8	U	Butylbenzene	1.8	U
Benzene	1.8	U	1,2-Dichlorobenzene	1.8	U
Trichloroethene	1.8	U	1,2-Dibromo-3-Chloropropane	3.7	U
1,2-Dichloropropane	1.8	U	1,2,4-Trichlorobenzene	3.7	U
Dibromomethane	1.8	U	Hexachlorobutadiene	3.7	U
Bromodichloromethane	1.8	U	Naphthalene	9.2	UJ
Cis-1,3-Dichloropropene	2	U	1,2,3-Trichlorobenzene	9.2	U
4-Methyl-2-Pentanone	1.8	U			
Toluene	**.3**	**J**	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.7	U			
1,1,2-Trichloroethane	1.8	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1.8	U	**Fluorobenzene**	**99**	**%**
2-Hexanone	3.7	UJ	**D8-Toluene**	**99**	**%**
Tetrachloroethene	1.8	U	**p-Bromofluorobenzene**	**98**	**%**
Dibromochloromethane	1.8	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1.8	U			
Chlorobenzene	1.8	U			
Ethane, 1,1,1,2-Tetrachloro-	1.8	U			

Authorized By: D. Hyatt Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248139 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW1-15' **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Tentatively Identified Compounds

CAS Number	Analyte Description	Result	Qualifier
110623	*Pentanal*	37	NJ
111659	*Octane (Dot)*	49	NJ
66251	*Hexanal*	630	NJ
111717	*Heptanal*	37	NJ
3777693	*Furan, 2-Pentyl-*	35	NJ
124130	*Octanal*	16	NJ
14919018	*3-Octene, (E)*	37	NJ
112403	*Dodecane*	99	NJ

Authorized By: D. Hanten Release Date: 8/15/95

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248140
Field ID: MW1-25'
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/22/95

Method: SW8260
Matrix: Sediment/Soil
Units: ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.4	U	Ethylbenzene	1.4	U
Chloromethane	1.4	U	m & p-Xylene	2.8	U
Vinyl Chloride	1.4	U	o-Xylene	1.4	U
Bromomethane	1.4	U	Total Xylenes	4.2	U
Chloroethane	1.4	U	Benzene, Ethenyl-(Styrene)	1.4	U
Trichlorofluoromethane	1.4	UJ	Bromoform	1.4	U
Acetone	10	UJ	Isopropylbenzene (Cumene)	1.4	U
1,1-Dichloroethene	1.4	U	Ethane, 1,1,2,2-Tetrachloro-	1.4	U
Carbon Disulfide	1.4	UJ	1,2,3-Trichloropropane	1.4	U
Methylene Chloride	1.4	UJ	Bromobenzene	1.4	U
Trans-1,2-Dichloroethene	1.4	U	n-Propylbenzene	1.4	U
1,1-Dichloroethane	1.4	U	2-Chlorotoluene	1.4	U
2-Butanone	**3.7**	**J**	1,3,5-Trimethylbenzene	1.4	U
Cis-1,2-Dichloroethene	1.4	U	4-Chlorotoluene	1.4	U
2,2-Dichloropropane	1.4	U	Tert-Butylbenzene	1.4	U
Bromochloromethane	1.4	U	1,2,4-Trimethylbenzene	1.4	U
Chloroform	.9	UJ	Sec-Butylbenzene	1.4	U
1,1,1-Trichloroethane	1.4	U	p-Isopropyltoluene	1.4	U
1,1-Dichloropropene	1.4	U	1,3-Dichlorobenzene	1.4	U
Carbon Tetrachloride	1.4	U	1,4-Dichlorobenzene	1.4	U
1,2-Dichloroethane	1.4	U	Butylbenzene	1.4	U
Benzene	1.4	U	1,2-Dichlorobenzene	1.4	U
Trichloroethene	1.4	U	1,2-Dibromo-3-Chloropropane	2.8	U
1,2-Dichloropropane	1.4	U	1,2,4-Trichlorobenzene	2.8	U
Dibromomethane	1.4	U	Hexachlorobutadiene	2.8	U
Bromodichloromethane	1.4	U	Naphthalene	6.9	UJ
Cis-1,3-Dichloropropene	1.5	U	1,2,3-Trichlorobenzene	6.9	UJ
4-Methyl-2-Pentanone	1.4	U			
Toluene	**.2**	**J**	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.3	U			
1,1,2-Trichloroethane	1.4	U	**1,2-Dichloroethane-D4**	**95**	**%**
1,3-Dichloropropane	1.4	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	2.8	UJ	**D8-Toluene**	**99**	**%**
Tetrachloroethene	**.4**	**J**	**p-Bromofluorobenzene**	**96**	**%**
Dibromochloromethane	1.4	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1.4	U			
Chlorobenzene	1.4	U			
Ethane, 1,1,1,2-Tetrachloro-	1.4	U			

Authorized By: D. Hamilton Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners			**LIMS Project ID:** 1931-95
Sample: 95248140	**Date Received:** 06/13/95	**Method:** SW8260	
Field ID: MW1-25'		**Matrix:** Sediment/Soil	
Project Officer: Mark Peterschmidt	**Date Analyzed:** 06/22/95	**Units:** ug/Kg Dry Wt.	

Tentatively Identified Compounds

CAS Number	Analyte Description	Result	Qualifier
31295564	*Dodecane, 2,6,11-trimethyl*	83	NJ

Authorized By: D. Hamilton Release Date: 8/15/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248141
Field ID: MW1 CUTTINGS
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/22/95

Method: SW8260
Matrix: Sediment/Soil
Units: ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.8	U	Ethylbenzene	1.8	U
Chloromethane	1.8	U	**m & p-Xylene**	**.5**	**J**
Vinyl Chloride	1.8	U	**o-Xylene**	**.3**	**J**
Bromomethane	1.8	U	**Total Xylenes**	**.9**	**J**
Chloroethane	1.8	U	Benzene, Ethenyl-(Styrene)	1.8	U
Trichlorofluoromethane	1.8	UJ	Bromoform	1.8	U
Acetone	18	UJ	Isopropylbenzene (Cumene)	1.8	U
1,1-Dichloroethene	1.8	U	Ethane, 1,1,2,2-Tetrachloro-	1.8	U
Carbon Disulfide	1.8	UJ	1,2,3-Trichloropropane	1.8	U
Methylene Chloride	1.8	UJ	Bromobenzene	1.8	U
Trans-1,2-Dichloroethene	1.8	U	n-Propylbenzene	1.8	U
1,1-Dichloroethane	1.8	U	2-Chlorotoluene	1.8	U
2-Butanone	3.6	UJ	1,3,5-Trimethylbenzene	1.8	U
Cis-1,2-Dichloroethene	1.8	U	4-Chlorotoluene	1.8	U
2,2-Dichloropropane	1.8	U	Tert-Butylbenzene	1.8	U
Bromochloromethane	1.8	U	**1,2,4-Trimethylbenzene**	**.4**	**J**
Chloroform	**1.3**	**J**	Sec-Butylbenzene	1.8	U
1,1,1-Trichloroethane	1.8	U	p-Isopropyltoluene	1.8	U
1,1-Dichloropropene	1.8	U	1,3-Dichlorobenzene	1.8	U
Carbon Tetrachloride	1.8	U	1,4-Dichlorobenzene	1.8	U
1,2-Dichloroethane	1.8	U	Butylbenzene	1.8	U
Benzene	1.8	U	1,2-Dichlorobenzene	1.8	U
Trichloroethene	1.8	U	1,2-Dibromo-3-Chloropropane	3.5	U
1,2-Dichloropropane	1.8	U	1,2,4-Trichlorobenzene	3.5	U
Dibromomethane	1.8	U	Hexachlorobutadiene	3.5	U
Bromodichloromethane	1.8	U	Naphthalene	8.8	UJ
Cis-1,3-Dichloropropene	1.9	U	1,2,3-Trichlorobenzene	8.8	UJ
4-Methyl-2-Pentanone	1.8	U			
Toluene	**.3**	**J**	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.6	U			
1,1,2-Trichloroethane	1.8	U	**1,2-Dichloroethane-D4**	**95**	**%**
1,3-Dichloropropane	1.8	U	**Fluorobenzene**	**99**	**%**
2-Hexanone	3.5	UJ	**D8-Toluene**	**99**	**%**
Tetrachloroethene	**.3**	**J**	**p-Bromofluorobenzene**	**91**	**%**
Dibromochloromethane	1.8	U	**D4-1,2-Dichlorobenzene**	**97**	**%**
1,2-Dibromoethane (EDB)	1.8	U			
Chlorobenzene	1.8	U			
Ethane, 1,1,1,2-Tetrachloro-	1.8	U			

Authorized By: D Hanson Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248142 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW2 CUTTINGS **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.7	U	Ethylbenzene	1.7	U
Chloromethane	1.7	U	m & p-Xylene	3.5	U
Vinyl Chloride	1.7	U	o-Xylene	1.7	U
Bromomethane	1.7	U	Total Xylenes	5.2	U
Chloroethane	1.7	U	Benzene, Ethenyl-(Styrene)	1.7	U
Trichlorofluoromethane	1.7	UJ	Bromoform	1.7	U
Acetone	17	UJ	Isopropylbenzene (Cumene)	1.7	U
1,1-Dichloroethene	1.7	U	Ethane, 1,1,2,2-Tetrachloro-	1.7	U
Carbon Disulfide	4.8	UJ	1,2,3-Trichloropropane	1.7	U
Methylene Chloride	1.7	UJ	Bromobenzene	1.7	U
Trans-1,2-Dichloroethene	1.7	U	n-Propylbenzene	1.7	U
1,1-Dichloroethane	1.7	U	2-Chlorotoluene	1.7	U
2-Butanone	**3.6**	**J**	1,3,5-Trimethylbenzene	1.7	U
Cis-1,2-Dichloroethene	1.7	U	4-Chlorotoluene	1.7	U
2,2-Dichloropropane	1.7	U	Tert-Butylbenzene	1.7	U
Bromochloromethane	1.7	U	1,2,4-Trimethylbenzene	1.7	U
Chloroform	1.7	UJ	Sec-Butylbenzene	1.7	U
1,1,1-Trichloroethane	1.7	U	p-Isopropyltoluene	1.7	U
1,1-Dichloropropene	1.7	U	1,3-Dichlorobenzene	1.7	U
Carbon Tetrachloride	1.7	U	1,4-Dichlorobenzene	1.7	U
1,2-Dichloroethane	1.7	U	Butylbenzene	1.7	U
Benzene	**.1**	**J**	1,2-Dichlorobenzene	1.7	U
Trichloroethene	1.7	U	1,2-Dibromo-3-Chloropropane	3.5	U
1,2-Dichloropropane	1.7	U	1,2,4-Trichlorobenzene	3.5	U
Dibromomethane	1.7	U	Hexachlorobutadiene	3.5	U
Bromodichloromethane	1.7	U	Naphthalene	8.7	UJ
Cis-1,3-Dichloropropene	1.8	U	1,2,3-Trichlorobenzene	8.7	UJ
4-Methyl-2-Pentanone	1.7	U			
Toluene	**.2**	**J**	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.6	U			
1,1,2-Trichloroethane	1.7	U	**1,2-Dichloroethane-D4**	**94**	**%**
1,3-Dichloropropane	1.7	U	**Fluorobenzene**	**98**	**%**
2-Hexanone	3.5	UJ	**D8-Toluene**	**96**	**%**
Tetrachloroethene	**.3**	**J**	**p-Bromofluorobenzene**	**94**	**%**
Dibromochloromethane	1.7	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1.7	U			
Chlorobenzene	1.7	U			
Ethane, 1,1,1,2-Tetrachloro-	1.7	U			

Authorized By: D. Hunt Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248142
Field ID: MW2 CUTTINGS
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/22/95

Method: SW8260
Matrix: Sediment/Soil
Units: ug/Kg Dry Wt.

Tentatively Identified Compounds

CAS Number	Analyte Description	Result	Qualifier
123057	*Hexanal, 2-Ethyl-*	16	NJ
106672	*1-Pentanol, 2-ethyl-4-methy*	20	NJ
17312833	*Undecane, 5,7-Dimethyl-*	12	NJ
21164954	*Hexadecane, 7,9-dimethyl*	11	NJ

Authorized By: D. Hunter Release Date: 8/15/95

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248143 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW3 CUTTINGS **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1.6	U	Ethylbenzene	1.6	U
Chloromethane	1.6	U	m & p-Xylene	3.3	U
Vinyl Chloride	1.6	U	o-Xylene	1.6	U
Bromomethane	1.6	U	Total Xylenes	4.9	U
Chloroethane	1.6	U	Benzene, Ethenyl-(Styrene)	1.6	U
Trichlorofluoromethane	1.6	UJ	Bromoform	1.6	U
Acetone	14	UJ	Isopropylbenzene (Cumene)	1.6	U
1,1-Dichloroethene	1.6	U	Ethane, 1,1,2,2-Tetrachloro-	1.6	U
Carbon Disulfide	2.2	UJ	1,2,3-Trichloropropane	1.6	U
Methylene Chloride	1.6	UJ	Bromobenzene	1.6	U
Trans-1,2-Dichloroethene	1.6	U	n-Propylbenzene	1.6	U
1,1-Dichloroethane	1.6	U	2-Chlorotoluene	1.6	U
2-Butanone	8.2	U	1,3,5-Trimethylbenzene	1.6	U
Cis-1,2-Dichloroethene	1.6	U	4-Chlorotoluene	1.6	U
2,2-Dichloropropane	1.6	U	Tert-Butylbenzene	1.6	U
Bromochloromethane	1.6	U	1,2,4-Trimethylbenzene	1.6	U
Chloroform	1.6	UJ	Sec-Butylbenzene	1.6	U
1,1,1-Trichloroethane	1.6	U	p-Isopropyltoluene	1.6	U
1,1-Dichloropropene	1.6	U	1,3-Dichlorobenzene	1.6	U
Carbon Tetrachloride	1.6	U	1,4-Dichlorobenzene	1.6	U
1,2-Dichloroethane	1.6	U	Butylbenzene	1.6	U
Benzene	1.6	U	1,2-Dichlorobenzene	1.6	U
Trichloroethene	1.6	U	1,2-Dibromo-3-Chloropropane	3.3	U
1,2-Dichloropropane	1.6	U	1,2,4-Trichlorobenzene	3.3	U
Dibromomethane	1.6	U	Hexachlorobutadiene	3.3	U
Bromodichloromethane	1.6	U	Naphthalene	8.2	UJ
Cis-1,3-Dichloropropene	1.7	U	1,2,3-Trichlorobenzene	8.2	U
4-Methyl-2-Pentanone	1.6	U			
Toluene	1.6	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.5	U			
1,1,2-Trichloroethane	1.6	U	**1,2-Dichloroethane-D4**	**94**	**%**
1,3-Dichloropropane	1.6	U	**Fluorobenzene**	**99**	**%**
2-Hexanone	3.3	UJ	**D8-Toluene**	**100**	**%**
Tetrachloroethene	**.8**	**J**	**p-Bromofluorobenzene**	**93**	**%**
Dibromochloromethane	1.6	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1.6	U			
Chlorobenzene	1.6	U			
Ethane, 1,1,1,2-Tetrachloro-	1.6	U			

Authorized By: D. X [illegible] Release Date: 8/25/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248143 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW3 CUTTINGS **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Tentatively Identified Compounds

CAS Number	Analyte Description	Result	Qualifier
4810097	*1-Heptene, 3-methyl*	33	NJ
2425549	*Tetradecane, 1-Chloro-*	52	NJ

Authorized By: D. Kuntz Release Date: 8/15/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: BLN52432 **Method:** SW8260
Blank ID: KBS5173 **Matrix:** Sediment/Soil
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95 **Units:** ug/Kg Dry Wt.

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	2	U	Ethylbenzene	2	U
Chloromethane	2	U	m & p-Xylene	4	U
Vinyl Chloride	2	U	o-Xylene	2	U
Bromomethane	2	U	Total Xylenes	6	U
Chloroethane	2	U	Benzene, Ethenyl-(Styrene)	2	U
Trichlorofluoromethane	2	UJ	Bromoform	2	U
Acetone	**13**		Isopropylbenzene (Cumene)	2	U
1,1-Dichloroethene	2	U	Ethane, 1,1,2,2-Tetrachloro-	2	U
Carbon Disulfide	**1**	**J**	1,2,3-Trichloropropane	2	U
Methylene Chloride	**1.7**	**J**	Bromobenzene	2	U
Trans-1,2-Dichloroethene	2	U	n-Propylbenzene	2	U
1,1-Dichloroethane	2	U	2-Chlorotoluene	2	U
2-Butanone	10	UJ	1,3,5-Trimethylbenzene	2	U
Cis-1,2-Dichloroethene	2	U	4-Chlorotoluene	2	U
2,2-Dichloropropane	2	U	Tert-Butylbenzene	2	U
Bromochloromethane	2	U	1,2,4-Trimethylbenzene	2	U
Chloroform	**.3**	**J**	Sec-Butylbenzene	2	U
1,1,1-Trichloroethane	2	U	p-Isopropyltoluene	2	U
1,1-Dichloropropene	2	U	1,3-Dichlorobenzene	2	U
Carbon Tetrachloride	2	U	1,4-Dichlorobenzene	2	U
1,2-Dichloroethane	2	U	Butylbenzene	2	U
Benzene	2	U	1,2-Dichlorobenzene	2	U
Trichloroethene	2	U	1,2-Dibromo-3-Chloropropane	4	U
1,2-Dichloropropane	2	U	1,2,4-Trichlorobenzene	4	U
Dibromomethane	2	U	Hexachlorobutadiene	4	U
Bromodichloromethane	2	U	**Naphthalene**	**2.9**	**J**
Cis-1,3-Dichloropropene	2.1	U	**1,2,3-Trichlorobenzene**	**1.3**	**J**
4-Methyl-2-Pentanone	2	U			
Toluene	2	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	1.9	U			
1,1,2-Trichloroethane	2	U	**1,2-Dichloroethane-D4**	**96**	**%**
1,3-Dichloropropane	2	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	4	UJ	**D8-Toluene**	**99**	**%**
Tetrachloroethene	2	U	**p-Bromofluorobenzene**	**97**	**%**
Dibromochloromethane	2	U	**D4-1,2-Dichlorobenzene**	**98**	**%**
1,2-Dibromoethane (EDB)	2	U			
Chlorobenzene	2	U			
Ethane, 1,1,1,2-Tetrachloro-	2	U			

Authorized By: D. Hostetler Release Date: 8/15/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: BLN52432
Blank ID: KBS5173
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/22/95

Method: SW8260
Matrix: Sediment/Soil
Units: ug/Kg Dry Wt.

Tentatively Identified Compounds

CAS Number	Analyte Description	Result	Qualifier
124389	*Carbon Dioxide (Acn)*	150	NJ

Authorized By: D. Norton Release Date: 8/9/95 Page: 2

water
copies

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive E , Port Orchard Washington 98366

CASE NARRATIVE

August 16, 1995

Subject: Nu-Way Cleaners

Samples: 95 - 248130 to -248135

Case No. 1931 - 95

Officer: Mark Peterschmidt

By: Dickey D. Huntamer
Organics Analysis Unit

VOLATILE ORGANIC ANALYSIS

ANALYTICAL METHODS:

Volatile organic compounds were analyzed using Manchester modification of the EPA SW 846 Method 8260 purge-trap procedure with capillary GC/MS analysis. Normal QA/QC procedures were performed on the samples.

BLANKS:

Low levels of the common laboratory solvents acetone and methylene chloride were detected in the laboratory blanks The EPA five times rule was applied to all target compounds which were found in the blank. Compounds that were found in the sample and in the blank were considered real and not the result of contamination if the levels in the sample are greater than or equal to five times the amount of compounds in the associated method blank.

SURROGATES:

Surrogate recoveries were within acceptable limits for water samples.

HOLDING TIMES:

The water samples were analyzed within the recommended 14 day holding time.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE:

Water matrix spikes were within acceptable QC limits for both percent recovery and RPD for all compounds except 1,1-dichloroethene, methylene chloride, trans-1,2-dichloroethene and 1,1-dichloroethane. These compounds had high Relative Percent Differences (RPD) and all results were qualified as estimates, "J" for these compounds.

ANALYTICAL COMMENTS:

No analytical problems were encountered in the analysis. The data is acceptable for use as qualified.

DATA QUALIFIER CODES:

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
EXP	-	The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals 3×10^6.
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248130
Field ID: MW-1
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/21/95

Method: SW8260
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1.0	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	10	UJ	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	UJ	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	1	UJ	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	UJ	n-Propylbenzene	1	U
1,1-Dichloroethane	1	UJ	2-Chlorotoluene	1	U
2-Butanone	1.0	UJ	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	**1.5**		Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	**.9**	**J**	p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	1	U	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	1	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	**5.4**		**p-Bromofluorobenzene**	**100**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: D. Hopkins Release Date: 8/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248130 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW-1 **Matrix:** Water
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/21/95 **Units:** ug/L

Tentatively Identified Compounds

CAS Number	Analyte Description	Result	Qualifier
66251	*Hexanal*	2.6	NJ

Authorized By: ____________ Release Date: 9/11/95 Page: 2

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248130 (Matrix Spike - LMX1) **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW-1 **Matrix:** Water
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/21/95 **Units:** % Recovery

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	82		Ethylbenzene	99	
Chloromethane	98		m & p-Xylene	97	
Vinyl Chloride	85		o-Xylene	97	
Bromomethane	98		Total Xylenes	97	
Chloroethane	98		Benzene, Ethenyl-(Styrene)	99	
Trichlorofluoromethane	88		Bromoform	97	
Acetone	174		Isopropylbenzene (Cumene)	96	
1,1-Dichloroethene	84		Ethane, 1,1,2,2-Tetrachloro-	98	
Carbon Disulfide	89		1,2,3-Trichloropropane	100	
Methylene Chloride	66		Bromobenzene	98	
Trans-1,2-Dichloroethene	54		n-Propylbenzene	97	
.,1-Dichloroethane	40		2-Chlorotoluene	100	
2-Butanone	70		1,3,5-Trimethylbenzene	95	
Cis-1,2-Dichloroethene	96		4-Chlorotoluene	100	
2,2-Dichloropropane	94		Tert-Butylbenzene	97	
Bromochloromethane	92		1,2,4-Trimethylbenzene	94	
Chloroform	91		Sec-Butylbenzene	91	
1,1,1-Trichloroethane	96		p-Isopropyltoluene	88	
1,1-Dichloropropene	98		1,3-Dichlorobenzene	98	
Carbon Tetrachloride	92		1,4-Dichlorobenzene	98	
1,2-Dichloroethane	98		Butylbenzene	91	
Benzene	100		1,2-Dichlorobenzene	100	
Trichloroethene	100		1,2-Dibromo-3-Chloropropane	95	
1,2-Dichloropropane	100		1,2,4-Trichlorobenzene	92	
Dibromomethane	98		Hexachlorobutadiene	90	
Bromodichloromethane	100		Naphthalene	110	
Cis-1,3-Dichloropropene	95		1,2,3-Trichlorobenzene	110	
4-Methyl-2-Pentanone	98				
Toluene	99				
Trans-1,3-Dichloropropene	90				
1,1,2-Trichloroethane	100				
1,3-Dichloropropane	99				
2-Hexanone	89				
Tetrachloroethene	75				
Dibromochloromethane	96				
1,2-Dibromoethane (EDB)	98				
Chlorobenzene	98				
:thane, 1,1,1,2-Tetrachloro-	100				

Surrogate Recoveries

1,2-Dichloroethane-D4	100	%
Fluorobenzene	98	%
D8-Toluene	100	%
p-Bromofluorobenzene	99	%
D4-1,2-Dichlorobenzene	99	%

Authorized By: *[signature]* Release Date: 8/11/95 Page: 3

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners

LIMS Project ID: 1931-95

Sample: 95248130 (Matrix Spike - LMX2)
Field ID: MW-1
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/21/95

Method: SW8260
Matrix: Water
Units: % Recovery

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	86		Ethylbenzene	100	
Chloromethane	106		m & p-Xylene	100	
Vinyl Chloride	100		o-Xylene	98	
Bromomethane	100		Total Xylenes	99	
Chloroethane	120		Benzene, Ethenyl-(Styrene)	99	
Trichlorofluoromethane	94		Bromoform	92	
Acetone	179		Isopropylbenzene (Cumene)	98	
1,1-Dichloroethene	100		Ethane, 1,1,2,2-Tetrachloro-	97	
Carbon Disulfide	100		1,2,3-Trichloropropane	100	
Methylene Chloride	120		Bromobenzene	95	
Trans-1,2-Dichloroethene	100		n-Propylbenzene	96	
1,1-Dichloroethane	100		2-Chlorotoluene	100	
2-Butanone	67		1,3,5-Trimethylbenzene	98	
Cis-1,2-Dichloroethene	100		4-Chlorotoluene	100	
2,2-Dichloropropane	91		Tert-Butylbenzene	94	
Bromochloromethane	93		1,2,4-Trimethylbenzene	98	
Chloroform	94		Sec-Butylbenzene	93	
1,1,1-Trichloroethane	98		p-Isopropyltoluene	90	
1,1-Dichloropropene	100		1,3-Dichlorobenzene	97	
Carbon Tetrachloride	95		1,4-Dichlorobenzene	99	
1,2-Dichloroethane	97		Butylbenzene	91	
Benzene	100		1,2-Dichlorobenzene	100	
Trichloroethene	100		1,2-Dibromo-3-Chloropropane	93	
1,2-Dichloropropane	100		1,2,4-Trichlorobenzene	98	
Dibromomethane	99		Hexachlorobutadiene	91	
Bromodichloromethane	97		Naphthalene	100	
Cis-1,3-Dichloropropene	94		1,2,3-Trichlorobenzene	110	
4-Methyl-2-Pentanone	95				
Toluene	100		Surrogate Recoveries		
Trans-1,3-Dichloropropene	87				
1,1,2-Trichloroethane	100		1,2-Dichloroethane-D4	99	%
1,3-Dichloropropane	100		Fluorobenzene	97	%
2-Hexanone	88		D8-Toluene	100	%
Tetrachloroethene	80		p-Bromofluorobenzene	99	%
Dibromochloromethane	95		D4-1,2-Dichlorobenzene	98	%
1,2-Dibromoethane (EDB)	97				
Chlorobenzene	100				
Ethane, 1,1,1,2-Tetrachloro-	100				

Authorized By: _____ Release Date: 8/11/95

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248131 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: MW-2 **Matrix:** Water
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/21/95 **Units:** ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	5	U	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	UJ	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	1	UJ	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	UJ	n-Propylbenzene	1	U
1,1-Dichloroethane	1	UJ	2-Chlorotoluene	1	U
2-Butanone	1	U	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	**1.5**		Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	**1.6**		p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	1	U	1,2-Dichlorobenzene	1	U
Trichloroethene	**.1**	**J**	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	1	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	**7.5**		**p-Bromofluorobenzene**	**100**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: D. Hanson Release Date: 8/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248132
Field ID: MW-3
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/21/95

Method: SW8260
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	5	U	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	UJ	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	1	UJ	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	UJ	n-Propylbenzene	1	U
1,1-Dichloroethane	1	UJ	2-Chlorotoluene	1	U
2-Butanone	1	U	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	**1.6**		Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	**1.1**		p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	1	U	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	1	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	**7.1**		**p-Bromofluorobenzene**	**100**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**99**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: _____ Release Date: 8/16/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248133
Field ID: DECON-1
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/21/95

Method: SW8260
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	10	UJ	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	UJ	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	1	UJ	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	UJ	n-Propylbenzene	1	U
1,1-Dichloroethane	1	UJ	2-Chlorotoluene	1	U
2-Butanone	1.9	UJ	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	**11**		Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	1	U	p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	1	U	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	**.2**	**J**	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**110**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	1	U	**p-Bromofluorobenzene**	**100**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: D. Christensen Release Date: 8/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: 95248134 **Date Received:** 06/13/95 **Method:** SW8260
Field ID: FIELDBLANK **Matrix:** Water
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/21/95 **Units:** ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	10	UJ	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	UJ	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	1	UJ	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	UJ	n-Propylbenzene	1	U
1,1-Dichloroethane	1	UJ	2-Chlorotoluene	1	U
2-Butanone	2	UJ	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	**14**		Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	1	U	p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	1.0	UJ	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	**.1**	**J**	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**100**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	1	U	**p-Bromofluorobenzene**	**99**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: D. Norton Release Date: 8/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners

LIMS Project ID: 1931-95

Sample: 95248135
Field ID: TRIPBLANK
Project Officer: Mark Peterschmidt

Date Received: 06/13/95
Date Analyzed: 06/21/95

Method: SW8260
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	5	U	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	UJ	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	1.5	UJ	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	UJ	n-Propylbenzene	1	U
1,1-Dichloroethane	1	UJ	2-Chlorotoluene	1	U
2-Butanone	1	U	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	1	U	Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	1	U	p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	1	U	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	1	U			
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U			
1,3-Dichloropropane	1	U			
2-Hexanone	1	U			
Tetrachloroethene	1	U			
Dibromochloromethane	1	U			
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Surrogate Recoveries

1,2-Dichloroethane-D4	**110**	%
Fluorobenzene	**100**	%
D8-Toluene	**100**	%
p-Bromofluorobenzene	**99**	%
D4-1,2-Dichlorobenzene	**100**	%

Authorized By: D. X[illegible] Release Date: 8/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: BLN52626
Blank ID: KBW5172
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/21/95

Method: SW8260
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	**1.3**	**J**	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	U	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	**.5**	**J**	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	U	n-Propylbenzene	1	U
1,1-Dichloroethane	1	U	2-Chlorotoluene	1	U
2-Butanone	**.2**	**J**	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	1	U	Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	1	U	p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	**.033**	**J**	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	Naphthalene	1	U
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	1	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**100**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**100**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	1	U	**p-Bromofluorobenzene**	**98**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**100**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: O-N. [signature] Release Date: 8/11/95 Page: 1

Manchester Environmental Laboratory

Department of Ecology

Analysis Report for

Volatile Organic Analysis

Project Name: Nu-Way Cleaners **LIMS Project ID:** 1931-95

Sample: BLN52627
Blank ID: KBW5174
Project Officer: Mark Peterschmidt **Date Analyzed:** 06/23/95

Method: SW8260
Matrix: Water
Units: ug/L

Analyte	Result	Qualifier	Analyte	Result	Qualifier
Dichlorodifluoromethane	1	U	Ethylbenzene	1	U
Chloromethane	1	U	m & p-Xylene	2	U
Vinyl Chloride	1	U	o-Xylene	1	U
Bromomethane	1	U	Total Xylenes	3	U
Chloroethane	1	U	Benzene, Ethenyl-(Styrene)	1	U
Trichlorofluoromethane	1	U	Bromoform	1	U
Acetone	**2.5**	**J**	Isopropylbenzene (Cumene)	1	U
1,1-Dichloroethene	1	U	Ethane, 1,1,2,2-Tetrachloro-	1	U
Carbon Disulfide	1	U	1,2,3-Trichloropropane	1	U
Methylene Chloride	**.5**	**J**	Bromobenzene	1	U
Trans-1,2-Dichloroethene	1	U	n-Propylbenzene	1	U
1,1-Dichloroethane	1	U	2-Chlorotoluene	1	U
2-Butanone	**.3**	**J**	1,3,5-Trimethylbenzene	1	U
Cis-1,2-Dichloroethene	1	U	4-Chlorotoluene	1	U
2,2-Dichloropropane	1	U	Tert-Butylbenzene	1	U
Bromochloromethane	1	U	1,2,4-Trimethylbenzene	1	U
Chloroform	1	U	Sec-Butylbenzene	1	U
1,1,1-Trichloroethane	1	U	p-Isopropyltoluene	1	U
1,1-Dichloropropene	1	U	1,3-Dichlorobenzene	1	U
Carbon Tetrachloride	1	U	1,4-Dichlorobenzene	1	U
1,2-Dichloroethane	1	U	Butylbenzene	1	U
Benzene	**.032**	**J**	1,2-Dichlorobenzene	1	U
Trichloroethene	1	U	1,2-Dibromo-3-Chloropropane	1	U
1,2-Dichloropropane	1	U	1,2,4-Trichlorobenzene	1	U
Dibromomethane	1	U	Hexachlorobutadiene	1	U
Bromodichloromethane	1	U	**Naphthalene**	**.026**	**J**
Cis-1,3-Dichloropropene	1.1	U	1,2,3-Trichlorobenzene	1	U
4-Methyl-2-Pentanone	1	U			
Toluene	1	U	**Surrogate Recoveries**		
Trans-1,3-Dichloropropene	.9	U			
1,1,2-Trichloroethane	1	U	**1,2-Dichloroethane-D4**	**100**	**%**
1,3-Dichloropropane	1	U	**Fluorobenzene**	**98**	**%**
2-Hexanone	1	U	**D8-Toluene**	**100**	**%**
Tetrachloroethene	1	U	**p-Bromofluorobenzene**	**100**	**%**
Dibromochloromethane	1	U	**D4-1,2-Dichlorobenzene**	**99**	**%**
1,2-Dibromoethane (EDB)	1	U			
Chlorobenzene	1	U			
Ethane, 1,1,1,2-Tetrachloro-	1	U			

Authorized By: _____ Release Date: 5/10/95 Page: 1

Pacific
Northern
Analytical, Inc.

May 29, 1995

Trent Smith
Enviros, Inc.
210 Marina Park Building
25 Central Way
Kirkland, WA 98033

Dear Trent:

Enclosed are the analytical results of samples submitted on May 26, 1995 from project NuWay , E1/950109 .

If you have any questions regarding this report or if you need any other assistance, please do not hesitate to call me.

Sincerely,

Robert R. (Buddy) Wilson
Technical Director

RRW/lh

15314 N.E. 95th Street
Redmond, WA 98052-2517
(206) 881-7538 • FAX 881-8215

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 24, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-1**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-001	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.11		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.33		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 24, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-2**	Date Analyzed:	May 29-30, 1995
Laboratory Batch #	02269-002	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.36		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	2.60	D	0.20
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.02

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

D-Data from 1:10 dilution.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 24, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-3**	Date Analyzed:	May 29-30, 1995
Laboratory Batch #	02269-003	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	0.02	B	0.02
1,1,1-Trichloroethane	0.37		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.67	D	0.04
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.
B-The analyte indicated was also found in the method blank sample.
D-Data from 1:2 dilution.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 24, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-4**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-004	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.24		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.16		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 24, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-5**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-005	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.26		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.39		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 24, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-6**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-006	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.10		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	N.D.		0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.11		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-7**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-007	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.05		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.04		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-8**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-008	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	0.02	B	0.02
1,1,1-Trichloroethane	N.D.		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.08	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.09		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-9**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-009	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	0.03	B	0.02
1,1,1-Trichloroethane	0.05		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.08	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.09		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-10**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269-010	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.06		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.08	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	0.08		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

B-The analyte indicated was also found in the method blank sample.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-11**	Date Analyzed:	May 29-30, 1995
Laboratory Batch #	02269-011	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	0.05	B	0.02
1,1,1-Trichloroethane	18.1	D	2.0
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	6.0	D, B	5.0
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	12.9	D	2.0
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.
B-The analyte indicated was also found in the method blank sample.
D-Data from 1:100 dilution.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-12**	Date Analyzed:	May 29-30, 1995
Laboratory Batch #	02269-012	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	0.80		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.08	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	210	D	10.0
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.
B-The analyte indicated was also found in the method blank sample.
D-Data from 1:500 dilution.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Client:	Enviros, Inc.	Date Sampled:	May 25, 1995
Project Name:	NuWay	Date Received:	May 26, 1995
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Client Sample ID:	**SV-13**	Date Analyzed:	May 29-30, 1995
Laboratory Batch #	02269-013	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	0.03	B	0.02
1,1,1-Trichloroethane	1.7	D	0.10
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.06	B	0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	2.1	D	0.10
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.
B-The analyte indicated was also found in the method blank sample.
D-Data from 1:5 dilution.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Quality Control Data

Client:	Enviros, Inc.		
Project Name:	NuWay		
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Sample ID:	**Method Blank #2**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	0.03		0.02
1,1,1-Trichloroethane	N.D.		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07		0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	N.D.		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Quality Control Data

Client:	Enviros, Inc.		
Project Name:	NuWay		
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Sample ID:	**Method Blank #1**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269	Sample Matrix:	Carbon Tube
Units:	**ug/tube**	Dilution Factor:	1

Analyte	Sample Result	Notes	Reporting Limit
Chloroform	N.D.		0.02
1,1,1-Trichloroethane	N.D.		0.02
1,2-Dichloroethane	N.D.		0.02
1,1-Dichloropropene	N.D.		0.02
Carbon Tetrachloride	0.07		0.05
Trichloroethene (TCE)	N.D.		0.02
1,2-Dichloropropane	N.D.		0.02
Bromodichloromethane	N.D.		0.02
cis-1,3-Dichloropropene	N.D.		0.02
trans-1,3-Dichloropropene	N.D.		0.02
1,1,2-Trichloroethane	N.D.		0.02
Chlorodibromomethane	N.D.		0.02
Tetrachloroethene (PCE)	N.D.		0.02
Chlorobenzene	N.D.		0.02
1,1,1,2-Tetrachloroethane	N.D.		0.02
Bromoform	N.D.		0.02
1,1,2,2-Tetrachloroethane	N.D.		0.02
Bromobenzene	N.D.		0.05
2-Chlorotoluene	N.D.		0.02
4-Chlorotoluene	N.D.		0.02
1,2,3-Trichlorobenzene	N.D.		0.02
1,2,4-Trichlorobenzene	N.D.		0.02
Hexachlorobutadiene	N.D.		0.05

Notes

N.D.-Not detected above the reporting limit.

NIOSH Method 1003 (Modified) Volatile Halogenated Hydrocarbons

Quality Control Data

Client:	Enviros, Inc.		
Project Name:	NuWay		
Project Number:	E1/950109	Date Extracted:	May 29, 1995
Sample ID:	**Desorption Efficiency Stds. (0.25 ug/tube)**	Date Analyzed:	May 29, 1995
Laboratory Batch #	02269	Sample Matrix:	Carbon Tube
Units:	**% Recovery**	Dilution Factor:	1

Analyte	DE 1	DE 2	DE 3	DE 4	Average Recovery
Chloroform	60%	50%	92%	188%	97.50%
1,1,1-Trichloroethane	97%	112%	103%	94%	101.50%
1,2-Dichloroethane	84%	90%	109%	100%	95.75%
1,1-Dichloropropene	84%	104%	107%	100%	98.75%
Carbon Tetrachloride	67%	76%	80%	84%	76.75%
Trichloroethene (TCE)	128%	135%	120%	112%	123.75%
1,2-Dichloropropane	92%	112%	107%	103%	103.50%
Bromodichloromethane	92%	108%	97%	100%	99.25%
cis-1,3-Dichloropropene	99%	112%	102%	99%	103.00%
trans-1,3-Dichloropropene	536%	604%	608%	524%	568.00%
1,1,2-Trichloroethane	84%	106%	93%	92%	93.75%
Chlorodibromomethane	67%	100%	92%	89%	87.00%
Tetrachloroethene (PCE)	81%	98%	101%	98%	94.50%
Chlorobenzene	70%	86%	92%	89%	84.25%
1,1,1,2-Tetrachloroethane	70%	102%	98%	101%	92.75%
Bromoform	50%	98%	96%	97%	85.25%
1,1,2,2-Tetrachloroethane	39%	66%	64%	75%	61.00%
Bromobenzene	64%	93%	93%	92%	85.50%
2-Chlorotoluene	67%	84%	80%	79%	77.50%
4-Chlorotoluene	369%	328%	398%	287%	345.50%
1,2,3-Trichlorobenzene	66%	71%	69%	68%	68.50%
1,2,4-Trichlorobenzene	53%	60%	62%	56%	57.75%
Hexachlorobutadiene	92%	106%	121%	111%	107.50%

Notes

N.D.-Not detected above the reporting limit.

APPENDIX E: CLEANUP ACTION ALTERNATIVE COST ESTIMATES

Cost Estimate: Alternative No. 1					
ITEM	AMT	UNITS	UNIT COST	TOTAL COST	NOTES
Mobilization	1	LS	$800	$800	Enviros estimate based on previous bid amounts
Asbestos Abatement	1	LS	$2,000	$2,000	Vendor estimate
Building Demolition	1	LS	$2,550	$2,550	Enviros estimate based on previous bid amounts
Disposal of Demolition Debris	20	TONS	$165	$3,300	Enviros estimate based on previous bid amounts
Building Repair	1	LS	$5,000	$5,000	Assumes minimal non-structural repairs only
Excavation of Contaminated Soils	150	CY	$15	$2,250	Conservative volume estimate; previous bid amo
Soils Hauling & Disposal	150	CY	$70	$10,500	Rabanco estimate
Backfill & Compaction	150	CY	$10	$1,500	Enviros estimate;$6 mat'ls cost, $4 labor & equip
Engineering Oversight & Reporting	1	LS	$30,000	$30,000	Enviros estimate based on previous site work
Design Contingency	30	%	$57,900	$17,370	
General Contingency	20	%	$57,900	$11,580	
TOTAL ESTIMATED COST				$86,850	

Cost Estimate: Alternative No. 2					
ITEM	AMT	UNITS	UNIT COST	TOTAL COST	NOTES
Mobilization	1	LS	$800	$800	Enviros estimate based on previous bid amounts
System Design	1	LS	$10,000	$10,000	Enviros estimate
Asphalt pavement	1500	SF	$2	$3,000	Vendor estimate
System Installation	1	LS	$10,000	$10,000	Enviros estimate based on previous bid amounts
Operation & Maintenance	12	MO	$1,000	$12,000	Enviros estimate; bimonthly monitoring
Engineering Oversight & Reporting	1	LS	$15,000	$15,000	Enviros estimate based on previous site work
Design Contingency	30	%	$50,800	$15,240	
General Contingency	20	%	$50,800	$10,160	
TOTAL ESTIMATED COST				$76,200	

Cost Estimate: Alternative No. 3					
ITEM	AMT	UNITS	UNIT COST	TOTAL COST	NOTES
Fixed costs:					
Workplan, H&S plan	1	LS	$1,500	$1,500	Enviros estimate
Cost per sampling event:					
Mobilization/Demobilization	8	HR	$50	$400	Enviros estimate
Sample Collection	6	HR	$50	$300	Enviros estimate
Expenses	1	LS	$250	$250	Enviros estimate
Analytical	4	EA	$280	$1,120	Vendor estimate; WTPH-D & EPA 8240
Letter Report	12	HR	$50	$600	Enviros estimate
	2	HR	$90	$180	Enviros estimate
Contingency	20	%	$2,850	$570	
Subtotal				$3,420	
Quarterly sampling for two years:					
Fixed Costs	1	LS	$1,500	$1,500	
Sampling Events	8	EA	$3,420	$27,360	
Total Estimated Cost				$28,860	
Tri-annual sampling for three years:					
Fixed Costs	1	LS	$1,500	$1,500	
Sampling Events	9	EA	$3,420	$30,780	
Total Estimated Cost				$32,280	
Semi-annual sampling for five years:					
Fixed Costs	1	LS	$1,500	$1,500	
Sampling Events	10	EA	$3,420	$34,200	
Total Estimated Cost				$35,700	
Note: 5% inflation, 5% nominal discount rate assumed; All estimates given in 1996 dollars.					

or 8260?
(current method)
Manchester Costs ('96)
WTPH-D = 150 per sample
8260 (VOA) = 250 per sample
400 per well
x 3 wells
= 1,200

IF WE DO:
3 wells, 4x/yr
1200 x 4 = $4,800 x 2 yrs = $9,600

3 wells, 3x/yr
1200 x 3 = $3,600 x 3 yrs = $10,800

3 wells, 2x/yr
1200 x 2 = $2400 x 5 yrs = $12,000

G. total = $32,400 ('96 dollars)
IF WE DO.

Cost Estimate: Alternative No. 4					
ITEM	AMT	UNITS	UNIT COST	TOTAL COST	NOTES
Asphalt Pavement	1500	SF	$2	$3,000	Enviros estimate
Contingency	20	%	$3,000	$600	
TOTAL ESTIMATED COST				$3,600	