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Soil Removal Report
Former Log Storage/Peeler Area

Soil and Groundwater Operable Units

Wyckoff/Eagle Harbor Superfund Site
Bainbridge Island, Washington

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

The Seattle District, U.S. Army Corps of Engineers (USACE) is assisting the U.S. Environmental Protection Agency (EPA) in conducting remedial design and remedial action for the Wyckoff/Eagle Harbor Superfund Site, Bainbridge Island, Washington. The purpose of this Soil Removal Report is to describe soil removal activities in the Former Log Storage/Peeler Area and CW01 Area of the Wyckoff site. The successful completion of the soil removal activity and demonstration of compliance with Washington State Department of Ecology regulations represents achievement of the remediation goals from these portions of the site.

Soil and groundwater at the Wyckoff site are primarily contaminated with creosote and pentachlorophenol that were used as wood preservatives. Free-phase product exists in the subsurface of the Former Process Area (Figure 1), as well as dissolved contaminants in groundwater and adsorbed contaminants on soil particles. In contrast, contamination in the Former Log Storage/Peeler Area and the CW01 Area consisted primarily of high molecular weight polycyclic aromatic hydrocarbons (HPAHs) adsorbed to soil at relatively shallow depths. The selected remedy for soils in the Former Log Storage/Peeler Area, as described in the Record of Decision (EPA, 2000) is excavation and consolidation within the containment constructed around the more highly contaminated Former Process Area. Once placed in the Former Process Area, contaminated soil from the Former Log Storage/Peeler Area will either be treated by the thermal remediation process being tested in that area, or be incorporated into the containment remedy if thermal treatment remedy is not implemented.

1.1 OBJECTIVES

Contaminants of concern in the vadose zone at the Wyckoff site were identified in the RI (CH2M Hill, 1997) as polycyclic aromatic hydrocarbons (PAHs) and pentachlorophenol (PCP). As identified in the ROD, the State of Washington Model Toxics Control Act (MTCA) is the principal ARAR governing soil cleanup levels in vadose zone soil. Method B cleanup standards were selected as cleanup levels for the site (Table 1). For contaminants of concern where the Method B concentration is less than the practical quantitation limit (PQL), the PQL is considered the cleanup level (WAC 173-340-707(2)). PQLs were established by Ecology in 1993 (Ecology 1993) and are listed for each contaminant of concern in Table 1.

Table 1 - MTCA Method B Cleanup Levels and Practical Quantitation Limits for Contaminants of Concern in Soil

Contaminant of Concern	MTCA Method B Cleanup Standards (mg/kg)	Practical Quantitation Limit (mg/kg)
Naphthalene	**3,200**	0.66
Acenaphthylene	NA	**0.66**
Acenaphthene	**4,800**	0.66
Fluorene	**3,200**	0.66
Phenanthrene	NA	**0.66**
Anthracene	**24,000**	0.66
Fluoranthene	**3,200**	0.66
Pyrene	**2,400**	0.66
Benzo(a)anthracene	0.137	**0.66**
Chrysene	0.137	**0.66**
Benzo(b)fluoranthene	0.137	**0.66**
Benzo(k)fluoranthene	0.137	**0.66**
Benzo(a)pyrene	0.137	**0.66**
Dibenzo(a,h)anthracene	0.137	**0.66**
Benzo(g,h,i)perylene	NA	**0.66**
Indeno(1,2,3-cd)pyrene	0.137	**0.66**
Pentachlorophenol	**8.33**	3.3

Bold indicates value selected as cleanup level.

The primary objective of soil removal activity was to excavate contaminated soil from the Former Log Storage/Peeler Area and CW01 Area to meet the substantive requirements of the MTCA Method B cleanup levels in force at the time that the ROD for Soils and Groundwater Operable Units was finalized in February 2000. The demonstration of compliance under MTCA at that time the ROD was signed relies on the calculation of a site-wide 95% Upper Confidence Limit (UCL) that is then compared to the cleanup level for each contaminant of concern. In addition the statistical determination, the demonstration of compliance with MTCA includes two administrative provisions. The first is that no more than 10% of the confirmation sample results can exceed the cleanup level. The second provision is that no single confirmation sample result can be more than twice the cleanup value. Soil removal activity and confirmation sampling in the Former Log Storage/Peeler Area and the CW01 Area was conducted to meet each of these criteria.

1.2 RELATIONSHIP TO OTHER ACTIVITIES AT THE WYCKOFF SITE

A groundwater extraction and treatment system is currently operating on site. This system consists of eight extraction wells and a groundwater treatment plant. Since going into operation 12 years ago, the system has recovered approximately 98,000 gallons of creosote, helping to control the migration of contaminants from the Wyckoff Groundwater OU, and processed over 350 million gallons of groundwater contaminated with elevated levels of PAHs and PCP.

A Thermal Remediation Pilot Study Project has been designed. Construction of the pilot study began in late July 2001 began commissioning and limited steam injection in October 2002. In addition, a sheet pile containment wall has been constructed along the shoreline adjacent to the Former Process Area to restrict the movement of contaminants beyond site boundaries.

To mitigate for the loss of intertidal and subtidal habitat caused by the offshore alignment of the sheet pile containment wall, a mitigation beach was created along the shoreline with Eagle Harbor on the western portion of the Wyckoff site. Construction of the mitigation beach consisted of the removal of a failing wooden bulkhead, excavation of approximately 40,000 cubic yards of fill material behind the bulk head and the placement of habitat material on the surface of the newly contoured shoreline. Of the 40,000 cubic yards of material excavated during construction of the mitigation beach, 20,000 cubic yards contained contaminated soil that exceeded the MTCA Method B cleanup levels. This material was transported to the eastern portion of the site and stockpiled in the portion of the Former Process Area within the sheet pile containment wall.

If the thermal remediation pilot study is successful at meeting performance goals, thermal remediation may be implemented site-wide to full-scale remediation of the Former Process Area. If full-scale thermal treatment is not implemented, a "containment" remedy will be completed. This remedy will utilize the existing sheet pile wall, capping of contaminated surface soils within the Former Process Area and a replacing the groundwater pump-and-treat system to maintain the water level within the containment wall.

2.0 SITE BACKGROUND AND SETTING

2.1 SITE LOCATION AND DESCRIPTION

The Wyckoff/Eagle Harbor Superfund site is located on Bainbridge Island, Washington. The site has been divided into four operable units (OUs):

- Wyckoff Soil OU: located on the southern shoreline of Eagle Harbor (Figure 1) and encompasses unsaturated surface and subsurface soil extending to the maximum elevation of the water table within the Former Process Area and the Former Log Storage/Peeler Area

- Wyckoff Groundwater OU: saturated soil and groundwater beneath the Soil OU (beneath the maximum elevation of the water table)

- West Harbor OU: intertidal and subtidal surface sediments located within the West Harbor OU boundary of Eagle Harbor

- East Harbor OU: intertidal and subtidal surface sediments located within the East Harbor OU boundary of Eagle Harbor

The Wyckoff property occupies approximately 57 acres (about 18 acres of which encompass the Soil OU), including a spit with about 0.8 miles of shoreline extending northward into Eagle Harbor. The spit was extended and filled at least twice prior to the 1950s, and was the location of wood treatment activities that have caused the current soil and groundwater contamination.

The Wyckoff Soil and Groundwater OUs occupy a relatively flat lowland and intertidal area bounded by a densely vegetated bluff on the south. The lowland area has an average elevation of approximately 10 feet NGVD while the hillside area rises to elevations above 200 feet. A small stream flows north from the hills above the western arm of the property into a culvert that discharges into Eagle Harbor. The north and west portions of the spit are bounded by Eagle Harbor, and Puget Sound abuts the eastern margin of the spit.

2.2 SITE HISTORY

Prior to 1904, the Wyckoff property was owned by a sand mining operation, and a brickyard. From 1904 through 1988, the site was used for the treatment of wood products (e.g., railroad ties and trestles, telephone poles, pilings, docks and piers) by a succession of owners and companies. Chemicals used at the site include creosote, pentachlorophenol (PCP), solvents, gasoline,

antifreeze, fuel, waste oil and lubricants. These chemicals were stored in aboveground storage tanks, conveyed through above- and below-ground piping, disposed in sumps, spilled and buried on site.

EPA began an investigation of the property in 1971, and the site was placed on the National Priority List in 1987. In 1988, the Wyckoff Company ceased all operations on the property. In 1993, EPA assumed management of the soil and groundwater OUs, and in 1994 the assets of the former Wyckoff Company (now Pacific Sound Resources) were placed into an environmental trust.

All wood-treatment structures in the lowland portion of the site, including buildings, foundations, tanks, pipelines and sumps, were removed between 1988 and 1997. The West Dock was removed in December 1998. A groundwater treatment plant, monitoring and extraction wells, and a conveyance piping system for contaminant recovery and control are in place and in use.

2.3 PREVIOUS INVESTIGATION AND REMEDIATION EFFORTS

EPA began investigating the Wyckoff property in 1971. The RI report (CH2M HILL, 1997a) contains a summary of the investigations and studies conducted at the site through 1997. During the 1970s, efforts were made to address oil seepages on beaches adjacent to the plant through site inspections and recommendations. During the 1980s, at least five investigations of groundwater, soil, seeps and sediments were conducted at the site to characterize the extent of contamination. Investigations continued in the 1990s and have included a focused RI/FS (CH2M HILL, 1994) for the Groundwater OU to provide administrative justification for interim removal actions and a full RI/FS (CH2M HILL, 1997a and 1997b).

Source control and remediation activities have been conducted at the site since 1981 to mitigate actual or potential threats to human health and the environment. Table 1-3 in the 1997 RI report provides a list of these activities, which include removal and offsite disposal of structures such as buildings, sumps and retorts; storage tanks; pipelines; asbestos, docks and selected pilings. A groundwater extraction and treatment system has been operational since 1990 to minimize further releases and recover as much NAPL as possible. New wells have been installed for monitoring and extraction purposes and approximately 19 deteriorated wells, including two drinking water wells, have been abandoned.

Geotechnical investigations conducted by Seattle District for design of a slurry wall began in February 1997. The objective of the investigation was to establish the depth and continuity of the aquitard along a proposed slurry wall alignment, and to collect soil data required for design of the wall. Initially, soil borings were drilled on 50 to100-foot centers along the alignment proposed in the FS report (CH2M HILL, 1997b). Changes were eventually made to the slurry

wall alignment to accommodate anticipated buried obstacles. The area of investigation was gradually widened during the drilling program as additional NAPL was discovered in the subsurface. Eventually, a total of 43 auger borings were drilled, sampled and permanently sealed. NAPL was detected along the shoreline indicating that an offshore alignment would not only avoid subsurface obstacles but would contain a greater volume of NAPL. Consequently, an additional 11 soil borings were drilled offshore in January 1998. Blow counts were recorded in all borings using a 3-inch split-spoon sampler driven with a 300-pound hammer, and samples from all of the borings were tested for gradation and Atterberg limits. Upland samples from the vadose zone were tested for moisture content. Offshore samples were tested for NAPL saturation and density, as well as pore water salinity and density.

In 1999, USACE conducted a NAPL Field Exploration on behalf of EPA to evaluate the potential for thermal remediation at the site and obtain data for the design of a sheet pile containment wall. Construction of the sheet pile containment wall to prevent contaminant migration from the Wyckoff site into Eagle Harbor and Puget Sound was completed in February 2001. A smaller sheet pile wall was installed inside the outer containment wall to provide a site for the Thermal Remediation Pilot Study.

Two Supplemental investigations were conducted in February and September/October 2000, subsequent to the completion of the Wyckoff NAPL Field Exploration performed during the summer of 1999. The primary focus of the NAPL Field Exploration was to facilitate the evaluation and design of a Thermal Remediation Pilot Study in the Former Process Area at the former Wyckoff wood-treatment facility. The NAPL Exploration Comprehensive Report (USACE, 2000a) discussed project objectives, a description of field exploration activities and a summary of the validated analytical data collected in the Former Process Area. In addition, data from the Tulsa District's (USACE) Site Characterization and Analysis Penetrometer System (SCAPS) was integrated with historical site data to obtain a complete estimate of NAPL presence across the Former Process Area.

The two subsequent supplemental investigations generally focused on the areas south and west of the Former Process Area known as the Former Log Storage / Peeler Area (Figure 1). Historically, this area was used for log storage and de-barking operations rather than wood treatment. Consequently, the concentration and character of contamination is different than in the Former Process Area, as is the selected method of remediation. The greatest difference between the two areas is the general lack of NAPL in the Log Storage/Peeler Area and the limited vertical extent of soil contamination. As a result, the selected remedial action in the Former Log Storage/Peeler Area was soil excavation and consolidation to the Former Process Area.

Detailed information on the field procedures and data quality objectives (DQOs) for these supplemental investigations are described in Amendment No.1 (January 2000b) and Amendment No. 3 (September 2000c) to the Wyckoff NAPL Field Exploration Management Plan (USACE, 1999).

The supplemental investigations addressed data gaps that remained after the completion of both the Remedial Investigation/Feasibility Study (CH2M Hill, 1997) and the NAPL Field Exploration (USACE, 2000a). The first supplemental investigation took place in February 2000. The primary objective of this investigation was to refine existing data to select the most favorable location for the Thermal Treatment Pilot Study. A summary of the results from this portion of the investigation was reported in the Pilot Study Location Selection Report (USACE, 2000d).

The second supplemental investigation was conducted in September and October 2000. The primary focus of the second supplemental investigation was to collect design data on vadose zone contamination in the Former Log Storage/Peeler Area, west of the Former Process Area, and in the area around monitoring well CW01 (on the hillside south of the support zone) to determine more accurately the volume of soil requiring excavation. Evaluation of existing soil contamination data from the RI/FS (CH2M Hill, 1997) identified areas of the vadose zone contamination at two intervals; 0-3 inches and 5-7 feet. Data from the surface soil results were extrapolated to 4 feet bgs in the RI report, resulting in greater uncertainty regarding the actual vertical extent of vadose zone contamination.

Construction of a sheet pile containment wall began in November 2000. The sheet pile wall was installed around the perimeter of the Former Process Area to eliminate the flow of NAPL into the marine environment (Figure 2). A smaller sheet pile wall was also constructed to segregate a 1-acre area of the site for the pilot study. Construction began on the thermal remediation pilot study in July 2001 and the system began commissioning and limited steam injection in October 2002. A detailed discussion of the cleanup alternative is presented in the ROD for the Soil and Groundwater OUs (EPA, 2000). In addition to sheet pile wall construction, extension of the sediment cap occurred in phases between October 2000 and February 2002. The cap was placed adjacent to the Wyckoff facility to remediate creosote-contaminated sediments in Eagle Harbor.

The timing of the second supplemental investigation was critical to the sheet pile construction schedule. On October 3, 2000, government-purchased sheet piles were delivered on site and stockpiled in the Former Log Storage/Peeler Area. The sheet pile was delivered by a barge and deposited on the upland portion of the site by a barge-mounted crane. The amount of sheet piles delivered to the site effectively covered the entire 3-acre area of the Former Log Storage/Peeler Area. In addition, approximately 40,000 cubic yards of soil from the Former Log Storage/Peeler Area was slated to be excavated for construction of the habitat mitigation site and used as backfill between the installed sheet pile wall and the existing shoreline. Consequently, the delineation in the Former Log Storage/Peeler Area had to be completed prior to delivery of the sheet pile to avoid impacting the schedule of both the sheet pile delivery and the construction activities.

3.0 CONTAMINATED SOIL EXPLORATION ACTIVITIES

Soil investigations in the Former Log Storage/Peeler Area were conducted during the Remedial Investigation in 1994 and 1995 (CH2M Hill, 1997). During that effort, 178 near surface soil samples were collected from the upper 3 inches of the soil column and 182 subsurface samples from a depth of 5 to 7 feet bgs. Samples were collected from a surveyed grid established across the entire site. In addition, a number of biased samples were collected to confirm results from previous investigations.

In 1995, additional surface samples were collected for dioxin/furan analysis at seven locations. Samples were also obtained from the vicinity of monitoring well CW01. Together, these sampling events provided a comprehensive picture of the horizontal extent of contamination in surface soils and the vadose zone across the site. Based on these results, the RI estimated that a total of 60,000 cubic yards of soil would require excavation from both the Former Log Storage/Peeler Area and CW01 Area to meet MTCA Method B cleanup levels. However, the extrapolation of surface soil results to 5 feet bgs created uncertainty regarding the actual volume of soil requiring excavation; therefore the supplemental investigations conducted by USACE focused on refining the estimated volume of contaminated soil.

3.1 FIRST SUPPLEMENTAL INVESTIGATION

The first supplemental investigation began on February 7, 2000 and was completed on March 1, 2000. A total of 74 soil samples were collected from 34 borings located in both the Former Process Area and the Former Log Storage/Peeler Area (Figure 2). Soil samples were collected for chemical analysis by the on-site mobile laboratory for PAHs, TPH-Dx, and PCP. Results of this investigation are reported in the either the Pilot Study Location Selection Report (USACE, 2000d) or in the Thermal Remediation Pilot Study Project design documents.

3.2 SECOND SUPPLEMENTAL INVESTIGATION

The second supplemental investigation conducted in the Former Log Storage/Peeler Area began on September 28, 2000 and was completed on October 29, 2000. The portion of the Former Log Storage/Peeler Area sampled during this mobilization focused on the area west of the Former Process Area (Figure 3). The EPA Region 10 Geoprobe and mobile laboratory were used to collect and analyze soil samples within areas of the Former Log Storage/Peeler Area already identified by the RI (CH2M Hill, 1997) as having PAH and PCP concentrations greater than MTCA Method B cleanup levels. The

soil-sampling grid used in the RI was re-established by the Seattle District survey crew across the Former Log Storage/Peeler Area, west of the Former Process Area, based on coordinates provided in the RI report. A total of 619 soil samples were collected from 162 borings in 18 sampling days. Sampling locations are shown in Figure 3.

At locations where surface soil samples alone were collected in the RI, sampling was conducted at 2-foot intervals generally to a depth of eight feet or until groundwater was encountered. Initially, only the on-site FASP laboratory analyzed the upper two intervals for PAHs by GC/FID and PCP by GC/ECD. Lower sample intervals were archived on-site pending the analytical results of the higher elevation samples. If the –2 foot interval contained PAHs or PCP greater than the on-site laboratory's Practical Quantitation Limit (PQL), then the lower elevation samples were analyzed to determine the true depth of contamination. Once the on-site laboratory results failed to detect PAHs or PCP, the next lower sample interval was split and sent to the EPA Region 10 Manchester laboratory for analysis using EPA SW-846 Method 8270. The PQL of this method was significantly lower than the field method and provided verification that MTCA Method B cleanup levels could be achieved if the overlying soils were removed.

At sample locations that exceeded MTCA Method B cleanup levels in the RI at the –5 to –7 foot interval, soil sampling began at a depth of 5 feet and continued until groundwater was encountered. Again, the upper two 2-foot intervals were analyzed first followed by lower samples until levels of contamination in the boring did not exceed the on-site laboratory's PQL. Once the depth of contamination was determined, the sample from that interval was split for confirmation analysis by the Manchester laboratory using EPA SW-846 Method 8270.

Once the vertical extent of contamination had been determined, the horizontal boundaries of the contaminated areas were delineated. Since the original soil-sampling grid was established on approximately 75-foot centers, the initial horizontal delineation occurred on a 30-foot spacing between a confirmed contaminated sample location and adjacent no-hit sample locations. Samples were collected at the surface at 2-foot intervals and analyzed for PAHs and PCP by the on-site laboratory. If samples from the upper intervals exceeded the on-site laboratory's PQL, then the depth of contamination was determined as discussed above. If the analytical results for the upper interval sample were non-detect, then the horizontal distance between was halved again (15 feet) from the adjacent contaminated sample location and another upper interval sample was collected. Continuing this pattern of sampling formed an offset or triangular grid pattern, which has been demonstrated to be an efficient method for defining contaminant "hot-spots" (Gilbert, 1987).

The goal of this sampling was to increase the resolution of contaminated soil delineation to approximately 8.5 cubic yards (15'x 15' x 1'). This value was selected to approximate the volume of a standard 10-yard dump truck that would be used to haul contaminated soil from the excavation site to the soil consolidation site in the Former Process Area.

The resolution of contaminated soil delineation reported in the RI was approximately 230 cubic yards.

Soil delineation in the CW01 Area was conducted in a similar manner and with the same goal of obtaining a spatial resolution of 8.5 cubic yards. In the RI, trenches were used to collect samples from the vicinity of well CW01 rather than the grid system employed in the Former Log Storage/ Peeler Area. Since there was no surveyed grid to re-occupy, one was established on approximately 15-foot centers. Sampling began at the outer fringe of the contaminated area established by the RI to determine the actual horizontal boundary. Once the horizontal extent of contamination was determined, the vertical extent was established. Based on RI data, PAH and PCP contamination in this area appears limited to historically placed fill. Since the fill material is distinct in appearance from the native soils, the depth of contamination was determined to 1 foot below the interface between the fill and the native soil.

As in previous phases of the investigation, all Geoprobe borings were physically sampled and logged (scale of one inch to one foot) by a geologist. Materials recovered from the borings were classified using the Unified Soil Classification System (ASTM D 2488-90) visual-manual procedure.

Soil sampling was sequenced to avoid conflicts with the delivery of sheet piles to the site. Based on coordination with the delivery contractor, the southeast quadrant was sampled first. To stay ahead of the sheet pile delivery, sampling activity then moved west along the southern portion of the area. The northwest corner of the Former Log Storage/Peeler Area was sampled last since the uneven ground surface could not be used to stockpile sheet piles. Once the Former Log Storage/ Peeler Area has been sampled, work moved to the CW01 Area.

3.3 CONFIRMATION SAMPLING AND ANALYSIS

Based on the results of the second supplemental investigation, areas requiring excavation were determined. Excavations were conducted from September 2001 through February 2002. The excavation process is described in detail in Section 5.0. Once an area was excavated to the pre-determined depth for removal of contamination, a discrete sample was collected at the bottom of the excavation. These confirmation samples were sent to the Region 10 Manchester laboratory for analysis of PAHs and PCP by Method 8270. A total of 30 confirmation samples were collected from the excavations in the Former Log Storage/Peeler Area and in the vicinity of the CW01 Area from September 27, 2001 through March 1, 2002. These data, combined with the confirmation samples collected during the second supplemental investigation, were used for calculation of the site-wide UCL to confirm achievement of Method B cleanup levels in the Former Log Storage/Peeler and CW01 Areas. This evaluation is presented in Section 5.0.

4.0 RESULTS

4.1 CHEMISTRY RESULTS

Contaminant characteristics in the Former Log Storage/Peeler Area are generally distinct from the Former Process Area. NAPL is present in the upper aquifer underlying the majority of the Former Process Area and occurs within two feet of the soil surface at some points. Residual contamination occurs at higher concentrations through the soil column of the Former Process Area with naphthalene and substituted-naphthalene dominating. Conversely, contaminant concentrations in the Former Log Storage/Peeler Area are generally much lower, restricted to the upper fill unit and are comprised of higher molecular weight PAHs (HPAHs). In fact, most samples that exceeded MTCA Method B cleanup levels in the Former Log Storage/Peeler Area did not contain detectable concentrations of low molecular weight PAHs (LPAHs). Chemical data from the on-site and confirmation laboratories are presented in Appendix A.

All locations sampled during the second supplemental investigation are shown in Figure 3. Locations where PAHs were detected by the on-site or confirmation laboratory during the second supplemental investigation are shown in red in Figure 4. PCP was not detected at concentrations exceeding the cleanup level of 8.33 mg/kg at any location sampled during the second supplemental investigation. Based on the results shown in Figure 4, areas for excavation were determined. The excavation process is described in detail in Section 5.0.

4.2 DATA QUALITY EVALUATION

This section represents a summary of chemical data quality in relation to project objectives. Data were collected in support of the primary objective to better define the extent of vadose zone contamination in the Former Log Storage/Peeler Area. This evaluation only covers data collected in September 2001 through March 2002. The quality evaluation of the data reported by the on-site laboratory and the associated confirmation samples collected in September through October 2000 was included in the Former Log Storage/Peeler Area Investigation Report and Soil Remediation Plan (USACE, 2001).

Data collected in September 2001 through March 2002 generally met the data quality objectives outlined in the Quality Assurance Project Plan (QAPjP) in the Wyckoff NAPL Field Exploration Management Plan (USACE, 1999) and Amendments No. 1 and No. 3 except for the items discussed in the following subsections.

The chemical data review process for this project included two levels of QA review. All data were reviewed and qualified by the project laboratory, EPA Region 10 Manchester Environmental Laboratory, prior to submittal to Seattle District, USACE. The Region 10 laboratory determined data usefulness based on the USEPA SW-846 Method 8270 and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1994). Qualifiers were assigned to data where necessary. The Manchester Peer Review and Data Validation Reports are included in Appendix B.

The Seattle District then conducted an independent data quality review evaluating attainment of data quality objectives of the overall project. Data were reviewed to evaluate its sensitivity, precision, accuracy, completeness, representativeness and comparability based on project-specific data quality objectives. Results for the following laboratory confirmatory quality control (QC) samples were reviewed:

- Field and matrix duplicates
- Matrix spike/matrix spike duplicates (MS/MSD)
- Laboratory control samples (LCS) and blank spikes
- Rinsate, field and method blanks
- Surrogates
- Internal standards
- Instrument tuning standards
- Initial and continuing calibration standards

Chain–of-custody (COC) and cooler receipt forms were reviewed, as part of sample representativeness, for evaluation of sample integrity during shipping and handling procedures and to verify contractual and technical holding times. Laboratory reporting limits (i.e. sensitivity) were reviewed to determine if project-specific detection limits were met. Frequency of collection and analysis of field and laboratory QC samples were viewed to evaluate completeness and adherence to the SAP.

4.3.1.1 Reporting Limits

Generally, all Region 10 Manchester laboratory data met or exceeded reporting limit goals outlined in the Management Plan Amendments No. 1 and No. 3 (USACE 1999, 2000b, and 2000c).

4.3.1.2 Precision

Precision is defined as the degree of agreement between or among independent, similar or repeated measures. While true precision cannot be measured, it can be expressed in terms of analytical variability. For this project, analytical variability was measured as the relative percent difference (RPD) between blind field duplicate samples, analytical lab replicates and between the matrix spike (MS) and matrix spike duplicate (MSD) analyses.

Blind field duplicate samples were collected to determine the variability associated with both the sampling technique and the naturally occurring heterogeneity in the sampled media. Measurement error has five basic sources: the contaminant being measured, sample collection procedures, sampling handling procedures, analytical procedures and data production procedures. The collection of blind field duplicate samples quantifies both measurement error and the variability associated with the project samples.

RPD QC Limits for primary and field duplicate evaluations were ≤ 50% for soil samples. The RPD QC limits for MS/MSDs were those established by the laboratories and referenced in the QAPjP (USACE, 1999). Field duplicates results are presented in the Peer Review and Data Validation Reports (Appendix B). RPDs are within the project specified QC limits. No qualifiers were assigned based on duplicate precision results.

4.3.1.3 Accuracy

Accuracy is the amount of agreement between a measured value and the true value, and allows evaluation of the analytical bias in a measurement system. Sources of error are the sampling process, field contamination, preservation, handling, nature of the matrix, sample preparation and analysis technique. Accuracy is measured as the percent recovery of matrix spikes/matrix spike duplicates and organic surrogate compounds. Accuracy criteria for this project are specified in the Management Plan (USACE, 1999) and Amendments No. 1 and No. 3 (USACE, 2000b and 2000c).

Manchester MS/MSD recoveries were within DQO specified recovery limits (50-150%) with the following exceptions:

Recoveries for samples 01423502, 01433588, 01503500, 02062500, and 02092553 were outside acceptance limits. Qualifiers (J and R) were applied to results based on out of limit recoveries. No results for contaminants of concern were rejected.

Surrogate recoveries for the samples analyzed at the Manchester laboratory were within the acceptance criteria of between 50-150% with the following exceptions:

Recoveries for samples 02092553, 01503500, 01503501, 01503502, and 01503503 were greater than acceptance criteria. All detected sample results were qualified J.

Generally, analytical data analyzed for this project meet acceptance criteria used to evaluate accuracy. When QC limits were exceeded some of the data required qualifications as estimates. However, the sample collection strategy contained redundancies that reduced the overall uncertainty of the data set.

4.3.1.4 Representativeness

Representativeness is the degree to which sample results represent the system under study. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program. Objectives for representativeness are defined for

sampling and analysis tasks and are a function of the project specific data quality objectives. Sampling procedures, as described in the SAP (USACE, 1999) have been selected with the goal of obtaining representative samples for the media of concern. Sample representativeness was maximized by using standard sampling techniques and preservation procedures.

Representativeness was evaluated by examining sample tracking information and COC/cooler receipt documentation. All Manchester laboratory samples were analyzed within method specific criteria and no sample tracking discrepancies were noted.

4.3.1.5 Comparability

Comparability is the degree to which data from one study can be compared to data from other similar studies and for comparison of site data to reference values. This goal is achieved through using standard techniques to collect and analyze representative samples and reporting results in appropriate units. Comparability is limited by other PARCC parameters, because only when precision and accuracy are known can a data set comparison be performed with confidence. EPA Region 10 laboratory data followed SW-846 methodology and generally met project specific goals.

Comparability can be evaluated by comparing inter-laboratory split sample results. In this investigation, split samples were not a project-specific requirement.

4.3.1.6 Completeness

Completeness is the amount of valid data (usable for project-specific purposes) obtained during a project compared to the amount of valid data expected. Field data such as that collected in this study must be evaluated for its usefulness according to data qualifiers assigned by the laboratory. Although some of the data were qualified as estimates or were rejected, all analytical results for contaminants of concern obtained from the EPA Region 10 Laboratory are valid and meet the objectives of the project at this time.

4.3.1.7 Overall Data Usability

After review of information contained in the laboratory data deliverables, an evaluation was performed to determine how well the analytical portion of the project was executed and to what extent the chemical data achieved project specific DQOs. The overall DQO for this project was to generate data to better define the extent of NAPL contamination in the subsurface at the Wyckoff facility. Despite minor data QC issues identified above, the analytical data reported for this project are usable.

Table 2 - Samples Included In Data Quality Evaluation

Description	Sample ID	Collection Date
01CF040204/4’	01403531 *	9/27/01
01CF040307/7’	01403532 *	9/27/01
01CF030402/2.5’	01403533 *	9/27/01
01CF2109/ 2FT	01413545	10/9/01
01CF0208/ 2FT	01413546	10/9/01
01CF0308/ 2FT	01413547	10/9/01
01CF0307/ 6FT	01413548	10/9/01
01CF0309/ 6FT	01413549	10/10/01
01CF0312N/ 2-3FT (2.5)	01413550	10/10/01
01CF0312S/ 3.5FT	01413551	10/10/01
01CF0314N/ 2 FT	01423500	10/16/01
01CF0314/ 4 FT	01423501	10/16/01
01CF0313/ 4 FT	01423502	10/16/01
01CF0313N/ 2 FT	01423503	10/16/01
01CFCWO1W 4FT	01433586	10/23/01
01CFCWO153E 5FT	01433587	10/23/01
01CFCWO152 4FT	01433588	10/23/01
212-1 (212W)	01503500	12/10/01
212	01503501	12/10/01
212-2 (213W)	01503502	12/10/01
213	01503503	12/10/01
304	02062500	2/7/02
308	02062501	2/7/02
312	02062502	2/7/02
313	02062503	2/7/02
212W	02062504	2/8/02
213	02062505	2/8/02
212	02062506	2/8/02
CW01S2	02092553	3/1/02
CW01W	02092554	3/1/02

*Preliminary results only. Data not included in data quality evaluation.

5.0 SOIL REMOVAL SUMMARY

Removal of contaminated soil in the Former Log Storage/Peeler Area, west of the Former Process Area, and the CW01 Area was conducted in phases under two separate construction contracts. This approach allowed the removal costs to be reduced since the work was assigned to contractors already mobilized to the site to complete additional remediation projects on the Wyckoff site. The first phase of soil removal from the Former Log Storage/Peeler Area was conducted during construction of the Mitigation Beach under the Sheet Pile Wall Installation contract with Bay West, Inc. between December 2000 and February 2001. The soil removal work was completed during the Thermal Remediation Site Infrastructure contract with Marine Vacuum Service, Inc. (MarVac) between September 2001 and March 2002. In both cases, contaminated soil was consolidated in the Former Process Area surrounding the Thermal Remediation Pilot Study Area. Chemical data representative of post excavation conditions were evaluated to demonstrate compliance with MTCA Method B cleanup levels.

5.1 SOIL REMOVAL AREAS

Soil removal was conducted in three general areas: the construction footprint of the Mitigation Beach, the remaining area of the Former Log Storage/Peeler Area south of the Mitigation Beach, and the CW01 Area. Excavated areas are shown in Figures 5a through 5d.

5.1.1 Mitigation Beach Area

Approximately half of the soil exceeding MTCA Method B cleanup levels in the western portion of the Former Log Storage/Peeler Area was removed during construction of the 2-acre mitigation beach. This excavation restored a more natural sloping shoreline behind a failing wooden bulkhead along the entire western end of the Former Log Storage/Peeler Area. This mitigation was required by the Natural Resource Trustees (U.S. Fish and Wildlife, National Marine Fisheries Service, WA State Department of Fish and Wildlife and the Squamish Tribe) in response to the loss of intertidal and subtidal nearshore habitat that occurred as the result of installation of the sheet pile containment wall around the Former Process Area.

The creation of the mitigation beach required the removal of approximately 40,000 cubic yards of soil. About 50% percent of the removed soil was identified as contaminated during the second supplemental investigation. The area excavated included the soil in the northwest corner of the Former Log Storage/Peeler Area that constituted some of the highest levels of PAH and PCP contamination measured in the entire Former Log Storage/Peeler Area (sample locations 602S, 602S2, 602E) (Figure 4). Some contaminated soil initially remained below the new grade of the Mitigation Beach in the vicinity of sample locations 602E, 602S and 602S2. This material was subsequently

removed during spot removals once the new grade was established. All of the contaminated soil excavated during construction was transported and stockpiled in the Transfer Pit within the Former Process Area.

Residual PAH contamination within 2-6 feet of the ground surface further east in the Mitigation Beach area was also removed during beach construction. This removal occurred as the first phase of construction after the contaminated areas were flagged in the field. Soil at each location and all intervening material was removed to a depth that corresponded to a non-detect sample interval collected during the second supplemental investigation. All contaminated material north of the revetment (Figures 5a through 5d) was excavated and transported to the Former Process Area.

5.1.2 Former Log Storage/Peeler Area south of the Mitigation Beach

Contaminated soil south of the Mitigation Beach and west of the Former Process Area was removed in 2-foot lifts. The horizontal extent of contamination was determined using data from both the RI (CH2M Hill, 1997) and the Corps' second supplemental investigation. The boundaries of the excavation area were set by splitting the linear distance between adjacent hit and no hit sample locations. Vertical limits of the soil removal was determined by splitting non-detect FASP samples with the Region 10 Manchester laboratory and confirming the depth of contamination using Method 8270.

The initial two-foot lift encompasses much of the remaining surface soil in the Former Log Storage/Peeler Area west of the Former Process Area (Figure 5a). The total estimated quantity of soil exceeding MTCA Method B cleanup levels for PAHs and PCP was 6200 cubic yards. Sample locations outside the excavation limits depicted as hits on Figure 5a were represent detections of PAHs below the cleanup levels (sample locations 111E, 111N, 211, 213N, 308E, 310, 311 and 312N).

The 2-4 foot lift was approximately 2000 cubic yards and consists of a narrow strip of soil running from sample location 0313 to 0312W (Figure 5b). Small areas around sample locations 0309 and 0405ES2 were also removed to a depth of 4 feet. The final lift from 4-6 feet is restricted to areas around 0309E and 0403 (Figure 5c) with an estimated removal volume of 160 cubic yards. Groundwater was encountered in the excavations at 6 feet below ground surface.

5.1.3 CW01 Area

Removal of contaminated soil in the CW01 Area required a rectangular excavation approximately 100 feet long and 50 ft wide. Since this area represents a flattened pad on a slope, the southern portion of the excavation was about 2 feet deep on the up-slope (southern) edge and 6 feet deep on the down-slope side (northern) edge. The estimated quantity of contaminated soil requiring removal to meet MTCA Method B cleanup levels was 1152 cubic yards (Figure 5a).

Backfill of the excavation in the Former Log Storage/Peeler Area was phased to allow use of on-site stockpiles mixed with imported material. A total of 18 samples were collected from the 3500 cubic yards of stockpile material on July 5, 2001 to verify that the material did not contain PAHs or PCP concentrations above site cleanup levels. Since the material removed in the CW01 Area represents fill, the area was not backfilled after excavation. The removal area was contoured to match the existing slope, thus restoring the natural grade. Monitoring well CW01 was maintained by cutting down the exposed casing to match the new slope.

5.2 COMPLIANCE EVALUATION

5.2.1 Compliance Sampling

Since remaining contamination in the Former Log Storage/Peeler Area (south of the newly constructed mitigation beach and the revetment shown in Figures 5a through 5d) is generally uniform in character, a random sampling pattern distributed across the entire soil removal area was determined prior to excavation. Once a pre-selected confirmation sample location was excavated to the pre-determined depth, a discrete sample was collected at the bottom of the excavation. The sample was then shipped to the Region 10 Manchester laboratory for analysis of PAHs and PCP by Method 8270. When results confirming removal of contaminated soil were received by the Site Manager, the excavation was backfilled with clean material.

A total of 30 confirmation samples were collected from the excavations in the Former Log Storage/Peeler Area and in the vicinity of the CW01 Area (Table 2). These data were combined with the 97 confirmation samples collected from the CW01 Area and the area south of the revetment during the second supplemental investigation (September to October 2000) for the compliance evaluation. Together, this data set provides an adequate sample size for calculation of site-wide UCL to confirm achievement of Method B cleanup levels in the Former Log Storage/Peeler and CW01 Areas.

5.2.2 Target Cleanup Level

As described in the ROD (EPA, 2000), the selected remedy for contaminated soil in the Former Log Storage/Peeler and CW01 Areas is removal and consolidation in the Former Process Area. Once a clean surface was reached in the bottom of the excavation, the open excavation was then to be backfilled with clean material to the pre-excavation elevation. The primary objective of the soil remediation in the Former Log Storage/Peeler Area was to remove impacted soil that exceeds the Washington State Model Toxics Control Act (MTCA) Method B cleanup levels for PAHs and PCP.

For many of the HPAHs that are listed by EPA as potential human carcinogens, the Method B cleanup level is lower than the Practical Quantitation Limit (PQL) of the analytical method (Table 1). The PQL is defined as the concentration that can be

reliability measured within specified limits during routine laboratory operating conditions using SW-846 methods. Ecology has issued an Implementation Memo (Ecology, 1993) that provided guidance in the use of the PQL as the cleanup level. This memo also provides a list of analytes with PQLs above the Method B cleanup level and a range of PQL values achieved by independent laboratories.

In most cases, the PQL of the project laboratory slightly exceeded the Method B cleanup level but was less than the PQL for the method. Consequently, the concentration used to determine compliance with MTCA Method B cleanup levels will be the method specific PQL listed in Ecology's implementation memo. Target cleanup levels are listed in Table 3.

5.2.3 Evaluation of Compliance Sampling

The final evaluation to demonstrate compliance with MTCA Method B cleanup levels was conducted consistent with Ecology's *Statistical Guidance for Ecology Site Managers* (1992). This guidance states that average soil concentrations shall be used to evaluate compliance with cleanup levels. This procedure compares the upper confidence limit (UCL) of the site data to the cleanup level.

In addition to comparing site data to the cleanup standard, there are two additional administrative requirements listed in the guidance (WAC 173-340-740(7)(e)). The first is that no single sample concentration shall be greater than two times the soil cleanup level. Second, less than 10% of the sample concentrations shall exceed the soil cleanup level.

5.2.3.1 Calculation of the 95 Percent Upper Confidence Limit (UCL_{95})

According to EPA (USEPA 1992), the concentration term at the exposure point should be an estimate of the average concentration to which an individual would be exposed over a significant part of a lifetime. Because of the uncertainty associated with estimating the true average concentration at a site, EPA and Ecology generally recommend the use of the 95 percent upper confidence limit (UCL_{95}) of the arithmetic mean as the appropriate estimate of the average site concentration. (USEPA 1992 and Ecology 1992). At the UCL_{95}, the probability of underestimating the true mean is less than 5 percent. The UCL_{95} can address the uncertainties surrounding a distribution average due to limited sampling data.

The data used to calculate the UCL95's for each chemical is provided in Appendix C. For non-detected results, half the SQL was used as a surrogate concentration as required by MTCA (WAC 173-340-740(7)(g)).

The formula used to calculate a UCL_{95} depends on the distribution of the data, i.e., the "shape" of the curve (USEPA 1992). EPA experience shows that most environmental contaminant data sets are lognormally distributed (USEPA 1992). However, in cases where the distribution is questionable or unknown, EPA recommends performing a statistical test to determine the best distribution assumption for the data set.

MTCA's statistical add-in to Microsoft Excel (MTCA*Stat* 3.0) provided by Ecology was used to determine distributions and calculate corresponding UCL_{95} values. MTCA*Stat* 3.0 uses the Shapiro-Wilkes W-test (for sample sizes less than 50) and D'Agostino's test (D-test) (for sample sizes greater than 50) to determine the approximate distribution of a data set. All data sets evaluated contained greater than 50 results. Therefore the D'Agostino's test (D-test) was performed on each data set. This test determines if a data set best matches a normal, lognormal, or other distribution (Ecology 1992; Gilbert 1987; USEPA 1992). If the result of a distribution test indicated a normally distributed data set, a normal UCL_{95} was calculated using MTCA*Stat* 3.0 with an equation reflecting a Student's t-distribution as described in EPA guidance (1992). If the D-test results indicated a lognormal distribution of the data set, MTCA*Stat* 3.0 calculated a one-sided UCL_{95} using the Land's method. This procedure uses statistics calculated from the log-transformed sample data with the tabled parameter, H. If the D-test results indicated that both the normal and lognormal distributions should be rejected, for large sample sizes (i.e., where n is greater than 50) Ecology recommends calculating a UCL_{95} using the Student's t equation with the Z statistic (Ecology 1992).

The D-test results indicated that all data sets evaluated were neither normally nor lognormally distributed and all sample sizes were greater than 50. Therefore, the Z statistic was used in all the UCL_{95} calculations as follows:

$$UCL = \bar{x} + Z_{1-\alpha}\left(\frac{s}{\sqrt{n}}\right)$$

where,

$\bar{x}$ = sample mean
s = sample standard deviation
n = number of samples
$Z_{1-\forall}$ = value of the Z parameter from the normal distribution for a defined $\forall$ level. For a one-sided upper 95 percent confidence limit, a value of Z_{95} is 1.645.

The MTCA*Stat* 3.0 statistical outputs are provided in Appendix C. The UCL_{95} for each chemical are listed in Table 3.

5.2.3.2 Conclusion

All calculated UCL_{95} values were less than target cleanup levels. Additionally, less than 10% of the confirmation sample concentrations exceeded the target cleanup level. Results for three confirmation samples (locations 307, 312S, and 314N) had detections of PAHs at concentrations greater than the target cleanup level. Results for two of these samples (locations 307 and 312S) exceeded the screening level by more than two times. Results are presented in Figure 6.

Table 3 - UCL_{95} and Target Cleanup Levels

Contaminant of Concern	UCL_{95} (mg/kg)	Target Cleanup Level (mg/kg)
Acenaphthene	0.093	4,800
Acenaphthylene	0.092	0.66
Anthracene	0.116	24,000
Benzo(a)anthracene	0.137	0.66
Benzo(a)pyrene	0.159	0.66
Benzo(b)fluoranthene	0.125	0.66
Benzo(ghi)perylene	0.184	0.66
Benzo(k)fluoranthene	0.224	0.66
Chrysene	0.185	0.66
Dibenzo(a,h)anthracene	0.172	0.66
Fluoranthene	0.301	3,200
Fluorene	0.092	3,200
Indeno(1,2,3-cd)pyrene	0.233	0.66
Naphthalene	0.117	3,200
Pentachlorophenol	0.317	8.33
Phenanthrene	0.156	0.66
Pyrene	0.229	2,400

6.0 REFERENCES

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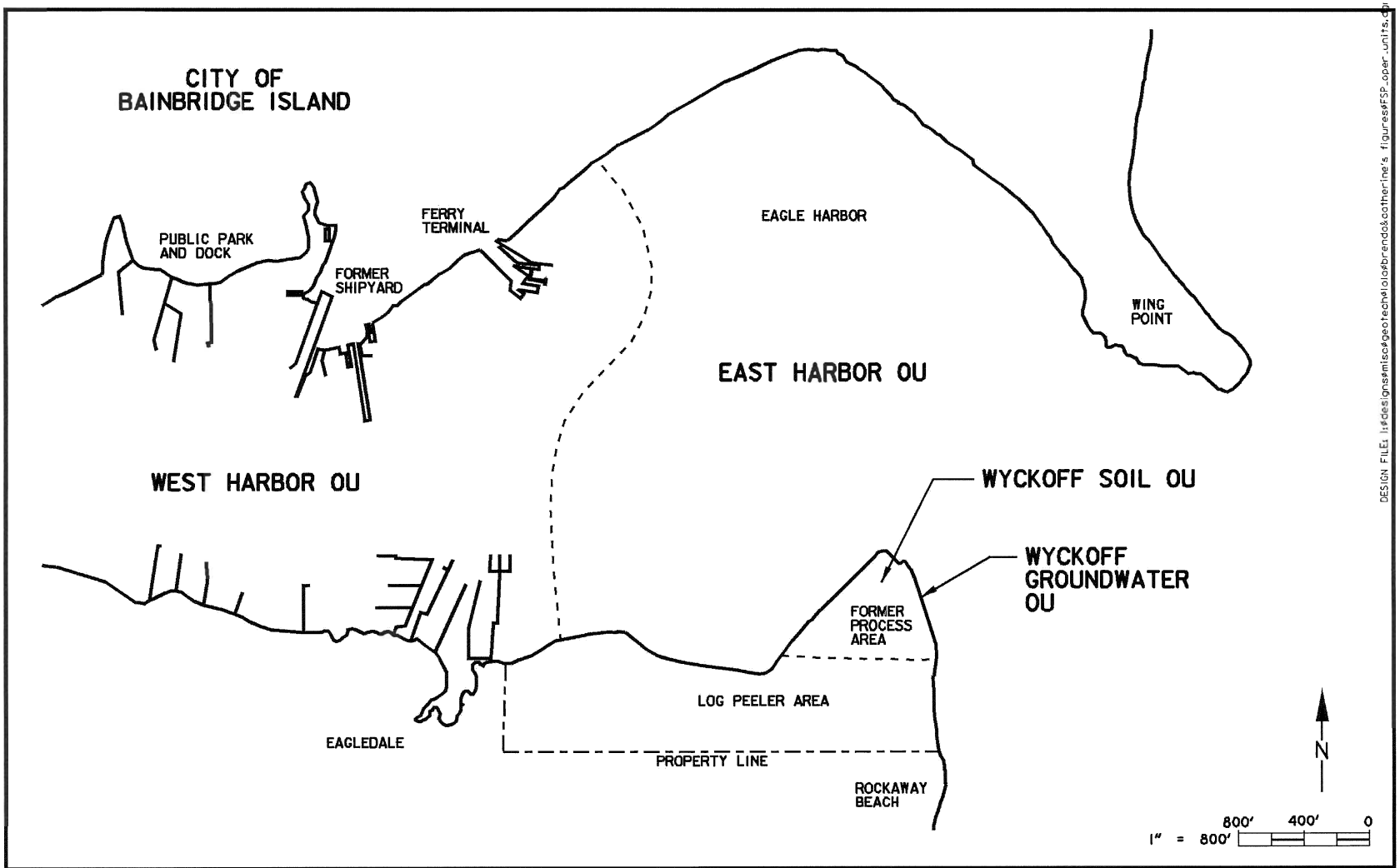
FIGURES



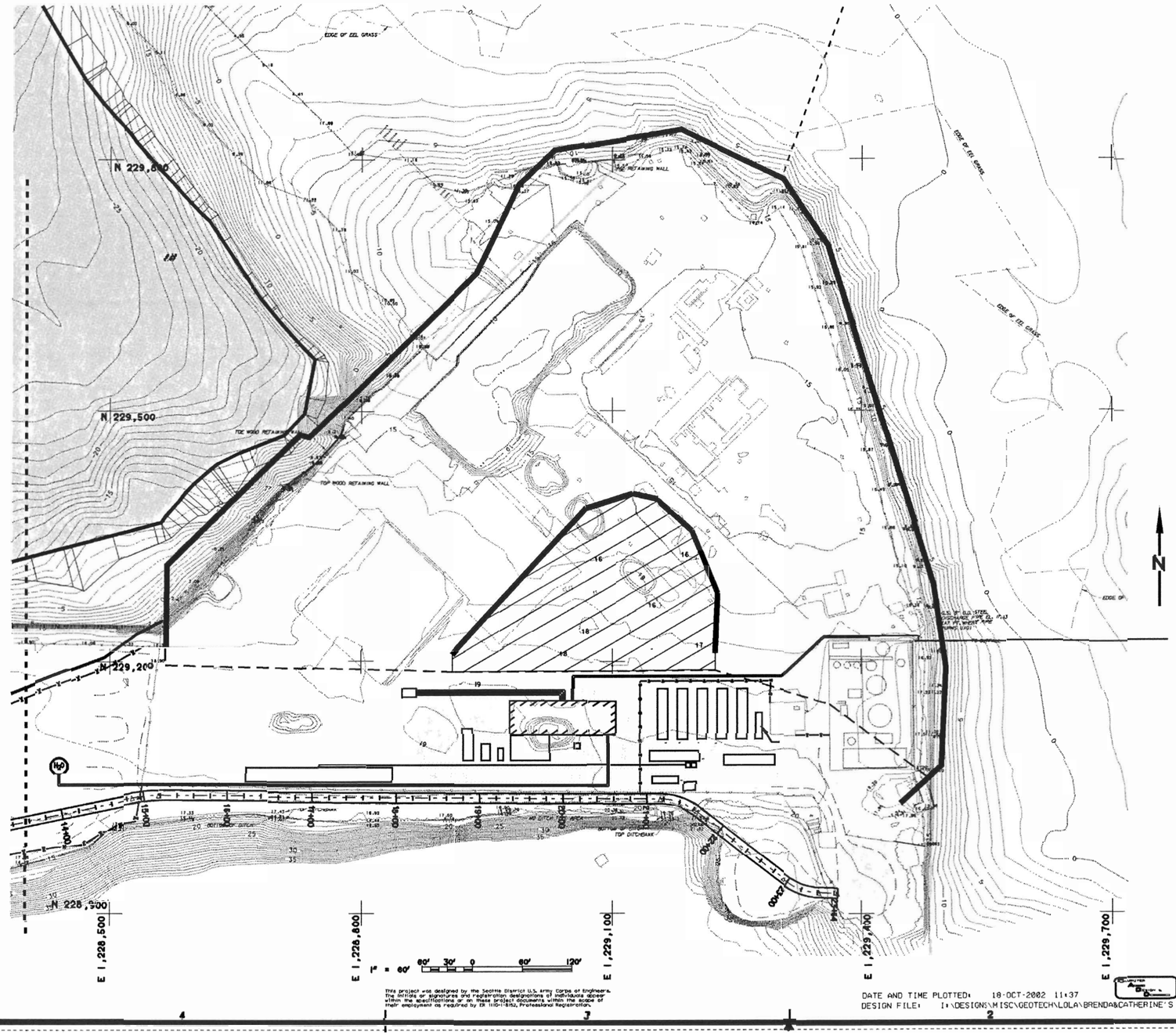
US Army Corps
of Engineers
Seattle District

FIGURE 1
LOCATIONS OF OPERABLE UNITS AT WYCKOFF/EAGLE HARBOR SUPERFUND SITE

THERMAL REMEDIATION
PILOT PROJECT

WYCKOFF/EAGLE HARBOR SUPERFUND SITE
BAINBRIDGE ISLAND, WASHINGTON

REVISIONS				
SYMBOL	ZONE	DESCRIPTION	DATE	BY



This project was designed by the Seattle District U.S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear within the specifications or on these project documents within the scope of their employment as required by ER 1110-1-8152, Professional Registration.

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U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

WYCKOFF/EAGLE HARBOR SUPERFUND SITE
SITE PLAN

FIGURE 2

BAINBRIDGE ISLAND		PN C1898		WASHINGTON
SIZE	INVITATION NO.	FILE NO.	DATE	PLATE
D		E-54-1-18	13APR01	
DSGN. RAMER		DR.	SHEET 5	

EAGLE HARBOR

LOG PEELER AREA

602W 602S 602E1 602E 602ES1 602SW2 602S2W 602SW2W2 602S2 603W 603 502W 602ES 501 502 502E 603E 502S 502SE 603S 603ES 603ES2 503 504N 403W 403W 403 403E 403S

505W 505 505E 405N 405W 405 505S 405E 505SE2 405E2 405S 405S2 405ES2 406N

307N 307E 307S 308N 308W 308 308E 308S 309N2 309W 309 309E 309S 309E2 208N 208 208E 208E2

411N 411W 411 411E 411S 312N2 312N 312W 312 312E 312S2 312S 313W 313N 313 313E 313S 313S2 314N2 314N 314W 314 314E 314S 314S2 315N 315W 315 315E 315S 209 210 211

2109W2 2109N 2109 2109W 2109E 2109S

212W2 212N 212W3 212W 212 213W 213N1 213N 213 213E 213E2 213S 213S2 212S 212S2

111W 111N 111 111E

RI SAMPLING GRID

LEGEND

CW01W Geoprobe Sampling Location

N

0 25 50 100
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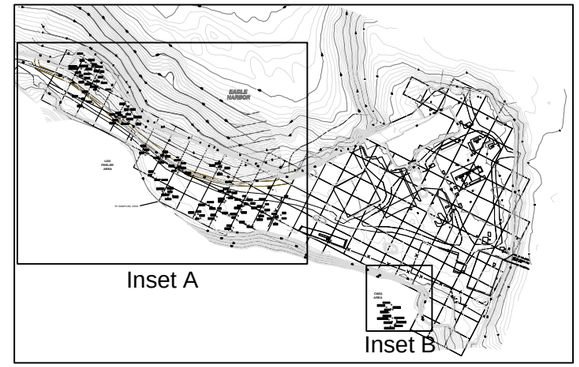

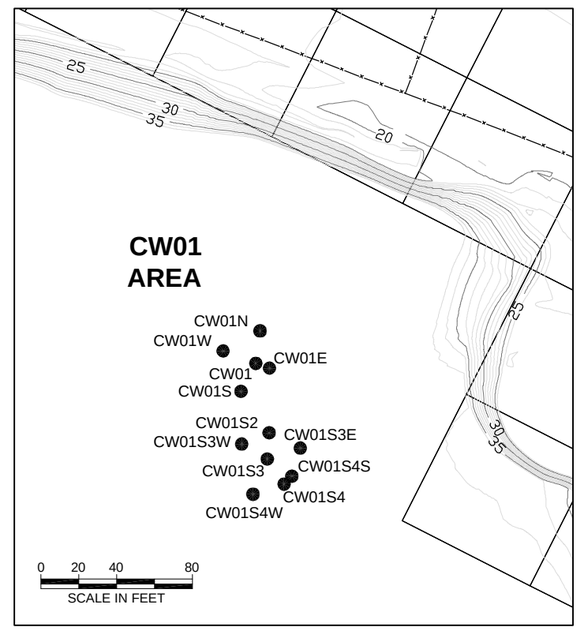

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Figure 3
Second Supplemental Investigation
Geoprobe Sampling Locations
September - October 2000

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

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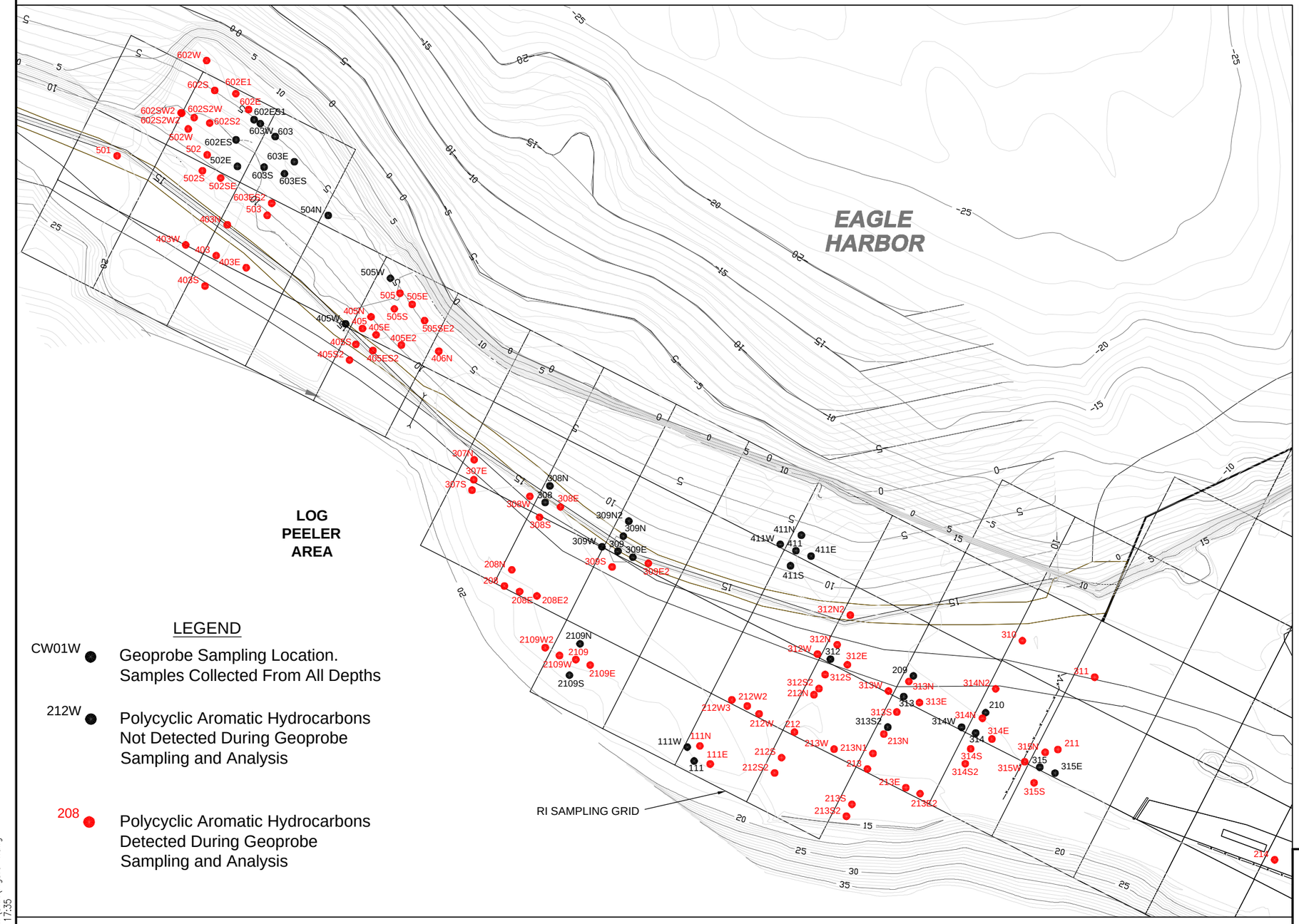

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CW01W ● Geoprobe Sampling Location. Samples Collected From All Depths

212W ● Polycyclic Aromatic Hydrocarbons Not Detected During Geoprobe Sampling and Analysis

208 ● Polycyclic Aromatic Hydrocarbons Detected During Geoprobe Sampling and Analysis

Inset A

Inset B

Figure 4
Second Supplemental Investigation
Analytical Results
September - October 2000

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

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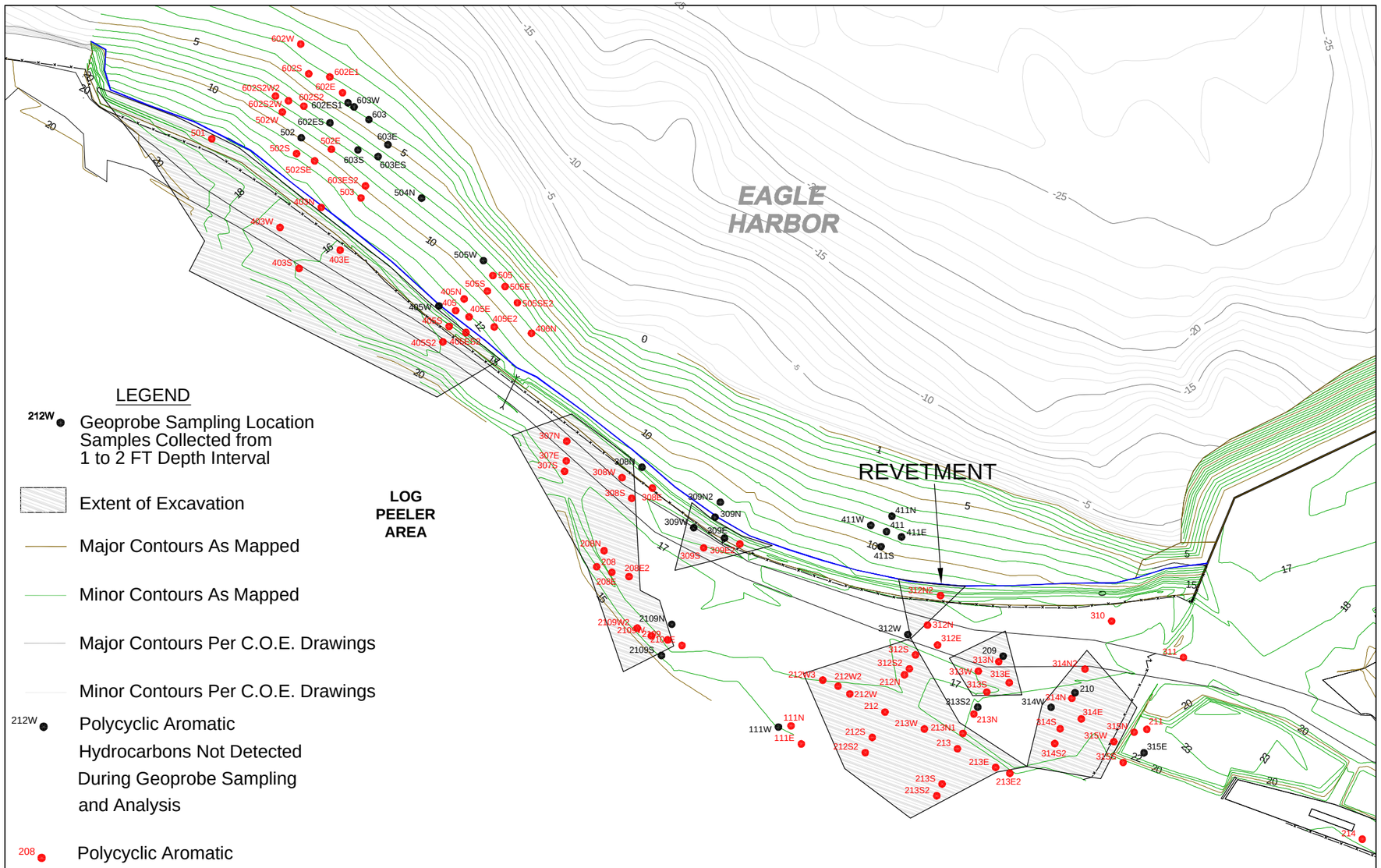

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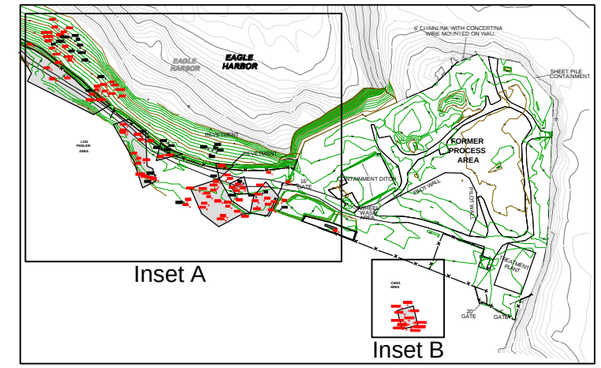

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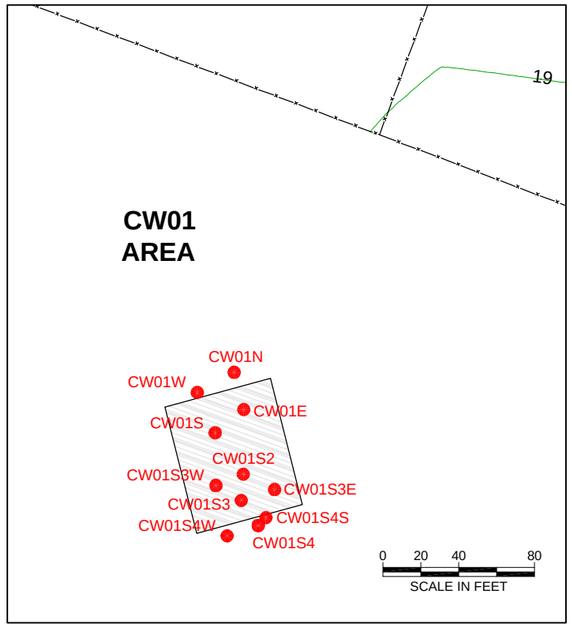

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Figure 5a
Soil Removal Areas
2-Ft Lift, October 2001

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

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EAGLE HARBOR

REVETMENT

LOG PEELER AREA

LEGEND

212W ● Geoprobe Sampling Location
Samples Collected from
3 to 4 FT Depth Interval

Extent of Excavation

Major Contours As Mapped

Minor Contours As Mapped

Major Contours Per C.O.E. Drawings

Minor Contours Per C.O.E. Drawings

212W ● Polycyclic Aromatic Hydrocarbons Not Detected During Geoprobe Sampling and Analysis

208 ● Polycyclic Aromatic Hydrocarbons Detected During Geoprobe Sampling and Analysis

603ES, 502SE, 603ES2, 503, 504N, 403N, 403W, 403E, 403S, 505W, 505, 505E, 505S, 505SE2, 405W, 405, 405E, 405S, 405E2, 406N, 405ES2, 307N, 307E, 307S, 308N, 308W, 308E, 308S, 309N2, 309N, 309W, 309E, 309S, 309E2, 411N, 411W, 411, 411E, 411S, 208N, 208, 208E, 208E2, 2109N, 2109W2, 2109W, 2109, 2109E, 2109S, 312N2, 312N, 312W, 312E, 312S, 312S2, 212N, 212W3, 212W2, 212W, 212, 111W, 111E, 212S, 212S2, 313N, 313W, 313E, 313S, 313S2, 314N2, 314N, 314W, 314E, 314S, 314S2, 213W, 213N1, 213N, 213, 213E, 213E2, 213S, 213S2, 315N, 315W, 315E, 315S

Inset A

Inset B

CW01
AREA

CW01N, CW01W, CW01, CW01E, CW01S, CW01S2, CW01S3W, CW01S3, CW01S3E, CW01S4S, CW01S4W, CW01S4

0 20 40 80
SCALE IN FEET

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0 20 40 80
SCALE IN FEET

Figure 5b
Soil Removal Areas
4-Ft Lift, October 2001

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

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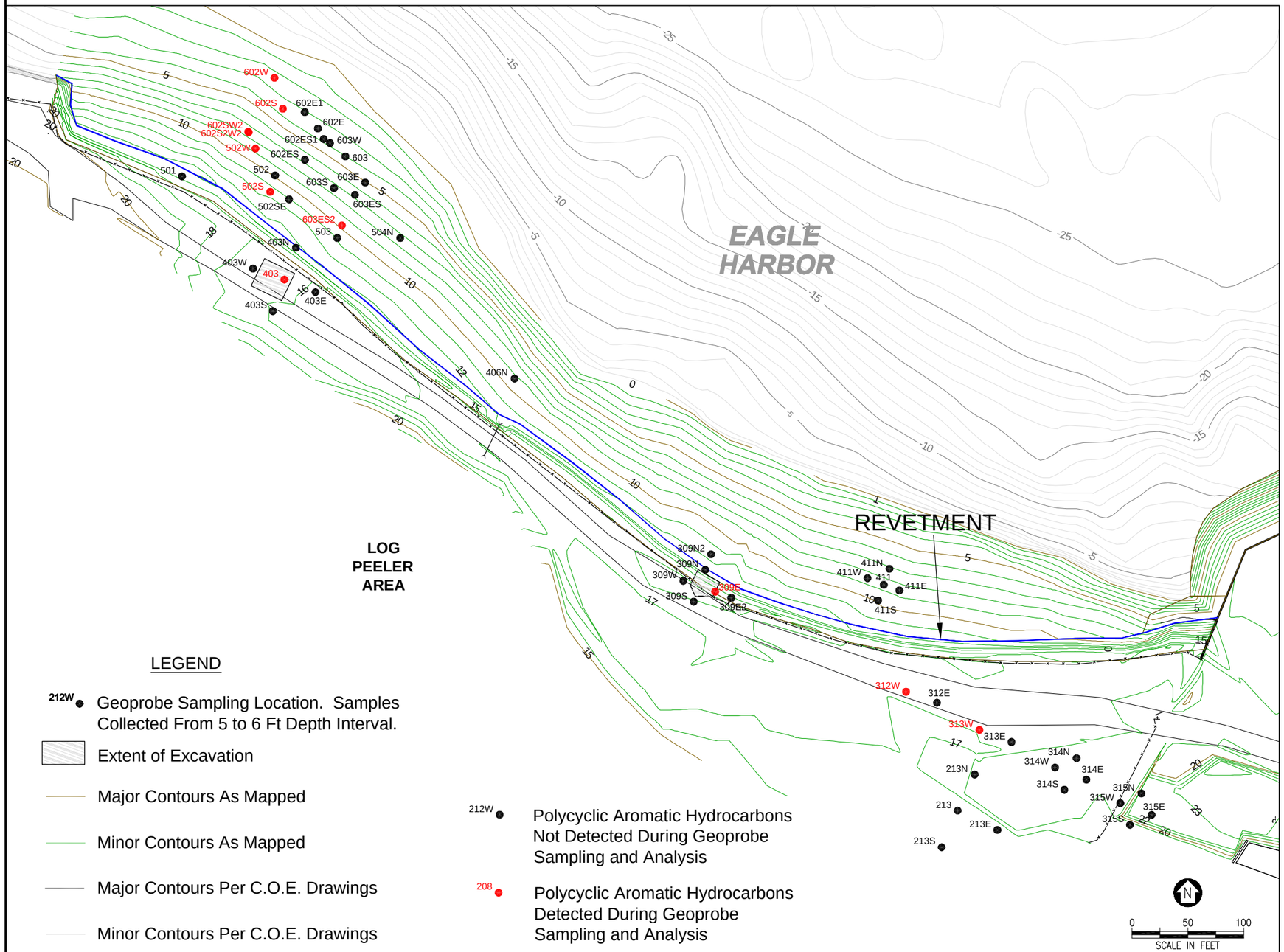

LOG PEELER AREA

LEGEND

212W ● Geoprobe Sampling Location. Samples Collected From 5 to 6 Ft Depth Interval.

Extent of Excavation

Major Contours As Mapped

Minor Contours As Mapped

Major Contours Per C.O.E. Drawings

Minor Contours Per C.O.E. Drawings

212W ● Polycyclic Aromatic Hydrocarbons Not Detected During Geoprobe Sampling and Analysis

208 ● Polycyclic Aromatic Hydrocarbons Detected During Geoprobe Sampling and Analysis

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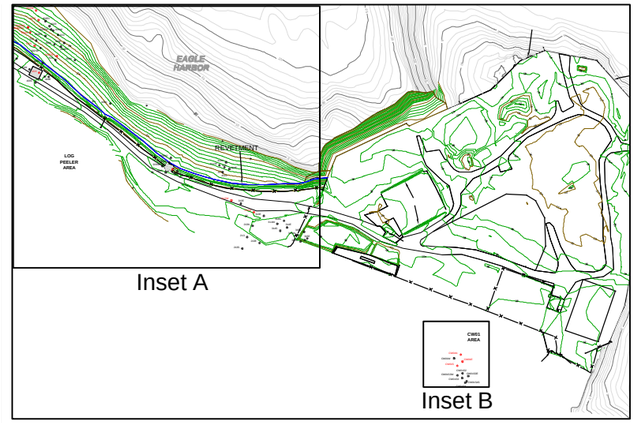

CW01 AREA

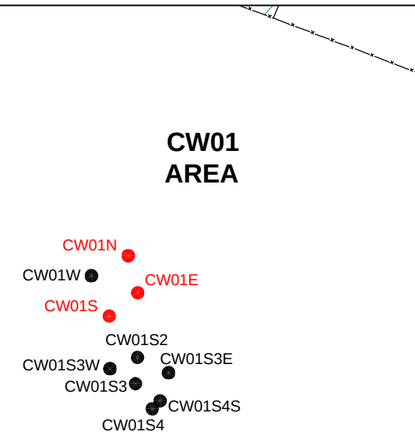

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Figure 5c
Soil Removal Areas
6-Ft Lift, October 2001

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

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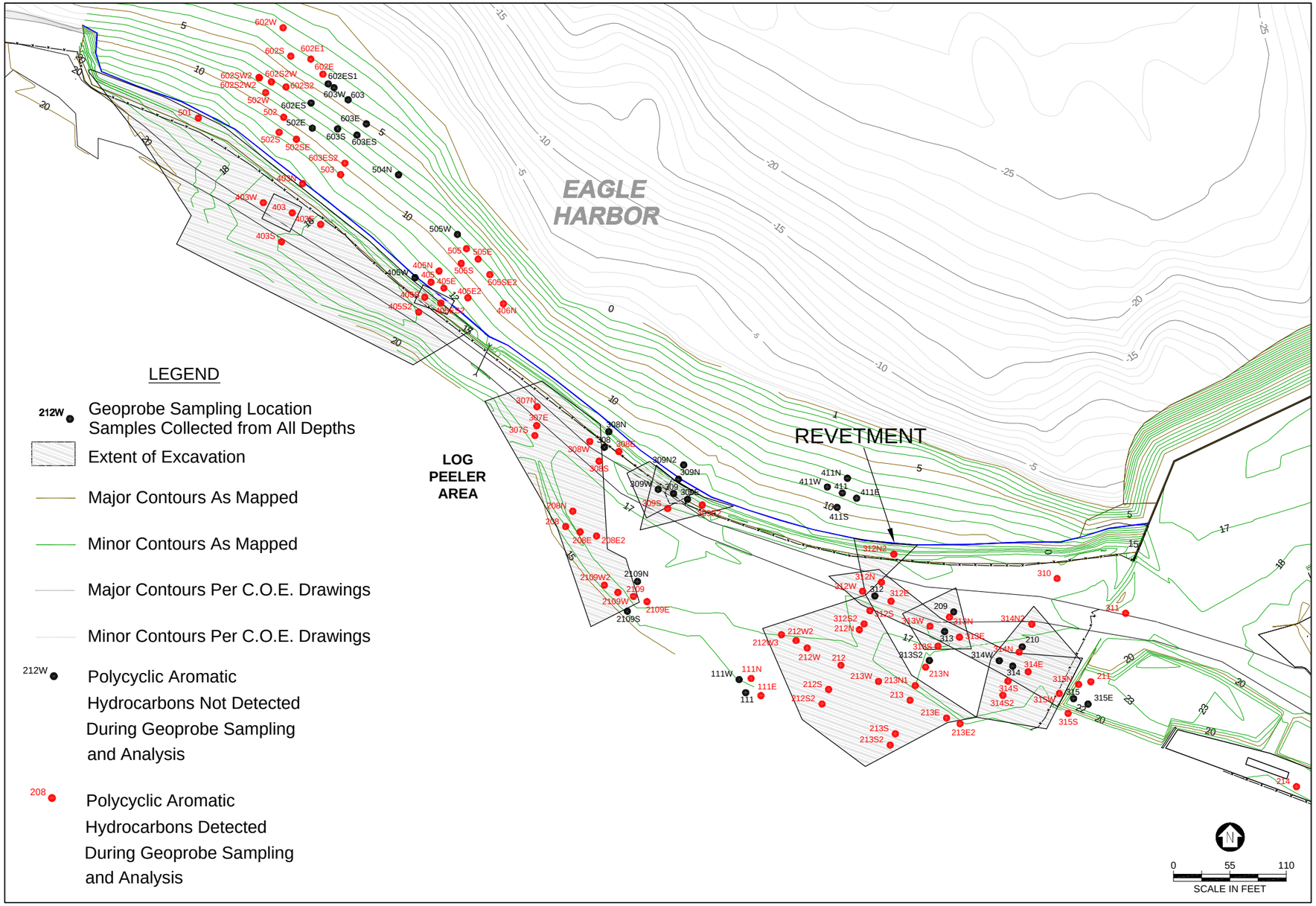

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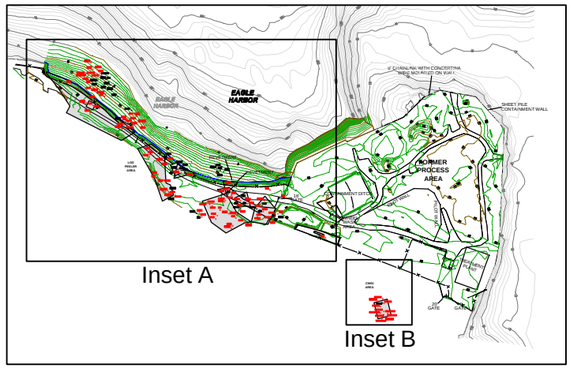

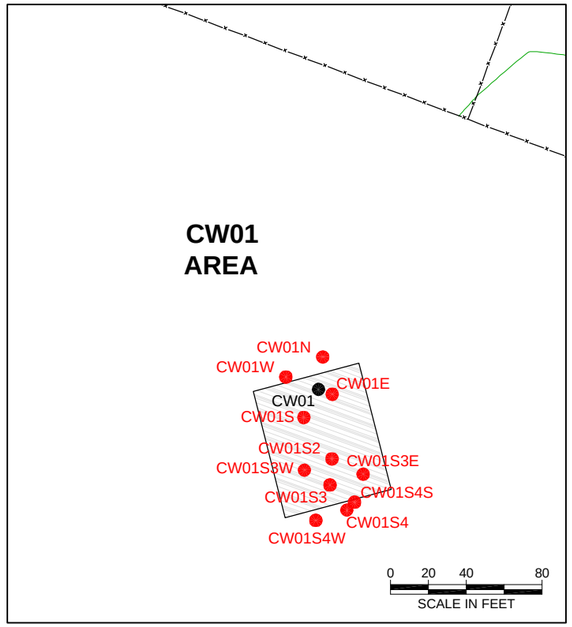

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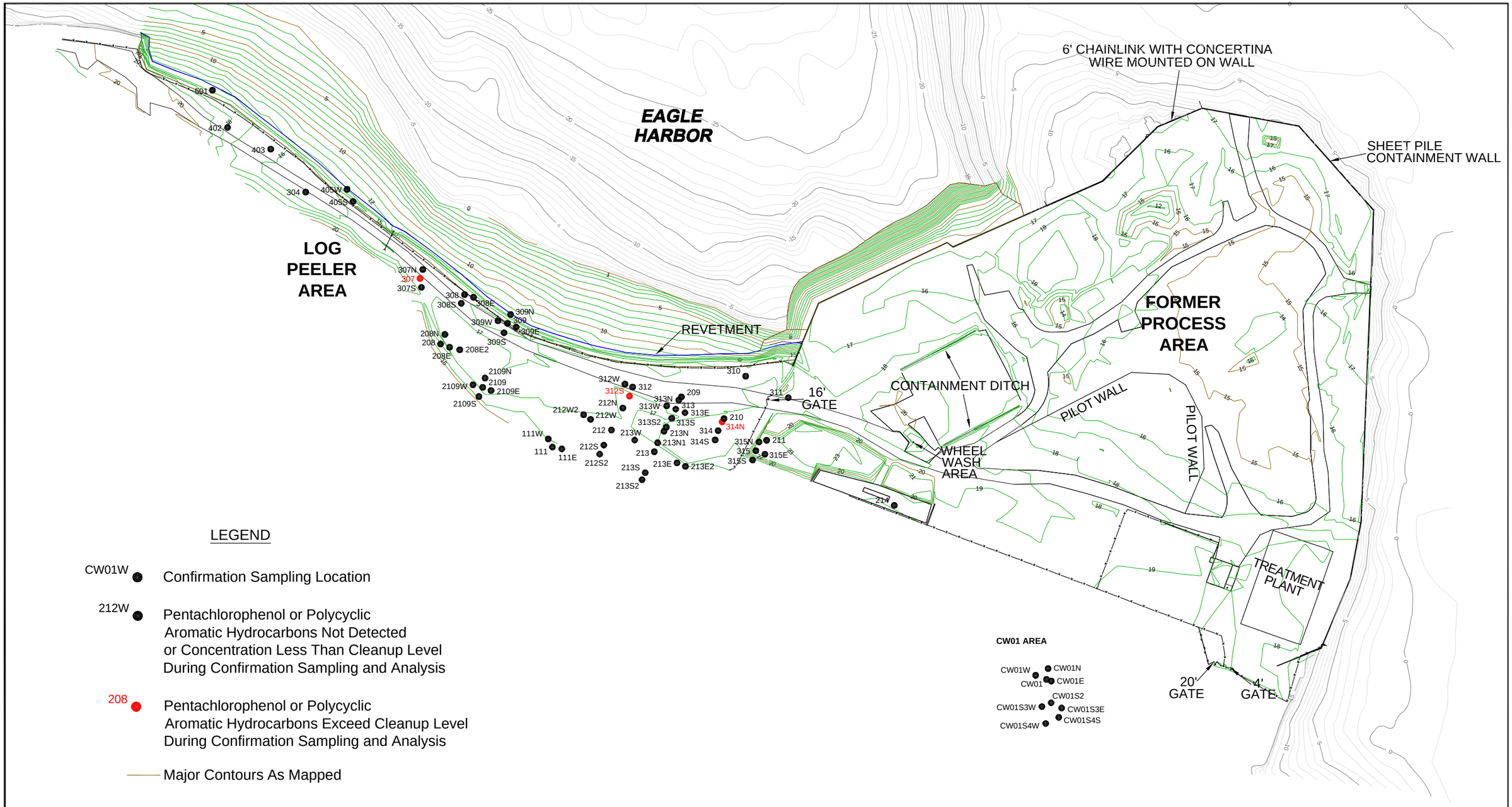
Figure 5d
Soil Removal Areas
Extent of 2-Ft through 6-Ft Lifts Combined, October 2001

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

FILENAME: T:\Misc-Jobs\Wyckoff\SRR\Figure 5d.dwg
EDIT DATE: 09/16/02 AT: 17:39



LEGEND

CW01W ● Confirmation Sampling Location

212W ● Pentachlorophenol or Polycyclic Aromatic Hydrocarbons Not Detected or Concentration Less Than Cleanup Level During Confirmation Sampling and Analysis

208 ● Pentachlorophenol or Polycyclic Aromatic Hydrocarbons Exceed Cleanup Level During Confirmation Sampling and Analysis

—— Major Contours As Mapped

—— Minor Contours As Mapped

—— Major Contours Per C.O.E. Drawings

—— Minor Contours Per C.O.E. Drawings

N

0 75 150

SCALE IN FEET

Figure 6
Post Removal Conditions

Wyckoff/Eagle Harbor Superfund Site
Former Log Storage/Peeler Area
Soil Removal Report, 2002

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APPENDIX A
CHEMISTRY SUMMARY

ACOE - Wyckoff Facility
Soil Sampling

Site ID: 402
Sample ID: 1403531
Description: 01CF040204/4'
Sample Date: 9/27/2001

Parameter Name:	Result	Qualifier
Acenaphthene	1000	UF
Acenaphthylene	1000	UF
Anthracene	1000	UF
Benzo(a)anthracene	1000	UF
Benzo(a)pyrene	1000	UF
Benzo(b)fluoranthene	1000	UF
Benzo(ghi)perylene	1000	UF
Benzo(k)fluoranthene	1000	UF
Chrysene	1000	UF
Dibenzo(a,h)anthracene	1000	UF
Fluoranthene	1000	UF
Fluorene	1000	UF
Indeno(1,2,3-cd)pyrene	1000	UF
Naphthalene	1000	UF
Phenanthrene	1000	UF
Pyrene	1000	UF

Site ID: 304
Sample ID: 1403533
Description: 01CF030402/2.5'
Sample Date: 9/27/2001

Parameter Name:	Result	Qualifier
Acenaphthene	1000	UF
Acenaphthylene	1000	UF
Anthracene	1000	UF
Benzo(a)anthracene	1100	F
Benzo(a)pyrene	1000	UF
Benzo(b)fluoranthene	1000	UF
Benzo(ghi)perylene	1000	UF
Benzo(k)fluoranthene	1000	UF
Chrysene	1100	F
Dibenzo(a,h)anthracene	1000	UF
Fluoranthene	1000	UF
Fluorene	1000	UF
Indeno(1,2,3-cd)pyrene	1000	UF
Naphthalene	1000	UF
Phenanthrene	1000	UF
Pyrene	1000	UF

Site ID: 403
Sample ID: 1403532
Description: 01CF040307/7'
Sample Date: 9/27/2001

Parameter Name:	Result	Qualifier
Acenaphthene	1000	UF
Acenaphthylene	1000	UF
Anthracene	1000	UF
Benzo(a)anthracene	1000	UF
Benzo(a)pyrene	1000	UF
Benzo(b)fluoranthene	1000	UF
Benzo(ghi)perylene	1000	UF
Benzo(k)fluoranthene	1000	UF
Chrysene	1000	UF
Dibenzo(a,h)anthracene	1000	UF
Fluoranthene	1000	UF
Fluorene	1000	UF
Indeno(1,2,3-cd)pyrene	1000	UF
Naphthalene	1000	UF
Phenanthrene	1000	UF
Pyrene	1000	UF

Site ID: 2109
Sample ID: 1413545
Description: 01CF2109/ 2FT
Sample Date: 10/9/2001

Parameter Name:	Result	Qualifier
Acenaphthene	16.9	U
Acenaphthylene	1.1	J
Anthracene	16.9	U
Benzo(a)anthracene	16.9	U
Benzo(a)pyrene	7.8	J
Benzo(b)fluoranthene	8.4	J
Benzo(ghi)perylene	16.9	U
Benzo(k)fluoranthene	5.8	J
Chrysene	5.3	J
Dibenzo(a,h)anthracene	16.9	U
Fluoranthene	9.1	J
Fluorene	0.78	J
Indeno(1,2,3-cd)pyrene	16.9	U
Naphthalene	16.9	U
Phenanthrene	16.9	U
Pyrene	8.5	J

Site ID: 208
Sample ID: 1413546
Description: 01CF0208/ 2FT
Sample Date: 10/9/2001

Parameter Name:	Result	Qualifier
Acenaphthene	19.5	U
Acenaphthylene	19.5	U
Anthracene	19.5	U
Benzo(a)anthracene	19.5	U
Benzo(a)pyrene	2.5	J
Benzo(b)fluoranthene	3.2	J
Benzo(ghi)perylene	19.5	U
Benzo(k)fluoranthene	3.3	J
Chrysene	19.5	U
Dibenzo(a,h)anthracene	19.5	U
Fluoranthene	4.8	J
Fluorene	19.5	U
Indeno(1,2,3-cd)pyrene	19.5	U
Naphthalene	19.5	U
Phenanthrene	19.5	U
Pyrene	7.5	J

Site ID: 308
Sample ID: 1413547
Description: 01CF0308/ 2FT
Sample Date: 10/9/2001

Parameter Name:	Result	Qualifier
Acenaphthene	441	
Acenaphthylene	79.7	
Anthracene	830	
Benzo(a)anthracene	951	
Benzo(a)pyrene	713	
Benzo(ghi)perylene	284	
Benzo(k)fluoranthene	1350	
Chrysene	1160	
Dibenzo(a,h)anthracene	138	
Fluoranthene	3970	
Fluorene	442	
Indeno(1,2,3-cd)pyrene	339	
Naphthalene	353	
Phenanthrene	1470	
Pyrene	3370	

Site ID: 307
Sample ID: 1413548
Description: 01CF0307/ 6FT
Sample Date: 10/9/2001

Parameter Name:	Result	Qualifier
Acenaphthene	396	
Acenaphthylene	204	
Anthracene	637	
Benzo(a)anthracene	947	
Benzo(a)pyrene	1040	
Benzo(ghi)perylene	388	
Benzo(k)fluoranthene	2180	
Chrysene	1700	
Dibenzo(a,h)anthracene	94.8	
Fluoranthene	4700	
Fluorene	293	
Indeno(1,2,3-cd)pyrene	446	
Naphthalene	1110	
Phenanthrene	1750	
Pyrene	2880	

Site ID: 309
Sample ID: 1413549
Description: 01CF0309/ 6FT
Sample Date: 10/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	10.8	J
Acenaphthylene	18.3	U
Anthracene	2.5	J
Benzo(a)anthracene	18.3	U
Benzo(a)pyrene	18.3	U
Benzo(b)fluoranthene	18.3	U
Benzo(ghi)perylene	18.3	U
Benzo(k)fluoranthene	18.3	U
Chrysene	18.3	U
Dibenzo(a,h)anthracene	18.3	U
Fluoranthene	9.1	J
Fluorene	7.9	J
Indeno(1,2,3-cd)pyrene	18.3	U
Naphthalene	18.3	U
Phenanthrene	17	J
Pyrene	4.8	J

Site ID: 312N
Sample ID: 1413550
Description: 01CF0312N/ 2-3FT (2.5)
Sample Date: 10/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	71.1	
Acenaphthylene	120	
Anthracene	1120	
Benzo(a)anthracene	346	
Benzo(a)pyrene	491	
Benzo(ghi)perylene	259	
Benzo(k)fluoranthene	1000	
Chrysene	792	
Dibenzo(a,h)anthracene	84	U
Fluoranthene	1070	
Fluorene	127	
Indeno(1,2,3-cd)pyrene	314	
Naphthalene	70.8	
Phenanthrene	461	
Pyrene	863	

Site ID: 314N
Sample ID: 1423500
Description: 01CF0314N/ 2 FT
Sample Date: 10/16/2001

Parameter Name:	Result	Qualifier
Acenaphthene	24.6	
Acenaphthylene	90.1	
Anthracene	293	
Benzo(a)anthracene	201	
Benzo(a)pyrene	497	
Benzo(ghi)perylene	330	
Benzo(k)fluoranthene	1050	
Chrysene	435	
Dibenzo(a,h)anthracene	116	
Fluoranthene	728	
Fluorene	53.2	
Indeno(1,2,3-cd)pyrene	415	
Naphthalene	72.9	
Phenanthrene	298	
Pyrene	497	

Site ID: 312S
Sample ID: 1413551
Description: 01CF0312S/ 3.5FT
Sample Date: 10/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	50.8	
Acenaphthylene	198	
Anthracene	538	
Benzo(a)anthracene	922	
Benzo(a)pyrene	1280	
Benzo(ghi)perylene	293	
Benzo(k)fluoranthene	2230	
Chrysene	1430	
Dibenzo(a,h)anthracene	203	U
Fluoranthene	1760	
Fluorene	71.4	
Indeno(1,2,3-cd)pyrene	419	
Naphthalene	91.7	
Phenanthrene	723	
Pyrene	1650	

Site ID: 314
Sample ID: 1423501
Description: 01CF0314/ 4 FT
Sample Date: 10/16/2001

Parameter Name:	Result	Qualifier
Acenaphthene	15.8	U
Acenaphthylene	15.8	U
Anthracene	15.8	U
Benzo(a)anthracene	2	J
Benzo(a)pyrene	4.3	J
Benzo(b)fluoranthene	5.9	J
Benzo(ghi)perylene	15.8	U
Benzo(k)fluoranthene	5.1	J
Chrysene	4	J
Dibenzo(a,h)anthracene	15.8	U
Fluoranthene	4.6	J
Fluorene	15.8	U
Indeno(1,2,3-cd)pyrene	15.8	U
Naphthalene	15.8	U
Phenanthrene	15.8	U
Pyrene	4.4	J

Site ID: 313
Sample ID: 1423502
Description: 01CF0313/ 4 FT
Sample Date: 10/16/2001

Parameter Name:	Result	Qualifier
Acenaphthene	26.8	
Acenaphthylene	21.5	
Anthracene	70.5	
Benzo(a)anthracene	96	
Benzo(a)pyrene	82.2	
Benzo(b)fluoranthene	148	
Benzo(ghi)perylene	38.5	
Benzo(k)fluoranthene	125	
Chrysene	198	
Dibenzo(a,h)anthracene	16.4	U
Fluoranthene	662	
Fluorene	31.1	
Indeno(1,2,3-cd)pyrene	50	
Naphthalene	15.1	J
Phenanthrene	380	
Pyrene	415	

Site ID: CW01W
Sample ID: 1433586
Description: 01CFCWO1W 4FT
Sample Date: 10/23/2001

Parameter Name:	Result	Qualifier
Acenaphthene	20	
Acenaphthylene	107	
Anthracene	264	
Benzo(a)anthracene	274	
Benzo(a)pyrene	376	
Benzo(b)fluoranthene	752	
Benzo(ghi)perylene	327	
Benzo(k)fluoranthene	459	
Chrysene	590	
Dibenzo(a,h)anthracene	122	
Fluoranthene	542	
Fluorene	28.3	
Indeno(1,2,3-cd)pyrene	374	
Naphthalene	51.7	
Phenanthrene	228	
Pyrene	429	

Site ID: 313N
Sample ID: 1423503
Description: 01CF0313N/ 2 FT
Sample Date: 10/16/2001

Parameter Name:	Result	Qualifier
Acenaphthene	14.5	J
Acenaphthylene	59.9	
Anthracene	165	
Benzo(a)anthracene	141	
Benzo(a)pyrene	308	
Benzo(b)fluoranthene	526	
Benzo(ghi)perylene	151	
Benzo(k)fluoranthene	257	
Chrysene	308	
Dibenzo(a,h)anthracene	83.2	
Fluoranthene	319	
Fluorene	24.2	
Indeno(1,2,3-cd)pyrene	215	
Naphthalene	48.8	
Phenanthrene	144	
Pyrene	311	

Site ID: CW01S3E
Sample ID: 1433587
Description: 01CFCWO153E 5FT
Sample Date: 10/23/2001

Parameter Name:	Result	Qualifier
Acenaphthene	6.4	J
Acenaphthylene	10.4	J
Anthracene	28.6	
Benzo(a)anthracene	31.3	
Benzo(a)pyrene	38.8	
Benzo(b)fluoranthene	75.9	
Benzo(ghi)perylene	36.1	
Benzo(k)fluoranthene	59.8	
Chrysene	65	
Dibenzo(a,h)anthracene	5.5	J
Fluoranthene	88.3	
Fluorene	5.9	J
Indeno(1,2,3-cd)pyrene	38	
Naphthalene	26.1	
Phenanthrene	44.5	
Pyrene	66.8	

Site ID: CW01S2
Sample ID: 1433588
Description: 01CFCWO152 4FT
Sample Date: 10/23/2001

Parameter Name:	Result	Qualifier
Acenaphthene	15.8	J
Acenaphthylene	55.8	
Anthracene	124	
Benzo(a)anthracene	157	
Benzo(a)pyrene	209	
Benzo(b)fluoranthene	385	
Benzo(ghi)perylene	187	
Benzo(k)fluoranthene	235	
Chrysene	257	
Dibenzo(a,h)anthracene	48	
Fluoranthene	290	J
Fluorene	19.8	
Indeno(1,2,3-cd)pyrene	203	
Naphthalene	32.7	
Phenanthrene	104	
Pyrene	243	J

Site ID: 212
Sample ID: 1503501
Description: 212
Sample Date: 12/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	56.4	J
Acenaphthylene	28.8	J
Anthracene	112	J
Benzo(a)anthracene	273	J
Benzo(a)pyrene	232	J
Benzo(b)fluoranthene	599	J
Benzo(ghi)perylene	389	J
Benzo(k)fluoranthene	229	J
Chrysene	446	J
Dibenzo(a,h)anthracene	391	J
Fluoranthene	672	J
Fluorene	47.5	J
Indeno(1,2,3-cd)pyrene	678	J
Naphthalene	170	J
Phenanthrene	392	J
Pyrene	631	J

Site ID: 212W
Sample ID: 1503500
Description: 212-1
Sample Date: 12/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	80	U
Acenaphthylene	80	U
Anthracene	80	U
Benzo(a)anthracene	80	U
Benzo(a)pyrene	80	U
Benzo(b)fluoranthene	20.1	J
Benzo(ghi)perylene	400	U
Benzo(k)fluoranthene	80	U
Chrysene	80	U
Dibenzo(a,h)anthracene	400	U
Fluoranthene	9.2	J
Fluorene	80	U
Indeno(1,2,3-cd)pyrene	800	U
Naphthalene	80	U
Phenanthrene	80	U
Pyrene	17.2	J

Site ID: 213W
Sample ID: 1503502
Description: 212-2
Sample Date: 12/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	27.3	J
Acenaphthylene	13.2	J
Anthracene	44.6	J
Benzo(a)anthracene	137	J
Benzo(a)pyrene	121	J
Benzo(b)fluoranthene	273	J
Benzo(ghi)perylene	284	J
Benzo(k)fluoranthene	104	J
Chrysene	201	J
Dibenzo(a,h)anthracene	360	J
Fluoranthene	224	J
Fluorene	18.5	J
Indeno(1,2,3-cd)pyrene	574	J
Naphthalene	111	J
Phenanthrene	101	J
Pyrene	239	J

Site ID: 213
Sample ID: 1503503
Description: 213
Sample Date: 12/10/2001

Parameter Name:	Result	Qualifier
Acenaphthene	58.1	J
Acenaphthylene	74.8	J
Anthracene	176	J
Benzo(a)anthracene	800	J
Benzo(a)pyrene	544	J
Benzo(b)fluoranthene	1460	J
Benzo(ghi)perylene	455	J
Benzo(k)fluoranthene	503	J
Chrysene	1250	J
Dibenzo(a,h)anthracene	409	J
Fluoranthene	3160	J
Fluorene	64	J
Indeno(1,2,3-cd)pyrene	769	J
Naphthalene	53.1	J
Phenanthrene	455	J
Pyrene	2530	J

Site ID: 308
Sample ID: 2062501
Description: 308
Sample Date: 2/7/2002

Parameter Name:	Result	Qualifier
Acenaphthene	81.2	U
Acenaphthylene	81.2	U
Anthracene	81.2	U
Benzo(a)anthracene	81.2	U
Benzo(a)pyrene	81.2	U
Benzo(b)fluoranthene	81.2	U
Benzo(ghi)perylene	406	U
Benzo(k)fluoranthene	81.2	U
Chrysene	81.2	U
Dibenzo(a,h)anthracene	406	U
Fluoranthene	81.2	U
Fluorene	81.2	U
Indeno(1,2,3-cd)pyrene	812	U
Naphthalene	81.2	U
Phenanthrene	81.2	U
Pyrene	81.2	U

Site ID: 304
Sample ID: 2062500
Description: 304
Sample Date: 2/7/2002

Parameter Name:	Result	Qualifier
Acenaphthene	26.2	J
Acenaphthylene	76.7	U
Anthracene	12.5	J
Benzo(a)anthracene	30	J
Benzo(a)pyrene	76.7	U
Benzo(b)fluoranthene	35.1	J
Benzo(ghi)perylene	203	J
Benzo(k)fluoranthene	76.7	U
Chrysene	37.9	J
Dibenzo(a,h)anthracene	384	U
Fluoranthene	131	
Fluorene	25.4	J
Indeno(1,2,3-cd)pyrene	468	J
Naphthalene	76.7	U
Phenanthrene	86	
Pyrene	79.5	

Site ID: 312
Sample ID: 2062502
Description: 312
Sample Date: 2/7/2002

Parameter Name:	Result	Qualifier
Acenaphthene	63.8	U
Acenaphthylene	63.8	U
Anthracene	63.8	U
Benzo(a)anthracene	63.8	U
Benzo(a)pyrene	63.8	U
Benzo(b)fluoranthene	63.8	U
Benzo(ghi)perylene	319	U
Benzo(k)fluoranthene	63.8	U
Chrysene	63.8	U
Dibenzo(a,h)anthracene	319	U
Fluoranthene	63.8	U
Fluorene	63.8	U
Indeno(1,2,3-cd)pyrene	638	U
Naphthalene	63.8	U
Phenanthrene	63.8	U
Pyrene	63.8	U

Site ID: 313
Sample ID: 2062503
Description: 313
Sample Date: 2/7/2002

Parameter Name:	Result	Qualifier
Acenaphthene	32.7	J
Acenaphthylene	13.3	J
Anthracene	99.2	
Benzo(a)anthracene	74.9	
Benzo(a)pyrene	84.7	
Benzo(b)fluoranthene	167	
Benzo(ghi)perylene	233	J
Benzo(k)fluoranthene	62.3	J
Chrysene	122	
Dibenzo(a,h)anthracene	294	J
Fluoranthene	259	
Fluorene	41.6	J
Indeno(1,2,3-cd)pyrene	482	J
Naphthalene	70.1	U
Phenanthrene	160	
Pyrene	181	

Site ID: 213
Sample ID: 2062505
Description: 213
Sample Date: 2/8/2002

Parameter Name:	Result	Qualifier
Acenaphthene	75.9	U
Acenaphthylene	27	J
Anthracene	44.7	J
Benzo(a)anthracene	177	
Benzo(a)pyrene	238	
Benzo(b)fluoranthene	379	
Benzo(ghi)perylene	329	J
Benzo(k)fluoranthene	125	
Chrysene	245	
Dibenzo(a,h)anthracene	322	J
Fluoranthene	255	
Fluorene	75.9	U
Indeno(1,2,3-cd)pyrene	608	J
Naphthalene	75.9	U
Phenanthrene	34	J
Pyrene	212	

Site ID: 212W
Sample ID: 2062504
Description: 212W
Sample Date: 2/8/2002

Parameter Name:	Result	Qualifier
Acenaphthene	74.1	U
Acenaphthylene	74.1	U
Anthracene	74.1	U
Benzo(a)anthracene	74.1	U
Benzo(a)pyrene	74.1	U
Benzo(b)fluoranthene	74.1	U
Benzo(ghi)perylene	370	U
Benzo(k)fluoranthene	74.1	U
Chrysene	74.1	U
Dibenzo(a,h)anthracene	370	U
Fluoranthene	74.1	U
Fluorene	74.1	U
Indeno(1,2,3-cd)pyrene	741	U
Naphthalene	74.1	U
Phenanthrene	74.1	U
Pyrene	74.1	U

Site ID: 212
Sample ID: 2062506
Description: 212
Sample Date: 2/8/2002

Parameter Name:	Result	Qualifier
Acenaphthene	7.7	J
Acenaphthylene	66.2	U
Anthracene	13.6	J
Benzo(a)anthracene	66.2	U
Benzo(a)pyrene	11.8	J
Benzo(b)fluoranthene	30.1	J
Benzo(ghi)perylene	331	U
Benzo(k)fluoranthene	66.2	U
Chrysene	66.2	U
Dibenzo(a,h)anthracene	331	U
Fluoranthene	75.1	
Fluorene	66.2	U
Indeno(1,2,3-cd)pyrene	662	U
Naphthalene	66.2	U
Phenanthrene	22.8	J
Pyrene	52.6	J

Site ID: CW01S2
Sample ID: 2092553
Description: CW01S2
Sample Date: 3/1/2002

Parameter Name:	Result	Qualifier
Acenaphthene	73.6	U
Acenaphthylene	73.6	U
Anthracene	73.6	U
Benzo(a)anthracene	73.6	U
Benzo(a)pyrene	73.6	U
Benzo(b)fluoranthene	73.6	U
Benzo(ghi)perylene	368	U
Benzo(k)fluoranthene	73.6	U
Chrysene	73.6	U
Dibenzo(a,h)anthracene	368	U
Fluoranthene	73.6	U
Fluorene	73.6	U
Indeno(1,2,3-cd)pyrene	736	U
Naphthalene	73.6	U
Phenanthrene	73.6	U
Pyrene	73.6	U

Site ID: 213
Sample ID: 393501
Description: 0213/ 3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	147	U
Acenaphthylene	147	U
Anthracene	147	U
Benzo(a)anthracene	147	U
Benzo(a)pyrene	147	U
Benzo(b)fluoranthene	147	U
Benzo(ghi)perylene	293	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	293	U
Fluoranthene	147	U
Fluorene	147	U
Indeno(1,2,3-cd)pyrene	293	U
Naphthalene	147	U
Phenanthrene	147	U
Pyrene	147	U

Site ID: CW01W
Sample ID: 2092554
Description: CW01W
Sample Date: 3/1/2002

Parameter Name:	Result	Qualifier
Acenaphthene	7	J
Acenaphthylene	42	J
Anthracene	103	
Benzo(a)anthracene	126	
Benzo(a)pyrene	133	
Benzo(b)fluoranthene	325	
Benzo(ghi)perylene	291	J
Benzo(k)fluoranthene	126	
Chrysene	169	
Dibenzo(a,h)anthracene	332	J
Fluoranthene	233	
Fluorene	77.1	U
Indeno(1,2,3-cd)pyrene	553	J
Naphthalene	36.6	J
Phenanthrene	95.2	
Pyrene	258	

Site ID: 213S
Sample ID: 393504
Description: 0213(S)/ 3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	137	U
Acenaphthylene	137	U
Anthracene	137	U
Benzo(a)anthracene	137	U
Benzo(a)pyrene	137	U
Benzo(b)fluoranthene	137	U
Benzo(ghi)perylene	274	U
Benzo(k)fluoranthene	137	U
Chrysene	137	U
Dibenzo(a,h)anthracene	274	U
Fluoranthene	137	U
Fluorene	137	U
Indeno(1,2,3-cd)pyrene	274	U
Naphthalene	137	U
Phenanthrene	137	U
Pyrene	137	U

Site ID: 213N
Sample ID: 393506
Description: 0213(N)/ 1-2 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	142	U
Acenaphthylene	142	U
Anthracene	142	U
Benzo(a)anthracene	142	U
Benzo(a)pyrene	142	U
Benzo(b)fluoranthene	54.2	J
Benzo(ghi)perylene	285	U
Benzo(k)fluoranthene	142	U
Chrysene	54.1	J
Dibenzo(a,h)anthracene	285	U
Fluoranthene	93.9	J
Fluorene	142	U
Indeno(1,2,3-cd)pyrene	285	U
Naphthalene	142	U
Phenanthrene	142	U
Pyrene	61.6	J

Site ID: 213W
Sample ID: 393513
Description: 0213(W)/3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	158	U
Acenaphthylene	158	U
Anthracene	158	U
Benzo(a)anthracene	158	U
Benzo(a)pyrene	158	U
Benzo(b)fluoranthene	158	U
Benzo(ghi)perylene	316	U
Benzo(k)fluoranthene	158	U
Chrysene	158	U
Dibenzo(a,h)anthracene	316	U
Fluoranthene	158	U
Fluorene	158	U
Indeno(1,2,3-cd)pyrene	316	U
Naphthalene	158	U
Phenanthrene	158	U
Pyrene	158	U

Site ID: 213E
Sample ID: 393510
Description: 0213(E)/ 3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	139	U
Anthracene	139	U
Benzo(a)anthracene	139	U
Benzo(a)pyrene	139	U
Benzo(b)fluoranthene	139	U
Benzo(ghi)perylene	279	U
Benzo(k)fluoranthene	139	U
Chrysene	139	U
Dibenzo(a,h)anthracene	279	U
Fluoranthene	139	U
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	279	U
Naphthalene	139	U
Phenanthrene	139	U
Pyrene	139	U

Site ID: 212S
Sample ID: 393516
Description: 0212(S)/ 3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	172	U
Acenaphthylene	172	U
Anthracene	172	U
Benzo(a)anthracene	172	U
Benzo(a)pyrene	172	U
Benzo(b)fluoranthene	172	U
Benzo(ghi)perylene	345	U
Benzo(k)fluoranthene	172	U
Chrysene	172	U
Dibenzo(a,h)anthracene	345	U
Fluoranthene	172	U
Fluorene	172	U
Indeno(1,2,3-cd)pyrene	345	U
Naphthalene	172	U
Phenanthrene	172	U
Pyrene	172	U

Site ID: 212
Sample ID: 393518
Description: 0212 / 3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	163	U
Acenaphthylene	163	U
Anthracene	163	U
Benzo(a)anthracene	163	U
Benzo(a)pyrene	163	U
Benzo(b)fluoranthene	163	U
Benzo(ghi)perylene	327	U
Benzo(k)fluoranthene	163	U
Chrysene	163	U
Dibenzo(a,h)anthracene	327	U
Fluoranthene	163	U
Fluorene	163	U
Indeno(1,2,3-cd)pyrene	327	U
Naphthalene	163	U
Phenanthrene	163	U
Pyrene	163	U

Site ID: 212W
Sample ID: 393524
Description: 0212(W)/3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	173	U
Acenaphthylene	173	U
Anthracene	173	U
Benzo(a)anthracene	173	U
Benzo(a)pyrene	173	U
Benzo(b)fluoranthene	173	U
Benzo(ghi)perylene	346	U
Benzo(k)fluoranthene	173	U
Chrysene	173	U
Dibenzo(a,h)anthracene	346	U
Fluoranthene	173	U
Fluorene	173	U
Indeno(1,2,3-cd)pyrene	346	U
Naphthalene	173	U
Phenanthrene	173	U
Pyrene	173	U

Site ID: 212N
Sample ID: 393521
Description: 0212(N)/3-4 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	144	U
Acenaphthylene	144	U
Anthracene	144	U
Benzo(a)anthracene	144	U
Benzo(a)pyrene	144	U
Benzo(b)fluoranthene	144	U
Benzo(ghi)perylene	287	U
Benzo(k)fluoranthene	144	U
Chrysene	144	U
Dibenzo(a,h)anthracene	287	U
Fluoranthene	144	U
Fluorene	144	U
Indeno(1,2,3-cd)pyrene	287	U
Naphthalene	144	U
Phenanthrene	144	U
Pyrene	144	U

Site ID: 111
Sample ID: 393529
Description: 0111 / 5-7 FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	162	U
Acenaphthylene	162	U
Anthracene	162	U
Benzo(a)anthracene	162	U
Benzo(a)pyrene	162	U
Benzo(b)fluoranthene	162	U
Benzo(ghi)perylene	324	U
Benzo(k)fluoranthene	162	U
Chrysene	162	U
Dibenzo(a,h)anthracene	324	U
Fluoranthene	162	U
Fluorene	162	U
Indeno(1,2,3-cd)pyrene	324	U
Naphthalene	162	U
Phenanthrene	162	U
Pyrene	162	U

Site ID: 111E
Sample ID: 393530
Description: 0111(E)/1-2- FT.
Sample Date: 9/28/2000

Parameter Name:	Result	Qualifier
Acenaphthene	146	U
Acenaphthylene	146	U
Anthracene	146	U
Benzo(a)anthracene	146	U
Benzo(a)pyrene	146	U
Benzo(b)fluoranthene	146	U
Benzo(ghi)perylene	293	U
Benzo(k)fluoranthene	146	U
Chrysene	146	U
Dibenzo(a,h)anthracene	293	U
Fluoranthene	34.2	J
Fluorene	146	U
Indeno(1,2,3-cd)pyrene	293	U
Naphthalene	146	U
Phenanthrene	146	U
Pyrene	32.2	J

Site ID: 2109
Sample ID: 393545
Description: 2109/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	154	U
Acenaphthylene	154	U
Anthracene	154	U
Benzo(a)anthracene	154	U
Benzo(a)pyrene	154	U
Benzo(b)fluoranthene	154	U
Benzo(ghi)perylene	307	U
Benzo(k)fluoranthene	154	U
Chrysene	154	U
Dibenzo(a,h)anthracene	307	U
Fluoranthene	154	U
Fluorene	154	U
Indeno(1,2,3-cd)pyrene	307	U
Naphthalene	154	U
Phenanthrene	154	U
Pyrene	154	U

Site ID: 111W
Sample ID: 393540
Description: 0111(W)/1-2 ft.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	161	U
Acenaphthylene	161	U
Anthracene	161	U
Benzo(a)anthracene	161	U
Benzo(a)pyrene	161	U
Benzo(b)fluoranthene	161	U
Benzo(ghi)perylene	322	U
Benzo(k)fluoranthene	161	U
Chrysene	161	U
Dibenzo(a,h)anthracene	322	U
Fluoranthene	161	U
Fluorene	161	U
Indeno(1,2,3-cd)pyrene	322	U
Naphthalene	161	U
Phenanthrene	161	U
Pyrene	161	U

Site ID: 2109E
Sample ID: 393548
Description: 2109(E)/1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	152	U
Acenaphthylene	152	U
Anthracene	152	U
Benzo(a)anthracene	152	U
Benzo(a)pyrene	152	U
Benzo(b)fluoranthene	41.9	J
Benzo(ghi)perylene	305	U
Benzo(k)fluoranthene	152	U
Chrysene	152	U
Dibenzo(a,h)anthracene	305	U
Fluoranthene	30.1	J
Fluorene	152	U
Indeno(1,2,3-cd)pyrene	305	U
Naphthalene	152	U
Phenanthrene	152	U
Pyrene	22.8	J

Site ID: 2109W
Sample ID: 393551
Description: 2109(W)/ 1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	4950	
Acenaphthylene	23900	
Anthracene	52300	
Benzo(a)anthracene	166000	
Benzo(a)pyrene	237000	
Benzo(b)fluoranthene	286000	
Benzo(ghi)perylene	143000	
Benzo(k)fluoranthene	97200	
Chrysene	210000	
Dibenzo(a,h)anthracene	40600	J
Fluoranthene	265000	
Fluorene	7820	
Indeno(1,2,3-cd)pyrene	168000	J
Naphthalene	5770	
Phenanthrene	38600	
Pyrene	252000	

Site ID: 2109N
Sample ID: 393553
Description: 2109(N)/ 1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	150	U
Acenaphthylene	150	U
Anthracene	150	U
Benzo(a)anthracene	150	U
Benzo(a)pyrene	150	U
Benzo(b)fluoranthene	150	U
Benzo(ghi)perylene	300	U
Benzo(k)fluoranthene	150	U
Chrysene	150	U
Dibenzo(a,h)anthracene	300	U
Fluoranthene	150	U
Fluorene	150	U
Indeno(1,2,3-cd)pyrene	300	U
Naphthalene	150	U
Phenanthrene	150	U
Pyrene	150	U

Site ID: 2109W
Sample ID: 393552
Description: 2109(W)/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	161	U
Acenaphthylene	161	U
Anthracene	161	U
Benzo(a)anthracene	161	U
Benzo(a)pyrene	161	U
Benzo(b)fluoranthene	161	U
Benzo(ghi)perylene	321	U
Benzo(k)fluoranthene	161	U
Chrysene	161	U
Dibenzo(a,h)anthracene	321	U
Fluoranthene	161	U
Fluorene	161	U
Indeno(1,2,3-cd)pyrene	321	U
Naphthalene	161	U
Phenanthrene	161	U
Pyrene	161	U

Site ID: 2109S
Sample ID: 393555
Description: 2901(S)/ 1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	157	U
Acenaphthylene	157	U
Anthracene	157	U
Benzo(a)anthracene	157	U
Benzo(a)pyrene	157	U
Benzo(b)fluoranthene	157	U
Benzo(ghi)perylene	314	U
Benzo(k)fluoranthene	157	U
Chrysene	157	U
Dibenzo(a,h)anthracene	314	U
Fluoranthene	157	U
Fluorene	157	U
Indeno(1,2,3-cd)pyrene	314	U
Naphthalene	157	U
Phenanthrene	157	U
Pyrene	157	U

Site ID: 208
Sample ID: 393558
Description: 0208/ 3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	155	U
Acenaphthylene	155	U
Anthracene	155	U
Benzo(a)anthracene	155	U
Benzo(a)pyrene	155	U
Benzo(b)fluoranthene	155	U
Benzo(ghi)perylene	309	U
Benzo(k)fluoranthene	155	U
Chrysene	155	U
Dibenzo(a,h)anthracene	309	U
Fluoranthene	155	U
Fluorene	155	U
Indeno(1,2,3-cd)pyrene	309	U
Naphthalene	155	U
Phenanthrene	155	U
Pyrene	27	J

Site ID: 213N
Sample ID: 393562
Description: 0213(N)/ 3-4 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	139	U
Anthracene	139	U
Benzo(a)anthracene	139	U
Benzo(a)pyrene	139	U
Benzo(b)fluoranthene	139	U
Benzo(ghi)perylene	278	U
Benzo(k)fluoranthene	139	U
Chrysene	139	U
Dibenzo(a,h)anthracene	278	U
Fluoranthene	139	U
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	278	U
Naphthalene	139	U
Phenanthrene	139	U
Pyrene	139	U

Site ID: 208N
Sample ID: 393561
Description: 0208(N)/ 3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	128	U
Acenaphthylene	128	U
Anthracene	128	U
Benzo(a)anthracene	128	U
Benzo(a)pyrene	128	U
Benzo(b)fluoranthene	128	U
Benzo(ghi)perylene	256	U
Benzo(k)fluoranthene	128	U
Chrysene	128	U
Dibenzo(a,h)anthracene	256	U
Fluoranthene	128	U
Fluorene	128	U
Indeno(1,2,3-cd)pyrene	256	U
Naphthalene	128	U
Phenanthrene	128	U
Pyrene	128	U

Site ID: 208E
Sample ID: 393563
Description: 0208(E)/ 1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	281	
Acenaphthylene	403	
Anthracene	1820	
Benzo(a)anthracene	1840	
Benzo(a)pyrene	1650	
Benzo(b)fluoranthene	3330	
Benzo(ghi)perylene	828	
Benzo(k)fluoranthene	1110	
Chrysene	2540	
Dibenzo(a,h)anthracene	441	
Fluoranthene	4160	
Fluorene	694	
Indeno(1,2,3-cd)pyrene	1120	
Naphthalene	242	
Phenanthrene	1910	
Pyrene	4310	

Site ID: 208E
Sample ID: 393564
Description: 0208(E)/ 3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	158	U
Acenaphthylene	158	U
Anthracene	158	U
Benzo(a)anthracene	158	U
Benzo(a)pyrene	158	U
Benzo(b)fluoranthene	158	U
Benzo(ghi)perylene	316	U
Benzo(k)fluoranthene	158	U
Chrysene	158	U
Dibenzo(a,h)anthracene	316	U
Fluoranthene	158	U
Fluorene	158	U
Indeno(1,2,3-cd)pyrene	316	U
Naphthalene	158	U
Phenanthrene	158	U
Pyrene	158	U

Site ID: 405
Sample ID: 393570
Description: 0405/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	140	U
Acenaphthylene	140	U
Anthracene	140	U
Benzo(a)anthracene	140	U
Benzo(a)pyrene	140	U
Benzo(b)fluoranthene	140	U
Benzo(ghi)perylene	279	U
Benzo(k)fluoranthene	140	U
Chrysene	140	U
Dibenzo(a,h)anthracene	279	U
Fluoranthene	32.3	J
Fluorene	140	U
Indeno(1,2,3-cd)pyrene	279	U
Naphthalene	140	U
Phenanthrene	140	U
Pyrene	38.2	J

Site ID: 405E
Sample ID: 393566
Description: 0405(E)/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	155	U
Acenaphthylene	155	U
Anthracene	155	U
Benzo(a)anthracene	155	U
Benzo(a)pyrene	155	U
Benzo(b)fluoranthene	155	U
Benzo(ghi)perylene	310	U
Benzo(k)fluoranthene	155	U
Chrysene	155	U
Dibenzo(a,h)anthracene	310	U
Fluoranthene	155	U
Fluorene	155	U
Indeno(1,2,3-cd)pyrene	310	U
Naphthalene	155	U
Phenanthrene	155	U
Pyrene	155	U

Site ID: 405W
Sample ID: 393572
Description: 0405(W)/1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	141	U
Acenaphthylene	141	U
Anthracene	141	U
Benzo(a)anthracene	141	U
Benzo(a)pyrene	141	U
Benzo(b)fluoranthene	141	U
Benzo(ghi)perylene	281	U
Benzo(k)fluoranthene	141	U
Chrysene	141	U
Dibenzo(a,h)anthracene	281	U
Fluoranthene	141	U
Fluorene	141	U
Indeno(1,2,3-cd)pyrene	281	U
Naphthalene	141	U
Phenanthrene	141	U
Pyrene	141	U

Site ID: 405S
Sample ID: 393575
Description: 0405(S)/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	138	U
Acenaphthylene	138	U
Anthracene	138	U
Benzo(a)anthracene	138	U
Benzo(a)pyrene	138	U
Benzo(b)fluoranthene	138	U
Benzo(ghi)perylene	276	U
Benzo(k)fluoranthene	138	U
Chrysene	138	U
Dibenzo(a,h)anthracene	276	U
Fluoranthene	138	U
Fluorene	138	U
Indeno(1,2,3-cd)pyrene	276	U
Naphthalene	138	U
Phenanthrene	138	U
Pyrene	138	U

Site ID: 505
Sample ID: 393582
Description: 0505/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	141	U
Acenaphthylene	141	U
Anthracene	141	U
Benzo(a)anthracene	141	U
Benzo(a)pyrene	141	U
Benzo(b)fluoranthene	141	U
Benzo(ghi)perylene	281	U
Benzo(k)fluoranthene	141	U
Chrysene	141	U
Dibenzo(a,h)anthracene	281	U
Fluoranthene	141	U
Fluorene	141	U
Indeno(1,2,3-cd)pyrene	281	U
Naphthalene	141	U
Phenanthrene	141	U
Pyrene	141	U

Site ID: 405N
Sample ID: 393577
Description: 0405(N)/1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	144	U
Acenaphthylene	144	U
Anthracene	144	U
Benzo(a)anthracene	144	U
Benzo(a)pyrene	144	U
Benzo(b)fluoranthene	50.6	J
Benzo(ghi)perylene	288	U
Benzo(k)fluoranthene	144	U
Chrysene	37.3	J
Dibenzo(a,h)anthracene	288	U
Fluoranthene	64.9	J
Fluorene	144	U
Indeno(1,2,3-cd)pyrene	288	U
Naphthalene	165	
Phenanthrene	58.6	J
Pyrene	41.2	J

Site ID: 505E
Sample ID: 393585
Description: 0505(E)/3-4 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	133	U
Acenaphthylene	133	U
Anthracene	133	U
Benzo(a)anthracene	133	U
Benzo(a)pyrene	133	U
Benzo(b)fluoranthene	133	U
Benzo(ghi)perylene	265	U
Benzo(k)fluoranthene	133	U
Chrysene	133	U
Dibenzo(a,h)anthracene	265	U
Fluoranthene	133	U
Fluorene	133	U
Indeno(1,2,3-cd)pyrene	265	U
Naphthalene	133	U
Phenanthrene	133	U
Pyrene	133	U

Site ID: 505W
Sample ID: 393587
Description: 0505(W)/1-2 FT.
Sample Date: 9/29/2000

Parameter Name:	Result	Qualifier
Acenaphthene	145	U
Acenaphthylene	145	U
Anthracene	145	U
Benzo(a)anthracene	145	U
Benzo(a)pyrene	89.1	J
Benzo(b)fluoranthene	126	J
Benzo(ghi)perylene	289	U
Benzo(k)fluoranthene	52.5	J
Chrysene	62.9	J
Dibenzo(a,h)anthracene	289	U
Fluoranthene	38.4	J
Fluorene	145	U
Indeno(1,2,3-cd)pyrene	289	U
Naphthalene	145	U
Phenanthrene	145	U
Pyrene	52.5	J

Site ID: 213N1
Sample ID: 393594
Description: 0213(N1)
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	148	U
Acenaphthylene	148	U
Anthracene	148	U
Benzo(a)anthracene	148	U
Benzo(a)pyrene	148	U
Benzo(b)fluoranthene	148	U
Benzo(ghi)perylene	296	U
Benzo(k)fluoranthene	148	U
Chrysene	148	U
Dibenzo(a,h)anthracene	296	U
Fluoranthene	148	U
Fluorene	148	U
Indeno(1,2,3-cd)pyrene	296	U
Naphthalene	148	U
Phenanthrene	148	U
Pyrene	148	U

Site ID: 213S2
Sample ID: 393591
Description: 0213(S2)/
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	147	U
Acenaphthylene	147	U
Anthracene	147	U
Benzo(a)anthracene	147	U
Benzo(a)pyrene	147	U
Benzo(b)fluoranthene	147	U
Benzo(ghi)perylene	294	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	294	U
Fluoranthene	147	U
Fluorene	147	U
Indeno(1,2,3-cd)pyrene	294	U
Naphthalene	147	U
Phenanthrene	147	U
Pyrene	147	U

Site ID: 213E2
Sample ID: 393596
Description: 0213E2 / 3-4 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	158	U
Acenaphthylene	158	U
Anthracene	158	U
Benzo(a)anthracene	158	U
Benzo(a)pyrene	158	U
Benzo(b)fluoranthene	158	U
Benzo(ghi)perylene	316	U
Benzo(k)fluoranthene	158	U
Chrysene	158	U
Dibenzo(a,h)anthracene	316	U
Fluoranthene	158	U
Fluorene	158	U
Indeno(1,2,3-cd)pyrene	316	U
Naphthalene	158	U
Phenanthrene	158	U
Pyrene	158	U

Site ID: 212S2
Sample ID: 393598
Description: 0212(S2)/3-4 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	183	U
Acenaphthylene	183	U
Anthracene	183	U
Benzo(a)anthracene	183	U
Benzo(a)pyrene	183	U
Benzo(b)fluoranthene	183	U
Benzo(ghi)perylene	366	U
Benzo(k)fluoranthene	183	U
Chrysene	183	U
Dibenzo(a,h)anthracene	366	U
Fluoranthene	183	U
Fluorene	183	U
Indeno(1,2,3-cd)pyrene	366	U
Naphthalene	183	U
Phenanthrene	183	U
Pyrene	183	U

Site ID: 313E
Sample ID: 393602
Description: 0313E / 5-6 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	148	U
Acenaphthylene	148	U
Anthracene	148	U
Benzo(a)anthracene	148	U
Benzo(a)pyrene	148	U
Benzo(b)fluoranthene	148	U
Benzo(ghi)perylene	297	U
Benzo(k)fluoranthene	148	U
Chrysene	148	U
Dibenzo(a,h)anthracene	297	U
Fluoranthene	148	U
Fluorene	148	U
Indeno(1,2,3-cd)pyrene	297	U
Naphthalene	148	U
Phenanthrene	148	U
Pyrene	148	U

Site ID: 313
Sample ID: 393599
Description: 0313 / 5-7 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	157	U
Acenaphthylene	157	U
Anthracene	157	U
Benzo(a)anthracene	157	U
Benzo(a)pyrene	157	U
Benzo(b)fluoranthene	157	U
Benzo(ghi)perylene	314	U
Benzo(k)fluoranthene	157	U
Chrysene	157	U
Dibenzo(a,h)anthracene	314	U
Fluoranthene	157	U
Fluorene	157	U
Indeno(1,2,3-cd)pyrene	314	U
Naphthalene	157	U
Phenanthrene	157	U
Pyrene	157	U

Site ID: 313W
Sample ID: 393605
Description: 0313W / 5-6 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	150	U
Acenaphthylene	150	U
Anthracene	59.4	J
Benzo(a)anthracene	150	U
Benzo(a)pyrene	122	J
Benzo(b)fluoranthene	265	
Benzo(ghi)perylene	300	U
Benzo(k)fluoranthene	126	J
Chrysene	168	
Dibenzo(a,h)anthracene	300	U
Fluoranthene	103	J
Fluorene	150	U
Indeno(1,2,3-cd)pyrene	255	J
Naphthalene	150	U
Phenanthrene	28	J
Pyrene	178	

Site ID: 313N
Sample ID: 393607
Description: 0313(N)/3-4 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	137	U
Acenaphthylene	137	U
Anthracene	137	U
Benzo(a)anthracene	137	U
Benzo(a)pyrene	137	U
Benzo(b)fluoranthene	137	U
Benzo(ghi)perylene	274	U
Benzo(k)fluoranthene	137	U
Chrysene	137	U
Dibenzo(a,h)anthracene	274	U
Fluoranthene	137	U
Fluorene	137	U
Indeno(1,2,3-cd)pyrene	274	U
Naphthalene	137	U
Phenanthrene	137	U
Pyrene	137	U

Site ID: 314
Sample ID: 393611
Description: 0314 / 5-7 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	137	U
Acenaphthylene	137	U
Anthracene	137	U
Benzo(a)anthracene	137	U
Benzo(a)pyrene	137	U
Benzo(b)fluoranthene	137	U
Benzo(ghi)perylene	274	U
Benzo(k)fluoranthene	137	U
Chrysene	137	U
Dibenzo(a,h)anthracene	274	U
Fluoranthene	137	U
Fluorene	137	U
Indeno(1,2,3-cd)pyrene	274	U
Naphthalene	137	U
Phenanthrene	137	U
Pyrene	137	U

Site ID: 313S
Sample ID: 393610
Description: 0313(S)/3-4 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	147	U
Acenaphthylene	147	U
Anthracene	33.8	J
Benzo(a)anthracene	147	U
Benzo(a)pyrene	55.4	J
Benzo(b)fluoranthene	101	J
Benzo(ghi)perylene	294	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	294	U
Fluoranthene	99.8	J
Fluorene	147	U
Indeno(1,2,3-cd)pyrene	294	U
Naphthalene	147	U
Phenanthrene	44.6	J
Pyrene	94.9	J

Site ID: 314S
Sample ID: 393620
Description: 0314(S)/5-6 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	134	U
Acenaphthylene	134	U
Anthracene	134	U
Benzo(a)anthracene	134	U
Benzo(a)pyrene	134	U
Benzo(b)fluoranthene	134	U
Benzo(ghi)perylene	268	U
Benzo(k)fluoranthene	134	U
Chrysene	134	U
Dibenzo(a,h)anthracene	268	U
Fluoranthene	134	U
Fluorene	134	U
Indeno(1,2,3-cd)pyrene	268	U
Naphthalene	134	U
Phenanthrene	134	U
Pyrene	134	U

Site ID: 314N
Sample ID: 393622
Description: 0314(N)/3-4 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	157	U
Acenaphthylene	157	U
Anthracene	157	U
Benzo(a)anthracene	157	U
Benzo(a)pyrene	157	U
Benzo(b)fluoranthene	157	U
Benzo(ghi)perylene	314	U
Benzo(k)fluoranthene	157	U
Chrysene	157	U
Dibenzo(a,h)anthracene	314	U
Fluoranthene	157	U
Fluorene	157	U
Indeno(1,2,3-cd)pyrene	314	U
Naphthalene	157	U
Phenanthrene	157	U
Pyrene	157	U

Site ID: 502E
Sample ID: 403100
Description: 0502E / 3-4FT
Sample Date: 10/6/2000

Parameter Name:	Result	Qualifier
Acenaphthene	142	UJ
Acenaphthylene	142	UJ
Anthracene	142	UJ
Benzo(a)anthracene	142	UJ
Benzo(a)pyrene	142	UJ
Benzo(b)fluoranthene	142	UJ
Benzo(ghi)perylene	283	UJ
Benzo(k)fluoranthene	142	UJ
Chrysene	142	UJ
Dibenzo(a,h)anthracene	283	UJ
Fluoranthene	53.4	J
Fluorene	142	UJ
Indeno(1,2,3-cd)pyrene	283	UJ
Naphthalene	142	UJ
Phenanthrene	44.6	J
Pyrene	39.9	J

Site ID: 312W
Sample ID: 393630
Description: 0312(W)/5-6 FT.
Sample Date: 9/30/2000

Parameter Name:	Result	Qualifier
Acenaphthene	162	U
Acenaphthylene	162	U
Anthracene	162	U
Benzo(a)anthracene	162	U
Benzo(a)pyrene	162	U
Benzo(b)fluoranthene	162	U
Benzo(ghi)perylene	325	U
Benzo(k)fluoranthene	162	U
Chrysene	162	U
Dibenzo(a,h)anthracene	325	U
Fluoranthene	22.6	J
Fluorene	162	U
Indeno(1,2,3-cd)pyrene	325	U
Naphthalene	162	U
Phenanthrene	162	U
Pyrene	162	U

Site ID: 502E
Sample ID: 403101
Description: 0502 E / 2-3 FT.
Sample Date: 10/6/2000

Parameter Name:	Result	Qualifier
Acenaphthene	1090	
Acenaphthylene	62.9	J
Anthracene	397	
Benzo(a)anthracene	406	
Benzo(a)pyrene	287	
Benzo(b)fluoranthene	584	
Benzo(ghi)perylene	257	J
Benzo(k)fluoranthene	212	
Chrysene	567	
Dibenzo(a,h)anthracene	298	U
Fluoranthene	2680	
Fluorene	772	
Indeno(1,2,3-cd)pyrene	352	
Naphthalene	290	
Phenanthrene	2210	
Pyrene	2000	

Site ID: 503
Sample ID: 403108
Description: 0503 / 5-6FT
Sample Date: 10/6/2000

Parameter Name:	Result	Qualifier
Acenaphthene	43.7	J
Acenaphthylene	161	UJ
Anthracene	161	UJ
Benzo(a)anthracene	161	UJ
Benzo(a)pyrene	161	UJ
Benzo(b)fluoranthene	161	UJ
Benzo(ghi)perylene	321	UJ
Benzo(k)fluoranthene	161	UJ
Chrysene	161	UJ
Dibenzo(a,h)anthracene	321	UJ
Fluoranthene	40.5	J
Fluorene	161	UJ
Indeno(1,2,3-cd)pyrene	321	UJ
Naphthalene	161	UJ
Phenanthrene	161	UJ
Pyrene	29.7	J

Site ID: 309W
Sample ID: 403517
Description: 0309W / 5-6 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	140	U
Acenaphthylene	140	U
Anthracene	140	U
Benzo(a)anthracene	140	U
Benzo(a)pyrene	140	U
Benzo(b)fluoranthene	140	U
Benzo(ghi)perylene	280	U
Benzo(k)fluoranthene	140	U
Chrysene	140	U
Dibenzo(a,h)anthracene	280	U
Fluoranthene	140	U
Fluorene	140	U
Indeno(1,2,3-cd)pyrene	280	U
Naphthalene	140	U
Phenanthrene	140	U
Pyrene	140	U

Site ID: 309
Sample ID: 403510
Description: 0309 / 5-7 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	149	U
Acenaphthylene	149	U
Anthracene	149	U
Benzo(a)anthracene	149	U
Benzo(a)pyrene	149	U
Benzo(b)fluoranthene	149	U
Benzo(ghi)perylene	297	U
Benzo(k)fluoranthene	149	U
Chrysene	149	U
Dibenzo(a,h)anthracene	297	U
Fluoranthene	149	U
Fluorene	149	U
Indeno(1,2,3-cd)pyrene	297	U
Naphthalene	149	U
Phenanthrene	49.3	J
Pyrene	149	U

Site ID: 309S
Sample ID: 403520
Description: 0309S / 5-6 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	148	U
Acenaphthylene	148	U
Anthracene	148	U
Benzo(a)anthracene	148	U
Benzo(a)pyrene	148	U
Benzo(b)fluoranthene	148	U
Benzo(ghi)perylene	295	U
Benzo(k)fluoranthene	148	U
Chrysene	148	U
Dibenzo(a,h)anthracene	295	U
Fluoranthene	148	U
Fluorene	148	U
Indeno(1,2,3-cd)pyrene	295	U
Naphthalene	148	U
Phenanthrene	148	U
Pyrene	148	U

Site ID: 309N
Sample ID: 403523
Description: 0309N / 5-6 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	137	UJ
Acenaphthylene	137	UJ
Anthracene	137	UJ
Benzo(a)anthracene	137	UJ
Benzo(a)pyrene	137	UJ
Benzo(b)fluoranthene	137	UJ
Benzo(ghi)perylene	275	UJ
Benzo(k)fluoranthene	137	UJ
Chrysene	137	UJ
Dibenzo(a,h)anthracene	275	UJ
Fluoranthene	137	UJ
Fluorene	137	UJ
Indeno(1,2,3-cd)pyrene	275	UJ
Naphthalene	137	UJ
Phenanthrene	137	UJ
Pyrene	137	UJ

Site ID: 308S
Sample ID: 403526
Description: 0308S / 3-4 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	142	U
Acenaphthylene	142	U
Anthracene	142	U
Benzo(a)anthracene	142	U
Benzo(a)pyrene	142	U
Benzo(b)fluoranthene	142	U
Benzo(ghi)perylene	283	U
Benzo(k)fluoranthene	142	U
Chrysene	142	U
Dibenzo(a,h)anthracene	283	U
Fluoranthene	142	U
Fluorene	142	U
Indeno(1,2,3-cd)pyrene	283	U
Naphthalene	142	U
Phenanthrene	142	U
Pyrene	142	U

Site ID: 308
Sample ID: 403524
Description: 0308 / 5-7 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	157	U
Acenaphthylene	157	U
Anthracene	157	U
Benzo(a)anthracene	157	U
Benzo(a)pyrene	157	U
Benzo(b)fluoranthene	157	U
Benzo(ghi)perylene	315	U
Benzo(k)fluoranthene	157	U
Chrysene	157	U
Dibenzo(a,h)anthracene	315	U
Fluoranthene	157	U
Fluorene	157	U
Indeno(1,2,3-cd)pyrene	315	U
Naphthalene	157	U
Phenanthrene	157	U
Pyrene	157	U

Site ID: 308E
Sample ID: 403531
Description: 0308E / 1-2 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	144	U
Acenaphthylene	144	U
Anthracene	144	U
Benzo(a)anthracene	144	U
Benzo(a)pyrene	144	U
Benzo(b)fluoranthene	64.1	J
Benzo(ghi)perylene	287	U
Benzo(k)fluoranthene	144	U
Chrysene	56.6	J
Dibenzo(a,h)anthracene	287	U
Fluoranthene	181	
Fluorene	144	U
Indeno(1,2,3-cd)pyrene	287	U
Naphthalene	144	U
Phenanthrene	98.5	J
Pyrene	125	J

Site ID: 307
Sample ID: 403539
Description: 0307 / 5-7 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	148	U
Acenaphthylene	148	U
Anthracene	148	U
Benzo(a)anthracene	148	U
Benzo(a)pyrene	148	U
Benzo(b)fluoranthene	148	U
Benzo(ghi)perylene	295	U
Benzo(k)fluoranthene	148	U
Chrysene	148	U
Dibenzo(a,h)anthracene	295	U
Fluoranthene	148	U
Fluorene	148	U
Indeno(1,2,3-cd)pyrene	295	U
Naphthalene	148	U
Phenanthrene	148	U
Pyrene	148	U

Site ID: 307S
Sample ID: 403547
Description: 0307S / 3-4 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	141	UJ
Acenaphthylene	141	UJ
Anthracene	141	UJ
Benzo(a)anthracene	141	UJ
Benzo(a)pyrene	141	UJ
Benzo(b)fluoranthene	141	UJ
Benzo(ghi)perylene	283	UJ
Benzo(k)fluoranthene	141	UJ
Chrysene	141	UJ
Dibenzo(a,h)anthracene	283	UJ
Fluoranthene	141	UJ
Fluorene	141	UJ
Indeno(1,2,3-cd)pyrene	283	UJ
Naphthalene	141	UJ
Phenanthrene	141	UJ
Pyrene	141	UJ

Site ID: 307N
Sample ID: 403541
Description: 0307N / 3-4 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	138	UJ
Acenaphthylene	138	UJ
Anthracene	138	UJ
Benzo(a)anthracene	138	UJ
Benzo(a)pyrene	138	UJ
Benzo(b)fluoranthene	138	UJ
Benzo(ghi)perylene	275	UJ
Benzo(k)fluoranthene	138	UJ
Chrysene	138	UJ
Dibenzo(a,h)anthracene	275	UJ
Fluoranthene	138	UJ
Fluorene	138	UJ
Indeno(1,2,3-cd)pyrene	275	UJ
Naphthalene	138	UJ
Phenanthrene	138	UJ
Pyrene	138	UJ

Site ID: 307S
Sample ID: 403548
Description: 0307S / 5-6 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	136	UJ
Acenaphthylene	136	UJ
Anthracene	136	UJ
Benzo(a)anthracene	136	UJ
Benzo(a)pyrene	136	UJ
Benzo(b)fluoranthene	136	UJ
Benzo(ghi)perylene	273	UJ
Benzo(k)fluoranthene	136	UJ
Chrysene	136	UJ
Dibenzo(a,h)anthracene	273	UJ
Fluoranthene	136	UJ
Fluorene	136	UJ
Indeno(1,2,3-cd)pyrene	273	UJ
Naphthalene	136	UJ
Phenanthrene	136	UJ
Pyrene	136	UJ

Site ID: 315
Sample ID: 403549
Description: 0315 / 5-7 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	147	U
Acenaphthylene	147	U
Anthracene	147	U
Benzo(a)anthracene	147	U
Benzo(a)pyrene	147	U
Benzo(b)fluoranthene	147	U
Benzo(ghi)perylene	294	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	294	U
Fluoranthene	147	U
Fluorene	147	U
Indeno(1,2,3-cd)pyrene	294	U
Naphthalene	147	U
Phenanthrene	147	U
Pyrene	147	U

Site ID: 315S
Sample ID: 403557
Description: 0315S / 3-4 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	134	U
Acenaphthylene	134	U
Anthracene	134	U
Benzo(a)anthracene	134	U
Benzo(a)pyrene	134	U
Benzo(b)fluoranthene	134	U
Benzo(ghi)perylene	267	U
Benzo(k)fluoranthene	134	U
Chrysene	134	U
Dibenzo(a,h)anthracene	267	U
Fluoranthene	134	U
Fluorene	134	U
Indeno(1,2,3-cd)pyrene	267	U
Naphthalene	134	U
Phenanthrene	134	U
Pyrene	134	U

Site ID: 315E
Sample ID: 403553
Description: 0315E / 1-2 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	142	UJ
Acenaphthylene	142	UJ
Anthracene	142	UJ
Benzo(a)anthracene	142	UJ
Benzo(a)pyrene	142	UJ
Benzo(b)fluoranthene	142	UJ
Benzo(ghi)perylene	283	UJ
Benzo(k)fluoranthene	142	UJ
Chrysene	142	UJ
Dibenzo(a,h)anthracene	283	UJ
Fluoranthene	142	UJ
Fluorene	142	UJ
Indeno(1,2,3-cd)pyrene	283	UJ
Naphthalene	142	UJ
Phenanthrene	142	UJ
Pyrene	142	UJ

Site ID: 315N
Sample ID: 403561
Description: 0315N / 5-6 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	147	U
Acenaphthylene	147	U
Anthracene	147	U
Benzo(a)anthracene	147	U
Benzo(a)pyrene	147	U
Benzo(b)fluoranthene	147	U
Benzo(ghi)perylene	293	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	293	U
Fluoranthene	147	U
Fluorene	147	U
Indeno(1,2,3-cd)pyrene	293	U
Naphthalene	147	U
Phenanthrene	147	U
Pyrene	147	U

Site ID: 208E2
Sample ID: 403564
Description: 0208E 2 / 3-4 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	135	UJ
Acenaphthylene	135	UJ
Anthracene	135	UJ
Benzo(a)anthracene	135	UJ
Benzo(a)pyrene	135	UJ
Benzo(b)fluoranthene	135	UJ
Benzo(ghi)perylene	270	UJ
Benzo(k)fluoranthene	135	UJ
Chrysene	135	UJ
Dibenzo(a,h)anthracene	270	UJ
Fluoranthene	135	UJ
Fluorene	135	UJ
Indeno(1,2,3-cd)pyrene	270	UJ
Naphthalene	135	UJ
Phenanthrene	135	UJ
Pyrene	135	UJ

Site ID: 503
Sample ID: 403570
Description: 503
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	134	U
Acenaphthylene	116	J
Anthracene	148	
Benzo(a)anthracene	268	
Benzo(a)pyrene	354	
Benzo(b)fluoranthene	854	
Benzo(ghi)perylene	315	
Benzo(k)fluoranthene	375	
Chrysene	585	
Dibenzo(a,h)anthracene	265	J
Fluoranthene	854	
Fluorene	134	U
Indeno(1,2,3-cd)pyrene	433	
Naphthalene	134	U
Phenanthrene	107	J
Pyrene	625	

Site ID: 411
Sample ID: 403568
Description: 0411 / 1-2 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	126	U
Acenaphthylene	126	U
Anthracene	126	U
Benzo(a)anthracene	126	U
Benzo(a)pyrene	126	U
Benzo(b)fluoranthene	126	U
Benzo(ghi)perylene	251	U
Benzo(k)fluoranthene	126	U
Chrysene	126	U
Dibenzo(a,h)anthracene	251	U
Fluoranthene	126	U
Fluorene	126	U
Indeno(1,2,3-cd)pyrene	251	U
Naphthalene	126	U
Phenanthrene	126	U
Pyrene	126	U

Site ID: 502
Sample ID: 403571
Description: 502
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	134	U
Acenaphthylene	134	U
Anthracene	134	U
Benzo(a)anthracene	134	U
Benzo(a)pyrene	134	U
Benzo(b)fluoranthene	62.4	J
Benzo(ghi)perylene	268	U
Benzo(k)fluoranthene	134	U
Chrysene	134	U
Dibenzo(a,h)anthracene	268	U
Fluoranthene	61.2	J
Fluorene	134	U
Indeno(1,2,3-cd)pyrene	268	U
Naphthalene	134	U
Phenanthrene	39.9	J
Pyrene	40.4	J

Site ID: 504
Sample ID: 403572
Description: 504
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	143	U
Acenaphthylene	143	U
Anthracene	51.6	J
Benzo(a)anthracene	143	U
Benzo(a)pyrene	49.8	J
Benzo(b)fluoranthene	151	
Benzo(ghi)perylene	237	J
Benzo(k)fluoranthene	54.7	J
Chrysene	126	J
Dibenzo(a,h)anthracene	287	U
Fluoranthene	146	
Fluorene	143	U
Indeno(1,2,3-cd)pyrene	287	U
Naphthalene	143	U
Phenanthrene	75.2	J
Pyrene	120	J

Site ID: 407
Sample ID: 403574
Description: 407
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	37.7	J
Acenaphthylene	225	
Anthracene	470	
Benzo(a)anthracene	634	
Benzo(a)pyrene	780	
Benzo(b)fluoranthene	1750	
Benzo(ghi)perylene	761	
Benzo(k)fluoranthene	633	
Chrysene	1530	
Dibenzo(a,h)anthracene	353	
Fluoranthene	1610	
Fluorene	53.1	J
Indeno(1,2,3-cd)pyrene	955	
Naphthalene	73.3	J
Phenanthrene	542	
Pyrene	1310	

Site ID: 406
Sample ID: 403573
Description: 406
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	13.8	J
Acenaphthylene	209	
Anthracene	389	
Benzo(a)anthracene	411	
Benzo(a)pyrene	750	
Benzo(b)fluoranthene	1080	
Benzo(ghi)perylene	1410	
Benzo(k)fluoranthene	501	
Chrysene	1270	
Dibenzo(a,h)anthracene	474	
Fluoranthene	664	
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	1710	
Naphthalene	139	U
Phenanthrene	147	
Pyrene	669	

Site ID: 408
Sample ID: 403575
Description: 408
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	19.2	J
Acenaphthylene	215	
Anthracene	254	
Benzo(a)anthracene	370	
Benzo(a)pyrene	547	
Benzo(b)fluoranthene	1190	
Benzo(ghi)perylene	675	
Benzo(k)fluoranthene	458	
Chrysene	1070	
Dibenzo(a,h)anthracene	317	
Fluoranthene	728	
Fluorene	134	U
Indeno(1,2,3-cd)pyrene	730	
Naphthalene	134	U
Phenanthrene	184	
Pyrene	669	

Site ID: 409
Sample ID: 403576
Description: 409
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	144	U
Acenaphthylene	152	
Anthracene	239	
Benzo(a)anthracene	343	
Benzo(a)pyrene	428	
Benzo(b)fluoranthene	1190	
Benzo(ghi)perylene	553	
Benzo(k)fluoranthene	537	
Chrysene	1130	
Dibenzo(a,h)anthracene	329	
Fluoranthene	1010	
Fluorene	144	U
Indeno(1,2,3-cd)pyrene	648	
Naphthalene	144	U
Phenanthrene	233	
Pyrene	832	

Site ID: 210
Sample ID: 403578
Description: 210
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	129	U
Acenaphthylene	129	U
Anthracene	129	U
Benzo(a)anthracene	129	U
Benzo(a)pyrene	129	U
Benzo(b)fluoranthene	129	U
Benzo(ghi)perylene	259	U
Benzo(k)fluoranthene	129	U
Chrysene	129	U
Dibenzo(a,h)anthracene	259	U
Fluoranthene	129	U
Fluorene	129	U
Indeno(1,2,3-cd)pyrene	259	U
Naphthalene	129	U
Phenanthrene	129	U
Pyrene	129	U

Site ID: 209
Sample ID: 403577
Description: 209
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	139	U
Anthracene	139	U
Benzo(a)anthracene	139	U
Benzo(a)pyrene	139	U
Benzo(b)fluoranthene	139	U
Benzo(ghi)perylene	278	U
Benzo(k)fluoranthene	139	U
Chrysene	139	U
Dibenzo(a,h)anthracene	278	U
Fluoranthene	139	U
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	278	U
Naphthalene	139	U
Phenanthrene	139	U
Pyrene	139	U

Site ID: 211
Sample ID: 403579
Description: 211
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	140	U
Acenaphthylene	140	U
Anthracene	140	U
Benzo(a)anthracene	140	U
Benzo(a)pyrene	140	U
Benzo(b)fluoranthene	140	U
Benzo(ghi)perylene	280	U
Benzo(k)fluoranthene	140	U
Chrysene	140	U
Dibenzo(a,h)anthracene	280	U
Fluoranthene	140	U
Fluorene	140	U
Indeno(1,2,3-cd)pyrene	280	U
Naphthalene	140	U
Phenanthrene	140	U
Pyrene	19.8	J

Site ID: 311
Sample ID: 403580
Description: 311
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	144	U
Acenaphthylene	144	U
Anthracene	144	U
Benzo(a)anthracene	144	U
Benzo(a)pyrene	144	U
Benzo(b)fluoranthene	144	U
Benzo(ghi)perylene	288	U
Benzo(k)fluoranthene	144	U
Chrysene	51.9	J
Dibenzo(a,h)anthracene	288	U
Fluoranthene	39.6	J
Fluorene	144	U
Indeno(1,2,3-cd)pyrene	288	U
Naphthalene	144	U
Phenanthrene	144	U
Pyrene	32.7	J

Site ID: 410
Sample ID: 403582
Description: 410
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	51.8	J
Acenaphthylene	328	
Anthracene	1380	
Benzo(a)anthracene	1790	
Benzo(a)pyrene	1880	
Benzo(b)fluoranthene	3690	
Benzo(ghi)perylene	1320	
Benzo(k)fluoranthene	1270	
Chrysene	3550	
Dibenzo(a,h)anthracene	498	
Fluoranthene	4160	
Fluorene	96	J
Indeno(1,2,3-cd)pyrene	1440	
Naphthalene	136	U
Phenanthrene	531	
Pyrene	3490	

Site ID: 310
Sample ID: 403581
Description: 310
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	46.8	J
Anthracene	86.2	J
Benzo(a)anthracene	108	J
Benzo(a)pyrene	139	J
Benzo(b)fluoranthene	328	
Benzo(ghi)perylene	297	
Benzo(k)fluoranthene	125	J
Chrysene	306	
Dibenzo(a,h)anthracene	278	U
Fluoranthene	298	
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	339	
Naphthalene	139	U
Phenanthrene	75.8	J
Pyrene	238	

Site ID: 412
Sample ID: 403583
Description: 412
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	37.6	J
Acenaphthylene	159	
Anthracene	646	
Benzo(a)anthracene	488	
Benzo(a)pyrene	527	
Benzo(b)fluoranthene	1440	
Benzo(ghi)perylene	551	
Benzo(k)fluoranthene	585	
Chrysene	1390	
Dibenzo(a,h)anthracene	302	
Fluoranthene	2120	
Fluorene	89	J
Indeno(1,2,3-cd)pyrene	689	
Naphthalene	40.7	J
Phenanthrene	837	
Pyrene	1540	

Site ID: 413
Sample ID: 403584
Description: 413
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	135	U
Acenaphthylene	135	U
Anthracene	51.9	J
Benzo(a)anthracene	77.9	J
Benzo(a)pyrene	69.7	J
Benzo(b)fluoranthene	180	
Benzo(ghi)perylene	270	U
Benzo(k)fluoranthene	71.7	J
Chrysene	193	
Dibenzo(a,h)anthracene	270	U
Fluoranthene	230	
Fluorene	135	U
Indeno(1,2,3-cd)pyrene	248	J
Naphthalene	135	U
Phenanthrene	58.8	J
Pyrene	175	

Site ID: 514
Sample ID: 403586
Description: 514
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	138	U
Acenaphthylene	138	U
Anthracene	138	U
Benzo(a)anthracene	138	U
Benzo(a)pyrene	138	U
Benzo(b)fluoranthene	65.4	J
Benzo(ghi)perylene	275	U
Benzo(k)fluoranthene	138	U
Chrysene	62	J
Dibenzo(a,h)anthracene	275	U
Fluoranthene	89.7	J
Fluorene	138	U
Indeno(1,2,3-cd)pyrene	275	U
Naphthalene	138	U
Phenanthrene	138	U
Pyrene	62.3	J

Site ID: 414
Sample ID: 403585
Description: 414
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	128	U
Acenaphthylene	51.9	J
Anthracene	197	
Benzo(a)anthracene	140	
Benzo(a)pyrene	149	
Benzo(b)fluoranthene	453	
Benzo(ghi)perylene	254	J
Benzo(k)fluoranthene	230	
Chrysene	332	
Dibenzo(a,h)anthracene	256	U
Fluoranthene	519	
Fluorene	128	U
Indeno(1,2,3-cd)pyrene	326	
Naphthalene	128	U
Phenanthrene	335	
Pyrene	397	

Site ID: 214
Sample ID: 403587
Description: 214
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	143	U
Acenaphthylene	143	U
Anthracene	143	U
Benzo(a)anthracene	143	U
Benzo(a)pyrene	143	U
Benzo(b)fluoranthene	95.9	J
Benzo(ghi)perylene	286	U
Benzo(k)fluoranthene	32.5	J
Chrysene	52.7	J
Dibenzo(a,h)anthracene	286	U
Fluoranthene	75.7	J
Fluorene	143	U
Indeno(1,2,3-cd)pyrene	231	J
Naphthalene	143	U
Phenanthrene	143	U
Pyrene	63.1	J

Site ID: 7002
Sample ID: 403589
Description: 7002
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	141	U
Acenaphthylene	141	U
Anthracene	41.2	J
Benzo(a)anthracene	141	U
Benzo(a)pyrene	50	J
Benzo(b)fluoranthene	195	
Benzo(ghi)perylene	177	J
Benzo(k)fluoranthene	84.8	J
Chrysene	194	
Dibenzo(a,h)anthracene	283	U
Fluoranthene	139	J
Fluorene	141	U
Indeno(1,2,3-cd)pyrene	247	J
Naphthalene	141	U
Phenanthrene	39.7	J
Pyrene	111	J

Site ID: 411N
Sample ID: 403598
Description: 0411N / 5-6 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	146	U
Acenaphthylene	146	U
Anthracene	146	U
Benzo(a)anthracene	146	U
Benzo(a)pyrene	146	U
Benzo(b)fluoranthene	146	U
Benzo(ghi)perylene	292	U
Benzo(k)fluoranthene	146	U
Chrysene	146	U
Dibenzo(a,h)anthracene	292	U
Fluoranthene	146	U
Fluorene	146	U
Indeno(1,2,3-cd)pyrene	292	U
Naphthalene	146	U
Phenanthrene	146	U
Pyrene	146	U

Site ID: 411S
Sample ID: 403595
Description: 0411S / 5-6 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	138	UJ
Acenaphthylene	138	UJ
Anthracene	138	UJ
Benzo(a)anthracene	138	UJ
Benzo(a)pyrene	138	UJ
Benzo(b)fluoranthene	138	UJ
Benzo(ghi)perylene	276	UJ
Benzo(k)fluoranthene	138	UJ
Chrysene	138	UJ
Dibenzo(a,h)anthracene	276	UJ
Fluoranthene	138	UJ
Fluorene	138	UJ
Indeno(1,2,3-cd)pyrene	276	UJ
Naphthalene	138	UJ
Phenanthrene	138	UJ
Pyrene	138	UJ

Site ID: 411W
Sample ID: 403602
Description: 0411W / 1-2 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	136	U
Acenaphthylene	136	U
Anthracene	136	U
Benzo(a)anthracene	136	U
Benzo(a)pyrene	136	U
Benzo(b)fluoranthene	136	U
Benzo(ghi)perylene	271	U
Benzo(k)fluoranthene	136	U
Chrysene	136	U
Dibenzo(a,h)anthracene	271	U
Fluoranthene	136	U
Fluorene	136	U
Indeno(1,2,3-cd)pyrene	271	U
Naphthalene	136	U
Phenanthrene	136	U
Pyrene	136	U

Site ID: 309E
Sample ID: 403609
Description: 0309E 2 / 3-4 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	135	UJ
Acenaphthylene	135	UJ
Anthracene	135	UJ
Benzo(a)anthracene	135	UJ
Benzo(a)pyrene	135	UJ
Benzo(b)fluoranthene	135	UJ
Benzo(ghi)perylene	270	UJ
Benzo(k)fluoranthene	135	UJ
Chrysene	135	UJ
Dibenzo(a,h)anthracene	270	UJ
Fluoranthene	135	UJ
Fluorene	135	UJ
Indeno(1,2,3-cd)pyrene	270	UJ
Naphthalene	135	UJ
Phenanthrene	135	UJ
Pyrene	135	UJ

Site ID: 313S2
Sample ID: 403625
Description: 0313 S2 / 1-2 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	138	UJ
Acenaphthylene	138	UJ
Anthracene	138	UJ
Benzo(a)anthracene	138	UJ
Benzo(a)pyrene	138	UJ
Benzo(b)fluoranthene	138	UJ
Benzo(ghi)perylene	276	UJ
Benzo(k)fluoranthene	138	UJ
Chrysene	138	UJ
Dibenzo(a,h)anthracene	276	UJ
Fluoranthene	138	UJ
Fluorene	138	UJ
Indeno(1,2,3-cd)pyrene	276	UJ
Naphthalene	138	UJ
Phenanthrene	138	UJ
Pyrene	138	UJ

Site ID: 505SE2
Sample ID: 403618
Description: 0505 SE2 / 3-4 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	142	UJ
Acenaphthylene	142	UJ
Anthracene	142	UJ
Benzo(a)anthracene	142	UJ
Benzo(a)pyrene	142	UJ
Benzo(b)fluoranthene	142	UJ
Benzo(ghi)perylene	284	UJ
Benzo(k)fluoranthene	142	UJ
Chrysene	142	UJ
Dibenzo(a,h)anthracene	284	UJ
Fluoranthene	142	UJ
Fluorene	142	UJ
Indeno(1,2,3-cd)pyrene	284	UJ
Naphthalene	142	UJ
Phenanthrene	142	UJ
Pyrene	142	UJ

Site ID: 314N2
Sample ID: 403629
Description: 0314N2 / 1-2 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	136	UJ
Acenaphthylene	136	UJ
Anthracene	64.7	J
Benzo(a)anthracene	71.5	J
Benzo(a)pyrene	72.4	J
Benzo(b)fluoranthene	171	J
Benzo(ghi)perylene	272	UJ
Benzo(k)fluoranthene	76.1	J
Chrysene	79.9	J
Dibenzo(a,h)anthracene	272	UJ
Fluoranthene	126	J
Fluorene	136	UJ
Indeno(1,2,3-cd)pyrene	230	J
Naphthalene	136	UJ
Phenanthrene	46.3	J
Pyrene	135	J

Site ID: 602S
Sample ID: 403637
Description: 0602 S / 10-11 FT.
Sample Date: 10/4/2000

Parameter Name:	Result	Qualifier
Acenaphthene	331	
Acenaphthylene	147	U
Anthracene	147	U
Benzo(a)anthracene	147	U
Benzo(a)pyrene	147	U
Benzo(b)fluoranthene	147	U
Benzo(ghi)perylene	293	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	293	U
Fluoranthene	202	
Fluorene	123	J
Indeno(1,2,3-cd)pyrene	293	U
Naphthalene	212	
Phenanthrene	115	J
Pyrene	106	J

Site ID: 602ES
Sample ID: 403648
Description: 0602 ES / 11-12 FT.
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	2750	
Acenaphthylene	152	U
Anthracene	60.1	J
Benzo(a)anthracene	152	U
Benzo(a)pyrene	152	U
Benzo(b)fluoranthene	152	U
Benzo(ghi)perylene	305	U
Benzo(k)fluoranthene	152	U
Chrysene	152	U
Dibenzo(a,h)anthracene	305	U
Fluoranthene	121	J
Fluorene	679	
Indeno(1,2,3-cd)pyrene	305	U
Naphthalene	970	
Phenanthrene	218	
Pyrene	92.3	J

Site ID: 602E
Sample ID: 403642
Description: 0602 E / 3-4- FT.
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	145	U
Acenaphthylene	145	U
Anthracene	145	U
Benzo(a)anthracene	145	U
Benzo(a)pyrene	145	U
Benzo(b)fluoranthene	145	U
Benzo(ghi)perylene	290	U
Benzo(k)fluoranthene	145	U
Chrysene	145	U
Dibenzo(a,h)anthracene	290	U
Fluoranthene	145	U
Fluorene	145	U
Indeno(1,2,3-cd)pyrene	290	U
Naphthalene	145	U
Phenanthrene	145	U
Pyrene	145	U

Site ID: 602ES
Sample ID: 403649
Description: 0602 ES / 15-16 FT.
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	147	U
Acenaphthylene	147	U
Anthracene	147	U
Benzo(a)anthracene	147	U
Benzo(a)pyrene	147	U
Benzo(b)fluoranthene	147	U
Benzo(ghi)perylene	293	U
Benzo(k)fluoranthene	147	U
Chrysene	147	U
Dibenzo(a,h)anthracene	293	U
Fluoranthene	147	U
Fluorene	147	U
Indeno(1,2,3-cd)pyrene	293	U
Naphthalene	147	U
Phenanthrene	147	U
Pyrene	147	U

Site ID: 602S2
Sample ID: 403655
Description: 0602 S2 / 13-14 FT.
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	152	U
Acenaphthylene	152	U
Anthracene	152	U
Benzo(a)anthracene	152	U
Benzo(a)pyrene	152	U
Benzo(b)fluoranthene	152	U
Benzo(ghi)perylene	304	U
Benzo(k)fluoranthene	152	U
Chrysene	152	U
Dibenzo(a,h)anthracene	304	U
Fluoranthene	79.3	J
Fluorene	152	U
Indeno(1,2,3-cd)pyrene	304	U
Naphthalene	152	U
Phenanthrene	119	J
Pyrene	59.5	J

Site ID: 502
Sample ID: 403666
Description: 0502 / 5-6FT
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	164	J
Acenaphthylene	152	UJ
Anthracene	152	UJ
Benzo(a)anthracene	152	UJ
Benzo(a)pyrene	152	UJ
Benzo(b)fluoranthene	152	UJ
Benzo(ghi)perylene	303	UJ
Benzo(k)fluoranthene	152	UJ
Chrysene	45.3	J
Dibenzo(a,h)anthracene	303	UJ
Fluoranthene	51.8	J
Fluorene	156	J
Indeno(1,2,3-cd)pyrene	303	UJ
Naphthalene	166	J
Phenanthrene	152	UJ
Pyrene	38.5	J

Site ID: 602S2W
Sample ID: 403662
Description: 0602 S2 W / 17-18 FT.
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	4570	
Acenaphthylene	49.4	J
Anthracene	607	
Benzo(a)anthracene	174	U
Benzo(a)pyrene	174	U
Benzo(b)fluoranthene	174	U
Benzo(ghi)perylene	347	U
Benzo(k)fluoranthene	174	U
Chrysene	48.5	J
Dibenzo(a,h)anthracene	347	U
Fluoranthene	1100	
Fluorene	5420	
Indeno(1,2,3-cd)pyrene	347	U
Naphthalene	21700	
Phenanthrene	8920	
Pyrene	464	

Site ID: 502S
Sample ID: 403671
Description: 0502 S / 5-6- FT.
Sample Date: 10/5/2000

Parameter Name:	Result	Qualifier
Acenaphthene	179	U
Acenaphthylene	179	U
Anthracene	3020	
Benzo(a)anthracene	179	U
Benzo(a)pyrene	179	U
Benzo(b)fluoranthene	179	U
Benzo(ghi)perylene	358	U
Benzo(k)fluoranthene	179	U
Chrysene	99.3	J
Dibenzo(a,h)anthracene	358	U
Fluoranthene	353	
Fluorene	81.1	J
Indeno(1,2,3-cd)pyrene	358	U
Naphthalene	43.1	J
Phenanthrene	242	
Pyrene	311	

Site ID: 212W2
Sample ID: 403678
Description: 0212W2 / 3/4 FT.
Sample Date: 10/1/2000

Parameter Name:	Result	Qualifier
Acenaphthene	151	U
Acenaphthylene	151	U
Anthracene	151	U
Benzo(a)anthracene	151	U
Benzo(a)pyrene	151	U
Benzo(b)fluoranthene	151	U
Benzo(ghi)perylene	302	U
Benzo(k)fluoranthene	151	U
Chrysene	151	U
Dibenzo(a,h)anthracene	302	U
Fluoranthene	151	U
Fluorene	151	U
Indeno(1,2,3-cd)pyrene	302	U
Naphthalene	151	U
Phenanthrene	151	U
Pyrene	151	U

Site ID: 505S
Sample ID: 403680
Description: 0505S / 5-6 FT.
Sample Date: 10/2/2000

Parameter Name:	Result	Qualifier
Acenaphthene	148	U
Acenaphthylene	148	U
Anthracene	148	U
Benzo(a)anthracene	148	U
Benzo(a)pyrene	148	U
Benzo(b)fluoranthene	148	U
Benzo(ghi)perylene	296	U
Benzo(k)fluoranthene	148	U
Chrysene	148	U
Dibenzo(a,h)anthracene	296	U
Fluoranthene	148	U
Fluorene	148	U
Indeno(1,2,3-cd)pyrene	296	U
Naphthalene	148	U
Phenanthrene	148	U
Pyrene	148	U

Site ID: 411S
Sample ID: 403679
Description: 0411S / 5-6 FT.
Sample Date: 10/3/2000

Parameter Name:	Result	Qualifier
Acenaphthene	140	U
Acenaphthylene	140	U
Anthracene	140	U
Benzo(a)anthracene	140	U
Benzo(a)pyrene	140	U
Benzo(b)fluoranthene	140	U
Benzo(ghi)perylene	281	U
Benzo(k)fluoranthene	140	U
Chrysene	140	U
Dibenzo(a,h)anthracene	281	U
Fluoranthene	140	U
Fluorene	140	U
Indeno(1,2,3-cd)pyrene	281	U
Naphthalene	140	U
Phenanthrene	140	U
Pyrene	140	U

Site ID: CW01
Sample ID: 413501
Description: CW01 S4 / 3-4FT
Sample Date: 10/10/2000

Parameter Name:	Result	Qualifier
Acenaphthene	134	UJ
Acenaphthylene	134	UJ
Anthracene	134	UJ
Benzo(a)anthracene	134	UJ
Benzo(a)pyrene	134	UJ
Benzo(b)fluoranthene	134	UJ
Benzo(ghi)perylene	269	UJ
Benzo(k)fluoranthene	134	UJ
Chrysene	134	UJ
Dibenzo(a,h)anthracene	269	UJ
Fluoranthene	134	UJ
Fluorene	134	UJ
Indeno(1,2,3-cd)pyrene	269	UJ
Naphthalene	134	UJ
Phenanthrene	134	UJ
Pyrene	134	UJ

Site ID: CW01
Sample ID: 413511
Description: CW01 S / 7-8FT
Sample Date: 10/10/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	UJ
Acenaphthylene	139	UJ
Anthracene	139	UJ
Benzo(a)anthracene	139	UJ
Benzo(a)pyrene	139	UJ
Benzo(b)fluoranthene	139	UJ
Benzo(ghi)perylene	278	UJ
Benzo(k)fluoranthene	139	UJ
Chrysene	139	UJ
Dibenzo(a,h)anthracene	278	UJ
Fluoranthene	139	UJ
Fluorene	139	UJ
Indeno(1,2,3-cd)pyrene	278	UJ
Naphthalene	139	UJ
Phenanthrene	139	UJ
Pyrene	139	UJ

Site ID: CW01W
Sample ID: 413522
Description: CW01 W / 5-6FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	139	U
Anthracene	139	U
Benzo(a)anthracene	139	U
Benzo(a)pyrene	139	U
Benzo(b)fluoranthene	139	U
Benzo(ghi)perylene	278	U
Benzo(k)fluoranthene	139	U
Chrysene	139	U
Dibenzo(a,h)anthracene	278	U
Fluoranthene	139	U
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	278	U
Naphthalene	139	U
Phenanthrene	139	U
Pyrene	139	U

Site ID: CW01E
Sample ID: 413516
Description: CW01 E / 7-8FT
Sample Date: 10/10/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	UJ
Acenaphthylene	139	UJ
Anthracene	139	UJ
Benzo(a)anthracene	139	UJ
Benzo(a)pyrene	139	UJ
Benzo(b)fluoranthene	139	UJ
Benzo(ghi)perylene	278	UJ
Benzo(k)fluoranthene	139	UJ
Chrysene	139	UJ
Dibenzo(a,h)anthracene	278	UJ
Fluoranthene	139	UJ
Fluorene	139	UJ
Indeno(1,2,3-cd)pyrene	278	UJ
Naphthalene	139	UJ
Phenanthrene	139	UJ
Pyrene	139	UJ

Site ID: CW01N
Sample ID: 413527
Description: CW01 N / 7-8FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	139	U
Anthracene	139	U
Benzo(a)anthracene	71.3	J
Benzo(a)pyrene	139	U
Benzo(b)fluoranthene	43.1	J
Benzo(ghi)perylene	278	U
Benzo(k)fluoranthene	139	U
Chrysene	139	U
Dibenzo(a,h)anthracene	278	U
Fluoranthene	81.4	J
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	278	U
Naphthalene	49.6	J
Phenanthrene	64.3	J
Pyrene	43.4	J

Site ID: CW01S2
Sample ID: 413531
Description: CW01 S2 / 5-6FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	129	U
Acenaphthylene	129	U
Anthracene	129	U
Benzo(a)anthracene	129	U
Benzo(a)pyrene	129	U
Benzo(b)fluoranthene	129	U
Benzo(ghi)perylene	259	U
Benzo(k)fluoranthene	129	U
Chrysene	129	U
Dibenzo(a,h)anthracene	259	U
Fluoranthene	129	U
Fluorene	129	U
Indeno(1,2,3-cd)pyrene	259	U
Naphthalene	129	U
Phenanthrene	129	U
Pyrene	129	U

Site ID: CW01S3W
Sample ID: 413539
Description: CW01 S3W / 1-2FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	132	U
Acenaphthylene	132	U
Anthracene	50.1	J
Benzo(a)anthracene	132	U
Benzo(a)pyrene	83.6	J
Benzo(b)fluoranthene	185	
Benzo(ghi)perylene	196	J
Benzo(k)fluoranthene	58.7	J
Chrysene	93.1	J
Dibenzo(a,h)anthracene	264	U
Fluoranthene	101	J
Fluorene	132	U
Indeno(1,2,3-cd)pyrene	254	J
Naphthalene	42.4	J
Phenanthrene	77.7	J
Pyrene	86.1	J

Site ID: CW01S3E
Sample ID: 413536
Description: CW01 SE3 / 5-6FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	139	U
Acenaphthylene	139	U
Anthracene	139	U
Benzo(a)anthracene	139	U
Benzo(a)pyrene	139	U
Benzo(b)fluoranthene	139	U
Benzo(ghi)perylene	277	U
Benzo(k)fluoranthene	139	U
Chrysene	139	U
Dibenzo(a,h)anthracene	277	U
Fluoranthene	139	U
Fluorene	139	U
Indeno(1,2,3-cd)pyrene	277	U
Naphthalene	139	U
Phenanthrene	139	U
Pyrene	139	U

Site ID: CW01S4W
Sample ID: 413543
Description: CW01 S4W / 3-4FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	142	U
Acenaphthylene	142	U
Anthracene	142	U
Benzo(a)anthracene	142	U
Benzo(a)pyrene	142	U
Benzo(b)fluoranthene	142	U
Benzo(ghi)perylene	283	U
Benzo(k)fluoranthene	142	U
Chrysene	142	U
Dibenzo(a,h)anthracene	283	U
Fluoranthene	142	U
Fluorene	142	U
Indeno(1,2,3-cd)pyrene	283	U
Naphthalene	142	U
Phenanthrene	142	U
Pyrene	142	U

Site ID: CW01S4S
Sample ID: 413544
Description: CW01 S4S / 1-2FT
Sample Date: 10/11/2000

Parameter Name:	Result	Qualifier
Acenaphthene	143	U
Acenaphthylene	143	U
Anthracene	143	U
Benzo(a)anthracene	143	U
Benzo(a)pyrene	143	U
Benzo(b)fluoranthene	31.9	J
Benzo(ghi)perylene	287	U
Benzo(k)fluoranthene	143	U
Chrysene	143	U
Dibenzo(a,h)anthracene	287	U
Fluoranthene	70.2	J
Fluorene	143	U
Indeno(1,2,3-cd)pyrene	287	U
Naphthalene	143	U
Phenanthrene	41.5	J
Pyrene	33.1	J

Site ID: 602E
Sample ID: 413550
Description: 0602E / 21-22FT
Sample Date: 10/12/2000

Parameter Name:	Result	Qualifier
Acenaphthene	2470	
Acenaphthylene	174	U
Anthracene	174	U
Benzo(a)anthracene	174	U
Benzo(a)pyrene	174	U
Benzo(b)fluoranthene	174	U
Benzo(ghi)perylene	348	U
Benzo(k)fluoranthene	174	U
Chrysene	174	U
Dibenzo(a,h)anthracene	348	U
Fluoranthene	170	J
Fluorene	1150	
Indeno(1,2,3-cd)pyrene	348	U
Naphthalene	15200	
Phenanthrene	940	
Pyrene	106	J

Site ID: 602E
Sample ID: 413549
Description: 0602E / 16-17FT
Sample Date: 10/12/2000

Parameter Name:	Result	Qualifier
Acenaphthene	1340	
Acenaphthylene	49.4	J
Anthracene	970	
Benzo(a)anthracene	2840	
Benzo(a)pyrene	942	
Benzo(b)fluoranthene	1670	
Benzo(ghi)perylene	405	
Benzo(k)fluoranthene	734	
Chrysene	3510	
Dibenzo(a,h)anthracene	295	
Fluoranthene	12300	
Fluorene	2150	
Indeno(1,2,3-cd)pyrene	535	
Naphthalene	724	
Phenanthrene	4880	
Pyrene	8380	

Site ID: 602S2W2
Sample ID: 413552
Description: 0602 S2W2 / 13-14FT
Sample Date: 10/13/2000

Parameter Name:	Result	Qualifier
Acenaphthene	162	U
Acenaphthylene	162	U
Anthracene	162	U
Benzo(a)anthracene	162	U
Benzo(a)pyrene	162	U
Benzo(b)fluoranthene	162	U
Benzo(ghi)perylene	324	U
Benzo(k)fluoranthene	162	U
Chrysene	162	U
Dibenzo(a,h)anthracene	324	U
Fluoranthene	162	U
Fluorene	162	U
Indeno(1,2,3-cd)pyrene	324	U
Naphthalene	162	U
Phenanthrene	162	U
Pyrene	162	U

Site ID: 502W
Sample ID: 413554
Description: 0502 W / 9-10FT
Sample Date: 10/13/2000

Parameter Name:	Result	Qualifier
Acenaphthene	26.6	J
Acenaphthylene	169	U
Anthracene	169	U
Benzo(a)anthracene	169	U
Benzo(a)pyrene	169	U
Benzo(b)fluoranthene	169	U
Benzo(ghi)perylene	338	U
Benzo(k)fluoranthene	169	U
Chrysene	169	U
Dibenzo(a,h)anthracene	338	U
Fluoranthene	169	U
Fluorene	169	U
Indeno(1,2,3-cd)pyrene	338	U
Naphthalene	169	U
Phenanthrene	31.8	J
Pyrene	169	U

Site ID: 602W
Sample ID: 423503
Description: 0602W / 21-22FT
Sample Date: 10/16/2000

Parameter Name:	Result	Qualifier
Acenaphthene	175	U
Acenaphthylene	175	U
Anthracene	175	U
Benzo(a)anthracene	175	U
Benzo(a)pyrene	175	U
Benzo(b)fluoranthene	175	U
Benzo(ghi)perylene	351	U
Benzo(k)fluoranthene	175	U
Chrysene	175	U
Dibenzo(a,h)anthracene	351	U
Fluoranthene	175	U
Fluorene	175	U
Indeno(1,2,3-cd)pyrene	351	U
Naphthalene	175	U
Phenanthrene	175	U
Pyrene	175	U

Site ID: 502S
Sample ID: 413558
Description: 0502S / 9-10FT
Sample Date: 10/13/2000

Parameter Name:	Result	Qualifier
Acenaphthene	554	
Acenaphthylene	160	U
Anthracene	49.2	J
Benzo(a)anthracene	160	U
Benzo(a)pyrene	160	U
Benzo(b)fluoranthene	160	U
Benzo(ghi)perylene	320	U
Benzo(k)fluoranthene	160	U
Chrysene	160	U
Dibenzo(a,h)anthracene	320	U
Fluoranthene	131	J
Fluorene	665	
Indeno(1,2,3-cd)pyrene	320	U
Naphthalene	160	U
Phenanthrene	385	
Pyrene	70.3	J

Site ID: 603E
Sample ID: 423506
Description: 0603E / 13-14FT
Sample Date: 10/16/2000

Parameter Name:	Result	Qualifier
Acenaphthene	144	U
Acenaphthylene	144	U
Anthracene	144	U
Benzo(a)anthracene	144	U
Benzo(a)pyrene	144	U
Benzo(b)fluoranthene	144	U
Benzo(ghi)perylene	287	U
Benzo(k)fluoranthene	144	U
Chrysene	144	U
Dibenzo(a,h)anthracene	287	U
Fluoranthene	144	U
Fluorene	144	U
Indeno(1,2,3-cd)pyrene	287	U
Naphthalene	144	U
Phenanthrene	144	U
Pyrene	144	U

Site ID: 603
Sample ID: 423529
Description: 0603 / 11-12FT
Sample Date: 10/17/2000

Parameter Name:	Result	Qualifier
Acenaphthene	152	U
Acenaphthylene	152	U
Anthracene	35.9	J
Benzo(a)anthracene	152	U
Benzo(a)pyrene	152	U
Benzo(b)fluoranthene	152	U
Benzo(ghi)perylene	304	U
Benzo(k)fluoranthene	152	U
Chrysene	152	U
Dibenzo(a,h)anthracene	304	U
Fluoranthene	80.7	J
Fluorene	152	U
Indeno(1,2,3-cd)pyrene	304	U
Naphthalene	152	U
Phenanthrene	28.1	J
Pyrene	89.1	J

Site ID: 602E1
Sample ID: 423559
Description: 0602E1 / 15-16FT
Sample Date: 10/18/2000

Parameter Name:	Result	Qualifier
Acenaphthene	361	
Acenaphthylene	148	U
Anthracene	148	U
Benzo(a)anthracene	148	U
Benzo(a)pyrene	148	U
Benzo(b)fluoranthene	148	U
Benzo(ghi)perylene	296	U
Benzo(k)fluoranthene	148	U
Chrysene	148	U
Dibenzo(a,h)anthracene	296	U
Fluoranthene	47.3	J
Fluorene	148	U
Indeno(1,2,3-cd)pyrene	296	U
Naphthalene	105	J
Phenanthrene	34.2	J
Pyrene	31.4	J

Site ID: 603W
Sample ID: 423541
Description: 0603W / 13-14FT
Sample Date: 10/18/2000

Parameter Name:	Result	Qualifier
Acenaphthene	601	
Acenaphthylene	158	U
Anthracene	120	J
Benzo(a)anthracene	158	U
Benzo(a)pyrene	158	U
Benzo(b)fluoranthene	158	U
Benzo(ghi)perylene	316	U
Benzo(k)fluoranthene	158	U
Chrysene	158	U
Dibenzo(a,h)anthracene	316	U
Fluoranthene	263	
Fluorene	158	U
Indeno(1,2,3-cd)pyrene	316	U
Naphthalene	198	
Phenanthrene	102	J
Pyrene	150	J

Site ID: 406N
Sample ID: 423568
Description: 0406N / 5-6FT
Sample Date: 10/19/2000

Parameter Name:	Result	Qualifier
Acenaphthene	161	U
Acenaphthylene	161	U
Anthracene	161	U
Benzo(a)anthracene	161	U
Benzo(a)pyrene	161	U
Benzo(b)fluoranthene	161	U
Benzo(ghi)perylene	321	U
Benzo(k)fluoranthene	161	U
Chrysene	161	U
Dibenzo(a,h)anthracene	321	U
Fluoranthene	161	U
Fluorene	161	U
Indeno(1,2,3-cd)pyrene	321	U
Naphthalene	161	U
Phenanthrene	161	U
Pyrene	161	U

Site ID: 501
Sample ID: 423572
Description: 0501 / 3-4FT
Sample Date: 10/19/2000

Parameter Name:	Result	Qualifier
Acenaphthene	159	U
Acenaphthylene	159	U
Anthracene	159	U
Benzo(a)anthracene	159	U
Benzo(a)pyrene	159	U
Benzo(b)fluoranthene	159	U
Benzo(ghi)perylene	318	U
Benzo(k)fluoranthene	159	U
Chrysene	159	U
Dibenzo(a,h)anthracene	318	U
Fluoranthene	159	U
Fluorene	159	U
Indeno(1,2,3-cd)pyrene	318	U
Naphthalene	159	U
Phenanthrene	159	U
Pyrene	159	U

APPENDIX B
MANCHESTER LABORATORY DATA VALIDATION REPORTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

December 10, 2001

MEMORANDUM

SUBJECT: Peer Review and Data Validation Report of Semivolatiles' Results for the Wyckoff-Thermal Remediation Project Samples 01413545, 01413546, 01413547, 01413548, 01413549, 01413550, 01413551, 01423500, 01423501, 01423502, 01423503, 01433585, 01433586, 01433587, and 01433588

FROM: Gerald H. Dodo, Chemist
USEPA

TO: Hanh Gold
USEPA

CC: Travis Shaw
USACE

The following is a data validation report of semivolatiles analyses' results for soil samples collected for the Wyckoff-Thermal Remediation project. The samples were analyzed at the USEPA Region 10 Laboratory located in Manchester, WA using USEPA SW846 Method 8270C. This report covers the samples listed above.

The project code for these samples is FSP-009G. The account number is 01T10P50102D10P4LA00.

Data qualifications

The following comments refer to laboratory performance meeting the Quality Control specifications outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99).

I. Holding Times: Acceptable

The recommended holding time for the extraction of soil samples is 14 days from the date of sampling. Extracts have a

holding time limit of 40 days from the time of preparation. All samples were extracted and analyzed within holding time maximums.

II. GC/MS Tuning and Performance: Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance met criteria. All sample analyses were preceded by a tune less than 12 hours prior to analysis. No qualifiers were applied on the basis of the tuning data.

III. Initial Calibration: Acceptable

A six- to nine-point initial calibration was performed on 09/24/01. Correlation coefficients were $\geq$0.99. Average RRFs met the criteria of $\geq$0.05. %RSDs of the RRFs met the criteria of $\leq$30%. No qualifiers were applied based on the initial calibration.

IV. Continuing Calibration:

The continuing calibration check standard met the criteria for frequency of analysis and RRT windows for all target compounds and surrogates. The RRFs were $\geq$0.05 and the accuracy for the target compounds met the criteria of 75-125% of the true value except for the following.

10/23/01 Samples 01413545, 01413546, 01413547, 01413548, 01413549, 01413550, 01413551, 01423500, 01423501, 01423502, 01423503, Matrix Spikes 01423502S1, and 01423502S2.

2,4-Dinitrophenol resulted with <75% of the true value. The associated results for this compound were qualified J if detected and UJ if non-detected.

11/01/01 Diluted Reanalyses for Samples 01413547 and 01413548.

Benzoic acid and 4,6-dinitro-2-methylphenol resulted with RRFs much lower than 0.05. Pentachlorophenol, 3B-coprostanol, benzyl alcohol, 2-nitrophenol, hexachlorocyclopentadiene, 2,4-dinitrophenol, and 4-nitrophenol resulted with <75% of the true value. The associated results for these compounds and analyses were not used or reported.

11/07/01 Samples 01433585, 01433586, 01433587, 01433588, Matrix Spikes 0143358851, and 0143358852.

Benzyl alcohol resulted with <75% of the true value. The associated results for this compound were qualified J if detected and UJ if non-detected.

V. Blanks:

Method blanks were prepared and analyzed with each sample extraction batch. Target compounds detected in the samples were reported without qualification if the sample result area integration exceeded ten times that of the blank for common contaminates (e.g., phthalates) or five times that of the blank for the other target compounds. Detected sample results were qualified U if the area integration was below these criteria. The sample concentration or the sample quantitation limit, whichever is greater, was reported as the qualified result. Tentatively identified compounds detected in the blanks were deleted from the sample results.

All detected phthalate results from responses below the calibration range were qualified U with the sample quantitation limit reported as a conservative measure.

VI. Surrogates: Acceptable

The SW846 Method 8270C and the Functional Guidelines specifications for surrogate recoveries were applied. The recoveries met the criteria, therefore, no qualifiers were applied based on the surrogates.

VII. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

MS/MSD analyses were performed using samples 01423502 and 01433588 (S1/S2). The MS/MSD criteria as described in the CLP Statement of Work and the Region 10 acceptance ranges (50-150% recovery, ≤50% relative percent difference, RPD) were applied.

01423502S1/S2

Recoveries for phenanthrene, fluoranthene, and pyrene could not be measured due to the spike level being too low relative to the native concentrations. The following measurable recoveries did not meet the applied criteria:

Compound	Recovery (S1/S2)
phenol	94/
N-nitrosodimethylamine	11/6
benzoic acid	18/34
2,4-dinitrotoluene	114/126

hexachlorocyclopentadiene	34/28
pentachlorophenol	/116

The compounds above were not detected in sample 01423502. The reported N-nitrosodimethylamine result for this sample was qualified R due to the <10% recovery. The reported benzoic acid and hexachlorocyclopentadiene results for this sample were qualified UJ due to the low recoveries. No qualifiers were applied based on the high recoveries for the other compounds above since these results do not indicate a problem with the reported quantitation limits.

01433588S1/S2

The following measurable recoveries did not meet the applied criteria:

Compound	Recovery (S1/S2)
N-nitrosodimethylamine	16/23
aniline	15/16
phenol	92/92
benzoic acid	24/20
4-chloroaniline	16/20
2,4-dinitrotoluene	92/102
fluoranthene	151/
pyrene	155/
3,3'-dichlorobenzidine	35/41

The reported N-nitrosodimethylamine, aniline, benzoic acid, 4-chloroaniline, and 3,3'-dichlorobenzidine results for sample 01433588 were non-detected and were qualified UJ due to the low recoveries. The reported fluoranthene and pyrene detected results for this sample were qualified J due to the high recoveries. No qualifiers were applied based on the phenol and 2,4-dinitrotoluene recoveries. These two compounds were not detected in sample 01433588 and the high recoveries do not indicate a problem with the reported quantitation limits.

VIII. Laboratory Duplicate:

A laboratory duplicate analysis was performed using sample 01433585. An RPD criterion of $\leq$ 50 for detected results >2X the quantitation limit was applied. The reported 9H-carbazole results for this sample and duplicate were qualified J due to the RPD being >50.

IX. Internal Standard Performance: Acceptable

The retention time variations of all internal standards were within 30 seconds of the continuing calibration standards. The %areas of all internal standards were within the specified 50% to

200% of the continuing calibration standards. No qualifiers were applied based on the internal standards.

X. Target Compound Identification:

All detected target compounds' relative retention times were within acceptable limits of the related standards in the continuing calibration standard. Criteria were met for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

Results for benzo(b)fluoranthene and benzo(k)fluoranthene are being reported as a total for samples 01413547, 01413548, 01413550, 01413551, and 01423500 due to the lack of chromatographic resolution.

XI. Compound Quantitation: Acceptable

Calculations were based on the initial calibration. Sample quantitation limits were adjusted appropriately as according to sample amounts and calibration data. Detected results below the sample quantitation limits were qualified J.

XII. Tentatively Identified Compounds: Acceptable

Spectra for all tentatively identified compounds (TICs) met criteria for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

Overall Assessment for the Case

The usefulness of the data is based on the criteria outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99). All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Gerald Dodo at the Region 10 laboratory, phone number (360) 871-8728.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported result.
J	-	The analyte was positively identified. The associated numerical result is an estimate.
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 x 10^6.
R	-	The data are unusable for all purposes.
N	-	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.
UJ	-	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
NAF	-	Not analyzed for.
NAR	-	No analytical result.
*	-	The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)

Manchester Environmental Laboratory

Report by Parameter for Project FSP-009G

Project Code:	FSP-009G	**Collected:**	10/ 9/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413545
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF2109/ 2FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

			Result	Units	Qlfr
Analytes :	92524	1,1'-Biphenyl	16.9	ug/kg	U
	120821	1,2,4-Trichlorobenzene	16.9	ug/kg	U
	122667	1,2-Diphenylhydrazine	16.9	ug/kg	U
	95954	2,4,5-Trichlorophenol	33.8	ug/kg	U
	88062	2,4,6-Trichlorophenol	33.8	ug/kg	U
	120832	2,4-Dichlorophenol	16.9	ug/kg	U
	105679	2,4-Dimethylphenol	16.9	ug/kg	U
	51285	2,4-Dinitrophenol	169	ug/kg	UJ
	121142	2,4-Dinitrotoluene	84.6	ug/kg	U
	606202	2,6-Dinitrotoluene	169	ug/kg	U
	91587	2-Chloronaphthalene	16.9	ug/kg	U
	95578	2-Chlorophenol	16.9	ug/kg	U
	88744	2-Nitroaniline	84.6	ug/kg	U
	88755	2-Nitrophenol	84.6	ug/kg	U
	91941	3,3'-Dichlorobenzidine	67.7	ug/kg	U
	99092	3-Nitroaniline	33.8	ug/kg	U
	360689	3B-Coprostanol	338	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	84.6	ug/kg	U
	101553	4-Bromophenyl-Phenylether	16.9	ug/kg	U
	59507	4-Chloro-3-methylphenol	16.9	ug/kg	U
	106478	4-Chloroaniline	16.9	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	16.9	ug/kg	U
	106445	4-Methylphenol	16.9	ug/kg	U
	100016	4-Nitroaniline	33.8	ug/kg	U
	100027	4-Nitrophenol	84.6	ug/kg	U
	86748	9H-Carbazole	16.9	ug/kg	U
	86737	**9H-Fluorene**	**0.78**	**ug/kg**	**J**
	83329	Acenaphthene	16.9	ug/kg	U
	208968	**Acenaphthylene**	**1.1**	**ug/kg**	**J**
	62533	Aniline	16.9	ug/kg	U
	120127	Anthracene	16.9	ug/kg	U
	1912249	Atrazine	16.9	ug/kg	U
	100527	Benzaldehyde	16.9	ug/kg	U
	95501	Benzene, 1,2-dichloro-	16.9	ug/kg	U
	541731	Benzene, 1,3-dichloro-	16.9	ug/kg	U
	106467	Benzene, 1,4-dichloro-	16.9	ug/kg	U
	100516	Benzenemethanol	84.6	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	16.9	ug/kg	U
	50328	**Benzo(a)pyrene**	**7.8**	**ug/kg**	**J**
	191242	Benzo(g,h,i)perylene	16.9	ug/kg	U
	205992	**Benzo[b]Fluoranthene**	**8.4**	**ug/kg**	**J**
	207089	**Benzo[k]fluoranthene**	**5.8**	**ug/kg**	**J**
	65850	Benzoic acid	84.6	ug/kg	U
	111444	bis(2-Chloroethyl)ether	16.9	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	16.9	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	100	ug/kg	U
	85687	Butylbenzylphthalate	100	ug/kg	U
	58082	Caffeine	16.9	ug/kg	U
	105602	Caprolactam	16.9	ug/kg	U
	218019	**Chrysene**	**5.3**	**ug/kg**	**J**
	84742	Di-n-Butylphthalate	16.9	ug/kg	U
	117840	Di-n-octylphthalate	169	ug/kg	U
	53703	Dibenzo[a,h]anthracene	16.9	ug/kg	U
	132649	Dibenzofuran	16.9	ug/kg	U
	84662	Diethyl phthalate	16.9	ug/kg	U
	131113	Dimethylphthalate	16.9	ug/kg	U
	98862	Ethanone, 1-phenyl-	33.8	ug/kg	U
	206440	**Fluoranthene**	**9.1**	**ug/kg**	**J**
	118741	Hexachlorobenzene	16.9	ug/kg	U
	87683	Hexachlorobutadiene	16.9	ug/kg	U
	77474	Hexachlorocyclopentadiene	33.8	ug/kg	U
	67721	Hexachloroethane	16.9	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	16.9	ug/kg	U
	78591	Isophorone	16.9	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	16.9	ug/kg	U
	62759	N-Nitrosodimethylamine	16.9	ug/kg	U
	621647	N-Nitrosodinpropylamine	16.9	ug/kg	U
	86306	n-Nitrosodiphenylamine	16.9	ug/kg	U
	91203	Naphthalene	16.9	ug/kg	U
	90120	Naphthalene, 1-methyl-	16.9	ug/kg	U
	91576	Naphthalene, 2-methyl-	16.9	ug/kg	U
	98953	Nitrobenzene	16.9	ug/kg	U
	87865	Pentachlorophenol	84.6	ug/kg	U
	85018	Phenanthrene	16.9	ug/kg	U
	108952	Phenol	16.9	ug/kg	U
	95487	Phenol, 2-methyl-	16.9	ug/kg	U
	129000	**Pyrene**	**8.5**	**ug/kg**	**J**
	483658	Retene	63.4	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	101	%Rec	
	2199691	1,2-Dichlorobenzene-d4	62	%Rec	
	93951736	2-chlorophenol-d4	79	%Rec	
	1718521	D10-Pyrene	85	%Rec	
	4165600	Nitrobenzene-d5	80	%Rec	
	367124	Phenol, 2-fluoro-	79	%Rec	
	4165622	Phenol-d5	80	%Rec	

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	82	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	*3008001	Unknown 01	466	ug/kg	NJ
		*308002	Unknown 02	71.5	ug/kg	NJ
		*3008003	Unknown 03	65.7	ug/kg	NJ
		*3008004	Unknown 04	3310	ug/kg	NJ
		*3008005	Unknown 05	4130	ug/kg	NJ
		*3008006	Unknown 06	13400	ug/kg	NJ
		*3008007	Unknown 07	50.5	ug/kg	NJ
		*3008008	Unknown 08	29.8	ug/kg	NJ
		*3008009	Unknown 09	57.9	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code:	FSP-009G	**Collected:**	10/ 9/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413546
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0208/ 2FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	19.5	ug/kg	U
120821	1,2,4-Trichlorobenzene	19.5	ug/kg	U
122667	1,2-Diphenylhydrazine	19.5	ug/kg	U
95954	2,4,5-Trichlorophenol	39.0	ug/kg	U
88062	2,4,6-Trichlorophenol	39.0	ug/kg	U
120832	2,4-Dichlorophenol	19.5	ug/kg	U
105679	2,4-Dimethylphenol	19.5	ug/kg	U
51285	2,4-Dinitrophenol	195	ug/kg	UJ
121142	2,4-Dinitrotoluene	97.6	ug/kg	U
606202	2,6-Dinitrotoluene	195	ug/kg	U
91587	2-Chloronaphthalene	19.5	ug/kg	U
95578	2-Chlorophenol	19.5	ug/kg	U
88744	2-Nitroaniline	97.6	ug/kg	U
88755	2-Nitrophenol	97.6	ug/kg	U
91941	3,3'-Dichlorobenzidine	78.1	ug/kg	U
99092	3-Nitroaniline	39.0	ug/kg	U
360689	3B-Coprostanol	390	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	97.6	ug/kg	U
101553	4-Bromophenyl-Phenylether	19.5	ug/kg	U
59507	4-Chloro-3-methylphenol	19.5	ug/kg	U
106478	4-Chloroaniline	19.5	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	19.5	ug/kg	U
106445	4-Methylphenol	19.5	ug/kg	U
100016	4-Nitroaniline	39.0	ug/kg	U
100027	4-Nitrophenol	97.6	ug/kg	U
86748	9H-Carbazole	19.5	ug/kg	U
86737	9H-Fluorene	19.5	ug/kg	U
83329	Acenaphthene	19.5	ug/kg	U
208968	Acenaphthylene	19.5	ug/kg	U
62533	Aniline	19.5	ug/kg	U
120127	Anthracene	19.5	ug/kg	U
1912249	Atrazine	19.5	ug/kg	U
100527	Benzaldehyde	19.5	ug/kg	U
95501	Benzene, 1,2-dichloro-	19.5	ug/kg	U
541731	Benzene, 1,3-dichloro-	19.5	ug/kg	U
106467	Benzene, 1,4-dichloro-	19.5	ug/kg	U
100516	Benzenemethanol	134	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	19.5	ug/kg	U
	50328	**Benzo(a)pyrene**	**2.5**	**ug/kg**	**J**
	191242	Benzo(g,h,i)perylene	19.5	ug/kg	U
	205992	**Benzo[b]Fluoranthene**	**3.2**	**ug/kg**	**J**
	207089	**Benzo[k]fluoranthene**	**3.3**	**ug/kg**	**J**
	65850	Benzoic acid	97.6	ug/kg	U
	111444	bis(2-Chloroethyl)ether	19.5	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	19.5	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	97.6	ug/kg	U
	85687	Butylbenzylphthalate	97.6	ug/kg	U
	58082	Caffeine	19.5	ug/kg	U
	105602	Caprolactam	19.5	ug/kg	U
	218019	Chrysene	19.5	ug/kg	U
	84742	Di-n-Butylphthalate	19.5	ug/kg	U
	117840	Di-n-octylphthalate	195	ug/kg	U
	53703	Dibenzo[a,h]anthracene	19.5	ug/kg	U
	132649	Dibenzofuran	19.5	ug/kg	U
	84662	Diethyl phthalate	19.5	ug/kg	U
	131113	Dimethylphthalate	19.5	ug/kg	U
	98862	Ethanone, 1-phenyl-	39.0	ug/kg	U
	206440	**Fluoranthene**	**4.8**	**ug/kg**	**J**
	118741	Hexachlorobenzene	19.5	ug/kg	U
	87683	Hexachlorobutadiene	19.5	ug/kg	U
	77474	Hexachlorocyclopentadiene	39.0	ug/kg	U
	67721	Hexachloroethane	19.5	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	19.5	ug/kg	U
	78591	Isophorone	19.5	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	19.5	ug/kg	U
	62759	N-Nitrosodimethylamine	19.5	ug/kg	U
	621647	N-Nitrosodinpropylamine	19.5	ug/kg	U
	86306	n-Nitrosodiphenylamine	19.5	ug/kg	U
	91203	Naphthalene	19.5	ug/kg	U
	90120	Naphthalene, 1-methyl-	19.5	ug/kg	U
	91576	Naphthalene, 2-methyl-	19.5	ug/kg	U
	98953	Nitrobenzene	19.5	ug/kg	U
	87865	Pentachlorophenol	97.6	ug/kg	U
	85018	Phenanthrene	19.5	ug/kg	U
	108952	Phenol	19.5	ug/kg	U
	95487	Phenol, 2-methyl-	19.5	ug/kg	U
	129000	**Pyrene**	**7.5**	**ug/kg**	**J**
	483658	Retene	73.2	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	88	%Rec	
	2199691	1,2-Dichlorobenzene-d4	53	%Rec	
	93951736	2-chlorophenol-d4	83	%Rec	
	1718521	D10-Pyrene	89	%Rec	
	4165600	Nitrobenzene-d5	83	%Rec	
	367124	Phenol, 2-fluoro-	86	%Rec	
	4165622	Phenol-d5	84	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	85	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	74685339	3-Eicosene, (E)-	242	ug/kg	NJ
		57103	Hexadecanoic acid	59.5	ug/kg	NJ
		*3008001	Unknown 01	100	ug/kg	NJ
		*3008002	Unknown 02	320	ug/kg	NJ
		*3008003	Unknown 03	41.4	ug/kg	NJ
		*3005001	Unknown Hydrocarbon 01	36.5	ug/kg	NJ
		*3005002	Unknown Hydrocarbon 02	44.8	ug/kg	NJ
		*3005003	Unknown Hydrocarbon 03	40.1	ug/kg	NJ

Project Code:	FSP-009G	**Collected:**	10/ 9/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413547
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0308/ 2FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : **92524**	**1,1'-Biphenyl**	**65.2**	**ug/kg**	
120821	1,2,4-Trichlorobenzene	17.3	ug/kg	U
122667	1,2-Diphenylhydrazine	17.3	ug/kg	U
95954	2,4,5-Trichlorophenol	34.6	ug/kg	U
88062	2,4,6-Trichlorophenol	34.6	ug/kg	U
120832	2,4-Dichlorophenol	17.3	ug/kg	U
105679	**2,4-Dimethylphenol**	**12.5**	**ug/kg**	**J**
51285	2,4-Dinitrophenol	173	ug/kg	UJ
121142	2,4-Dinitrotoluene	86.5	ug/kg	U
606202	2,6-Dinitrotoluene	173	ug/kg	U
91587	2-Chloronaphthalene	17.3	ug/kg	U
95578	2-Chlorophenol	17.3	ug/kg	U
88744	2-Nitroaniline	86.5	ug/kg	U
88755	2-Nitrophenol	86.5	ug/kg	U
91941	3,3'-Dichlorobenzidine	69.2	ug/kg	U
99092	3-Nitroaniline	34.6	ug/kg	U
360689	3B-Coprostanol	346	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	86.5	ug/kg	U
101553	4-Bromophenyl-Phenylether	17.3	ug/kg	U
59507	4-Chloro-3-methylphenol	17.3	ug/kg	U
106478	4-Chloroaniline	17.3	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	17.3	ug/kg	U
106445	**4-Methylphenol**	**12.9**	**ug/kg**	**J**
100016	4-Nitroaniline	34.6	ug/kg	U
100027	4-Nitrophenol	86.5	ug/kg	U
86748	**9H-Carbazole**	**217**	**ug/kg**	
86737	**9H-Fluorene**	**442**	**ug/kg**	
83329	**Acenaphthene**	**441**	**ug/kg**	
208968	**Acenaphthylene**	**79.7**	**ug/kg**	
62533	Aniline	17.3	ug/kg	U
120127	**Anthracene**	**830**	**ug/kg**	
1912249	Atrazine	17.3	ug/kg	U
100527	Benzaldehyde	17.3	ug/kg	U
95501	Benzene, 1,2-dichloro-	17.3	ug/kg	U
541731	Benzene, 1,3-dichloro-	17.3	ug/kg	U
106467	Benzene, 1,4-dichloro-	17.3	ug/kg	U
100516	Benzenemethanol	123	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**951**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**713**	**ug/kg**	
	***90201**	**benzo(b)+benzo(k)flouranthene**	**1350**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**284**	**ug/kg**	
	65850	Benzoic acid	96.9	ug/kg	U
	111444	bis(2-Chloroethyl)ether	17.3	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	17.3	ug/kg	U
	117817	**Bis(2-ethylhexyl) phthalate**	**13.6**	**ug/kg**	**J**
	85687	Butylbenzylphthalate	86.5	ug/kg	U
	58082	Caffeine	17.3	ug/kg	U
	105602	Caprolactam	17.3	ug/kg	U
	218019	**Chrysene**	**1160**	**ug/kg**	
	84742	Di-n-Butylphthalate	17.3	ug/kg	U
	117840	Di-n-octylphthalate	173	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**138**	**ug/kg**	
	132649	**Dibenzofuran**	**383**	**ug/kg**	
	84662	Diethyl phthalate	17.3	ug/kg	U
	131113	Dimethylphthalate	17.3	ug/kg	U
	98862	Ethanone, 1-phenyl-	34.6	ug/kg	U
	206440	**Fluoranthene**	**3970**	**ug/kg**	
	118741	Hexachlorobenzene	17.3	ug/kg	U
	87683	Hexachlorobutadiene	17.3	ug/kg	U
	77474	Hexachlorocyclopentadiene	34.6	ug/kg	U
	67721	Hexachloroethane	17.3	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**339**	**ug/kg**	
	78591	Isophorone	17.3	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	17.3	ug/kg	U
	62759	N-Nitrosodimethylamine	17.3	ug/kg	U
	621647	N-Nitrosodinpropylamine	17.3	ug/kg	U
	86306	n-Nitrosodiphenylamine	17.3	ug/kg	U
	91203	**Naphthalene**	**353**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**83.2**	**ug/kg**	
	91576	**Naphthalene, 2-methyl-**	**161**	**ug/kg**	
	98953	Nitrobenzene	17.3	ug/kg	U
	87865	**Pentachlorophenol**	**56.3**	**ug/kg**	**J**
	85018	**Phenanthrene**	**1470**	**ug/kg**	
	108952	Phenol	17.3	ug/kg	U
	95487	Phenol, 2-methyl-	17.3	ug/kg	U
	129000	**Pyrene**	**3370**	**ug/kg**	
	483658	Retene	64.9	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	81	%Rec	
	2199691	1,2-Dichlorobenzene-d4	64	%Rec	
	93951736	2-chlorophenol-d4	83	%Rec	
	1718521	D10-Pyrene	88	%Rec	
	4165600	Nitrobenzene-d5	83	%Rec	
	367124	Phenol, 2-fluoro-	87	%Rec	
	4165622	Phenol-d5	83	%Rec	
	1718510	Terphenyl-d14	87	%Rec	

				Result	Units	Qlfr
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	83476	.gamma.-Sitosterol	593	ug/kg	NJ
		6510652	1-Methylcarbazole	108	ug/kg	NJ
		243174	11H-Benzo[b]fluorene	713	ug/kg	NJ
		35465715	2-Phenylnaphthalene	412	ug/kg	NJ
		203645	4H-Cyclopenta[def]phenanthrene	655	ug/kg	NJ
		2523377	9H-Fluorene, 9-methyl-	81.0	ug/kg	NJ
		206495	Acenaphtho(1,2-B)pyridine	279	ug/kg	NJ
		613127	Anthracene, 2-methyl-	164	ug/kg	NJ
		7320538	Dibenzofuran, 4-methyl-	130	ug/kg	NJ
		832699	Phenanthrene, 1-methyl-	191	ug/kg	NJ
		832713	Phenanthrene, 3-methyl-	221	ug/kg	NJ
		38754948	s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	310	ug/kg	NJ
		*3008001	Unknown 01	130	ug/kg	NJ
		*3008002	Unknown 02	271	ug/kg	NJ
		*3008003	Unknown 03	373	ug/kg	NJ
		*3005001	Unknown Hydrocarbon 01	119	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code:	FSP-009G	**Collected:**	10/ 9/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413548
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0307/ 6FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

Analytes		Result	Units	Qlfr
92524	**1,1'-Biphenyl**	**107**	**ug/kg**	
120821	1,2,4-Trichlorobenzene	18.3	ug/kg	U
122667	1,2-Diphenylhydrazine	18.3	ug/kg	U
95954	2,4,5-Trichlorophenol	36.7	ug/kg	U
88062	2,4,6-Trichlorophenol	36.7	ug/kg	U
120832	2,4-Dichlorophenol	18.3	ug/kg	U
105679	**2,4-Dimethylphenol**	**29.3**	**ug/kg**	
51285	2,4-Dinitrophenol	183	ug/kg	UJ
121142	2,4-Dinitrotoluene	91.7	ug/kg	U
606202	2,6-Dinitrotoluene	183	ug/kg	U
91587	2-Chloronaphthalene	18.3	ug/kg	U
95578	2-Chlorophenol	18.3	ug/kg	U
88744	2-Nitroaniline	91.7	ug/kg	U
88755	2-Nitrophenol	91.7	ug/kg	U
91941	3,3'-Dichlorobenzidine	73.4	ug/kg	U
99092	3-Nitroaniline	36.7	ug/kg	U
360689	3B-Coprostanol	367	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	91.7	ug/kg	U
101553	4-Bromophenyl-Phenylether	18.3	ug/kg	U
59507	4-Chloro-3-methylphenol	18.3	ug/kg	U
106478	4-Chloroaniline	18.3	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	18.3	ug/kg	U
106445	**4-Methylphenol**	**49.3**	**ug/kg**	
100016	4-Nitroaniline	36.7	ug/kg	U
100027	4-Nitrophenol	91.7	ug/kg	U
86748	**9H-Carbazole**	**504**	**ug/kg**	
86737	**9H-Fluorene**	**293**	**ug/kg**	
83329	**Acenaphthene**	**396**	**ug/kg**	
208968	**Acenaphthylene**	**204**	**ug/kg**	
62533	Aniline	18.3	ug/kg	U
120127	**Anthracene**	**637**	**ug/kg**	
1912249	Atrazine	18.3	ug/kg	U
100527	Benzaldehyde	18.3	ug/kg	U
95501	Benzene, 1,2-dichloro-	18.3	ug/kg	U
541731	Benzene, 1,3-dichloro-	18.3	ug/kg	U
106467	Benzene, 1,4-dichloro-	18.3	ug/kg	U
100516	Benzenemethanol	138	ug/kg	U

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**947**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**1040**	**ug/kg**	
	***90201**	**benzo(b)+benzo(k)flouranthene**	**2180**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**388**	**ug/kg**	
	65850	Benzoic acid	111	ug/kg	U
	111444	bis(2-Chloroethyl)ether	18.3	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	18.3	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	91.7	ug/kg	U
	85687	Butylbenzylphthalate	91.7	ug/kg	U
	58082	Caffeine	18.3	ug/kg	U
	105602	Caprolactam	18.3	ug/kg	U
	218019	**Chrysene**	**1700**	**ug/kg**	
	84742	Di-n-Butylphthalate	18.3	ug/kg	U
	117840	Di-n-octylphthalate	183	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**94.8**	**ug/kg**	
	132649	**Dibenzofuran**	**301**	**ug/kg**	
	84662	Diethyl phthalate	18.3	ug/kg	U
	131113	Dimethylphthalate	18.3	ug/kg	U
	98862	Ethanone, 1-phenyl-	36.7	ug/kg	U
	206440	**Fluoranthene**	**4700**	**ug/kg**	
	118741	Hexachlorobenzene	18.3	ug/kg	U
	87683	Hexachlorobutadiene	18.3	ug/kg	U
	77474	Hexachlorocyclopentadiene	36.7	ug/kg	U
	67721	Hexachloroethane	18.3	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**446**	**ug/kg**	
	78591	Isophorone	18.3	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	18.3	ug/kg	U
	62759	N-Nitrosodimethylamine	18.3	ug/kg	U
	621647	N-Nitrosodinpropylamine	18.3	ug/kg	U
	86306	n-Nitrosodiphenylamine	18.3	ug/kg	U
	91203	**Naphthalene**	**1110**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**167**	**ug/kg**	
	91576	**Naphthalene, 2-methyl-**	**244**	**ug/kg**	
	98953	Nitrobenzene	18.3	ug/kg	U
	87865	**Pentachlorophenol**	**46.3**	**ug/kg**	**J**
	85018	**Phenanthrene**	**1750**	**ug/kg**	
	108952	Phenol	26.1	ug/kg	U
	95487	Phenol, 2-methyl-	18.3	ug/kg	U
	129000	**Pyrene**	**2880**	**ug/kg**	
	483658	Retene	68.8	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	81	%Rec	
	2199691	1,2-Dichlorobenzene-d4	63	%Rec	
	93951736	2-chlorophenol-d4	81	%Rec	
	1718521	D10-Pyrene	88	%Rec	
	4165600	Nitrobenzene-d5	78	%Rec	
	367124	Phenol, 2-fluoro-	82	%Rec	
	4165622	Phenol-d5	79	%Rec	
	1718510	Terphenyl-d14	87	%Rec	

			Result	Units	Qlfr
Parameter	: Semi-volatiles - Tentatives				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 83476	.gamma.-Sitosterol	433	ug/kg	NJ
	238846	11H-Benzo[a]fluorene	280	ug/kg	NJ
	35465715	2-Phenylnaphthalene	360	ug/kg	NJ
	203645	4H-Cyclopenta[def]phenanthrene	492	ug/kg	NJ
	82053	7H-Benz[de]anthracen-7-one	204	ug/kg	NJ
	84651	9,10-Anthracenedione	329	ug/kg	NJ
	206495	Acenaphtho(1,2-B)pyridine	151	ug/kg	NJ
	613127	Anthracene, 2-methyl-	252	ug/kg	NJ
	203123	Benzo[ghi]fluoranthene	166	ug/kg	NJ
	593453	N-OCTADECANE	173	ug/kg	NJ
	832713	Phenanthrene, 3-methyl-	218	ug/kg	NJ
	10544500	Sulfur, mol. (S8)	603	ug/kg	NJ
	*3005001	Unknown Hydrocarbon 01	173	ug/kg	NJ

Project Code:	FSP-009G	**Collected:**	10/10/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413549
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0309/ 6FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540
Analytes :

		Result	Units	Qlfr
92524	1,1'-Biphenyl	18.3	ug/kg	U
120821	1,2,4-Trichlorobenzene	18.3	ug/kg	U
122667	1,2-Diphenylhydrazine	18.3	ug/kg	U
95954	2,4,5-Trichlorophenol	36.5	ug/kg	U
88062	2,4,6-Trichlorophenol	36.5	ug/kg	U
120832	2,4-Dichlorophenol	18.3	ug/kg	U
105679	2,4-Dimethylphenol	18.3	ug/kg	U
51285	2,4-Dinitrophenol	183	ug/kg	UJ
121142	2,4-Dinitrotoluene	91.3	ug/kg	U
606202	2,6-Dinitrotoluene	183	ug/kg	U
91587	2-Chloronaphthalene	18.3	ug/kg	U
95578	2-Chlorophenol	18.3	ug/kg	U
88744	2-Nitroaniline	91.3	ug/kg	U
88755	2-Nitrophenol	91.3	ug/kg	U
91941	3,3'-Dichlorobenzidine	73.1	ug/kg	U
99092	3-Nitroaniline	36.5	ug/kg	U
360689	3B-Coprostanol	365	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	91.3	ug/kg	U
101553	4-Bromophenyl-Phenylether	18.3	ug/kg	U
59507	4-Chloro-3-methylphenol	18.3	ug/kg	U
106478	4-Chloroaniline	18.3	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	18.3	ug/kg	U
106445	4-Methylphenol	18.3	ug/kg	U
100016	4-Nitroaniline	36.5	ug/kg	U
100027	4-Nitrophenol	91.3	ug/kg	U
86748	**9H-Carbazole**	**4.2**	**ug/kg**	**J**
86737	**9H-Fluorene**	**7.9**	**ug/kg**	**J**
83329	**Acenaphthene**	**10.8**	**ug/kg**	**J**
208968	Acenaphthylene	18.3	ug/kg	U
62533	Aniline	18.3	ug/kg	U
120127	**Anthracene**	**2.5**	**ug/kg**	**J**
1912249	Atrazine	18.3	ug/kg	U
100527	Benzaldehyde	18.3	ug/kg	U
95501	Benzene, 1,2-dichloro-	18.3	ug/kg	U
541731	Benzene, 1,3-dichloro-	18.3	ug/kg	U
106467	Benzene, 1,4-dichloro-	18.3	ug/kg	U
100516	Benzenemethanol	120	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	18.3	ug/kg	U
	50328	Benzo(a)pyrene	18.3	ug/kg	U
	191242	Benzo(g,h,i)perylene	18.3	ug/kg	U
	205992	Benzo[b]Fluoranthene	18.3	ug/kg	U
	207089	Benzo[k]fluoranthene	18.3	ug/kg	U
	65850	Benzoic acid	91.3	ug/kg	U
	111444	bis(2-Chloroethyl)ether	18.3	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	18.3	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	91.3	ug/kg	U
	85687	Butylbenzylphthalate	91.3	ug/kg	U
	58082	Caffeine	18.3	ug/kg	U
	105602	Caprolactam	18.3	ug/kg	U
	218019	Chrysene	18.3	ug/kg	U
	84742	Di-n-Butylphthalate	18.3	ug/kg	U
	117840	Di-n-octylphthalate	183	ug/kg	U
	53703	Dibenzo[a,h]anthracene	18.3	ug/kg	U
	132649	**Dibenzofuran**	**7.9**	**ug/kg**	**J**
	84662	**Diethyl phthalate**	**5.2**	**ug/kg**	**J**
	131113	Dimethylphthalate	18.3	ug/kg	U
	98862	Ethanone, 1-phenyl-	36.5	ug/kg	U
	206440	**Fluoranthene**	**9.1**	**ug/kg**	**J**
	118741	Hexachlorobenzene	18.3	ug/kg	U
	87683	Hexachlorobutadiene	18.3	ug/kg	U
	77474	Hexachlorocyclopentadiene	36.5	ug/kg	U
	67721	Hexachloroethane	18.3	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	18.3	ug/kg	U
	78591	Isophorone	18.3	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	18.3	ug/kg	U
	62759	N-Nitrosodimethylamine	18.3	ug/kg	U
	621647	N-Nitrosodinpropylamine	18.3	ug/kg	U
	86306	n-Nitrosodiphenylamine	18.3	ug/kg	U
	91203	Naphthalene	18.3	ug/kg	U
	90120	Naphthalene, 1-methyl-	18.3	ug/kg	U
	91576	Naphthalene, 2-methyl-	18.3	ug/kg	U
	98953	Nitrobenzene	18.3	ug/kg	U
	87865	Pentachlorophenol	91.3	ug/kg	U
	85018	**Phenanthrene**	**17.0**	**ug/kg**	**J**
	108952	Phenol	18.3	ug/kg	U
	95487	Phenol, 2-methyl-	18.3	ug/kg	U
	129000	**Pyrene**	**4.8**	**ug/kg**	**J**
	483658	Retene	68.5	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	80	%Rec	
	2199691	1,2-Dichlorobenzene-d4	55	%Rec	
	93951736	2-chlorophenol-d4	80	%Rec	
	1718521	D10-Pyrene	89	%Rec	
	4165600	Nitrobenzene-d5	78	%Rec	
	367124	Phenol, 2-fluoro-	84	%Rec	
	4165622	Phenol-d5	81	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	87	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	21424828	3-Phenyl-4-hydroxyacetophenone	13.4	ug/kg	NJ
		599644	Phenol, 4-(1-methyl-1-phenylet hyl)-	19.9	ug/kg	NJ
		*3008001	Unknown 01	159	ug/kg	NJ
		*3008002	Unknown 02	19.5	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code:	FSP-009G	**Collected:**	10/10/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413550
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0312N/ 2-3FT (2.5)		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540
Analytes :

		Result	Units	Qlfr
92524	**1,1'-Biphenyl**	**15.8**	**ug/kg**	**J**
120821	1,2,4-Trichlorobenzene	17.0	ug/kg	U
122667	1,2-Diphenylhydrazine	17.0	ug/kg	U
95954	2,4,5-Trichlorophenol	34.1	ug/kg	U
88062	2,4,6-Trichlorophenol	34.1	ug/kg	U
120832	2,4-Dichlorophenol	17.0	ug/kg	U
105679	**2,4-Dimethylphenol**	**26.9**	**ug/kg**	
51285	2,4-Dinitrophenol	170	ug/kg	UJ
121142	2,4-Dinitrotoluene	85.2	ug/kg	U
606202	2,6-Dinitrotoluene	170	ug/kg	U
91587	2-Chloronaphthalene	17.0	ug/kg	U
95578	2-Chlorophenol	17.0	ug/kg	U
88744	2-Nitroaniline	85.2	ug/kg	U
88755	2-Nitrophenol	85.2	ug/kg	U
91941	3,3'-Dichlorobenzidine	68.2	ug/kg	U
99092	3-Nitroaniline	34.1	ug/kg	U
360689	3B-Coprostanol	341	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	85.2	ug/kg	U
101553	4-Bromophenyl-Phenylether	17.0	ug/kg	U
59507	4-Chloro-3-methylphenol	17.0	ug/kg	U
106478	4-Chloroaniline	17.0	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	17.0	ug/kg	U
106445	**4-Methylphenol**	**26.7**	**ug/kg**	
100016	4-Nitroaniline	34.1	ug/kg	U
100027	4-Nitrophenol	85.2	ug/kg	U
86748	**9H-Carbazole**	**261**	**ug/kg**	
86737	**9H-Fluorene**	**127**	**ug/kg**	
83329	**Acenaphthene**	**71.1**	**ug/kg**	
208968	**Acenaphthylene**	**120**	**ug/kg**	
62533	Aniline	17.0	ug/kg	U
120127	**Anthracene**	**1120**	**ug/kg**	
1912249	Atrazine	17.0	ug/kg	U
100527	Benzaldehyde	17.8	ug/kg	U
95501	Benzene, 1,2-dichloro-	17.0	ug/kg	U
541731	Benzene, 1,3-dichloro-	17.0	ug/kg	U
106467	Benzene, 1,4-dichloro-	17.0	ug/kg	U
100516	Benzenemethanol	126	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**346**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**491**	**ug/kg**	
	***90201**	**benzo(b)+benzo(k)flouranthene**	**1000**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**259**	**ug/kg**	
	65850	Benzoic acid	85.2	ug/kg	U
	111444	bis(2-Chloroethyl)ether	17.0	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	17.0	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	85.2	ug/kg	U
	85687	Butylbenzylphthalate	85.2	ug/kg	U
	58082	Caffeine	17.0	ug/kg	U
	105602	Caprolactam	17.0	ug/kg	U
	218019	**Chrysene**	**792**	**ug/kg**	
	84742	Di-n-Butylphthalate	36.2	ug/kg	U
	117840	Di-n-octylphthalate	170	ug/kg	U
	53703	Dibenzo[a,h]anthracene	84.0	ug/kg	U
	132649	**Dibenzofuran**	**76.6**	**ug/kg**	
	84662	Diethyl phthalate	17.0	ug/kg	U
	131113	Dimethylphthalate	17.0	ug/kg	U
	98862	Ethanone, 1-phenyl-	34.1	ug/kg	U
	206440	**Fluoranthene**	**1070**	**ug/kg**	
	118741	Hexachlorobenzene	17.0	ug/kg	U
	87683	Hexachlorobutadiene	17.0	ug/kg	U
	77474	Hexachlorocyclopentadiene	34.1	ug/kg	U
	67721	Hexachloroethane	17.0	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**314**	**ug/kg**	
	78591	Isophorone	17.0	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	17.0	ug/kg	U
	62759	N-Nitrosodimethylamine	17.0	ug/kg	U
	621647	N-Nitrosodinpropylamine	17.0	ug/kg	U
	86306	n-Nitrosodiphenylamine	17.0	ug/kg	U
	91203	**Naphthalene**	**70.8**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**15.1**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**31.0**	**ug/kg**	
	98953	Nitrobenzene	17.0	ug/kg	U
	87865	**Pentachlorophenol**	**27.2**	**ug/kg**	**J**
	85018	**Phenanthrene**	**461**	**ug/kg**	
	108952	Phenol	22.3	ug/kg	U
	95487	Phenol, 2-methyl-	17.0	ug/kg	U
	129000	**Pyrene**	**863**	**ug/kg**	
	483658	Retene	63.9	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	88	%Rec	
	2199691	1,2-Dichlorobenzene-d4	69	%Rec	
	93951736	2-chlorophenol-d4	84	%Rec	
	1718521	D10-Pyrene	93	%Rec	
	4165600	Nitrobenzene-d5	84	%Rec	
	367124	Phenol, 2-fluoro-	85	%Rec	
	4165622	Phenol-d5	83	%Rec	
	1718510	Terphenyl-d14	90	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Parameter	: Semi-volatiles - Tentatives				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 243174	11H-Benzo[b]fluorene	266	ug/kg	NJ
	886384	2-Cyclopropen-1-one, 2,3-diphe nyl-	208	ug/kg	NJ
	203645	4H-Cyclopenta[def]phenanthrene	202	ug/kg	NJ
	84651	9,10-Anthracenedione	275	ug/kg	NJ
	206495	Acenaphtho(1,2-B)pyridine	221	ug/kg	NJ
	203123	Benzo[ghi]fluoranthene	132	ug/kg	NJ
	5737133	Cyclopenta(def)phenanthrenone	282	ug/kg	NJ
	883205	Phenanthrene, 9-methyl-	146	ug/kg	NJ
	*3008001	Unknown 01	448	ug/kg	NJ

Project Code:	FSP-009G	**Collected:**	10/10/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01413551
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0312S/ 3.5FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : **92524**	**1,1'-Biphenyl**	**18.7**	**ug/kg**	**J**
120821	1,2,4-Trichlorobenzene	18.7	ug/kg	U
122667	1,2-Diphenylhydrazine	18.7	ug/kg	U
95954	2,4,5-Trichlorophenol	37.5	ug/kg	U
88062	2,4,6-Trichlorophenol	37.5	ug/kg	U
120832	2,4-Dichlorophenol	18.7	ug/kg	U
105679	**2,4-Dimethylphenol**	**43.2**	**ug/kg**	
51285	2,4-Dinitrophenol	187	ug/kg	UJ
121142	2,4-Dinitrotoluene	93.7	ug/kg	U
606202	2,6-Dinitrotoluene	187	ug/kg	U
91587	2-Chloronaphthalene	18.7	ug/kg	U
95578	2-Chlorophenol	18.7	ug/kg	U
88744	2-Nitroaniline	93.7	ug/kg	U
88755	2-Nitrophenol	93.7	ug/kg	U
91941	3,3'-Dichlorobenzidine	75.0	ug/kg	U
99092	3-Nitroaniline	37.5	ug/kg	U
360689	3B-Coprostanol	375	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	93.7	ug/kg	U
101553	4-Bromophenyl-Phenylether	18.7	ug/kg	U
59507	4-Chloro-3-methylphenol	18.7	ug/kg	U
106478	4-Chloroaniline	18.7	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	18.7	ug/kg	U
106445	**4-Methylphenol**	**52.2**	**ug/kg**	
100016	4-Nitroaniline	37.5	ug/kg	U
100027	4-Nitrophenol	93.7	ug/kg	U
86748	**9H-Carbazole**	**315**	**ug/kg**	
86737	**9H-Fluorene**	**71.4**	**ug/kg**	
83329	**Acenaphthene**	**50.8**	**ug/kg**	
208968	**Acenaphthylene**	**198**	**ug/kg**	
62533	Aniline	18.7	ug/kg	U
120127	**Anthracene**	**538**	**ug/kg**	
1912249	Atrazine	18.7	ug/kg	U
100527	Benzaldehyde	18.7	ug/kg	U
95501	Benzene, 1,2-dichloro-	18.7	ug/kg	U
541731	Benzene, 1,3-dichloro-	18.7	ug/kg	U
106467	Benzene, 1,4-dichloro-	18.7	ug/kg	U
100516	Benzenemethanol	130	ug/kg	U

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**922**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**1280**	**ug/kg**	
	***90201**	**benzo(b)+benzo(k)flouranthene**	**2230**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**293**	**ug/kg**	
	65850	Benzoic acid	93.7	ug/kg	U
	111444	bis(2-Chloroethyl)ether	18.7	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	18.7	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	93.7	ug/kg	U
	85687	Butylbenzylphthalate	93.7	ug/kg	U
	58082	Caffeine	18.7	ug/kg	U
	105602	Caprolactam	18.7	ug/kg	U
	218019	**Chrysene**	**1430**	**ug/kg**	
	84742	Di-n-Butylphthalate	18.7	ug/kg	U
	117840	Di-n-octylphthalate	187	ug/kg	U
	53703	Dibenzo[a,h]anthracene	203	ug/kg	U
	132649	**Dibenzofuran**	**75.1**	**ug/kg**	
	84662	Diethyl phthalate	18.7	ug/kg	U
	131113	Dimethylphthalate	18.7	ug/kg	U
	98862	Ethanone, 1-phenyl-	37.5	ug/kg	U
	206440	**Fluoranthene**	**1760**	**ug/kg**	
	118741	Hexachlorobenzene	18.7	ug/kg	U
	87683	Hexachlorobutadiene	18.7	ug/kg	U
	77474	Hexachlorocyclopentadiene	37.5	ug/kg	U
	67721	Hexachloroethane	18.7	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**419**	**ug/kg**	
	78591	Isophorone	18.7	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	18.7	ug/kg	U
	62759	N-Nitrosodimethylamine	18.7	ug/kg	U
	621647	N-Nitrosodinpropylamine	18.7	ug/kg	U
	86306	n-Nitrosodiphenylamine	18.7	ug/kg	U
	91203	**Naphthalene**	**91.7**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**22.0**	**ug/kg**	
	91576	**Naphthalene, 2-methyl-**	**25.6**	**ug/kg**	
	98953	Nitrobenzene	18.7	ug/kg	U
	87865	**Pentachlorophenol**	**21.2**	**ug/kg**	**J**
	85018	**Phenanthrene**	**723**	**ug/kg**	
	108952	Phenol	24.0	ug/kg	U
	95487	Phenol, 2-methyl-	18.7	ug/kg	U
	129000	**Pyrene**	**1650**	**ug/kg**	
	483658	Retene	70.3	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	95	%Rec	
	2199691	1,2-Dichlorobenzene-d4	52	%Rec	
	93951736	2-chlorophenol-d4	76	%Rec	
	1718521	D10-Pyrene	91	%Rec	
	4165600	Nitrobenzene-d5	83	%Rec	
	367124	Phenol, 2-fluoro-	73	%Rec	
	4165622	Phenol-d5	74	%Rec	
	1718510	Terphenyl-d14	91	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Parameter	: Semi-volatiles - Tentatives				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 243174	11H-Benzo[b]fluorene	387	ug/kg	NJ
	82053	7H-Benz[de]anthracen-7-one	237	ug/kg	NJ
	206495	Acenaphtho(1,2-B)pyridine	209	ug/kg	NJ
	5737133	Cyclopenta(def)phenanthrenone	500	ug/kg	NJ
	27208373	Cyclopenta[cd]pyrene	205	ug/kg	NJ
	2381217	Pyrene, 1-methyl-	115	ug/kg	NJ
	3442782	Pyrene, 2-methyl-	169	ug/kg	NJ
	1705846	Triphenylene, 2-methyl-	185	ug/kg	NJ
	*3008001	Unknown 01	211	ug/kg	NJ
	*3008002	Unknown 02	109	ug/kg	NJ
	*3005001	Unknown Hydrocarbon 01	37.7	ug/kg	NJ

Project Code:	FSP-009G	**Collected:**	10/16/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01423500
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0314N/ 2 FT		

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 92524	1,1'-Biphenyl	19.7	ug/kg	U
	120821	1,2,4-Trichlorobenzene	19.7	ug/kg	U
	122667	1,2-Diphenylhydrazine	19.7	ug/kg	U
	95954	2,4,5-Trichlorophenol	39.5	ug/kg	U
	88062	**2,4,6-Trichlorophenol**	**13.9**	**ug/kg**	**J**
	120832	2,4-Dichlorophenol	19.7	ug/kg	U
	105679	2,4-Dimethylphenol	19.7	ug/kg	U
	51285	2,4-Dinitrophenol	197	ug/kg	UJ
	121142	2,4-Dinitrotoluene	98.6	ug/kg	U
	606202	2,6-Dinitrotoluene	197	ug/kg	U
	91587	2-Chloronaphthalene	19.7	ug/kg	U
	95578	2-Chlorophenol	19.7	ug/kg	U
	88744	2-Nitroaniline	98.6	ug/kg	U
	88755	2-Nitrophenol	98.6	ug/kg	U
	91941	3,3'-Dichlorobenzidine	78.9	ug/kg	U
	99092	3-Nitroaniline	39.5	ug/kg	U
	360689	3B-Coprostanol	395	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	98.6	ug/kg	U
	101553	4-Bromophenyl-Phenylether	19.7	ug/kg	U
	59507	4-Chloro-3-methylphenol	19.7	ug/kg	U
	106478	4-Chloroaniline	19.7	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	19.7	ug/kg	U
	106445	**4-Methylphenol**	**29.0**	**ug/kg**	
	100016	4-Nitroaniline	39.5	ug/kg	U
	100027	4-Nitrophenol	98.6	ug/kg	U
	86748	**9H-Carbazole**	**143**	**ug/kg**	
	86737	**9H-Fluorene**	**53.2**	**ug/kg**	
	83329	**Acenaphthene**	**24.6**	**ug/kg**	
	208968	**Acenaphthylene**	**90.1**	**ug/kg**	
	62533	Aniline	19.7	ug/kg	U
	120127	**Anthracene**	**293**	**ug/kg**	
	1912249	Atrazine	19.7	ug/kg	U
	100527	Benzaldehyde	19.7	ug/kg	U
	95501	Benzene, 1,2-dichloro-	19.7	ug/kg	U
	541731	Benzene, 1,3-dichloro-	19.7	ug/kg	U
	106467	Benzene, 1,4-dichloro-	19.7	ug/kg	U
	100516	Benzenemethanol	150	ug/kg	U

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**201**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**497**	**ug/kg**	
	***90201**	**benzo(b)+benzo(k)flouranthene**	**1050**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**330**	**ug/kg**	
	65850	Benzoic acid	98.6	ug/kg	U
	111444	bis(2-Chloroethyl)ether	19.7	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	19.7	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	98.6	ug/kg	U
	85687	Butylbenzylphthalate	98.6	ug/kg	U
	58082	Caffeine	19.7	ug/kg	U
	105602	Caprolactam	19.7	ug/kg	U
	218019	**Chrysene**	**435**	**ug/kg**	
	84742	Di-n-Butylphthalate	19.7	ug/kg	U
	117840	Di-n-octylphthalate	197	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**116**	**ug/kg**	
	132649	**Dibenzofuran**	**35.6**	**ug/kg**	
	84662	Diethyl phthalate	19.7	ug/kg	U
	131113	Dimethylphthalate	19.7	ug/kg	U
	98862	Ethanone, 1-phenyl-	39.5	ug/kg	U
	206440	**Fluoranthene**	**728**	**ug/kg**	
	118741	Hexachlorobenzene	19.7	ug/kg	U
	87683	Hexachlorobutadiene	19.7	ug/kg	U
	77474	Hexachlorocyclopentadiene	39.5	ug/kg	U
	67721	Hexachloroethane	19.7	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**415**	**ug/kg**	
	78591	Isophorone	19.7	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	19.7	ug/kg	U
	62759	N-Nitrosodimethylamine	19.7	ug/kg	U
	621647	N-Nitrosodinpropylamine	19.7	ug/kg	U
	86306	n-Nitrosodiphenylamine	19.7	ug/kg	U
	91203	**Naphthalene**	**72.9**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**10.4**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**20.8**	**ug/kg**	
	98953	Nitrobenzene	19.7	ug/kg	U
	87865	Pentachlorophenol	98.6	ug/kg	U
	85018	**Phenanthrene**	**298**	**ug/kg**	
	108952	Phenol	24.0	ug/kg	U
	95487	Phenol, 2-methyl-	19.7	ug/kg	U
	129000	**Pyrene**	**497**	**ug/kg**	
	483658	Retene	74.0	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	93	%Rec	
	2199691	1,2-Dichlorobenzene-d4	22	%Rec	
	93951736	2-chlorophenol-d4	82	%Rec	
	1718521	D10-Pyrene	88	%Rec	
	4165600	Nitrobenzene-d5	98	%Rec	
	367124	Phenol, 2-fluoro-	65	%Rec	
	4165622	Phenol-d5	78	%Rec	
	1718510	Terphenyl-d14	86	%Rec	

				Result	Units	Qlfr
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	243174	11H-Benzo[b]fluorene	481	ug/kg	NJ
		886384	2-Cyclopropen-1-one, 2,3-diphe nyl-	565	ug/kg	NJ
		2693461	3-Fluoranthenamine	273	ug/kg	NJ
		203645	4H-Cyclopenta[def]phenanthrene	132	ug/kg	NJ
		82053	7H-Benz[de]anthracen-7-one	346	ug/kg	NJ
		84651	9,10-Anthracenedione	209	ug/kg	NJ
		206495	Acenaphtho(1,2-B)pyridine	921	ug/kg	NJ
		613127	Anthracene, 2-methyl-	96.1	ug/kg	NJ
		203123	Benzo[ghi]fluoranthene	320	ug/kg	NJ
		5737133	Cyclopenta(def)phenanthrenone	148	ug/kg	NJ
		92240	Naphthacene	195	ug/kg	NJ

Project Code:	FSP-009G	**Collected:**	10/16/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01423501
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0314/ 4 FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540
Analytes :

		Result	Units	Qlfr
92524	1,1'-Biphenyl	15.8	ug/kg	U
120821	1,2,4-Trichlorobenzene	15.8	ug/kg	U
122667	1,2-Diphenylhydrazine	15.8	ug/kg	U
95954	2,4,5-Trichlorophenol	31.6	ug/kg	U
88062	2,4,6-Trichlorophenol	31.6	ug/kg	U
120832	2,4-Dichlorophenol	15.8	ug/kg	U
105679	2,4-Dimethylphenol	15.8	ug/kg	U
51285	2,4-Dinitrophenol	158	ug/kg	UJ
121142	2,4-Dinitrotoluene	78.9	ug/kg	U
606202	2,6-Dinitrotoluene	158	ug/kg	U
91587	2-Chloronaphthalene	15.8	ug/kg	U
95578	2-Chlorophenol	15.8	ug/kg	U
88744	2-Nitroaniline	78.9	ug/kg	U
88755	2-Nitrophenol	78.9	ug/kg	U
91941	3,3'-Dichlorobenzidine	63.1	ug/kg	U
99092	3-Nitroaniline	31.6	ug/kg	U
360689	3B-Coprostanol	316	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	78.9	ug/kg	U
101553	4-Bromophenyl-Phenylether	15.8	ug/kg	U
59507	4-Chloro-3-methylphenol	15.8	ug/kg	U
106478	4-Chloroaniline	15.8	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	15.8	ug/kg	U
106445	4-Methylphenol	15.8	ug/kg	U
100016	4-Nitroaniline	31.6	ug/kg	U
100027	4-Nitrophenol	78.9	ug/kg	U
86748	9H-Carbazole	15.8	ug/kg	U
86737	9H-Fluorene	15.8	ug/kg	U
83329	Acenaphthene	15.8	ug/kg	U
208968	Acenaphthylene	15.8	ug/kg	U
62533	Aniline	15.8	ug/kg	U
120127	Anthracene	15.8	ug/kg	U
1912249	Atrazine	15.8	ug/kg	U
100527	Benzaldehyde	15.8	ug/kg	U
95501	Benzene, 1,2-dichloro-	15.8	ug/kg	U
541731	Benzene, 1,3-dichloro-	15.8	ug/kg	U
106467	Benzene, 1,4-dichloro-	15.8	ug/kg	U
100516	Benzenemethanol	108	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	**Benzo(a)anthracene**	**2.0**	**ug/kg**	**J**
	50328	**Benzo(a)pyrene**	**4.3**	**ug/kg**	**J**
	191242	Benzo(g,h,i)perylene	15.8	ug/kg	U
	205992	**Benzo[b]Fluoranthene**	**5.9**	**ug/kg**	**J**
	207089	**Benzo[k]fluoranthene**	**5.1**	**ug/kg**	**J**
	65850	Benzoic acid	78.9	ug/kg	U
	111444	bis(2-Chloroethyl)ether	15.8	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	15.8	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	78.9	ug/kg	U
	85687	Butylbenzylphthalate	78.9	ug/kg	U
	58082	Caffeine	15.8	ug/kg	U
	105602	Caprolactam	15.8	ug/kg	U
	218019	**Chrysene**	**4.0**	**ug/kg**	**J**
	84742	Di-n-Butylphthalate	15.8	ug/kg	U
	117840	Di-n-octylphthalate	158	ug/kg	U
	53703	Dibenzo[a,h]anthracene	15.8	ug/kg	U
	132649	Dibenzofuran	15.8	ug/kg	U
	84662	Diethyl phthalate	15.8	ug/kg	U
	131113	Dimethylphthalate	15.8	ug/kg	U
	98862	Ethanone, 1-phenyl-	31.6	ug/kg	U
	206440	**Fluoranthene**	**4.6**	**ug/kg**	**J**
	118741	Hexachlorobenzene	15.8	ug/kg	U
	87683	Hexachlorobutadiene	15.8	ug/kg	U
	77474	Hexachlorocyclopentadiene	31.6	ug/kg	U
	67721	Hexachloroethane	15.8	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	15.8	ug/kg	U
	78591	Isophorone	15.8	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	15.8	ug/kg	U
	62759	N-Nitrosodimethylamine	15.8	ug/kg	U
	621647	N-Nitrosodinpropylamine	15.8	ug/kg	U
	86306	n-Nitrosodiphenylamine	15.8	ug/kg	U
	91203	Naphthalene	15.8	ug/kg	U
	90120	Naphthalene, 1-methyl-	15.8	ug/kg	U
	91576	Naphthalene, 2-methyl-	15.8	ug/kg	U
	98953	Nitrobenzene	15.8	ug/kg	U
	87865	Pentachlorophenol	78.9	ug/kg	U
	85018	Phenanthrene	15.8	ug/kg	U
	108952	Phenol	15.8	ug/kg	U
	95487	Phenol, 2-methyl-	15.8	ug/kg	U
	129000	**Pyrene**	**4.4**	**ug/kg**	**J**
	483658	Retene	59.2	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	89	%Rec	
	2199691	1,2-Dichlorobenzene-d4	25	%Rec	
	93951736	2-chlorophenol-d4	60	%Rec	
	1718521	D10-Pyrene	88	%Rec	
	4165600	Nitrobenzene-d5	81	%Rec	
	367124	Phenol, 2-fluoro-	50	%Rec	
	4165622	Phenol-d5	62	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	87	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	**872504**	**2-Pyrrolidinone, 1-methyl-**	**1840**	**ug/kg**	**NJ**
		***3008001**	**Unknown 01**	**75.2**	**ug/kg**	**NJ**

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code:	FSP-009G	**Collected:**	10/16/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01423502
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0313/ 4 FT		

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 62759	N-Nitrosodimethylamine			R
	92524	1,1'-Biphenyl	15.6	ug/kg	U
	120821	1,2,4-Trichlorobenzene	15.6	ug/kg	U
	122667	1,2-Diphenylhydrazine	15.6	ug/kg	U
	95954	2,4,5-Trichlorophenol	31.2	ug/kg	U
	88062	2,4,6-Trichlorophenol	31.2	ug/kg	U
	120832	2,4-Dichlorophenol	15.6	ug/kg	U
	105679	2,4-Dimethylphenol	15.6	ug/kg	U
	51285	2,4-Dinitrophenol	156	ug/kg	UJ
	121142	2,4-Dinitrotoluene	78.0	ug/kg	U
	606202	2,6-Dinitrotoluene	156	ug/kg	U
	91587	2-Chloronaphthalene	15.6	ug/kg	U
	95578	2-Chlorophenol	15.6	ug/kg	U
	88744	2-Nitroaniline	78.0	ug/kg	U
	88755	2-Nitrophenol	78.0	ug/kg	U
	91941	3,3'-Dichlorobenzidine	62.4	ug/kg	U
	99092	3-Nitroaniline	31.2	ug/kg	U
	360689	3B-Coprostanol	312	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	78.0	ug/kg	U
	101553	4-Bromophenyl-Phenylether	15.6	ug/kg	U
	59507	4-Chloro-3-methylphenol	15.6	ug/kg	U
	106478	4-Chloroaniline	15.6	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	15.6	ug/kg	U
	106445	4-Methylphenol	15.6	ug/kg	U
	100016	4-Nitroaniline	31.2	ug/kg	U
	100027	4-Nitrophenol	78.0	ug/kg	U
	86748	**9H-Carbazole**	**37.6**	**ug/kg**	
	86737	**9H-Fluorene**	**31.1**	**ug/kg**	
	83329	**Acenaphthene**	**26.8**	**ug/kg**	
	208968	**Acenaphthylene**	**21.5**	**ug/kg**	
	62533	Aniline	15.6	ug/kg	U
	120127	**Anthracene**	**70.5**	**ug/kg**	
	1912249	Atrazine	15.6	ug/kg	U
	100527	Benzaldehyde	15.6	ug/kg	U
	95501	Benzene, 1,2-dichloro-	15.6	ug/kg	U
	541731	Benzene, 1,3-dichloro-	15.6	ug/kg	U
	106467	Benzene, 1,4-dichloro-	15.6	ug/kg	U

			Result	Units	Qlfr
Analytes	: 100516	Benzenemethanol	118	ug/kg	U
	56553	**Benzo(a)anthracene**	**96.0**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**82.2**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**38.5**	**ug/kg**	
	205992	**Benzo[b]Fluoranthene**	**148**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**125**	**ug/kg**	
	65850	Benzoic acid	78.0	ug/kg	UJ
	111444	bis(2-Chloroethyl)ether	15.6	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	15.6	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	78.0	ug/kg	U
	85687	Butylbenzylphthalate	78.0	ug/kg	U
	58082	Caffeine	15.6	ug/kg	U
	105602	Caprolactam	15.6	ug/kg	U
	218019	**Chrysene**	**198**	**ug/kg**	
	84742	Di-n-Butylphthalate	15.6	ug/kg	U
	117840	Di-n-octylphthalate	156	ug/kg	U
	53703	Dibenzo[a,h]anthracene	16.4	ug/kg	U
	132649	**Dibenzofuran**	**21.5**	**ug/kg**	
	84662	Diethyl phthalate	15.6	ug/kg	U
	131113	Dimethylphthalate	15.6	ug/kg	U
	98862	Ethanone, 1-phenyl-	31.2	ug/kg	U
	206440	**Fluoranthene**	**662**	**ug/kg**	
	118741	Hexachlorobenzene	15.6	ug/kg	U
	87683	Hexachlorobutadiene	15.6	ug/kg	U
	77474	Hexachlorocyclopentadiene	31.2	ug/kg	UJ
	67721	Hexachloroethane	15.6	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**50.0**	**ug/kg**	
	78591	Isophorone	15.6	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	15.6	ug/kg	U
	621647	N-Nitrosodinpropylamine	15.6	ug/kg	U
	86306	n-Nitrosodiphenylamine	15.6	ug/kg	U
	91203	**Naphthalene**	**15.1**	**ug/kg**	**J**
	90120	**Naphthalene, 1-methyl-**	**5.0**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**4.3**	**ug/kg**	**J**
	98953	Nitrobenzene	15.6	ug/kg	U
	87865	Pentachlorophenol	78.0	ug/kg	U
	85018	**Phenanthrene**	**380**	**ug/kg**	
	108952	Phenol	15.6	ug/kg	U
	95487	Phenol, 2-methyl-	15.6	ug/kg	U
	129000	**Pyrene**	**415**	**ug/kg**	
	483658	Retene	58.5	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	95	%Rec	
	2199691	1,2-Dichlorobenzene-d4	22	%Rec	
	93951736	2-chlorophenol-d4	83	%Rec	
	1718521	D10-Pyrene	89	%Rec	
	4165600	Nitrobenzene-d5	97	%Rec	
	367124	Phenol, 2-fluoro-	54	%Rec	
	4165622	Phenol-d5	79	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	87	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	243174	11H-Benzo[b]fluorene	89.8	ug/kg	NJ
		872504	2-Pyrrolidinone, 1-methyl-	1760	ug/kg	NJ
		82053	7H-Benz[de]anthracen-7-one	71.8	ug/kg	NJ
		84651	9,10-Anthracenedione	155	ug/kg	NJ
		192972	Benzo[e]pyrene	98.1	ug/kg	NJ
		5737133	Cyclopenta(def)phenanthrenone	86.9	ug/kg	NJ
		2381217	Pyrene, 1-methyl-	46.4	ug/kg	NJ
		*3008001	Unknown 01	116	ug/kg	NJ
		*3008002	Unknown 02	78.8	ug/kg	NJ

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 01423502
Type: Matrix Spike

			Result	Units	Qlfr
GCMS					
Parameter :	Semi-volatiles				
Method :	8270-M	BNA			
Prep Method:	3510M/3540				
Analytes :	206440	Fluoranthene			NAR
	85018	Phenanthrene			NAR
	129000	Pyrene			NAR
	321608	1,1'-Biphenyl, 2-fluoro-	84	%Rec	
	120821	1,2,4-Trichlorobenzene	95.7	%Rec	
	2199691	1,2-Dichlorobenzene-d4	84	%Rec	
	122667	1,2-Diphenylhydrazine	96.6	%Rec	
	95954	2,4,5-Trichlorophenol	119	%Rec	
	88062	2,4,6-Trichlorophenol	115	%Rec	
	120832	2,4-Dichlorophenol	96.4	%Rec	
	105679	2,4-Dimethylphenol	92.3	%Rec	
	51285	2,4-Dinitrophenol	51.7	%Rec	J
	121142	2,4-Dinitrotoluene	114	%Rec	
	606202	2,6-Dinitrotoluene	112	%Rec	
	91587	2-Chloronaphthalene	93.2	%Rec	
	95578	2-Chlorophenol	90.6	%Rec	
	93951736	2-chlorophenol-d4	84	%Rec	
	88744	2-Nitroaniline	98.0	%Rec	
	88755	2-Nitrophenol	101.6	%Rec	
	99092	3-Nitroaniline	87.4	%Rec	
	534521	4,6-Dinitro-2-methylphenol	74.9	%Rec	
	101553	4-Bromophenyl-Phenylether	103	%Rec	
	59507	4-Chloro-3-methylphenol	87.9	%Rec	
	106478	4-Chloroaniline	74.0	%Rec	
	7005723	4-Chlorophenyl-Phenylether	98.4	%Rec	
	106445	4-Methylphenol	91.2	%Rec	
	100016	4-Nitroaniline	104	%Rec	
	100027	4-Nitrophenol	97.8	%Rec	
	86737	9H-Fluorene	99.7	%Rec	
	83329	Acenaphthene	93.5	%Rec	
	208968	Acenaphthylene	94.1	%Rec	
	62533	Aniline	60.0	%Rec	
	120127	Anthracene	98.9	%Rec	
	95501	Benzene, 1,2-dichloro-	80.5	%Rec	
	541731	Benzene, 1,3-dichloro-	80.5	%Rec	
	106467	Benzene, 1,4-dichloro-	80.5	%Rec	
	100516	Benzenemethanol	105	%Rec	

				Result	Units	Qlfr
Analytes	:	56553	Benzo(a)anthracene	105	%Rec	
		50328	Benzo(a)pyrene	109	%Rec	
		191242	Benzo(g,h,i)perylene	103	%Rec	
		205992	Benzo[b]Fluoranthene	143	%Rec	
		207089	Benzo[k]fluoranthene	65.1	%Rec	
		65850	Benzoic acid	17.8	%Rec	
		111444	bis(2-Chloroethyl)ether	59.0	%Rec	
		108601	BIS(2-CHLOROISOPROPYL)ETHER	71.2	%Rec	
		117817	Bis(2-ethylhexyl) phthalate	108	%Rec	
		85687	Butylbenzylphthalate	107	%Rec	
		218019	Chrysene	99.9	%Rec	
		1718521	D10-Pyrene	100	%Rec	
		84742	Di-n-Butylphthalate	108	%Rec	
		117840	Di-n-octylphthalate	114	%Rec	
		53703	Dibenzo[a,h]anthracene	112	%Rec	
		132649	Dibenzofuran	97.9	%Rec	
		84662	Diethyl phthalate	99.7	%Rec	
		131113	Dimethylphthalate	102	%Rec	
		118741	Hexachlorobenzene	105	%Rec	
		87683	Hexachlorobutadiene	101	%Rec	
		77474	Hexachlorocyclopentadiene	34.3	%Rec	
		67721	Hexachloroethane	74.6	%Rec	
		193395	Indeno(1,2,3-cd)pyrene	111	%Rec	
		78591	Isophorone	90.7	%Rec	
		111911	Methane, bis(2-chloroethoxy)-	87.1	%Rec	
		62759	N-Nitrosodimethylamine	10.5	%Rec	
		621647	N-Nitrosodinpropylamine	84.9	%Rec	
		86306	n-Nitrosodiphenylamine	88.1	%Rec	
		91203	Naphthalene	92.2	%Rec	
		91576	Naphthalene, 2-methyl-	69.0	%Rec	
		98953	Nitrobenzene	88.4	%Rec	
		4165600	Nitrobenzene-d5	84	%Rec	
		87865	Pentachlorophenol	108	%Rec	
		108952	Phenol	93.8	%Rec	
		367124	Phenol, 2-fluoro-	84	%Rec	
		95487	Phenol, 2-methyl-	89.3	%Rec	
		4165622	Phenol-d5	81	%Rec	
		1718510	Terphenyl-d14	98	%Rec	

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 01423502
Type: Matrix Spike Dupl

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 206440	Fluoranthene			NAR
	85018	Phenanthrene			NAR
	129000	Pyrene			NAR
	321608	1,1'-Biphenyl, 2-fluoro-	88	%Rec	
	120821	1,2,4-Trichlorobenzene	101	%Rec	
	2199691	1,2-Dichlorobenzene-d4	48	%Rec	
	122667	1,2-Diphenylhydrazine	109	%Rec	
	95954	2,4,5-Trichlorophenol	132	%Rec	
	88062	2,4,6-Trichlorophenol	124	%Rec	
	120832	2,4-Dichlorophenol	110	%Rec	
	105679	2,4-Dimethylphenol	98.9	%Rec	
	51285	2,4-Dinitrophenol	68.7	%Rec	J
	121142	2,4-Dinitrotoluene	126	%Rec	
	606202	2,6-Dinitrotoluene	122	%Rec	
	91587	2-Chloronaphthalene	100	%Rec	
	95578	2-Chlorophenol	84.0	%Rec	
	93951736	2-chlorophenol-d4	74	%Rec	
	88744	2-Nitroaniline	106	%Rec	
	88755	2-Nitrophenol	108	%Rec	
	99092	3-Nitroaniline	109	%Rec	
	534521	4,6-Dinitro-2-methylphenol	84.6	%Rec	
	101553	4-Bromophenyl-Phenylether	105	%Rec	
	59507	4-Chloro-3-methylphenol	87.6	%Rec	
	106478	4-Chloroaniline	86.7	%Rec	
	7005723	4-Chlorophenyl-Phenylether	108	%Rec	
	106445	4-Methylphenol	84.5	%Rec	
	100016	4-Nitroaniline	123	%Rec	
	100027	4-Nitrophenol	113	%Rec	
	86737	9H-Fluorene	109	%Rec	
	83329	Acenaphthene	97.6	%Rec	
	208968	Acenaphthylene	100	%Rec	
	62533	Aniline	59.9	%Rec	
	120127	Anthracene	103	%Rec	
	95501	Benzene, 1,2-dichloro-	74.3	%Rec	
	541731	Benzene, 1,3-dichloro-	74.3	%Rec	
	106467	Benzene, 1,4-dichloro-	74.3	%Rec	
	100516	Benzenemethanol	95.7	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	107	%Rec	
	50328	Benzo(a)pyrene	110	%Rec	
	191242	Benzo(g,h,i)perylene	106	%Rec	
	205992	Benzo[b]Fluoranthene	132	%Rec	
	207089	Benzo[k]fluoranthene	92.7	%Rec	
	65850	Benzoic acid	33.9	%Rec	
	111444	bis(2-Chloroethyl)ether	50.5	%Rec	
	108601	BIS(2-CHLOROISOPROPYL)ETHER	65.2	%Rec	
	117817	Bis(2-ethylhexyl) phthalate	108	%Rec	
	85687	Butylbenzylphthalate	107	%Rec	
	218019	Chrysene	101	%Rec	
	1718521	D10-Pyrene	95	%Rec	
	84742	Di-n-Butylphthalate	111	%Rec	
	117840	Di-n-octylphthalate	116	%Rec	
	53703	Dibenzo[a,h]anthracene	114	%Rec	
	132649	Dibenzofuran	104	%Rec	
	84662	Diethyl phthalate	110	%Rec	
	131113	Dimethylphthalate	108	%Rec	
	118741	Hexachlorobenzene	106	%Rec	
	87683	Hexachlorobutadiene	108	%Rec	
	77474	Hexachlorocyclopentadiene	28.3	%Rec	
	67721	Hexachloroethane	70.4	%Rec	
	193395	Indeno(1,2,3-cd)pyrene	112	%Rec	
	78591	Isophorone	96.7	%Rec	
	111911	Methane, bis(2-chloroethoxy)-	96.4	%Rec	
	62759	N-Nitrosodimethylamine	5.58	%Rec	
	621647	N-Nitrosodinpropylamine	79.8	%Rec	
	86306	n-Nitrosodiphenylamine	90.6	%Rec	
	91203	Naphthalene	96.3	%Rec	
	91576	Naphthalene, 2-methyl-	54	%Rec	
	98953	Nitrobenzene	96.6	%Rec	
	4165600	Nitrobenzene-d5	88	%Rec	
	87865	Pentachlorophenol	116	%Rec	
	108952	Phenol	86.7	%Rec	
	367124	Phenol, 2-fluoro-	67	%Rec	
	95487	Phenol, 2-methyl-	84.0	%Rec	
	4165622	Phenol-d5	71	%Rec	
	1718510	Terphenyl-d14	94	%Rec	

Project Code:	FSP-009G	**Collected:**	10/16/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01423503
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CF0313N/ 2 FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540
Analytes :

		Result	Units	Qlfr
92524	1,1'-Biphenyl	17.2	ug/kg	U
120821	1,2,4-Trichlorobenzene	17.2	ug/kg	U
122667	1,2-Diphenylhydrazine	17.2	ug/kg	U
95954	2,4,5-Trichlorophenol	34.3	ug/kg	U
88062	2,4,6-Trichlorophenol	34.3	ug/kg	U
120832	2,4-Dichlorophenol	17.2	ug/kg	U
105679	**2,4-Dimethylphenol**	**20.9**	**ug/kg**	
51285	2,4-Dinitrophenol	172	ug/kg	UJ
121142	2,4-Dinitrotoluene	85.8	ug/kg	U
606202	2,6-Dinitrotoluene	172	ug/kg	U
91587	2-Chloronaphthalene	17.2	ug/kg	U
95578	2-Chlorophenol	17.2	ug/kg	U
88744	2-Nitroaniline	85.8	ug/kg	U
88755	2-Nitrophenol	85.8	ug/kg	U
91941	3,3'-Dichlorobenzidine	68.6	ug/kg	U
99092	3-Nitroaniline	34.3	ug/kg	U
360689	3B-Coprostanol	343	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	85.8	ug/kg	U
101553	4-Bromophenyl-Phenylether	17.2	ug/kg	U
59507	4-Chloro-3-methylphenol	17.2	ug/kg	U
106478	4-Chloroaniline	17.2	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	17.2	ug/kg	U
106445	**4-Methylphenol**	**61.5**	**ug/kg**	
100016	4-Nitroaniline	34.3	ug/kg	U
100027	4-Nitrophenol	85.8	ug/kg	U
86748	**9H-Carbazole**	**66.3**	**ug/kg**	
86737	**9H-Fluorene**	**24.2**	**ug/kg**	
83329	**Acenaphthene**	**14.5**	**ug/kg**	**J**
208968	**Acenaphthylene**	**59.9**	**ug/kg**	
62533	Aniline	17.2	ug/kg	U
120127	**Anthracene**	**165**	**ug/kg**	
1912249	Atrazine	17.2	ug/kg	U
100527	Benzaldehyde	17.2	ug/kg	U
95501	Benzene, 1,2-dichloro-	17.2	ug/kg	U
541731	Benzene, 1,3-dichloro-	17.2	ug/kg	U
106467	Benzene, 1,4-dichloro-	17.2	ug/kg	U
100516	Benzenemethanol	113	ug/kg	U

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**141**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**308**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**151**	**ug/kg**	
	205992	**Benzo[b]Fluoranthene**	**526**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**257**	**ug/kg**	
	65850	Benzoic acid	85.8	ug/kg	U
	111444	bis(2-Chloroethyl)ether	17.2	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	17.2	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	85.8	ug/kg	U
	85687	Butylbenzylphthalate	85.8	ug/kg	U
	58082	Caffeine	17.2	ug/kg	U
	105602	Caprolactam	17.2	ug/kg	U
	218019	**Chrysene**	**308**	**ug/kg**	
	84742	Di-n-Butylphthalate	17.2	ug/kg	U
	117840	Di-n-octylphthalate	172	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**83.2**	**ug/kg**	
	132649	**Dibenzofuran**	**31.6**	**ug/kg**	
	84662	Diethyl phthalate	17.2	ug/kg	U
	131113	Dimethylphthalate	17.2	ug/kg	U
	98862	Ethanone, 1-phenyl-	34.3	ug/kg	U
	206440	**Fluoranthene**	**319**	**ug/kg**	
	118741	Hexachlorobenzene	17.2	ug/kg	U
	87683	Hexachlorobutadiene	17.2	ug/kg	U
	77474	Hexachlorocyclopentadiene	34.3	ug/kg	U
	67721	Hexachloroethane	17.2	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**215**	**ug/kg**	
	78591	Isophorone	17.2	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	17.2	ug/kg	U
	62759	N-Nitrosodimethylamine	17.2	ug/kg	U
	621647	N-Nitrosodinpropylamine	17.2	ug/kg	U
	86306	n-Nitrosodiphenylamine	17.2	ug/kg	U
	91203	**Naphthalene**	**48.8**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**7.9**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**16.9**	**ug/kg**	**J**
	98953	Nitrobenzene	17.2	ug/kg	U
	87865	Pentachlorophenol	85.8	ug/kg	U
	85018	**Phenanthrene**	**144**	**ug/kg**	
	108952	Phenol	20.9	ug/kg	U
	95487	Phenol, 2-methyl-	17.2	ug/kg	U
	129000	**Pyrene**	**311**	**ug/kg**	
	483658	Retene	64.4	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	80	%Rec	
	2199691	1,2-Dichlorobenzene-d4	57	%Rec	
	93951736	2-chlorophenol-d4	81	%Rec	
	1718521	D10-Pyrene	89	%Rec	
	4165600	Nitrobenzene-d5	78	%Rec	
	367124	Phenol, 2-fluoro-	80	%Rec	
	4165622	Phenol-d5	78	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	87	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	**83476**	**.gamma.-Sitosterol**	**1650**	**ug/kg**	**NJ**
		243174	**11H-Benzo[b]fluorene**	**178**	**ug/kg**	**NJ**
		206495	**Acenaphtho(1,2-B)pyridine**	**155**	**ug/kg**	**NJ**
		10544500	**Sulfur, mol. (S8)**	**296**	**ug/kg**	**NJ**
		***3008001**	**Unknown 01**	**243**	**ug/kg**	**NJ**
		***3008002**	**Unknown 02**	**180**	**ug/kg**	**NJ**
		***3008003**	**Unknown 03**	**554**	**ug/kg**	**NJ**
		***3005001**	**Unknown Hydrocarbon 01**	**270**	**ug/kg**	**NJ**
		***3005002**	**Unknown Hydrocarbon 02**	**240**	**ug/kg**	**NJ**

Project Code:	FSP-009G	**Collected:**	10/23/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01433585
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	T-81 39-40 FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : **92524**	**1,1'-Biphenyl**	**30500**	**ug/kg**	
120821	1,2,4-Trichlorobenzene	2010	ug/kg	U
122667	1,2-Diphenylhydrazine	2010	ug/kg	U
95954	2,4,5-Trichlorophenol	4020	ug/kg	U
88062	2,4,6-Trichlorophenol	4020	ug/kg	U
120832	2,4-Dichlorophenol	2010	ug/kg	U
105679	2,4-Dimethylphenol	2010	ug/kg	U
51285	2,4-Dinitrophenol	20100	ug/kg	U
121142	2,4-Dinitrotoluene	10100	ug/kg	U
606202	2,6-Dinitrotoluene	20100	ug/kg	U
91587	2-Chloronaphthalene	2010	ug/kg	U
95578	2-Chlorophenol	2010	ug/kg	U
88744	2-Nitroaniline	10100	ug/kg	U
88755	2-Nitrophenol	10100	ug/kg	U
91941	3,3'-Dichlorobenzidine	8040	ug/kg	U
99092	3-Nitroaniline	4020	ug/kg	U
360689	3B-Coprostanol	40200	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	10100	ug/kg	U
101553	4-Bromophenyl-Phenylether	2010	ug/kg	U
59507	4-Chloro-3-methylphenol	2010	ug/kg	U
106478	4-Chloroaniline	2010	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	2010	ug/kg	U
106445	4-Methylphenol	2010	ug/kg	U
100016	4-Nitroaniline	4020	ug/kg	U
100027	4-Nitrophenol	10100	ug/kg	U
86748	**9H-Carbazole**	**61900**	**ug/kg**	**J**
86737	**9H-Fluorene**	**109000**	**ug/kg**	
83329	**Acenaphthene**	**86000**	**ug/kg**	
208968	Acenaphthylene	2010	ug/kg	U
62533	Aniline	2010	ug/kg	U
120127	**Anthracene**	**135000**	**ug/kg**	
1912249	Atrazine	2010	ug/kg	U
100527	Benzaldehyde	2010	ug/kg	U
95501	Benzene, 1,2-dichloro-	2010	ug/kg	U
541731	Benzene, 1,3-dichloro-	2010	ug/kg	U
106467	Benzene, 1,4-dichloro-	2010	ug/kg	U
100516	Benzenemethanol	10100	ug/kg	UJ

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**10700**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**2650**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**598**	**ug/kg**	**J**
	205992	**Benzo[b]Fluoranthene**	**3080**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**3120**	**ug/kg**	
	65850	Benzoic acid	10100	ug/kg	U
	111444	bis(2-Chloroethyl)ether	2010	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	2010	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	10100	ug/kg	U
	85687	Butylbenzylphthalate	10100	ug/kg	U
	58082	Caffeine	2010	ug/kg	U
	105602	Caprolactam	2010	ug/kg	U
	218019	**Chrysene**	**11000**	**ug/kg**	
	84742	Di-n-Butylphthalate	2010	ug/kg	U
	117840	Di-n-octylphthalate	20100	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**257**	**ug/kg**	**J**
	132649	**Dibenzofuran**	**87000**	**ug/kg**	
	84662	Diethyl phthalate	2010	ug/kg	U
	131113	Dimethylphthalate	2010	ug/kg	U
	98862	Ethanone, 1-phenyl-	4020	ug/kg	U
	206440	**Fluoranthene**	**84500**	**ug/kg**	
	118741	Hexachlorobenzene	2010	ug/kg	U
	87683	Hexachlorobutadiene	2010	ug/kg	U
	77474	Hexachlorocyclopentadiene	4020	ug/kg	U
	67721	Hexachloroethane	2010	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**850**	**ug/kg**	**J**
	78591	Isophorone	2010	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	2010	ug/kg	U
	62759	N-Nitrosodimethylamine	2010	ug/kg	U
	621647	N-Nitrosodinpropylamine	2010	ug/kg	U
	86306	n-Nitrosodiphenylamine	2010	ug/kg	U
	91203	**Naphthalene**	**547000**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**56400**	**ug/kg**	
	91576	**Naphthalene, 2-methyl-**	**120000**	**ug/kg**	
	98953	Nitrobenzene	2010	ug/kg	U
	87865	Pentachlorophenol	10100	ug/kg	U
	85018	**Phenanthrene**	**233000**	**ug/kg**	
	108952	Phenol	2010	ug/kg	U
	95487	Phenol, 2-methyl-	2010	ug/kg	U
	129000	**Pyrene**	**46800**	**ug/kg**	
	483658	Retene	7540	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	89	%Rec	
	2199691	1,2-Dichlorobenzene-d4	75	%Rec	
	93951736	2-chlorophenol-d4	89	%Rec	
	1718521	D10-Pyrene	84	%Rec	
	4165600	Nitrobenzene-d5	93	%Rec	
	367124	Phenol, 2-fluoro-	99	%Rec	
	4165622	Phenol-d5	91	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	84	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	643583	1,1'-Biphenyl, 2-methyl-	15700	ug/kg	NJ
		644086	1,1'-Biphenyl, 4-methyl-	10700	ug/kg	NJ
		243174	11H-Benzo[b]fluorene	9900	ug/kg	NJ
		35465715	2-Phenylnaphthalene	14600	ug/kg	NJ
		203645	4H-Cyclopenta[def]phenanthrene	27800	ug/kg	NJ
		92831	9H-Xanthene	19700	ug/kg	NJ
		610480	Anthracene, 1-methyl-	20200	ug/kg	NJ
		613127	Anthracene, 2-methyl-	16400	ug/kg	NJ
		95158	Benzo[b]thiophene	3710	ug/kg	NJ
		7320538	Dibenzofuran, 4-methyl-	14900	ug/kg	NJ
		132650	Dibenzothiophene	24200	ug/kg	NJ
		573988	Naphthalene, 1,2-dimethyl-	26900	ug/kg	NJ
		571619	Naphthalene, 1,5-dimethyl-	13700	ug/kg	NJ
		575371	Naphthalene, 1,7-dimethyl-	27100	ug/kg	NJ
		581408	Naphthalene, 2,3-dimethyl-	13800	ug/kg	NJ
		2531842	Phenanthrene, 2-methyl-	14100	ug/kg	NJ

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 01433585
Type: Duplicate

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

Analytes :		**Result**	**Units**	**Qlfr**
92524	**1,1'-Biphenyl**	**37600**	**ug/kg**	
120821	1,2,4-Trichlorobenzene	1530	ug/kg	U
122667	1,2-Diphenylhydrazine	1530	ug/kg	U
95954	2,4,5-Trichlorophenol	3060	ug/kg	U
88062	2,4,6-Trichlorophenol	3060	ug/kg	U
120832	2,4-Dichlorophenol	1530	ug/kg	U
105679	2,4-Dimethylphenol	1530	ug/kg	U
51285	2,4-Dinitrophenol	15300	ug/kg	U
121142	2,4-Dinitrotoluene	7660	ug/kg	U
606202	2,6-Dinitrotoluene	15300	ug/kg	U
91587	2-Chloronaphthalene	1530	ug/kg	U
95578	2-Chlorophenol	1530	ug/kg	U
88744	2-Nitroaniline	7660	ug/kg	U
88755	2-Nitrophenol	7660	ug/kg	U
91941	3,3'-Dichlorobenzidine	6130	ug/kg	U
99092	3-Nitroaniline	3060	ug/kg	U
360689	3B-Coprostanol	30600	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	7660	ug/kg	U
101553	4-Bromophenyl-Phenylether	1530	ug/kg	U
59507	4-Chloro-3-methylphenol	1530	ug/kg	U
106478	4-Chloroaniline	1530	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	1530	ug/kg	U
106445	4-Methylphenol	1530	ug/kg	U
100016	4-Nitroaniline	3060	ug/kg	U
100027	4-Nitrophenol	7660	ug/kg	U
86748	**9H-Carbazole**	**109000**	**ug/kg**	**J**
86737	**9H-Fluorene**	**144000**	**ug/kg**	
83329	**Acenaphthene**	**98600**	**ug/kg**	
208968	Acenaphthylene	1530	ug/kg	U
62533	Aniline	1530	ug/kg	U
120127	**Anthracene**	**221000**	**ug/kg**	
1912249	Atrazine	1530	ug/kg	U
100527	Benzaldehyde	1530	ug/kg	U
95501	Benzene, 1,2-dichloro-	1530	ug/kg	U
541731	Benzene, 1,3-dichloro-	1530	ug/kg	U
106467	Benzene, 1,4-dichloro-	1530	ug/kg	U
100516	Benzenemethanol	7660	ug/kg	UJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**12600**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**3030**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**741**	**ug/kg**	**J**
	205992	**Benzo[b]Fluoranthene**	**3560**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**3860**	**ug/kg**	
	65850	Benzoic acid	7660	ug/kg	U
	111444	bis(2-Chloroethyl)ether	1530	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	1530	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	7660	ug/kg	U
	85687	Butylbenzylphthalate	7660	ug/kg	U
	58082	Caffeine	1530	ug/kg	U
	105602	Caprolactam	1530	ug/kg	U
	218019	**Chrysene**	**13600**	**ug/kg**	
	84742	Di-n-Butylphthalate	1530	ug/kg	U
	117840	Di-n-octylphthalate	15300	ug/kg	U
	53703	Dibenzo[a,h]anthracene	1530	ug/kg	U
	132649	**Dibenzofuran**	**106000**	**ug/kg**	
	84662	Diethyl phthalate	1530	ug/kg	U
	131113	Dimethylphthalate	1530	ug/kg	U
	98862	Ethanone, 1-phenyl-	3060	ug/kg	U
	206440	**Fluoranthene**	**96300**	**ug/kg**	
	118741	Hexachlorobenzene	1530	ug/kg	U
	87683	Hexachlorobutadiene	1530	ug/kg	U
	77474	Hexachlorocyclopentadiene	3060	ug/kg	U
	67721	Hexachloroethane	1530	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**943**	**ug/kg**	**J**
	78591	Isophorone	1530	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	1530	ug/kg	U
	62759	N-Nitrosodimethylamine	1530	ug/kg	U
	621647	N-Nitrosodinpropylamine	1530	ug/kg	U
	86306	n-Nitrosodiphenylamine	1530	ug/kg	U
	91203	**Naphthalene**	**578000**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**68500**	**ug/kg**	
	91576	**Naphthalene, 2-methyl-**	**149000**	**ug/kg**	
	98953	Nitrobenzene	1530	ug/kg	U
	87865	Pentachlorophenol	7660	ug/kg	U
	85018	**Phenanthrene**	**345000**	**ug/kg**	
	108952	Phenol	1530	ug/kg	U
	95487	Phenol, 2-methyl-	1530	ug/kg	U
	129000	**Pyrene**	**53800**	**ug/kg**	
	483658	Retene	5740	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	20.2	%Rec	
	2199691	1,2-Dichlorobenzene-d4	18.9	%Rec	
	93951736	2-chlorophenol-d4	19.5	%Rec	
	1718521	D10-Pyrene	20.0	%Rec	
	4165600	Nitrobenzene-d5	21.6	%Rec	
	367124	Phenol, 2-fluoro-	21.5	%Rec	
	4165622	Phenol-d5	20.1	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	19.6	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	643583	1,1'-Biphenyl, 2-methyl-	12400	ug/kg	NJ
		243174	11H-Benzo[b]fluorene	11200	ug/kg	NJ
		35465715	2-Phenylnaphthalene	3430	ug/kg	NJ
		203645	4H-Cyclopenta[def]phenanthrene	6840	ug/kg	NJ
		1730376	9H-Fluorene, 1-methyl-	2590	ug/kg	NJ
		92831	9H-Xanthene	4870	ug/kg	NJ
		610480	Anthracene, 1-methyl-	4800	ug/kg	NJ
		613127	Anthracene, 2-methyl-	3970	ug/kg	NJ
		95158	Benzo[b]thiophene	3290	ug/kg	NJ
		7320538	Dibenzofuran, 4-methyl-	16200	ug/kg	NJ
		132650	Dibenzothiophene	6090	ug/kg	NJ
		41593219	Fluorene, 1,4-dihydro-	17600	ug/kg	NJ
		571584	Naphthalene, 1,4-dimethyl-	16300	ug/kg	NJ
		571619	Naphthalene, 1,5-dimethyl-	30800	ug/kg	NJ
		575439	Naphthalene, 1,6-dimethyl-	29200	ug/kg	NJ
		581420	Naphthalene, 2,6-dimethyl-	15300	ug/kg	NJ
		832699	Phenanthrene, 1-methyl-	4290	ug/kg	NJ
		832713	Phenanthrene, 3-methyl-	2930	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code:	FSP-009G	**Collected:**	10/23/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01433586
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CFCWO1W 4FT		

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: **92524**	**1,1'-Biphenyl**	**13.9**	**ug/kg**	**J**
	120821	1,2,4-Trichlorobenzene	19.2	ug/kg	U
	122667	1,2-Diphenylhydrazine	19.2	ug/kg	U
	95954	2,4,5-Trichlorophenol	38.4	ug/kg	U
	88062	2,4,6-Trichlorophenol	38.4	ug/kg	U
	120832	2,4-Dichlorophenol	19.2	ug/kg	U
	105679	**2,4-Dimethylphenol**	**13.5**	**ug/kg**	**J**
	51285	2,4-Dinitrophenol	192	ug/kg	U
	121142	2,4-Dinitrotoluene	96.1	ug/kg	U
	606202	2,6-Dinitrotoluene	192	ug/kg	U
	91587	2-Chloronaphthalene	19.2	ug/kg	U
	95578	2-Chlorophenol	19.2	ug/kg	U
	88744	2-Nitroaniline	96.1	ug/kg	U
	88755	2-Nitrophenol	96.1	ug/kg	U
	91941	3,3'-Dichlorobenzidine	76.9	ug/kg	U
	99092	3-Nitroaniline	38.4	ug/kg	U
	360689	3B-Coprostanol	384	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	96.1	ug/kg	U
	101553	4-Bromophenyl-Phenylether	19.2	ug/kg	U
	59507	4-Chloro-3-methylphenol	19.2	ug/kg	U
	106478	4-Chloroaniline	19.2	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	19.2	ug/kg	U
	106445	**4-Methylphenol**	**15.6**	**ug/kg**	**J**
	100016	4-Nitroaniline	38.4	ug/kg	U
	100027	4-Nitrophenol	96.1	ug/kg	U
	86748	**9H-Carbazole**	**105**	**ug/kg**	
	86737	**9H-Fluorene**	**28.3**	**ug/kg**	
	83329	**Acenaphthene**	**20.0**	**ug/kg**	
	208968	**Acenaphthylene**	**107**	**ug/kg**	
	62533	Aniline	19.2	ug/kg	U
	120127	**Anthracene**	**264**	**ug/kg**	
	1912249	Atrazine	19.2	ug/kg	U
	100527	Benzaldehyde	19.2	ug/kg	U
	95501	Benzene, 1,2-dichloro-	19.2	ug/kg	U
	541731	Benzene, 1,3-dichloro-	19.2	ug/kg	U
	106467	Benzene, 1,4-dichloro-	19.2	ug/kg	U
	100516	Benzenemethanol	96.1	ug/kg	UJ

			Result	Units	Qlfr
Analytes	: 56553	**Benzo(a)anthracene**	**274**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**376**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**327**	**ug/kg**	
	205992	**Benzo[b]Fluoranthene**	**752**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**459**	**ug/kg**	
	65850	Benzoic acid	128	ug/kg	U
	111444	bis(2-Chloroethyl)ether	19.2	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	19.2	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	96.1	ug/kg	U
	85687	Butylbenzylphthalate	96.1	ug/kg	U
	58082	Caffeine	19.2	ug/kg	U
	105602	Caprolactam	19.2	ug/kg	U
	218019	**Chrysene**	**590**	**ug/kg**	
	84742	Di-n-Butylphthalate	19.2	ug/kg	U
	117840	Di-n-octylphthalate	192	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**122**	**ug/kg**	
	132649	**Dibenzofuran**	**35.7**	**ug/kg**	
	84662	Diethyl phthalate	19.2	ug/kg	U
	131113	Dimethylphthalate	19.2	ug/kg	U
	98862	Ethanone, 1-phenyl-	38.4	ug/kg	U
	206440	**Fluoranthene**	**542**	**ug/kg**	
	118741	Hexachlorobenzene	19.2	ug/kg	U
	87683	Hexachlorobutadiene	19.2	ug/kg	U
	77474	Hexachlorocyclopentadiene	38.4	ug/kg	U
	67721	Hexachloroethane	19.2	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**374**	**ug/kg**	
	78591	Isophorone	19.2	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	19.2	ug/kg	U
	62759	N-Nitrosodimethylamine	19.2	ug/kg	U
	621647	N-Nitrosodinpropylamine	19.2	ug/kg	U
	86306	n-Nitrosodiphenylamine	19.2	ug/kg	U
	91203	**Naphthalene**	**51.7**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**10.1**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**21.4**	**ug/kg**	
	98953	Nitrobenzene	19.2	ug/kg	U
	87865	**Pentachlorophenol**	**312**	**ug/kg**	
	85018	**Phenanthrene**	**228**	**ug/kg**	
	108952	Phenol	19.2	ug/kg	U
	95487	**Phenol, 2-methyl-**	**6.0**	**ug/kg**	**J**
	129000	**Pyrene**	**429**	**ug/kg**	
	483658	**Retene**	**411**	**ug/kg**	
	321608	1,1'-Biphenyl, 2-fluoro-	94	%Rec	
	2199691	1,2-Dichlorobenzene-d4	77	%Rec	
	93951736	2-chlorophenol-d4	88	%Rec	
	1718521	D10-Pyrene	90	%Rec	
	4165600	Nitrobenzene-d5	96	%Rec	
	367124	Phenol, 2-fluoro-	91	%Rec	
	4165622	Phenol-d5	89	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	89	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	83476	.gamma.-Sitosterol	4040	ug/kg	NJ
		673325	Benzene, 1-propynyl-	91.6	ug/kg	NJ
		5737133	Cyclopenta(def)phenanthrenone	185	ug/kg	NJ
		143077	Dodecanoic acid	66.9	ug/kg	NJ
		57103	Hexadecanoic acid	94.1	ug/kg	NJ
		2613890	Propanedioic acid, phenyl-	64.1	ug/kg	NJ
		*3008001	Unknown 01	280	ug/kg	NJ
		*3005001	Unknown Hydrocarbon 01	3020	ug/kg	NJ
		*3005002	Unknown Hydrocarbon 02	4100	ug/kg	NJ
		*3005003	Unknown Hydrocarbon 03	2780	ug/kg	NJ

Project Code:	FSP-009G	**Collected:**	10/23/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01433587
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CFCWO153E 5FT		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

Analytes			Result	Units	Qlfr
	92524	**1,1'-Biphenyl**	**9.8**	**ug/kg**	**J**
	120821	1,2,4-Trichlorobenzene	18.5	ug/kg	U
	122667	1,2-Diphenylhydrazine	18.5	ug/kg	U
	95954	2,4,5-Trichlorophenol	36.9	ug/kg	U
	88062	2,4,6-Trichlorophenol	36.9	ug/kg	U
	120832	2,4-Dichlorophenol	18.5	ug/kg	U
	105679	2,4-Dimethylphenol	18.5	ug/kg	U
	51285	2,4-Dinitrophenol	185	ug/kg	U
	121142	2,4-Dinitrotoluene	92.3	ug/kg	U
	606202	2,6-Dinitrotoluene	185	ug/kg	U
	91587	2-Chloronaphthalene	18.5	ug/kg	U
	95578	2-Chlorophenol	18.5	ug/kg	U
	88744	2-Nitroaniline	92.3	ug/kg	U
	88755	2-Nitrophenol	92.3	ug/kg	U
	91941	3,3'-Dichlorobenzidine	73.9	ug/kg	U
	99092	3-Nitroaniline	36.9	ug/kg	U
	360689	3B-Coprostanol	369	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	92.3	ug/kg	U
	101553	4-Bromophenyl-Phenylether	18.5	ug/kg	U
	59507	4-Chloro-3-methylphenol	18.5	ug/kg	U
	106478	4-Chloroaniline	18.5	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	18.5	ug/kg	U
	106445	4-Methylphenol	18.5	ug/kg	U
	100016	4-Nitroaniline	36.9	ug/kg	U
	100027	4-Nitrophenol	92.3	ug/kg	U
	86748	**9H-Carbazole**	**16.0**	**ug/kg**	**J**
	86737	**9H-Fluorene**	**5.9**	**ug/kg**	**J**
	83329	**Acenaphthene**	**6.4**	**ug/kg**	**J**
	208968	**Acenaphthylene**	**10.4**	**ug/kg**	**J**
	62533	Aniline	18.5	ug/kg	U
	120127	**Anthracene**	**28.6**	**ug/kg**	
	1912249	Atrazine	18.5	ug/kg	U
	100527	Benzaldehyde	18.5	ug/kg	U
	95501	Benzene, 1,2-dichloro-	18.5	ug/kg	U
	541731	Benzene, 1,3-dichloro-	18.5	ug/kg	U
	106467	Benzene, 1,4-dichloro-	18.5	ug/kg	U
	100516	Benzenemethanol	92.3	ug/kg	UJ

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**31.3**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**38.8**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**36.1**	**ug/kg**	
	205992	**Benzo[b]Fluoranthene**	**75.9**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**59.8**	**ug/kg**	
	65850	Benzoic acid	92.3	ug/kg	U
	111444	bis(2-Chloroethyl)ether	18.5	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	18.5	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	92.3	ug/kg	U
	85687	Butylbenzylphthalate	92.3	ug/kg	U
	58082	Caffeine	18.5	ug/kg	U
	105602	Caprolactam	18.5	ug/kg	U
	218019	**Chrysene**	**65.0**	**ug/kg**	
	84742	Di-n-Butylphthalate	18.5	ug/kg	U
	117840	Di-n-octylphthalate	185	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**5.5**	**ug/kg**	**J**
	132649	**Dibenzofuran**	**20.5**	**ug/kg**	
	84662	Diethyl phthalate	18.5	ug/kg	U
	131113	Dimethylphthalate	18.5	ug/kg	U
	98862	Ethanone, 1-phenyl-	36.9	ug/kg	U
	206440	**Fluoranthene**	**88.3**	**ug/kg**	
	118741	Hexachlorobenzene	18.5	ug/kg	U
	87683	Hexachlorobutadiene	18.5	ug/kg	U
	77474	Hexachlorocyclopentadiene	36.9	ug/kg	U
	67721	Hexachloroethane	18.5	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**38.0**	**ug/kg**	
	78591	Isophorone	18.5	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	18.5	ug/kg	U
	62759	N-Nitrosodimethylamine	18.5	ug/kg	U
	621647	N-Nitrosodinpropylamine	18.5	ug/kg	U
	86306	n-Nitrosodiphenylamine	18.5	ug/kg	U
	91203	**Naphthalene**	**26.1**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**4.2**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**8.2**	**ug/kg**	**J**
	98953	Nitrobenzene	18.5	ug/kg	U
	87865	**Pentachlorophenol**	**65.2**	**ug/kg**	**J**
	85018	**Phenanthrene**	**44.5**	**ug/kg**	
	108952	Phenol	18.5	ug/kg	U
	95487	Phenol, 2-methyl-	18.5	ug/kg	U
	129000	**Pyrene**	**66.8**	**ug/kg**	
	483658	**Retene**	**20.5**	**ug/kg**	**J**
	321608	1,1'-Biphenyl, 2-fluoro-	76	%Rec	
	2199691	1,2-Dichlorobenzene-d4	60	%Rec	
	93951736	2-chlorophenol-d4	73	%Rec	
	1718521	D10-Pyrene	77	%Rec	
	4165600	Nitrobenzene-d5	77	%Rec	
	367124	Phenol, 2-fluoro-	77	%Rec	
	4165622	Phenol-d5	77	%Rec	

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	75	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	*3008001	**Unknown 01**	**3210**	**ug/kg**	**NJ**
		*3008002	**Unknown 02**	**227**	**ug/kg**	**NJ**
		*3005001	**Unknown Hydrocarbon 01**	**332**	**ug/kg**	**NJ**
		*3005003	**Unknown Hydrocarbon 03**	**208**	**ug/kg**	**NJ**
		*3005004	**Unknown Hydrocarbon 04**	**562**	**ug/kg**	**NJ**
		*3005005	**Unknown Hydrocarbon 05**	**423**	**ug/kg**	**NJ**

Project Code:	FSP-009G	**Collected:**	10/23/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HAHN GOLD	**Sample Number:**	01433588
Account Code:	01T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	01CFCWO152 4FT		

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: **92524**	**1,1'-Biphenyl**	**7.8**	**ug/kg**	**J**
	120821	1,2,4-Trichlorobenzene	17.9	ug/kg	U
	122667	1,2-Diphenylhydrazine	17.9	ug/kg	U
	95954	2,4,5-Trichlorophenol	35.9	ug/kg	U
	88062	2,4,6-Trichlorophenol	35.9	ug/kg	U
	120832	2,4-Dichlorophenol	17.9	ug/kg	U
	105679	**2,4-Dimethylphenol**	**8.7**	**ug/kg**	**J**
	51285	2,4-Dinitrophenol	179	ug/kg	U
	121142	2,4-Dinitrotoluene	89.7	ug/kg	U
	606202	2,6-Dinitrotoluene	179	ug/kg	U
	91587	2-Chloronaphthalene	17.9	ug/kg	U
	95578	2-Chlorophenol	17.9	ug/kg	U
	88744	2-Nitroaniline	89.7	ug/kg	U
	88755	2-Nitrophenol	89.7	ug/kg	U
	91941	3,3'-Dichlorobenzidine	71.8	ug/kg	UJ
	99092	3-Nitroaniline	35.9	ug/kg	U
	360689	3B-Coprostanol	359	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	89.7	ug/kg	U
	101553	4-Bromophenyl-Phenylether	17.9	ug/kg	U
	59507	4-Chloro-3-methylphenol	17.9	ug/kg	U
	106478	4-Chloroaniline	17.9	ug/kg	UJ
	7005723	4-Chlorophenyl-Phenylether	17.9	ug/kg	U
	106445	4-Methylphenol	17.9	ug/kg	U
	100016	4-Nitroaniline	35.9	ug/kg	U
	100027	4-Nitrophenol	89.7	ug/kg	U
	86748	**9H-Carbazole**	**56.5**	**ug/kg**	
	86737	**9H-Fluorene**	**19.8**	**ug/kg**	
	83329	**Acenaphthene**	**15.8**	**ug/kg**	**J**
	208968	**Acenaphthylene**	**55.8**	**ug/kg**	
	62533	Aniline	17.9	ug/kg	UJ
	120127	**Anthracene**	**124**	**ug/kg**	
	1912249	Atrazine	17.9	ug/kg	U
	100527	Benzaldehyde	17.9	ug/kg	U
	95501	Benzene, 1,2-dichloro-	17.9	ug/kg	U
	541731	Benzene, 1,3-dichloro-	17.9	ug/kg	U
	106467	Benzene, 1,4-dichloro-	17.9	ug/kg	U
	100516	Benzenemethanol	89.7	ug/kg	UJ

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**157**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**209**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**187**	**ug/kg**	
	205992	**Benzo[b]Fluoranthene**	**385**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**235**	**ug/kg**	
	65850	Benzoic acid	101	ug/kg	UJ
	111444	bis(2-Chloroethyl)ether	17.9	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	17.9	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	89.7	ug/kg	U
	85687	Butylbenzylphthalate	89.7	ug/kg	U
	58082	Caffeine	17.9	ug/kg	U
	105602	Caprolactam	17.9	ug/kg	U
	218019	**Chrysene**	**257**	**ug/kg**	
	84742	Di-n-Butylphthalate	17.9	ug/kg	U
	117840	Di-n-octylphthalate	179	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**48.0**	**ug/kg**	
	132649	**Dibenzofuran**	**22.1**	**ug/kg**	
	84662	Diethyl phthalate	17.9	ug/kg	U
	131113	Dimethylphthalate	17.9	ug/kg	U
	98862	Ethanone, 1-phenyl-	35.9	ug/kg	U
	206440	**Fluoranthene**	**290**	**ug/kg**	**J**
	118741	Hexachlorobenzene	17.9	ug/kg	U
	87683	Hexachlorobutadiene	17.9	ug/kg	U
	77474	Hexachlorocyclopentadiene	35.9	ug/kg	U
	67721	Hexachloroethane	17.9	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**203**	**ug/kg**	
	78591	Isophorone	17.9	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	17.9	ug/kg	U
	62759	N-Nitrosodimethylamine	17.9	ug/kg	UJ
	621647	N-Nitrosodinpropylamine	17.9	ug/kg	U
	86306	n-Nitrosodiphenylamine	17.9	ug/kg	U
	91203	**Naphthalene**	**32.7**	**ug/kg**	
	90120	**Naphthalene, 1-methyl-**	**5.6**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**10.7**	**ug/kg**	**J**
	98953	Nitrobenzene	17.9	ug/kg	U
	87865	**Pentachlorophenol**	**220**	**ug/kg**	
	85018	**Phenanthrene**	**104**	**ug/kg**	
	108952	Phenol	17.9	ug/kg	U
	95487	Phenol, 2-methyl-	17.9	ug/kg	U
	129000	**Pyrene**	**243**	**ug/kg**	**J**
	483658	Retene	67.3	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	82	%Rec	
	2199691	1,2-Dichlorobenzene-d4	70	%Rec	
	93951736	2-chlorophenol-d4	86	%Rec	
	1718521	D10-Pyrene	86	%Rec	
	4165600	Nitrobenzene-d5	88	%Rec	
	367124	Phenol, 2-fluoro-	81	%Rec	
	4165622	Phenol-d5	87	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	86	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	**1058613**	**Stigmast-4-en-3-one**	**357**	**ug/kg**	**NJ**
		18525354	**Stigmast-7-en-3-ol, (3.beta.,5 .alpha.,24**	**814**	**ug/kg**	**NJ**
		***3008001**	**Unknown 01**	**358**	**ug/kg**	**NJ**
		***3005001**	**Unknown Hydrocarbon 01**	**214**	**ug/kg**	**NJ**
		***3005002**	**Unknown Hydrocarbon 02**	**604**	**ug/kg**	**NJ**
		***3005003**	**Unknown Hydrocarbon 03**	**517**	**ug/kg**	**NJ**

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 01433588
Type: Matrix Spike

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 205992	Benzo[b]Fluoranthene			NAR
	321608	1,1'-Biphenyl, 2-fluoro-	91	%Rec	
	120821	1,2,4-Trichlorobenzene	86.8	%Rec	
	2199691	1,2-Dichlorobenzene-d4	72	%Rec	
	122667	1,2-Diphenylhydrazine	88.7	%Rec	
	95954	2,4,5-Trichlorophenol	97.5	%Rec	
	88062	2,4,6-Trichlorophenol	93.0	%Rec	
	120832	2,4-Dichlorophenol	87.9	%Rec	
	105679	2,4-Dimethylphenol	80.1	%Rec	
	51285	2,4-Dinitrophenol	63.6	%Rec	
	121142	2,4-Dinitrotoluene	92.0	%Rec	
	606202	2,6-Dinitrotoluene	91.2	%Rec	
	91587	2-Chloronaphthalene	89.0	%Rec	
	95578	2-Chlorophenol	87.9	%Rec	
	93951736	2-chlorophenol-d4	82	%Rec	
	88744	2-Nitroaniline	98.4	%Rec	
	88755	2-Nitrophenol	96.9	%Rec	
	91941	3,3'-Dichlorobenzidine	35.3	%Rec	
	99092	3-Nitroaniline	53.0	%Rec	
	534521	4,6-Dinitro-2-methylphenol	76.6	%Rec	
	101553	4-Bromophenyl-Phenylether	90.4	%Rec	
	59507	4-Chloro-3-methylphenol	85.1	%Rec	
	106478	4-Chloroaniline	15.7	%Rec	
	7005723	4-Chlorophenyl-Phenylether	83.8	%Rec	
	106445	4-Methylphenol	83.6	%Rec	J
	100016	4-Nitroaniline	72.0	%Rec	
	100027	4-Nitrophenol	80.7	%Rec	
	86737	9H-Fluorene	83.6	%Rec	
	83329	Acenaphthene	81.2	%Rec	
	208968	Acenaphthylene	83.9	%Rec	
	62533	Aniline	14.7	%Rec	
	120127	Anthracene	85.6	%Rec	
	95501	Benzene, 1,2-dichloro-	72.2	%Rec	
	541731	Benzene, 1,3-dichloro-	70.8	%Rec	
	106467	Benzene, 1,4-dichloro-	70.8	%Rec	
	100516	Benzenemethanol	95.5	%Rec	
	56553	Benzo(a)anthracene	109	%Rec	

				Result	Units	Qlfr
Analytes	:	50328	Benzo(a)pyrene	102	%Rec	
		191242	Benzo(g,h,i)perylene	95.0	%Rec	
		207089	Benzo[k]fluoranthene	77.8	%Rec	
		65850	Benzoic acid	23.9	%Rec	
		111444	bis(2-Chloroethyl)ether	62.7	%Rec	
		108601	BIS(2-CHLOROISOPROPYL)ETHER	74.1	%Rec	
		117817	Bis(2-ethylhexyl) phthalate	86.7	%Rec	
		85687	Butylbenzylphthalate	86.0	%Rec	
		218019	Chrysene	109	%Rec	
		1718521	D10-Pyrene	94	%Rec	
		84742	Di-n-Butylphthalate	89.3	%Rec	
		117840	Di-n-octylphthalate	94.8	%Rec	
		53703	Dibenzo[a,h]anthracene	101	%Rec	
		132649	Dibenzofuran	91.6	%Rec	
		84662	Diethyl phthalate	80.9	%Rec	
		131113	Dimethylphthalate	83.0	%Rec	
		206440	Fluoranthene	151	%Rec	
		118741	Hexachlorobenzene	94.9	%Rec	
		87683	Hexachlorobutadiene	88.3	%Rec	
		77474	Hexachlorocyclopentadiene	66.7	%Rec	
		67721	Hexachloroethane	69.4	%Rec	
		193395	Indeno(1,2,3-cd)pyrene	118	%Rec	
		78591	Isophorone	92.1	%Rec	
		111911	Methane, bis(2-chloroethoxy)-	81.2	%Rec	
		62759	N-Nitrosodimethylamine	16.3	%Rec	
		621647	N-Nitrosodinpropylamine	89.2	%Rec	
		86306	n-Nitrosodiphenylamine	78.0	%Rec	
		91203	Naphthalene	85.2	%Rec	
		91576	Naphthalene, 2-methyl-	82.3	%Rec	
		98953	Nitrobenzene	90.9	%Rec	
		4165600	Nitrobenzene-d5	89	%Rec	
		87865	Pentachlorophenol	72.0	%Rec	
		85018	Phenanthrene	83.5	%Rec	
		108952	Phenol	92.4	%Rec	
		367124	Phenol, 2-fluoro-	89	%Rec	
		95487	Phenol, 2-methyl-	79.6	%Rec	
		4165622	Phenol-d5	87	%Rec	
		129000	Pyrene	155	%Rec	
		1718510	Terphenyl-d14	94	%Rec	

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: 01433588
Type: Matrix Spike Dupl

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 205992	Benzo[b]Fluoranthene			NAR
	321608	1,1'-Biphenyl, 2-fluoro-	87	%Rec	
	120821	1,2,4-Trichlorobenzene	78.0	%Rec	
	2199691	1,2-Dichlorobenzene-d4	66	%Rec	
	122667	1,2-Diphenylhydrazine	98.9	%Rec	
	95954	2,4,5-Trichlorophenol	113	%Rec	
	88062	2,4,6-Trichlorophenol	109	%Rec	
	120832	2,4-Dichlorophenol	98.1	%Rec	
	105679	2,4-Dimethylphenol	92.5	%Rec	
	51285	2,4-Dinitrophenol	64.2	%Rec	
	121142	2,4-Dinitrotoluene	102.5	%Rec	
	606202	2,6-Dinitrotoluene	104	%Rec	
	91587	2-Chloronaphthalene	91.6	%Rec	
	95578	2-Chlorophenol	85.6	%Rec	
	93951736	2-chlorophenol-d4	80	%Rec	
	88744	2-Nitroaniline	101	%Rec	
	88755	2-Nitrophenol	90.8	%Rec	
	91941	3,3'-Dichlorobenzidine	40.6	%Rec	
	99092	3-Nitroaniline	56.9	%Rec	
	534521	4,6-Dinitro-2-methylphenol	88.7	%Rec	
	101553	4-Bromophenyl-Phenylether	105	%Rec	
	59507	4-Chloro-3-methylphenol	103	%Rec	
	106478	4-Chloroaniline	19.5	%Rec	
	7005723	4-Chlorophenyl-Phenylether	93.9	%Rec	
	106445	4-Methylphenol	89.5	%Rec	
	100016	4-Nitroaniline	75.0	%Rec	
	100027	4-Nitrophenol	93.4	%Rec	
	86737	9H-Fluorene	93.4	%Rec	
	83329	Acenaphthene	89.7	%Rec	
	208968	Acenaphthylene	86.3	%Rec	
	62533	Aniline	15.5	%Rec	
	120127	Anthracene	94.4	%Rec	
	95501	Benzene, 1,2-dichloro-	66.4	%Rec	
	541731	Benzene, 1,3-dichloro-	64.1	%Rec	
	106467	Benzene, 1,4-dichloro-	64.1	%Rec	
	100516	Benzenemethanol	95.4	%Rec	
	56553	Benzo(a)anthracene	101	%Rec	

			Result	Units	Qlfr
Analytes	50328	Benzo(a)pyrene	99.1	%Rec	
	191242	Benzo(g,h,i)perylene	101	%Rec	
	207089	Benzo[k]fluoranthene	81.8	%Rec	
	65850	Benzoic acid	19.6	%Rec	
	111444	bis(2-Chloroethyl)ether	57.9	%Rec	
	108601	BIS(2-CHLOROISOPROPYL)ETHER	67.6	%Rec	
	117817	Bis(2-ethylhexyl) phthalate	105	%Rec	
	85687	Butylbenzylphthalate	103	%Rec	
	218019	Chrysene	97.9	%Rec	
	1718521	D10-Pyrene	97	%Rec	
	84742	Di-n-Butylphthalate	107	%Rec	
	117840	Di-n-octylphthalate	114	%Rec	
	53703	Dibenzo[a,h]anthracene	105	%Rec	
	132649	Dibenzofuran	93.2	%Rec	
	84662	Diethyl phthalate	93.7	%Rec	
	131113	Dimethylphthalate	96.4	%Rec	
	206440	Fluoranthene	102	%Rec	
	118741	Hexachlorobenzene	104	%Rec	
	87683	Hexachlorobutadiene	76.5	%Rec	
	77474	Hexachlorocyclopentadiene	57.4	%Rec	
	67721	Hexachloroethane	64.2	%Rec	
	193395	Indeno(1,2,3-cd)pyrene	111	%Rec	
	78591	Isophorone	87.0	%Rec	
	111911	Methane, bis(2-chloroethoxy)-	73.6	%Rec	
	62759	N-Nitrosodimethylamine	23.3	%Rec	
	621647	N-Nitrosodinpropylamine	83.1	%Rec	
	86306	n-Nitrosodiphenylamine	91.3	%Rec	
	91203	Naphthalene	77.1	%Rec	
	91576	Naphthalene, 2-methyl-	83.3	%Rec	
	98953	Nitrobenzene	80.4	%Rec	
	4165600	Nitrobenzene-d5	78	%Rec	
	87865	Pentachlorophenol	93.6	%Rec	
	85018	Phenanthrene	95.1	%Rec	
	108952	Phenol	91.8	%Rec	
	367124	Phenol, 2-fluoro-	80	%Rec	
	95487	Phenol, 2-methyl-	78.2	%Rec	
	4165622	Phenol-d5	85	%Rec	
	129000	Pyrene	98.5	%Rec	
	1718510	Terphenyl-d14	95	%Rec	

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: OBS1295A1
Type: Blank

			Result	Units	Qlfr
GCMS					
Parameter :	Semi-volatiles				
Method :	8270-M	BNA			
Prep Method:	3510M/3540				
Analytes :	92524	1,1'-Biphenyl	20.0	ug/kg	U
	120821	1,2,4-Trichlorobenzene	20.0	ug/kg	U
	122667	1,2-Diphenylhydrazine	20.0	ug/kg	U
	95954	2,4,5-Trichlorophenol	40.0	ug/kg	U
	88062	2,4,6-Trichlorophenol	40.0	ug/kg	U
	120832	2,4-Dichlorophenol	20.0	ug/kg	U
	105679	2,4-Dimethylphenol	20.0	ug/kg	U
	51285	2,4-Dinitrophenol	200	ug/kg	U
	121142	2,4-Dinitrotoluene	100	ug/kg	U
	606202	2,6-Dinitrotoluene	200	ug/kg	U
	91587	2-Chloronaphthalene	20.0	ug/kg	U
	95578	2-Chlorophenol	20.0	ug/kg	U
	88744	2-Nitroaniline	100	ug/kg	U
	88755	2-Nitrophenol	100	ug/kg	U
	91941	3,3'-Dichlorobenzidine	80.0	ug/kg	U
	99092	3-Nitroaniline	40.0	ug/kg	U
	360689	3B-Coprostanol	400	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	100	ug/kg	U
	101553	4-Bromophenyl-Phenylether	20.0	ug/kg	U
	59507	4-Chloro-3-methylphenol	20.0	ug/kg	U
	106478	4-Chloroaniline	20.0	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	20.0	ug/kg	U
	106445	4-Methylphenol	20.0	ug/kg	U
	100016	4-Nitroaniline	40.0	ug/kg	U
	100027	4-Nitrophenol	100	ug/kg	U
	86748	9H-Carbazole	20.0	ug/kg	U
	86737	9H-Fluorene	20.0	ug/kg	U
	83329	Acenaphthene	20.0	ug/kg	U
	208968	Acenaphthylene	20.0	ug/kg	U
	62533	Aniline	20.0	ug/kg	U
	120127	Anthracene	20.0	ug/kg	U
	1912249	Atrazine	20.0	ug/kg	U
	100527	Benzaldehyde	20.0	ug/kg	U
	95501	Benzene, 1,2-dichloro-	20.0	ug/kg	U
	541731	Benzene, 1,3-dichloro-	20.0	ug/kg	U
	106467	Benzene, 1,4-dichloro-	20.0	ug/kg	U
	100516	**Benzenemethanol**	**141**	**ug/kg**	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	20.0	ug/kg	U
	50328	Benzo(a)pyrene	20.0	ug/kg	U
	191242	Benzo(g,h,i)perylene	20.0	ug/kg	U
	205992	Benzo[b]Fluoranthene	20.0	ug/kg	U
	207089	Benzo[k]fluoranthene	20.0	ug/kg	U
	65850	Benzoic acid	100	ug/kg	U
	111444	bis(2-Chloroethyl)ether	20.0	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	20.0	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	100	ug/kg	U
	85687	Butylbenzylphthalate	100	ug/kg	U
	58082	Caffeine	20.0	ug/kg	U
	105602	Caprolactam	20.0	ug/kg	U
	218019	Chrysene	20.0	ug/kg	U
	84742	Di-n-Butylphthalate	20.0	ug/kg	U
	117840	Di-n-octylphthalate	200	ug/kg	U
	53703	Dibenzo[a,h]anthracene	20.0	ug/kg	U
	132649	Dibenzofuran	20.0	ug/kg	U
	84662	Diethyl phthalate	20.0	ug/kg	U
	131113	Dimethylphthalate	20.0	ug/kg	U
	98862	Ethanone, 1-phenyl-	40.0	ug/kg	U
	206440	Fluoranthene	20.0	ug/kg	U
	118741	Hexachlorobenzene	20.0	ug/kg	U
	87683	Hexachlorobutadiene	20.0	ug/kg	U
	77474	Hexachlorocyclopentadiene	40.0	ug/kg	U
	67721	Hexachloroethane	20.0	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	20.0	ug/kg	U
	78591	Isophorone	20.0	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	20.0	ug/kg	U
	62759	N-Nitrosodimethylamine	20.0	ug/kg	U
	621647	N-Nitrosodinpropylamine	20.0	ug/kg	U
	86306	n-Nitrosodiphenylamine	20.0	ug/kg	U
	91203	Naphthalene	20.0	ug/kg	U
	90120	Naphthalene, 1-methyl-	20.0	ug/kg	U
	91576	Naphthalene, 2-methyl-	20.0	ug/kg	U
	98953	Nitrobenzene	20.0	ug/kg	U
	87865	Pentachlorophenol	100	ug/kg	U
	85018	Phenanthrene	20.0	ug/kg	U
	108952	Phenol	20.0	ug/kg	U
	95487	Phenol, 2-methyl-	20.0	ug/kg	U
	129000	Pyrene	20.0	ug/kg	U
	483658	Retene	75.0	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	87	%Rec	
	2199691	1,2-Dichlorobenzene-d4	82	%Rec	
	93951736	2-chlorophenol-d4	84	%Rec	
	1718521	D10-Pyrene	95	%Rec	
	4165600	Nitrobenzene-d5	89	%Rec	
	367124	Phenol, 2-fluoro-	90	%Rec	
	4165622	Phenol-d5	87	%Rec	

			Result	Units	Qlfr
Analytes	: 1718510	Terphenyl-d14	90	%Rec	
Parameter	: Semi-volatiles - Tentatives				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: **20019641**	**2(5H)-Furanone, 5,5-dimethyl-**	**29.2**	**ug/kg**	**NJ**
	930687	**2-Cyclohexen-1-one**	**19.6**	**ug/kg**	**NJ**
	123422	**2-Pentanone, 4-hydroxy-4-methy l-**	**152000**	**ug/kg**	**NJ**
	141797	**3-Penten-2-one, 4-methyl-**	**331**	**ug/kg**	**NJ**
	540976	**Cyclohexasiloxane, dodecamethy l-**	**68.1**	**ug/kg**	**NJ**
	541026	**Cyclopentasiloxane, decamethyl -**	**36.8**	**ug/kg**	**NJ**
	57103	**Hexadecanoic acid**	**50.4**	**ug/kg**	**NJ**
	599644	**Phenol, 4-(1-methyl-1-phenylet hyl)-**	**16.1**	**ug/kg**	**NJ**
	31396335	**Pyridine, 3-butyl-, 1-oxide**	**17.2**	**ug/kg**	**NJ**
	***3009003**	**Surrogate Artifact #3**	**15.3**	**ug/kg**	**NJ**
	***3008001**	**Unknown 01**	**35.5**	**ug/kg**	**NJ**
	***3008002**	**Unknown 02**	**65.7**	**ug/kg**	**NJ**
	***3008003**	**Unknown 03**	**60.2**	**ug/kg**	**NJ**
	***3008005**	**Unknown 05**	**41.0**	**ug/kg**	**NJ**
	***3008006**	**Unknown 06**	**104**	**ug/kg**	**NJ**
	***3008007**	**Unknown 07**	**51.0**	**ug/kg**	**NJ**
	***3008008**	**Unknown 08**	**33.6**	**ug/kg**	**NJ**
	***3008009**	**Unknown 09**	**19.7**	**ug/kg**	**NJ**

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

Project Code: FSP-009G
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HAHN GOLD
Account Code: 01T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: OBS1295A2
Type: Blank

			Result	Units	Qlfr
GCMS					
Parameter :	Semi-volatiles				
Method :	8270-M	BNA			
Prep Method:	3510M/3540				
Analytes :	92524	1,1'-Biphenyl	20.0	ug/kg	U
	120821	1,2,4-Trichlorobenzene	20.0	ug/kg	U
	122667	1,2-Diphenylhydrazine	20.0	ug/kg	U
	95954	2,4,5-Trichlorophenol	40.0	ug/kg	U
	88062	2,4,6-Trichlorophenol	40.0	ug/kg	U
	120832	2,4-Dichlorophenol	20.0	ug/kg	U
	105679	2,4-Dimethylphenol	20.0	ug/kg	U
	51285	2,4-Dinitrophenol	200	ug/kg	U
	121142	2,4-Dinitrotoluene	100	ug/kg	U
	606202	2,6-Dinitrotoluene	200	ug/kg	U
	91587	2-Chloronaphthalene	20.0	ug/kg	U
	95578	2-Chlorophenol	20.0	ug/kg	U
	88744	2-Nitroaniline	100	ug/kg	U
	88755	2-Nitrophenol	100	ug/kg	U
	91941	3,3'-Dichlorobenzidine	80.0	ug/kg	U
	99092	3-Nitroaniline	40.0	ug/kg	U
	360689	3B-Coprostanol	400	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	100	ug/kg	U
	101553	4-Bromophenyl-Phenylether	20.0	ug/kg	U
	59507	4-Chloro-3-methylphenol	20.0	ug/kg	U
	106478	4-Chloroaniline	20.0	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	20.0	ug/kg	U
	106445	4-Methylphenol	20.0	ug/kg	U
	100016	4-Nitroaniline	40.0	ug/kg	U
	100027	4-Nitrophenol	100	ug/kg	U
	86748	9H-Carbazole	20.0	ug/kg	U
	86737	9H-Fluorene	20.0	ug/kg	U
	83329	Acenaphthene	20.0	ug/kg	U
	208968	Acenaphthylene	20.0	ug/kg	U
	62533	Aniline	20.0	ug/kg	U
	120127	Anthracene	20.0	ug/kg	U
	1912249	Atrazine	20.0	ug/kg	U
	100527	Benzaldehyde	20.0	ug/kg	U
	95501	Benzene, 1,2-dichloro-	20.0	ug/kg	U
	541731	Benzene, 1,3-dichloro-	20.0	ug/kg	U
	106467	Benzene, 1,4-dichloro-	20.0	ug/kg	U
	100516	**Benzenemethanol**	**123**	**ug/kg**	

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	20.0	ug/kg	U
	50328	Benzo(a)pyrene	20.0	ug/kg	U
	191242	Benzo(g,h,i)perylene	20.0	ug/kg	U
	205992	Benzo[b]Fluoranthene	20.0	ug/kg	U
	207089	Benzo[k]fluoranthene	20.0	ug/kg	U
	65850	Benzoic acid	100	ug/kg	U
	111444	bis(2-Chloroethyl)ether	20.0	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	20.0	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	100	ug/kg	U
	85687	Butylbenzylphthalate	100	ug/kg	U
	58082	Caffeine	20.0	ug/kg	U
	105602	Caprolactam	20.0	ug/kg	U
	218019	Chrysene	20.0	ug/kg	U
	84742	Di-n-Butylphthalate	20.0	ug/kg	U
	117840	Di-n-octylphthalate	200	ug/kg	U
	53703	Dibenzo[a,h]anthracene	20.0	ug/kg	U
	132649	Dibenzofuran	20.0	ug/kg	U
	84662	Diethyl phthalate	20.0	ug/kg	U
	131113	Dimethylphthalate	20.0	ug/kg	U
	98862	Ethanone, 1-phenyl-	40.0	ug/kg	U
	206440	Fluoranthene	20.0	ug/kg	U
	118741	Hexachlorobenzene	20.0	ug/kg	U
	87683	Hexachlorobutadiene	20.0	ug/kg	U
	77474	Hexachlorocyclopentadiene	40.0	ug/kg	U
	67721	Hexachloroethane	20.0	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	20.0	ug/kg	U
	78591	Isophorone	20.0	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	20.0	ug/kg	U
	62759	N-Nitrosodimethylamine	20.0	ug/kg	U
	621647	N-Nitrosodinpropylamine	20.0	ug/kg	U
	86306	n-Nitrosodiphenylamine	20.0	ug/kg	U
	91203	Naphthalene	20.0	ug/kg	U
	90120	Naphthalene, 1-methyl-	20.0	ug/kg	U
	91576	Naphthalene, 2-methyl-	20.0	ug/kg	U
	98953	Nitrobenzene	20.0	ug/kg	U
	87865	Pentachlorophenol	100	ug/kg	U
	85018	Phenanthrene	20.0	ug/kg	U
	108952	**Phenol**	**26.2**	**ug/kg**	
	95487	**Phenol, 2-methyl-**	**47.5**	**ug/kg**	
	129000	Pyrene	20.0	ug/kg	U
	483658	Retene	75.0	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	84	%Rec	
	2199691	1,2-Dichlorobenzene-d4	79	%Rec	
	93951736	2-chlorophenol-d4	83	%Rec	
	1718521	D10-Pyrene	93	%Rec	
	4165600	Nitrobenzene-d5	84	%Rec	
	367124	Phenol, 2-fluoro-	89	%Rec	
	4165622	Phenol-d5	85	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009G

			Result	Units	Qlfr
Analytes	: 1718510	Terphenyl-d14	89	%Rec	
Parameter	: Semi-volatiles - Tentatives				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 20825712	2(3H)-Furanone	32.5	ug/kg	NJ
	110134	2,5-Hexanedione	57.7	ug/kg	NJ
	930687	2-Cyclohexen-1-one	23.7	ug/kg	NJ
	40467047	2-Hexene, 2,5,5-trimethyl-	33.3	ug/kg	NJ
	123422	2-Pentanone, 4-hydroxy-4-methy l-	126000	ug/kg	NJ
	141797	3-Penten-2-one, 4-methyl-	323	ug/kg	NJ
	540976	Cyclohexasiloxane, dodecamethy l-	180	ug/kg	NJ
	541026	Cyclopentasiloxane, decamethyl -	52.4	ug/kg	NJ
	57103	Hexadecanoic acid	56.9	ug/kg	NJ
	57114	Octadecanoic acid	25.0	ug/kg	NJ
	599644	Phenol, 4-(1-methyl-1-phenylet hyl)-	21.3	ug/kg	NJ
	*3008001	Unknown 01	56.9	ug/kg	NJ
	*3008002	Unknown 02	39.7	ug/kg	NJ
	*3008003	Unknown 03	29.9	ug/kg	NJ
	*3008004	Unknown 04	75.9	ug/kg	NJ
	*3008005	Unknown 05	34.0	ug/kg	NJ
	*3008006	Unknown 06	33.9	ug/kg	NJ
	*3008007	Unknown 07	191	ug/kg	NJ
	*3008008	Unknown 08	40.9	ug/kg	NJ
	*3008009	Unknown 09	72.0	ug/kg	NJ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

12/10/01

January 28, 2002

212W 213W

MEMORANDUM

SUBJECT: Data Validation Report of Semivolatiles' Results for the Wyckoff-Thermal Remediation Project Samples 01503500, 01503501, 01503502, and 01503503
212-1 212 212-2 213

FROM: Gerald H. Dodo, Chemist
USEPA

TO: Hanh Gold
USEPA

CC: Travis Shaw
USACE

The following is a data validation report of semivolatiles analyses' results for soil samples collected for the Wyckoff-Thermal Remediation project. The samples were analyzed by the USEPA Region 10 Laboratory ESAT Team located in Manchester, WA using USEPA SW846 Method 8270C. The analyses' results were delivered as ESAT document number ES10-0-1270 under Technical Direction Form 1075. This report covers the samples listed above.

The project code for these samples is FSP-009G. The account number is 02T10P50102D10P4LA00.

Data qualifications

The following comments refer to laboratory performance meeting the Quality Control specifications outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99).

I. Holding Times: Acceptable

The recommended holding time for the extraction of soil samples is 14 days from the date of sampling. Extracts have a holding time limit of 40 days from the time of preparation. All samples were extracted and analyzed within holding time maximums.

II. GC/MS Tuning and Performance: Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance met criteria. All sample analyses were preceded by a tune less than 12 hours prior to analysis. No qualifiers were applied on the basis of the tuning data.

III. Initial Calibration: Acceptable

A five- to nine-point initial calibration was performed on 12/27/01. Correlation coefficients were $\geq$0.99. Average RRFs met the criteria of $\geq$0.05. %RSDs of the RRFs met the criteria of $\leq$30%. No qualifiers were applied based on the initial calibration.

IV. Continuing Calibration:

The continuing calibration check standard met the criteria for frequency of analysis and RRT windows for all target compounds and surrogates. The RRFs were $\geq$0.05 and the accuracy for the target compounds met the criteria of 75-125% of the true value except for the following.

12/31/01 Samples01503500, 01503501, 01503502, 01503503, Matrix Spikes 01503500S1, and 01503500S2.

Benzaldehyde and benzoic acid resulted with <75% of the true value. The associated sample results for these compounds were non-detected and were qualified UJ.

V. Blanks:

Method blanks were prepared and analyzed with each sample extraction batch. Target compounds detected in the samples were reported without qualification if the sample result area integration exceeded ten times that of the blank for common contaminates (e.g., phthalates) or five times that of the blank for the other target compounds. Detected sample results were qualified U if the area integration was below these criteria. The sample concentration or the sample quantitation limit, whichever is greater, was reported as the qualified result. Tentatively identified compounds detected in the blanks were deleted from the sample results.

VI. Surrogates:

The SW846 Method 8270C and the Functional Guidelines specifications for surrogate recoveries were applied. Most of the surrogate recoveries for the samples were above the upper limits of the criteria. Recoveries ranged from 90-152%. Although it's possible that the surrogate standard solution may have concentrated to cause artificially high recoveries, as a

conservative measure all detected sample results were qualified J.

VII. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

An MS/MSD analysis was performed using sample 01503500 (S1/S2). The MS/MSD criteria as described in the CLP Statement of Work and the Region 10 acceptance ranges (50-150% recovery, ≤50% relative percent difference, RPD) were applied. The following recoveries did not meet the applied criteria:

Compound	Recovery (S1/S2)
benzaldehyde	5/12
phenol	110/114
2-chlorophenol	113/121
4-chloroaniline	42/42
4-chloro-3-methylphenol	117/121
2,6-dinitrotoluene	103/113
4-nitrophenol	/128
2,4-dinitrotoluene	100/108
pentachlorophenol	/112
3,3'-dichlorobenzidine	7/11

The compounds above were not detected in sample 01503500. The reported benzaldehyde and 3,3-dichlorobenzidine results for this sample were qualified R due to the <10% recoveries. The reported 4-chloroaniline result for this sample was qualified UJ due to the low recoveries. No qualifiers were applied based on the high recoveries for the other compounds above since these results do not indicate a problem with the reported quantitation limits.

VIII. Internal Standard Performance: Acceptable

The retention time variations of all internal standards were within 30 seconds of the continuing calibration standards. The %areas of all internal standards were within the specified 50% to 200% of the continuing calibration standards. No qualifiers were applied based on the internal standards.

IX. Target Compound Identification: Acceptable

All detected target compounds' relative retention times were within acceptable limits of the related standards in the continuing calibration standard. Criteria were met for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

X. Compound Quantitation: Acceptable

Calculations were based on the initial calibration. Sample quantitation limits were adjusted appropriately as according to

sample amounts and calibration data. Detected results below the sample quantitation limits were qualified J.

XI. Tentatively Identified Compounds: Acceptable

Spectra for all tentatively identified compounds (TICs) met criteria for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

Overall Assessment for the Case

The usefulness of the data is based on the criteria outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99). All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Gerald Dodo at the Region 10 laboratory, phone number (360) 871-8728.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported result.
J	-	The analyte was positively identified. The associated numerical result is an estimate.
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.
R	-	The data are unusable for all purposes.
N	-	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.
UJ	-	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
NAF	-	Not analyzed for.
NAR	-	No analytical result.
*	-	The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

Project Code:	FSP-009G	Parameter:	BNA	Sample:	01503500
Project Name:	WYCKOFF THERMAL 1	Method:	BNA	Type:	0
Project Officer:	HANH GOLD	Matrix:	Solid	Initial Wt./Vol:	
Account Code:	01T10P50102D10P4LA00	Station:		Final Volume:	

Collected:	12/10/01	Prepped:	12/19/01	Analyzed:	12/31/01	Promised:	
Received:	12/19/01	Released:		Reviewed:	1/28/02		

VERIFIED ___ /___/___ _____

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
62759	N-Nitrosodimethylamine	800	ug/kg	U			
110861	Pyridine	800	ug/kg	U			
100527	Benzaldehyde			R			
62533	Aniline	80.0	ug/kg	U			
108952	Phenol	80.0	ug/kg	U			
111444	bis(2-Chloroethyl)ether	80.0	ug/kg	U			
95578	2-Chlorophenol	80.0	ug/kg	U			
541731	Benzene, 1,3-dichloro-	80.0	ug/kg	U			
106467	Benzene, 1,4-dichloro-	80.0	ug/kg	U			
95501	Benzene, 1,2-dichloro-	80.0	ug/kg	U			
100516	Benzenemethanol	80.0	ug/kg	U			
95487	Phenol, 2-methyl-	80.0	ug/kg	U			
108601	BIS(2-CHLOROISOPROPYL)E	80.0	ug/kg	U			
98862	Ethanone, 1-phenyl-	80.0	ug/kg	U			
621647	N-Nitrosodinpropylamine	80.0	ug/kg	U			
106445	4-Methylphenol	80.0	ug/kg	U			
67721	Hexachloroethane	80.0	ug/kg	U			
98953	Nitrobenzene	80.0	ug/kg	U			
78591	Isophorone	80.0	ug/kg	U			
88755	2-Nitrophenol	400	ug/kg	U			
105679	2,4-Dimethylphenol	80.0	ug/kg	U			
111911	Methane, bis(2-chloroethoxy)-	80.0	ug/kg	U			
65850	Benzoic acid	800	ug/kg	UJ			
120832	2,4-Dichlorophenol	80.0	ug/kg	U			
120821	1,2,4-Trichlorobenzene	80.0	ug/kg	U			
91203	Naphthalene	80.0	ug/kg	U			
106478	4-Chloroaniline	80.0	ug/kg	UJ			
87683	Hexachlorobutadiene	80.0	ug/kg	U			
105602	Caprolactam	160	ug/kg	U			
59507	4-Chloro-3-methylphenol	80.0	ug/kg	U			
91576	Naphthalene, 2-methyl-	80.0	ug/kg	U			
90120	Naphthalene, 1-methyl-	80.0	ug/kg	U			
77474	Hexachlorocyclopentadiene	400	ug/kg	U			

Manchester Environmental Laboratory

GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
88062	2,4,6-Trichlorophenol	400	ug/kg	U			
95954	2,4,5-Trichlorophenol	80.0	ug/kg	U			
92524	1,1'-Biphenyl	80.0	ug/kg	U			
91587	2-Chloronaphthalene	80.0	ug/kg	U			
88744	2-Nitroaniline	160	ug/kg	U			
131113	Dimethylphthalate	80.0	ug/kg	U			
606202	2,6-Dinitrotoluene	400	ug/kg	U			
208968	Acenaphthylene	80.0	ug/kg	U			
99092	3-Nitroaniline	400	ug/kg	U			
83329	Acenaphthene	80.0	ug/kg	U			
51285	2,4-Dinitrophenol	1600	ug/kg	U			
100027	4-Nitrophenol	800	ug/kg	U			
132649	Dibenzofuran	80.0	ug/kg	U			
121142	2,4-Dinitrotoluene	800	ug/kg	U			
84662	Diethyl phthalate	80.0	ug/kg	U			
86737	9H-Fluorene	80.0	ug/kg	U			
7005723	4-Chlorophenyl-Phenylether	80.0	ug/kg	U			
100016	4-Nitroaniline	400	ug/kg	U			
534521	4,6-Dinitro-2-methylphenol	800	ug/kg	U			
86306	n-Nitrosodiphenylamine	80.0	ug/kg	U			
101553	4-Bromophenyl-Phenylether	80.0	ug/kg	U			
118741	Hexachlorobenzene	80.0	ug/kg	U			
1912249	Atrazine	80.0	ug/kg	U			
87865	Pentachlorophenol	400	ug/kg	U			
85018	Phenanthrene	80.0	ug/kg	U			
120127	Anthracene	80.0	ug/kg	U			
58082	Caffeine	80.0	ug/kg	U			
86748	9H-Carbazole	80.0	ug/kg	U			
84742	Di-n-Butylphthalate	80.0	ug/kg	U			
92875	Benzidine	800	ug/kg	U			
206440	Fluoranthene	9.2	ug/kg	J			
129000	Pyrene	17.2	ug/kg	J			
483658	Retene	80.0	ug/kg	U			
85687	Butylbenzylphthalate	400	ug/kg	U			
56553	Benzo(a)anthracene	80.0	ug/kg	U			
91941	3,3'-Dichlorobenzidine			R			
218019	Chrysene	80.0	ug/kg	U			
117817	Bis(2-ethylhexyl) phthalate	400	ug/kg	U			
117840	Di-n-octylphthalate	400	ug/kg	U			
205992	Benzo[b]Fluoranthene	20.1	ug/kg	J			
207089	Benzo[k]fluoranthene	80.0	ug/kg	U			

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
50328	Benzo(a)pyrene	80.0	ug/kg	U			
360689	3B-Coprostanol	1600	ug/kg	U			
193395	Indeno(1,2,3-cd)pyrene	800	ug/kg	U			
53703	Dibenzo[a,h]anthracene	400	ug/kg	U			
191242	Benzo(g,h,i)perylene	400	ug/kg	U			
367124	Phenol, 2-fluoro-	119	%Rec				
4165622	Phenol-d5	135	%Rec				
93951736	2-chlorophenol-d4	139	%Rec				
2199691	1,2-Dichlorobenzene-d4	99	%Rec				
4165600	Nitrobenzene-d5	124	%Rec				
321608	1,1'-Biphenyl, 2-fluoro-	132	%Rec				
1718521	D10-Pyrene	130	%Rec				
1718510	Terphenyl-d14	136	%Rec				

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

Project Code:	FSP-009G	Parameter:	BNA-TIC	Sample:	01503500
Project Name:	WYCKOFF THERMAL]	Method:	BNA	Type:	0
Project Officer:	HANH GOLD	Matrix:	Solid	Initial Wt./Vol:	
Account Code:	01T10P50102D10P4LA00	Station:		Final Volume:	

Collected:	12/10/01	Prepped:		Analyzed: 12/31/01	Promised:
Received:	12/19/01	Released:		Reviewed: 1/28/02	

VERIFIED ___ /___/___ _____

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
2896608	1,3-Benzenediol, 4-ethyl-	670	ug/kg	NJ			
*3008001	Unknown 01	386	ug/kg	NJ			
*3008002	Unknown 02	4910	ug/kg	NJ			

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

Project Code:	FSP-009G	Parameter:	BNA	Sample:	01503500
Project Name:	WYCKOFF THERMAL I	Method:	BNA	Type:	S1
Project Officer:	HANH GOLD	Matrix:	Solid	Initial Wt./Vol:	
Account Code:	01T10P50102D10P4LA00	Station:		Final Volume:	

Collected:		Prepped:	12/19/01	Analyzed:	12/31/01
Received:		Released:		Reviewed:	1/28/02

Promised:

VERIFIED ___ /___/___ _____

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
100527	Benzaldehyde	5.2	%Rec				
108952	Phenol	110	%Rec				
111444	bis(2-Chloroethyl)ether	109	%Rec				
95578	2-Chlorophenol	113	%Rec				
95501	Benzene, 1,2-dichloro-	123	%Rec				
95487	Phenol, 2-methyl-	115	%Rec				
108601	BIS(2-CHLOROISOPROPYL)E	87.5	%Rec				
98862	Ethanone, 1-phenyl-	99.3	%Rec				
621647	N-Nitrosodinpropylamine	114	%Rec				
106445	4-Methylphenol	118	%Rec				
67721	Hexachloroethane	102	%Rec				
98953	Nitrobenzene	114	%Rec				
78591	Isophorone	115	%Rec				
88755	2-Nitrophenol	103	%Rec				
105679	2,4-Dimethylphenol	81.5	%Rec				
111911	Methane, bis(2-chloroethoxy)-	112	%Rec				
120832	2,4-Dichlorophenol	109	%Rec				
91203	Naphthalene	107	%Rec				
106478	4-Chloroaniline	41.6	%Rec				
87683	Hexachlorobutadiene	106	%Rec				
105602	Caprolactam	95.4	%Rec				
59507	4-Chloro-3-methylphenol	117	%Rec				
91576	Naphthalene, 2-methyl-	107	%Rec				
77474	Hexachlorocyclopentadiene	67.5	%Rec				
88062	2,4,6-Trichlorophenol	99.7	%Rec				
95954	2,4,5-Trichlorophenol	121	%Rec				
92524	1,1'-Biphenyl	113	%Rec				
91587	2-Chloronaphthalene	112	%Rec				
88744	2-Nitroaniline	103	%Rec				
131113	Dimethylphthalate	111	%Rec				
606202	2,6-Dinitrotoluene	103	%Rec				
208968	Acenaphthylene	113	%Rec				
99092	3-Nitroaniline	64.7	%Rec				

GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
83329	Acenaphthene	111	%Rec				
51285	2,4-Dinitrophenol	121	%Rec				
100027	4-Nitrophenol	109	%Rec				
132649	Dibenzofuran	103	%Rec				
121142	2,4-Dinitrotoluene	99.9	%Rec				
84662	Diethyl phthalate	110	%Rec				
86737	9H-Fluorene	112	%Rec				
7005723	4-Chlorophenyl-Phenylether	108	%Rec				
100016	4-Nitroaniline	90.0	%Rec				
534521	4,6-Dinitro-2-methylphenol	99.9	%Rec				
86306	n-Nitrosodiphenylamine	114	%Rec				
101553	4-Bromophenyl-Phenylether	113	%Rec				
118741	Hexachlorobenzene	113	%Rec				
1912249	Atrazine	120	%Rec				
87865	Pentachlorophenol	105	%Rec				
85018	Phenanthrene	115	%Rec				
120127	Anthracene	119	%Rec				
86748	9H-Carbazole	116	%Rec				
84742	Di-n-Butylphthalate	117	%Rec				
206440	Fluoranthene	119	%Rec				
129000	Pyrene	112	%Rec				
85687	Butylbenzylphthalate	109	%Rec				
56553	Benzo(a)anthracene	115	%Rec				
91941	3,3'-Dichlorobenzidine	6.9	%Rec				
218019	Chrysene	109	%Rec				
117817	Bis(2-ethylhexyl) phthalate	114	%Rec				
117840	Di-n-octylphthalate	117	%Rec				
205992	Benzo[b]Fluoranthene	111	%Rec				
207089	Benzo[k]fluoranthene	116	%Rec				
50328	Benzo(a)pyrene	106	%Rec				
193395	Indeno(1,2,3-cd)pyrene	126	%Rec				
53703	Dibenzo[a,h]anthracene	116	%Rec				
191242	Benzo(g,h,i)perylene	123	%Rec				
367124	Phenol, 2-fluoro-	122	%Rec				
4165622	Phenol-d5	136	%Rec				
93951736	2-chlorophenol-d4	140	%Rec				
2199691	1,2-Dichlorobenzene-d4	123	%Rec				
4165600	Nitrobenzene-d5	126	%Rec				
321608	1,1'-Biphenyl, 2-fluoro-	128	%Rec				
1718521	D10-Pyrene	123	%Rec				

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
1718510	**Terphenyl-d14**	**130**	**%Rec**				

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

Project Code:	FSP-009G	Parameter:	BNA	Sample:	01503500
Project Name:	WYCKOFF THERMAL I	Method:	BNA	Type:	S2
Project Officer:	HANH GOLD	Matrix:	Solid	Initial Wt./Vol:	
Account Code:	01T10P50102D10P4LA00	Station:		Final Volume:	

Collected:		Prepped:	12/19/01	Analyzed:	12/31/01	Promised:
Received:		Released:		Reviewed:	1/28/02	

VERIFIED ___/___/___ _____

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
100527	Benzaldehyde	12.1	%Rec				
108952	Phenol	114	%Rec				
111444	bis(2-Chloroethyl)ether	115	%Rec				
95578	2-Chlorophenol	121	%Rec				
95501	Benzene, 1,2-dichloro-	129	%Rec				
95487	Phenol, 2-methyl-	121	%Rec				
108601	BIS(2-CHLOROISOPROPYL)E	92.4	%Rec				
98862	Ethanone, 1-phenyl-	116	%Rec				
621647	N-Nitrosodinpropylamine	122	%Rec				
106445	4-Methylphenol	124	%Rec				
67721	Hexachloroethane	108	%Rec				
98953	Nitrobenzene	120	%Rec				
78591	Isophorone	124	%Rec				
88755	2-Nitrophenol	110	%Rec				
105679	2,4-Dimethylphenol	80.8	%Rec				
111911	Methane, bis(2-chloroethoxy)-	114	%Rec				
120832	2,4-Dichlorophenol	116	%Rec				
91203	Naphthalene	112	%Rec				
106478	4-Chloroaniline	42.1	%Rec				
87683	Hexachlorobutadiene	111	%Rec				
105602	Caprolactam	101	%Rec				
59507	4-Chloro-3-methylphenol	121	%Rec				
91576	Naphthalene, 2-methyl-	111	%Rec				
77474	Hexachlorocyclopentadiene	70.0	%Rec				
88062	2,4,6-Trichlorophenol	109	%Rec				
95954	2,4,5-Trichlorophenol	129	%Rec				
92524	1,1'-Biphenyl	120	%Rec				
91587	2-Chloronaphthalene	120	%Rec				
88744	2-Nitroaniline	108	%Rec				
131113	Dimethylphthalate	119	%Rec				
606202	2,6-Dinitrotoluene	113	%Rec				
208968	Acenaphthylene	118	%Rec				
99092	3-Nitroaniline	76.7	%Rec				

Manchester Environmental Laboratory

GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
83329	Acenaphthene	118	%Rec				
51285	2,4-Dinitrophenol	125	%Rec				
100027	4-Nitrophenol	128	%Rec				
132649	Dibenzofuran	111	%Rec				
121142	2,4-Dinitrotoluene	108	%Rec				
84662	Diethyl phthalate	119	%Rec				
86737	9H-Fluorene	122	%Rec				
7005723	4-Chlorophenyl-Phenylether	114	%Rec				
100016	4-Nitroaniline	101	%Rec				
534521	4,6-Dinitro-2-methylphenol	107	%Rec				
86306	n-Nitrosodiphenylamine	119	%Rec				
101553	4-Bromophenyl-Phenylether	118	%Rec				
118741	Hexachlorobenzene	119	%Rec				
1912249	Atrazine	131	%Rec				
87865	Pentachlorophenol	112	%Rec				
85018	Phenanthrene	121	%Rec				
120127	Anthracene	125	%Rec				
86748	9H-Carbazole	126	%Rec				
84742	Di-n-Butylphthalate	128	%Rec				
206440	Fluoranthene	125	%Rec				
129000	Pyrene	118	%Rec				
85687	Butylbenzylphthalate	119	%Rec				
56553	Benzo(a)anthracene	121	%Rec				
91941	3,3'-Dichlorobenzidine	10.9	%Rec				
218019	Chrysene	121	%Rec				
117817	Bis(2-ethylhexyl) phthalate	124	%Rec				
117840	Di-n-octylphthalate	128	%Rec				
205992	Benzo[b]Fluoranthene	125	%Rec				
207089	Benzo[k]fluoranthene	131	%Rec				
50328	Benzo(a)pyrene	115	%Rec				
193395	Indeno(1,2,3-cd)pyrene	133	%Rec				
53703	Dibenzo[a,h]anthracene	128	%Rec				
191242	Benzo(g,h,i)perylene	131	%Rec				
367124	Phenol, 2-fluoro-	126	%Rec				
4165622	Phenol-d5	141	%Rec				
93951736	2-chlorophenol-d4	149	%Rec				
2199691	1,2-Dichlorobenzene-d4	129	%Rec				
4165600	Nitrobenzene-d5	133	%Rec				
321608	1,1'-Biphenyl, 2-fluoro-	133	%Rec				
1718521	D10-Pyrene	134	%Rec				

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
1718510	**Terphenyl-d14**	135	%Rec				

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

Project Code:	FSP-009G	Parameter:	BNA	Sample:	01503502
Project Name:	WYCKOFF THERMAL I	Method:	BNA	Type:	0
Project Officer:	HANH GOLD	Matrix:	Solid	Initial Wt./Vol:	
Account Code:	01T10P50102D10P4LA00	Station:		Final Volume:	

Collected:	12/10/01	Prepped:	12/19/01	Analyzed:	12/31/01	Promised:
Received:	12/19/01	Released:		Reviewed:	1/28/02	

VERIFIED ___/___/___ _____

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
62759	N-Nitrosodimethylamine	846	ug/kg	U			
110861	Pyridine	846	ug/kg	U			
100527	Benzaldehyde	84.6	ug/kg	UJ			
62533	Aniline	84.6	ug/kg	U			
108952	Phenol	84.6	ug/kg	U			
111444	bis(2-Chloroethyl)ether	84.6	ug/kg	U			
95578	2-Chlorophenol	84.6	ug/kg	U			
541731	Benzene, 1,3-dichloro-	84.6	ug/kg	U			
106467	Benzene, 1,4-dichloro-	84.6	ug/kg	U			
95501	Benzene, 1,2-dichloro-	84.6	ug/kg	U			
100516	Benzenemethanol	84.6	ug/kg	U			
95487	Phenol, 2-methyl-	84.6	ug/kg	U			
108601	BIS(2-CHLOROISOPROPYL)E	84.6	ug/kg	U			
98862	Ethanone, 1-phenyl-	84.6	ug/kg	U			
621647	N-Nitrosodinpropylamine	84.6	ug/kg	U			
106445	4-Methylphenol	84.6	ug/kg	U			
67721	Hexachloroethane	84.6	ug/kg	U			
98953	Nitrobenzene	84.6	ug/kg	U			
78591	Isophorone	84.6	ug/kg	U			
88755	2-Nitrophenol	423	ug/kg	U			
105679	2,4-Dimethylphenol	84.6	ug/kg	U			
111911	Methane, bis(2-chloroethoxy)-	84.6	ug/kg	U			
65850	Benzoic acid	846	ug/kg	UJ			
120832	2,4-Dichlorophenol	84.6	ug/kg	U			
120821	1,2,4-Trichlorobenzene	84.6	ug/kg	U			
91203	Naphthalene	111	ug/kg	J			
106478	4-Chloroaniline	84.6	ug/kg	U			
87683	Hexachlorobutadiene	84.6	ug/kg	U			
105602	Caprolactam	169	ug/kg	U			
59507	4-Chloro-3-methylphenol	84.6	ug/kg	U			
91576	Naphthalene, 2-methyl-	16.2	ug/kg	J			
90120	Naphthalene, 1-methyl-	15.3	ug/kg	J			
77474	Hexachlorocyclopentadiene	423	ug/kg	U			

Manchester Environmental Laboratory

GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
88062	2,4,6-Trichlorophenol	423	ug/kg	U			
95954	2,4,5-Trichlorophenol	84.6	ug/kg	U			
92524	1,1'-Biphenyl	17.2	ug/kg	J			
91587	2-Chloronaphthalene	84.6	ug/kg	U			
88744	2-Nitroaniline	169	ug/kg	U			
131113	Dimethylphthalate	84.6	ug/kg	U			
606202	2,6-Dinitrotoluene	423	ug/kg	U			
208968	Acenaphthylene	13.2	ug/kg	J			
99092	3-Nitroaniline	423	ug/kg	U			
83329	Acenaphthene	27.3	ug/kg	J			
51285	2,4-Dinitrophenol	1690	ug/kg	U			
100027	4-Nitrophenol	846	ug/kg	U			
132649	Dibenzofuran	31.3	ug/kg	J			
121142	2,4-Dinitrotoluene	846	ug/kg	U			
84662	Diethyl phthalate	84.6	ug/kg	U			
86737	9H-Fluorene	18.5	ug/kg	J			
7005723	4-Chlorophenyl-Phenylether	84.6	ug/kg	U			
100016	4-Nitroaniline	423	ug/kg	U			
534521	4,6-Dinitro-2-methylphenol	846	ug/kg	U			
86306	n-Nitrosodiphenylamine	84.6	ug/kg	U			
101553	4-Bromophenyl-Phenylether	84.6	ug/kg	U			
118741	Hexachlorobenzene	84.6	ug/kg	U			
1912249	Atrazine	84.6	ug/kg	U			
87865	Pentachlorophenol	423	ug/kg	U			
85018	Phenanthrene	101	ug/kg	J			
120127	Anthracene	44.6	ug/kg	J			
58082	Caffeine	84.6	ug/kg	U			
86748	9H-Carbazole	23.6	ug/kg	J			
84742	Di-n-Butylphthalate	84.6	ug/kg	U			
92875	Benzidine	846	ug/kg	U			
206440	Fluoranthene	224	ug/kg	J			
129000	Pyrene	239	ug/kg	J			
483658	Retene	26.0	ug/kg	J			
85687	Butylbenzylphthalate	423	ug/kg	U			
56553	Benzo(a)anthracene	137	ug/kg	J			
91941	3,3'-Dichlorobenzidine	338	ug/kg	U			
218019	Chrysene	201	ug/kg	J			
117817	Bis(2-ethylhexyl) phthalate	423	ug/kg	U			
117840	Di-n-octylphthalate	423	ug/kg	U			
205992	Benzo[b]Fluoranthene	273	ug/kg	J			
207089	Benzo[k]fluoranthene	104	ug/kg	J			

Manchester Environmental Laboratory

GC-Mass Spec Multi-Analyte Report

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
50328	Benzo(a)pyrene	121	ug/kg	J			
360689	3B-Coprostanol	1690	ug/kg	U			
193395	Indeno(1,2,3-cd)pyrene	574	ug/kg	J			
53703	Dibenzo[a,h]anthracene	360	ug/kg	J			
191242	Benzo(g,h,i)perylene	284	ug/kg	J			
367124	Phenol, 2-fluoro-	124	%Rec				
4165622	Phenol-d5	134	%Rec				
93951736	2-chlorophenol-d4	142	%Rec				
2199691	1,2-Dichlorobenzene-d4	107	%Rec				
4165600	Nitrobenzene-d5	128	%Rec				
321608	1,1'-Biphenyl, 2-fluoro-	134	%Rec				
1718521	D10-Pyrene	135	%Rec				
1718510	Terphenyl-d14	139	%Rec				

Manchester Environmental Laboratory
GC-Mass Spec Multi-Analyte Report

Project Code:	FSP-009G	Parameter:	BNA-TIC	Sample:	01503502
Project Name:	WYCKOFF THERMAL]	Method:	BNA	Type:	0
Project Officer:	HANH GOLD	Matrix:	Solid	Initial Wt./Vol:	
Account Code:	01T10P50102D10P4LA00	Station:		Final Volume:	

Collected:	12/10/01	Prepped:		Analyzed:	12/31/01	Promised:
Received:	12/19/01	Released:		Reviewed:	1/28/02	

VERIFIED ___/___/___ _____

CAS Number	Name	Result	Units	Qlfr	Aux R1	Aux R2	Aux R3
455367	Ethanone, 1-(3-fluorophenyl	322	ug/kg	NJ			

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

2/7-8/02

February 27, 2002

MEMORANDUM

SUBJECT: Data Validation Report of Semivolatiles' Results for the Wyckoff-Thermal Remediation Project Samples 02062500, 02062501, 02062502, 02062503, 02062504, 02062505, and 02062506

FROM: Gerald H. Dodo, Chemist
USEPA

TO: Hanh Gold
USEPA

CC: Travis Shaw
USACE

The following is a data validation report of semivolatiles analyses' results for soil samples collected for the Wyckoff-Thermal Remediation project. The samples were analyzed by the USEPA Region 10 Laboratory ESAT Team located in Manchester, WA using USEPA SW846 Method 8270C. The analyses' results were delivered as ESAT document number ES10-0-1318 under Technical Direction Form 1075. This report covers the samples listed above.

The project code for these samples is FSP-009H. The account number is 02T10P50102D10P4LA00.

Data qualifications

The following comments refer to laboratory performance meeting the Quality Control specifications outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99).

I. Holding Times: Acceptable

The recommended holding time for the extraction of soil samples is 14 days from the date of sampling. Extracts have a

holding time limit of 40 days from the time of preparation. All samples were extracted and analyzed within holding time maximums.

II. GC/MS Tuning and Performance: Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance met criteria. All sample analyses were preceded by a tune less than 12 hours prior to analysis. No qualifiers were applied on the basis of the tuning data.

III. Initial Calibration: Acceptable

A five- to nine-point initial calibration was performed on 12/27/01. Correlation coefficients were $\geq$0.99. Average RRFs met the criteria of $\geq$0.05. %RSDs of the RRFs met the criteria of $\leq$30%. No qualifiers were applied based on the initial calibration.

IV. Continuing Calibration: Acceptable

The continuing calibration check standard met the criteria for frequency of analysis and RRT windows for all target compounds and surrogates. The RRFs were $\geq$0.05 and the accuracy for the target compounds met the criteria of 75-125% of the true value. No qualifiers were applied based on the continuing calibration check.

V. Blanks:

Method blanks were prepared and analyzed with each sample extraction batch. Target compounds detected in the samples were reported without qualification if the sample result area integration exceeded ten times that of the blank for common contaminates (e.g., phthalates) or five times that of the blank for the other target compounds. Detected sample results were qualified U if the area integration was below these criteria. The sample concentration or the sample quantitation limit, whichever is greater, was reported as the qualified result. Tentatively identified compounds detected in the blanks were deleted from the sample results.

Detected phthalate results below the quantitation limits for samples were qualified U regardless of the blank data as a conservative measure.

VI. Surrogates: Acceptable

The SW846 Method 8270C and the Functional Guidelines specifications for surrogate recoveries were applied. The recoveries met the criteria, therefore, no qualifiers were applied based on the surrogates.

VII. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

An MS/MSD analysis was performed using sample 02062500 (S1/S2). The MS/MSD criteria as described in the CLP Statement of Work and the Region 10 acceptance ranges (50-150% recovery, ≤50% relative percent difference, RPD) were applied. The following recoveries did not meet the applied criteria:

Compound	Recovery (S1/S2)	RPD
benzaldehyde	22/16	
phenol	/93	53
2,4-dimethylphenol	16/27	52
4-chloroaniline	6/6	
4-chloro-3-methylphenol	119/	
hexachlorocyclopentadiene	28/17	53
2,6-dinitrotoluene	113/	
3-nitroaniline	29/26	
acenaphthene		21
2,4-dinitrotoluene	108/	
3,3'-dichlorobenzidine	13/19	

The compounds above were not detected in sample 02062500 except for acenaphthene which was previously qualified J due to detection below the quantitation limit. The reported 4-chloroaniline result for this sample was qualified R due to the <10% recoveries. The reported benzaldehyde, 2,4-dimethylphenol, hexachlorocyclopentadiene, 3-nitroaniline, and 3,3'-dichlorobenzidine results for this sample were qualified UJ due to the low recoveries. No qualifiers were applied based on the high recoveries and RPDs for the other compounds above since these results do not indicate a problem with the reported quantitation limits.

VIII. Internal Standard Performance: Acceptable

The retention time variations of all internal standards were within 30 seconds of the continuing calibration standards. The %areas of all internal standards were within the specified 50% to 200% of the continuing calibration standards. No qualifiers were applied based on the internal standards.

IX. Target Compound Identification: Acceptable

All detected target compounds' relative retention times were within acceptable limits of the related standards in the continuing calibration standard. Criteria were met for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

X. Compound Quantitation: Acceptable

Calculations were based on the initial calibration. Sample quantitation limits were adjusted appropriately as according to sample amounts and calibration data. Detected results below the sample quantitation limits were qualified J.

XI. Tentatively Identified Compounds: Acceptable

Spectra for all tentatively identified compounds (TICs) met criteria for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

Overall Assessment for the Case

The usefulness of the data is based on the criteria outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99). All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Gerald Dodo at the Region 10 laboratory, phone number (360) 871-8728.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported result.
J	-	The analyte was positively identified. The associated numerical result is an estimate.
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.
R	-	The data are unusable for all purposes.
N	-	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.
UJ	-	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
NAF	-	Not analyzed for.
NAR	-	No analytical result.
*	-	The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	2/ 7/01 02
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062500
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	0304		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540
Analytes :

		Result	Units	Qlfr
92524	1,1'-Biphenyl	76.7	ug/kg	U
120821	1,2,4-Trichlorobenzene	76.7	ug/kg	U
95954	2,4,5-Trichlorophenol	76.7	ug/kg	U
88062	2,4,6-Trichlorophenol	384	ug/kg	U
120832	2,4-Dichlorophenol	76.7	ug/kg	U
105679	2,4-Dimethylphenol	76.7	ug/kg	UJ
51285	2,4-Dinitrophenol	1530	ug/kg	U
121142	2,4-Dinitrotoluene	767	ug/kg	U
606202	2,6-Dinitrotoluene	384	ug/kg	U
91587	2-Chloronaphthalene	76.7	ug/kg	U
95578	2-Chlorophenol	76.7	ug/kg	U
88744	2-Nitroaniline	153	ug/kg	U
88755	2-Nitrophenol	384	ug/kg	U
91941	3,3'-Dichlorobenzidine	307	ug/kg	UJ
99092	3-Nitroaniline	384	ug/kg	UJ
360689	3B-Coprostanol	1530	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	767	ug/kg	U
101553	4-Bromophenyl-Phenylether	76.7	ug/kg	U
59507	4-Chloro-3-methylphenol	76.7	ug/kg	U
106478	**4-Chloroaniline**		**ug/kg**	**R**
7005723	4-Chlorophenyl-Phenylether	76.7	ug/kg	U
106445	4-Methylphenol	76.7	ug/kg	U
100016	4-Nitroaniline	384	ug/kg	U
100027	4-Nitrophenol	767	ug/kg	U
86748	9H-Carbazole	76.7	ug/kg	U
86737	**9H-Fluorene**	**25.4**	**ug/kg**	**J**
83329	**Acenaphthene**	**26.2**	**ug/kg**	**J**
208968	Acenaphthylene	76.7	ug/kg	U
62533	Aniline	76.7	ug/kg	U
120127	**Anthracene**	**12.5**	**ug/kg**	**J**
1912249	Atrazine	76.7	ug/kg	U
100527	Benzaldehyde	76.7	ug/kg	UJ
95501	Benzene, 1,2-dichloro-	76.7	ug/kg	U
541731	Benzene, 1,3-dichloro-	76.7	ug/kg	U
106467	Benzene, 1,4-dichloro-	76.7	ug/kg	U
100516	Benzenemethanol	76.7	ug/kg	U
92875	Benzidine	767	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes :	56553	**Benzo(a)anthracene**	**30.0**	**ug/kg**	**J**
	50328	Benzo(a)pyrene	76.7	ug/kg	U
	191242	**Benzo(g,h,i)perylene**	**203**	**ug/kg**	**J**
	205992	**Benzo[b]Fluoranthene**	**35.1**	**ug/kg**	**J**
	207089	Benzo[k]fluoranthene	76.7	ug/kg	U
	65850	Benzoic acid	767	ug/kg	U
	111444	bis(2-Chloroethyl)ether	76.7	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	76.7	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	384	ug/kg	U
	85687	Butylbenzylphthalate	384	ug/kg	U
	58082	Caffeine	76.7	ug/kg	U
	105602	Caprolactam	153	ug/kg	U
	218019	**Chrysene**	**37.9**	**ug/kg**	**J**
	84742	Di-n-Butylphthalate	76.7	ug/kg	U
	117840	Di-n-octylphthalate	384	ug/kg	U
	53703	Dibenzo[a,h]anthracene	384	ug/kg	U
	132649	**Dibenzofuran**	**19.0**	**ug/kg**	**J**
	84662	Diethyl phthalate	76.7	ug/kg	U
	131113	Dimethylphthalate	76.7	ug/kg	U
	98862	Ethanone, 1-phenyl-	76.7	ug/kg	U
	206440	**Fluoranthene**	**131**	**ug/kg**	
	118741	Hexachlorobenzene	76.7	ug/kg	U
	87683	Hexachlorobutadiene	76.7	ug/kg	U
	77474	Hexachlorocyclopentadiene	384	ug/kg	UJ
	67721	Hexachloroethane	76.7	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**468**	**ug/kg**	**J**
	78591	Isophorone	76.7	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	76.7	ug/kg	U
	62759	N-Nitrosodimethylamine	767	ug/kg	U
	621647	N-Nitrosodinpropylamine	76.7	ug/kg	U
	86306	n-Nitrosodiphenylamine	76.7	ug/kg	U
	91203	Naphthalene	76.7	ug/kg	U
	90120	Naphthalene, 1-methyl-	76.7	ug/kg	U
	91576	Naphthalene, 2-methyl-	76.7	ug/kg	U
	98953	Nitrobenzene	76.7	ug/kg	U
	87865	Pentachlorophenol	384	ug/kg	U
	85018	**Phenanthrene**	**86.0**	**ug/kg**	
	108952	Phenol	76.7	ug/kg	U
	95487	Phenol, 2-methyl-	76.7	ug/kg	U
	129000	**Pyrene**	**79.5**	**ug/kg**	
	110861	Pyridine	767	ug/kg	U
	483658	Retene	76.7	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	105	%Rec	
	2199691	1,2-Dichlorobenzene-d4	54	%Rec	
	93951736	2-chlorophenol-d4	105	%Rec	
	1718521	D10-Pyrene	89	%Rec	
	4165600	Nitrobenzene-d5	115	%Rec	
	367124	Phenol, 2-fluoro-	91	%Rec	
	4165622	Phenol-d5	110	%Rec	

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	103	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	76095	2,3-Butanediol, 2,3-dimethyl-	4180	ug/kg	NJ
		20758605	Benzene, 1-(1-cyclohexen-1-yl) -4-methoxy	452	ug/kg	NJ
		123397	Formamide, N-methyl-	3840	ug/kg	NJ
		*3008001	Unknown 01	776	ug/kg	NJ
		*3008002	Unknown 02	804	ug/kg	NJ
		15500966	Urea, N-(2-chlorophenyl)-N'-me thyl-	972	ug/kg	NJ

Project Code:	FSP-009H	**Collected:**	
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062500
Account Code:	02T10P50102D10P4LA00	**Type:**	Matrix Spike
Station Description:			

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540
Analytes :

		Result	Units	Qlfr
92524	1,1'-Biphenyl	121	%Rec	
321608	1,1'-Biphenyl, 2-fluoro-	111	%Rec	
2199691	1,2-Dichlorobenzene-d4	91.5	%Rec	
95954	2,4,5-Trichlorophenol	123	%Rec	
88062	2,4,6-Trichlorophenol	100	%Rec	
120832	2,4-Dichlorophenol	112	%Rec	
105679	2,4-Dimethylphenol	15.6	%Rec	
51285	2,4-Dinitrophenol	120	%Rec	
121142	2,4-Dinitrotoluene	108	%Rec	
606202	2,6-Dinitrotoluene	113	%Rec	
91587	2-Chloronaphthalene	121	%Rec	
95578	2-Chlorophenol	72.1	%Rec	
93951736	2-chlorophenol-d4	67.0	%Rec	
88744	2-Nitroaniline	108	%Rec	
88755	2-Nitrophenol	102	%Rec	
91941	3,3'-Dichlorobenzidine	12.7	%Rec	
99092	3-Nitroaniline	29.0	%Rec	
534521	4,6-Dinitro-2-methylphenol	105	%Rec	
101553	4-Bromophenyl-Phenylether	115	%Rec	
59507	4-Chloro-3-methylphenol	119	%Rec	
106478	4-Chloroaniline	6.2	%Rec	
7005723	4-Chlorophenyl-Phenylether	113	%Rec	
106445	4-Methylphenol	103	%Rec	
100016	4-Nitroaniline	74.8	%Rec	
100027	4-Nitrophenol	105	%Rec	
86748	9H-Carbazole	119	%Rec	
86737	9H-Fluorene	122	%Rec	
83329	Acenaphthene	118	%Rec	
208968	Acenaphthylene	86.2	%Rec	
120127	Anthracene	98.9	%Rec	
1912249	Atrazine	123	%Rec	
100527	Benzaldehyde	22.0	%Rec	
95501	Benzene, 1,2-dichloro-	91.5	%Rec	
56553	Benzo(a)anthracene	108	%Rec	
50328	Benzo(a)pyrene	85	%Rec	
191242	Benzo(g,h,i)perylene	127	%Rec	
205992	Benzo[b]Fluoranthene	117	%Rec	

			Result	Units	Qlfr
Analytes	207089	Benzo[k]fluoranthene	124	%Rec	
	111444	bis(2-Chloroethyl)ether	111	%Rec	
	108601	BIS(2-CHLOROISOPROPYL)ETHER	91.2	%Rec	
	117817	Bis(2-ethylhexyl) phthalate	120	%Rec	
	85687	Butylbenzylphthalate	112	%Rec	
	105602	Caprolactam	118	%Rec	
	218019	Chrysene	113	%Rec	
	1718521	D10-Pyrene	101	%Rec	
	84742	Di-n-Butylphthalate	126	%Rec	
	117840	Di-n-octylphthalate	121	%Rec	
	53703	Dibenzo[a,h]anthracene	128	%Rec	
	132649	Dibenzofuran	110	%Rec	
	84662	Diethyl phthalate	120	%Rec	
	131113	Dimethylphthalate	119	%Rec	
	98862	Ethanone, 1-phenyl-	114	%Rec	
	206440	Fluoranthene	118	%Rec	
	118741	Hexachlorobenzene	117	%Rec	
	87683	Hexachlorobutadiene	97.7	%Rec	
	77474	Hexachlorocyclopentadiene	28.4	%Rec	
	67721	Hexachloroethane	89.8	%Rec	
	193395	Indeno(1,2,3-cd)pyrene	106	%Rec	
	78591	Isophorone	122	%Rec	
	111911	Methane, bis(2-chloroethoxy)-	122	%Rec	
	621647	N-Nitrosodinpropylamine	113	%Rec	
	86306	n-Nitrosodiphenylamine	96.6	%Rec	
	91203	Naphthalene	111	%Rec	
	91576	Naphthalene, 2-methyl-	110	%Rec	
	98953	Nitrobenzene	116	%Rec	
	4165600	Nitrobenzene-d5	108	%Rec	
	87865	Pentachlorophenol	108	%Rec	
	85018	Phenanthrene	119	%Rec	
	108952	Phenol	53.9	%Rec	
	367124	Phenol, 2-fluoro-	106	%Rec	
	95487	Phenol, 2-methyl-	92.9	%Rec	
	4165622	Phenol-d5	57.9	%Rec	
	129000	Pyrene	112	%Rec	
	1718510	Terphenyl-d14	107	%Rec	

Project Code:	FSP-009H	**Collected:**	
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062500
Account Code:	02T10P50102D10P4LA00	**Type:**	Matrix Spike Dupl
Station Description:			

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

Analytes			Result	Units	Qlfr
	92524	1,1'-Biphenyl	96.6	%Rec	
	321608	1,1'-Biphenyl, 2-fluoro-	88.2	%Rec	
	2199691	1,2-Dichlorobenzene-d4	74.5	%Rec	
	95954	2,4,5-Trichlorophenol	97.9	%Rec	
	88062	2,4,6-Trichlorophenol	80.9	%Rec	
	120832	2,4-Dichlorophenol	91.0	%Rec	
	105679	2,4-Dimethylphenol	26.6	%Rec	
	51285	2,4-Dinitrophenol	111	%Rec	
	121142	2,4-Dinitrotoluene	83.3	%Rec	
	606202	2,6-Dinitrotoluene	85.9	%Rec	
	91587	2-Chloronaphthalene	97.4	%Rec	
	95578	2-Chlorophenol	93.2	%Rec	
	93951736	2-chlorophenol-d4	89.7	%Rec	
	88744	2-Nitroaniline	87.2	%Rec	
	88755	2-Nitrophenol	79.5	%Rec	
	91941	3,3'-Dichlorobenzidine	18.6	%Rec	
	99092	3-Nitroaniline	26.1	%Rec	
	534521	4,6-Dinitro-2-methylphenol	89.5	%Rec	
	101553	4-Bromophenyl-Phenylether	93.5	%Rec	
	59507	4-Chloro-3-methylphenol	97.1	%Rec	
	106478	4-Chloroaniline	6.1	%Rec	
	7005723	4-Chlorophenyl-Phenylether	90.4	%Rec	
	106445	4-Methylphenol	88.1	%Rec	
	100016	4-Nitroaniline	63.3	%Rec	
	100027	4-Nitrophenol	83.1	%Rec	
	86748	9H-Carbazole	97.3	%Rec	
	86737	9H-Fluorene	93.8	%Rec	
	83329	Acenaphthene	96.2	%Rec	
	208968	Acenaphthylene	56.5	%Rec	
	120127	Anthracene	71.8	%Rec	
	1912249	Atrazine	101	%Rec	
	100527	Benzaldehyde	16.0	%Rec	
	95501	Benzene, 1,2-dichloro-	74.5	%Rec	
	56553	Benzo(a)anthracene	87.1	%Rec	
	50328	Benzo(a)pyrene	61.2	%Rec	
	191242	Benzo(g,h,i)perylene	103	%Rec	
	205992	Benzo[b]Fluoranthene	96.5	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes	: 207089	Benzo[k]fluoranthene	99.4	%Rec	
	111444	bis(2-Chloroethyl)ether	93.7	%Rec	
	108601	BIS(2-CHLOROISOPROPYL)ETHER	75.0	%Rec	
	117817	Bis(2-ethylhexyl) phthalate	98.1	%Rec	
	85687	Butylbenzylphthalate	94.1	%Rec	
	105602	Caprolactam	99.7	%Rec	
	218019	Chrysene	91.4	%Rec	
	1718521	D10-Pyrene	81.4	%Rec	
	84742	Di-n-Butylphthalate	99.9	%Rec	
	117840	Di-n-octylphthalate	102	%Rec	
	53703	Dibenzo[a,h]anthracene	102	%Rec	
	132649	Dibenzofuran	90.0	%Rec	
	84662	Diethyl phthalate	95.3	%Rec	
	131113	Dimethylphthalate	94.5	%Rec	
	98862	Ethanone, 1-phenyl-	93.2	%Rec	
	206440	Fluoranthene	94.4	%Rec	
	118741	Hexachlorobenzene	94.0	%Rec	
	87683	Hexachlorobutadiene	81.0	%Rec	
	77474	Hexachlorocyclopentadiene	16.5	%Rec	
	67721	Hexachloroethane	74.8	%Rec	
	193395	Indeno(1,2,3-cd)pyrene	85.0	%Rec	
	78591	Isophorone	98.6	%Rec	
	111911	Methane, bis(2-chlorocthoxy)-	97.4	%Rec	
	621647	N-Nitrosodinpropylamine	91.9	%Rec	
	86306	n-Nitrosodiphenylamine	79.3	%Rec	
	91203	Naphthalene	90.2	%Rec	
	91576	Naphthalene, 2-methyl-	90.7	%Rec	
	98953	Nitrobenzene	92.9	%Rec	
	4165600	Nitrobenzene-d5	86.3	%Rec	
	87865	Pentachlorophenol	89.8	%Rec	
	85018	Phenanthrene	96.3	%Rec	
	108952	Phenol	92.7	%Rec	
	367124	Phenol, 2-fluoro-	82.0	%Rec	
	95487	Phenol, 2-methyl-	80.9	%Rec	
	4165622	Phenol-d5	92.9	%Rec	
	129000	Pyrene	88.9	%Rec	
	1718510	Terphenyl-d14	86.3	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	2/ 7/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062501
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	0308		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

			Result	Units	Qlfr
Analytes :	92524	1,1'-Biphenyl	81.2	ug/kg	U
	120821	1,2,4-Trichlorobenzene	81.2	ug/kg	U
	95954	2,4,5-Trichlorophenol	81.2	ug/kg	U
	88062	2,4,6-Trichlorophenol	406	ug/kg	U
	120832	2,4-Dichlorophenol	81.2	ug/kg	U
	105679	2,4-Dimethylphenol	81.2	ug/kg	U
	51285	2,4-Dinitrophenol	1620	ug/kg	U
	121142	2,4-Dinitrotoluene	812	ug/kg	U
	606202	2,6-Dinitrotoluene	406	ug/kg	U
	91587	2-Chloronaphthalene	81.2	ug/kg	U
	95578	2-Chlorophenol	81.2	ug/kg	U
	88744	2-Nitroaniline	162	ug/kg	U
	88755	2-Nitrophenol	406	ug/kg	U
	91941	3,3'-Dichlorobenzidine	325	ug/kg	U
	99092	3-Nitroaniline	406	ug/kg	U
	360689	3B-Coprostanol	1620	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	812	ug/kg	U
	101553	4-Bromophenyl-Phenylether	81.2	ug/kg	U
	59507	4-Chloro-3-methylphenol	81.2	ug/kg	U
	106478	4-Chloroaniline	81.2	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	81.2	ug/kg	U
	106445	4-Methylphenol	81.2	ug/kg	U
	100016	4-Nitroaniline	406	ug/kg	U
	100027	4-Nitrophenol	812	ug/kg	U
	86748	9H-Carbazole	81.2	ug/kg	U
	86737	9H-Fluorene	81.2	ug/kg	U
	83329	Acenaphthene	81.2	ug/kg	U
	208968	Acenaphthylene	81.2	ug/kg	U
	62533	Aniline	81.2	ug/kg	U
	120127	Anthracene	81.2	ug/kg	U
	1912249	Atrazine	81.2	ug/kg	U
	100527	Benzaldehyde	81.2	ug/kg	U
	95501	Benzene, 1,2-dichloro-	81.2	ug/kg	U
	541731	Benzene, 1,3-dichloro-	81.2	ug/kg	U
	106467	Benzene, 1,4-dichloro-	81.2	ug/kg	U
	100516	Benzenemethanol	81.2	ug/kg	U
	92875	Benzidine	812	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	81.2	ug/kg	U
	50328	Benzo(a)pyrene	81.2	ug/kg	U
	191242	Benzo(g,h,i)perylene	406	ug/kg	U
	205992	Benzo[b]Fluoranthene	81.2	ug/kg	U
	207089	Benzo[k]fluoranthene	81.2	ug/kg	U
	65850	Benzoic acid	812	ug/kg	U
	111444	bis(2-Chloroethyl)ether	81.2	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	81.2	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	406	ug/kg	U
	85687	Butylbenzylphthalate	406	ug/kg	U
	58082	Caffeine	81.2	ug/kg	U
	105602	Caprolactam	162	ug/kg	U
	218019	Chrysene	81.2	ug/kg	U
	84742	Di-n-Butylphthalate	81.2	ug/kg	U
	117840	Di-n-octylphthalate	406	ug/kg	U
	53703	Dibenzo[a,h]anthracene	406	ug/kg	U
	132649	Dibenzofuran	81.2	ug/kg	U
	84662	Diethyl phthalate	81.2	ug/kg	U
	131113	Dimethylphthalate	81.2	ug/kg	U
	98862	Ethanone, 1-phenyl-	81.2	ug/kg	U
	206440	Fluoranthene	81.2	ug/kg	U
	118741	Hexachlorobenzene	81.2	ug/kg	U
	87683	Hexachlorobutadiene	81.2	ug/kg	U
	77474	Hexachlorocyclopentadiene	406	ug/kg	U
	67721	Hexachloroethane	81.2	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	812	ug/kg	U
	78591	Isophorone	81.2	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	81.2	ug/kg	U
	62759	N-Nitrosodimethylamine	812	ug/kg	U
	621647	N-Nitrosodinpropylamine	81.2	ug/kg	U
	86306	n-Nitrosodiphenylamine	81.2	ug/kg	U
	91203	Naphthalene	81.2	ug/kg	U
	90120	Naphthalene, 1-methyl-	81.2	ug/kg	U
	91576	Naphthalene, 2-methyl-	81.2	ug/kg	U
	98953	Nitrobenzene	81.2	ug/kg	U
	87865	Pentachlorophenol	406	ug/kg	U
	85018	Phenanthrene	81.2	ug/kg	U
	108952	Phenol	81.2	ug/kg	U
	95487	Phenol, 2-methyl-	81.2	ug/kg	U
	129000	Pyrene	81.2	ug/kg	U
	110861	Pyridine	812	ug/kg	U
	483658	Retene	81.2	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	104	%Rec	
	2199691	1,2-Dichlorobenzene-d4	60	%Rec	
	93951736	2-chlorophenol-d4	107	%Rec	
	1718521	D10-Pyrene	102	%Rec	
	4165600	Nitrobenzene-d5	107	%Rec	
	367124	Phenol, 2-fluoro-	109	%Rec	
	4165622	Phenol-d5	112	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	107	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	113008	Guanidine	935	ug/kg	NJ
		*3008001	Unknown 01	286	ug/kg	NJ
		*3008002	Unknown 02	514	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	2/ 7/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062502
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	312		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	63.8	ug/kg	U
120821	1,2,4-Trichlorobenzene	63.8	ug/kg	U
95954	2,4,5-Trichlorophenol	63.8	ug/kg	U
88062	2,4,6-Trichlorophenol	319	ug/kg	U
120832	2,4-Dichlorophenol	63.8	ug/kg	U
105679	2,4-Dimethylphenol	63.8	ug/kg	U
51285	2,4-Dinitrophenol	1280	ug/kg	U
121142	2,4-Dinitrotoluene	638	ug/kg	U
606202	2,6-Dinitrotoluene	319	ug/kg	U
91587	2-Chloronaphthalene	63.8	ug/kg	U
95578	2-Chlorophenol	63.8	ug/kg	U
88744	2-Nitroaniline	128	ug/kg	U
88755	2-Nitrophenol	319	ug/kg	U
91941	3,3'-Dichlorobenzidine	255	ug/kg	U
99092	3-Nitroaniline	319	ug/kg	U
360689	3B-Coprostanol	1280	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	638	ug/kg	U
101553	4-Bromophenyl-Phenylether	63.8	ug/kg	U
59507	4-Chloro-3-methylphenol	63.8	ug/kg	U
106478	4-Chloroaniline	63.8	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	63.8	ug/kg	U
106445	4-Methylphenol	63.8	ug/kg	U
100016	4-Nitroaniline	319	ug/kg	U
100027	4-Nitrophenol	638	ug/kg	U
86748	9H-Carbazole	63.8	ug/kg	U
86737	9H-Fluorene	63.8	ug/kg	U
83329	Acenaphthene	63.8	ug/kg	U
208968	Acenaphthylene	63.8	ug/kg	U
62533	Aniline	63.8	ug/kg	U
120127	Anthracene	63.8	ug/kg	U
1912249	Atrazine	63.8	ug/kg	U
100527	Benzaldehyde	63.8	ug/kg	U
95501	Benzene, 1,2-dichloro-	63.8	ug/kg	U
541731	Benzene, 1,3-dichloro-	63.8	ug/kg	U
106467	Benzene, 1,4-dichloro-	63.8	ug/kg	U
100516	Benzenemethanol	63.8	ug/kg	U
92875	Benzidine	638	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	63.8	ug/kg	U
	50328	Benzo(a)pyrene	63.8	ug/kg	U
	191242	Benzo(g,h,i)perylene	319	ug/kg	U
	205992	Benzo[b]Fluoranthene	63.8	ug/kg	U
	207089	Benzo[k]fluoranthene	63.8	ug/kg	U
	65850	Benzoic acid	638	ug/kg	U
	111444	bis(2-Chloroethyl)ether	63.8	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	63.8	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	319	ug/kg	U
	85687	Butylbenzylphthalate	319	ug/kg	U
	58082	Caffeine	63.8	ug/kg	U
	105602	Caprolactam	128	ug/kg	U
	218019	Chrysene	63.8	ug/kg	U
	84742	Di-n-Butylphthalate	63.8	ug/kg	U
	117840	Di-n-octylphthalate	319	ug/kg	U
	53703	Dibenzo[a,h]anthracene	319	ug/kg	U
	132649	Dibenzofuran	63.8	ug/kg	U
	84662	Diethyl phthalate	63.8	ug/kg	U
	131113	Dimethylphthalate	63.8	ug/kg	U
	98862	Ethanone, 1-phenyl-	63.8	ug/kg	U
	206440	Fluoranthene	63.8	ug/kg	U
	118741	Hexachlorobenzene	63.8	ug/kg	U
	87683	Hexachlorobutadiene	63.8	ug/kg	U
	77474	Hexachlorocyclopentadiene	319	ug/kg	U
	67721	Hexachloroethane	63.8	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	638	ug/kg	U
	78591	Isophorone	63.8	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	63.8	ug/kg	U
	62759	N-Nitrosodimethylamine	638	ug/kg	U
	621647	N-Nitrosodinpropylamine	63.8	ug/kg	U
	86306	n-Nitrosodiphenylamine	63.8	ug/kg	U
	91203	Naphthalene	63.8	ug/kg	U
	90120	Naphthalene, 1-methyl-	63.8	ug/kg	U
	91576	Naphthalene, 2-methyl-	63.8	ug/kg	U
	98953	Nitrobenzene	63.8	ug/kg	U
	87865	Pentachlorophenol	319	ug/kg	U
	85018	Phenanthrene	63.8	ug/kg	U
	108952	Phenol	63.8	ug/kg	U
	95487	Phenol, 2-methyl-	63.8	ug/kg	U
	129000	Pyrene	63.8	ug/kg	U
	110861	Pyridine	638	ug/kg	U
	483658	Retene	63.8	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	110	%Rec	
	2199691	1,2-Dichlorobenzene-d4	70	%Rec	
	93951736	2-chlorophenol-d4	109	%Rec	
	1718521	D10-Pyrene	97	%Rec	
	4165600	Nitrobenzene-d5	101	%Rec	
	367124	Phenol, 2-fluoro-	102	%Rec	
	4165622	Phenol-d5	110	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	103	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	62016493	**Butane, 2-methoxy-3-methyl-**	**3410**	**ug/kg**	**NJ**
		113008	**Guanidine**	**1230**	**ug/kg**	**NJ**
		*3008001	**Unknown 01**	**983**	**ug/kg**	**NJ**
		*3008002	**Unknown 02**	**227**	**ug/kg**	**NJ**
		*3008003	**Unknown 03**	**243**	**ug/kg**	**NJ**

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	2/ 7/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062503
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	313		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

Analytes		Result	Units	Qlfr
92524	1,1'-Biphenyl	70.1	ug/kg	U
120821	1,2,4-Trichlorobenzene	70.1	ug/kg	U
95954	2,4,5-Trichlorophenol	70.1	ug/kg	U
88062	2,4,6-Trichlorophenol	351	ug/kg	U
120832	2,4-Dichlorophenol	70.1	ug/kg	U
105679	2,4-Dimethylphenol	70.1	ug/kg	U
51285	2,4-Dinitrophenol	1400	ug/kg	U
121142	2,4-Dinitrotoluene	701	ug/kg	U
606202	2,6-Dinitrotoluene	351	ug/kg	U
91587	2-Chloronaphthalene	70.1	ug/kg	U
95578	2-Chlorophenol	70.1	ug/kg	U
88744	2-Nitroaniline	140	ug/kg	U
88755	2-Nitrophenol	351	ug/kg	U
91941	3,3'-Dichlorobenzidine	281	ug/kg	U
99092	3-Nitroaniline	351	ug/kg	U
360689	3B-Coprostanol	1400	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	701	ug/kg	U
101553	4-Bromophenyl-Phenylether	70.1	ug/kg	U
59507	4-Chloro-3-methylphenol	70.1	ug/kg	U
106478	4-Chloroaniline	70.1	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	70.1	ug/kg	U
106445	4-Methylphenol	70.1	ug/kg	U
100016	4-Nitroaniline	351	ug/kg	U
100027	4-Nitrophenol	701	ug/kg	U
86748	**9H-Carbazole**	**33.9**	**ug/kg**	**J**
86737	**9H-Fluorene**	**41.6**	**ug/kg**	**J**
83329	**Acenaphthene**	**32.7**	**ug/kg**	**J**
208968	**Acenaphthylene**	**13.3**	**ug/kg**	**J**
62533	Aniline	70.1	ug/kg	U
120127	**Anthracene**	**99.2**	**ug/kg**	
1912249	Atrazine	70.1	ug/kg	U
100527	Benzaldehyde	70.1	ug/kg	U
95501	Benzene, 1,2-dichloro-	70.1	ug/kg	U
541731	Benzene, 1,3-dichloro-	70.1	ug/kg	U
106467	Benzene, 1,4-dichloro-	70.1	ug/kg	U
100516	Benzenemethanol	70.1	ug/kg	U
92875	Benzidine	701	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	74.9	ug/kg	
	50328	Benzo(a)pyrene	84.7	ug/kg	
	191242	Benzo(g,h,i)perylene	233	ug/kg	J
	205992	Benzo[b]Fluoranthene	167	ug/kg	
	207089	Benzo[k]fluoranthene	62.3	ug/kg	J
	65850	Benzoic acid	701	ug/kg	U
	111444	bis(2-Chloroethyl)ether	70.1	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	70.1	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	351	ug/kg	U
	85687	Butylbenzylphthalate	351	ug/kg	U
	58082	Caffeine	70.1	ug/kg	U
	105602	Caprolactam	140	ug/kg	U
	218019	Chrysene	122	ug/kg	
	84742	Di-n-Butylphthalate	70.1	ug/kg	U
	117840	Di-n-octylphthalate	351	ug/kg	U
	53703	Dibenzo[a,h]anthracene	294	ug/kg	J
	132649	Dibenzofuran	28.0	ug/kg	J
	84662	Diethyl phthalate	70.1	ug/kg	U
	131113	Dimethylphthalate	70.1	ug/kg	U
	98862	Ethanone, 1-phenyl-	70.1	ug/kg	U
	206440	Fluoranthene	259	ug/kg	
	118741	Hexachlorobenzene	70.1	ug/kg	U
	87683	Hexachlorobutadiene	70.1	ug/kg	U
	77474	Hexachlorocyclopentadiene	351	ug/kg	U
	67721	Hexachloroethane	70.1	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	482	ug/kg	J
	78591	Isophorone	70.1	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	70.1	ug/kg	U
	62759	N-Nitrosodimethylamine	701	ug/kg	U
	621647	N-Nitrosodinpropylamine	70.1	ug/kg	U
	86306	n-Nitrosodiphenylamine	70.1	ug/kg	U
	91203	Naphthalene	70.1	ug/kg	U
	90120	Naphthalene, 1-methyl-	6.5	ug/kg	J
	91576	Naphthalene, 2-methyl-	10.0	ug/kg	J
	98953	Nitrobenzene	70.1	ug/kg	U
	87865	Pentachlorophenol	351	ug/kg	U
	85018	Phenanthrene	160	ug/kg	
	108952	Phenol	70.1	ug/kg	U
	95487	Phenol, 2-methyl-	70.1	ug/kg	U
	129000	Pyrene	181	ug/kg	
	110861	Pyridine	701	ug/kg	U
	483658	Retene	70.1	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	108	%Rec	
	2199691	1,2-Dichlorobenzene-d4	72	%Rec	
	93951736	2-chlorophenol-d4	108	%Rec	
	1718521	D10-Pyrene	103	%Rec	
	4165600	Nitrobenzene-d5	103	%Rec	
	367124	Phenol, 2-fluoro-	108	%Rec	
	4165622	Phenol-d5	110	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	107	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	*3008001	Unknown 01	846	ug/kg	NJ
		*3008002	Unknown 02	658	ug/kg	NJ
		*3008003	Unknown 03	264	ug/kg	NJ
		*3008004	Unknown 04	2200	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	2/ 8/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062504
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	212W		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

Analytes			Result	Units	Qlfr
	92524	1,1'-Biphenyl	74.1	ug/kg	U
	120821	1,2,4-Trichlorobenzene	74.1	ug/kg	U
	95954	2,4,5-Trichlorophenol	74.1	ug/kg	U
	88062	2,4,6-Trichlorophenol	370	ug/kg	U
	120832	2,4-Dichlorophenol	74.1	ug/kg	U
	105679	2,4-Dimethylphenol	74.1	ug/kg	U
	51285	2,4-Dinitrophenol	1480	ug/kg	U
	121142	2,4-Dinitrotoluene	741	ug/kg	U
	606202	2,6-Dinitrotoluene	370	ug/kg	U
	91587	2-Chloronaphthalene	74.1	ug/kg	U
	95578	2-Chlorophenol	74.1	ug/kg	U
	88744	2-Nitroaniline	148	ug/kg	U
	88755	2-Nitrophenol	370	ug/kg	U
	91941	3,3'-Dichlorobenzidine	296	ug/kg	U
	99092	3-Nitroaniline	370	ug/kg	U
	360689	3B-Coprostanol	1480	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	741	ug/kg	U
	101553	4-Bromophenyl-Phenylether	74.1	ug/kg	U
	59507	4-Chloro-3-methylphenol	74.1	ug/kg	U
	106478	4-Chloroaniline	74.1	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	74.1	ug/kg	U
	106445	4-Methylphenol	74.1	ug/kg	U
	100016	4-Nitroaniline	370	ug/kg	U
	100027	4-Nitrophenol	741	ug/kg	U
	86748	9H-Carbazole	74.1	ug/kg	U
	86737	9H-Fluorene	74.1	ug/kg	U
	83329	Acenaphthene	74.1	ug/kg	U
	208968	Acenaphthylene	74.1	ug/kg	U
	62533	Aniline	74.1	ug/kg	U
	120127	Anthracene	74.1	ug/kg	U
	1912249	Atrazine	74.1	ug/kg	U
	100527	Benzaldehyde	74.1	ug/kg	U
	95501	Benzene, 1,2-dichloro-	74.1	ug/kg	U
	541731	Benzene, 1,3-dichloro-	74.1	ug/kg	U
	106467	Benzene, 1,4-dichloro-	74.1	ug/kg	U
	100516	Benzenemethanol	74.1	ug/kg	U
	92875	Benzidine	741	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	74.1	ug/kg	U
	50328	Benzo(a)pyrene	74.1	ug/kg	U
	191242	Benzo(g,h,i)perylene	370	ug/kg	U
	205992	Benzo[b]Fluoranthene	74.1	ug/kg	U
	207089	Benzo[k]fluoranthene	74.1	ug/kg	U
	65850	Benzoic acid	741	ug/kg	U
	111444	bis(2-Chloroethyl)ether	74.1	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	74.1	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	370	ug/kg	U
	85687	Butylbenzylphthalate	370	ug/kg	U
	58082	Caffeine	74.1	ug/kg	U
	105602	Caprolactam	148	ug/kg	U
	218019	Chrysene	74.1	ug/kg	U
	84742	Di-n-Butylphthalate	74.1	ug/kg	U
	117840	Di-n-octylphthalate	370	ug/kg	U
	53703	Dibenzo[a,h]anthracene	370	ug/kg	U
	132649	Dibenzofuran	74.1	ug/kg	U
	84662	Diethyl phthalate	74.1	ug/kg	U
	131113	Dimethylphthalate	74.1	ug/kg	U
	98862	Ethanone, 1-phenyl-	74.1	ug/kg	U
	206440	Fluoranthene	74.1	ug/kg	U
	118741	Hexachlorobenzene	74.1	ug/kg	U
	87683	Hexachlorobutadiene	74.1	ug/kg	U
	77474	Hexachlorocyclopentadiene	370	ug/kg	U
	67721	Hexachloroethane	74.1	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	741	ug/kg	U
	78591	Isophorone	74.1	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	74.1	ug/kg	U
	62759	N-Nitrosodimethylamine	741	ug/kg	U
	621647	N-Nitrosodinpropylamine	74.1	ug/kg	U
	86306	n-Nitrosodiphenylamine	74.1	ug/kg	U
	91203	Naphthalene	74.1	ug/kg	U
	90120	Naphthalene, 1-methyl-	74.1	ug/kg	U
	91576	Naphthalene, 2-methyl-	74.1	ug/kg	U
	98953	Nitrobenzene	74.1	ug/kg	U
	87865	Pentachlorophenol	370	ug/kg	U
	85018	Phenanthrene	74.1	ug/kg	U
	108952	Phenol	74.1	ug/kg	U
	95487	Phenol, 2-methyl-	74.1	ug/kg	U
	129000	Pyrene	74.1	ug/kg	U
	110861	Pyridine	741	ug/kg	U
	483658	Retene	74.1	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	99	%Rec	
	2199691	1,2-Dichlorobenzene-d4	61	%Rec	
	93951736	2-chlorophenol-d4	103	%Rec	
	1718521	D10-Pyrene	92	%Rec	
	4165600	Nitrobenzene-d5	99	%Rec	
	367124	Phenol, 2-fluoro-	101	%Rec	
	4165622	Phenol-d5	103	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	100	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	*3008001	Unknown 01	732	ug/kg	NJ
		*3008002	Unknown 02	907	ug/kg	NJ
		*3008003	Unknown 03	398	ug/kg	NJ
		*3008004	Unknown 04	293	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	Collected:	2/ 8/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	Matrix:	Solid
Project Officer:	HANH GOLD	Sample Number:	02062505
Account Code:	02T10P50102D10P4LA00	Type:	Reg sample
Station Description:	213		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	75.9	ug/kg	U
120821	1,2,4-Trichlorobenzene	75.9	ug/kg	U
95954	2,4,5-Trichlorophenol	75.9	ug/kg	U
88062	2,4,6-Trichlorophenol	379	ug/kg	U
120832	2,4-Dichlorophenol	75.9	ug/kg	U
105679	2,4-Dimethylphenol	75.9	ug/kg	U
51285	2,4-Dinitrophenol	1520	ug/kg	U
121142	2,4-Dinitrotoluene	759	ug/kg	U
606202	2,6-Dinitrotoluene	379	ug/kg	U
91587	2-Chloronaphthalene	75.9	ug/kg	U
95578	2-Chlorophenol	75.9	ug/kg	U
88744	2-Nitroaniline	152	ug/kg	U
88755	2-Nitrophenol	379	ug/kg	U
91941	3,3'-Dichlorobenzidine	304	ug/kg	U
99092	3-Nitroaniline	379	ug/kg	U
360689	3B-Coprostanol	1520	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	759	ug/kg	U
101553	4-Bromophenyl-Phenylether	75.9	ug/kg	U
59507	4-Chloro-3-methylphenol	75.9	ug/kg	U
106478	4-Chloroaniline	75.9	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	75.9	ug/kg	U
106445	4-Methylphenol	75.9	ug/kg	U
100016	4-Nitroaniline	379	ug/kg	U
100027	4-Nitrophenol	759	ug/kg	U
86748	9H-Carbazole	75.9	ug/kg	U
86737	9H-Fluorene	75.9	ug/kg	U
83329	Acenaphthene	75.9	ug/kg	U
208968	**Acenaphthylene**	**27.0**	**ug/kg**	**J**
62533	Aniline	75.9	ug/kg	U
120127	**Anthracene**	**44.7**	**ug/kg**	**J**
1912249	Atrazine	75.9	ug/kg	U
100527	Benzaldehyde	75.9	ug/kg	U
95501	Benzene, 1,2-dichloro-	75.9	ug/kg	U
541731	Benzene, 1,3-dichloro-	75.9	ug/kg	U
106467	Benzene, 1,4-dichloro-	75.9	ug/kg	U
100516	Benzenemethanol	75.9	ug/kg	U
92875	Benzidine	759	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes	56553	**Benzo(a)anthracene**	**177**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**238**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**329**	**ug/kg**	J
	205992	**Benzo[b]Fluoranthene**	**379**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**125**	**ug/kg**	
	65850	Benzoic acid	759	ug/kg	U
	111444	bis(2-Chloroethyl)ether	75.9	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	75.9	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	379	ug/kg	U
	85687	Butylbenzylphthalate	379	ug/kg	U
	58082	Caffeine	75.9	ug/kg	U
	105602	Caprolactam	152	ug/kg	U
	218019	**Chrysene**	**245**	**ug/kg**	
	84742	Di-n-Butylphthalate	75.9	ug/kg	U
	117840	Di-n-octylphthalate	379	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**322**	**ug/kg**	J
	132649	Dibenzofuran	75.9	ug/kg	U
	84662	Diethyl phthalate	75.9	ug/kg	U
	131113	Dimethylphthalate	75.9	ug/kg	U
	98862	Ethanone, 1-phenyl-	75.9	ug/kg	U
	206440	**Fluoranthene**	**255**	**ug/kg**	
	118741	Hexachlorobenzene	75.9	ug/kg	U
	87683	Hexachlorobutadiene	75.9	ug/kg	U
	77474	Hexachlorocyclopentadiene	379	ug/kg	U
	67721	Hexachloroethane	75.9	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**608**	**ug/kg**	J
	78591	Isophorone	75.9	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	75.9	ug/kg	U
	62759	N-Nitrosodimethylamine	759	ug/kg	U
	621647	N-Nitrosodinpropylamine	75.9	ug/kg	U
	86306	n-Nitrosodiphenylamine	75.9	ug/kg	U
	91203	Naphthalene	75.9	ug/kg	U
	90120	Naphthalene, 1-methyl-	75.9	ug/kg	U
	91576	Naphthalene, 2-methyl-	75.9	ug/kg	U
	98953	Nitrobenzene	75.9	ug/kg	U
	87865	Pentachlorophenol	379	ug/kg	U
	85018	**Phenanthrene**	**34.0**	**ug/kg**	J
	108952	Phenol	75.9	ug/kg	U
	95487	Phenol, 2-methyl-	75.9	ug/kg	U
	129000	**Pyrene**	**212**	**ug/kg**	
	110861	Pyridine	759	ug/kg	U
	483658	Retene	75.9	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	101	%Rec	
	2199691	1,2-Dichlorobenzene-d4	67	%Rec	
	93951736	2-chlorophenol-d4	103	%Rec	
	1718521	D10-Pyrene	96	%Rec	
	4165600	Nitrobenzene-d5	94	%Rec	
	367124	Phenol, 2-fluoro-	98	%Rec	
	4165622	Phenol-d5	103	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	104	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	*3008001	Unknown 01	930	ug/kg	NJ
		*3008002	Unknown 02	269	ug/kg	NJ
		*3008003	Unknown 03	2270	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	2/ 8/01
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02062506
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	212		

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	66.2	ug/kg	U
120821	1,2,4-Trichlorobenzene	66.2	ug/kg	U
95954	2,4,5-Trichlorophenol	66.2	ug/kg	U
88062	2,4,6-Trichlorophenol	331	ug/kg	U
120832	2,4-Dichlorophenol	66.2	ug/kg	U
105679	2,4-Dimethylphenol	66.2	ug/kg	U
51285	2,4-Dinitrophenol	1320	ug/kg	U
121142	2,4-Dinitrotoluene	662	ug/kg	U
606202	2,6-Dinitrotoluene	331	ug/kg	U
91587	2-Chloronaphthalene	66.2	ug/kg	U
95578	2-Chlorophenol	66.2	ug/kg	U
88744	2-Nitroaniline	132	ug/kg	U
88755	2-Nitrophenol	331	ug/kg	U
91941	3,3'-Dichlorobenzidine	265	ug/kg	U
99092	3-Nitroaniline	331	ug/kg	U
360689	3B-Coprostanol	1320	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	662	ug/kg	U
101553	4-Bromophenyl-Phenylether	66.2	ug/kg	U
59507	4-Chloro-3-methylphenol	66.2	ug/kg	U
106478	4-Chloroaniline	66.2	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	66.2	ug/kg	U
106445	4-Methylphenol	66.2	ug/kg	U
100016	4-Nitroaniline	331	ug/kg	U
100027	4-Nitrophenol	662	ug/kg	U
86748	9H-Carbazole	66.2	ug/kg	U
86737	9H-Fluorene	66.2	ug/kg	U
83329	**Acenaphthene**	**7.7**	**ug/kg**	**J**
208968	Acenaphthylene	66.2	ug/kg	U
62533	Aniline	66.2	ug/kg	U
120127	**Anthracene**	**13.6**	**ug/kg**	**J**
1912249	Atrazine	66.2	ug/kg	U
100527	Benzaldehyde	66.2	ug/kg	U
95501	Benzene, 1,2-dichloro-	66.2	ug/kg	U
541731	Benzene, 1,3-dichloro-	66.2	ug/kg	U
106467	Benzene, 1,4-dichloro-	66.2	ug/kg	U
100516	Benzenemethanol	66.2	ug/kg	U
92875	Benzidine	662	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	66.2	ug/kg	U
	50328	**Benzo(a)pyrene**	**11.8**	**ug/kg**	**J**
	191242	Benzo(g,h,i)perylene	331	ug/kg	U
	205992	**Benzo[b]Fluoranthene**	**30.1**	**ug/kg**	**J**
	207089	Benzo[k]fluoranthene	66.2	ug/kg	U
	65850	Benzoic acid	662	ug/kg	U
	111444	bis(2-Chloroethyl)ether	66.2	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	66.2	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	331	ug/kg	U
	85687	Butylbenzylphthalate	331	ug/kg	U
	58082	Caffeine	66.2	ug/kg	U
	105602	Caprolactam	132	ug/kg	U
	218019	Chrysene	66.2	ug/kg	U
	84742	**Di-n-Butylphthalate**	**154**	**ug/kg**	
	117840	Di-n-octylphthalate	331	ug/kg	U
	53703	Dibenzo[a,h]anthracene	331	ug/kg	U
	132649	**Dibenzofuran**	**7.2**	**ug/kg**	**J**
	84662	**Diethyl phthalate**	**67.4**	**ug/kg**	
	131113	Dimethylphthalate	66.2	ug/kg	U
	98862	Ethanone, 1-phenyl-	66.2	ug/kg	U
	206440	**Fluoranthene**	**75.1**	**ug/kg**	
	118741	Hexachlorobenzene	66.2	ug/kg	U
	87683	Hexachlorobutadiene	66.2	ug/kg	U
	77474	Hexachlorocyclopentadiene	331	ug/kg	U
	67721	Hexachloroethane	66.2	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	662	ug/kg	U
	78591	Isophorone	66.2	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	66.2	ug/kg	U
	62759	N-Nitrosodimethylamine	662	ug/kg	U
	621647	N-Nitrosodinpropylamine	66.2	ug/kg	U
	86306	n-Nitrosodiphenylamine	66.2	ug/kg	U
	91203	Naphthalene	66.2	ug/kg	U
	90120	Naphthalene, 1-methyl-	66.2	ug/kg	U
	91576	Naphthalene, 2-methyl-	66.2	ug/kg	U
	98953	Nitrobenzene	66.2	ug/kg	U
	87865	Pentachlorophenol	331	ug/kg	U
	85018	**Phenanthrene**	**22.8**	**ug/kg**	**J**
	108952	Phenol	66.2	ug/kg	U
	95487	Phenol, 2-methyl-	66.2	ug/kg	U
	129000	**Pyrene**	**52.6**	**ug/kg**	**J**
	110861	Pyridine	662	ug/kg	U
	483658	Retene	66.2	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	95	%Rec	
	2199691	1,2-Dichlorobenzene-d4	63	%Rec	
	93951736	2-chlorophenol-d4	101	%Rec	
	1718521	D10-Pyrene	90	%Rec	
	4165600	Nitrobenzene-d5	97	%Rec	
	367124	Phenol, 2-fluoro-	100	%Rec	
	4165622	Phenol-d5	100	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	93	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	*3008001	Unknown 01	487	ug/kg	NJ
		*3008002	Unknown 02	359	ug/kg	NJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	OBS2045A1
Account Code:	02T10P50102D10P4LA00	**Type:**	Blank
Station Description:			

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

			Result	Units	Qlfr
Analytes :	92524	1,1'-Biphenyl	66.7	ug/kg	U
	120821	1,2,4-Trichlorobenzene	66.7	ug/kg	U
	95954	2,4,5-Trichlorophenol	66.7	ug/kg	U
	88062	2,4,6-Trichlorophenol	333	ug/kg	U
	120832	2,4-Dichlorophenol	66.7	ug/kg	U
	105679	2,4-Dimethylphenol	66.7	ug/kg	U
	51285	2,4-Dinitrophenol	1330	ug/kg	U
	121142	2,4-Dinitrotoluene	667	ug/kg	U
	606202	2,6-Dinitrotoluene	333	ug/kg	U
	91587	2-Chloronaphthalene	66.7	ug/kg	U
	95578	2-Chlorophenol	66.7	ug/kg	U
	88744	2-Nitroaniline	133	ug/kg	U
	88755	2-Nitrophenol	333	ug/kg	U
	91941	3,3'-Dichlorobenzidine	267	ug/kg	U
	99092	3-Nitroaniline	333	ug/kg	U
	360689	3B-Coprostanol	1330	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	667	ug/kg	U
	101553	4-Bromophenyl-Phenylether	66.7	ug/kg	U
	59507	4-Chloro-3-methylphenol	66.7	ug/kg	U
	106478	4-Chloroaniline	66.7	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	66.7	ug/kg	U
	106445	4-Methylphenol	66.7	ug/kg	U
	100016	4-Nitroaniline	333	ug/kg	U
	100027	4-Nitrophenol	667	ug/kg	U
	86748	9H-Carbazole	66.7	ug/kg	U
	86737	9H-Fluorene	66.7	ug/kg	U
	83329	Acenaphthene	66.7	ug/kg	U
	208968	Acenaphthylene	66.7	ug/kg	U
	62533	Aniline	66.7	ug/kg	U
	120127	Anthracene	66.7	ug/kg	U
	1912249	Atrazine	66.7	ug/kg	U
	100527	Benzaldehyde	66.7	ug/kg	U
	95501	Benzene, 1,2-dichloro-	66.7	ug/kg	U
	541731	Benzene, 1,3-dichloro-	66.7	ug/kg	U
	106467	Benzene, 1,4-dichloro-	66.7	ug/kg	U
	100516	Benzenemethanol	66.7	ug/kg	U
	92875	Benzidine	667	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	66.7	ug/kg	U
	50328	Benzo(a)pyrene	66.7	ug/kg	U
	191242	Benzo(g,h,i)perylene	333	ug/kg	U
	205992	Benzo[b]Fluoranthene	66.7	ug/kg	U
	207089	Benzo[k]fluoranthene	66.7	ug/kg	U
	65850	Benzoic acid	667	ug/kg	U
	111444	bis(2-Chloroethyl)ether	66.7	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	66.7	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	333	ug/kg	U
	85687	Butylbenzylphthalate	333	ug/kg	U
	58082	Caffeine	66.7	ug/kg	U
	105602	Caprolactam	133	ug/kg	U
	218019	Chrysene	66.7	ug/kg	U
	84742	Di-n-Butylphthalate	66.7	ug/kg	U
	117840	Di-n-octylphthalate	333	ug/kg	U
	53703	Dibenzo[a,h]anthracene	333	ug/kg	U
	132649	Dibenzofuran	66.7	ug/kg	U
	84662	Diethyl phthalate	66.7	ug/kg	U
	131113	Dimethylphthalate	66.7	ug/kg	U
	98862	Ethanone, 1-phenyl-	66.7	ug/kg	U
	206440	Fluoranthene	66.7	ug/kg	U
	118741	Hexachlorobenzene	66.7	ug/kg	U
	87683	Hexachlorobutadiene	66.7	ug/kg	U
	77474	Hexachlorocyclopentadiene	333	ug/kg	U
	67721	Hexachloroethane	66.7	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	667	ug/kg	U
	78591	Isophorone	66.7	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	66.7	ug/kg	U
	62759	N-Nitrosodimethylamine	667	ug/kg	U
	621647	N-Nitrosodinpropylamine	66.7	ug/kg	U
	86306	n-Nitrosodiphenylamine	66.7	ug/kg	U
	91203	Naphthalene	66.7	ug/kg	U
	90120	Naphthalene, 1-methyl-	66.7	ug/kg	U
	91576	Naphthalene, 2-methyl-	66.7	ug/kg	U
	98953	Nitrobenzene	66.7	ug/kg	U
	87865	Pentachlorophenol	333	ug/kg	U
	85018	Phenanthrene	66.7	ug/kg	U
	108952	Phenol	66.7	ug/kg	U
	95487	Phenol, 2-methyl-	66.7	ug/kg	U
	129000	Pyrene	66.7	ug/kg	U
	110861	Pyridine	667	ug/kg	U
	483658	Retene	66.7	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	81	%Rec	
	2199691	1,2-Dichlorobenzene-d4	77	%Rec	
	93951736	2-chlorophenol-d4	79	%Rec	
	1718521	D10-Pyrene	71	%Rec	
	4165600	Nitrobenzene-d5	89	%Rec	
	367124	Phenol, 2-fluoro-	79	%Rec	
	4165622	Phenol-d5	85	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes :	1718510	Terphenyl-d14	77	%Rec	
Parameter :	Semi-volatiles - Tentatives				
Method :	8270-M	BNA			
Prep Method :	3510M/3540				
Analytes :	110134	2,5-Hexanedione	430	ug/kg	NJ
	1626091	2,7-Octanedione	5600	ug/kg	NJ
	123422	2-Pentanone, 4-hydroxy-4-methy l-	172000	ug/kg	NJ
	78944	3-Buten-2-one	348	ug/kg	NJ
	79345	Ethane, 1,1,2,2-tetrachloro-	387	ug/kg	NJ
	*3008001	Unknown 01	421	ug/kg	NJ
	*3008002	Unknown 02	1820	ug/kg	NJ
	*3008003	Unknown 03	601	ug/kg	NJ
	*3008004	Unknown 04	436	ug/kg	NJ
	*3008005	Unknown 05	2120	ug/kg	NJ

Project Code:	FSP-009H	**Collected:**	
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	OBS2045A2
Account Code:	02T10P50102D10P4LA00	**Type:**	Blank
Station Description:			

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method : 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	66.7	ug/kg	U
120821	1,2,4-Trichlorobenzene	66.7	ug/kg	U
95954	2,4,5-Trichlorophenol	66.7	ug/kg	U
88062	2,4,6-Trichlorophenol	333	ug/kg	U
120832	2,4-Dichlorophenol	66.7	ug/kg	U
105679	2,4-Dimethylphenol	66.7	ug/kg	U
51285	2,4-Dinitrophenol	1330	ug/kg	U
121142	2,4-Dinitrotoluene	667	ug/kg	U
606202	2,6-Dinitrotoluene	333	ug/kg	U
91587	2-Chloronaphthalene	66.7	ug/kg	U
95578	2-Chlorophenol	66.7	ug/kg	U
88744	2-Nitroaniline	133	ug/kg	U
88755	2-Nitrophenol	333	ug/kg	U
91941	3,3'-Dichlorobenzidine	267	ug/kg	U
99092	3-Nitroaniline	333	ug/kg	U
360689	3B-Coprostanol	1330	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	667	ug/kg	U
101553	4-Bromophenyl-Phenylether	66.7	ug/kg	U
59507	4-Chloro-3-methylphenol	66.7	ug/kg	U
106478	4-Chloroaniline	66.7	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	66.7	ug/kg	U
106445	4-Methylphenol	66.7	ug/kg	U
100016	4-Nitroaniline	333	ug/kg	U
100027	4-Nitrophenol	667	ug/kg	U
86748	9H-Carbazole	66.7	ug/kg	U
86737	9H-Fluorene	66.7	ug/kg	U
83329	Acenaphthene	66.7	ug/kg	U
208968	Acenaphthylene	66.7	ug/kg	U
62533	Aniline	66.7	ug/kg	U
120127	Anthracene	66.7	ug/kg	U
1912249	Atrazine	66.7	ug/kg	U
100527	Benzaldehyde	66.7	ug/kg	U
95501	Benzene, 1,2-dichloro-	66.7	ug/kg	U
541731	Benzene, 1,3-dichloro-	66.7	ug/kg	U
106467	Benzene, 1,4-dichloro-	66.7	ug/kg	U
100516	Benzenemethanol	66.7	ug/kg	U
92875	Benzidine	667	ug/kg	U

			Result	Units	Qlfr
Analytes :	56553	Benzo(a)anthracene	66.7	ug/kg	U
	50328	Benzo(a)pyrene	66.7	ug/kg	U
	191242	Benzo(g,h,i)perylene	333	ug/kg	U
	205992	Benzo[b]Fluoranthene	66.7	ug/kg	U
	207089	Benzo[k]fluoranthene	66.7	ug/kg	U
	65850	Benzoic acid	667	ug/kg	U
	111444	bis(2-Chloroethyl)ether	66.7	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	66.7	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	333	ug/kg	U
	85687	Butylbenzylphthalate	333	ug/kg	U
	58082	Caffeine	66.7	ug/kg	U
	105602	Caprolactam	133	ug/kg	U
	218019	Chrysene	66.7	ug/kg	U
	84742	Di-n-Butylphthalate	66.7	ug/kg	U
	117840	Di-n-octylphthalate	333	ug/kg	U
	53703	Dibenzo[a,h]anthracene	333	ug/kg	U
	132649	Dibenzofuran	66.7	ug/kg	U
	84662	Diethyl phthalate	66.7	ug/kg	U
	131113	Dimethylphthalate	66.7	ug/kg	U
	98862	Ethanone, 1-phenyl-	66.7	ug/kg	U
	206440	Fluoranthene	66.7	ug/kg	U
	118741	Hexachlorobenzene	66.7	ug/kg	U
	87683	Hexachlorobutadiene	66.7	ug/kg	U
	77474	Hexachlorocyclopentadiene	333	ug/kg	U
	67721	Hexachloroethane	66.7	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	667	ug/kg	U
	78591	Isophorone	66.7	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	66.7	ug/kg	U
	62759	N-Nitrosodimethylamine	667	ug/kg	U
	621647	N-Nitrosodinpropylamine	66.7	ug/kg	U
	86306	n-Nitrosodiphenylamine	66.7	ug/kg	U
	91203	Naphthalene	66.7	ug/kg	U
	90120	Naphthalene, 1-methyl-	66.7	ug/kg	U
	91576	Naphthalene, 2-methyl-	66.7	ug/kg	U
	98953	Nitrobenzene	66.7	ug/kg	U
	87865	Pentachlorophenol	333	ug/kg	U
	85018	Phenanthrene	66.7	ug/kg	U
	108952	Phenol	66.7	ug/kg	U
	95487	Phenol, 2-methyl-	66.7	ug/kg	U
	129000	Pyrene	66.7	ug/kg	U
	110861	Pyridine	667	ug/kg	U
	483658	Retene	66.7	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	89	%Rec	
	2199691	1,2-Dichlorobenzene-d4	87	%Rec	
	93951736	2-chlorophenol-d4	80	%Rec	
	1718521	D10-Pyrene	81	%Rec	
	4165600	Nitrobenzene-d5	96	%Rec	
	367124	Phenol, 2-fluoro-	79	%Rec	
	4165622	Phenol-d5	91	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	86	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	110134	2,5-Hexanedione	509	ug/kg	NJ
		1626091	2,7-Octanedione	2880	ug/kg	NJ
		123422	2-Pentanone, 4-hydroxy-4-methy l-	105000	ug/kg	NJ
		79345	Ethane, 1,1,2,2-tetrachloro-	617	ug/kg	NJ
		*3008001	Unknown 01	408	ug/kg	NJ
		*3008002	Unknown 02	1990	ug/kg	NJ
		*3008003	Unknown 03	490	ug/kg	NJ
		*3008004	Unknown 04	551	ug/kg	NJ
		*3008005	Unknown 05	1140	ug/kg	NJ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

For further information regarding the attached data contact the appropriate person listed below or Joseph N. Blazevich Sr., supervisor of the Environmental Chemistry Section at the Region Ten Manchester Laboratory.

CONTACT	PHONE NUMBER	TYPE of ANALYSES
Gerald Dodo	(360) 871-8728	Organic Analyses - ESAT (Superfund)
Isa Chamberlain	(360) 871-8706	Metals Analyses - EPA (non-Superfund)
Katie Adams	(360) 871-8748	Metals Analyses - ESAT (Suuperfund)
Kathy Parker	(360) 871-8716	Conventional & Hg Analyses - EPA & ESAT
Robert Rieck	(360) 871-8719	Pesticide/PCB - EPA
Steve Pope	(360) 871-8717	VOC & VOA Analyses - EPA
Peggy Knight	(360) 871-8713	Organic Analyses, BNA & PAH - EPA
Susan Davis	(360) 871-8806	Asbestos
Joseph N. Blazevich	(360) 871-8705	All Analyses - EPA & ESAT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

3/1/02

April 4, 2002

MEMORANDUM

SUBJECT: Data Validation Report of Semivolatiles' Results for the Wyckoff-Thermal Remediation Project Samples 02092553 and 02092554

FROM: Gerald H. Dodo, Chemist
USEPA

TO: Hanh Gold
USEPA

CC: Travis Shaw
USACE

The following is a data validation report of semivolatiles analyses' results for soil samples collected for the Wyckoff-Thermal Remediation project. The samples were analyzed by the USEPA Region 10 Laboratory ESAT Team located in Manchester, WA using USEPA SW846 Method 8270C. The analyses' results were delivered as ESAT document number ES10-0-1335 under Technical Direction Form 1075. This report covers the samples listed above.

The project code for these samples is FSP-009H. The account number is 02T10P50102D10P4LA00.

Data qualifications

The following comments refer to laboratory performance meeting the Quality Control specifications outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99).

I. Holding Times: Acceptable

The recommended holding time for the extraction of soil samples is 14 days from the date of sampling. Extracts have a

holding time limit of 40 days from the time of preparation. All samples were extracted and analyzed within holding time maximums.

II. GC/MS Tuning and Performance: Acceptable

The tuning summary agreed with the raw data. All decafluorotriphenylphosphine ion abundance met criteria. All sample analyses were preceded by a tune less than 12 hours prior to analysis. No qualifiers were applied on the basis of the tuning data.

III. Initial Calibration: Acceptable

A five- to nine-point initial calibration was performed on 12/27/01. Correlation coefficients were $\geq$0.99. Average RRFs met the criteria of $\geq$0.05. %RSDs of the RRFs met the criteria of $\leq$30%. No qualifiers were applied based on the initial calibration.

IV. Continuing Calibration:

The continuing calibration check standard met the criteria for frequency of analysis and RRT windows for all target compounds and surrogates. The RRFs were $\geq$0.05 and the accuracy for the target compounds met the criteria of 75-125% of the true value except for the following.

03/11/02 Samples 02092553, 02092554, Matrix Spikes 02092553S1, and 02092553S2.

Hexachlorocyclopentadiene and benzidine resulted with <75% of the true value. The associated sample results for these compounds were non-detected and were qualified UJ. 3,3'-Dichlorobenzidine resulted with >125% of the true value. This compound was not detected in the associated samples, therefore, no qualifiers were applied based on this high result.

V. Blanks:

Method blanks were prepared and analyzed with each sample extraction batch. Target compounds detected in the samples were reported without qualification if the sample result area integration exceeded ten times that of the blank for common contaminates (e.g., phthalates) or five times that of the blank for the other target compounds. Detected sample results were qualified U if the area integration was below these criteria. The sample concentration or the sample quantitation limit, whichever is greater, was reported as the qualified result.

Tentatively identified compounds detected in the blanks were deleted from the sample results.

Detected phthalate results below the quantitation limits for samples were qualified U regardless of the blank data as a conservative measure.

VI. Surrogates:

The SW846 Method 8270C and the Functional Guidelines specifications for surrogate recoveries were applied. Sample 02092553 resulted with two or more surrogates per fraction above the criteria maximum recoveries. Detected results for this sample were qualified J.

VII. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

An MS/MSD analysis was performed using sample 02092553 (S1/S2). The MS/MSD criteria as described in the CLP Statement of Work and the Region 10 acceptance ranges (50-150% recovery, ≤50% relative percent difference, RPD) were applied. The following recoveries did not meet the applied criteria:

Compound	Recovery (S1/S2)
benzaldehyde	8/14
phenol	115/113
2,4-dimethylphenol	/40
4-chloroaniline	10/11
4-chloro-3-methylphenol	124/117
hexachlorocyclopentadiene	/48
2,6-dinitrotoluene	118/109
3-nitroaniline	47/44
2,4-dinitrotoluene	116/
pentachlorophenol	116/111
3,3'-dichlorobenzidine	40/33

The compounds above were not detected in sample 02092553. The reported benzaldehyde result for this sample was qualified R due to the <10% recovery. The reported 2,4-dimethylphenol, 4-chloroaniline, hexachlorocyclopentadiene, 3-nitroaniline, and 3,3'-dichlorobenzidine results for this sample were qualified UJ due to the low recoveries. No qualifiers were applied based on the high recoveries and RPDs for the other compounds above since these results do not indicate a problem with the reported quantitation limits.

VIII. Internal Standard Performance: Acceptable

The retention time variations of all internal standards were within 30 seconds of the continuing calibration standards. The %areas of all internal standards were within the specified 50% to

200% of the continuing calibration standards. No qualifiers were applied based on the internal standards.

IX. Target Compound Identification: Acceptable

All detected target compounds' relative retention times were within acceptable limits of the related standards in the continuing calibration standard. Criteria were met for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

X. Compound Quantitation: Acceptable

Calculations were based on the initial calibration. Sample quantitation limits were adjusted appropriately as according to sample amounts and calibration data. Detected results below the sample quantitation limits were qualified J.

XI. Tentatively Identified Compounds: Acceptable

Spectra for all tentatively identified compounds (TICs) met criteria for mass spectral ion matching and ion abundance matching or the mass spectra were judged acceptable.

Overall Assessment for the Case

The usefulness of the data is based on the criteria outlined in the USEPA SW846 Method 8270C and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (10/99). All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

In general, all unqualified data can be used without restriction. The usefulness of qualified data should be treated according to the severity of the qualifier. Should questions arise regarding the qualification of data and its relation to the usefulness, the reader is encouraged to contact Gerald Dodo at the Region 10 laboratory, phone number (360) 871-8728.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported result.
J	-	The analyte was positively identified. The associated numerical result is an estimate.
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.
R	-	The data are unusable for all purposes.
N	-	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.
UJ	-	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
NAF	-	Not analyzed for.
NAR	-	No analytical result.
*	-	The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	3/ 1/02
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02092553
Account Code:	02T10P50102D10P4LA00	**Type:**	Reg sample
Station Description:	CW01S2		

			Result	Units	Qlfr
GCMS					
Parameter	: Semi-volatiles				
Method	: 8270-M	BNA			
Prep Method	: 3510M/3540				
Analytes	: 100527	Benzaldehyde			R
	92524	1,1'-Biphenyl	73.6	ug/kg	U
	120821	1,2,4-Trichlorobenzene	73.6	ug/kg	U
	95954	2,4,5-Trichlorophenol	73.6	ug/kg	U
	88062	2,4,6-Trichlorophenol	368	ug/kg	U
	120832	2,4-Dichlorophenol	73.6	ug/kg	U
	105679	2,4-Dimethylphenol	73.6	ug/kg	UJ
	51285	2,4-Dinitrophenol	1470	ug/kg	U
	121142	2,4-Dinitrotoluene	736	ug/kg	U
	606202	2,6-Dinitrotoluene	368	ug/kg	U
	91587	2-Chloronaphthalene	73.6	ug/kg	U
	95578	2-Chlorophenol	73.6	ug/kg	U
	88744	2-Nitroaniline	147	ug/kg	U
	88755	2-Nitrophenol	368	ug/kg	U
	91941	3,3'-Dichlorobenzidine	295	ug/kg	UJ
	99092	3-Nitroaniline	368	ug/kg	UJ
	360689	3B-Coprostanol	1470	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	736	ug/kg	U
	101553	4-Bromophenyl-Phenylether	73.6	ug/kg	U
	59507	4-Chloro-3-methylphenol	73.6	ug/kg	U
	106478	4-Chloroaniline	73.6	ug/kg	UJ
	7005723	4-Chlorophenyl-Phenylether	73.6	ug/kg	U
	106445	4-Methylphenol	73.6	ug/kg	U
	100016	4-Nitroaniline	368	ug/kg	U
	100027	4-Nitrophenol	736	ug/kg	U
	86748	9H-Carbazole	73.6	ug/kg	U
	86737	9H-Fluorene	73.6	ug/kg	U
	83329	Acenaphthene	73.6	ug/kg	U
	208968	Acenaphthylene	73.6	ug/kg	U
	62533	Aniline	73.6	ug/kg	U
	120127	Anthracene	73.6	ug/kg	U
	1912249	Atrazine	73.6	ug/kg	U
	95501	Benzene, 1,2-dichloro-	73.6	ug/kg	U
	541731	Benzene, 1,3-dichloro-	73.6	ug/kg	U
	106467	Benzene, 1,4-dichloro-	73.6	ug/kg	U
	100516	Benzenemethanol	73.9	ug/kg	U
	92875	Benzidine	736	ug/kg	UJ

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

			Result	Units	Qlfr
Analytes	56553	Benzo(a)anthracene	73.6	ug/kg	U
	50328	Benzo(a)pyrene	73.6	ug/kg	U
	191242	Benzo(g,h,i)perylene	368	ug/kg	U
	205992	Benzo[b]Fluoranthene	73.6	ug/kg	U
	207089	Benzo[k]fluoranthene	73.6	ug/kg	U
	65850	Benzoic acid	736	ug/kg	U
	111444	bis(2-Chloroethyl)ether	73.6	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	73.6	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	368	ug/kg	U
	85687	Butylbenzylphthalate	368	ug/kg	U
	58082	Caffeine	73.6	ug/kg	U
	105602	Caprolactam	147	ug/kg	U
	218019	Chrysene	73.6	ug/kg	U
	84742	**Di-n-Butylphthalate**	**86.3**	**ug/kg**	**J**
	117840	Di-n-octylphthalate	368	ug/kg	U
	53703	Dibenzo[a,h]anthracene	368	ug/kg	U
	132649	Dibenzofuran	73.6	ug/kg	U
	84662	Diethyl phthalate	73.6	ug/kg	U
	131113	Dimethylphthalate	73.6	ug/kg	U
	98862	Ethanone, 1-phenyl-	73.6	ug/kg	U
	206440	Fluoranthene	73.6	ug/kg	U
	118741	Hexachlorobenzene	73.6	ug/kg	U
	87683	Hexachlorobutadiene	73.6	ug/kg	U
	77474	Hexachlorocyclopentadiene	368	ug/kg	UJ
	67721	Hexachloroethane	73.6	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	736	ug/kg	U
	78591	Isophorone	73.6	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	73.6	ug/kg	U
	62759	N-Nitrosodimethylamine	736	ug/kg	U
	621647	N-Nitrosodinpropylamine	73.6	ug/kg	U
	86306	n-Nitrosodiphenylamine	73.6	ug/kg	U
	91203	Naphthalene	73.6	ug/kg	U
	90120	Naphthalene, 1-methyl-	73.6	ug/kg	U
	91576	Naphthalene, 2-methyl-	73.6	ug/kg	U
	98953	Nitrobenzene	73.6	ug/kg	U
	87865	Pentachlorophenol	368	ug/kg	U
	85018	Phenanthrene	73.6	ug/kg	U
	108952	Phenol	73.6	ug/kg	U
	95487	Phenol, 2-methyl-	73.6	ug/kg	U
	129000	Pyrene	73.6	ug/kg	U
	110861	Pyridine	736	ug/kg	U
	483658	Retene	73.6	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	133	%Rec	
	2199691	1,2-Dichlorobenzene-d4	110	%Rec	
	93951736	2-chlorophenol-d4	138	%Rec	
	1718521	D10-Pyrene	145	%Rec	
	4165600	Nitrobenzene-d5	130	%Rec	
	367124	Phenol, 2-fluoro-	132	%Rec	
	4165622	Phenol-d5	139	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	152	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	**113008**	**Guanidine**	**1340**	**ug/kg**	**NJ**
		***3008001**	**Unknown 01**	**271**	**ug/kg**	**NJ**
		***3008002**	**Unknown 02**	**14000**	**ug/kg**	**NJ**
		***3008003**	**Unknown 03**	**887**	**ug/kg**	**NJ**
		***3008004**	**Unknown 04**	**638**	**ug/kg**	**NJ**

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code:	FSP-009H	**Collected:**	
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02092553
Account Code:	02T10P50102D10P4LA00	**Type:**	Matrix Spike
Station Description:			

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes :	92524 1,1'-Biphenyl	117	%Rec	
	321608 1,1'-Biphenyl, 2-fluoro-	122	%Rec	
	2199691 1,2-Dichlorobenzene-d4	117	%Rec	
	95954 2,4,5-Trichlorophenol	129	%Rec	
	88062 2,4,6-Trichlorophenol	111	%Rec	
	120832 2,4-Dichlorophenol	115	%Rec	
	105679 2,4-Dimethylphenol	72.8	%Rec	
	51285 2,4-Dinitrophenol	137	%Rec	
	121142 2,4-Dinitrotoluene	116	%Rec	
	606202 2,6-Dinitrotoluene	118	%Rec	
	91587 2-Chloronaphthalene	120	%Rec	
	95578 2-Chlorophenol	119	%Rec	
	93951736 2-chlorophenol-d4	125	%Rec	
	88744 2-Nitroaniline	111	%Rec	
	88755 2-Nitrophenol	115	%Rec	
	91941 3,3'-Dichlorobenzidine	40.2	%Rec	
	99092 3-Nitroaniline	46.7	%Rec	
	534521 4,6-Dinitro-2-methylphenol	124	%Rec	
	101553 4-Bromophenyl-Phenylether	117	%Rec	
	59507 4-Chloro-3-methylphenol	124	%Rec	
	106478 4-Chloroaniline	9.5	%Rec	
	7005723 4-Chlorophenyl-Phenylether	113	%Rec	
	106445 4-Methylphenol	128	%Rec	
	100016 4-Nitroaniline	91.5	%Rec	
	100027 4-Nitrophenol	113	%Rec	
	86748 9H-Carbazole	121	%Rec	
	86737 9H-Fluorene	116	%Rec	
	83329 Acenaphthene	117	%Rec	
	208968 Acenaphthylene	104	%Rec	
	120127 Anthracene	106	%Rec	
	1912249 Atrazine	129	%Rec	
	100527 Benzaldehyde	8.4	%Rec	
	95501 Benzene, 1,2-dichloro-	117	%Rec	
	56553 Benzo(a)anthracene	110	%Rec	
	50328 Benzo(a)pyrene	95.9	%Rec	
	191242 Benzo(g,h,i)perylene	121	%Rec	
	205992 Benzo[b]Fluoranthene	122	%Rec	

			Result	Units	Qlfr
Analytes	: 207089	Benzo[k]fluoranthene	116	%Rec	
	111444	bis(2-Chloroethyl)ether	110	%Rec	
	108601	BIS(2-CHLOROISOPROPYL)ETHER	93.8	%Rec	
	117817	Bis(2-ethylhexyl) phthalate	124	%Rec	
	85687	Butylbenzylphthalate	131	%Rec	
	105602	Caprolactam	124	%Rec	
	218019	Chrysene	111	%Rec	
	1718521	D10-Pyrene	126	%Rec	
	84742	Di-n-Butylphthalate	114	%Rec	
	117840	Di-n-octylphthalate	133	%Rec	
	53703	Dibenzo[a,h]anthracene	105	%Rec	
	132649	Dibenzofuran	106	%Rec	
	84662	Diethyl phthalate	111	%Rec	
	131113	Dimethylphthalate	115	%Rec	
	98862	Ethanone, 1-phenyl-	101	%Rec	
	206440	Fluoranthene	106	%Rec	
	118741	Hexachlorobenzene	117	%Rec	
	87683	Hexachlorobutadiene	103	%Rec	
	77474	Hexachlorocyclopentadiene	54.5	%Rec	
	67721	Hexachloroethane	103	%Rec	
	193395	Indeno(1,2,3-cd)pyrene	122	%Rec	
	78591	Isophorone	121	%Rec	
	111911	Methane, bis(2-chloroethoxy)-	114	%Rec	
	621647	N-Nitrosodinpropylamine	115	%Rec	
	86306	n-Nitrosodiphenylamine	116	%Rec	
	91203	Naphthalene	114	%Rec	
	91576	Naphthalene, 2-methyl-	108	%Rec	
	98953	Nitrobenzene	116	%Rec	
	4165600	Nitrobenzene-d5	120	%Rec	
	87865	Pentachlorophenol	116	%Rec	
	85018	Phenanthrene	118	%Rec	
	108952	Phenol	115	%Rec	
	367124	Phenol, 2-fluoro-	125	%Rec	
	95487	Phenol, 2-methyl-	122	%Rec	
	4165622	Phenol-d5	128	%Rec	
	129000	Pyrene	125	%Rec	
	1718510	Terphenyl-d14	134	%Rec	

Project Code:	FSP-009H	**Collected:**	
Project Name:	WYCKOFF THERMAL REMEDIATION P	**Matrix:**	Solid
Project Officer:	HANH GOLD	**Sample Number:**	02092553
Account Code:	02T10P50102D10P4LA00	**Type:**	Matrix Spike Dupl
Station Description:			

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	115	%Rec	
321608	1,1'-Biphenyl, 2-fluoro-	123	%Rec	
2199691	1,2-Dichlorobenzene-d4	117	%Rec	
95954	2,4,5-Trichlorophenol	118	%Rec	
88062	2,4,6-Trichlorophenol	105	%Rec	
120832	2,4-Dichlorophenol	110	%Rec	
105679	2,4-Dimethylphenol	40.3	%Rec	
51285	2,4-Dinitrophenol	131	%Rec	
121142	2,4-Dinitrotoluene	108	%Rec	
606202	2,6-Dinitrotoluene	109	%Rec	
91587	2-Chloronaphthalene	116	%Rec	
95578	2-Chlorophenol	120	%Rec	
93951736	2-chlorophenol-d4	130	%Rec	
88744	2-Nitroaniline	109	%Rec	
88755	2-Nitrophenol	108	%Rec	
91941	3,3'-Dichlorobenzidine	32.9	%Rec	
99092	3-Nitroaniline	43.8	%Rec	
534521	4,6-Dinitro-2-methylphenol	114	%Rec	
101553	4-Bromophenyl-Phenylether	113	%Rec	
59507	4-Chloro-3-methylphenol	117	%Rec	
106478	4-Chloroaniline	10.9	%Rec	
7005723	4-Chlorophenyl-Phenylether	109	%Rec	
106445	4-Methylphenol	115	%Rec	
100016	4-Nitroaniline	83.6	%Rec	
100027	4-Nitrophenol	111	%Rec	
86748	9H-Carbazole	113	%Rec	
86737	9H-Fluorene	113	%Rec	
83329	Acenaphthene	114	%Rec	
208968	Acenaphthylene	88.0	%Rec	
120127	Anthracene	92.5	%Rec	
1912249	Atrazine	124	%Rec	
100527	Benzaldehyde	13.6	%Rec	
95501	Benzene, 1,2-dichloro-	117	%Rec	
56553	Benzo(a)anthracene	103	%Rec	
50328	Benzo(a)pyrene	81.5	%Rec	
191242	Benzo(g,h,i)perylene	114	%Rec	
205992	Benzo[b]Fluoranthene	114	%Rec	

			Result	Units	Qlfr
Analytes	: 207089	Benzo[k]fluoranthene	114	%Rec	
	111444	bis(2-Chloroethyl)ether	114	%Rec	
	108601	BIS(2-CHLOROISOPROPYL)ETHER	94.8	%Rec	
	117817	Bis(2-ethylhexyl) phthalate	120	%Rec	
	85687	Butylbenzylphthalate	127	%Rec	
	105602	Caprolactam	122	%Rec	
	218019	Chrysene	108	%Rec	
	1718521	D10-Pyrene	129	%Rec	
	84742	Di-n-Butylphthalate	111	%Rec	
	117840	Di-n-octylphthalate	127	%Rec	
	53703	Dibenzo[a,h]anthracene	100	%Rec	
	132649	Dibenzofuran	102	%Rec	
	84662	Diethyl phthalate	106	%Rec	
	131113	Dimethylphthalate	111	%Rec	
	98862	Ethanone, 1-phenyl-	107	%Rec	
	206440	Fluoranthene	103	%Rec	
	118741	Hexachlorobenzene	114	%Rec	
	87683	Hexachlorobutadiene	99.3	%Rec	
	77474	Hexachlorocyclopentadiene	48.4	%Rec	
	67721	Hexachloroethane	102	%Rec	
	193395	Indeno(1,2,3-cd)pyrene	117	%Rec	
	78591	Isophorone	119	%Rec	
	111911	Methane, bis(2-chloroethoxy)-	112	%Rec	
	621647	N-Nitrosodinpropylamine	113	%Rec	
	86306	n-Nitrosodiphenylamine	110	%Rec	
	91203	Naphthalene	115	%Rec	
	91576	Naphthalene, 2-methyl-	109	%Rec	
	98953	Nitrobenzene	115	%Rec	
	4165600	Nitrobenzene-d5	124	%Rec	
	87865	Pentachlorophenol	111	%Rec	
	85018	Phenanthrene	113	%Rec	
	108952	Phenol	113	%Rec	
	367124	Phenol, 2-fluoro-	127	%Rec	
	95487	Phenol, 2-methyl-	112	%Rec	
	4165622	Phenol-d5	131	%Rec	
	129000	Pyrene	120	%Rec	
	1718510	Terphenyl-d14	132	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code: FSP-009H
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HANH GOLD
Account Code: 02T10P50102D10P4LA00
Station Description: CW01W

Collected: 3/ 1/02
Matrix: Solid
Sample Number: 02092554
Type: Reg sample

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

		Result	Units	Qlfr
Analytes : 92524	1,1'-Biphenyl	77.1	ug/kg	U
120821	1,2,4-Trichlorobenzene	77.1	ug/kg	U
95954	2,4,5-Trichlorophenol	77.1	ug/kg	U
88062	2,4,6-Trichlorophenol	385	ug/kg	U
120832	2,4-Dichlorophenol	77.1	ug/kg	U
105679	2,4-Dimethylphenol	77.1	ug/kg	U
51285	2,4-Dinitrophenol	1540	ug/kg	U
121142	2,4-Dinitrotoluene	771	ug/kg	U
606202	2,6-Dinitrotoluene	385	ug/kg	U
91587	2-Chloronaphthalene	77.1	ug/kg	U
95578	2-Chlorophenol	77.1	ug/kg	U
88744	2-Nitroaniline	154	ug/kg	U
88755	2-Nitrophenol	385	ug/kg	U
91941	3,3'-Dichlorobenzidine	308	ug/kg	U
99092	3-Nitroaniline	385	ug/kg	U
360689	3B-Coprostanol	1540	ug/kg	U
534521	4,6-Dinitro-2-methylphenol	771	ug/kg	U
101553	4-Bromophenyl-Phenylether	77.1	ug/kg	U
59507	4-Chloro-3-methylphenol	77.1	ug/kg	U
106478	4-Chloroaniline	77.1	ug/kg	U
7005723	4-Chlorophenyl-Phenylether	77.1	ug/kg	U
106445	4-Methylphenol	77.1	ug/kg	U
100016	4-Nitroaniline	385	ug/kg	U
100027	4-Nitrophenol	771	ug/kg	U
86748	**9H-Carbazole**	**51.6**	**ug/kg**	**J**
86737	9H-Fluorene	77.1	ug/kg	U
83329	**Acenaphthene**	**7.0**	**ug/kg**	**J**
208968	**Acenaphthylene**	**42.0**	**ug/kg**	**J**
62533	Aniline	77.1	ug/kg	U
120127	**Anthracene**	**103**	**ug/kg**	
1912249	Atrazine	77.1	ug/kg	U
100527	Benzaldehyde	77.1	ug/kg	U
95501	Benzene, 1,2-dichloro-	77.1	ug/kg	U
541731	Benzene, 1,3-dichloro-	77.1	ug/kg	U
106467	Benzene, 1,4-dichloro-	77.1	ug/kg	U
100516	Benzenemethanol	77.1	ug/kg	U
92875	Benzidine	771	ug/kg	UJ

			Result	Units	Qlfr
Analytes :	**56553**	**Benzo(a)anthracene**	**126**	**ug/kg**	
	50328	**Benzo(a)pyrene**	**133**	**ug/kg**	
	191242	**Benzo(g,h,i)perylene**	**291**	**ug/kg**	**J**
	205992	**Benzo[b]Fluoranthene**	**325**	**ug/kg**	
	207089	**Benzo[k]fluoranthene**	**126**	**ug/kg**	
	65850	**Benzoic acid**	**899**	**ug/kg**	
	111444	bis(2-Chloroethyl)ether	77.1	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	77.1	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	385	ug/kg	U
	85687	Butylbenzylphthalate	385	ug/kg	U
	58082	Caffeine	77.1	ug/kg	U
	105602	Caprolactam	154	ug/kg	U
	218019	**Chrysene**	**169**	**ug/kg**	
	84742	Di-n-Butylphthalate	77.1	ug/kg	U
	117840	Di-n-octylphthalate	385	ug/kg	U
	53703	**Dibenzo[a,h]anthracene**	**332**	**ug/kg**	**J**
	132649	**Dibenzofuran**	**16.8**	**ug/kg**	**J**
	84662	Diethyl phthalate	77.1	ug/kg	U
	131113	Dimethylphthalate	77.1	ug/kg	U
	98862	Ethanone, 1-phenyl-	77.1	ug/kg	U
	206440	**Fluoranthene**	**233**	**ug/kg**	
	118741	Hexachlorobenzene	77.1	ug/kg	U
	87683	Hexachlorobutadiene	77.1	ug/kg	U
	77474	Hexachlorocyclopentadiene	385	ug/kg	UJ
	67721	Hexachloroethane	77.1	ug/kg	U
	193395	**Indeno(1,2,3-cd)pyrene**	**553**	**ug/kg**	**J**
	78591	Isophorone	77.1	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	77.1	ug/kg	U
	62759	N-Nitrosodimethylamine	771	ug/kg	U
	621647	N-Nitrosodinpropylamine	77.1	ug/kg	U
	86306	n-Nitrosodiphenylamine	77.1	ug/kg	U
	91203	**Naphthalene**	**36.6**	**ug/kg**	**J**
	90120	**Naphthalene, 1-methyl-**	**4.7**	**ug/kg**	**J**
	91576	**Naphthalene, 2-methyl-**	**11.8**	**ug/kg**	**J**
	98953	Nitrobenzene	77.1	ug/kg	U
	87865	**Pentachlorophenol**	**290**	**ug/kg**	**J**
	85018	**Phenanthrene**	**95.2**	**ug/kg**	
	108952	Phenol	77.1	ug/kg	U
	95487	Phenol, 2-methyl-	77.1	ug/kg	U
	129000	**Pyrene**	**258**	**ug/kg**	
	110861	Pyridine	771	ug/kg	U
	483658	Retene	77.1	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	113	%Rec	
	2199691	1,2-Dichlorobenzene-d4	100	%Rec	
	93951736	2-chlorophenol-d4	113	%Rec	
	1718521	D10-Pyrene	116	%Rec	
	4165600	Nitrobenzene-d5	110	%Rec	
	367124	Phenol, 2-fluoro-	109	%Rec	
	4165622	Phenol-d5	115	%Rec	

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	123	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	**83476**	**.gamma.-Sitosterol**	**2320**	**ug/kg**	**NJ**
		629970	**Docosane**	**3020**	**ug/kg**	**NJ**
		629801	**Hexadecanal**	**544**	**ug/kg**	**NJ**
		638664	**Octadecanal**	**474**	**ug/kg**	**NJ**
		629629	**Pentadecane**	**1360**	**ug/kg**	**NJ**
		7098217	**Tritetracontane**	**860**	**ug/kg**	**NJ**
		***3008001**	**Unknown 01**	**861**	**ug/kg**	**NJ**
		***3008002**	**Unknown 02**	**283**	**ug/kg**	**NJ**
		***3008003**	**Unknown 03**	**9930**	**ug/kg**	**NJ**
		***3008004**	**Unknown 04**	**754**	**ug/kg**	**NJ**
		***3008005**	**Unknown 05**	**326**	**ug/kg**	**NJ**
		***3008007**	**Unknown 07**	**727**	**ug/kg**	**NJ**
		***3008008**	**Unknown 08**	**404**	**ug/kg**	**NJ**
		***3008009**	**Unknown 09**	**409**	**ug/kg**	**NJ**
		***3008010**	**Unknown 10**	**413**	**ug/kg**	**NJ**

Project Code: FSP-009H **Collected:**
Project Name: WYCKOFF THERMAL REMEDIATION P **Matrix:** Solid
Project Officer: HANH GOLD **Sample Number:** OBS2063A1
Account Code: 02T10P50102D10P4LA00 **Type:** Blank
Station Description:

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

Analytes			Result	Units	Qlfr
	92524	1,1'-Biphenyl	66.7	ug/kg	U
	120821	1,2,4-Trichlorobenzene	66.7	ug/kg	U
	95954	2,4,5-Trichlorophenol	66.7	ug/kg	U
	88062	2,4,6-Trichlorophenol	333	ug/kg	U
	120832	2,4-Dichlorophenol	66.7	ug/kg	U
	105679	2,4-Dimethylphenol	66.7	ug/kg	U
	51285	2,4-Dinitrophenol	1330	ug/kg	U
	121142	2,4-Dinitrotoluene	667	ug/kg	U
	606202	2,6-Dinitrotoluene	333	ug/kg	U
	91587	2-Chloronaphthalene	66.7	ug/kg	U
	95578	2-Chlorophenol	66.7	ug/kg	U
	88744	2-Nitroaniline	133	ug/kg	U
	88755	2-Nitrophenol	333	ug/kg	U
	91941	3,3'-Dichlorobenzidine	267	ug/kg	UJ
	99092	3-Nitroaniline	333	ug/kg	U
	360689	3B-Coprostanol	1330	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	667	ug/kg	U
	101553	4-Bromophenyl-Phenylether	66.7	ug/kg	U
	59507	4-Chloro-3-methylphenol	66.7	ug/kg	U
	106478	4-Chloroaniline	66.7	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	66.7	ug/kg	U
	106445	4-Methylphenol	66.7	ug/kg	U
	100016	4-Nitroaniline	333	ug/kg	U
	100027	4-Nitrophenol	667	ug/kg	U
	86748	9H-Carbazole	66.7	ug/kg	U
	86737	9H-Fluorene	66.7	ug/kg	U
	83329	Acenaphthene	66.7	ug/kg	U
	208968	Acenaphthylene	66.7	ug/kg	U
	62533	Aniline	66.7	ug/kg	U
	120127	Anthracene	66.7	ug/kg	U
	1912249	Atrazine	66.7	ug/kg	U
	100527	Benzaldehyde	66.7	ug/kg	U
	95501	Benzene, 1,2-dichloro-	66.7	ug/kg	U
	541731	Benzene, 1,3-dichloro-	66.7	ug/kg	U
	106467	Benzene, 1,4-dichloro-	66.7	ug/kg	U
	100516	**Benzenemethanol**	**44.0**	**ug/kg**	**J**
	92875	Benzidine	667	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

				Result	Units	Qlfr
Analytes	:	56553	Benzo(a)anthracene	66.7	ug/kg	U
		50328	Benzo(a)pyrene	66.7	ug/kg	U
		191242	Benzo(g,h,i)perylene	333	ug/kg	U
		205992	Benzo[b]Fluoranthene	66.7	ug/kg	U
		207089	Benzo[k]fluoranthene	66.7	ug/kg	U
		65850	Benzoic acid	667	ug/kg	U
		111444	bis(2-Chloroethyl)ether	66.7	ug/kg	U
		108601	BIS(2-CHLOROISOPROPYL)ETHER	66.7	ug/kg	U
		117817	Bis(2-ethylhexyl) phthalate	333	ug/kg	U
		85687	Butylbenzylphthalate	333	ug/kg	U
		58082	Caffeine	66.7	ug/kg	U
		105602	Caprolactam	133	ug/kg	U
		218019	Chrysene	66.7	ug/kg	U
		84742	Di-n-Butylphthalate	66.7	ug/kg	U
		117840	Di-n-octylphthalate	333	ug/kg	U
		53703	Dibenzo[a,h]anthracene	333	ug/kg	U
		132649	Dibenzofuran	66.7	ug/kg	U
		84662	Diethyl phthalate	66.7	ug/kg	U
		131113	Dimethylphthalate	66.7	ug/kg	U
		98862	Ethanone, 1-phenyl-	66.7	ug/kg	U
		206440	Fluoranthene	66.7	ug/kg	U
		118741	Hexachlorobenzene	66.7	ug/kg	U
		87683	Hexachlorobutadiene	66.7	ug/kg	U
		77474	Hexachlorocyclopentadiene	333	ug/kg	U
		67721	Hexachloroethane	66.7	ug/kg	U
		193395	Indeno(1,2,3-cd)pyrene	667	ug/kg	U
		78591	Isophorone	66.7	ug/kg	U
		111911	Methane, bis(2-chloroethoxy)-	66.7	ug/kg	U
		62759	N-Nitrosodimethylamine	667	ug/kg	U
		621647	N-Nitrosodinpropylamine	66.7	ug/kg	U
		86306	n-Nitrosodiphenylamine	66.7	ug/kg	U
		91203	Naphthalene	66.7	ug/kg	U
		90120	Naphthalene, 1-methyl-	66.7	ug/kg	U
		91576	Naphthalene, 2-methyl-	66.7	ug/kg	U
		98953	Nitrobenzene	66.7	ug/kg	U
		87865	Pentachlorophenol	333	ug/kg	U
		85018	Phenanthrene	66.7	ug/kg	U
		108952	**Phenol**	**23.0**	**ug/kg**	**J**
		95487	Phenol, 2-methyl-	66.7	ug/kg	U
		129000	Pyrene	66.7	ug/kg	U
		110861	Pyridine	667	ug/kg	U
		483658	Retene	66.7	ug/kg	U
		321608	1,1'-Biphenyl, 2-fluoro-	97	%Rec	
		2199691	1,2-Dichlorobenzene-d4	99	%Rec	
		93951736	2-chlorophenol-d4	94	%Rec	
		1718521	D10-Pyrene	102	%Rec	
		4165600	Nitrobenzene-d5	103	%Rec	
		367124	Phenol, 2-fluoro-	93	%Rec	
		4165622	Phenol-d5	99	%Rec	

			Result	Units	Qlfr
Analytes :	1718510	Terphenyl-d14	107	%Rec	
Parameter :	Semi-volatiles - Tentatives				
Method :	8270-M	BNA			
Prep Method:	3510M/3540				
Analytes :	**123422**	**2-Pentanone, 4-hydroxy-4-methy l-**	**100000**	**ug/kg**	**NJ**
	4914914	**2-Pentene, 3,4-dimethyl-, (Z)-**	**109**	**ug/kg**	**NJ**
	16015115	**2H-Pyran, 3,4-dihydro-6-methyl -**	**229**	**ug/kg**	**NJ**
	38653360	**5H-1,4-Dioxepin, 2,3-dihydro-5 -methyl-**	**452**	**ug/kg**	**NJ**
	79345	**Ethane, 1,1,2,2-tetrachloro-**	**425**	**ug/kg**	**NJ**
	***3008001**	**Unknown 01**	**3270**	**ug/kg**	**NJ**
	***3008002**	**Unknown 02**	**358**	**ug/kg**	**NJ**
	***3008003**	**Unknown 03**	**1340**	**ug/kg**	**NJ**
	***3008004**	**Unknown 04**	**2030**	**ug/kg**	**NJ**
	***3008005**	**Unknown 05**	**572**	**ug/kg**	**NJ**
	***3008006**	**Unknown 06**	**490**	**ug/kg**	**NJ**

Manchester Environmental Laboratory
Report by Parameter for Project FSP-009H

Project Code: FSP-009H
Project Name: WYCKOFF THERMAL REMEDIATION P
Project Officer: HANH GOLD
Account Code: 02T10P50102D10P4LA00
Station Description:

Collected:
Matrix: Solid
Sample Number: OBS2063A2
Type: Blank

GCMS

Parameter : Semi-volatiles
Method : 8270-M BNA
Prep Method: 3510M/3540

			Result	Units	Qlfr
Analytes :	92524	1,1'-Biphenyl	66.7	ug/kg	U
	120821	1,2,4-Trichlorobenzene	66.7	ug/kg	U
	95954	2,4,5-Trichlorophenol	66.7	ug/kg	U
	88062	2,4,6-Trichlorophenol	333	ug/kg	U
	120832	2,4-Dichlorophenol	66.7	ug/kg	U
	105679	2,4-Dimethylphenol	66.7	ug/kg	U
	51285	2,4-Dinitrophenol	1330	ug/kg	U
	121142	2,4-Dinitrotoluene	667	ug/kg	U
	606202	2,6-Dinitrotoluene	333	ug/kg	U
	91587	2-Chloronaphthalene	66.7	ug/kg	U
	95578	2-Chlorophenol	66.7	ug/kg	U
	88744	2-Nitroaniline	133	ug/kg	U
	88755	2-Nitrophenol	333	ug/kg	U
	91941	3,3'-Dichlorobenzidine	267	ug/kg	U
	99092	3-Nitroaniline	333	ug/kg	U
	360689	3B-Coprostanol	1330	ug/kg	U
	534521	4,6-Dinitro-2-methylphenol	667	ug/kg	U
	101553	4-Bromophenyl-Phenylether	66.7	ug/kg	U
	59507	4-Chloro-3-methylphenol	66.7	ug/kg	U
	106478	4-Chloroaniline	66.7	ug/kg	U
	7005723	4-Chlorophenyl-Phenylether	66.7	ug/kg	U
	106445	4-Methylphenol	66.7	ug/kg	U
	100016	4-Nitroaniline	333	ug/kg	U
	100027	4-Nitrophenol	667	ug/kg	U
	86748	9H-Carbazole	66.7	ug/kg	U
	86737	9H-Fluorene	66.7	ug/kg	U
	83329	Acenaphthene	66.7	ug/kg	U
	208968	Acenaphthylene	66.7	ug/kg	U
	62533	Aniline	66.7	ug/kg	U
	120127	Anthracene	66.7	ug/kg	U
	1912249	Atrazine	66.7	ug/kg	U
	100527	Benzaldehyde	66.7	ug/kg	U
	95501	Benzene, 1,2-dichloro-	66.7	ug/kg	U
	541731	Benzene, 1,3-dichloro-	66.7	ug/kg	U
	106467	Benzene, 1,4-dichloro-	66.7	ug/kg	U
	100516	**Benzenemethanol**	**53.5**	**ug/kg**	**J**
	92875	Benzidine	667	ug/kg	U

			Result	Units	Qlfr
Analytes	56553	Benzo(a)anthracene	66.7	ug/kg	U
	50328	Benzo(a)pyrene	66.7	ug/kg	U
	191242	Benzo(g,h,i)perylene	333	ug/kg	U
	205992	Benzo[b]Fluoranthene	66.7	ug/kg	U
	207089	Benzo[k]fluoranthene	66.7	ug/kg	U
	65850	Benzoic acid	667	ug/kg	U
	111444	bis(2-Chloroethyl)ether	66.7	ug/kg	U
	108601	BIS(2-CHLOROISOPROPYL)ETHER	66.7	ug/kg	U
	117817	Bis(2-ethylhexyl) phthalate	333	ug/kg	U
	85687	Butylbenzylphthalate	333	ug/kg	U
	58082	Caffeine	66.7	ug/kg	U
	105602	Caprolactam	133	ug/kg	U
	218019	Chrysene	66.7	ug/kg	U
	84742	Di-n-Butylphthalate	66.7	ug/kg	U
	117840	Di-n-octylphthalate	333	ug/kg	U
	53703	Dibenzo[a,h]anthracene	333	ug/kg	U
	132649	Dibenzofuran	66.7	ug/kg	U
	84662	Diethyl phthalate	66.7	ug/kg	U
	131113	Dimethylphthalate	66.7	ug/kg	U
	98862	Ethanone, 1-phenyl-	66.7	ug/kg	U
	206440	Fluoranthene	66.7	ug/kg	U
	118741	Hexachlorobenzene	66.7	ug/kg	U
	87683	Hexachlorobutadiene	66.7	ug/kg	U
	77474	Hexachlorocyclopentadiene	333	ug/kg	U
	67721	Hexachloroethane	66.7	ug/kg	U
	193395	Indeno(1,2,3-cd)pyrene	667	ug/kg	U
	78591	Isophorone	66.7	ug/kg	U
	111911	Methane, bis(2-chloroethoxy)-	66.7	ug/kg	U
	62759	N-Nitrosodimethylamine	667	ug/kg	U
	621647	N-Nitrosodinpropylamine	66.7	ug/kg	U
	86306	n-Nitrosodiphenylamine	66.7	ug/kg	U
	91203	Naphthalene	66.7	ug/kg	U
	90120	Naphthalene, 1-methyl-	66.7	ug/kg	U
	91576	Naphthalene, 2-methyl-	66.7	ug/kg	U
	98953	Nitrobenzene	66.7	ug/kg	U
	87865	Pentachlorophenol	333	ug/kg	U
	85018	Phenanthrene	66.7	ug/kg	U
	108952	**Phenol**	**23.1**	**ug/kg**	**J**
	95487	Phenol, 2-methyl-	66.7	ug/kg	U
	129000	Pyrene	66.7	ug/kg	U
	110861	Pyridine	667	ug/kg	U
	483658	Retene	66.7	ug/kg	U
	321608	1,1'-Biphenyl, 2-fluoro-	108	%Rec	
	2199691	1,2-Dichlorobenzene-d4	109	%Rec	
	93951736	2-chlorophenol-d4	101	%Rec	
	1718521	D10-Pyrene	113	%Rec	
	4165600	Nitrobenzene-d5	110	%Rec	
	367124	Phenol, 2-fluoro-	99	%Rec	
	4165622	Phenol-d5	109	%Rec	

				Result	Units	Qlfr
Analytes	:	1718510	Terphenyl-d14	120	%Rec	
Parameter	:	Semi-volatiles - Tentatives				
Method	:	8270-M	BNA			
Prep Method	:	3510M/3540				
Analytes	:	**815576**	**2,4-Pentanedione, 3-methyl-**	**533**	**ug/kg**	**NJ**
		123422	**2-Pentanone, 4-hydroxy-4-methy l-**	**157000**	**ug/kg**	**NJ**
		141797	**3-Penten-2-one, 4-methyl-**	**128**	**ug/kg**	**NJ**
		3744023	**4-Penten-2-one, 4-methyl-**	**1940**	**ug/kg**	**NJ**
		79345	**Ethane, 1,1,2,2-tetrachloro-**	**318**	**ug/kg**	**NJ**
		7208051	**Oxazole, 2,4-dimethyl-**	**660**	**ug/kg**	**NJ**
		***3008001**	**Unknown 01**	**4840**	**ug/kg**	**NJ**
		***3008002**	**Unknown 02**	**348**	**ug/kg**	**NJ**
		***3008003**	**Unknown 03**	**2160**	**ug/kg**	**NJ**
		***3008004**	**Unknown 04**	**587**	**ug/kg**	**NJ**
		***3008005**	**Unknown 05**	**247**	**ug/kg**	**NJ**

APPENDIX C
UCL95 CACULATION BACKUP FILES

Summary of UCL_{95}

Chemical	UCL_{95} (mg/kg)
Acenaphthene	0.093
Acenaphthylene	0.092
Anthracene	0.116
Benzo(a)anthracene	0.137
Benzo(a)pyrene	1.28
Benzo(b)fluoranthene	0.125
Benzo(ghi)perylene	0.184
Benzo(k)fluoranthene	0.224
Chrysene	0.185
Dibenzo(a,h)anthracene	0.172
Fluoranthene	0.301
Fluorene	0.092
Indeno(1,2,3-cd)pyrene	0.233
Naphthalene	0.117
Pentachlorophenol	0.317
Phenanthrene	0.156
Pyrene	0.229

Distribution Analysis and Statistical Summaries

Acenaphthalene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0319	2062502	0.00975	1413546	0.067	413501
0.074	393602	0.0079	1423501	0.072	393521
0.0735	403561	0.072	403531	0.0735	393610
0.0675	403564	0.03705	2062504	0.0077	2062506
0.064	393561	0.07	403517	0.071	403526
0.0685	403523	0.0715	413544	0.0785	393555
0.0327	2062503	0.0273	1503502	0.074	403520
0.086	393516	0.0368	2092553	0.069	393575
0.5	1403531	0.0805	393540	0.0705	393572
0.0735	403549	0.0755	403678	0.0246	1423500
0.069	403625	0.0685	393504	0.071	403553
0.0805	393552	0.0735	393591	0.0715	403587
0.0695	413527	0.03795	2062505	0.0064	1433587
0.0108	1413549	0.081	393630	0.00845	1413545
0.081	393529	0.0695	403581	0.066	413539
0.5	1403532	0.0262	2062500	0.0915	393598
0.396	1413548	0.076	393548	0.0695	403577
0.073	393530	0.074	393594	0.071	413543
0.072	403580	0.079	393564	0.07	403579
0.075	393553	0.0508	1413551	0.067	403557
0.075	393605	0.007	2092554	0.0145	1423503
0.067	393620	0.0645	403578	0.0406	2062501
0.071	393506	0.0705	403547	0.069	403541
0.0695	393510	0.0675	403609	0.0795	423572
0.0695	413516	0.079	393596		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.08
Censored		Lognormal mean	0.08
Detection limit or PQL		Std. devn.	0.08420407
Method detection limit		Median	0.07
TOTAL	74	Min.	0.0064
		Max.	0.5

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -15.857. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -35.7719. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.093

Distribution Analysis and Statistical Summaries

Acenaphthylene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0735	403549	0.0675	403564	0.042	2092554
0.0675	403609	0.0735	393610	0.072	393521
0.0705	393572	0.0735	403561	0.0695	413516
0.5	1403531	0.0785	393555	0.5	1403532
0.081	393630	0.072	403531	0.0331	2062506
0.081	393529	0.0104	1433587	0.072	403580
0.0695	393510	0.069	393575	0.075	393553
0.0645	403578	0.0368	2092553	0.0735	393591
0.0133	2062503	0.067	403557	0.07	403579
0.076	393548	0.204	1413548	0.075	393605
0.0685	403523	0.0695	403577	0.027	2062505
0.067	413501	0.07	403517	0.073	393530
0.198	1413551	0.03705	2062504	0.0468	403581
0.071	413543	0.0715	413544	0.071	403526
0.0901	1423500	0.074	393594	0.086	393516
0.0406	2062501	0.064	393561	0.079	393596
0.079	393564	0.071	403553	0.067	393620
0.03835	2062500	0.00975	1413546	0.0319	2062502
0.0915	393598	0.0755	403678	0.00915	1413549
0.074	403520	0.069	403541	0.0695	413527
0.0599	1423503	0.066	413539	0.0715	403587
0.0805	393540	0.0805	393552	0.0685	393504
0.074	393602	0.0132	1503502	0.0011	1413545
0.071	393506	0.069	403625	0.0795	423572
0.0705	403547	0.0079	1423501		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.08
Censored		Lognormal mean	0.08
Detection limit or PQL		Std. devn.	0.07749034
Method detection limit		Median	0.0705
TOTAL	74	Min.	0.0011
		Max.	0.5

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -19.764. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -35.0279. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.092

Distribution Analysis and Statistical Summaries

Anthracene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0368	2092553	0.072	393521	0.0695	413516
0.103	2092554	0.064	393561	0.0675	403564
0.072	403580	0.0685	393504	0.0685	403523
0.074	393602	0.0705	403547	0.0992	2062503
0.0338	393610	0.079	393564	0.0501	413539
0.067	393620	0.081	393529	0.07	403517
0.0735	403549	0.0695	393510	0.03705	2062504
0.0715	403587	0.067	403557	0.076	393548
0.086	393516	0.538	1413551	0.07	403579
0.0705	393572	0.0805	393540	0.0695	413527
0.0594	393605	0.0715	413544	0.00845	1413545
0.0406	2062501	0.0447	2062505	0.0125	2062500
0.0785	393555	0.071	403526	0.293	1423500
0.069	403541	0.0675	403609	0.5	1403531
0.165	1423503	0.0805	393552	0.0136	2062506
0.0286	1433587	0.0735	393591	0.0079	1423501
0.071	403553	0.00975	1413546	0.074	403520
0.071	393506	0.079	393596	0.0695	403577
0.0862	403581	0.067	413501	0.072	403531
0.0319	2062502	0.0025	1413549	0.074	393594
0.071	413543	0.5	1403532	0.0915	393598
0.0735	403561	0.0645	403578	0.637	1413548
0.075	393553	0.069	393575	0.0446	1503502
0.0755	403678	0.069	403625	0.0795	423572
0.081	393630	0.073	393530		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.09
Censored		Lognormal mean	0.09
Detection limit or PQL		Std. devn.	0.11481215
Method detection limit		Median	0.071
TOTAL	74	Min.	0.0025
		Max.	0.637

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -16.7643. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -33.4387. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.116

Distribution Analysis and Statistical Summaries

Benzo(a)anthracene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0331	2062506	0.0735	403549	0.0695	393510
0.075	393605	0.07	403517	0.074	403520
0.002	1423501	0.07	403579	0.0713	413527
0.947	1413548	0.0695	413516	0.0735	393610
0.079	393564	0.067	393620	0.071	393506
0.0695	403577	0.0705	403547	0.0406	2062501
0.0705	393572	0.201	1423500	0.0715	403587
0.071	403526	0.00915	1413549	0.076	393548
0.067	413501	0.0785	393555	0.0915	393598
0.0675	403609	0.0749	2062503	0.072	393521
0.0675	403564	0.0319	2062502	0.0755	403678
0.0368	2092553	0.081	393630	0.086	393516
0.5	1403532	0.075	393553	0.0313	1433587
0.922	1413551	0.072	403580	0.069	403541
0.137	1503502	0.074	393594	0.0735	393591
0.081	393529	0.0715	413544	0.074	393602
0.5	1403531	0.177	2062505	0.069	393575
0.072	403531	0.0805	393540	0.126	2092554
0.079	393596	0.0685	403523	0.071	403553
0.071	413543	0.0645	403578	0.141	1423503
0.0735	403561	0.00975	1413546	0.066	413539
0.069	403625	0.03	2062500	0.0685	393504
0.073	393530	0.0805	393552	0.067	403557
0.00845	1413545	0.064	393561	0.0795	423572
0.03705	2062504	0.108	403581		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.11
Censored		Lognormal mean	0.10
Detection limit or PQL		Std. devn.	0.15854528
Method detection limit		Median	0.0715
TOTAL	74	Min.	0.002
		Max.	0.947

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -19.5343. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -38.9612. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.137

Distribution Analysis and Statistical Summaries

Benzo(a)pyrene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0836	413539	0.071	403526	0.0705	393572
0.497	1423500	0.0695	413527	0.067	403557
0.0043	1423501	0.0805	393552	0.5	1403531
0.069	403541	0.07	403517	0.0735	403549
0.0025	1413546	0.0645	403578	0.0319	2062502
0.03705	2062504	0.073	393530	0.079	393564
1.04	1413548	0.067	413501	0.0406	2062501
0.064	393561	0.081	393630	0.072	403580
0.0078	1413545	0.079	393596	0.071	413543
0.0675	403609	0.0685	403523	0.0715	413544
0.075	393553	0.238	2062505	0.139	403581
0.074	393594	0.0695	403577	0.0368	2092553
0.03835	2062500	0.076	393548	0.071	393506
0.0805	393540	0.072	403531	0.074	393602
0.086	393516	0.072	393521	0.0735	403561
0.074	403520	0.081	393529	0.069	393575
0.0847	2062503	0.0715	403587	0.0695	393510
0.067	393620	0.0735	393591	0.0915	393598
0.0705	403547	0.00915	1413549	0.5	1403532
0.121	1503502	0.0675	403564	0.0554	393610
1.28	1413551	0.0118	2062506	0.0785	393555
0.0388	1433587	0.133	2092554	0.0685	393504
0.0695	413516	0.071	403553	0.0755	403678
0.07	403579	0.122	393605	0.0795	423572
0.069	403625	0.308	1423503		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.12
Censored		Lognormal mean	0.11
Detection limit or PQL		Std. devn.	0.19913422
Method detection limit		Median	0.0715
TOTAL	74	Min.	0.0025
		Max.	1.28

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -17.4943. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -38.0088. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.159

Distribution Analysis and Statistical Summaries

Benzo(b)fluoranthene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.069	393575	0.079	393596	0.073	393530
0.101	393610	0.0805	393552	0.072	393521
0.0032	1413546	0.0785	393555	0.081	393529
0.081	393630	0.0641	403531	0.0735	403549
0.0059	1423501	0.067	403557	0.069	403541
0.0431	413527	0.0301	2062506	0.07	403579
0.0419	393548	0.379	2062505	0.074	403520
0.067	393620	0.0319	2062502	0.0675	403609
0.0915	393598	0.325	2092554	0.0084	1413545
0.074	393594	0.0959	403587	0.0805	393540
0.067	413501	0.0351	2062500	0.0542	393506
0.526	1423503	0.0685	393504	0.071	403526
0.074	393602	0.5	1403532	0.00915	1413549
0.0759	1433587	0.273	1503502	0.167	2062503
0.0705	393572	0.328	403581	0.0675	403564
0.0735	393591	0.072	403580	0.0705	403547
0.075	393553	0.0645	403578	0.071	413543
0.265	393605	0.0695	403577	0.0735	403561
0.5	1403531	0.0695	413516	0.0368	2092553
0.0755	403678	0.0695	393510	0.071	403553
0.185	413539	0.0406	2062501	0.0795	423572
0.079	393564	0.03705	2062504		
0.07	403517	0.0685	403523		
0.069	403625	0.0319	413544		
0.064	393561	0.086	393516		

Number of samples		Uncensored values	
Uncensored	71	Mean	0.10
Censored		Lognormal mean	0.11
Detection limit or PQL		Std. devn.	0.11072448
Method detection limit		Median	0.071
TOTAL	71	Min.	0.0032
		Max.	0.526

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -13.0294. This lies outside the tabled values of 1.181 and -2.6481

Reject normal distribution.

Y value is -23.978. This lies outside the tabled values of 1.181 and -2.6481

UCL (based on Z-statistic) is 0.125

Distribution Analysis and Statistical Summaries

Benzo(g,h,i)perylene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.1475	403520	0.184	2092553	0.1725	393516
0.1415	413543	0.1465	403561	0.15	393553
0.148	393594	0.1405	393572	0.203	2062501
0.183	393598	0.00845	1413545	0.134	393620
0.1435	413544	0.139	413516	0.1395	393510
0.147	393591	0.0079	1423501	0.297	403581
0.293	1413551	0.5	1403531	0.137	393504
0.1375	403523	0.1375	403541	0.151	1423503
0.14	403517	0.203	2062500	0.1415	403547
0.1525	393548	0.33	1423500	0.1605	393552
0.139	403577	0.1435	403531	0.147	403549
0.158	393596	0.1485	393602	0.162	393529
0.233	2062503	0.1415	403553	0.147	393610
0.329	2062505	0.157	393555	0.1425	393506
0.1465	393530	0.1435	393521	0.1595	2062502
0.185	2062504	0.15	393605	0.1625	393630
0.14	403579	0.291	2092554	0.1655	2062506
0.0361	1433587	0.151	403678	0.5	1403532
0.1295	403578	0.144	403580	0.1415	403526
0.161	393540	0.00915	1413549	0.196	413539
0.138	393575	0.143	403587	0.128	393561
0.1345	413501	0.00975	1413546	0.138	403625
0.284	1503502	0.1335	403557	0.388	1413548
0.135	403564	0.139	413527	0.159	423572
0.135	403609	0.158	393564		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.17
Censored		Lognormal mean	0.19
Detection limit or PQL		Std. devn.	0.08599917
Method detection limit		Median	0.147
TOTAL	74	Min.	0.0079
		Max.	0.5

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -24.775. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -17.7778. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.184

Distribution Analysis and Statistical Summaries

Benzo(k)fluoranthene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.00915	1413549	2.18	1413548	0.0685	403523
0.072	403531	0.0368	2092553	0.0735	393591
0.064	393561	0.067	393620	0.079	393564
0.072	393521	0.069	403541	0.076	393548
0.079	393596	0.086	393516	0.072	403580
0.0695	403577	0.07	403579	0.03705	2062504
0.0715	413544	0.0587	413539	0.0675	403609
0.071	393506	0.0325	403587	1.05	1423500
0.0735	393610	0.0331	2062506	0.067	403557
0.0705	403547	0.0695	413527	0.0598	1433587
0.0785	393555	0.0735	403549	0.074	393594
0.0915	393598	0.0645	403578	0.071	413543
0.0675	403564	0.071	403526	0.074	393602
0.0051	1423501	0.0319	2062502	0.0805	393540
0.125	403581	0.067	413501	0.074	403520
0.257	1423503	0.0033	1413546	0.07	403517
0.5	1403531	0.0755	403678	0.0805	393552
0.03835	2062500	0.5	1403532	0.0705	393572
0.0695	393510	0.104	1503502	0.069	403625
0.069	393575	0.126	2092554	0.081	393630
2.23	1413551	0.0695	413516	0.081	393529
0.125	2062505	0.0058	1413545	0.126	393605
0.0623	2062503	0.073	393530	0.0735	403561
0.075	393553	0.0406	2062501	0.0795	423572
0.0685	393504	0.071	403553		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.15
Censored		Lognormal mean	0.12
Detection limit or PQL		Std. devn.	0.37028397
Method detection limit		Median	0.071
TOTAL	74	Min.	0.0033
		Max.	2.23

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -19.8341. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -45.363. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.224

Distribution Analysis and Statistical Summaries

Chrysene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0915	393598	0.5	1403532	0.00915	1413549
0.074	393602	0.073	393530	0.071	403526
0.0735	393610	0.086	393516	0.03705	2062504
0.0368	2092553	0.069	403625	0.0805	393552
0.168	393605	0.0675	403609	0.079	393596
0.306	403581	0.00975	1413546	0.0715	413544
0.0755	403678	0.067	393620	0.0705	403547
0.0319	2062502	0.201	1503502	0.07	403579
0.079	393564	0.0645	403578	0.0785	393555
0.308	1423503	0.069	403541	1.43	1413551
0.0053	1413545	0.0685	403523	0.0931	413539
0.0735	403549	0.076	393548	0.069	393575
0.071	403553	0.245	2062505	0.122	2062503
0.0406	2062501	0.435	1423500	0.074	393594
0.0675	403564	0.004	1423501	0.067	413501
0.0519	403580	0.07	403517	0.074	403520
0.064	393561	0.075	393553	0.0695	393510
0.169	2092554	0.0566	403531	0.5	1403531
0.0705	393572	0.0527	403587	0.0379	2062500
0.0735	403561	1.7	1413548	0.0695	413527
0.0685	393504	0.072	393521	0.081	393630
0.0541	393506	0.0695	413516	0.081	393529
0.0331	2062506	0.065	1433587	0.0805	393540
0.067	403557	0.0735	393591	0.0795	423572
0.071	413543	0.0695	403577		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.14
Censored		Lognormal mean	0.12
Detection limit or PQL		Std. devn.	0.25898372
Method detection limit		Median	0.071
TOTAL	74	Min.	0.004
		Max.	1.7

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -15.5011. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -40.2643. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.185

Distribution Analysis and Statistical Summaries

Dibenzo(a,h)anthracene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.147	393591	0.00975	1413546	0.185	2062504
0.1485	393602	0.147	393610	0.1375	403523
0.5	1403531	0.1525	393548	0.139	413527
0.162	393529	0.139	403581	0.139	403577
0.1465	403561	0.203	2062501	0.161	393540
0.1725	393516	0.14	403517	0.322	2062505
0.135	403609	0.15	393605	0.192	2062500
0.1415	413543	0.157	393555	0.1475	403520
0.1655	2062506	0.1295	403578	0.128	393561
0.1375	403541	0.132	413539	0.36	1503502
0.1435	393521	0.294	2062503	0.1435	413544
0.151	403678	0.1625	393630	0.1415	403547
0.183	393598	0.1595	2062502	0.1015	1413551
0.00845	1413545	0.139	413516	0.1345	413501
0.184	2092553	0.134	393620	0.0948	1413548
0.0055	1433587	0.144	403580	0.0079	1423501
0.5	1403532	0.14	403579	0.147	403549
0.116	1423500	0.143	403587	0.1415	403553
0.138	403625	0.1405	393572	0.1395	393510
0.1335	403557	0.135	403564	0.1425	393506
0.15	393553	0.1415	403526	0.158	393596
0.332	2092554	0.1465	393530	0.148	393594
0.138	393575	0.0832	1423503	0.137	393504
0.1435	403531	0.158	393564	0.159	423572
0.1605	393552	0.00915	1413549		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.16
Censored		Lognormal mean	0.18
Detection limit or PQL		Std. devn.	0.08242592
Method detection limit		Median	0.1435
TOTAL	74	Min.	0.0055
		Max.	0.5

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -26.5179. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -21.3074. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.172

Distribution Analysis and Statistical Summaries

Fluoranthene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
4.7	1413548	0.069	403541	0.5	1403532
0.0702	413544	0.101	413539	0.0785	393555
0.5	1403531	0.0755	403678	0.0915	393598
0.0319	2062502	0.0695	413516	0.0735	403549
0.071	403553	0.0757	403587	0.079	393596
0.0735	393591	0.0939	393506	0.0342	393530
0.086	393516	0.0396	403580	0.728	1423500
0.064	393561	0.0046	1423501	0.079	393564
0.255	2062505	0.069	403625	0.081	393529
0.224	1503502	0.0814	413527	0.0685	403523
0.072	393521	0.067	403557	0.0705	393572
0.0805	393552	0.069	393575	0.131	2062500
0.0226	393630	0.0675	403564	0.07	403517
0.071	413543	0.0735	403561	0.0695	403577
0.075	393553	0.0091	1413549	0.0406	2062501
0.0675	403609	0.0705	403547	0.0695	393510
0.067	413501	0.03705	2062504	0.0301	393548
0.233	2092554	0.0805	393540	0.0685	393504
0.07	403579	0.074	403520	0.0645	403578
1.76	1413551	0.0883	1433587	0.181	403531
0.071	403526	0.0998	393610	0.298	403581
0.067	393620	0.259	2062503	0.0751	2062506
0.0091	1413545	0.074	393602	0.319	1423503
0.103	393605	0.0368	2092553	0.0795	423572
0.0048	1413546	0.074	393594		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.19
Censored		Lognormal mean	0.14
Detection limit or PQL		Std. devn.	0.5770233
Method detection limit		Median	0.0735
TOTAL	74	Min.	0.0046
		Max.	4.7

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -14.0245. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -49.7179. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.301

Distribution Analysis and Statistical Summaries

Flourene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.086	393516	0.0319	2062502	0.0735	393610
0.0185	1503502	0.0695	403581	0.03855	2092554
0.0714	1413551	0.071	393506	0.0735	403561
0.079	393564	0.0915	393598	0.073	393530
0.0079	1423501	0.0685	403523	0.072	403531
0.0695	403577	0.00078	1413545	0.079	393596
0.0805	393540	0.069	393575	0.074	393602
0.0705	403547	0.03795	2062505	0.081	393529
0.081	393630	0.5	1403531	0.0059	1433587
0.0715	403587	0.076	393548	0.0675	403564
0.07	403517	0.0805	393552	0.069	403541
0.0715	413544	0.075	393553	0.071	403553
0.0735	403549	0.069	403625	0.0254	2062500
0.064	393561	0.293	1413548	0.0685	393504
0.0532	1423500	0.074	403520	0.071	403526
0.0416	2062503	0.0406	2062501	0.071	413543
0.5	1403532	0.07	403579	0.0695	413516
0.072	403580	0.03705	2062504	0.0705	393572
0.0331	2062506	0.067	413501	0.074	393594
0.066	413539	0.0695	413527	0.067	403557
0.0735	393591	0.0645	403578	0.0755	403678
0.0695	393510	0.0242	1423503	0.0368	2092553
0.0785	393555	0.0675	403609	0.075	393605
0.0079	1413549	0.00975	1413546	0.0795	423572
0.067	393620	0.072	393521		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.08
Censored		Lognormal mean	0.08
Detection limit or PQL		Std. devn.	0.07887377
Method detection limit		Median	0.07025
TOTAL	74	Min.	0.00078
		Max.	0.5

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -22.0163. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -36.7755. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.092

Distribution Analysis and Statistical Summaries

Indeno(1,2,3-cd)pyrene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.148	393594	0.1415	403553	0.138	393575
0.215	1423503	0.147	393610	0.574	1503502
0.339	403581	0.1395	393510	0.1625	393630
0.135	403609	0.553	2092554	0.1605	393552
0.147	403549	0.1475	403520	0.135	403564
0.158	393564	0.1295	403578	0.319	2062502
0.1345	413501	0.482	2062503	0.1415	403526
0.139	413527	0.468	2062500	0.183	393598
0.00845	1413545	0.138	403625	0.446	1413548
0.1725	393516	0.1435	403531	0.5	1403531
0.1415	413543	0.1465	393530	0.254	413539
0.406	2062501	0.158	393596	0.1465	403561
0.1525	393548	0.1375	403541	0.1335	403557
0.3705	2062504	0.415	1423500	0.14	403517
0.161	393540	0.0079	1423501	0.15	393553
0.157	393555	0.1405	393572	0.144	403580
0.1415	403547	0.14	403579	0.1375	403523
0.128	393561	0.608	2062505	0.1435	393521
0.255	393605	0.137	393504	0.368	2092553
0.147	393591	0.1485	393602	0.134	393620
0.00975	1413546	0.331	2062506	0.231	403587
0.5	1403532	0.139	413516	0.00915	1413549
0.1425	393506	0.1435	413544	0.139	403577
0.151	403678	0.162	393529	0.159	423572
0.038	1433587	0.419	1413551		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.21
Censored		Lognormal mean	0.23
Detection limit or PQL		Std. devn.	0.13818044
Method detection limit		Median	0.147
TOTAL	74	Min.	0.0079
		Max.	0.608

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -16.7316. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -11.7505. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.233

Distribution Analysis and Statistical Summaries

Naphthalene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.079	393596	0.0805	393552	0.07	403517
0.0735	403549	0.0715	413544	0.0705	403547
0.071	393506	0.073	393530	0.071	413543
0.0785	393555	0.069	403541	0.0685	393504
0.0917	1413551	0.067	413501	0.075	393553
0.111	1503502	0.03835	2062500	0.072	393521
0.00915	1413549	0.5	1403532	0.03505	2062503
0.0695	393510	0.0675	403564	0.074	393594
1.11	1413548	0.07	403579	0.067	403557
0.0755	403678	0.00845	1413545	0.064	393561
0.074	393602	0.0368	2092553	0.0705	393572
0.0319	2062502	0.0331	2062506	0.0695	413516
0.0915	393598	0.03705	2062504	0.0675	403609
0.071	403553	0.074	403520	0.0366	2092554
0.0079	1423501	0.069	393575	0.0735	393591
0.069	403625	0.0695	403577	0.0261	1433587
0.081	393630	0.079	393564	0.0729	1423500
0.0424	413539	0.0735	393610	0.5	1403531
0.0496	413527	0.0685	403523	0.0406	2062501
0.086	393516	0.0645	403578	0.0735	403561
0.0695	403581	0.076	393548	0.075	393605
0.067	393620	0.0488	1423503	0.081	393529
0.00975	1413546	0.0715	403587	0.072	403580
0.0805	393540	0.03795	2062505	0.0795	423572
0.072	403531	0.071	403526		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.09
Censored		Lognormal mean	0.08
Detection limit or PQL		Std. devn.	0.14121152
Method detection limit		Median	0.07075
TOTAL	74	Min.	0.0079
		Max.	1.11

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -19.5797. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -45.5558. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.117

Distribution Analysis and Statistical Summaries

Pentachlorophenol

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0429	1423503	0.344	403541	0.367	393610
0.1895	2062505	0.371	393602	0.3425	393504
0.04565	1413549	0.3955	393596	0.375	393605
0.3305	413539	0.0652	1433587	0.03945	1423501
0.3595	393521	0.348	403577	0.359	403531
0.3445	393575	0.3745	393553	0.381	393548
0.348	403581	0.3475	413527	0.0493	1423500
0.1655	2062506	0.192	2062500	0.458	393598
0.1755	2062503	0.1595	2062502	0.203	2062501
0.3535	403547	0.3945	393564	0.0488	1413546
0.354	403553	0.3435	403523	0.184	2092553
0.431	393516	0.3595	403580	0.336	413501
0.0463	1413548	0.29	2092554	0.2115	1503502
0.3475	413516	0.366	393530	0.3585	413544
0.3545	413543	0.337	403564	0.3205	393561
0.3235	403578	0.338	403609	0.3675	403549
0.05	1403532	0.406	393630	0.369	403520
0.0423	1413545	0.3515	393572	0.185	2062504
0.3925	393555	0.3485	393510	0.05	1403531
0.3355	393620	0.4045	393529	0.35	403579
0.377	403678	0.3495	403517	0.3675	393591
0.334	403557	0.3575	403587	0.402	393552
0.403	393540	0.356	393506	0.0212	1413551
0.354	403526	0.3665	403561	0.3975	423572
0.3695	393594	0.3455	403625		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.29
Censored		Lognormal mean	0.33
Detection limit or PQL		Std. devn.	0.12179007
Method detection limit		Median	0.348
TOTAL	74	Min.	0.0212
		Max.	0.458

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -16.6728. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -8.8444. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.317

Distribution Analysis and Statistical Summaries

Phenanthrene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.086	2062500	0.0228	2062506	0.0695	403577
0.064	393561	0.07	403579	0.0675	403609
0.074	393594	0.0915	393598	0.072	403580
0.069	403541	0.079	393564	0.03705	2062504
0.069	403625	0.0805	393540	0.074	403520
0.0319	2062502	0.034	2062505	0.0685	403523
0.067	413501	0.071	413543	0.086	393516
0.0952	2092554	0.067	403557	0.0705	403547
0.081	393630	0.076	393548	0.0079	1423501
0.0445	1433587	1.75	1413548	0.0755	403678
0.16	2062503	0.00845	1413545	0.101	1503502
0.0758	403581	0.0446	393610	0.069	393575
0.0735	393591	0.017	1413549	0.0695	393510
0.067	393620	0.07	403517	0.00975	1413546
0.081	393529	0.5	1403531	0.5	1403532
0.0705	393572	0.0675	403564	0.079	393596
0.0368	2092553	0.075	393553	0.0685	393504
0.0735	403561	0.073	393530	0.071	403553
0.0695	413516	0.0645	403578	0.0735	403549
0.0785	393555	0.0415	413544	0.071	393506
0.0406	2062501	0.144	1423503	0.072	393521
0.074	393602	0.0777	413539	0.723	1413551
0.298	1423500	0.0643	413527	0.028	393605
0.0805	393552	0.0715	403587	0.0795	423572
0.071	403526	0.0985	403531		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.11
Censored		Lognormal mean	0.10
Detection limit or PQL		Std. devn.	0.22119359
Method detection limit		Median	0.071
TOTAL	74	Min.	0.0079
		Max.	1.75

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -16.8766. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -44.9396. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.156

Distribution Analysis and Statistical Summaries

Pyrene

Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID	Concentration (mg/kg)	Sample ID
0.0668	1433587	0.069	403625	0.0705	393572
0.074	403520	0.0695	393510	0.238	403581
0.0616	393506	0.239	1503502	0.178	393605
0.086	393516	0.0434	413527	0.0331	413544
0.0805	393540	0.075	393553	0.0735	403561
0.069	403541	0.0805	393552	0.5	1403531
0.067	393620	0.067	413501	0.5	1403532
0.0861	413539	0.064	393561	0.069	393575
0.0685	403523	0.071	403553	0.067	403557
0.0075	1413546	0.0085	1413545	0.079	393564
0.07	403517	0.497	1423500	0.0949	393610
0.072	393521	0.0755	403678	0.0735	403549
0.0322	393530	1.65	1413551	0.079	393596
0.0785	393555	0.074	393602	0.0675	403564
0.0705	403547	0.181	2062503	0.0915	393598
0.0228	393548	0.0526	2062506	2.88	1413548
0.311	1423503	0.0198	403579	0.0695	403577
0.081	393630	0.0368	2092553	0.0406	2062501
0.071	403526	0.212	2062505	0.074	393594
0.0631	403587	0.03705	2062504	0.071	413543
0.0795	2062500	0.258	2092554	0.0044	1423501
0.0048	1413549	0.0735	393591	0.0327	403580
0.081	393529	0.0695	413516	0.0685	393504
0.125	403531	0.0319	2062502	0.0795	423572
0.0675	403609	0.0645	403578		

Number of samples		Uncensored values	
Uncensored	74	Mean	0.16
Censored		Lognormal mean	0.13
Detection limit or PQL		Std. devn.	0.38154236
Method detection limit		Median	0.071
TOTAL	74	Min.	0.0044
		Max.	2.88

Lognormal distribution?	Normal distribution?
r-squared is:	r-squared is:

Recommendations:

Reject lognormal distribution.

Y value is -12.5916. This lies outside the tabled values of 1.196 and -2.6364

Reject normal distribution.

Y value is -44.9938. This lies outside the tabled values of 1.196 and -2.6364

UCL (based on Z-statistic) is 0.229