Work Plan for Site Investigation The Sherwin-Williams Facility 1450 Sherwin Avenue Emeryville, California

> June 2, 1997 3435.00-004

Prepared for The Sherwin-Williams Company 101 Prospect Avenue, NW Cleveland, Ohio 44115





June 2, 1997 3435.00-005

Mr. Mark Johnson California Regional Water Quality Control Board 2101 Webster Street, Suite 500 Oakland, California 94612

Subject: Work Plan for Site Investigation, Sherwin-Williams Facility, Emeryville, California

Dear Mark:

Levine Fricke Recon Inc. (LFR) has prepared the enclosed work plan ("Work Plan") for an investigation in the vicinity of and including the Sherwin-Williams facility located at 1450 Sherwin Avenue, Emeryville, California. This Work Plan has been prepared on behalf of The Sherwin-Williams Company in response to Tasks 2 and 3 of the California Regional Water Quality Control Board (RWQCB) Cleanup and Abatement Order No. 97-047 ("the Order").

The Order requested three work plans. The first work plan (Task 1) is currently being addressed under separate cover. The RWQCB's Tasks 2 and 3 have been combined under one Work Plan to create a comprehensive investigation that addresses the issues stated by the Order. This Work Plan is being submitted in advance of the revised June 6 deadline. This revised due date was agreed at the meeting between the RWQCB and Sherwin-Williams on April 15, 1997.

As indicated in the enclosed schedule, we hope to get approval for the Work Plan from the RWQCB by June 23, 1997. Once we receive RWQCB approval, the work will proceed in accordance with the schedule.

If you have any comments or questions, please call Larry Mencin of Sherwin-Williams at (216) 566-1768 or Mike Marsden or me of LFR at (510) 652-4500.

Sincerely,

Angla Jawbson for Mark D. Knox

Principal Engineer

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- A Regional Water Quality Control Board, Cleanup and Abatement Order No. 97-047
- B Soil Investigation in the Vicinity of the Southern Rifkin Property, dated June 2, 1997
- C Revised Work Plan for Additional Soil and Groundwater Investigations, dated March 28, 1997
- D Work Plan for Expansion of Existing Groundwater Remedial System, dated November 7, 1996
- E Standard Operating Procedures

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1.0 INTRODUCTION

Levine Fricke Recon Inc. (LFR; formerly Levine Fricke, Inc. and Recon) has prepared this work plan ("Work Plan") for an investigation in the vicinity of and including the Sherwin-Williams facility located at 1450 Sherwin Avenue, Emeryville, California ("the Site;" Figure 1). The Site includes the Sherwin-Williams property, portions of Horton Street, the Rifkin Property, and surrounding areas as illustrated in Figure 2. This work plan includes a proposed scope of work and schedule.

This work plan has been prepared in response to Tasks 2 and 3 of the California Regional Water Quality Control Board (RWQCB) Cleanup and Abatement Order No. 97-047 ("the Order;" Appendix A), dated April 7, 1997. Task 1 of the Order was addressed by various work plans prepared in March, April, and May 1997 as discussed in Section 3.3 herein. Tasks 2 and 3 of the Order state that Sherwin-Williams will investigate the following:

- The existence of natural and human-made preferential pathways and lateral and vertical conduits for migration of pollution at the Site.
- The extent of the soil and groundwater pollution, outside the existing slurry wall, in the on- and off-site areas.

The two work plans requested under the Order for Tasks 2 and 3 have been combined under one work plan in order to create a comprehensive investigation that addresses the issues required by the Order.

1.1 Work Plan Organization

This Work Plan presents a brief background and physical setting of the Site, the proposed field investigations, report production, and schedule for the work to be conducted. In addressing Tasks 2 and 3 of the Order, the investigation of the Site has been divided into issues and areas of concern to be evaluated (Figure 2). These include the following:

- Current site conditions
- Human-made conduits
- Horton Street
- Rifkin Property
- Northwestern area
- Southern area
- B-zone aquifer
- Inside existing slurry wall

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Natural conduits will be evaluated as part of each the areas and issues of concern listed above.

1.2 Objectives

LFR's objectives are to comply with Tasks 2 and 3 of the Order, to collect further data in order to better define the conditions at the Site, and ascertain the nature and extent of contaminants in the soil and groundwater at the Site. Arsenic concentrations in soil and groundwater on the Sherwin-Williams property will be compared to arsenic concentrations found on adjacent properties. The data will be used to evaluate risk management strategies for any impacted areas at the Site.

2.0 BACKGROUND AND PHYSICAL SETTING

Previous land use, investigations, and remediation activities conducted at the Sherwin-Williams Site and the surrounding properties and a description of the physical setting of the area are summarized below.

2.1 Background

Previous investigation and remediation activities have been conducted at the Sherwin-Williams plant site, Rifkin Property, and Horton Street. The following section includes a summary of previous activities, investigations, and remedial measures conducted at these areas.

2.1.1 The Sherwin-Williams Facility

The Sherwin-Williams Company owns and operates a coatings manufacturing plant located at the corner of Horton Street and Sherwin Avenue (1450 Sherwin Avenue) in Emeryville, California. The plant has been in operation since the early 1900s, manufacturing various types of coating products. It also produced lead-arsenate pesticides from the 1920s until the 1940s. In 1987, Sherwin-Williams changed its manufacturing at the Site from oil-based products to water-based products. The change in manufacturing operations included the closure and dismantling of an oil tank storage facility, solvent tank storage facilities, alkyd resin manufacturing facility, lacquer manufacturing facility, and the former pesticide manufacturing area.

Several soil and groundwater investigation phases were subsequently conducted from 1988 to 1991 to assess the nature and extent of a range of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and certain inorganic compounds (mostly arsenic and lead) detected at the Site as a result of the investigation of the tank storage and production facilities.

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Soil investigations conducted at the Site included the following areas:

- · Former oil tank storage.
- Former solvent tank storage.
- A paved parking area near the former solvent tank storage.
- Arsenic source area.

VOCs, SVOCs including total petroleum hydrocarbons (TPHs), and arsenic were identified in A-zone groundwater in the site vicinity. Analytical data collected during the initial phases of investigation and monitoring indicated that chemical compounds detected in A-zone groundwater did not appear to affect B-zone groundwater at concentrations requiring remediation.

In 1990, the Sherwin-Williams Company retained LFR to develop interim remedial measures (IRMs) to address source areas for the Site. An evaluation was conducted in accordance with site investigation and treatability study work plans prepared by LFR for Sherwin-Williams. The objectives of the IRMs were to reduce or eliminate potential human exposure to affected soil and groundwater, prevent or minimize off-site migration of the affected groundwater, and control source areas. Proposed IRMs were developed and evaluated for the Site according to the feasibility, effectiveness, and implementability of the alternative IRMs.

The IRMs for the Site were presented in LFR's report, "Evaluation of Interim Remedial Measures," dated December 20, 1991. The RWQCB concurred with the proposed IRMs in a letter signed by the Executive Officer, Steve Ritchie, dated March 10, 1992.

As part of the IRMs, Sherwin-Williams installed the following items:

- Slurry wall to contain chemically affected areas and inhibit further off-site migration of affected groundwater.
- Cap and storm-water collection system to prevent infiltration into chemically affected soils from storm-water runoff.
- Groundwater extraction and treatment system (GWETS) to pump groundwater within the slurry wall, create an inward hydraulic gradient and treat extracted groundwater.

Periodic groundwater monitoring in on- and off-site groundwater monitoring wells has been conducted at the Site since 1989. Groundwater samples were collected for chemical analysis and measurement of groundwater elevation.

In 1994 and 1995, activities were conducted to remove underground storage tanks (USTs) owned by Southern Pacific Lines (SPL) and located near the western Sherwin-Williams property line (adjacent to SPL railroad lines) that were discovered during

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Sherwin-Williams Site Remediation construction work. The UST s were encountered during cap and slurry wall construction activities. The tanks contained petroleum products historically used by the Railroad. Four buried railroad tank cars were found on the western property boundary with Southern Pacific Lines, which agreed to take responsibility for their removal. Two smaller torpedo tanks were later located in the vicinity of the buried railroad tank cars. The adjacent property owner, the Southern Pacific Lines, took responsibility for these tanks, which were removed and disposed of at an approved facility.

2.1.2 The Rifkin Property

According to a previous report discussing historical site use (Harding Lawson Associates 1992), previous owners or users of the Rifkin Property located northeast of the Sherwin-Williams Property included the following:

- The Oakland Trotting Park and North California Jockey Club Race Track occupied Rifkin from approximately 1889 until at least 1911 or 1912.
- Pacific Galvanizing occupied the Site in 1925.
- Rotary Oil Company occupied the Site in the 1920s.
- Rheem Manufacturing occupied the Site in 1930.
- The California Container Corporation (later the Container Corporation of America) began manufacturing corrugated containers in the existing building beginning in approximately 1937.
- California Container Corporation occupied the Site until approximately 1978.
- Rifkin Investments obtained the property from Container Corporation of America in 1978.

In addition to the above-mentioned historical site users, East Bay Chemical Company also occupied the Rifkin Property adjacent to Sherwin-Williams in the 1920s, as indicated on historical site area maps. Several USTs were removed from the Rifkin Property in the late 1980s and 1990s.

Erler & Kalinowski, Inc., on behalf of Chiron; LFR, on behalf of the Sherwin-Williams Company; and TMC, on behalf of Mr. Frank Satterwhite, receiver for the Rifkin Property, conducted soil and groundwater investigations at Rifkin Property in 1993 and 1994. LFR has conducted periodic quarterly sampling and measuring water levels in groundwater monitoring wells at Rifkin Property since 1994. In addition, LFR conducted a soil investigation at Rifkin Property in 1996, and the results of this investigation are submitted with this work plan (Appendix C). VOCs and arsenic were identified by the previous investigations in soil and A-zone groundwater in the southern portion of Rifkin Property. TPH and their constituents were detected at sample locations across the Site. Soil and groundwater investigations at the upgradient BGR Property (formerly Shell Development Facility) conducted by Erler and Kalinowski

also identified the BGR property as a source, which has impacted groundwater beneath Rifkin Property.

2.1.3 Horton Street

LFR, on behalf of the Sherwin-Williams Company, conducted soil investigations in March, April, and May 1997, on Horton Street and other areas in the vicinity of the Sherwin-Williams facility. Investigation and remediation activities related to these areas are in progress and being conducted to address Task 1 of the RWQCB Cleanup and Abatement Order issued April 7, 1997. The activities for Horton Street are described more fully in Section 3.3 of this work plan.

2.2 Physical Setting

The Site is located in Emeryville, California, and is approximately 2,000 feet from the San Francisco Bay. Property in the area of the Site is mixed use with primarily industrial and commercial properties intermixed with some residential. The average minimum and maximum temperatures in the area are 50.0°F and 64.6°F, respectively. The average rainfall in the area is 23.0 inches per year.

The approximate site borders are: the east side of Horton Street located east of Sherwin-Williams; approximately 200 feet to the west of the western Sherwin-Williams property boundary for the purposes of this investigation, Sherwin Avenue to the south, and 100 feet to the north of Temescal Creek to the north.

The Sherwin-Williams facility is located at 1450 Sherwin Avenue. The Rifkin Property's former address was 4525 through 4623 Horton Street, but is now an asphalt-covered parking lot. Harcros Pigments Facility, Myer's Container Corporation, and Barbary Coast Steel are to the west of The Sherwin-Williams facility and the Rifkin Property. The Southern Pacific Railroad tracks run in an approximate north-south direction between The Sherwin-Williams facility and each of Harcros Pigments Facility, Myer's Container Corporation, and Barbary Coast Steel. A concrete-lined ditch (Temescal Creek) runs in an approximate east-west direction through the northern part of the Site and drains into the Bay.

Information regarding the hydrogeologic characteristics of the lithologic units that underlie the Site has been obtained from the drilling and pump testing conducted during investigations at the Sherwin-Williams facility and the Rifkin Property. The results of drilling indicate that shallow "A-zone" groundwater is generally encountered at a depth of 6 to 12 feet bgs. The results of drilling of A-zone monitoring wells indicate A-zone groundwater is generally present in relatively thin (2 to 5 feet thick) discontinuous and heterogeneous beds of sand and/or gravel interbedded with less permeable silty clayey sediments. The water-yielding units of the A zone are generally overlain by silty clay and gravely silty clay sediments. The A zone is underlain by a silty clay interval that starts at approximately 15 to 20 feet bgs and is approximately 10 to 18 feet thick. This clay-rich interval has a low permeability, and the unit acts as an aquitard to form a

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- Identify, map, and inspect outfalls to Temescal Creek and the drainage ditch leading from the Rifkin Property.
- Amend work plan for sediment, soil, and groundwater sampling, according to the records review and geophysical investigation results.
- Conduct a well survey by contacting state and local regulatory agencies.

3.2.3 Data Collection

Records Review

LFR will review historical aerial photographs and maps to identify surface features that may have existed on the Site in the past to indicate the locations of potential human-made conduits. Utility maps and plans provided by Sherwin-Williams will also be reviewed, as well as plans from the City of Emeryville. Slurry wall construction logs will be checked to evaluate if any subsurface conduits encountered during excavation activities can be correlated with the review of utility maps. The Department of Water Resource files will also be reviewed to identify wells that have not been properly abandoned or maintained, and may be serving as conduits for contaminated groundwater.

Data Compilation

LFR will compile the data from the records review to evaluate if any areas need further investigation, and if contaminant distribution can be attributed to manmade conduits. This data will be presented on a map and used to assess how potential conduits fit into the current understanding of the Site and evaluate how investigations for the Site may be impacted.

Geophysical Survey

A geophysical surveyor will be subcontracted to locate underground features that may be serving as conduits for contaminants. A combination of ground penetrating radar (GPR) and a pipe and cable locator will be used to locate subsurface conduits. GPR will be used to locate subsurface nonmetallic conduits. The pipe and cable locator (Metrotech 9890 or RD400) will be used to locate metallic objects. Potential conduit locations will be mapped and combined with information obtained in the records review.

Identify and Inspect Outfalls

The outfalls to Temescal Creek and the drainage ditch (beyond the north end of the Sherwin-Williams Property) within 500 feet of the Sherwin-Williams facility will be identified, mapped, and inspected. Based on the conditions and diameter of each outfall, the inspection will be conducted by video camera or by personnel, using confined entry precautions, if required.

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Work Plan Amendment

Based on maps and available off-site data, the Work Plan may be amended to identify additional soil, sediment, and groundwater sampling in the vicinity of potential conduits. Sampling strategies will be developed to supplement the sampling plans identified for the other areas of the Site as described in Sections 3.3 through 3.8.

Well Survey

LFR will contact state and local regulatory agencies including Alameda County, the City of Emeryville Water Department, and California Department of Water Resources, to obtain information about wells drilled within a 0.5 mile surrounding the Sherwin-Williams Property. This information will be used to evaluate vertical conduits in the area.

3.3 Horton Street Soils

Horton Street, trending in a north-south direction, is located adjacent to and east of the Sherwin-Williams facility. The section of concern is mostly paved and runs between Sherwin Avenue from the south to approximately 1,200 feet north along Horton Street. The properties located along Horton Street include the Sherwin-Williams facility, Rifkin Property, 45th Street Artists' Cooperative property, Horton Street Lofts, and various Chiron owned or leased property.

The investigation and remediation of impacted soils along Horton Street is being implemented under separate work plans in response to Task 1 of the RWQCB Cleanup and Abatement Order dated April 7, 1997. Further investigations and remediation will not be required at Horton Street after the work is completed, however, for completeness we have included references to the work conducted for the project in this work plan.

3.3.1 Objectives

The objectives of the Horton Street investigation and remediation are as follows:

- Define the extent of arsenic and lead contamination in shallow soil surrounding the Sherwin-Williams property beneath Horton Street, 45th Street, and Sherwin Avenue to determine the extent of soil removal.
- Remediate shallow soils through excavation and off-site disposal as identified by the area investigations.

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3.3.2 Scope of Work

Based upon the objectives listed above, the investigation portion of work was completed in April and May 1997 based on the following work plans:

- Three work plans dated March 27, April 2, 1997, and April 16, 1997. These work plans involved several phases of soil samples in sidewalk areas along Horton Street, 45th Street, and Sherwin Avenue as well as sampling on the 45th Street Artists' Cooperative property.
- The work plan dated April 28, 1997, which included three additional boring locations on the 45th Street Artists' Cooperative property.
- The work plan dated April 28, 1997, which proposed three soil borings on the Wareham property north of the 45th Street Artists' Cooperative. This work has not been completed since the property owner has denied access.
- The work plan dated May 2, 1997, which involved additional soil investigations in the Horton Street roadway.
- The work plan dated May 2, 1997, which involved the collection of sidewalk concrete core samples for waste disposal characterization.

3.3.3 Data Collection

Data for Horton Street were collected in accordance with the work plans described above and additional data collection is not anticipated.

3.3.4 Horton Street Remediation

The Horton Street remediation is being implemented in accordance with the following work plans:

- Work Plan dated April 14, 1997, which described the overall plan for the Horton Street remediation and included the Health and Safety Plan.
- Work Plan dated April 25, 1997, which described the excavation and disposal details and proposed target soil cleanup levels.
- Work Plan dated May 2, 1997, which presented the air monitoring plan to be implemented during the excavation activities.
- Addendum to the April 25, 1997 Work Plan dated May 8, 1997, which provided revised target cleanup levels for arsenic and lead.
- Response to comments dated May 21, 1997, which responded to comments on the Air Monitoring Plan dated May 2, 1997, and an Addendum dated May 8, 1997.

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The majority of the Horton Street remediation is anticipated to be completed by mid-July 1997. A project completion report will be submitted to the RWQCB after the project is finished.

3.4 Rifkin Property

The Rifkin property is located at 4525-4563 Horton Street in Emeryville, California. The southern and western sides of the Rifkin Property are immediately adjacent to The Sherwin-Williams Property. A summary describing historical use and previous investigations is included in Section 2.1.2.

3.4.1 Objectives

Objectives for activities proposed for the Rifkin Property are as follows:

- Conduct a visual analysis of the property, assess past industrial activities and review
 data from previous investigations to identify potential source areas for soil and
 groundwater contamination (task completed).
- Verify the extent of the arsenic groundwater plume from the Sherwin-Williams facility including assessment of whether arsenic is migrating in sand stringers beneath the currently installed wells RP-1 through RP-5.
- Confirm locations of other sources of contamination through selective sampling of soil and groundwater to fill in data gaps and/or confirm results from previous investigations.
- Define the extent of chemical migration in the vadose zone soil from the Sherwin-Williams property onto the Rifkin Property at the southern Sherwin-Williams/Rifkin Property boundary (task completed; see Appendix B).
- Collect groundwater samples in wells upgradient from Rifkin Property and downgradient from the South BGR property (former Shell development property) to verify the extent of contaminated groundwater migration from the South BGR property onto the Rifkin Property.

These objectives are described in current work plans for investigation and remediation that have been submitted to the RWQCB (Appendices C and D). The November 7, 1996 work plan addresses the expansion of the groundwater extraction system on the Rifkin Property to allow for containment and remediation of groundwater at the Rifkin Property. The March 28, 1997 work plan addresses investigation of A-zone soil and groundwater. Investigation of B-zone groundwater at the Rifkin Property is addressed in Section 3.7 of this Work Plan. An additional objective for the Rifkin Property is confirmation of a permeable sediment layer in the A-zone at the proposed extraction well locations to be completed prior to installing the extraction wells.

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3.4.2 Scope of Work

The scope of work for the above-mentioned objectives is defined in detail in Appendices C and D. One task will be added to the activities described in the November 7, 1996 and March 28, 1997 work plans. CPT borings are to be drilled at each of the three proposed extraction well locations shown on Figure 3.

3.4.3 Data Collection

Three proposed extraction wells will be installed and a CPT boring will be drilled at each of the approximate locations of the proposed extraction wells (Figure 3 and Appendix D-Figure 1). These CPT borings will be drilled to confirm the presence of a permeable layer(s) of sediments in the A-zone interval, so that the extraction wells will have optimum flow rates when being pumped. At each proposed extraction well location, if the CPT boring log indicates that a permeable layer(s) of sediment is not present then the location will be adjusted and a new CPT boring will be drilled at the new location to confirm the presence of a permeable layer(s) of sediment in the A-zone interval. The methodology used for the CPT borings is presented in Appendix E. LFR will obtain the appropriate permits from Alameda County Flood Control and Water Conservation District (Zone 7) before subsurface activities begin.

3.5 Northwestern Area

The investigation of the Northwestern Area will focus on the Sherwin-Williams Property north and west of the slurry wall, the Myer's Drum and Harcros facilities west of Sherwin-Williams, and Temescal Creek, which flows to the San Francisco Bay near the northern Sherwin-Williams property line (Figure 4). The focus of the investigation will be the interaction of surface water and shallow groundwater and downgradient extent of arsenic attributed to Sherwin-Williams in shallow groundwater.

3.5.1 Objectives

The primary objectives the Northwestern area investigation are as follows:

- Evaluate potential contaminant impact to Temescal Creek.
- Assess the interaction between the San Francisco Bay, Temescal Creek, and shallow groundwater at the Site.
- Evaluate the chemical makeup of railroad ballast west of the Sherwin-Williams Property.
- Evaluate the potential for contaminant transport by Temescal Creek.

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3.5.2 Scope of Work

Based upon the objectives listed above, the proposed scope of work includes the following tasks:

- Sediment sampling within Temescal Creek and the drainage ditch to evaluate contaminant impact.
- Piezometer installation in the vicinity of Temescal Creek to monitor tidal affects on water-bearing zone groundwater and groundwater/surface water interaction.
- Tidal study to assess the interaction between the San Francisco Bay, Temescal Creek, and shallow groundwater.
- Railroad ballast sampling to evaluate the chemical makeup of railroad ballast on the Sherwin-Williams Property.

3.5.3 Data Collection

Sediment Sampling

Sediment samples will be collected from seven locations within Temescal Creek and two locations within the drainage ditch that traverses the Rifkin Property (Figure 4).

In Temescal Creek, sediment samples will be collected in four locations where sediment samples were previously collected on November 3, 1993: at the northeast boundary of the Sherwin-Williams Property, where the drainage ditch from the Rifkin Property flows into the creek, at the storm sewer outfall, and west of the railroad tracks. One sample will be collected at each of these locations at the northern-most point of the creek where the majority of sediment has collected. Three additional samples will be collected in the creek in the vicinity of the storm sewer outfall: one upstream, one downstream, and one along the northern edge of the creek channel.

The two samples in the Rifkin Property drainage ditch will be collected from the middle of the ditch. One sample will be collected from the east side of the ditch, and the other will be collected midway between the Sherwin-William's property boundary and Temescal Creek.

Sediment samples collected in the drainage ditch may require confined space entry and may require an access agreement. Sediment samples will be collected during low tide to minimize worker exposure to water in the creek.

During sediment sampling, the thickness and aerial extent of sediment will be recorded in order to provide an estimate of the volume of sediment in the creek and drainage ditch.

Sediment samples will be collected between depths of 0.5 and 1 ft using a hand trowel. All samples will be analyzed for arsenic by EPA Method 3050A/6010A.

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Piezometer Installation

Piezometers will be installed at five locations at varying distances from Temescal Creek to monitor tidal affects on shallow water-bearing zone groundwater and groundwater/surface water interaction (Figure 4). Two piezometer pairs will be installed in the fill along the north and south sides of the creek. One pair will be located west of the storm sewer outfall, and one pair will be located approximately 100 feet west of monitoring well LF-25. An additional piezometer will be installed in native material north of the piezometer to be installed in the fill material on the north side of the creek.

Piezometers will be continuously cored to a depth of approximately 25 feet using hollow stem auger rig. All piezometers will be constructed of 2-inch-diameter polyvinyl chloride (PVC). Groundwater samples will be collected from the two piezometers installed west of LF-25 and analyzed for arsenic by EPA Method 3050A/6010A. Drilling and piezometer installation procedures are described in the Standard Operating Procedures (Appendix E).

Tidal Study

Twelve locations will be monitored during the tidal study (Figure 4). Water levels at each station will be measured using pressure transducers and automated data loggers. Water levels will be recorded over a continuous 72-hour period. Data loggers will be programmed to collect readings every 15 minutes for the 72-hour period. Once the test is completed, the water level data will be downloaded from the data logger and converted to a spreadsheet file. The data will then be reduced and analyzed.

The monitoring well network will consist of existing monitoring wells LF-8, LF-18, LF-26, LF-20, LF-23, and LF-25, the five newly installed 2-inch piezometers discussed above, and one surface water monitoring station. Each monitoring location will be surveyed vertically and horizontally.

Water levels in monitoring wells LF-8, LF-18, LF-26, LF-20, and LF-25 will be monitored to observe tidal effects at varying distances from Temescal Creek. Well pair LF-8 and LF-18 and well pair LF-26 and LF-20 will be monitored in order to observe tidal effects on adjacent sides of the slurry wall. Water level data at LF-25 and the two new piezometers in the western portion of the Sherwin-Williams property will provide data for the western portion of the Site. Water level measurements from monitoring well LF-23 will be used as control data, since tidal effects are not expected to be observed in this monitoring well. The piezometer installed in native material north of Temescal Creek will provide data which will be compared with data from the piezometers installed in fill material.

One temporary surface water monitoring station will be set up in Temescal Creek to observe tidal fluctuations during the test. This station will be located adjacent to the two piezometers that will be installed in artificial fill by the creek near the storm sewer outfall (Figure 4).

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Tidal study field procedures are described in the Standard Operating Procedures (Appendix E).

Railroad Ballast Sampling

Four representative railroad ballast samples will be collected between depths of 2 and 3 feet to determine the chemical makeup of the material used at the railroad tracks. Railroad ballast samples will be analyzed for CAM 17 Metals.

3.6 Southern Area

The Southern Area of the Sherwin-Williams site is located south of the slurry wall. The area is bounded to the south by Sherwin Avenue, to the east by the north Horton Street sidewalk, and to the west by Myer's Drum and Barbary Coast Steel.

The area consists of Yards A-1 and A-2, a 100,800 ft² manufacturing building (Building 35), three smaller warehouses (Buildings 1, 2, and 31), two tank storage buildings (Buildings 29 and 34), a treatment system (Building 30), one storage building (Building 4), two factories (Buildings 2 and 28) and an un-numbered warehouse office. Three existing monitoring wells (LF-11, LF-13, and LF-B4) are located in this area.

3.6.1 Objectives

The primary objectives for the Southern Area are the following:

- Assess potential sources of contamination through selective sampling of soil and groundwater.
- Evaluate the extent of contaminants, if present, in the vadose zone and shallow groundwater.

3.6.2 Scope of Work

Based upon the objectives listed above, the proposed scope of work includes the following tasks:

- Soil and groundwater sampling at 20 locations and one soil boring location.
- Installation, development, and sampling of five A-zone monitoring wells.

3.6.3 Data Collection

Soil and Groundwater Sampling

Twenty soil and groundwater borings and one soil boring will be drilled in the Southern Area. Ten of the soil and groundwater borings will be located in Yards A-1 and A-2,

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and ten will be located within the large manufacturing area (Building 35). The soil boring will be drilled immediately west of the truck ramp (Figure 5).

Under the supervision of an LFR geologist, an EnviroCore rig will be used to collect a soil sample at two different depths above the groundwater table at each soil and groundwater sampling location. Soil samples will be collected at 1 and 4 feet bgs. Following the collection of the soil samples, a discrete groundwater sampling tool will be attached to the hydraulically driven push-rod and one groundwater sample will be collected from the A-zone at each location. When possible, samples will be collected where sand layers are identified. Groundwater samples will be analyzed for Title 22 metals, VOCs by EPA Method 8260, and SVOCs by EPA Method 8270. Drilling and sampling procedures are described in Appendix E.

The soil boring will be drilled near the truck apron near the southwest corner of Building 35. Soil samples will be collected immediately below the concrete/asphalt base and at four feet. The soil samples will be analyzed for arsenic as part of the Horton Street investigation.

Soil and groundwater samples will be submitted to American Environmental Network (AEN) of Pleasant Hill, a California-certified laboratory, for chemical analysis on a standard laboratory turnaround schedule of two weeks.

Monitoring Well Installation

Five monitoring wells will be installed along the site perimeter (Figure 5). Three of these wells will be located south of groundwater monitoring well LF-11 along the western side of Building 35 using a hollow-stem auger drill rig, and the other two will be located in the southern portion of the Site along Sherwin Avenue. The locations of these monitoring wells may be adjusted based on underground utilities or above ground obstacles.

Each monitoring well will be completed to a depth of 20 to 25 feet bgs using a hollow stem auger drill rig. Soil samples will be collected at depths of 1 and 4 feet bgs from four of the five monitoring well borings. Soil samples were previously collected near the proposed fifth well (the most eastern on Sherwin Avenue) during the Horton Street investigation. After installation, all wells will be developed and sampled. Drilling, development, and sampling procedures are described in the Standard Operating Procedures (Appendix E).

Soil and groundwater samples will be submitted to American Environmental Network (AEN) of Pleasant Hill, a California-certified laboratory, for chemical analysis on a standard laboratory turnaround schedule of two weeks. Groundwater samples will be analyzed for Title 22 metals, VOCs by EPA Method 8260, and SVOCs by EPA Method 8270.

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The newly installed monitoring wells will be sampled during regular quarterly monitoring events and initially (at least three quarters) analyzed for Title 22 Metals, SVOCs by EPA Method 8270, and VOCs by EPA Method 8260.

3.7 B-Zone Investigation

Lithologic data collected during previous investigations indicates that the B-zone consists of a thick interval of well-sorted, coarse-grained sand and gravel interbedded with silty clay. B-zone groundwater is generally encountered at approximately 28 to 38 feet bgs. The B-zone investigation will focus on characterizing the B-zone underlying the Site.

3.7.1 Objectives

The data from the A-zone investigations described in this work plan will be used to guide the B-zone investigation at the Site. The primary objectives of the proposed B-zone investigation are to:

- Characterize the lithology and thickness of the B-zone and the aquitard below the B-zone.
- Characterize B-zone groundwater quality and flow direction.

3.7.2 Scope of Work

Based on the objectives listed above, the scope of work includes the following tasks:

- Drilling CPT borings to collect B-zone lithologic data.
- Drilling EnviroCore borings to assess the distribution of arsenic in the B-zone.
- Installing B-zone groundwater monitoring wells to monitor water quality.

3.7.3 Data Collection

CPT Borings

Four CPT borings will be drilled to collect lithologic data which will be used to define the B-zone at the Site (Figure 6). Each boring will be advanced through the A-zone, the aquitard between the A-zone and the B-zone, the B-zone, and five feet into the first acceptable aquitard below the B-zone sediments is defined as the first 5-foot interval below the B-zone with mostly clayey sediments and good aquitard characteristics.

The four CPT locations will be located at areas where historical data indicates that Azone soil and groundwater is not significantly affected. Therefore, it is unlikely that cross-contamination between the A-zone and B-zone will occur. As an extra

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precautionary measure, while drilling the CPT borings, communication between the Azone and B-zone will be limited by using a "grout collar" to seal the borehole while pushing the CPT probe. When using the "grout collar" method, a rubber seal is installed at the ground surface of the borehole. Grout is then injected near the CPT tip as the CPT cone and rods are pushed through the sediments. Grout is also injected as the CPT cone and rods are removed from the borehole. CPT procedures are presented in Appendix E.

EnviroCore Borings

Eleven borings will be drilled using the EnviroCore system to assess the distribution of arsenic in the B-zone (Figure 6). The EnviroCore system was selected because it is designed to limit communication between hydrogeologic and lithologic intervals. The locations of the proposed borings were selected using historical data and information previously collected at the Site.

Each boring will be advanced approximately 3 feet into the aquitard below the B-zone. The depth of the aquitard below the B-zone will be estimated using the lithological data collected from the four CPT borings.

Two discrete groundwater samples will be collected from each EnviroCore boring: one from the upper B-zone and one from the lower B-zone. The upper and lower B-zone will be defined during the CPT investigation. Soil samples will be collected on a continuous basis for lithologic description in all borings. Soil samples will not be retained for chemical analysis. A description of the EnviroCore system and the sampling methodology is included in Appendix E.

Groundwater samples will be submitted to AEN of Pleasant Hill, a California-certified laboratory, for chemical analysis on a standard laboratory turnaround schedule of two weeks. Samples will be analyzed for Title 22 Metals, SVOCs by EPA Method 8270, and VOCs by EPA Method 8260.

Monitoring Well Installation

Three B-zone groundwater monitoring wells will be installed to monitor groundwater quality (Figure 6). The proposed locations may be adjusted based on the information collected from the CPT borings and the EnviroCore borings. Monitoring well installation procedures are presented in Appendix E.

Groundwater samples will be submitted to AEN of Pleasant Hill, a California-certified laboratory, for chemical analysis on a standard laboratory turnaround schedule of two weeks. Samples will be analyzed for Title 22 Metals, SVOCs by EPA Method 8270, and VOCs by EPA Method 8260.

The newly installed monitoring wells will be sampled during regular quarterly monitoring events and initially (at least three quarters) analyzed for Title 22 Metals, SVOCs by EPA Method 8270, and VOCs by EPA Method 8260.

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3.8 Inside Slurry Wall

The portion of the Site enclosed by the slurry wall and covered with an impervious cap is located in the northern half of the Sherwin-Williams Property (Figure 7). The area enclosed is approximately 165,000 square feet. Currently, this area is mainly unoccupied or used for parking.

Three extraction wells (EX-1, EX-2, and EX-3) are located within the slurry wall (Figure 7). Three B-zone aquifer monitoring wells (LF-B3, LF-B5, and LF-B6) are also located within the slurry wall. Six of the seven A-zone aquifer monitoring wells inside the slurry wall are paired with similar wells immediately outside the slurry wall.

3:8.1 Objectives

The objectives for investigation inside the slurry wall area are as follows:

- Definition and characterization of the water table within the slurry wall.
- Definition and characterization of groundwater potential differences across the slurry wall.

3.8.2 Scope of Work

Based upon the objectives listed above, the proposed scope of work involves installing and developing 10 piezometers.

3.8.3 Data Collection

Piezometer Installation

Ten A-zone aquifer piezometers will be completed to a depth of 15 to 20 feet at the locations shown in Figure 7. Four of the piezometers will be installed within the capped area, while the other six will be installed as three pairs: one immediately inside the wall and one immediately outside. The locations of these piezometers may be adjusted based on underground utilities and/or above ground obstacles.

The wells will be installed by the EnviroCore method as described in Appendix E. The piezometers will be ¾-inch in diameter with prepacked PVC construction.

4.0 REPORT

Sherwin-Williams will meet with the RWQCB periodically during the site investigations to present and discuss data results. Upon completion of the investigation tasks, LFR will prepare and submit a report describing the results of the field investigations on behalf of Sherwin-Williams. The report will contain a summary of all

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data collected during the field investigations, evaluation of the data, recommendations, and an evaluation of risk management at the Site.

4.1 Data Evaluation

Data collected from the Site will include analytical data from soil, groundwater, and sediment samples; geotechnical data; tidal study data; and current data on physical conditions present at the Site. This data will be integrated into an analysis of the extent of soil and groundwater contamination; and preferential pathways and conduits that may affect the migration of contamination at the Site. The tools to be used in this analysis include:

- Groundwater elevation contour maps.
- Groundwater isoconcentration contour maps.
- Evaluate contaminant movement based on tidal study and sample analytical results.
- Geologic cross sections.
- Geologic unit contouring.
- Conceptual models of geology and hydrogeology.
- Human-made conduit evaluations.
- Natural conduit evaluations.

4.2 Risk Management Plan

The data collection and interpretation activities discussed in this report will be used to evaluate sources, pathways, and receptors to assess possible human health and environmental risks. A conceptual exposure model and screening-level risk evaluation will be presented in this report. This risk evaluation will be used as the basis for a risk management plan for the site, to be prepared under separate cover.

If the screening-level evaluation indicates the potential for risk, the risk management plan will determine site-specific cleanup goals based on potential pathways, exposure scenarios, and receptors. These site-specific cleanup goals will consider the potential for transport and exposure, and will be established to reasonably protect human health and the environment, and to protect existing and potential beneficial uses.

Depending on the findings of the investigation, the risk management plan may identify a combination of remedies and other risk management strategies. The risk management plan may delineate a number of "risk management zones," based on chemical occurrence, transport pathways and potential receptors. The type and scope of proposed actions will depend on a number of factors, including cost, feasibility, level of potential risk, and the potential to affect beneficial uses. Risk management measures that may be evaluated include actions that would control chemical exposures, including engineering and institutional controls.

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4.3 Report Preparation

After receiving RWQCB approval of this work plan, LFR will prepare an initial report for submittal to the RWQCB and detailing the evaluation of current site conditions and potential human-made conduits for migration of contaminants at the Site. These reports will provide input and possible modifications to the other investigation tasks described in this work plan.

Upon completion of all investigation work, LFR will also prepare a complete report on the investigation at the Site and submit the report to the RWQCB for review and discussion.

5.0 PROJECT SCHEDULE

This schedule has been prepared for the work plan based on experience for previous work conducted at the Site. Figure 8 shows a timeline for activities and deliverables associated with this work plan. The schedule may need to be modified depending on whether time required for work plan approval by the RWQCB, and access for investigation on off-site properties.

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REFERENCES

Harding Lawson Associates. 1992. Preliminary Site Assessment, 4525 - 4563 Horton Street, Emeryville. San Francisco, California. October 20.

Levine Fricke Recon Inc. 1996. Underground Storage Tank Removal Report, Sherwin-Williams Facility. Emeryville, California. March 15.

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Table 1
Investigative Concerns and Proposed Activity
1450 Sherwin Avenue, Emeryville, California

Investigative Concern	Proposed Investigative Activity	Number of Stations	Sample Type	Number of Samples per Station	Approximate Sample Depths (ft bgs)	Laboratory Analyses
Human-Made Conduits	Geophysical Survey (pending review of records)	TBD	NA	NA	NA	NA
	Soil/Groundwater/Sediment Samples	TBD	TBD	TBD	TBD	TBD
	(pending review of records)					
Horton Street Soil:	Street Borings*	24	Soil	2 or 3	0.5, 3, and 6.5	Arsenic (cadmium, lead, and zinc) by EPA Methods 3050A/6010A
	Co-Op Borings*	18	Soil	2	0.5 and 3	Arsenic and lead by EPA Methods 3050A/6010A
	Sidewalk Concrete Cores*	7	Concrete	1	0.5	Metals by EPA Methods 3050A/6010A/7471A
	Sidewalk Borings*	113	Soil	2	0.5 and 2.5	Arsenic and lead by EPA Methods 3050A/6010A
Rifkin Property	CPT Lithologic Boring	18	NA	· NA	NA NA	NA
	GeoProbe Soil Borings	18	5oil	2	Ton of Groundwater	Arsenic, lead, zinc by EPA Methods 3050A/6010A, VOCs by EPA Method 8260, and SVOCs by EPA Method 8270
	Discrete Groundwater Samples	18	Groundwater	2	Saturated Soil Above 15 and Between 15 and 30	Arsenic, lead, zinc, by EPA Method 6000/7000 series, SVOCs by EPA 8270, VOCs by EPA Method 8260, TPHg by EPA Method 5030 GCFID TPHd by EPA Methods 3510/3550, pH, and PCBs by EPA Method 8080
	Monitoring Well Sampling	4	Groundwater	1	A-Zone Groundwater	Arsenic by EPA Method 6000/7000 series, SVOCs by EPA 8270, VOCs by EPA Method 8260, TPHg by EPA Method 5030 GCFID, and TPHd by EPA Methods 3510/3550
Northwestern Area	Sediment Sampling	9	Sediment	1	1	Arsenic by EPA Methods 3050A/6010A
	Piezometer Installation	5	Groundwater	1 at 2 Stations	A-Zone Groundwater	Arsenic by EPA Methods 3050A/6010A
	Tidal Study	12	NA	NA	NA NA	NA .
	Railroad Ballast Sampling	4	Ballast	1	2 to 3	CAM 17 Metals
	Outfall Mapping and Inspection	NA	NA	NA	NA	NA
Southern Area	GeoProbe/HydroPunch Borings	20	Soil and Groundwater	2 Soil/1 Groundwater	I .	Title 22 metals, VOCs by EPA Method 8260, SVOCs by EPA Method 8270
	A-Zone Monitoring Well	5	Soil and Groundwater	2 Soil/1 Groundwater	1 and 4 Soil/A-Zone	Title 22 metals, VOCs by EPA Method 8260, SVOCs by EPA Method 8270
	Soil Boring	1	Soil	2		Arsenic by EPA Methods 3050A/6010A
B-Zone Aquifer	EnviroCore Boring	10	Groundwater	2	Upper 8-Zone and Lower B-Zone	Title 22 Metals, SVOCs by EPA Method 8270, VOCs by EPA Method 8260, TPHg by EPA Method 5030 GCFID, and TPHd by EPA Methods 3510/3550
	B-Zone Monitoring Well	3	Groundwater	1	B-Zone Groundwater	Title 22 Metals, SVOCs by EPA Method 8270, VOCs by EPA Method 8260, TPHg by EPA Method 5030 GCFID, and TPHd by EPA Methods 3510/3550, and General Minerals
	CPT Lithologic Boring	4	NA	NA	NA	NA
Inside Slurry Wall	Piezometer Installation	10	NA	NA	NA	NA

NOTES:

NA = not applicable TBD = to be determined

* Work completed as of May 1997

CPT - cone penetrometer testing

GCFID - gas chromatograph flame ionization detector

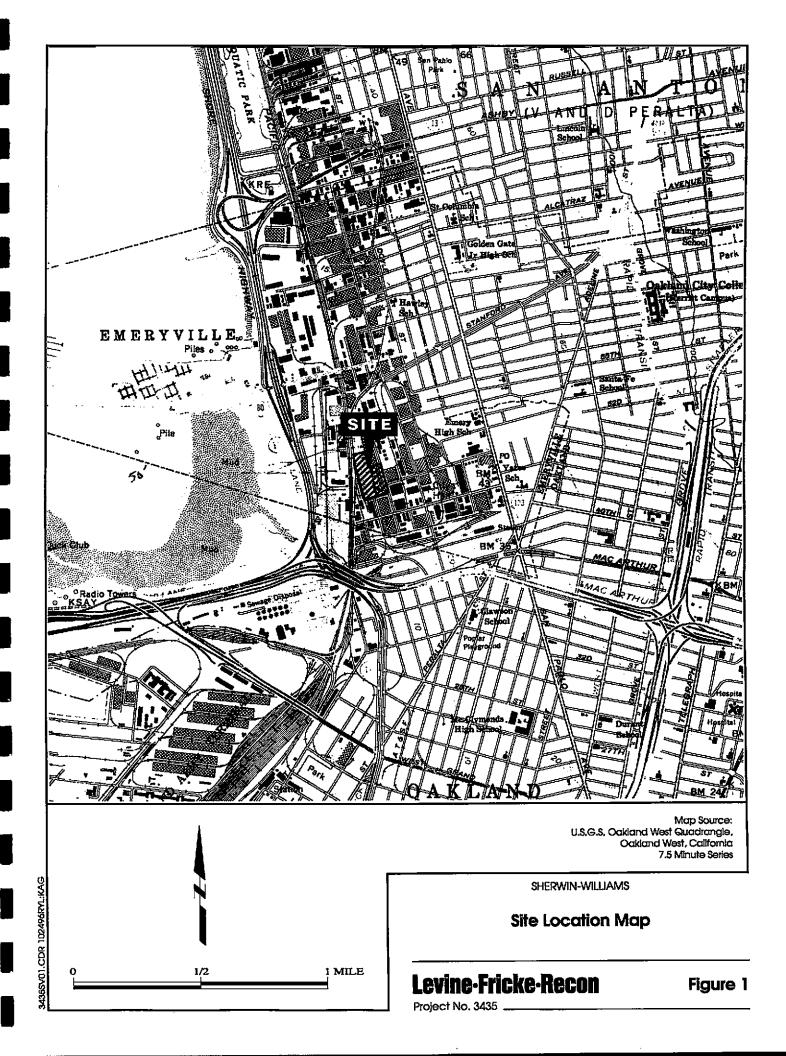
PCB - polychlorinated biphenyl

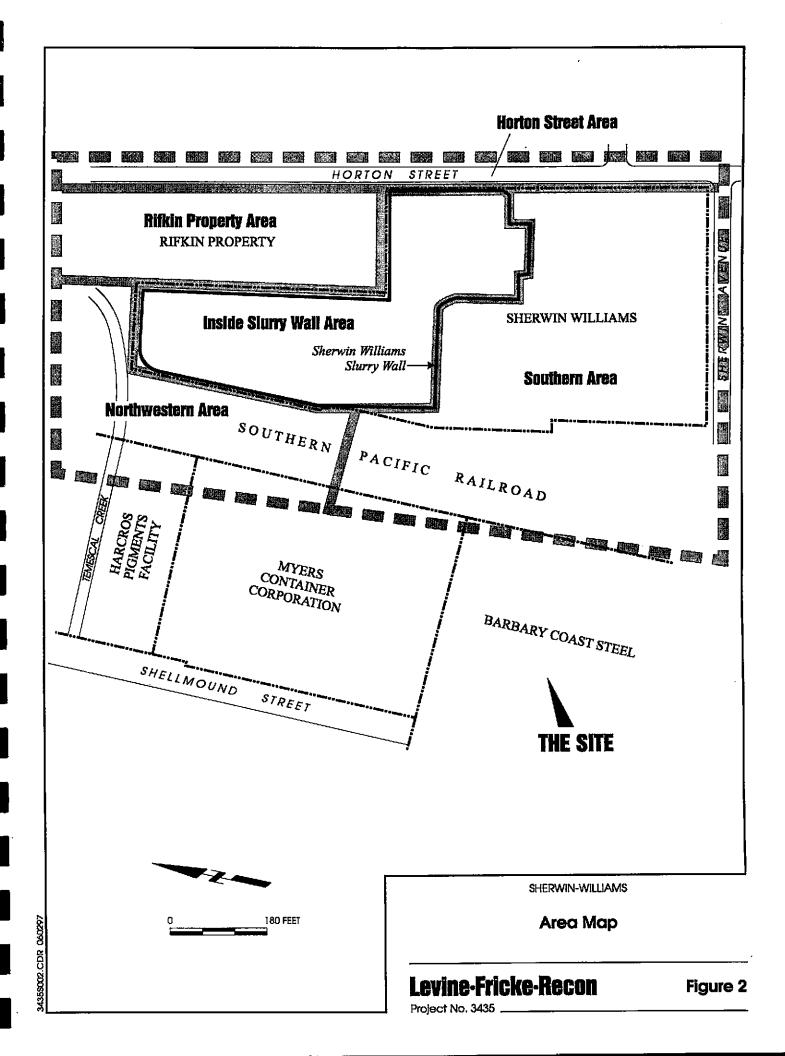
SVOC = semivolatile organic compound

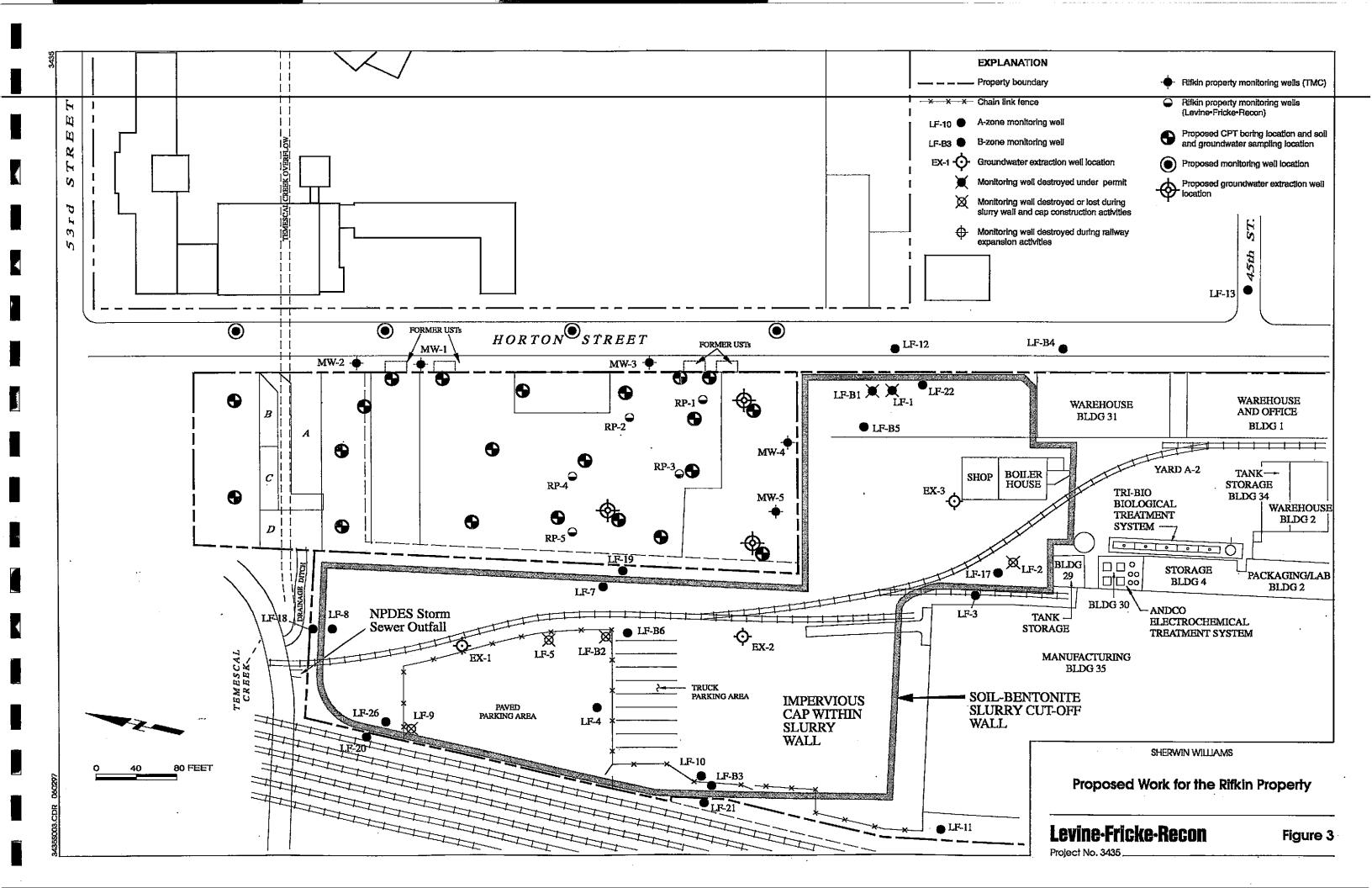
TPHd = total petroleum hydrocarbons for diesel

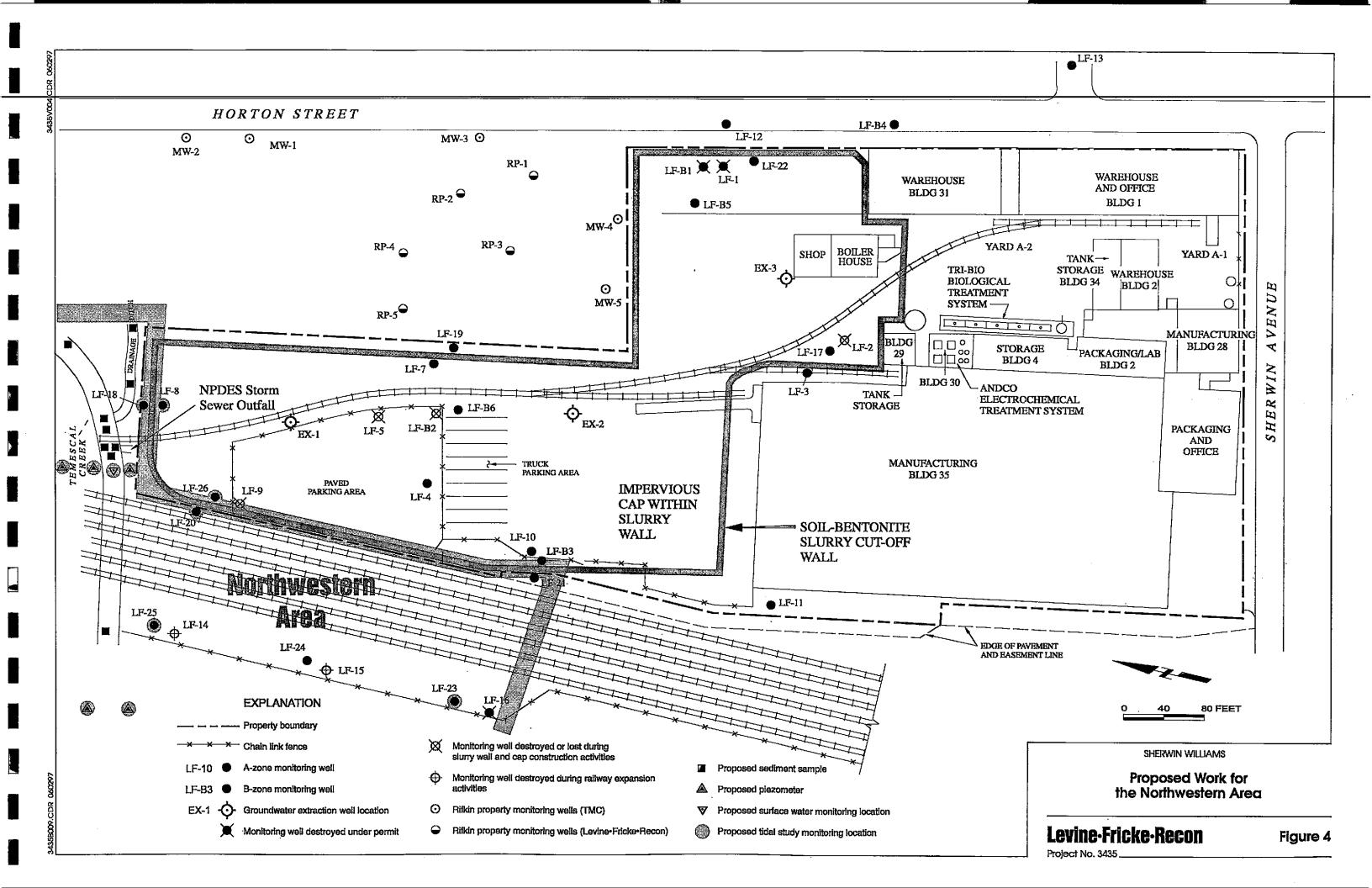
TPHg = total petroleum hydrocarbons for gasoline

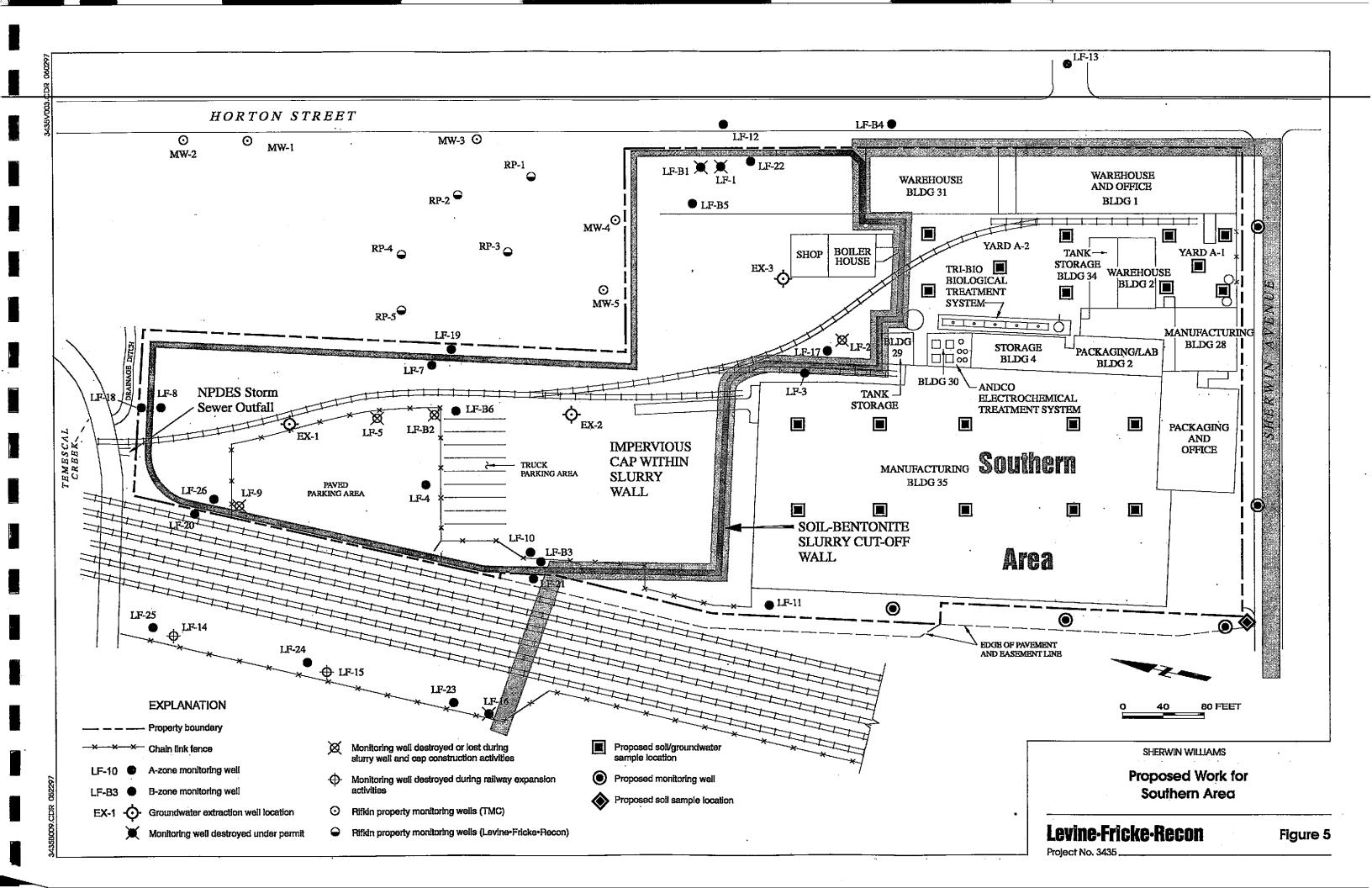
VOC - volatile organic compound

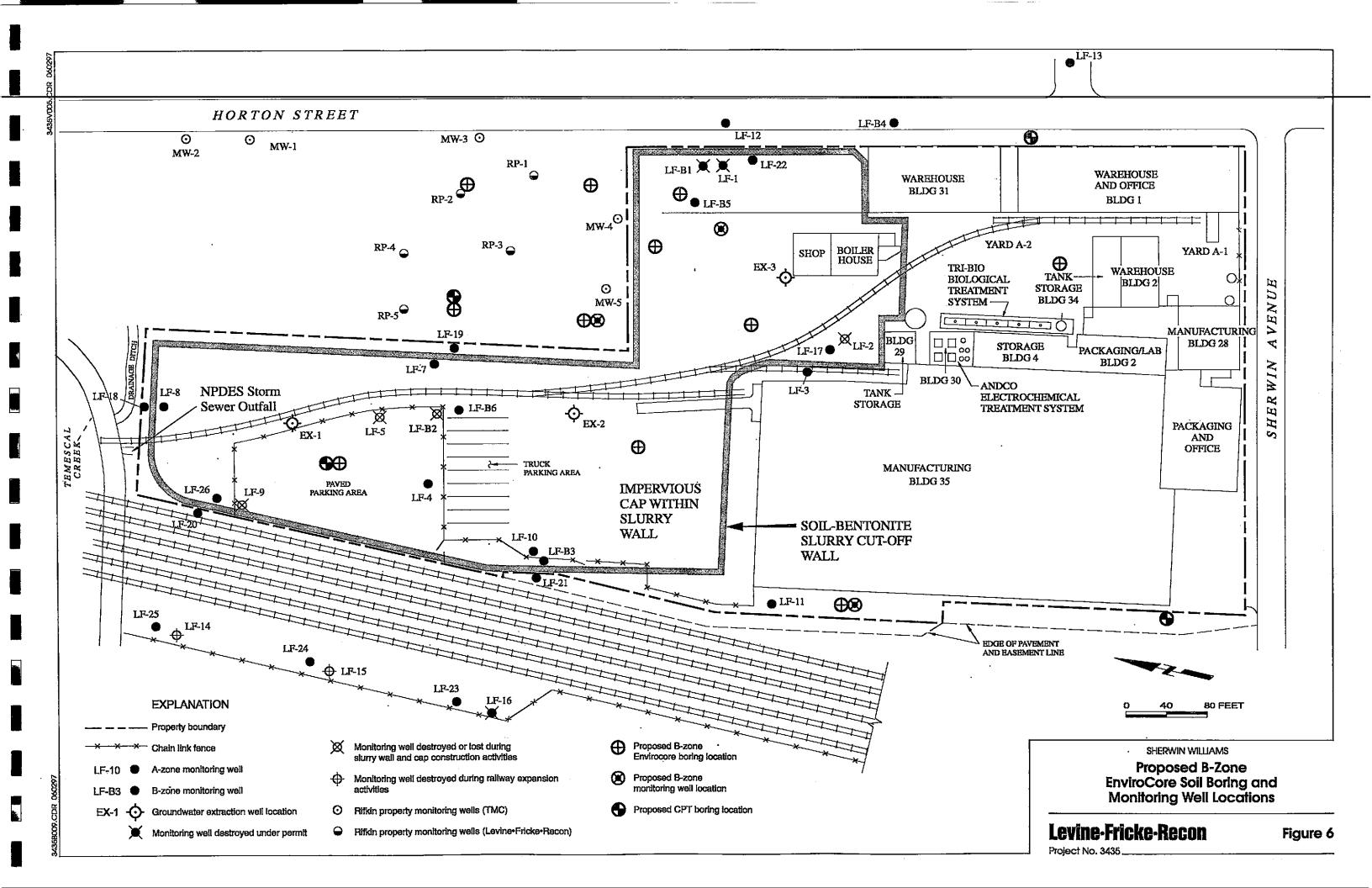


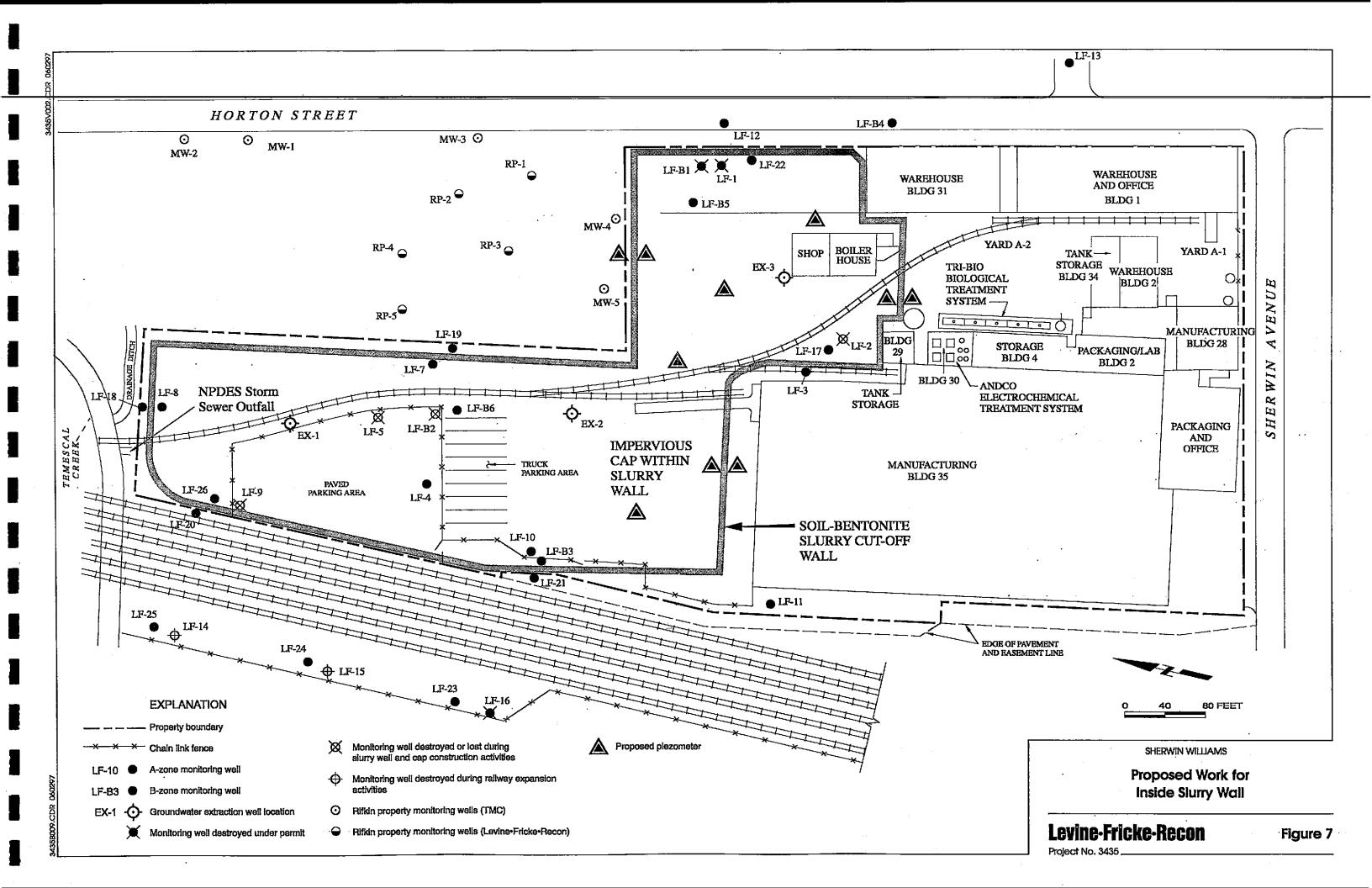












Appendix A

RWQCB, Cleanup and Abatement Order No. 97-047



San Francisco Bay Regional Water Quality Control Board

2101 Webster Street Suite 500 Oakland, CA 94612 (510) 286-1255 FAX (510) 286-1380



Governor

April 7, 1997

File: 2199.9309(SA)

Mr. Larry Mencin The Sherwin-Williams Company 101 Prospect Avenue, N.W. Cleveland, OH 44115

Mr. Frank McHugh The Sherwin-Williams Company 1450 Sherwin Avenue Emeryville, CA 94608

Cleanup And Abatement Order No. 97-047 SUBJECT:

Dear Messrs. Mencin and McHugh:

Enclosed is a copy of the Cleanup and Abatement Order (CAO) No. 97-047, relating to the discharge of pollution to the soil and groundwater at the Sherwin-Williams facility, Emeryville, Alameda County. This discharge is contrary to the California Water Code. The CAO contains certain tasks and submittal deadlines to be met.

If you have any questions regarding the CAO, please contact Sumadhu Arigala of my staff at (510) 286-0434.

Sincerely,

Loretta K. Barsamian **Executive Officer**

Attachment:

Cleanup and Abatement Order No. 97-047

cc w/attacment:

Barbara Cook, DTSC 700 Heinz Avenue, Suite 200 Berkeley, CA 94710-2737

Michael Biddle, City of Emeryville 2200 Powell Street, 12th Floor Emeryville, CA 94608-1806

Tom Dunkelman, US EPA ER Section H-8-3 75 Hawthorne Street San Francisco, CA 94105

Susan Hugo, ACDEH 1131 Harbor Bay Parkway, 2nd Flr. Alameda, CA 94502



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION

CLEANUP AND ABATEMENT ORDER NO. 97-047:

THE SHERWIN-WILLIAMS COMPANY

For the site located at

1450 SHERWIN AVENUE EMERYVILLE ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

- 1. Site Location: The site is located at the corner of Horton Street and Sherwin Avenue (1450 Sherwin Avenue) in Emeryville, Alameda County. The Sherwin-Williams Company (Sherwin-Williams) owns and operates a coatings manufacturing facility at the site. The northern-most site boundary is approximately 10 feet from Temescal creek.
- 2. Site History: Since the early 1900's, Sherwin-Williams has manufactured coating products and lead-arsenate pesticides at the site. The manufacturing of lead-arsenate pesticides ceased in the 1940's. In 1987, the manufacturing of coatings was changed from oil-based products to water based products. This change resulted in the closure and dismantling of an oil storage tank farm and a solvent storage tank farm. Several phases of soil and groundwater investigation were subsequently conducted.
- 3. Named Discharger: Sherwin-Williams is named as the discharger because it owned and operated the facility on the site at the time of the discharge, and currently owns the site.
- 4. Remedial Investigation: Several phases of soil and groundwater investigation were conducted at the site, from 1988 to 1991, to assess the nature and extent of the chemical contamination. The soil and groundwater investigations at the site revealed the presence of metals, Volatile Organic Chemicals (VOCs), Semi-Volatile Organic Chemicals (SVOCs), and total petroleum hydrocarbons in the gasoline and diesel range. The metals detected at the site are primarily arsenic, lead, cadmium, and zinc. The VOCs detected at the site are primarily acetone, benzene, ethylbenzene, toluene, xylene isomers, methyl ethyl ketone, and 2-hexanone. The SVOCs detected at the site are primarily napthalene, 2-methyl napthalene, 2-methyl phenol, 4-methyl phenol, 2,4-dimethyl phenol, phthalates, and a range of tentatively identified straight chain (C-7 to C-35) hydrocarbons. The presence of these constituents in soil and groundwater create or threatens to create a condition of pollution or nuisance.

- 5. Interim Remedial Measures: In November 1994, Sherwin-Williams completed the installation of a soil/ cement-bentonite slurry wall to contain on-site pollution sources and prevent continual migration of polluted groundwater. In September 1995, Sherwin-Williams completed the construction of an environmental cap and a storm-water collection system to prevent vertical migration of chemicals into groundwater due to rain-water infiltration and provide a direct barrier to human exposure and wind- erosion. A groundwater extraction and treatment system was installed to maintain an inward hydraulic gradient and treat the extracted groundwater. The treated groundwater is discharged under the General Waste Discharge Requirements of Order No. 94-087, NPDES permit No. CAG912003.
- 6. Adjacent Sites: The on-site pollution has migrated to adjacent properties. The property at 4525-4563 Horton Street, located immediately north and adjacent to the site, has been significantly impacted by pollution originating from site. Arsenic concentrations up to 12000 ppm and lead concentrations up to 21000 ppm were detected in soil at the west side of Horton Street adjacent to the site. Arsenic concentrations up to 920 ppm and lead concentrations up to 3600 ppm were detected in soil at the east side of Horton Street. The pollution at Horton Street has raised public health concerns that need to be addressed immediately and is required by this Order.
- 7. Basin Plan: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

The potential beneficial uses of groundwater underlying and adjacent to the site include:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply
- 8. Basis for 13304 Order: The discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
- 9. CEQA: This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A PROHIBITIONS

- 1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
- 2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
- 3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

TASKS

- 1. By April 14, 1997, submit a workplan acceptable to the Executive Officer that contains a description and a time schedule for the implementation of tasks and procedures necessary to clean up impacted soils in the vicinity of Horton Street to levels that are protective of the public health, environment, and water quality.
- 2. By May 1, 1997, submit a workplan acceptable to the Executive Officer to investigate the existence of natural and human-made preferential pathways and lateral & vertical conduits for migration of pollution at the site.
- 3. By May 12, 1997, submit a workplan acceptable to the Executive Officer to fully define the extent of the soil and groundwater pollution, outside the existing slurry wall, in the on-site and off-site areas.

Pursuant to Section 13304 of the Water Code, the Discharger is hereby notified that the Regional Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Regional Board to investigate unauthorized discharges of wastes and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. Upon receipt of a billing statement for such costs, the Discharger shall reimburse the Regional Board.

Pursuant to California Water Code sections 13304 and 13350, if a Discharger fails to comply with the provisions of this Order, the Board may schedule a hearing to consider assessing civil monetary penalties and to consider requesting the Attorney General to take appropriate enforcement action against the Discharger, including injunctive and civil monetary remedies.

Loretta K. Barsamian

Executive Officer

Date Ordered

Appendix B

Soil Investigation in the Vicinity of the Southern Rifkin Property, Dated June 2, 1997 Soil Investigation in the Vicinity of the Southern Rifkin Property Emeryville, California

> 3042.00-007 June 2, 1997

Prepared for The Sherwin-Williams Company 101 Prospect Avenue Northwest Cleveland, Ohio 44115

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CERTIFICATION

All information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by a Levine-Fricke-Recon California Professional Engineer.

Mark D. Knox

Principal Engineer

California Professional Engineer (33194)

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1.0 INTRODUCTION

Levine·Fricke·Recon Inc. (LFR), on behalf of The Sherwin-Williams Company ("Sherwin-Williams"), soil investigation report for the vicinity of the southern Rifkin Property in Emeryville, California ("the Site"). The investigation was conducted as outlined in Task 5 of Levine·Fricke·Recon's November 20, 1996 "Work Plan for Additional Soil and Groundwater Investigations, Rifkin Property, 4525 to 4563 Horton Street, Emeryville, California" ("the Work Plan"), and as amended in the letter to the RWQCB dated December 2, 1996.

Analytical results from soil samples collected from 19 borings drilled to depths of 4 to 8 feet below ground surface (bgs) are presented in Tables 1 and 2.

2.0 OBJECTIVE

The soil investigation was conducted to define the extent of chemical migration in the vadose zone soil from the Sherwin-Williams property onto the Rifkin property at the southern Sherwin-Williams/Rifkin property boundary to determine whether or not soil removal is appropriate and, if so, to what extent.

3.0 SOIL SAMPLING

A total of 44 soil samples were collected from 19 soil borings and submitted for chemical analyses. Figures 1 through 4 indicate soil boring locations GP-1 through GP-15, GP-1(B), GP-6(B), GP-9(B), and GP-14(B). The four borings GP-1(B), GP-6(B), GP-9(B), and GP-14(B) were moved from the original boring location where underground concrete was encountered before the desired depth of the boring was reached.

3.1 Methodology

Soil samples were collected on December 5, 1996, from 19 borings at locations illustrated on Figures 1 through 4. LFR retained Gregg Drilling of Martinez to conduct the drilling using a Geoprobe rig. LFR personnel supervised the field work and collected the soil samples. A representative of Erler & Kalinowski, Incorporated, was present during field activities on behalf of Chiron.

Boreholes were advanced hydraulically by driving a 1-½-inch- diameter steel sampling tube lined with plastic tubes to a depth of approximately 8 feet bgs (depth of first encountered groundwater). This sampling system allows soil samples to be collected on a continuous basis from approximately 6 feet bgs to the total depth of each soil boring. Upon removal of each sampler, samples were retained from the desired depth

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interval(s) and preserved by placing Teflon-lined plastic caps over the ends of the plastic tubes. The samples were then stored in a chilled cooler. Each sample was labeled with the borehole identification and depth interval of the sample, time and date of sample collection, analysis requested, and name of the individual who collected the sample.

Soil samples adjacent to those collected for chemical analyses were lithologically described using the Unified Soil Classification System. Lithologic descriptions were recorded in the field on borehole log forms. Lithologic logs for the soil borings are provided in Attachment A.

3.2 Lithology

Nineteen soil borings were completed to a depth of 4 to 8 feet bgs. Lithologic logs of the soil borings are included in Attachment A. Subsurface soils consisted of predominantly silt, silty to clayey sand, and minor gravel. Beneath the concrete floor and underlying aggregate rock base, a clayey to sandy silt was generally encountered with interbedded clayey or gravelly sand approximately 0.5 to 3 feet thick to a depth of 8 feet bgs.

3.3 Analytical Results for Soil Samples

A total of 44 soil samples were collected and submitted to American Environmental Network of Pleasant Hill, a California-certified laboratory, for chemical analyses. The 44 soil samples were analyzed for arsenic, lead, and zinc using EPA Method 6000/7000 series and for pH. Thirty-eight of the samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8240, and 29 of the samples were analyzed for semivolatile organic compounds (SVOCs) using EPA Method 8270.

In addition, most soil samples at or near the same depths for each line of borings along the property boundary were composited. For example, the soil samples collected within 2.5 feet bgs for the borings 3 feet out from the property boundary were composited. The toxicity characteristic leaching procedure (TCLP) for arsenic, lead, zinc, VOCs were analyzed for the composited samples. The TCLP for SVOCs was analyzed for six out of the nine composited samples. These data will provide information for selection of a landfill in the event that soils will have to be excavated from the Rifkin site.

Table 1 presents soil sample analytical results. Table 2 presents the TCLP analytical results and a key indicating the soil samples composited for each TCLP analysis. Figures 1, 2, 3, and 4 present the distribution in soil of the analytical results for inorganic compounds, pH, VOCs, and SVOCs, respectively. Laboratory certificates are provided in Attachment B.

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3.3.1 Inorganics in Soil

Arsenic

Analytical results for soil samples collected during this investigation indicated elevated concentrations of arsenic in 8 of the 44 samples analyzed for arsenic (i.e., arsenic concentrations greater than 20 mg/kg). Of these eight samples, the two highest concentrations of arsenic detected were found in samples collected from boring GP-12 at 2.5 feet bgs and 5.0 feet bgs at concentrations of 20,000 mg/kg and 14,000 mg/kg, respectively. The next highest concentration of arsenic was encountered at or near first encountered groundwater (7.5 feet bgs) in boring GP-8 at a concentration of 1,700 mg/kg. The five remaining samples with elevated concentrations of arsenic were detected in borings GP-2, GP-5, GP-9(B), GP-12, and GP-13. With the exception of the sample collected at GP-13 at a depth of 2.5 feet bgs at a concentration of 33 mg/kg, five of the remaining samples with elevated concentrations of arsenic were collected at or near the first encountered groundwater in each respective boring (7.5 feet bgs) at concentrations ranging from 49 to 480 mg/kg.

The 36 samples with lower concentrations of arsenic contained arsenic (less than 20 mg/kg) that ranged from 1 to 18 mg/kg (Table 1; Figure 1).

Lead

Analytical results for soil samples collected during this investigation indicated elevated concentrations of lead in 11 of the 44 samples analyzed for lead (i.e., lead concentrations greater than 50 mg/kg). Of these 11 samples, the highest concentration of lead detected was found in the sample collected from boring GP-13 at 2.5 feet bgs at a concentration of 3,100 mg/kg. The remaining 10 samples with elevated concentrations of lead were collected from borings GP-2, GP-3, GP-9, GP-12, GP-13, and GP-14(B) at concentrations ranging from 56 to 260 mg/kg. Three of the eleven samples with elevated concentrations of lead were collected at or near the first encountered groundwater in each boring (7.5 feet bgs).

The 33 samples with lower concentrations of lead (less than 50 mg/kg) contained lead that ranged from 4 to 40 mg/kg (Table 1 and Figure 1).

Zinc

Analytical results for soil samples collected during this investigation indicated elevated concentrations of zinc in 25 of the 44 samples analyzed for zinc (i.e., zinc greater than 100 mg/kg). The highest concentrations of zinc were detected in GP-2 at 2.5 feet bgs and GP-13 at 2.5 feet bgs at concentrations of 53,000 and 62,000 mg/kg, respectively. The next nine highest concentrations of zinc detected were found in samples collected from borings GP-2, GP-3, GP-8, GP-12, and GP-13 at concentrations ranging from 1,300 to 3,200 mg/kg. The remaining 14 samples with elevated concentrations of zinc

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were detected in samples collected from borings GP-1(B), GP-2, GP-7, GP-8, GP-9, GP-9(B), GP-11, and GP-12 at concentrations ranging from 140 to 930 mg/kg.

Concentrations of zinc were elevated in samples collected from borings GP-2, GP-3, GP-7, GP-8, GP-9, GP-9(B), GP-11, GP-12, and GP-13. In addition, a sample collected from GP-1(B) at 7.5 feet bgs contained an elevated concentration of zinc.

The 19 samples with lower concentrations of zinc (less than 100 mg/kg) contained zinc that ranged from 39 to 80 mg/kg (Table 1; Figure 1).

3.3.2 pH of Soil

Thirteen of the 44 soil samples analyzed for pH had a pH level below 5.0. These samples were collected from borings GP-2 at 7.5 feet bgs, GP-8 at 5.5 and 7.5 feet bgs, GP-7 at 7.0 feet bgs, GP-8 at 2.5, 5.5, and 7.5 feet bgs, GP-9(B) at 5.0 feet bgs, GP-11 at 2.5 feet bgs, GP-12 at 2.5, 5.0, and 7.5 feet bgs, and GP-13 at 7.5 feet bgs (Table 1; Figure 2).

3.3.3 Volatile Organic Compounds in Soil

Acetone was detected in eight samples. These eight samples were collected from borings GP-4 at 5.5 feet bgs, GP-9 at 2.5 feet bgs, GP-9(B) at 7.5 feet bgs, GP-10 at 5.5 and 7.5 feet bgs, GP-14(B) at 5.0 and 7.5 feet bgs, and GP-15 at 5.0 feet bgs at concentrations ranging from 0.10 to 48.0 mg/kg.

Toluene was detected in the soil samples collected from borings GP-3, GP-4, GP-9, GP-9(B), and GP-10 at concentrations ranging from 0.005 to 140 mg/kg. In addition, toluene was detected in a sample collected from GP-14(B) at 7.5 feet bgs at a concentration of 38.0 mg/kg.

Ethyl-benzene was detected in 10 samples. These 10 samples were collected from borings GP-4 at 2.5 feet bgs, GP-9 at 2.5 feet bgs, GP-9(B) at 5.0 feet bgs, GP-10 at 2.5 feet bgs and 7.5 feet bgs, GP-14(B) at 3.5 and 7.5 feet bgs, and GP-15 at 3.5 feet bgs, 5.0 feet bgs, and 7.5 feet bgs at concentrations ranging from 0.007 to 11.0 mg/kg.

4-Methyl-2-Pentanone was detected in three samples. These three samples were collected from borings GP-4 at 2.5 feet bgs, GP-9 at 2.5 feet bgs, and GP-14(B) at 5.0 feet bgs at concentrations of 8.2, 1.2, and 0.70 mg/kg, respectively (Table 1 and Figure 3).

3.3.4 Semivolatile Organic Compounds in Soil

4-Methyl Phenol was detected in one sample. This compound was detected at a concentration of 0.42 mg/kg in the sample collected from boring GP-15 at 3.5 feet bgs (Table 1; Figure 4).

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3.3.5 TCLP Compounds in Soil

Inorganics

With the exception of the "B" composite sample, arsenic was detected using the TCLP method of analysis in all composite samples analyzed. Concentrations ranged from 0.002 milligrams per liter (mg/l) in the "A" composite sample to 0.14 mg/l in the "G" composite sample.

Lead was detected using the TCLP method of analysis in three of the composite samples analyzed. Concentrations were detected at 0.17, 0.16, and 0.08 mg/l in composite samples "B," "G," and "I," respectively.

Zinc was detected using the TCLP method of analysis in all composite samples analyzed. Concentrations ranged from 0.01 mg/l in the "E" composite sample to 190 mg/l in the "A" composite sample.

Volatile Organic Compounds

Acetone was detected using the TCLP method of analysis in four of the nine composite samples analyzed. Acetone was detected at 1.8, 0.8, 0.92 and 0.6 mg/l in composite samples "A," "B," "C," and "E," respectively.

Toluene was detected using the TCLP method of analysis in the same four composite samples as acetone. Toluene was detected at 0.22, 0.84, 0.21 and 0.03 mg/l in composite samples "A," "B," "C," and "E," respectively.

Total xylenes were detected using the TCLP method of analysis in one of the composite samples analyzed. A xylene concentration of 0.06 mg/l was detected in the composite sample "G."

Semivolatile Organic Compounds

Semivolatile organic compounds were not detected above laboratory detection limits using the TCLP method of analysis.

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Table 1 Chemicals Detected In Soil Samples Rifkin Property, Emeryville, California (Concentrations Reported in milligrams per kilogram (mg/kg))

						Vo	olatile Organi	c Compoun	Volatile Organic Compounds				
Sample	Sample	As	Pb	Zn	"		Ethyl-	Total	Trans-	4-M-2-	4-Methyl		
ID	Date				Acetone	Toluene	Benzene	Xylenes	1,3-DCP	Pent	Phenol		
GP-1-2.5	12/05/96	1.1	9	80	NA	NA	NA	NA	NA	NA	NA		
GP-1(B)-5.0	12/05/96	3.8	11	59	NA	NA	NA	NA	NA	NA	NA		
GP-1(B)-7.5	12/05/96	4.6	32	910	NA	NA	NA.	NA	NA	NA	NA		
GP-2-2.5	12/05/96	7.4	40	53,000	NA	NA	NA	NA	NA	NA	NA		
GP-2-5.0	12/05/96	1	260	2,400	NA	NA	NA	NA.	NA	NA	NA		
GP-2-7.5	12/05/96	49	14	700	NA	NA NA	NA	NA	NA	NA	NA		
GP-3-2.5	12/05/96	10	76	1,800	<48.0	5.9.	< 2.4	<4.8	<2.4	< 24.0	NA		
GP-3-5.5	12/05/96	5.6	110	2,600	< 100	140	< 5.0	< 10.0	< 5.0	< 50.0	NA		
GP-3-7.5	12/05/96	9.6	250	1,300	<49.0	3.0	< 2.4	<4.9	< 2.4	<24.0	NA		
GP-4-2.5	12/05/96	5.5	20	65	<47.0	14.0	0.730	4.3	< .470	8.2	NA		
GP-4-5.5	12/05/96	8	7	54	9.6	0.910	< 0.470	< 0.950	< 0.470	<4.7	NA		
GP-4-7.5	12/05/96	5.9	7	58	<49.0	1.1	< 0.490	< 0.980	< 0.490	<4.9	NA		
GP-5-2.5	12/05/96	5.7	12	45	< 9.6	< 0.480	< 0.480	1,2	< 0.480	<4.8	NA		
GP-5-5.0	12/05/96	6	8	53	< 4.7	< 0.240	< 0.240	0.61	< 0.240	<2.4	NA		
GP-5-7.5	12/05/96	210	6	46	<4.5	< 0.230	< .230	0.580	< 0.230	<2.3	NA		
GP-6-3.5	12/05/96	3.4	12	46	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-6(B)-7.5	12/05/96	1.1	8	39	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-7-2.5	12/05/96	5.0	8	330	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.17		
GP-7-6.0	12/05/96	6.2	7	360	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-7-7.0	12/05/96	11	19	740	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-8-2.5	12/05/96	4.7	23	1,500	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	<1.7		
GP-8-5.5	12/05/96	4.8	8	930	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-8-7.5	12/05/96	1,700	190	650	< 0.500	< 0.030	< 0.030	< 0.050	< 0.030	< 0.300	< 17.0		
GP-9-2.5	12/05/96	11	100	930	1.0	0.780	0.085	0.200	< 0.030	1.2	< 17.0		
GP-9(B)-5.0	12/05/96	3.7	9	560	< 50	37.0	9,3	21.0	<3.0	< 30.0	<33.0		
GP-9(B)-7.5	12/05/96	170	4	140	0.200	0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-10-2.5	12/05/96	3.7	36	68	< 5.0	3.0	0.550	1.4	< 0.300	<3.0	< 0.330		
GP-10-5.5	12/05/96	11	7	39	48.0	1.1	< 0.500	<1.0	< 0.500	< 5.0	< 0.330		
GP-10-7.5	12/05/96	8.6	6	41	19.0	4.3	0.800	2.5	< 0.500	< 5.0	< 0.660		
GP-11-2.5	12/05/96	7.7	7	630	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-11-5.0	12/05/96	5.4	6	700	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-11-7.5	12/05/96	8.6	7	550	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-12-2.5	12/05/96	20,000	68	1,500	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-12-5.0	12/05/96	14,000	12	3,300	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-12-7.5	12/05/96	480	33	410	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-13-2.5	12/05/96	33	3,100	62,000	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	<13.0		
GP-13-5.0	12/05/96	18	160	3,200	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	<3.3		
GP-13-7.5	12/05/96	13	230	3,100	< 0.100	< 0.005	< 0.005	< 0.010	< 0.005	< 0.050	< 0.330		
GP-14(B)-3.5	12/05/96	4.7	56	67	< 0.50	< 0.030	0.050	0.210	< 0.030	< 0.300	< 0.330		
GP-14(B)-5.0	12/05/96	3.5	7	44	9.2	< 0.030	< 0.030	0.130	< 0.030	0.700	< 0.330		
GP-14(B)-7.5	12/05/96	17	6	45	32.0	38.0	11.0	59.0	<1.0	<10.0	< 1.7		
GP-15-3.5	12/05/96	4.4	12	62	< 10	< 0.500	1.4	3.8	< 0.500	< 5.0	0.420		
GP-15-5.0	12/05/96	3.4	7	43	0.10	< 0.005	0.007	< 0.010	< 0.005	< 0.050	< 0.330		
GP-15-7.5	12/05/96	18	5	44	< 5.0	< 0.300	0.300	< 0.500	< 0.300	<3.0	< 0.330		

Data entered by: PRW 1/3/97. Data Proofed by: KAG______. QA/QC by: SXS_______

Analysis performed by American Environmental Network, Pleasant Hill, California.

Arsenic analyzed using EPA Method 7060; Lead and Zinc analyzed by using EPA Method 6010;

Volatile organic compounds analyzed using EPA Method 8240;

Semivolatile organic compounds analyzed using EPA Method 8270.

NA = Not Analyzed

As = Arsenic

SVOCs = Semivolatile Organic Compounds

bgs = below ground surface

Pb = Lead

Zn = Zinc

Trans-1,3-DCP = Trans-1,3-Dichloropropane

 $\hbox{4-M-2-Pent}=\hbox{4-Methyl-2-Pentanone}$

Table 2 Results of TCLP Analysis of Soil Samples Rifkin Property, Emeryville, California

(Concentrations reported in milligrams per liter (mg/l)

		1			Ī			
Sample ID	Sample Date	As	Pb	Zn	Acetone	Toluene	Total Xylenes	SVOCs
"A"	12/5/96	0.002	< 0.04	190	1.8	0.22	< 0.05	NA
"B"	12/5/96	< 0.002	0.17	48	0.8	0.84	< 0.05	NA
"C"	12/5/96	0.12	< 0.04	25	0.92	0.21	< 0.05	NA
"D"	12/5/96	0.007	< 0.04	4.4	< 0.5	< 0.03	< 0.05	ND
"E"	12/5/96	0.003	< 0.04	0.01	0.6	0.03	< 0.05	ND
"F"	12/5/96	0.054	< 0.04	8. <i>7</i>	< 0.5	< 0.03	< 0.05	ND
"G"	12/5/96	0.14	0.16	96	< 0.5	< 0.03	0.06	ND
"H"	12/5/96	0.07	< 0.04	21	< 0.5	< 0.03	< 0.05	ND
" "	12/5/96	0.026	0.08	6	< 0.5	< 0.03	< 0.05	ND_

Notes:

Key to Sample ID:

"A": Composite of soil samples GP-1-2.5, GP-2-2.5, GP-3-2.5, GP-4-2.5, and GP-5-2.5

"B": Composite of soil samples GP-2-5.0, GP-3-5.5, GP-4-5.5, and GP-5-5.0

"C": Composite of soil samples GP-2-7.5, GP-3-7.5, GP-4-7.5, and GP-5-7.5

"D": Composite of soil samples GP-6-3.5, GP-7-2.5, GP-8-2.5, GP-9-2.5, and GP-10-2.5

"E": Composite of soil samples GP-7-6.0, GP-8-5.5, GP-9(B)-5.0, and GP-10-5.5

"F": Composite of soil samples GP-6(B)-7.5, GP-7-7.0, GP-8-7.5, GP-9(B)-7.5, and GP-10-7.5

"G": Composite of soil samples GP-11-2.5, GP-12-2.5, GP-13-2.5, GP-14(B)-3.5, and GP-15-3.5

"H": Composite of soil samples GP-11-5.0, GP-12-5.0, GP-13-5.0, GP-14(8)-5.0, and GP-15-5.0

"I": Composite of soil samples GP-11-7.5, GP-12-7.5, GP-13-7.5, GP-14(B)-7.5, and GP-15-7.5

Data entered by:	PRW	. Data	proofed by:	KAG	. QA/QC by:	SXS

Analysis performed by American Environmental Network, Pleasant Hill, California

NA - Not Analyzed

ND = No compounds analyzed for were detected above laboratory detection limits.

VOCs - Volatile organic compounds

SVOCs - Semivolatile organic compounds

As - Arsenic

Pb - Lead

Zn - Zinc

ATTACHMENT A

LITHOLOGIC LOGS

ATTACHMENT B

LABORATORY CERTIFICATES

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

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LEVINE-FRICKE-RECON 1900 POWELL ST. 12TH FL. EMERYVILLE, CA 94608

ATTN: KENTON GEE

CLIENT PROJ. ID: 3042.95.04 CLIENT PROJ. NAME: RIFKIN PROP. C.O.C. NUMBER: 1001,1002,1003 REPORT DATE: 12/31/96

DATE(S) SAMPLED: 12/05/96

DATE RECEIVED: 12/06/96

AEN WORK ORDER: 9612094

PROJECT SUMMARY:

On December 6, 1996, this laboratory received 48 soil sample(s).

Client requested 38 sample(s) be analyzed for chemical parameters; 10 samples were placed on hold. Portions of nine samples for EPA 8240 were subcontracted to a DOHS certified laboratory; subcontract report will follow at a later date. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larpy Klein

Laboratory Director



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LEVINE-FRICKE-RECON

SAMPLE ID: GP-1-2.5 AEN LAB NO: 9612094-01 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil all management in contra	FD4 004F4	0.1		40/00/00
Soil pH measured in water	EPA 9045A	8.1	S.U.	12/23/96
Lead	EPA 7420	9 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/26/96
Arsenic	EPA 7060	1.1 *	$0.5~\mathrm{mg/kg}$	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	•	Prep Date	12/26/96
Zinc	EPA 6010	80 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-2-2.5 AEN LAB NO: 9612094-02 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.3		S.U.	12/23/96
Lead	EPA 7420	40 *	٠ 3	mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/26/96
Arsenic	EPA 7060	7.4 *	0.5	mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/26/96
Zinc	EPA 6010	53,000 *	1	mg/kg	12/30/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-2-5.0 AEN LAB NO: 9612094-03 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042:95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	5.0		S.U.	12/23/96
Lead .	EPA 7420	260	* 3	mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/26/96
Arsenic	EPA 7060	1.0	* 0.5	mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/26/96
Zinc	EPA 6010	2,400	* 1	mg/kg	12/30/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-2-7.5 AEN LAB NO: 9612094-04 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	3.4	S.U.	12/23/96
Lead	EPA 7420	. 14 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/26/96
Arsenic	EPA 7060	49 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/26/96
Zinc	EPA 6010	700 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-3-2.5 AEN LAB NO: 9612094-05 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	11.8		S.U.	12/23/96
Lead	EPA 7420	76	* 3	mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/26/96
Arsenic	EPA 7060	10	* 0.5	mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/26/96
Zinc	EPA 6010	1,800	* 1	mg/kg	12/27/96

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-3-5.5 AEN LAB NO: 9612094-06 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	4.2	S.U.	12/23/96
Lead	EPA 7420	110 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/26/96
Arsenic	EPA 7060	5.6 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/26/96
Zinc	EPA 6010	2,600 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-3-7.5 AEN LAB NO: 9612094-07 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	3.5	S	.U.	12/23/96
Lead	EPA 7420	250 *	. 3 m	g/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	P	rep Date	12/26/96
Arsenic	EPA 7060	9.6 *	0.5 mg	g/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-	Pi	rep Date	12/26/96
Zinc	EPA 6010	1,300 *	1 mg	g/kg	12/27/96

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-4-2.5 AEN LAB NO: 9612094-08 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.8		S.U.	12/23/96
Lead	EPA 7420	20	* 3	mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/26/96
Arsenic	EPA 7060	5.5	* 0.5	mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/26/96
Zinc	EPA 6010	65	* 1	mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-4-5.5 AEN LAB NO: 9612094-09 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.0	S.U.	12/23/96
Lead	EPA 7420	7 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	• -	Prep Date	12/26/96
Arsenic	EPA 7060	8.0 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/26/96
Zinc	EPA 6010	54 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-4-7.5 AEN LAB NO: 9612094-10 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	5.9	S.U.	12/23/96
Lead	EPA 7420	7 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/26/96
Arsenic	EPA 7060	5.9 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	. -	Prep Date	12/26/96
Zinc	EPA 6010	58 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-5-2.5 AEN LAB NO: 9612094-11 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTI LIMIT	NG UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.3		S.U.	12/23/96
Lead	EPA 7420	12	*	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/26/96
Arsenic	EPA 7060	5.7	* 0.	5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/26/96
Zinc	EPA 6010	45	*	l mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-5-5.0 AEN LAB NO: 9612094-12 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.7	S.U.	12/23/96
Lead	EPA 7420	8 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	• -	Prep Date	12/26/96
Arsenic	EPA 7060	6.0 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/26/96
Zinc	EPA 6010	53 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-5-7.5 AEN LAB NO: 9612094-13 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.4	S.U.	12/23/96
Lead	EPA 7420	6 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/26/96
Arsenic	EPA 7060	210 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	~	Prep Date	12/26/96
Zinc	EPA 6010	46 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-6-3.5 AEN LAB NO: 9612094-14 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.2	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/08/96
Arsenic	EPA 7060	3.4 *	0.5 mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/08/96
Lead	EPA 6010	12 *	1 mg/kg	12/11/96
Zinc	EPA 6010	46 *	1 mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5		100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg 5 ug/kg	12/10/96 12/10/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-6-3.5 AEN LAB NO: 9612094-14 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	ND		ug/kg	12/10/96
1.1.1-Trichloroethane	71-55-6	ND	5	ug/kg	12/10/96
1.1.2-Trichloroethane	79-00-5	ND	5	ug/kg	12/10/96
Trichloroethene	79-01-6	ND	5	ug/kg	12/10/96
Vinyl Acetate Vinyl Chloride	108-05-4 75-01-4	ND ND	50	ug/kg	12/10/96
Xylenes Total	1330-20-7	ND ND		ug/kg ug/kg	12/10/96 12/10/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330	ug/kg	12/13/96
Anthracene	120-12-7	ND	330	ug/kg	12/13/96
Benzidine	92-87-5	ND		ug/kg	12/13/96
Benzoic Acid Benzo(a)anthracene	65-85-0	ND	1600	ug/kg	12/13/96
Benzo(b)fluoranthene	56-55 - 3 205-99 - 2	ND ND	330 330	ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND ND	330 330	ug/kg ug/kg	12/13/96 12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330	ug/kg ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	330	ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	660	ug/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330	ug/kg	12/13/96
Bis(2-choroethy1) Ether	111-44-4	ND	330	ug/kg	12/13/96
Bis(2-chloroisopropyl) Ethe	r 108-60-1	ND	330	ug/kg	12/13/96
Bis(2-ethylhexyl) Phthalate		ND	330	ug/kg	12/13/96
4-Bromophenyl Phenyl Ether Butylbenzyl Phthalate	101-55-3	ND	330	ug/kg	12/13/96
4-Chloroaniline	85-68-7 106-47-8	ND ND	330 660	ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND ND	330	ug/kg ug/kg	12/13/96 12/13/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	330	ug/kg	12/13/96
Chrysene	218-01-9	ND	330	ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330	ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74 - 2	ND		ug/kg	12/13/96
1.2-Dichlorobenzene	95-50-1	ND	330	ug/kg	12/13/96
1.3-Dichlorobenzene	541-73-1	ND	330	ug/kg	12/13/96
1,4-Dichlorobenzene	106-46-7	ND	330	ug/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND	660	ug/kg	12/13/96
Diethyl Phthalate Dimethyl Phthalate	84-66-2	ND	330	ug/kg	12/13/96
2.4-Dinitrotoluene	131-11-3 121-14-2	ND ND		ug/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND ND		ug/kg ug/kg	12/13/96 12/13/96
2,0 0 million ocordene	000-20-2	NU	330	ug/kg '	14/13/90

LEVINE-FRICKE-RECON

SAMPLE ID: GP-6-3.5 AEN LAB NO: 9612094-14 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 **REPORT DATE: 12/31/96**

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 u	a/ka	12/13/96
Fluoranthene	206-44-0	ND	330 u	g/kg	12/13/96
Fluorene	86-73-7	ND	330 u	g/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 u	g/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ud	g/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug	g/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug	g/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug	g/kg	12/13/96
Isophorone	78-59-1	ND	330 ug	g/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 u	g/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug	g/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug	g/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug	a/ka	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug	g/kg	12/13/96
Nitrobenzene	9 8- 95-3	ND	330 ug	i/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug	a/ka	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug	g/kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug	g/kg	12/13/96
Pyrene	129-00-0	· ND	330 u	a/ka	12/13/96
1.2.4-Trichlorobenzene	120-82-1	ND	330 ug	a/ka	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug	q/kq	12/13/96
2-Chlorophenol	95-57-8	ND	330 u	g/kg	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 u	g/kg	12/13/96
2,4-Dimethylphenol	105-67-9	ND	330 u	g/kg	12/13/9
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600 u	g/kg	12/13/9
2,4-Dinitrophenol	51-28-5	ND	1600 u	g/kg	12/13/9
2-Methylphenol	95-48-7	ND	330 u	g/kg	12/13/9
4-Methylphenol	106-44-5	ND		g/kg	12/13/9
2-Nitrophenol	88-75-5	ND	330 u		12/13/9
4-Nitrophenol	100-02-7	ND	1600 u	g/kg	12/13/9
Pentachlorophenol	87-86-5	ND	1600 u	g/kg	12/13/9
Phenol	108-95-2	ND	330 u	g/kg	12/13/9
2,4,5-Trichlorophenol	95-95-4	ND	330 u	īg/kg	12/13/9
2.4.6-Trichlorophenol	88-06-2	ND	330 u	ığ/kğ	12/13/9

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-2.5 AEN LAB NO: 9612094-15 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.2	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/08/96
Arsenic	EPA 7060	5.0 *	0.5 mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/08/96
Lead	EPA 6010	8 *	1 mg/kg	12/11/96
Zinc	EPA 6010	330 *	1 mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloroethene trans-1.3-Dichloropropene trans-1.3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg 5 ug/kg	12/10/96 12/10/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-2.5 AEN LAB NO: 9612094-15 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

Xylenes Total 1330-20-7 ND 10 ug #Extraction for BNAs EPA 3550 - Example Parameter Semi-Volatile Organics EPA 8270 Acenaphthene 83-32-9 ND 1700 ug Acenaphthylene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(x)fluoranthene 207-08-9 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	j/kg j/kg	12/10/96 12/10/96
1.1.1-Trichloroethane 71-55-6 ND 5 ug 1.1.2-Trichloroethane 79-00-5 ND 5 ug Trichloroethene 79-01-6 ND 5 ug Vinyl Acetate 108-05-4 ND 50 ug Vinyl Chloride 75-01-4 ND 10 ug Xylenes Total 1330-20-7 ND 10 ug *Extraction for BNAs EPA 8270 *** *** Acenaphthene 83-32-9 ND 1700 ug Acenaphthene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	j/kg j/kg	
1.1.2-Trichloroethane 79-00-5 ND 5 uc Trichloroethene 79-01-6 ND 5 uc Vinyl Acetate 108-05-4 ND 50 uc Vinyl Chloride 75-01-4 ND 10 uc Xylenes Total 1330-20-7 ND 10 uc #Extraction for BNAs EPA 3550 - Ex Semi-Volatile Organics EPA 8270 - - Ex Acenaphthene 83-32-9 ND 1700 uc - Acenaphthylene 208-96-8 ND 1700 uc - Anthracene 120-12-7 ND 1700 uc - Benzidine 92-87-5 ND 8000 uc - Benzoic Acid 65-85-0 ND 1700 uc - Benzo(a)anthracene 56-55-3 ND 1700 uc - Benzo(b)fluoranthene 205-99-2 ND 1700 uc - Benzo(c)fluoranthene 207-08-9 ND 1700 uc - Benzo(a)pyrene 50-32-8 ND 1700 uc -	ı/kg	
Trichloroethene 79-01-6 ND 5 up Vinyl Acetate 108-05-4 ND 50 up Vinyl Chloride 75-01-4 ND 10 up Xylenes Total 1330-20-7 ND 10 up Extraction for BNAs EPA 3550 - Ex Semi-Volatile Organics EPA 8270 Acenaphthene 83-32-9 ND 1700 up Acenaphthylene 208-96-8 ND 1700 up Anthracene 120-12-7 ND 1700 up Benzidine 92-87-5 ND 8000 up Benzoic Acid 65-85-0 ND 8000 up Benzoic Acid 65-85-0 ND 8000 up Benzo(a)anthracene 56-55-3 ND 1700 up Benzo(b)fluoranthene 205-99-2 ND 1700 up Benzo(b)fluoranthene 207-08-9 ND 1700 up Benzo(a)pyrene 50-32-8 ND 1700 up Benzo(a)pyrene 50-32-8 ND 1700 up Benzo(a)pyrene 50-32-8		12/10/96
Vinyl Acetate 108-05-4 ND 50 us Vinyl Chloride 75-01-4 ND 10 us Xylenes Total 1330-20-7 ND 10 us #Extraction for BNAs EPA 3550 - EX Semi-Volatile Organics EPA 8270 - - EX Acenaphthene 83-32-9 ND 1700 us 1700 us Acenaphthylene 208-96-8 ND 1700 us 1700 us Anthracene 120-12-7 ND 1700 us 1700 us Benzoic Acid 65-85-0 ND 8000 us 1800 us 1800 us Benzo(a)anthracene 56-55-3 ND 1700 us 1700 us 1700 us Benzo(k)fluoranthene 205-99-2 ND 1700 us 1700 us 1700 us Benzo(a)pyrene 50-32-8 ND 1700 us 1700 us 1700 us	ı/kā	12/10/96
Vinyl Chloride 75-01-4 ND 10 ug Xylenes Total 1330-20-7 ND 10 ug #Extraction for BNAs EPA 3550 - Example Semi-Volatile Organics EPA 8270 -	ı/kg	12/10/96
Xylenes Total 1330-20-7 ND 10 ug #Extraction for BNAs EPA 3550 - Example 10 ug Semi-Volatile Organics EPA 8270 Acenaphthene 83-32-9 ND 1700 ug Acenaphthylene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(a)pyrene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	j/kg	12/10/96
Semi-Volatile Organics EPA 8270 Acenaphthene 83-32-9 ND 1700 ug Acenaphthylene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	/kg	12/10/96
Acenaphthene 83-32-9 ND 1700 ug Acenaphthylene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	trn Date	12/09/96
Acenaphthene 83-32-9 ND 1700 ug Acenaphthylene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug		
Acenaphthylene 208-96-8 ND 1700 ug Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	ı/kg	12/12/96
Anthracene 120-12-7 ND 1700 ug Benzidine 92-87-5 ND 8000 ug Benzoic Acid 65-85-0 ND 8000 ug Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug		12/12/96
Benzoic Acid 65-85-0 ND 8000 uc Benzo(a)anthracene 56-55-3 ND 1700 uc Benzo(b)fluoranthene 205-99-2 ND 1700 uc Benzo(k)fluoranthene 207-08-9 ND 1700 uc Benzo(g,h,i)perylene 191-24-2 ND 1700 uc Benzo(a)pyrene 50-32-8 ND 1700 uc		12/12/96
Benzo(a)anthracene 56-55-3 ND 1700 ug Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug	/kg	12/12/96
Benzo(b)fluoranthene 205-99-2 ND 1700 ug Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug		12/12/96
Benzo(k)fluoranthene 207-08-9 ND 1700 ug Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug		12/12/96
Benzo(g,h,i)perylene 191-24-2 ND 1700 ug Benzo(a)pyrene 50-32-8 ND 1700 ug		12/12/96
Benzo(a)pyrene 50-32-8 ND 1700 ug		12/12/96
Benzo(a)pyrene 50-32-8 ND 1/00 uc		12/12/96
Qonzy Alcohol		12/12/96
Benzyl Alcohol 100-51-6 ND 3300 ug		12/12/96
Bis(2-chloroethoxy)methane 111-91-1 ND 1700 ug		12/12/96
Bis(2-choroethyl) Ether 111-44-4 ND 1700 up		12/12/96
Bis(2-chloroisopropyl) Ether 108-60-1 ND 1700 us		12/12/96
Bis(2-ethylhexyl) Phthalate 117-81-7 ND 1700 up		12/12/96
4-Bromophenyl Phenyl Ether 101-55-3 ND 1700 u		12/12/96
Butylbenzyl Phthalate 85-68-7 ND 1700 u		12/12/96
4-Chloroaniline 106-47-8 ND 3300 u		12/12/96
2-Chloronaphthalene 91-58-7 ND 1700 u		12/12/96
4-Chlorophenyl Phenyl Ether 7005-72-3 ND 1700 u		12/12/96
Chrysene 218-01-9 ND 1700 u	J/Kg	12/12/96
Dibenzo(a,h)anthracene 53-70-3 ND 1700 u		12/12/96
Dibenzofuran 132-64-9 ND 1700 u		12/12/96
Di-n-butyl Phthalate 84-74-2 ND 1700 u		12/12/96
1.2-Dichlorobenzene 95-50-1 ND 1700 u		12/12/96 12/12/96
1,3-Dichlorobenzene 541-73-1 ND 1700 u		12/12/96
1,4-Dichlorobenzene 106-46-7 ND 1700 u 3,3'-Dichlorobenzidine 91-94-1 ND 3300 u		12/12/96
		12/12/96
Diethyl Phthalate 84-66-2 ND 1700 u Dimethyl Phthalate 131-11-3 ND 1700 u		12/12/96
Dimethyl Phthalate 131-11-3 ND 1700 u 2.4-Dinitrotoluene 121-14-2 ND 1700 u		12/12/96
2.6-Dinitrotoluene 121-14-2 ND 1700 to 2.6-Dinitrotoluene 606-20-2 ND 1700 to 2.6-Dinitrotoluene	YA NY	17 / 17 / 71

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-2.5 AEN LAB NO: 9612094-15 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UN	DATE IITS ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	1700 ug/kg	12/12/96
Fluoranthene	206-44-0	ND	1700 ug/kg	12/12/96
Fluorene	86-73-7	ND	1700 ug/kg	12/12/96
Hexachlorobenzene	118-74-1	ND	1700 ug/kg	
Hexachlorobutadiene	87-68-3	ND	1700 ug/kg	12/12/96
Hexachlorocyclopentadiene	77-47-4	ND	1700 ug/kg	12/12/96
Hexachloroethane	67-72-1	ND	1700 ug/kg	12/12/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	1700 ug/kg	12/12/96
Isophorone	78-59-1	ND	1700 ug/kg	12/12/96
2-Methylnaphthalene	91-57-6	ND	1700 ug/kg	12/12/96
Naphthalene	91-20-3	ND	1700 ug/kg	12/12/96
2-Nitroaniline	88-74-4	ND	8000 ug/kg	12/12/96
3-Nitroaniline	99-09-2	ND	8000 ug/kg	12/12/96
4-Nitroaniline	100-01-6	ND	8000 ug/kg	12/12/96
Nitrobenzene	98-95-3	ND	1700 ug/kg	12/12/96
N-Nitrosodiphenylamine	86-30-6	ND	1700 ug/kg	12/12/96
N-Nitrosodi-n-propylamine	621-64-7	ND	1700 ug/kg	12/12/96
Phenanthrene	85-01-8	ND	1700 ug/kg	12/12/96
Pyrene	129-00-0	ND	1700 ug/kg	12/12/96
1,2,4-Trichlorobenzene	120-82-1	ND	1700 ug/kg	12/12/96
4-Chloro-3-methylphenol	59-50-7	ND	1700 ug/kg	12/12/96
2-Chlorophenol	95-57-8	ND -	1700 ug/kg	12/12/96
2.4-Dichlorophenol	120-83-2	ND	1700 ug/kg	12/12/96
2,4-Dimethylphenol	105-67-9	ND	1700 ug/kg	12/12/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	8000 ug/kg	12/12/96
2.4-Dinitrophenol	51-28-5	ND	8000 ug/kg	12/12/96
2-Methylphenol	95-48-7	ND	1700 ug/kg	12/12/96
4-Methylphenol	106-44-5	ND	1700 ug/kg	
2-Nitrophenol	88-75-5	ND	1700 ug/kg	
4-Nitrophenol	100-02-7	ND	8000 ug/kg	12/12/96
Pentachlorophenol	87-86-5	. ND	8000 ug/kg	12/12/96
Pheno1 .	108-95-2	ND	1700 ug/kg	12/12/96
2.4.5-Trichlorophenol	95-95-4	ND	1700 ug/kg	12/12/96
2,4,6-Trichlorophenol	88-06-2	ND	1700 ug/kg	12/12/96

RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-6.0 AEN LAB NO: 9612094-16 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	7.2		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	_		Prep Date	12/08/96
Arsenic	EPA 7060	6.2 *	0.5	mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/08/96
Lead	EPA 6010	7 *	1	mg/kg	12/11/96
Zinc	EPA 6010	360 *	1	mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloropropene trans-1.3-Dichloropropene trans-1.3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		5550 100 10550 10555555555550 5050 5050	ug/kg ug/kg ug/kg ug/kg	12/10/96 12/10/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-6.0 AEN LAB NO: 9612094-16 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5 11	g/kg	12/10/96
1.1.1-Trichloroethane	71-55-6	ND		g/kg g/kg	12/10/96
1,1,2-Trichloroethane	79-00-5	ND		g/kg g/kg	12/10/96
Trichloroethene	79-01-6	ND	5 u	g/kg	12/10/96
Vinyl Acetate	108-05-4	ND	50 u	g/kg n/ka	12/10/96
Vinyl Chloride	75-01-4	ND	10 ug	g/kg g/ka	12/10/96
Xylenes Total	1330-20-7	ND	10 ug	g/kg	12/10/96
#Extraction for BNAs	EPA 3550	-	Ex	xtrn Date	12/09/96
Semi-Volatile Organics	EPA 8270			•	
Acenaphthene	83-32-9	ND	330 ug	ı/ka	12/13/96
Acenaphthylene	208-96-8	ND	330 ug	3/ N9 1/ka	12/13/96
Anthracene	120-12-7	ND	330 ug	i/ka	12/13/96
Benzidine	92-87-5	ND	1600 ug	i/ka	12/13/96
Benzoic Acid	65-85-0	ND	1600 ug	i/ka	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 ug	i/ka	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 ug	i/ka	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug	ı/ka	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 ug	i/ka	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 ug	i/ka	12/13/96
Benzyl Alcohol	100-51-6	ND	660 ug	i/ka	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330 ug	i/ka	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 ug	i/kg	12/13/96
Bis(2-chloroisopropyl) Ethe	r 108-60-1	ND	330 ug	i/ka	12/13/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	330 ug	i/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330 ug	á/kď	12/13/96
Butylbenzyl Phthalate	85 - 68-7	ND	330 u	i/kg	12/13/96
4-Chloroaniline	106-47-8	ND	660 ug	á/kď	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 ug	a/kď	12/13/96
4-Chlorophenyl Phenyl Ether		ND	330 u	j/kg	12/13/96
Chrysene	218-01-9	ND	330 u	q/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 u	g/kg	12/13/96
Dibenzofuran	132-64-9	ND	330 u	g/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 u	g/kg	12/13/96
1.2-Dichlorobenzene	95-50-1	ND	330 u	g/kg	12/13/96
1.3-Dichlorobenzene	541-73-1	ND	330 u	g/kg	12/13/96
1.4-Dichlorobenzene	106 - 46-7	ND	330 u	g/kg	12/13/96
3.3'-Dichlorobenzidine	91-94-1	ND	660 u	g/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	330 u	g/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	330 u	g/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND	330 u	g/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330 u	a/ka	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-6.0 AEN LAB NO: 9612094-16 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 **REPORT DATE: 12/31/96**

WALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 u	ıa/ka	12/13/96
Fluoranthene	206-44-0	ND	330 u		12/13/96
Fluorene	86-73-7	ND	330 u	a/ka	12/13/96
Hexach]orobenzene	118-74-1	ND	330 u	a/ka	12/13/96
Hexach]orobutadiene	87-68-3	ND	330 u	a/ka	12/13/96
Hexachlorocyclopentadiene	77 -47-4	ND	330 u	a/ka	12/13/96
Hexachloroethane	67-72-1	ND	330 u	a/ka	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 u		12/13/96
Isophorone	78-59 - 1	ND	330 u	a/ka	12/13/96
2-Methylnaphthalene	91-57 - 6	ND	330 u		12/13/96
Naphthalene	91-20-3	ND	330 ü	a/ka	12/13/96
2-Nitroaniline	88-74-4	ND	1600 u	a/ka	12/13/96
3-Nitroaniline	99-09-2	ND	1600 u	a/ka	12/13/96
4-Nitroaniline	100-01-6	ND	1600 u	a/ka	12/13/96
Nitrobenzene	98-95-3	ND	330 u	g/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 u		12/13/96
N-Nitrosodi-n-propylamine	621 -64- 7	ND	330 u		12/13/96
Phenanthrene	85-01-8	ND	330 u		12/13/96
Pyrene	129-00-0	ND	330 u	g/kg	12/13/96
1.2,4-Trichlorobenzene	120-82 - 1	ND	330 u	g/kg	12/13/96
4-Chloro-3-methylphenol	59 - 50-7	ND	330 u	g/kg	12/13/96
2-Chlorophenol	95-57-8	ND	330 u	g/kg	12/13/96
2.4-Dichlorophenol	120-83-2	ND	330 u		12/13/96
2,4-Dimethylphenol	105-67-9	ND	330 u	g/kg	12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 u	g/kg	12/13/96
2.4-Dinitrophenol	51-28-5	ND	1600 u	g/kg	12/13/9
2-Methylphenol	95-48 - 7	ND	330 u	g/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 u	g/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 u	g/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600 u	g/kg	12/13/96
Pentachlorophenol	87-86-5	ND	1600 u	g/kg	12/13/90
Pheno1	108-95-2	ND	330 u	g/kg	12/13/90
2.4.5-Trichlorophenol	95-95-4	ND	330 u	g/kg	12/13/9
2,4,6-Trichlorophenol	88-06-2	ND	330 u	ıg/kg	12/13/9

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-7.0 AEN LAB NO: 9612094-17 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	4.1		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/08/96
Arsenic	EPA 7060	11 *	0.5	mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	_		Prep Date	12/08/96
Lead	EPA 6010	19 *	1	mg/kg	12/11/96
Zinc	EPA 6010	740 *	1	mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1,2-Dichloropropane cis-1.3-Dichloropropene trans-1.3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2.2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		5550 100 10550 105555555555555555555555	ug/kg	12/10/96 12/10/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-7.0 AEN LAB NO: 9612094-17 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	ND	5	ug/kg	12/10/96
1.1.1-Trichloroethane	71-55-6	ND		ug/kg	12/10/96
1,1,2-Trichloroethane	79-00-5	ND	5 5 5	ug/kg	12/10/96
Trichloroethene	79-01-6	ND		ug/kg	12/10/96
Vinyl Acetate	108-05-4	ND	50	ug/kg	12/10/96
Vinyl Ch <u>l</u> oride	75-01-4	ND	10	ug/kg	12/10/96
Xylenes Total	1330-20-7	ND	10	ug/kg	12/10/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/12/96
Acenaphthylene	208-96-8	ND	330	ug/kg	12/12/96
Anthracene	120-12-7	ND	330	ug/kg	12/12/96
Benzidine	92-87-5	ND	1600	ug/kg	12/12/96
Benzoic Acid	65- 85-0	ND	1600	ug/kg	12/12/96
Benzo(a)anthracene	56-55-3	ND	330	ug/kg	12/12/96
Benzo(b)fluoranthene	205-99-2	ND	330	ug/kg	12/12/96
Benzo(k)fluoranthene	207-08-9	ND	330	ug/kg	12/12/96
Benzo(g,h,i)perylene	191-24-2	ND	330	ug/kg	12/12/96
Benzo(a)pyrene	50-32-8	ND	330	ug/kg	12/12/96
Benzyl Alcohol Bis(2-chloroethoxy)methane	100-51-6 111-91-1	ND ND		ug/kg	12/12/96 12/12/96
Bis(2-choroethyl) Ether	111-91-1	ND ND	33U 330	ug/kg ug/kg	12/12/96
Bis(2-chloroisopropyl) Eth		ND		ug/kg ug/kg	12/12/96
Bis(2-ethylhexyl) Phthalat		ND	330	ug/kg	12/12/96
4-Bromophenyl Phenyl Ether		ND	330	ug/kg	12/12/90
Butylbenzyl Phthalate	85-68-7	ND	330	ug/kg	12/12/90
4-Chloroaniline	106-47-8	ND		ug/kg	12/12/9
2-Chloronaphthalene	91-58-7	ND		ug/kg	12/12/9
4-Chlorophenyl Phenyl Ethe		ND	330	ug/kg	12/12/9
Chrysene	218-01-9	ND	330	ug/kg	12/12/9
Dibenzo(a.h)anthracene	53-70-3	ND	330	ug/kg	12/12/9
Dibenzofuran	132-64-9	ND		ug/kg	12/12/9
Di-n-butyl Phthalate	84-74-2	ND		ug/kg	12/12/9
1.2-Dichlorobenzene	95-50-1	ND		ug/kg	12/12/9
1,3-Dichlorobenzene	541-73-1	ND		ug/kg	12/12/9
1,4-Dichlorobenzene	106-46-7	ND		ug/kg	12/12/9
3,3'-Dichlorobenzidine	91-94-1	ND	660	ug/kg	12/12/9
Diethyl Phthalate	84-66-2	ND	330	ug/kg	12/12/9
Dimethyl Phthalate	131-11-3	ND		ug/kg	12/12/9
2.4-Dinitrotoluene	121-14-2	ND	330	ug/kg	12/12/9
2.6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/12/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-7-7.0 AEN LAB NO: 9612094-17 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	330 ug	/kg	12/12/96
Fluoranthene	206-44-0	ND	330 ug	/kg	12/12/96
Fluorene	86-73-7	ND	330 ug	/kg	12/12/96
Hexachlorobenzene	118-74- 1	ND	330 ug	i/kg	12/12/96
Hexachlorobutadiene	87-68-3	ND	330 ug	i/kg	12/12/96
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330 ug	/kg	12/12/96
Hexachloroethane	67-72-1	ND	330 ug	/kď	12/12/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 uğ	/kď	12/12/96
Isophorone	78-59-1	ND	330 ug	/ka	12/12/96
2-Methylnaphthalene	91-57-6	ND	330 ug	/kg	12/12/96
Naphthalene	91-20-3	ND	330 ug	/kg	12/12/96
2-Nitroaniline	88-74-4	ND	1600 ug		12/12/96
3-Nitroaniline	99-09-2	ND	1600 ug	/ka	12/12/96
4-Nitroaniline	100-01-6	ND	1600 ug	/kg	12/12/96
Nitrobenzene	98-95-3	ND	330 ug	/kg	12/12/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug	/ka	12/12/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug	/ka	12/12/96
Phenanthrene	85-01-8	ND	330 ug	/ka	12/12/96
Pyrene	129-00-0	ND	330 ug		12/12/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug		12/12/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug	/ka	12/12/96
2-Chlorophenol	95-57-8	ND	330 ug	/ka	12/12/96
2,4-Dichlorophenol	120-83-2	ND	330 ug	/kg	12/12/96
2.4-Dimethylphenol	105-67-9	ND	330 ug	/ka	12/12/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug	/ka	12/12/96
2,4-Dinitrophenol	51-28-5	ND	1600 ug	/ka	12/12/96
2-Methylphenol	95-48-7	ND	330 ug		12/12/96
4-Methylphenol	106-44-5	ND	330 ug	i/ka	12/12/96
2-Nitrophenol	88-75-5	ND	330 ug	ı/ka	12/12/96
4-Nitrophenol	100-02-7	ND	1600 ug	ı/ka	12/12/96
Pentachlorophenol	87-86-5	ND	1600 ug	ı/ka	12/12/96
Pheno1	108-95-2	ND	330 ug	ı/ka	12/12/90
2.4.5-Trichlorophenol	95-95-4	ND ND	330 ug		12/12/90
2.4.6-Trichlorophenol	88-06-2	ND	330 ug		12/12/9

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-2.5 AEN LAB NO: 9612094-18 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	4.7		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/08/96
Arsenic	EPA 7060	4.7 *	0.5	mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/08/96
Lead	EPA 6010	23 *	1	mg/kg	. 12/11/96
Zinc	EPA 6010	1,500 *	1	mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1.2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		55 100 100 105 105 105 105 105 105 105 1	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	12/10/96 12/10/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-2.5 AEN LAB NO: 9612094-18 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNIT	DATE S analyze d
Toluene	108-88-3	ND	5 ug/kg	12/10/96
1,1,1-Trichloroethane	71-55-6	ND	5 ug/kg	12/10/96
1,1,2-Trichloroethane	79-00-5	ND	5 ug/kg	12/10/96
Trichloroethene	79-01-6	ND	5 ug/kg	12/10/96
Vinyl Acetate	108-05-4	ND	50 ug/kg	12/10/96
Vinyl Chloride	75-01-4	ND	10 ug/kg	12/10/96
Xylenes Total	1330-20-7	ND	10 ug/kg	12/10/96
#Extraction for BNAs	EPA 3550	-	Extrn Da	ate 12/09/96
Semi-Volatile Organics	EPA 8270			
Acenaphthene	83-32-9	ND	1700 ug/kg	12/12/96
Acenaphthylene	208-96-8	ND	1700 ug/kg	12/12/96
Anthracene	120-12 - 7	NĎ	1700 ug/kg	12/12/96
Benzidine	92-87-5	ND	8000 ug/kg	12/12/96
Benzoic Acid	65-85-0	ND	8000 ug/kg	12/12/96
Benzo(a)anthracene	56-55 - 3	ND	1700 ug/kg	12/12/96
Benzo(b)fluoranthene	205-99-2	ND	1700 ug/kg	12/12/96
Benzo(k)fluoranthene	207-08-9	ND	1700 uğ/kğ	12/12/96
Benzo(g,h,i)perylene	191-24-2	ND	1700 ug/kg	12/12/96
Benzo(a)pyrene	50-32-8	ND	1700 ug/kg	12/12/96
Benzyl Alcohol	100-51-6	ND	3300 uğ/kğ	12/12/96
Bis(2-chloroethoxy)methane	111-91-1	ND	1700 ug/kg	12/12/96
Bis(2-choroethyl) Ether	111-44-4	ND	1700 uğ/kğ	12/12/96
Bis(2-chloroisopropyl) Ether	108-60-1	ND	1700 ug/kg	12/12/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	1700 ug/kg	12/12/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	1700 ug/kg	12/12/96
Butylbenzyl Phthalate	85-68-7	ND	1700 ug/kg	12/12/96
4-Chloroaniline	106-47 - 8	ND	′ 3300 ug/kg	12/12/96
2-Chloronaphthalene	91-58 - 7	ND	1700 ug/kg	12/12/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	1700 ug/kg	12/12/96
Chrysene	218-01-9	ND	1700 ug/kg	12/12/96
Dibenzo(a,h)anthracene	53-70 - 3	ND	1700 ug/kg	12/12/96
Dibenzofuran	132-64-9	ND	1700 ug/kg	12/12/96
Di-n-butyl Phthalate	84-74-2	ND	1700 ug/kg	12/12/96
1.2-Dichlorobenzene	95-50 - 1	ND	1700 ug/kg	12/12/96
1.3-Dichlorobenzene	541-73-1	ND	1700 ug/kg	12/12/96
1.4-Dichlorobenzene	106-46-7	ND	1700 ug/kg	12/12/96
3.3'-Dichlorobenzidine	91-94-1	ND	3300 ug/kg	12/12/96
Diethyl Phthalate	84-66-2	ND	1700 uğ/kğ	12/12/96
Dimethyl Phthalate	131-11-3	ND	1700 ug/kg	12/12/96
2,4-Dinitrotoluene	121-14-2	ND	1700 ug/kg	12/12/96
2.6-Dinitrotoluene	606-20-2	ND	1700 ug/kg	12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-2.5 AEN LAB NO: 9612094-18 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	1700 ug/kg	12/12/96
Fluoranthene	206-44-0	ND	1700 ug/kg	12/12/96
Fluorene	86-73-7	ND	1700 ug/kg	12/12/96
Hexachlorobenzene	1 <u>1</u> 8-74- 1	ND	1700 ug/kg	12/12/96
Hexach]orobutadiene	87-68-3	NĎ	1700 ug/kg	12/12/96
Hexach]orocyclopentadiene	77 - 47-4	ND	1700 ug/kg	12/12/96
Hexachloroethane	67-72-1	ND	1700 ug/kg	12/12/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	1700 ug/kg	12/12/96
Isophorone	78-59-1	ND	1700 ug/kg	12/12/96
2-Methylnaphthalene	91-57-6	ND	1700 ug/kg	12/12/96
Naphthalene	91-20-3	ND	1700 ug/kg	12/12/96
2-Nitroaniline	88-74-4	ND	8000 ug/kg	12/12/96
3-Nitroaniline	99-09-2	ND	8000 ug/kg	12/12/96
4-Nitroaniline	100-01-6	ND	8000 ug/kg	12/12/96
Nitrobenzene	98-95-3	ND	1700 ug/kg	12/12/96
N-Nitrosodiphenylamine	86-30-6	ND	1700 ug/kg	12/12/96
N-Nitrosodi-n-propylamine	621-64-7	ND	1700 ug/kg	12/12/96
Phenanthrene	85-01-8	ND	1700 ug/kg	12/12/96
Pyrene	129-00-0	ND	1700 ug/kg	12/12/96
1,2,4-Trichlorobenzene	120-82-1	ND	1700 ug/kg	12/12/96
4-Chloro-3-methylphenol	59-50-7	ND	1700 ug/kg	12/12/96
2-Chlorophenol	95-57-8	ND	1700 ug/kg	12/12/96
2,4-Dichlorophenol	120-83-2	ND	1700 ug/kg	12/12/96
2,4-Dimethylphenol	105-67-9	ND	1700 ug/kg	12/12/9
4.6-Dinitro-2-methylphenol	534-52-1	ND	8000 ug/kg	12/12/9
2.4-Dinitrophenol	51-28-5	ND	8000 ug/kg	12/12/9
2-Methylphenol	95-48-7	ND	1700 ug/kg	12/12/9
4-Methylphenol	106-44-5	ND	1700 ug/kg	12/12/9
2-Nitrophenol	88-75-5	ND	1700 ug/kg	12/12/90
4-Nitrophenol	100-02-7	ND	8000 ug/kg	12/12/9
Pentachlorophenol	87-86-5	ND	8000 ug/kg	12/12/9
Phenol	108-95-2	ND	1700 ug/kg	12/12/90
2.4.5-Trichlorophenol	95-95-4	ND	1700 ug/kg	12/12/9
2.4.6-Trichlorophenol	88-06-2	ND	1700 ug/kg	12/12/9

RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-5.5 AEN LAB NO: 9612094-19 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	4.9	S	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	P	rep Date	12/08/96
Arsenic	EPA 7060	4.8 *	. 0.5 m	ıg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-	Р	rep Date	12/08/96
Lead	EPA 6010	8 *	1 m	g/kg	12/11/96
Zinc	EPA 6010	930 *	1 m	g/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropane cis-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		5 100 100 100 100 100 100 100 100 100 10	g/kg g/kg g/kg g/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-5.5 AEN LAB NO: 9612094-19 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Toluene	108-88-3	ND	5 ug/kg	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	5 ug/kg	12/11/96
1.1.2-Trichloroethane	79-00-5	ND	5 ug/kg	12/11/96
Trichloroethene	79-01-6	ND	5 ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	50 ug/kg	12/11/96
Vinyl Chloride	75-01-4	ND	10 ug/kg	12/11/96
Xylenes Total	1330-20-7	ND	10 ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	-	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270			
Acenaphthene	83-32-9	ND	330 ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330 ug/kg	12/13/96
Anthracene	120-12-7	ND	330 ug/kg	12/13/96
Benzidine	92-87-5	ND	1600 ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600 ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND ND	330 ug/kg	12/13/96 12/13/96
Benzyl Alcohol	100-51-6	ND ND	660 ug/kg 330 ug/kg	12/13/96
Bis(2-chloroethoxy)methan	e 111-91-1 111-44-4	ND ND	330 ug/kg 330 ug/kg	12/13/96
Bis(2-choroethyl) Ether Bis(2-chloroisopropyl) Et		ND ND	330 ug/kg	12/13/96
Bis(2-ethylhexyl) Phthala		ND	330 ug/kg	12/13/96
4-Bromophenyl Phenyl Ethe		ND	330 ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	. ND	330 ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND	660 ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 ug/kg	12/13/96
4-Chlorophenyl Phenyl Eth		ND	330 ug/kg	12/13/96
Chrysene	218-01-9	ND	330 ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 uğ/kğ	12/13/96
Dibenzofuran	132-64-9	ND	330 uğ/kğ	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 ug/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND	330 ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	330 ug/kg	12/13/90
1,4-Dichlorobenzene	106-46-7	ND	330 ug/kg	12/13/9
3,3'-Dichlorobenzidine	91-94-1	. ND	660 ug/kg	12/13/9
Diethyl Phthalate	84-66-2	ND	330 ug/kg	12/13/9
Dimethyl Phthalate	131-11-3	ND	330 ug/kg	12/13/96
2,4-Dinitrotoluene	121-14-2	ND	330 ug/kg	12/13/9
2,6-Dinitrotoluene	606-20-2	ND	330 ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-5.5 **AEN LAB NO: 9612094-19** AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzei
Di-n-octyl Phthalate	117-84-0	ND	330 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/kg	12/13/96
Fluorene	86-73-7	ND	330 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/kg	12/13/96
Hexachlorobutadiene -	87-68-3	ND	330 ug/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/kg	12/13/96
Isophorone	78-59-1	ND	330 ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/kg	12/13/96
3-Nitroaniline	99-09 - 2	ND	1600 ug/kg	12/13/90
4-Nitroaniline	100-01-6	ND	1600 ug/kg	12/13/9
Nitrobenzene	98-95-3	ND	330 ug/kg	12/13/90
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621 - 64-7	ND	330 ug/kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug/kg	12/13/96
Pyrene_	129-00-0	ND	330 ug/kg	12/13/96
1.2.4-TrichTorobenzene	120-82-1	ND	330 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/kg	12/13/96
2-Chlorophenol	95-57 - 8	ND	330 ug/kg	12/13/90
2,4-Dichlorophenol	120-83-2	ND	330 ug/kg	12/13/96
2.4-Dimethylphenol	105-67-9	ND	330 ug/kg	12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug/kg	12/13/90
2,4-Dinitrophenol	51-28-5	ND	1600 ug/kg	12/13/9
2-Methylphenol	95-48-7	ND	330 ug/kg	12/13/9
4-Methylphenol	106-44-5	ND	330 ug/kg	12/13/9
2-Nitrophenol	88-75-5	ND	330 ug/kg	12/13/9
4-Nitrophenol	100-02-7	ND	1600 ug/kg	12/13/9
Pentachlorophenol	87-86-5	ND	1600 ug/kg	12/13/9
Phenol	108-95-2	ND	330 ug/kg	12/13/9
2.4.5-Trichlorophenol	95-95-4	ND	330 ug/kg	12/13/9
2,4,6-Trichlorophenol	88-06-2	ND	330 ug/kg	12/13/9

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-7.5 AEN LAB NO: 9612094-20 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	4.1	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/08/96
Arsenic	EPA 7060	1,700 *	0.5 mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/08/96
Lead	EPA 6010	190 *	1 mg/kg	12/11/96
Zinc	EPA 6010	650 *	1 mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	20 00 00 00 00 00 00 00 00 00 00 00 00 0	500 ug/kg 30 ug/kg 30 ug/kg 30 ug/kg 50 ug/kg 500 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 30 ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-7.5 AEN LAB NO: 9612094-20 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	ND	30 .	ıg/kg	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	30 t	ig/kg	12/11/96
1,1,2-Trichloroethane	79-00 - 5	ND	30 L	ig/kg	12/11/96
Trichloroethene	79-01-6	ND	30 i	ig/kg	12/11/96
Vinyl Acetate	108-05-4	ND	300 u	ia/ka	12/11/96
Vinyl Chloride	75-01-4	ND	50 u	ig/kg	12/11/96
Xylenes Total	1330-20-7	ND	50 u	ig/kg	12/11/96
#Extraction for BNAs	EPA 3550	-	E	xtrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	17000 u	ıa/ka	12/13/96
Acenaphthylene	208-96-8	ND	17000 u	ia/ka	12/13/96
Anthracene	120-12-7	ND	17000 u	ia/ka	12/13/96
Benzidine	92-87-5	ND	80000 u	ia/ka	12/13/96
Benzoic Acid	65-85-0	ND	80000 u	ia/ka	12/13/96
Benzo(a)anthracene	56-55-3	ND	17000 u	ia/ka	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	17000 u	ia/ka	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	17000 u	ia/ka	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	17 00 0 u	ığ/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	17 000 u	ığ/k ğ	12/13/96
Benzyl Alcohol	100-51 - 6	ND	33000 u	ig/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	17000 u	ığ/kğ	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	17000 ປ	ığ/kğ	12/13/96
Bis(2-chloroisopropyl) Ethi	er 108-60-1	ND	17000 ປ	ığ/kğ	12/13/96
Bis(2-ethylhexyl) Phthalato	e 117-81-7	ND	17000 L	ığ/kğ	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	17000 ເ	ığ/k ğ	12/13/96
Butylbenzyl Phthalate	85-68 - 7	ND	17000 ι	ıg/kg	12/13/96
4-Chloroaniline	106-47 - 8	ND	33000 L	ığ/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	17000 ເ	ug/kg	12/13/96
4-Chlorophenyl Phenyl Ethe		ND	17000 ι	ıg/kg	12/13/96
Chrysene	218-01-9	ND	17000 u	ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	17 00 0 ι	ug/kg	12/13/96
Dibenzofuran	132-64 - 9	ND	17000 ເ	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	17000 t	ug/kg	12/13/96
1,2-Dichlorobenzene	95 <i>-</i> 50-1	ND	17 0 00 u	ug/kg	12/13/96
1.3-Dichlorobenzene	541-73-1	ND	17000 d	ug/kg	12/13/96
1,4-Dichlorobenzene	106-46-7	ND	17000 (ug/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND	33000 (ug/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	17000 (ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	17000	ug/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND	17000	ug/kg	12/13/96
2,6-Dinitrotoluene	606-20-2	ND	17000	ug/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-8-7.5 AEN LAB NO: 9612094-20 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

NALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZEI
Di-n-octyl Phthalate	117-84-0	ND	17000 u	g/kg	12/13/9
Fluoranthene	206-44-0	ND	17000 u	g/kg	12/13/9
Fluorene	86-73-7	ND	17000 ug	g/kg	12/13/9
Hexachlorobenzene	118-74-1	ND	17000 u	g/kg	12/13/9
Hexachlorobutadiene	87-68-3	ND	17000 u		12/13/9
Hexachlorocyclopentadiene	77 - 47 - 4	ND	17000 u	g/kg	12/13/9
Hexachloroethane	67-72-1	ND	17000 u		12/13/9
Indeno(1,2,3-cd)pyrene	193-39-5	ND	17000 ug	g/kg	12/13/9
Isophorone	78-59-1	ND	17000 u		12/13/9
2-Methylnaphthalene	91-57-6	ND	17000 u		12/13/9
Naphthalene	91-20-3	ND	17000 ug	a/ka	12/13/9
2-Nitroaniline	88-74-4	ND	80000 u	a/ka	12/13/9
3-Nitroaniline	99-09-2	ND	80000 u		12/13/9
4-Nitroaniline	100-01-6	ND	80000 u		12/13/9
Nitrobenzene	98-95-3	ND	17000 u	a/ka	12/13/9
N-Nitrosodiphenylamine	86-30-6	ND	17000 u	a/ka	12/13/9
N-Nitrosodi-n-propylamine	621-64-7	ND	17000 u		12/13/9
Phenanthrene	85-01-8	ND	17000 u		12/13/9
Pyrene	129-00-0	ND	17000 u	a/ka	12/13/9
1,2,4-Trichlorobenzene	120-82-1	ND	17000 u	g/kg n/ka	12/13/9
4-Chloro-3-methylphenol	59-50-7	ND	17000 u	a/ka	12/13/9
2-Chlorophenol	95-57-8	ND	17000 u	g/kg n/kn	12/13/9
2,4-Dichlorophenol	120-83-2	ND	17000 u		12/13/9
2,4-Dimethylphenol	105-67-9	ND	17000 u		12/13/9
4,6-Dinitro-2-methylphenol	534-52-1	ND	80000 u		12/13/9
2,4-Dinitrophenol	51-28-5	ND	80000 u		12/13/9
2-Methylphenol	95-48-7	ND ND	17000 u		12/13/9
	106-44-5	ND	17000 u		12/13/9
4-Methylphenol	88-75-5	ND ND	17000 u		12/13/
2-Nitrophenol		ND ND	80000 u	ig/kg ia/ka	12/13/9
4-Nitrophenol	100-02-7	ND UN	80000 U	ig/kg ia/ka	12/13/
Pentachlorophenol	87-86-5	ND ND	17000 t		12/13/
Phenol	108-95-2		17000 t		12/13/
2,4,5-Trichlorophenol 2,4,6-Trichlorophenol	95-95-4 88-06-2	ND ND	17000 t		12/13/1

RLs elevated for EPA 8270 and EPA 8240 due to high levels of non-target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9-2.5 AEN LAB NO: 9612094-21 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	10.4	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/08/96
Arsenic	EPA 7060	11 *	0.5 mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/08/96
Lead .	EPA 6010	100 *	1 mg/kg	12/11/96
Zinc	EPA 6010	930 *	1 mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	1,000 * ND N	500 ug/kg 30 ug/kg 30 ug/kg 30 ug/kg 50 ug/kg 500 ug/kg 500 ug/kg 30 ug/kg 50 ug/kg 50 ug/kg 30 ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9-2.5 AEN LAB NO: 9612094-21 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	780 *	30	ug/kg	12/11/96
1.1.1-Trichloroethane	71-55-6	ND		ug/kg	12/11/96
1,1,2-Trichloroethane	79-00-5	ND	30	ug/kg	12/11/96
Trichloroethene	79-01-6	ND	30	ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	300 (ug/kg	12/11/96
Vinyl Chloride	75-01-4	ND	50 (ug/kg	12/11/96
Xylenes Total	1330-20-7	200 *	50 ı	ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	-	(Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	17000 t	ug/kg	12/11/96
Acenaphthylene	208-96-8	ND	17000 t	ug/kg	12/11/96
Anthracene	120-12-7	ND	17000 t	ug/kg	12/11/96
Benzidine	92-87-5	ND	80000 t	ug/kg	12/11/96
Benzoic Acid	65-85-0	ND	80000 (ug/kg	12/11/96
Benzo(a)anthracene	56-55-3	ND	17000 t	ug/kg	12/11/96
Benzo(b)fluoranthene	205-99-2	ND	17000 t	ug/kg	12/11/96
Benzo(k)fluoranthene	207-08-9	ND ND	17000		12/11/96
Benzo(g,h,i)perylene Benzo(a)pyrene	191-24-2 50-32-8	ND ND	17000 t		12/11/96 12/11/96
Benzyl Alcohol	100-51-6	ND	17000 (33000 (ug/kg ug/ka	12/11/96
Bis(2-chloroethoxy)methane	111-91-1	ND	17000		12/11/96
Bis(2-choroethyl) Ether	111-44-4	ND	17000		12/11/96
Bis(2-chloroisopropyl) Ethe		ND	17000		12/11/96
Bis(2-ethylhexyl) Phthalate		ND	17000		12/11/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	17000		12/11/96
Butylbenzyl Phthalate	85 - 68-7	ND	17000		12/11/96
4-Chloroaniline	106-47-8	ND	33000		12/11/96
2-Chloronaphthalene	91-58-7	ND	17000		12/11/96
4-Chlorophenyl Phenyl Ether		ND	17000	ug/kg	12/11/96
Chrysene	218-01-9	ND	17000	ug/kg	12/11/96
Dibenzo(a.h)anthracene	53-70-3	ND	17000		12/11/96
Dibenzofuran	132-64-9	ND	17000		12/11/96
Di-n-butyl Phthalate	84-74-2	ND	17000		12/11/96
1,2-Dichlorobenzene	95 - 50-1	ND	17000		12/11/96
1,3-Dichlorobenzene 1,4-Dichlorobenzene	541-73-1	ND ND	17000		12/11/96
3,3'-Dichlorobenzidine	106-46-7	ND ND	17000		12/11/96
Diethyl Phthalate	91-94-1 84-66-2	ND ND	33000 17000		12/11/96 12/11/96
Dimethyl Phthalate	131-11-3	ND ND	17000		12/11/96
2.4-Dinitrotoluene	121-14-2	ND	17000		12/11/96
2.6-Dinitrotoluene	606-20-2	ND ND	17000		12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9-2.5 **AEN LAB NO:** 9612094-21 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96

REPORT DATE: 12/31/96

NALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	17000 ug/kg	12/11/96
Fluoranthene	206-44-0	ND	17000 ug/kg	12/11/96
Fluorene	86-73-7	ND	17000 ug/kg	12/11/96
Hexachlorobenzene	118-74-1	ND	17000 ug/kg	12/11/96
Hexachlorobutadiene	87-68-3	ND	17000 ug/kg	12/11/96
Hexachlorocyclopentadiene	77-47-4	ND	17000 ug/kg	12/11/96
Hexachloroethane	67-72-1	ND	17000 ug/kg	12/11/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	17000 ug/kg	12/11/96
Isophorone	78-59-1	ND	17000 ug/kg	12/11/96
2-Methylnaphthalene	91-57-6	ND	17000 ug/kg	12/11/96
Naphthalene	91-20-3	ND	17000 ug/kg	12/11/96
2-Nitroaniline	88-74-4	ND	80000 ug/kg	12/11/96
3-Nitroaniline	99-09-2	ND	80000 ug/kg	12/11/96
4-Nitroaniline	100-01-6	ND	80000 ug/kg	12/11/96
Nitrobenzene	98-95-3	ND	17000 ug/kg	12/11/96
N-Nitrosodiphenylamine	86-30-6	ND	17000 ug/kg	12/11/96
N-Nitrosodi-n-propylamine	621-64-7	ND	17000 ug/kg	12/11/96
Phenanthrene	85-01-8	ND	17000 ug/kg	12/11/96
Pyrene	129-00-0	ND	17000 ug/kg	12/11/96
1,2,4-Trichlorobenzene	120-82-1	ND	17000 ug/kg	12/11/96
4-Chloro-3-methylphenol	59-50-7	ND	17000 ug/kg	12/11/96
2-Chlorophenol	95-57 - 8	ND	17000 ug/kg	12/11/96
2.4-Dichlorophenol	120-83-2	ND	17000 ug/kg	12/11/96
2.4-Dimethylphenol	105-67-9	ND	17000 ug/kg	12/11/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	80000 ug/kg	12/11/96
2,4-Dinitrophenol	51-28-5	ND	80000 ug/kg	12/11/96
2-Methylphenol	95-48-7	ND ND	17000 ug/kg	12/11/90
4-Methylphenol	106-44-5	ND	17000 ug/kg	12/11/90
2-Nitrophenol	88-75-5	ND	17000 ug/kg	12/11/90
4-Nitrophenol	100-02-7	ND ND	80000 ug/kg	12/11/9
Pentachlorophenol	87-86-5	ND	80000 ug/kg	12/11/90
Pheno1	108-95-2	ND	17000 ug/kg	12/11/9
2,4,5-Trichlorophenol	95-95-4	ND	17000 ug/kg 17000 ug/kg	12/11/9
2,4,6-Trichlorophenol	88-06-2	ND	17000 ug/kg 17000 ug/kg	12/11/9

RLs elevated for EPA 8270 due to high levels of non-target compounds; RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-2.5 AEN LAB NO: 9612094-22 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	9.5		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	÷	Prep Date	12/08/96
Arsenic	EPA 7060	3.7 *	0.5	mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/08/96
Lead	EPA 6010	36 *	1	mg/kg	12/11/96
Zinc	EPA 6010	68 *	1	mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	ND ND DD DD DD DD DD DD DD ND ND ND ND N	300 300 300 5000 5000 300 500 300 500 300 3	ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-2.5 AEN LAB NO: 9612094-22 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT F	REPORTING LIMIT UNITS	DATE ANALYZED
Toluene	108-88-3	3.000 *	300 ug/kg	12/11/96
1,1,1-Trichloroethane	71-55-6	ND	300 ug/kg	12/11/96
1,1,2-Trichloroethane	79-00-5	ND	300 ug/kg	12/11/96
Trichloroethene	79-01-6	ND	300 ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	3000 ug/kg	12/11/96
Vinyl Chloride	75-01 -4	ND	500 ug/kg	12/11/96
Xylenes Total	1330-20-7	1.400 *	500 ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	~	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270			
Acenaphthene	83-32-9	ND	330 ug/kg	12/12/96
Acenaphthylene	208-96-8	ND	330 ug/kg	12/12/96
Anthracene	120-12-7	ND	330 ug/kg	12/12/96
Benzidine	92-87-5	ND	1600 ug/kg	12/12/96
Benzoic Acid	65-85-0	ND	1600 ug/kg	12/12/96
Benzo(a)anthracene	56-55-3	ND	330 ug/kg	12/12/96
Benzo(b)fluoranthene	205-99-2	ND	330 ug/kg	12/12/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug/kg	12/12/96
Benzo(g,h,i)perylene	191-24-2	ND	330 ug/kg	12/12/96
Benzo(a)pyrene	50-32-8	ND	330 ug/kg	12/12/96
Benzyl Alcohol	100-51-6	ND	660 ug/kg	12/12/96
Bis(2-chloroethoxy)methane		ND ND	330 ug/kg	12/12/96
Bis(2-choroethy1) Ether	111-44-4	ND ND	330 ug/kg	12/12/96
Bis(2-chloroisopropyl) Eth Bis(2-ethylhexyl) Phthalan		ND ND	330 ug/kg	12/12/96
		ND ND	330 ug/kg	12/12/96
4-Bromophenyl Phenyl Ether Butylbenzyl Phthalate	85-68-7	ND	330 ug/kg 330 ug/kg	12/12/96 12/12/96
4-Chloroaniline	106-47-8	ND	660 ug/kg	12/12/96
2-Chloronaphthalene	91-58-7	ND	330 ug/kg	12/12/96
4-Chlorophenyl Phenyl Ethe		ND	330 ug/kg	12/12/96
Chrysene	218-01-9	ND	330 ug/kg	12/12/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 ug/kg	12/12/96
Dibenzofuran	132-64-9	ŅĎ	330 ug/kg	12/12/96
Di-n-butyl Phthalate	84-74-2	ND	330 ug/kg	12/12/96
1,2-Dichlorobenzene	95-50-1	ND	330 ug/kg	12/12/96
1.3-Dichlorobenzene	541-73-1	ND	330 ug/kg	12/12/96
1,4-Dichlorobenzene	106-46-7	ND	330 ug/kg	12/12/96
3,3'-Dichlorobenzidine	91-94-1	ND	660 ug/kg	12/12/96
Diethyl Phthalate	84-66-2	ND	330 ug/kg	12/12/96
Dimethyl Phthalate	131-11-3	ND	330 ug/kg	12/12/96
2.4-Dinitrotoluene	121-14-2	ND	330 ug/kg	12/12/96
2.6-Dinitrotoluene	606-20-2	ND	330 ug/kg	12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-2.5 AEN LAB NO: 9612094-22 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZEI
Di-n-octyl Phthalate	117-84-0	ND	330 u	uq/ka	12/12/96
Fluoranthene	206-44-0	ND	330 t	ug/kg	12/12/96
Fluorene	86-73-7	ND	330 ι	ıg/kg	12/12/96
Hexachlorobenzene	118-74-1	ND	330 ι	ıg/kg	12/12/96
Hexachlorobutadiene	87-68-3	ND	330 ι	Ja/ka	12/12/96
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330 i	ığ/kğ	12/12/96
Hexachloroethane	67-72-1	ND	330 ι	ıā/kā	12/12/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 i	ia/ka	12/12/96
Isophorone	78-59-1	ND	330 L	ia/ka	12/12/96
2-Methylnaphthalene	91-57-6	ND	330 i		12/12/9
Naphthalene	91-20-3	ND	. 330 ເ	ia/ka	12/12/9
2-Nitroaniline	88-74-4	ND	1600 1	ia/ka	12/12/9
3-Nitroaniline	99-09-2	ND	1600 (ia/ka	12/12/9
4-Nitroaniline	100-01-6	ND	1600 i	ia/ka	12/12/9
Nitrobenzene	98-95-3	ND	330 (ia/ka	12/12/9
N-Nitrosodiphenylamine	86-30-6	ND	330 (ia/ka	12/12/9
N-Nitrosodi-n-propylamine	621-64-7	ND	330 (ia/ka	12/12/9
Phenanthrene	85-01-8	ND	330 (ia/ka	12/12/9
Pyrene	129-00-0	ND	330 (12/12/9
1,2,4-Trichlorobenzene	120-82-1	ND	330 (ia/ka	12/12/9
4-Chloro-3-methylphenol	59-50-7	ND	330 (ig/kg	12/12/9
2-Chlorophenol	95-57-8	ND	330 (ig/kg	12/12/9
2,4-Dichlorophenol	120-83-2	ND	330 (ug/kg	12/12/9
2,4-Dimethylphenol	105-67-9	ND	330 (ug/kg	12/12/9
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600	ua/ka	12/12/9
2,4-Dinitrophenol	51-28-5	ND	1600	ug/kg ug/ka	12/12/9
2-Methylphenol	95-48-7	ND	330	ug/kg	12/12/9
4-Methylphenol	106-44-5	ND		ug/kg ug/kg	12/12/9
2-Nitrophenol	88-75-5	ND		ug/kg ug/kg	12/12/9
4-Nitrophenol	100-02-7	ND	1600	ua/ka	12/12/9
Pentachlorophenol	87-86-5	ND ND	1600	ua/ka	12/12/9
Phenol	108-95-2	ND	330	ug/kg ug/kg	12/12/9
2,4,5-Trichlorophenol	95-95-4	ND	33U	ug/kg ug/kg	12/12/9
2,4,6-Trichlorophenol	88-06-2	ND	330	ug/kg ug/kg	12/12/9

RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-5.5 AEN LAB NO: 9612094-23 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNIT	DATE Is analyzed
Soil pH measured in water	EPA 9045A	8.1	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Da	ite 12/08/96
Arsenic	EPA 7060	11 *	0.5 mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Da	te 12/08/96
Lead	EPA 6010	7 *	1 mg/kg	12/11/96
Zinc	EPA 6010	39 *	1 mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	48.000 * ND N	10000 ug/kg 500 ug/kg 500 ug/kg 500 ug/kg 1000 ug/kg 1000 ug/kg 1000 ug/kg 500 ug/kg 1000 ug/kg 1000 ug/kg 1000 ug/kg 500 ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-5.5 AEN LAB NO: 9612094-23 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Toluene	108-88-3	1,100 *	500	ug/kg	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	500	ug/kg	12/11/96
1.1.2-Trichloroethane	79-00-5	ND	500	ug/kg	12/11/96
Trichloroethene	79-01-6	ND	500	ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	5000	ug/kg	12/11/96
Vinyl Chloride Xylenes Total	75-01-4	ND ND	1000	ug/kg	12/11/96
	1330-20-7	ND	1000	ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi Volatile Organics	EPA 8270				
Acenaphthene	83 <i>-</i> 32-9	ND		ug/kg	12/12/96
Acenaphthylene	208-96-8	ND	330	ug/kg	12/12/96
Anthracene	120-12-7	ND	330	ug/kg	12/12/96
Benzidine	92-87-5	ND	1600	ug/kg	12/12/96
Benzoic Acid	65-85-0	ND	1600	ug/kg	12/12/96
Benzo(a)anthracene Benzo(b)fluoranthene	56-55-3	ND	330	ug/kg	12/12/96
Benzo(k)fluoranthene	205-99-2 207-08-9	ND ND	330	ug/kg	12/12/96
Benzo(g,h,i)perylene	191-24-2	ND ND	330 330	ug/kg ug/kg	12/12/96 12/12/96
Benzo(a)pyrene	50-32-8	ND ND	330	ug/kg	12/12/96
Benzyl Alcohol	100-51-6	ND		ug/kg	12/12/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330	ug/kg	12/12/96
Bis(2-choroethy1) Ether	111-44-4	ND	330	ug/kg	12/12/96
Bis(2-chloroisopropyl) Ethe		ND		ug/kg	12/12/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	330	ug/kg	12/12/96
4-Bromophenyl Phenyl Ether	101 - 55-3	ND	330	uğ/kğ	12/12/96
Butylbenzyl Phthalate	85-68-7	ND	330	ug/kg	12/12/96
4-Chloroaniline	106-47-8	ND	660	ug/kg	12/12/96
2-Chloronaphthalene	91-58-7	ND	330	ug/kg	12/12/96
4-Chlorophenyl Phenyl Ether		ND	330	ug/kg	12/12/96
Chrysene	218-01-9	ND	330	ug/kg	12/12/96
Dibenzo(a,h)anthracene	53-70-3	ND		ug/kg	12/12/96
Dibenzofuran Di-n-butyl Phthalate	132-64-9	ND		ug/kg	12/12/96
1,2-Dichlorobenzene	84-74-2 95-50-1	ND ND		ug/kg	12/12/96
1,3-Dichlorobenzene	541-73-1	ND ND		ug/kg ug/kg	12/12/96 12/12/96
1.4-Dichlorobenzene	106-46-7	ND		ug/kg ug/kg	12/12/96
3,3'-Dichlorobenzidine	91-94-1	ND		ug/kg	12/12/96
Diethyl Phthalate	84-66-2	ND		ug/kg	12/12/96
Dimethyl Phthalate	131-11-3	ND		ug/kg	12/12/96
2.4-Dinitrotoluene	121-14-2	ND		ug/kg	12/12/96
2,6-Dinitrotoluene	606-20-2	ND		ug/kg	12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-5.5 AEN LAB NO: 9612094-23 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	330 ug	/ka	12/12/96
Fluoranthene	206-44-0	ND	330 ug	/ka	12/12/96
Fluorene	86-73-7	ND	330 ug	/ka	12/12/96
Hexachlorobenzene	118-74-1	ND	330 ug	/ka	12/12/96
Hexachlorobutadiene	87-68-3	ND	330 ug	/ka	12/12/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug.	/ka	12/12/96
Hexachloroethane	67-72-1	ND	330 ug.	/kg	12/12/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug.	/ka	12/12/96
Isophorone	78-59-1	ND	330 ug.		12/12/96
2-Methylnaphthalene	91-57-6	ND	330 ug.	/ka	12/12/96
Naphthalene	91-20-3	ND	330 ug.	/ka	12/12/96
2-Nitroaniline .	88-74-4	ND	1600 ug.	/ka	12/12/96
3-Nitroaniline	99-09-2	ND	1600 ug.	/ka	12/12/96
4-Nitroaniline	100-01-6	ND	1600 ug.	/ka	12/12/96
Nitrobenzene	98-95-3	ND	330 ug.	/ka	12/12/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug	/ka	12/12/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug	/ka	12/12/96
Phenanthrene	85-01-8	ND	330 ug.	/ka	12/12/96
Pyrene	129-00-0	ND	330 ug	/ka	12/12/96
1.2.4-Trichlorobenzene	120-82-1	ND	330 ug	/ka	12/12/96
4-Chloro-3-methylphenol	59-50 - 7	ND	330 ug,	/ka	12/12/96
2-Chlorophenol	95-57-8	ND	330 ug	/ka	12/12/96
2.4-Dichlorophenol	120-83-2	ND	330 ug.	/ka	12/12/96
2.4-Dimethylphenol	105-67-9	ND	330 ug.	/ka	12/12/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug.	/ka	12/12/96
2,4-Dinitrophenol	51-28-5	ND	1600 ug	/ka	12/12/96
2-Methylphenol	95-48-7	ND	330 ug	/ka	12/12/96
4-Methylphenol	106-44-5	ND	330 ug	/ka	12/12/96
2-Nitrophenol	88-75-5	ND	330 ug.	/ka	12/12/96
4-Nitrophenol	100-02-7	ND	1600 ug.	/kg	12/12/96
Pentachlorophenol	87-86-5	ND	1600 ug.	/kg	12/12/96
Phenol	108-95-2	ND	330 ug.	/kď	12/12/96
2,4,5-Trichlorophenol	95-95-4	ND	330 ug	/ka	12/12/96
2.4.6-Trichlorophenol	88-06-2	ND	330 ug	/kǧ	12/12/96

RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit \star = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-7.5 AEN LAB NO: 9612094-24 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE.	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	6.2	S	.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Pr	rep Date	12/08/96
Arsenic	EPA 7060	8.6 *	0.5 mg	g/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-	Pr	rep Date	12/08/96
Lead	EPA 6010	6 *	1 mg	g/kg	12/11/96
Zinc	EPA 6010	41 *	1 mg	g/kg	12/11/96
Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	19.000 * ND	500 ug 500 ug 500 ug 1000 ug 1000 ug 500 ug 500 ug 1000 ug 500 ug	g/kg g/kg g/kg g/kg g/kg g/kg g/kg g/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-7.5 AEN LAB NO: 9612094-24 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	4,300 *	500 .	ıg/kg	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	500 (ig/kg	12/11/96
1.1.2-Trichloroethane	79-00-5	ND	500 i	ia/ka	12/11/96
Trichloroethene	79-01-6	ND	500 1	ia/ka	12/11/96
Vinyl Acetate	108-05 -4	ND	5000 L	ia/ka	12/11/96
Vinyl Chloride	75-01-4	ND	1000 ເ	ig/kg	12/11/96
Xylenes Total	1330-20-7	2,500 *	1000 ເ	ığ/kğ	12/11/96
#Extraction for BNAs	EPA 3550	-	Е	xtrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	660 u	g/kg	12/14/96
Acenaphthylene	208-96-8	ND	660 u	g/kg	12/14/96
Anthracene	120-12-7	ND	660 u	g/kg	12/14/96
Benzidine	92-87-5	ND	3200 u	g/kg	12/14/96
Benzoic Acid	65-85-0	ND	3200 u	g/kg	12/14/96
Benzo(a)anthracene Benzo(b)fluoranthene	56-55-3	ND	660 u	g/kg	12/14/96
Benzo(k)fluoranthene	205-99-2	ND	660 u	g/kg	12/14/96
Benzo(g,h,i)perylene	207-08-9 191-24-2	ND	660 u	g/kg	12/14/96
Benzo(a)pyrene	50-32-8	ND ND	660 u	g/kg	12/14/96
Benzyl Alcohol	100-51-6	ND	660 u 1300 u	y/ky a/ka	12/14/96
Bis(2-chloroethoxy)methane	111-91-1	ND	660 u	g/kg a/ka	12/14/96 12/14/96
Bis(2-choroethyl) Ether	111-44-4	ND	660 u	g/kg n/ka	12/14/96
Bis(2-chloroisopropyl) Ethe	er 108-60-1	ND	660 u	g/kg n/kn	12/14/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	660 u	a/ka	12/14/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	660 u	a/ka	12/14/96
Butylbenzyl Phthalate	85-68-7	ND	660 u	a/ka	12/14/96
4-Chloroaniline	106-47-8	ND	1300 u	ığ/kğ	12/14/96
2-Chloronaphthalene	91-58-7	ND	660 u	ıg/kg	12/14/96
4-Chlorophenyl Phenyl Ether		ND	660 u	ığ∕kğ	12/14/96
Chrysene	218-01-9	ND	660 u	ıg/kg	12/14/96
Dibenzo(a,h)anthracene	53-70-3	ND	660 ს		12/14/96
Dibenzofuran	132-64-9	ND	660 L	ıg/kg	12/14/96
Di-n-butyl Phthalate 1,2-Dichlorobenzene	84-74-2	ND	660 t	ig/kg	12/14/96
1.3-Dichlorobenzene	95-50-1	ND	660 L	ıg/kg	12/14/96
1.4-Dichlorobenzene	541-73-1 106-46-7	ND ND	660 L	ıg/kg	12/14/96
3.3'-Dichlorobenzidine	106-46-7 91-94-1	ND ND	660 t	iy/Kg	12/14/96
Diethyl Phthalate	91-94-1 84-66-2	ND ND	1300 u	ig/kg	12/14/96
Dimethyl Phthalate	131-11-3	ND ND	660 t	ig/kg ig/kg	12/14/96
2.4-Dinitrotoluene	121-14-2	ND	660 ւ 660 ւ	ug/Ky ua/ka	12/14/96
2.6-Dinitrotoluene	606-20-2	ND ND	660 t	49/ KY	12/14/96 12/14/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-10-7.5 AEN LAB NO: 9612094-24 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	660 ug	ı/ka	12/14/96
Fluoranthene	206-44-0	ND	660 ug	i/ka	12/14/96
Fluorene	86-73-7	ND	660 ug	i/ka	12/14/96
Hexachlorobenzene	118-74-1	ND	660 ug	i/ka	12/14/96
Hexachlorobutadiene	87-68-3	ND	660 ug	i/ka	12/14/96
Hexachlorocyclopentadiene	77-47-4	ND	660 ug	i/ka	12/14/96
Hexachloroethane	67-72-1	ND	660 ug	i/ka	12/14/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	660 ug	i/ka	12/14/96
Isophorone	78-59-1	ND	660 ug	i/ka	12/14/96
2-Methylnaphthalene	91-57-6	ND	660 ug	i/ka	12/14/96
Naphthalene	91-20-3	ND	660 ug	i/ka	12/14/96
2-Nitroaniline	88-74-4	ND	3200 ug	i/ka	12/14/96
3-Nitroaniline	99-09-2	ND	3200 ug	i/ka	12/14/96
4-Nitroaniline	100-01-6	ND	3200 ug	i/ka	12/14/96
Nitrobenzene	98-95-3	ND	660 ug	/ka	12/14/96
N-Nitrosodiphenylamine	86-30-6	ND	660 ug	/ka	12/14/96
N-Nitrosodi-n-propylamine	621-64-7	ND	660 ug	/ka	12/14/96
Phenanthrene	85-01-8	ND	660 ug	/ka	12/14/96
Pyrene	129-00-0	ND	660 ug		12/14/96
1,2,4-Trichlorobenzene	120-82-1	ND	660 uğ	/kg	12/14/96
4-Chloro-3-methylphenol	59-50 - 7	ND	660 uğ	i/kg	12/14/96
2-Chlorophenol	95-57-8	ND	660 uğ	i/kg	12/14/96
2.4-Dichlorophenol	120-83-2	ND	660 uğ	i/kď	12/14/96
2.4-Dimethylphenol	105-67-9	ND	660 uğ	i/kď	12/14/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	3200 ug	i/kg	12/14/9
2.4-Dinitrophenol	51-28-5	ND	3200 uğ	i/kǧ	12/14/9
2-Methylphenol	95-48-7	ND	660 uğ	i/kg	12/14/9
4-Methylphenol	106-44-5	ND.	660 uğ	i/kg	12/14/9
2-Nitrophenol	88-75-5	ND	660 ug	j/kg	12/14/9
4-Nitrophenol	100-02-7	ND	3200 ug	ı/kg	12/14/9
Pentachlorophenol	87 <i>-</i> 86-5	ND	3200 ug	g/kg	12/14/9
Phenol	108-95 - 2	ND	660 ug]/kg	12/14/9
2.4.5-Trichlorophenol	95-95-4	ND	660 ug	j/kg	12/14/9
2.4.6-Trichlorophenol	88-06-2	ND	660 ug	g/kg	12/14/9

RLs elevated for EPA 8270 due to high levels of non-target compounds; RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

* = Value at or above reporting limit

ND = Not detected at or above the reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-2.5
AEN LAB NO: 9612094-25
AEN WORK ORDER: 9612094
CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	4.2		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/08/96
Arsenic	EPA 7060	7.7 *	0.5	mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/08/96
Lead	EPA 6010	7 *	1	mg/kg	12/11/96
Zinc	EPA 6010	630 *	1	mg/kg	12/11/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene trans-1.2-Dichloroethene trans-1.2-Dichloropropene trans-1.3-Dichloropropene trans-1.3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2.2-Tetrachloroethane	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5		5 100 100 105 105 105 105 105 105 105 10	ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-2.5 AEN LAB NO: 9612094-25 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT U	JNITS	DATE ANALYZED
Toluene	108-88-3	ND	5 ug/k	:a	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	5 ug/k		12/11/96
1,1,2-Trichloroethane	79-00-5	ND	5 ug/k	'n	12/11/96
Trichloroethene	79-01-6	ND	5 ug/k	ia Sa	12/11/96
Vinyl Acetate	108-05-4	ND	50 ug/k		12/11/96
Vinyl Chloride	75-01-4	ND	10 ug/k		12/11/96
Xylenes Total	1330-20-7	ND	10 ug/k		12/11/96
#Extraction for BNAs	EPA 3550	-	Extr	n Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330 ug/k	α	12/13/96
Acenaphthylene	208-96-8	ND	330 ug/k	G.	12/13/96
Anthracene	120-12-7	ND	330 ug/k	n e	12/13/96
Benzidine	92-87-5	ND	1600 ug/k	a	12/13/96
Benzoic Acid	65-85-0	ND	1600 ug/k	a	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 ug/k	ā	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 ug/k	G	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug/k	ā	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 ug/k	ā	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 ug/k	ā	12/13/96
Benzyl Alcohol	100-51-6	ND	660 ug/k	:a	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330 ug/k	a	12/13/96
Bis(2-choroethy1) Ether	111-44-4	ND	330 ug/k	:a	12/13/96
Bis(2-chloroisopropyl) Ethe		ND	330 ug/k	a	12/13/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	330 ug/k	a	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330 ug/k	a	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330 ug/k	.a	12/13/96
4-Chloroaniline	106-47-8	ND	660 ug/k		12/13/96
2-Chloronaphthalene	91-58-7	ND	330 ug/k	ξĞ	12/13/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	330 ug/k	ιğ	12/13/96
Chrysene	218-01-9	ND	330 ug/k	ξď	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 ug/k	κġ	12/13/96
Dibenzofuran	132-64-9	ND	330 ug/l	κğ	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 ug/l	ζĞ	12/13/96
1,2-Dichlorobenzene	95-50-1	ND	330 ug/l		12/13/96
1.3-Dichlorobenzene	541-73-1	ND	330 ug/l		12/13/90
1,4-Dichlorobenzene	106-46-7	ND	330 ug/l	kg	12/13/96
3.3'-Dichlorobenzidine	91-94-1	ND	660 ug/l	kg	12/13/9
Diethyl Phthalate	84-66-2	ND	330 ug/l		12/13/90
Dimethyl Phthalate	131-11-3	ND	330 ug/l		12/13/96
2.4-Dinitrotoluene	121-14-2	ND	330 ug/l		12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330 ug/l		12/13/9

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-2.5 AEN LAB NO: 9612094-25 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug	/ka	12/13/96
Fluoranthene	206-44-0	ND	330 ug		12/13/96
Fluorene	86-73-7	ND	330 ug		12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug.	/ka	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug	/ka	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug.	/ka	12/13/96
Hexachloroethane	67-72-1	ND	330 ug	/ka	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug.	/ka	12/13/96
Isophorone	78-59-1	ND	330 ug.	/ka	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug.		12/13/96
Naphthalene	91-20-3	ND	330 ug.	/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug.	/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug.	/ka	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug.	/ka	12/13/96
Nitrobenzene	98-95-3	ND	330 ug.	/ka	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug.	/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug	/ N.9 / k.a	12/13/96
Phenanthrene	85-01-8	ND ND	330 ug.	/kg /ka	12/13/96
Pyrene	129-00-0	ND	330 ug	/ka	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ON	330 ug		12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug	/kg /ka	12/13/96
2-Chlorophenol	95-57-8	ND	330 ug	/kg /ka	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 ug	/kg	12/13/96
2,4-Dimethylphenol	105-67-9	ND	330 ug	/kg /kg	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug	/kg /ka	12/13/96
2,4-Dinitrophenol	51-28-5	ND	1600 ug		12/13/96
2-Methylphenol	95-48-7	ND	330 ug	/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 ug		12/13/96
2-Nitrophenol	88-75-5	ND	330 ug	/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600 ug		12/13/90
Pentachlorophenol	87-86-5	ND	1600 ug	/kg	12/13/96
Phenol	108-95-2	ND ND	330 ug	/ka	12/13/90
2,4,5-Trichlorophenol	95-95-4	ND ND	330 ug	/ka	12/13/90
2.4.6-Trichlorophenol	88-06-2	ND ND	330 ug	/kg	12/13/9

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-5.0 AEN LAB NO: 9612094-26 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	8.9		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/09/96
Arsenic	EPA 7060	5.4 *	0.5	mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	·-		Prep Date	12/09/96
Lead	EPA 6010	6 *	1	mg/kg	12/10/96
Zinc	EPA 6010	700 *	1	mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1		55 100 100 105 10 105 105 105 105 105 10	ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-5.0 AEN LAB NO: 9612094-26 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5	ug/kg	12/11/96
1,1,1-Trichloroethane	71-55-6	ND		ug/kg	12/11/96
1,1,2-Trichloroethane	79-00-5	ND	5	ua/ka	12/11/96
Trichloroethene	79-01-6	ND	5	ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	50	ug/kg	12/11/96
Vinyl Chloride	75-01-4	ND	10	ug/kg	12/11/96
Xylenes Total	1330-20-7	ND	10	ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND		ug/kg	12/13/96
Anthracene	120-12-7	ND	330	ug/kg	12/13/96
Benzidine	92-87-5	ND	1600	ug/kg	12/13/96
Benzoic Acid	65-85 - 0	ND	1600	ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	330	ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND		ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND		ug/kg	12/13/96
Benzo(g.h.i)perylene	191-24-2	ND		ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND		ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND		ug/kg	12/13/96
Bis(2-chloroethoxy)methan		ND	330	ug/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330	ug/kg	12/13/96
Bis(2-chloroisopropyl) Et		ND	330	ug/kg	12/13/96
Bis(2-ethylhexyl) Phthala		ND	330	ug/kg	12/13/96
4-Bromophenyl Phenyl Ethe		ND		ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND		ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND	660	ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330	ug/kg	12/13/96
4-Chlorophenyl Phenyl Eth		ND	330	ug/kg	12/13/96
Chrysene	218-01-9	ND		ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND		ug/kg	12/13/96
Dibenzofuran	132-64-9	ND		ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND		ug/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND		ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND		ug/kg	12/13/96
1.4-Dichlorobenzene	106-46-7	ND		ug/kg	12/13/96
3.3'-Dichlorobenzidine	91-94-1	ND		ug/kg	12/13/96
Diethyl Phthalate	84-66-2	ND		ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND		ug/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND		ug/kg	12/13/96
2,6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-5.0 AEN LAB NO: 9612094-26 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 **REPORT DATE: 12/31/96**

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZEC
Di-n-octyl Phthalate	117-84-0	ND	330 ug.	/ka	12/13/96
Fluoranthene	206-44-0	ND	330 ug	/ka	12/13/96
Fluorene	86-73-7	ND	330 ug.	/ka	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug	/ka	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug	/ka	12/13/96
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330 ug/	/ka	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/	/ka	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/	/kg	12/13/96
Isophorone	78-59-1	ND	330 ug/	/ka	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/	/ka	12/13/96
Naphthalene	91-20-3	ND	330 ug/	/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/		12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/	/ka	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/	/ka	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/	/kg	12/13/90
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/	/kɑ̃	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 uğ	/kď	12/13/96
Phenanthrene	85-01-8	ND	330 ug/	/kg	12/13/96
Pyrene	129-00-0	ND	330 ug	/kg	12/13/96
1.2.4-Trichlorobenzene	120-82-1	ND	330 ug/	/ka	12/13/9
4-Chloro-3-methylphenol	59-50-7	ND	330 ug	/ka	12/13/9
2-Chlorophenol	95-57-8	ND	330 uğ.	/kg	12/13/9
2.4-Dichlorophenol	120-83-2	ND	330 ug.	/kg	12/13/9
2,4-Dimethylphenol	105-67-9	ND	330 ug.	/kg	12/13/9
4.6-Dinitro-2-methylphenol	534-52-1	ND		/kg	12/13/9
2.4-Dinitrophenol	51-28-5	ND	1600 ug		12/13/9
2-Methylphenol	95-48-7	ND	330 ug	/kg	12/13/9
4-Methylphenol	106-44-5	ND	330 uğ	/kg	12/13/9
2-Nitrophenol	88-75-5	ND	330 ug		12/13/9
4-Nitrophenol	100-02-7	ND	1600 uğ		12/13/9
Pentachlorophenol	87-86-5	ND	1600 ug	/kg	12/13/9
Pheno1 '	108-95-2	ND	330 ug	/kg	12/13/9
2,4,5-Trichlorophenol	95-95-4	ND	330 ug	/kg	12/13/9
2.4.6-Trichlorophenol	88-06 - 2	ND	330 uğ	/kg	12/13/9

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-7.5 AEN LAB NO: 9612094-27 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	5.3	Ç	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	ļ	Prep Date	12/09/96
Arsenic	EPA 7060	8.6 *	0.5 m	ng/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	F	Prep Date	12/09/96
Lead	EPA 6010	7 *	1 n	ng/kg	12/10/96
Zinc	EPA 6010	550 *	1 n	ng/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		55 100 10 10 10 10 10 10 10 10 10 10 10 10	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-7.5 AEN LAB NO: 9612094-27 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5.1	ıa/ka	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	5 1	ig/kg	12/11/96
1,1,2-Trichloroethane	79-00-5	ND	5 1	ig/kg ig/kg ig/kg	12/11/96
Trichloroethene	79-01-6	ND	5 1	ig/kg	12/11/96
Vinyl Acetate	108-05-4	ND	50 u	ig/kg	12/11/96
Vinyl Chloride	75-01-4	ND	10 1	ig/kg	12/11/96
Xylenes Total	1330-20-7	ND		ig/kg	12/11/96
#Extraction for BNAs	EPA 3550	-	E	xtrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330 u	ıa/ka	12/13/96
Acenaphthylene	208-96-8	ND	330 u	ia/ka	12/13/96
Anthracene	120-12-7	ND	330 u	ia/ka	12/13/96
Benzidine	92-87-5	ND	1600 u	ia/ka	12/13/96
Benzoic Acid	65-85-0	ND	1600 u	ia/ka	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 u	ia/ka	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 u	ia/ka	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 u		12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 u	ia/ka	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 u	ia/ka	12/13/96
Benzyl Alcohol	100-51-6	ND	660 u	ia/ka	12/13/96
Bis(2-chloroethoxy)methan		ND	330	ia/ka	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 L	ia/ka	12/13/96
Bis(2-chloroisopropyl) Et		ND	330 L	ia/ka	12/13/96
Bis(2-ethylhexyl) Phthala	te 117-81-7	ND	330 i	ia/ka	12/13/96
4-Bromophenyl Phenyl Ethe		ND	330 i	ia/ka	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330 0	ja/ka	12/13/96
4-Chloroaniline	106-47-8	ND	660 L		12/13/96
2-Chloronaphthalene	91-58-7	ND	330 i	ig/kg	12/13/96
4-Chlorophenyl Phenyl Eth		ND	330 (ig/kg	12/13/96
Chrysene	218-01-9	ND	330 i	ig/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 i	ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330 i	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 i	ug/kg	12/13/96
1.2-Dichlorobenzene	95-50-1	ND	330 i	ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	330	ug/kg	12/13/96
1,4-Dichlorobenzene	106-46-7	ND	330	ug/kg	12/13/96
3.3'-Dichlorobenzidine	91-94-1	ND	660	ug/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	330	ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	330	ug/kg	12/13/96
2,4-Dinitrotoluene	121-14-2	ND	330	ug/kg	12/13/9
2.6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-11-7.5 **AEN LAB NO:** 9612094-27 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug/	′kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/	′kg	12/13/96
Fluorene	86-73-7	ND	330 ug/	′kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/	′kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug/	′kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug/	′kġ	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/	′kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/	'kg	12/13/96
Isophorone	78-59-1	ND	330 ug/	'kġ	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/	'kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/	'kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/		12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/	'kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/	'kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/	'kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/		12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/	′kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug/	′kg	12/13/96
Pyrene	129-00-0	ND	330 ug/	′kg	12/13/96
1,2,4-Trichlorobenzene	120-82-1	DИ	330 ug/	′kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/	/kg	12/13/96
2-Chlorophenol	95-57-8	ND	330 ug/	/kg	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 ug/	/kg	12/13/96
2,4-Dimethylphenol	105-67-9	ND	330 ug	/kg	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug		12/13/96
2,4-Dinitrophenol	51-28-5	ND	1600 ug.		12/13/96
2-Methylphenol	95-48-7	ND	330 ug.		12/13/96
4-Methylphenol	106-44-5	ND	330 ug.	/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 ug		12/13/96
4-Nitrophenol	100-02-7	, ND	1600 ug	/kg	12/13/96
Pentachlorophenol	87-86-5	ND	1600 ug	/kg	12/13/96
Phenol	108-95-2	ND	330 ug	/kg	12/13/96
2,4,5-Trichlorophenol	95-95-4	ND	330 ug	/kg	12/13/96
2,4,6-Trichlorophenol	88-06-2	ND	330 ug	/kg	12/13/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-2.5 AEN LAB NO: 9612094-28 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	4.7		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/09/96
Arsenic	EPA 7060	20,000	0.5	mg/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/09/96
Lead	EPA 6010	68 7	1	mg/kg	12/10/96
Zinc	EPA 6010	1,500 3	1	mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		5 5 10 0 10 0 10 5 10 10 10 5 10 10 5 10 5 10 5 10 5 10 5 10 5 10 5 10 5 10 5 10 5 10 5 10 10 10 10 10 10 10 10 10 10 10 10 10		12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-2.5 AEN LAB NO: 9612094-28 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5 ug/kg	12/11/96
1.1.1-Trichloroethane	71-55-6	ND	5 ug/kg	12/11/96
1.1.2-Trichloroethane	79-00-5	ND	5 ug/kg	12/11/96
Trichloroethene	79-01-6	ND	5 ug/kg 5 ug/kg 5 ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	50 ug/kg	12/11/96
Vinyl Chloride	75 - 01-4	ND	10 ug/kg	12/11/96
Xylenes Total	1330-20-7	ND	10 ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	-	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270			
Acenaphthene	83-32-9	ND	330 ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330 ug/kg	12/13/96
Anthracene	120-12-7	ND	330 ug/kg	12/13/96
Benzidine	92-87 - 5	ND	1600 ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600 ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	660 ug/kg	12/13/96
Bis(2-chloroethoxy)methan		ND	330 ug/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 ug/kg	12/13/96
Bis(2-chloroisopropyl) Et		ND	330 ug/kg	12/13/96
Bis(2-ethylhexyl) Phthala		ND	330 ug/kg	12/13/96
4-Bromophenyl Phenyl Ethe Butylbenzyl Phthalate		ND	330 ug/kg	12/13/96
4-Chloroaniline	85-68-7 106-47-8	ND	330 ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND ND	660 ug/kg 330 ug/kg	12/13/96 12/13/96
4-Chlorophenyl Phenyl Eth		ND	330 ug/kg	12/13/96
Chrysene	218-01-9	ND	330 ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330 ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 ug/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND	330 ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	330 ug/kg	12/13/96
1.4-Dichlorobenzene	106-46-7	ND	330 ug/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND	660 ug/kg	12/13/9
Diethyl Phthalate	84-66-2	ND	330 ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	330 ug/kg	12/13/90
2.4-Dinitrotoluene	121-14-2	ND	330 ug/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330 ug/kg	12/13/9

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-2.5 AEN LAB NO: 9612094-28 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	330 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/kg	12/13/96
Fluorene	86-73-7	ND	330 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 uğ/kğ	12/13/96
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/kg	12/13/96
Isophorone	78-59-1	ND	330 ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug/kg	12/13/96
Pyrene	129-00-0	ND	330 ug/kg	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/kg	12/13/96
2-Chlorophenol	95-57 <i>-</i> 8	ND	330 ug/kg	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 ug/kg	12/13/96
2,4-Dimethylphenol	105-67-9	ND	330 ug/kg	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug/kg	12/13/96
2,4-Dinitrophenol	51-28-5	ND	1600 ug/kg	12/13/96
2-Methylphenol	95-48-7	ND	330 ug/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 ug/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600 ug/kg	12/13/96
Pentachlorophenol	87-86-5	ND	1600 ug/kg	12/13/96
Pheno1	108-95-2	ND	330 ug/kg	12/13/96
2,4,5-Trichlorophenol	95-95-4	ND	330 ug/kg	12/13/96
2,4,6-Trichlorophenol	88-06-2	ND	330 ug/kg	12/13/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-5.0 AEN LAB NO: 9612094-29 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	3.8		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/09/96
Arsenic	EPA 7060	14.000 *	0.5	mg/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/09/96
Lead	EPA 6010	12 *	1	mg/kg	12/10/96
Zinc	EPA 6010	3.300 *	1	mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2,2-Tetrachloroethane Tetrachloroethene	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		55 100 100 105 105 105 105 105 105 105 1	ug/kg ug/kg ug/kg ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-5.0 AEN LAB NO: 9612094-29 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5 ug/kg	12/11/96
1,1,1-Trichloroethane	71-55-6	ND	5 uā/kā	12/11/96
1.1.2-Trichloroethane	79-00-5	ND	5 ug/kg 5 ug/kg	12/11/96
Trichloroethene	79-01-6	ND	5 ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	50 ug/kg	12/11/96
Vinyl Chloride Xylenes Total	75-01-4 1330-20-7	ND ND	10 ug/kg 10 ug/kg	12/11/96 12/11/96
#Extraction for BNAs	EPA 3550	-	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270			
Acenaphthene	83-32-9	ND	330 ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330 ug/kg	12/13/96
Anthracene	120-12-7	ND	330 ug/kg	12/13/96
Benzidine	92-87-5	ND	1600 ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600 ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug/kg	12/13/96
Benzo(g.h.i)perylene Benzo(a)pyrene	191-24-2 50-32-8	ND ND	330 ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND ND	330 ug/kg 660 ug/kg	12/13/96 12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330 ug/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 ug/kg	12/13/96
Bis(2-chloroisopropyl) Ethe		ND	330 ug/kg	12/13/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	330 ug/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330 ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330 ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND	660 ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 ug/kg	12/13/96
4-Chlorophenyl Phenyl Ether		ND	330 ug/kg	12/13/96
Chrysene Dibenzo(a,h)anthracene	218-01-9	ND	330 ug/kg	12/13/96
Dibenzofuran	53-70-3 132-64-9	ND ND	330 ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND ND	330 ug/kg 330 ug/kg	12/13/96 12/13/96
1,2-Dichlorobenzene	95-50-1	ND	330 ug/kg 330 ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	330 ug/kg	12/13/96
1,4-Dichlorobenzene	106-46-7	ND	330 ug/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND	660 ug/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	330 ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	330 ug/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND	330 ug/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330 ug/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-5.0 AEN LAB NO: 9612094-29 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzei
Di-n-octyl Phthalate	117-84-0	ND	330	ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330	ug/kg	12/13/96
Fluorene	86-73-7	ND	330	ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330	ug/kg	12/13/9
Hexachlorobutadiene	87-68-3	ND	330	ug/kg	12/13/9
Hexachlorocyclopentadiene	77-47-4	ND	330	ug/kg	12/13/9
Hexachloroethane	67-72-1	ND	330	ug/kg	12/13/9
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330	ug/kg	12/13/9
Isophorone	78-59-1	ND	330	ug/kg	12/13/9
2-Methylnaphthalene	91-57-6	ND	330	ug/kg	12/13/9
Naphthalene	91-20-3	ND	330	ug/kg	12/13/9
2-Nitroaniline	88-74-4	ND	1600	ug/kg	12/13/9
3-Nitroaniline	99-09-2	ND	1600	ug/kg	12/13/9
4-Nitroaniline	100-01-6	ND	1600	ug/kg	12/13/9
Nitrobenzene	98-95-3	ND	330	ug/kg	12/13/9
N-Nitrosodiphenylamine	86-30-6	ND		ug/kg	12/13/9
N-Nitrosodi-n-propylamine	621-64-7	ND	330	ug/kg	12/13/9
Phenanthrene	85-01-8	ND	330	ug/kg	12/13/9
Pyrene	129-00-0	ND	330	ug/kg	12/13/9
1,2,4-Trichlorobenzene	120-82-1	ND	330	ug/kg	12/13/9
4-Chloro-3-methylphenol	59-50-7	ND	330	ug/kg	12/13/9
2-Chlorophenol	95-57-8	ND	330	ug/kg	12/13/9
2,4-Dichlorophenol	120-83-2	ND	330	ug/kg	12/13/9
2,4-Dimethylphenol	105-67-9	ND	330	ug/kg	12/13/9
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600	ug/kg	12/13/9
2,4-Dinitrophenol	51-28-5	ND	1600	ug/kg	12/13/9
2-Methylphenol	95-48-7	ND	330	ug/kg	12/13/9
4-Methylphenol	106-44-5	GN	330	ug/kg	12/13/9
2-Nitrophenol	88-75-5	ND	330 1600	ug/kg	12/13/9
4-Nitrophenol	100-02-7	ND	1600	ug/kg	12/13/9
Pentachlorophenol Phenol	87-86 - 5	ND	1900	ug/kg	12/13/9
	108-95-2	ND	330 222	ug/kg	12/13/9
2,4,5-Trichlorophenol	95-95-4	ND	330	ug/kg	12/13/9
2.4.6-Trichlorophenol	88-06-2	ND	330	ug/kg	12/13/

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-7.5 AEN LAB NO: 9612094-30 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	3.8	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/09/96
Arsenic	EPA 7060	480 *	0.5 mg/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/09/96
Lead	EPA 6010	33 *	1 mg/kg	12/10/96
Zinc	EPA 6010	410 *	1 mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1,2,2-Tetrachloroethane	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5		100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg 55 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-7.5 AEN LAB NO: 9612094-30 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	ND	5	ug/kg	12/11/96
1,1,1-Trichloroethane	71-55-6	ND	š	ug/kg	12/11/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/kg	12/11/96
Trichloroethene	79-01-6	ND	5	ug/kg	12/11/96
Vinyl Acetate	108-05-4	ND	50	ug/kg	12/11/96
Vinyl Chloride	75-01-4	ND	10	ug/kg	12/11/96
Xylenes Total	1330-20-7	ND	10	ug/kg	12/11/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330	ug/kg	12/13/96
Anthracene	120-12-7	ND	330	ug/kg	12/13/96
Benzidine	92-87-5	ND	1600	ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600	ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	330	ug/kg	12/13/96
Benzo(b) fluoranthene	205-99-2	ND	330	ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330	ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330	ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	330	ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	660	ug/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330	ug/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND ND	330	ug/kg	12/13/96
Bis(2-chloroisopropyl) Ethe Bis(2-ethylhexyl) Phthalate		ND ND	330	ug/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND ND	330	ug/kg ug/kg	12/13/96 12/13/96
Butylbenzyl Phthalate	85-68-7	ND ND	330	ug/kg ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND		ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330	ug/kg ug/kg	12/13/96
4-Chlorophenyl Phenyl Ether		ND ·	330	ug/kg	12/13/96
Chrysene	218-01-9	ND	330	ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330	ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330	ug/kg	12/13/96
1.2-Dichlorobenzene	95-50-1	ND	330	ug/kg	12/13/96
1.3-Dichlorobenzene	541-73-1	ND	330	ug/kg	12/13/9
1.4-Dichlorobenzene	106-46-7	ND		ug/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND		ug/kg	12/13/9
Diethyl Phthalate	84-66-2	ND	330	ug/kg	12/13/9
Dimethyl Phthalate	131-11-3	ND	330	ug/kg	12/13/9
2,4-Dinitrotoluene	121-14-2	ND	330	ug/kg	12/13/9
2.6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-12-7.5 AEN LAB NO: 9612094-30 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UN	DATE ITS ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/kg	12/13/96
Fluorene	86-73-7	NĎ	330 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/kg	12/13/96
Isophorone	78-59-1	ND	330 ug/kg	12/13/96
2-Methylmaphthalene	91-57-6	ND	330 ug/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug/kg	12/13/96
Pyrene	129-00-0	ND	330 ug/kg	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/kg	12/13/96
2-Chlorophenol	95-57 <i>-</i> 8	ND	330 ug/kg	12/13/96
2.4-Dichlorophenol	120-83-2	ND	330 ug/kg	12/13/96
2.4-Dimethylphenol	105-67-9	ND	330 ug/kg	12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug/kg	12/13/96
2,4-Dinitrophenol	51-28-5	ND	1600 ug/kg	12/13/96
2-Methylphenol	95-48-7	ND	330 ug/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 ug/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600 ug/kg	12/13/96
Pentachlorophenol	87-86-5	ND	1600 ug/kg	12/13/96
Pheno1	108-95-2	ND	330 ug/kg	12/13/96
2,4,5-Trichlorophenol	95-95-4	ND	330 ug/kg	12/13/96
2,4,6-Trichlorophenol	88-06-2	ND ND	330 ug/kg	12/13/90

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-2.5 AEN LAB NO: 9612094-31 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.2	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/09/96
Arsenic	EPA 7060	33 *	0.5 mg/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/09/96
Lead	EPA 6010	3,100 *	1 mg/kg	12/11/96
Zinc	EPA 6010	62.000 *	1 mg/kg	12/12/96
Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg	12/11/96 12/11/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-2.5 AEN LAB NO: 9612094-31 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5 ug/	'ka	12/11/96
1,1,1-Trichloroethane	71-55-6	ND	5 ug/	'ka	12/11/96
1,1,2-Trichloroethane	79-00-5	ND	5 ug/ 5 ug/ 5 ug/	'ka	12/11/96
Trichloroethene	79-01-6	ND	5 ug/	ka 'ka	12/11/96
Vinyl Acetate	108-05-4	ND	50 ug/	ka	12/11/96
Vinyl Chloride	75-01-4	ND	10 ug/	ka	12/11/96
Xylenes Total	1330-20-7	ND	10 ug/		12/11/96
#Extraction for BNAs	EPA 3550	-	Ext	rn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	13000 ug/	kg	12/13/96
Acenaphthylene	208-96-8	ND	13000 ug/		12/13/96
Anthracene	120-12-7	ND	13000 ug/		12/13/96
Benzidine	92-87 - 5	ND	64000 ug/		12/13/96
Benzoic Acid	65-85-0	ND	64000 ug/	kg	12/13/96
Benzo(a)anthracene	56-55- 3	ND	13000 ug/	kg	12/13/96
Benzo(b)fluoranthene	205-99 - 2	ND	13000 ug/	kď	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	13000 ug/	kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	13000 ug/	kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	13000 ug/	kğ	12/13/96
Benzyl Alcohol	100-51-6	ND	26000 ug/	kg	12/13/96
Bis(2-chloroethoxy)methane	111-91 - 1	МD	13000 ug/	kğ	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	13000 ug/	kg	12/13/96
Bis(2-chloroisopropyl) Ether		ND	13000 ug/		12/13/96
Bis(2-ethylhexyl) Phthalate	117-81-7	. ND	13000 ug/	kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	13000 ug/	'kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	13000 ug/	kg	12/13/96
4-Chloroaniline	106-47-8	ND	26000 ug/	'kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	13000 ug/	'kg	12/13/96
4-Chlorophenyl Phenyl Ether		ND	13000 ug/	′kg	12/13/96
Chrysene	218-01-9	ND	13000 ug/	′kg	12/13/96
Dibenzo(a.h)anthracene	53-70-3	ND	13000 ug/	′kg	12/13/96
Dibenzofuran	132-64-9	ND	13000 ug/	′kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	13000 ug/	′kg	12/13/96
1.2-Dichlorobenzene	95-50-1	ND	13000 ug/	′kg	12/13/96
1.3-Dichlorobenzene	541-73-1	DИ	13000 ug/	/kg	12/13/96
1.4-Dichlorobenzene	106-46-7	ND	13000 ug/	/kg	12/13/96
3.3 - Dichlorobenzidine	91-94-1	ND	26000 ug/	/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	13000 ug/		12/13/96
Dimethyl Phthalate	131-11-3	ND	13000 ug/	/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND	13000 ug.	/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	13000 ug.	/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-2.5 AEN LAB NO: 9612094-31 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	13000	ug/kg	12/13/96
Fluoranthene	206-44-0	ND	13000		12/13/96
Fluorene	86-73-7	ND	13000	ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	13000	ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	13000		12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	13000		12/13/96
Hexachloroethane	67-72-1	ND	13000		12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND		ug/kg	12/13/96
Isophorone	78-59-1	ND	13000	ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	13000		12/13/96
Naphthalene	91-20-3	ND	13000		12/13/96
2-Nitroaniline	88-74-4	ND		ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND		ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	64000		12/13/96
Nitrobenzene	98-95-3	ND.		ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6_	ND		ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND		ug/kg	12/13/96
Phenanthrene	85-01-8	ND		ug/kg	12/13/96
Pyrene_	129-00-0	ND	13000	ug/kg	12/13/96
1.2.4-Trichlorobenzene	120-82-1	ND	13000		12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	13000		12/13/96
2-Chlorophenol	95-57-8	ND	13000		12/13/96
2,4-Dichlorophenol	120-83-2	ND	13000		12/13/96
2,4-Dimethylphenol	105-67-9	ND	13000	ug/kg	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	64000	ug/kg	12/13/90
2,4-Dinitrophenol	51-28-5	ND	64000	ug/kg	12/13/9
2-Methylphenol	95-48-7	ND	13000	ug/kg	12/13/9
4-Methylphenol	106-44-5	ND	13000		12/13/9
2-Nitrophenol	88-75 - 5	ND	13000		12/13/96
4-Nitrophenol	100-02-7	ND	64000		12/13/9
Pentachlorophenol	87-86-5	ND	64000		12/13/90
Pheno1_	108-95-2	ND	13000		12/13/9
2.4.5-Trichlorophenol	95-95-4	ND	13000		12/13/9
2,4,6-Trichlorophenol	88-06-2	ND	13000	ug/kg	12/13/9

RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run dilute.

* = Value at or above reporting limit

ND = Not detected at or above the reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-5.0 AEN LAB NO: 9612094-32 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT RI	EPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	12.1	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/09/96
Arsenic	EPA 7060	18 *	0.5 mg/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/09/96
Lead	EPA 6010	160 *	1 mg/kg	12/10/96
Zinc	EPA 6010	3,200 *	1 mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2.2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg 5 ug/kg	12/12/96 12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-5.0 AEN LAB NO: 9612094-32 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	ND	5	ug/kg	12/12/96
1,1,1-Trichloroethane	71-55-6	ND		ug/kg	12/12/96
1,1,2-Trichloroethane	79-00-5	ND	. 5	ug/kg	12/12/96
Trichloroethene	79-01-6	ND	Š	ug/kg	12/12/96
Vinyl Acetate	108-05-4	ND	50	ug/kg	12/12/96
Vinyl Chloride	75-01-4	ND	10	ug/kg	12/12/96
Xylenes Total	1330-20-7	ND	10	ug/kg	12/12/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	3300	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND		ug/kg	12/13/96
Anthracene	120-12-7	ND	3300	ug/kg	12/13/96
Benzidine	92-87-5	ND	16000	ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	16000	ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	3300	ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	3300	ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	3300	ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	3300	ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND		ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND		ug/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	3300	ug/kg	12/13/96
Bis(2-choroethy1) Ether	111-44-4	ND	3300	ug/kg	12/13/9
Bis(2-chloroisopropyl) Ethe	er 108-60-1	ND	3300	ug/kg	12/13/9
Bis(2-ethylhexyl) Phthalate		ND		ug/kg	12/13/9
4-Bromophenyl Phenyl Ether	101-55-3	ND		ug/kg	12/13/9
Butylbenzyl Phthalate	85-68-7	ND		ug/kg	12/13/9
4-Chloroaniline	106-47-8	ND		ug/kg	12/13/9
2-Chloronaphthalene	91-58-7	ND		ug/kg	12/13/9
4-Chlorophenyl Phenyl Ether	7005-72-3	ND		ug/kg	12/13/9
Chrysene Chrysene	218-01-9	ND		uğ/kğ	12/13/9
Dibenzo(a,h)anthracene	53-70-3	ND		ug/kg	12/13/9
Dibenzofuran	132-64-9	ND	3300	ug/kg	12/13/9
Di-n-butyl Phthalate	84-74-2	ND		ug/kg	12/13/9
1,2-Dichlorobenzene	95-50 - 1	ND		ug/kg	12/13/9
1.3-Dichlorobenzene	541-73 - 1	ND	3300	ug/kg	12/13/9
1.4-Dichlorobenzene	106-46-7	ND	3300	ug/kg	12/13/9
3,3'-Dichlorobenzidine	91-94-1	ND	6600	ug/kg	12/13/9
Diethyl Phthalate	84 - 66-2	ND		ug/kg	12/13/9
Dimethyl Phthalate	131-11-3	ND		ug/kg	12/13/9
2.4-Dinitrotoluene	121-14-2	ND	3300	ug/kg	12/13/9
2,6-Dinitrotoluene	606-20-2	ND		ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-5.0 AEN LAB NO: 9612094-32 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	3300 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	3300 ug/kg	12/13/96
Fluorene	86-73-7	ND	3300 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	3300 ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	3300 ug/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	3300 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	3300 ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	3300 ug/kg	12/13/96
Isophorone	78-59-1	ND	3300 ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	3300 ug/kg	12/13/96
Naphthalene	91-20-3	ND	3300 ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND	16000 ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	16000 ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	16000 ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	3300 ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	3300 ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	3300 ug/kg	12/13/96
Phenanthrene	85-01-8	ND	3300 ug/kg	12/13/96
Pyrene	129-00-0	ND	3300 ug/kg	12/13/96
1.2.4-Trichlorobenzene	120-82-1	ND	3300 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	3300 ug/kg	12/13/96
2-Chlorophenol	95-57-8	ND	3300 ug/kg	12/13/96
2,4-Dichlorophenol	120-83-2	ND	3300 ug/kg	12/13/96
2.4-Dimethylphenol	105-67-9	ND	3300 ug/kg	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND	16000 ug/kg	12/13/96
2,4-Dinitrophenol	51-28-5	ND	16000 ug/kg	12/13/96
2-Methylphenol	95-48-7	ND	3300 ug/kg	12/13/96
4-Methylphenol	106-44-5	ND	3300 ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	3300 ug/kg	12/13/96
4-Nitrophenol	100-02-7	ND	16000 ug/kg	12/13/96
Pentachlorophenol	87-86-5	ND ND	16000 ug/kg	12/13/96
Pheno1	108-95-2	ND	3300 ug/kg	12/13/96
2.4.5-Trichlorophenol	95-95-4	ND	3300 ug/kg	12/13/96
2.4.6-Trichlorophenol	88-06-2	ND	3300 ug/kg	12/13/96

RLs elevated for EPA 8270 due to high levels of non-target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-7.5 AEN LAB NO: 9612094-33 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	4.3	S.U.	. 12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/09/96
Arsenic	EPA 7060	13 *	0.5 mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/09/96
Lead	EPA 6010	230 *	1 mg/kg	12/10/96
Zinc	EPA 6010	3,100 *	l mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5	2000000000000000000000000000000000000	100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg 5 ug/kg	12/12/96 12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-7.5 AEN LAB NO: 9612094-33 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	· ND	5.1	ıg/kg	12/12/96
1,1,1-Trichloroethane	71-55-6	ND	5 1	ig/kg	12/12/96
1,1,2-Trichloroethane	79-00-5	ND	5 1	ia/ka	12/12/96
Trichloroethene	79-01-6	ND	5 1	ig/kg ig/kg	12/12/96
Vinyl Acetate	108-05-4	ND	50 i	ig/kg	12/12/96
Vinyl Chloride	75-01-4	ND	10 i	ig/kg	12/12/96
Xylenes Total	1330-20-7	ND	10 i	ig/kg	12/12/96
#Extraction for BNAs	EPA 3550	~	E	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330 ι	ıa/ka	12/13/96
Acenaphthylene	208-96-8	ND	330 i	ig/kg	12/13/96
Anthracene	120-12-7	ND	330 i	ia/ka	12/13/96
Benzidine	92-87-5	ND	1600 ເ	ia/ka	12/13/96
Benzoic Acid	65-85-0	ND	1600 ເ	ia/ka	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 i	ia/ka	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 L	ig/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 u	ıg/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 L	ıg/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 ι	ığ/kğ	12/13/96
Benzyl Alcohol	100-51-6	ND	660 ເ	₫/kg	12/13/96
Bis(2-chloroethoxy)methan	ne 111-91-1	ND	330 ι	ıg/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 ι	ıg/kg	12/13/96
Bis(2-chloroisopropyl) E	ther 108-60-1	ND	330 ι	ıg/kg	12/13/96
Bis(2-ethylhexyl) Phthal		ND	330 ι	ug/kg	12/13/96
4-Bromophenyl Phenyl Eth	er 101-55-3	ND	330 ι	ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330 ι	ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND		ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 t	ug/kg	12/13/96
4-Chlorophenyl Phenyl Et		ND	330 t	ug/kg	12/13/96
Chrysene	218-01-9	ND	330 ו	ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 (ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74 - 2	ND	330	ug/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND		ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1.	ND	330	ug/kg	12/13/96
1.4-Dichlorobenzene	106-46-7	ND		ug/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND		ug/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	330	ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	. ND	330	ug/kg	12/13/96
2,4-Dinitrotoluene	121-14-2	ND	330	ug/kg	12/13/96
2,6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-13-7.5 AEN LAB NO: 9612094-33 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/kg	12/13/96
Fluorene	86-73-7	ND	330 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug/kg	12/13/96
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/kg	12/13/96
Isophorone	78-5 9 -1	ND	330 ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 uğ/kğ	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug/kg	12/13/96
Pyrene	129-00-0	ND	330 uğ/kğ	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/kg	12/13/96
2-Chlorophenol	95-57-8	ND	330 ug/kg	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 ug/kg	12/13/96
2.4-Dimethylphenol	105-67-9	ND	330 ug/kg	12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug/kg	12/13/90
2,4-Dinitrophenol	51-28-5	ND	1600 ug/kg	12/13/9
2-Methylphenol	95-48-7	ND	330 ug/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 ug/kg	12/13/90
4-Nitrophenol	100-02-7	ND	1600 ug/kg	12/13/9
Pentachlorophenol	87-86-5	ND	1600 ug/kg	12/13/9
Pheno1	108-95-2	ND	330 ug/kg	12/13/9
2,4,5-Trichlorophenol	95-95-4	ND	330 ug/kg	12/13/9
2.4.6-Trichlorophenol	88-06-2	ND	330 ug/kg	12/13/9

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-3.5 AEN LAB NO: 9612094-35 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.7	·	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/09/96
Arsenic	EPA 7060	4.4 *	0.5	mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050			Prep Date	12/09/96
Lead	EPA 6010	12 *	1	mg/kg	12/10/96
Zinc	EPA 6010	62 *	1	mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5	ND N	500 500 500 1000 1000 500 500 1000 500 5	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	12/12/96 12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-3.5 AEN LAB NO: 9612094-35 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	ND	500 .	ıg/kg	12/12/96
1.1.1-Trichloroethane	71-55-6	ND	500 (ig/kg	12/12/96
1,1,2-Trichloroethane	79-00-5	ND	500 t	ia/ka	12/12/96
Trichloroethene	79-01-6	ND	500 t	ia/ka	12/12/96
Vinyl Acetate	108-05-4	ND	5000 i	ia/ka	12/12/96
Vinyl Chloride	75-01-4	ND	1000 (ia/ka	12/12/96
Xylenes Total	1330-20-7	3,800 *	1000 (ig/kg	12/12/96
#Extraction for BNAs	EPA 3550	-	8	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330 ι	ıq/kq	12/13/96
Acenaphthylene	208-96-8	ND	330 i	ia/ka	12/13/96
Anthracene	120-12-7	ND	330 i	ia/ka	12/13/96
Benzidine	92-87-5	ND	1600 L	ia/ka	12/13/96
Benzoic Acid	65-85-0	ND	1600 ເ	ia/ka	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 i	ia/ka	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 L	ia/ka	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 i	ia/ka	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330 i	ia/ka	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 i	ıa/ka	12/13/96
Benzyl Alcohol	100-51-6	ND	660 u	ığ/kğ	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330 i		12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 t	Ja/ka	12/13/96
Bis(2-chloroisopropyl) Ethe	r 108-60-1	ND	330 ι	ığ/kğ	12/13/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	330 ú	ig/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330 u	ığ/kğ	12/13/96
Butylbenzyl Phthalate	85-68 - 7	ND	330 ι	ığ∕kğ	12/13/96
4-Chloroaniline	106-47-8	ND		ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 (ug/kg	12/13/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	330 t	uğ/kğ	12/13/90
Chrysene	218-01-9	ND	330 t	uğ/kğ	12/13/9
Dibenzo(a,h)anthracene	53-70-3	ND	330 (ug/kg	12/13/9
Dibenzofuran	132-64-9	ND	330	ug/kg	12/13/9
Di-n-butyl Phthalate	84-74-2	ND	330	uğ/kğ	12/13/9
1,2-Dichlorobenzene	95-50-1	ND	330	ug/kg	12/13/9
1.3-Dichlorobenzene	541-73-1	ND	330	ug/kg	12/13/9
1.4-Dichlorobenzene	106-46-7	ND	330	ug/kg	12/13/9
3.3'-Dichlorobenzidine	91-94-1	ND		ug/kg	12/13/9
Diethyl Phthalate	84-66-2	ND	330	ug/kg	12/13/9
Dimethyl Phthalate	131-11-3	ND	330	uğ/kğ	12/13/9
2.4-Dinitrotoluene	121-14-2	ND	330	uğ/kğ	12/13/9
2.6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-3.5 AEN LAB NO: 9612094-35 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ Cas#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	330	ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330	ug/kg	12/13/96
Fluorene	86-73-7	ND	330	ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330	ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330	ug/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330	ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330	ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND		ug/kg	12/13/96
Isophorone	78-59-1	ND	330	ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND		ug/kg	12/13/96
Naphthalene	91-20-3	ND		ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND		ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600	ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600	ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	330	ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30 - 6	ND		ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330	ug/kg	12/13/96
Phenanthrene	85-01-8	ND		uğ/kğ	12/13/96
Pyrene	129-00-0	ND	330	ug/kg	12/13/96
1.2.4-Trichlorobenzene	120-82-1	ND	330	ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND		ug/kg	12/13/96
2-Chlorophenol	95-57-8	ND	330	ug/kg	12/13/96
2.4-Dichlorophenol	120-83-2	ND	330	ug/kg	12/13/96
2.4-Dimethylphenol	105-67-9	ND	330	ug/kg	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND		ug/kg	12/13/96
2,4-Dinitrophenol	51-28-5	ND		ug/kg	12/13/96
2-Methylphenol	95-48-7	ND		ug/kg	12/13/96
4-Methylphenol	106-44-5	420 *	330	ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330	ug/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600	ug/kg	12/13/96
Pentachlorophenol	87-86-5	ND	1600	ug/kg	12/13/96
Pheno1	108-95-2	ND		uq/kq	12/13/96
2,4,5-Trichlorophenol	95-95-4	ND		ug/kg	12/13/96
2.4.6-Trichlorophenol	88-06-2	ND	330	ug/kg	12/13/96

RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

* = Value at or above reporting limit

ND = Not detected at or above the reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-5.0 AEN LAB NO: 9612094-36 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.8		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/09/96
Arsenic	EPA 7060	3.4 *	0.5	mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/09/96
Lead	EPA 6010	7 *	1	mg/kg	12/10/96
Zinc	EPA 6010	43 *	1	mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	100 * ND	55 100 100 105 10 105 105 105 105 105 10	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	12/12/96 12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-5.0 AEN LAB NO: 9612094-36 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

METHOD/ REPORTING DATE **ANALYTE** RESULT UNITS **ANALYZED** CAS# LIMIT Toluene 108-88-3 ND 5 ug/kg 12/12/96 1.1.1-Trichloroethane 71-55-6 5 ug/kg ND 12/12/96 1.1.2-Trichloroethane 79-00-5 ND 5 ug/kg 12/12/96 ND 5 ug/kg Trichloroethene 79-01-6 12/12/96 108-05-4 50 ug/kg Vinyl Acetate ND 12/12/96 Vinvl Chloride 12/12/96 75-01-4 ND 10 ug/kg Xylenes Total 1330-20-7 ND 10 ug/kg 12/12/96 #Extraction for BNAs EPA 3550 Extrn Date 12/09/96 Semi-Volatile Organics EPA 8270 Acenaphthene 83-32-9 ND 330 ug/kg 12/13/96 Acenaphthylene 208-96-8 ND 330 ug/kg 12/13/96 120-12-7 12/13/96 Anthracene ND 330 ug/kg 92-87-5 1600 ug/kg 12/13/96 Benzidine ND 65-85-0 ND 1600 ug/kg 12/13/96 Benzoic Acid 330 ug/kg 12/13/96 Benzo(a)anthracene 56-55-3 ND Benzo(b)fluoranthene 205-99-2 ND 330 ug/kg 12/13/96 207-08-9 ND 330 ug/kg 12/13/96 Benzo(k)fluoranthene 191-24-2 ND 330 ug/kg 12/13/96 Benzo(g,h,i)perylene Benzo(a)pyrene Benzyl Alcohol 50-32-8 12/13/96 330 ug/kg ND 12/13/96 100-51-6 ND 660 ug/kg Bis(2-chloroethoxy)methane 111-91-1 ND 330 ug/kg 12/13/96 Bis(2-choroethyl) Ether 111-44-4 ND 330 ug/kg 12/13/96 12/13/96 Bis(2-chloroisopropyl) Ether 108-60-1 ND 330 ug/kg Bis(2-ethylhexyl) Phthalate 4-Bromophenyl Phenyl Ether 117-81-7 ND 330 ug/kg 12/13/96 12/13/96 101-55-3 ND 330 ug/kg Butylbenzyl Phthalate 85-68-7 ND 330 ug/kg 12/13/96 12/13/96 4-Chloroaniline 106-47-8 ND 660 ug/kg 91-58-7 ND 330 ug/kg 12/13/96 2-Chloronaphthalene 7005-72-3 330 ug/kg 12/13/96 4-Chlorophenyl Phenyl Ether ND 330 ug/kg 12/13/96 218-01-9 Chrysene ND Dibenzo(a,h)anthracene 53-70-3 ND 330 ug/kg 12/13/96 12/13/96 132-64-9 ND 330 ug/kg Dibenzofuran 84-74-2 ND 330 ug/kg 12/13/96 Di-n-butyl Phthalate 95-50-1 330 ug/kg 12/13/96 1.2-Dichlorobenzene ND 12/13/96 541-73-1 330 ug/kg 1.3-Dichlorobenzene ND 12/13/96 1.4-Dichlorobenzene 106-46-7 ND 330 ug/kg3.3'-Dichlorobenzidine 91-94-1 660 uq/kg 12/13/96 ND 12/13/96 Diethyl Phthalate 330 ug/kg 84-66-2 ND 131-11-3 ND 330 ug/kg 12/13/96 Dimethyl Phthalate 2.4-Dinitrotoluene 121-14-2 ND 330 ug/kg 12/13/96 12/13/96 2.6-Dinitrotoluene 606-20-2 ND 330 ug/kg

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-5.0 AEN LAB NO: 9612094-36 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/kg	12/13/96
Fluorene	86-73-7	ND	330 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/kg	12/13/96
<pre>Indeno(1,2,3-cd)pyrene</pre>	193-39-5	ND	330 ug/kg	12/13/96
Isophorone	78-59-1	ND	330 ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/kg	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/kg	12/13/96
Phenanthrene '	85-01-8	ND	330 ug/kg	12/13/96
Pyrene	129-00-0	ND	330 ug/kg	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/kg	12/13/96
2-Chlorophenol	95-57-8	ND	330 ug/kg	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 ug/kg	12/13/96
2.4-Dimethylphenol	105-67-9	ND	330 ug/kg	12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	NÐ	1600 ug/kg	12/13/96
2.4-Dinitrophenol	51-28-5	ND	1600 ug/kg	12/13/96
2-Methylphenol	95-48-7	ND	330 ug/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 ug/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600 ug/kg	12/13/96
Pentachlorophenol	87 - 86-5	ND	1600 ug/kg	12/13/96
Phenol	108-95-2	ND	330 ug/kg	12/13/96
2,4,5-Trichlorophenol	95 - 95-4	ND	330 ug/kg	12/13/96
2.4.6-Trichlorophenol	88-06-2	ND	330 ug/kg	12/13/9

ND = Not detected at or above the reporting limit \star = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-7.5 AEN LAB NO: 9612094-37 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.9	S	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	F	Prep Date	12/09/96
Arsenic	EPA 7060	18 *	0.5 m	ng/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-	F	Prep Date	12/09/96
Lead	EPA 6010	5 *	1 π	ng/kg	12/10/96
Zinc	EPA 6010	44 *	1 1	ng/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1,2.2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		300 to 500 to 50	1g/kg 1g/kg 1g/kg 1g/kg 1g/kg 1g/kg	12/13/96 12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-7.5 AEN LAB NO: 9612094-37 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Toluene	108-88-3	ND	300 ug/kg	12/13/96
1,1,1-Trichloroethane	71-55-6	ND	300 ug/kg	12/13/96
1,1,2-Trichloroethane	79-00-5	ND	300 ug/kg	12/13/96
Trichloroethene	79-01-6	NĎ	300 ug/kg	12/13/96
Vinyl Acetate	108-05-4	ND	3000 ug/kg	12/13/96
Vinyl Chloride	75-01-4	ND	500 ug/kg	12/13/96
Xylenes Total	1330-20-7	ND	500 ug/kg	12/13/96
#Extraction for BNAs	EPA 3550	-	Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270			
Acenaphthene	83-32-9	ND	330 ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330 ug/kg	12/13/96
Anthracene	120-12-7	ND	330 ug/kg	12/13/96
Benzidine	92-87-5	ND	1600 ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600 ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 ug/kg	12/13/96
Benzo(b)fluoranthene	205 - 99-2	ND	330 ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 ug/kg	12/13/96
Benzo(g,h,i)perylene	191 - 24-2	ND	330 ug/kg	12/13/96
Benzo(a)pyrene	50-32 - 8	ND	330 ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	660 ug/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330 ug/kg	12/13/96
Bis(2-choroethy1) Ether	111-44-4	ND	330 ug/kg	12/13/96
Bis(2-chloroisopropyl) Ether		ND	330 ug/kg	12/13/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	330 ug/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330 ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330 ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND	660 ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 ug/kg	12/13/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	330 ug/kg	12/13/96
Chrysene	218-01-9	ND	330 ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330 ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330 ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 ug/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND	330 ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	330 ug/kg	12/13/96
1,4-Dichlorobenzene	106-46-7	ND	330 ug/kg	12/13/96
3.3'-Dichlorobenzidine	91-94-1	ND	660 ug/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	330 ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	330 ug/kg	12/13/96
2,4-Dinitrotoluene	121-14-2	ND	330 ug/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330 ug/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-15-7.5 AEN LAB NO: 9612094-37 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96
DATE RECEIVED: 12/06/96 **REPORT DATE: 12/31/96**

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZEI
Di-n-octyl Phthalate	117-84-0	ND	330 ı	ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ı	ug/kg	12/13/96
Fluorene	86-73-7	ND	330 ι	Jg∕kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ι	ug/kg	12/13/9
Hexachlorobutadiene	87-68-3	ND	330 ι	ug/kg	12/13/9
Hexachlorocyclopentadiene	77-47-4	ND	330 ι	ığ/kğ	12/13/9
Hexachloroethane	67-72-1	ND	330 ι	ığ/kğ	12/13/9
<pre>Indeno(1.2.3-cd)pyrene</pre>	193-39-5	ND	330 t	ug/kg	12/13/9
Isophorone	78-59-1	ND	330 u	ıg∕kg	12/13/9
2-Methylnaphthalene	91-57 <i>-</i> 6	ND	330 ι	ıg∕kg	12/13/9
Naphthalene	91-20-3	ND	330 ι	ig/kg	12/13/9
2-Nitroaniline	88-74-4	ND	1600 ι	ıg/kg	12/13/9
3-Nitroaniline	99-09-2	ND	1600 ι	ıg/kg	12/13/9
4-Nitroaniline	100-01-6	ND	1600 ι	ıg/kg	12/13/9
Nitrobenzene	98-95 - 3	ND	330 ι	ıg/kg	12/13/9
N-Nitrosodiphenylamine	86-30-6	ND	330 ι	ığ/kğ	12/13/9
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ι	ıg/kg	12/13/9
Phenanthrene	85-01-8	ND	330 t	ıg/kg	12/13/9
Pyrene	129-00-0	ND	330 ι	ıg/kg	12/13/9
1,2,4-Trichlorobenzene	120-82-1	ND	330 u	ıg/kg	12/13/9
4-Chloro-3-methylphenol	59-50-7	ND	330 ι	ığ/kğ	12/13/9
2-Chlorophenol	95-57 - 8	ND	330 t	ığ/kğ	12/13/9
2,4-Dichlorophenol	120-83-2	ND	330 ι	ug/kg	12/13/9
2,4-Dimethylphenol	105-67-9	ND	330 t	ug/kg	12/13/9
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ເ	ug/kg	12/13/9
2.4-Dinitrophenol	51-28-5	ND	1600 t	ug/kg	12/13/9
2-Methylphenol	95-48-7	ND	330 1	ug/kg	12/13/9
4-Methylphenol	106-44-5	ND	330 (ug/kg	12/13/9
2-Nitrophenol	88-75-5	ND	330 (ug/kg	12/13/9
4-Nitrophenol	100-02-7	ND	1600	ug/kg	12/13/9
Pentachlorophenol	87-86-5	ND	1600	ug/kg	12/13/9
Pheno1	108-95-2	ND	330	uğ/kğ	12/13/9
2,4,5-Trichlorophenol	95-95-4	ND	330	uğ/kğ	12/13/9
2.4.6-Trichlorophenol	88-06-2	ND	330	uğ/kğ	12/13/9

RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-1(B)-5.0 AEN LAB NO: 9612094-39 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	11.4		S.U.	12/23/96
Lead	EPA 7420	11	* 3	mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	•		Prep Date	12/26/96
Arsenic	EPA 7060	3.8	* 0.5	mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/26/96
Zinc	EPA 6010	59	* 1	mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-1(B)-7.5 AEN LAB NO: 9612094-40 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.3	S.U.	12/23/96
Lead	EPA 7420	32 *	3 mg/kg	12/30/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/26/96
Arsenic	EPA 7060	4.6 *	0.5 mg/kg	12/30/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/26/96
Zinc	EPA 6010	910 *	1 mg/kg	12/27/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-6(B)-7.5 AEN LAB NO: 9612094-42 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	11.2	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/09/96
Arsenic	EPA 7060	1.1 *	0.5 mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/09/96
Lead	EPA 6010	8 *	1 mg/kg	12/10/96
Zinc	EPA 6010	39 *	1 mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloroethene trans-1.3-Dichloropropene trans-1.3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2.2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4		100 ug/kg 5 ug/kg 5 ug/kg 5 ug/kg 10 ug/kg 5 ug/kg	12/12/96 12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-6(B)-7.5 AEN LAB NO: 9612094-42 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE ANALYZED
Toluene	108-88-3	ND	5	ug/kg	12/12/96
1.1.1-Trichloroethane	71-55-6	ND	5	ug/kg	12/12/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/kg	12/12/96
Trichloroethene Vinyl Acetate	79-01-6	ND	5	ug/kg	12/12/96
Vinyl Acetate Vinyl Chloride	108-05-4 75-01-4	ND ND	50	ug/kg	12/12/96
Xylenes Total	1330-20-7	ND ND		ug/kg ug/kg	12/12/96 12/12/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330	ug/kg	12/13/96
Anthracene	120-12-7	ND	330	ug/kg	12/13/96
Benzidine	92-87-5	ND	1600	ug/kg	12/13/96
Benzoic Acid Benzo(a)anthracene	65-85-0	ND	1600	ug/kg	12/13/96
Benzo(b)fluoranthene	56-55-3 205-99-2	ND ND	330	ug/kg	12/13/96
Benzo(k)fluoranthene	205-99-2	ND ND	330 220	ug/kg ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330	ug/kg ug/kg	12/13/96 12/13/96
Benzo(a)pyrene	50-32-8	ND	330	ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	660	ug/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330	ug/kg	12/13/96
Bis(2-choroethy1) Ether	111-44-4	ND	330	ug/kg	12/13/96
Bis(2-chloroisopropyl) Ether	108-60-1	ND	330	ug/kg	12/13/96
Bis(2-ethylhexyl) Phthalate		ND	330	ug/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330	ug/kg	12/13/96
Butylbenzyl Phthalate 4-Chloroaniline	85-68-7 106-47 <i>-</i> 8	ND	. 330	ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND ND	320	ug/kg	12/13/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	330	ug/kg ug/kg	12/13/96 12/13/96
Chrysene	218-01-9	ND	330	ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	330	ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	330	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330	ug/kg	12/13/96
1.2-Dichlorobenzene	95-50-1	ND	330	ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	330	ug/kg	12/13/96
1.4-Dichlorobenzene	106-46-7	ND	330	ug/kg	12/13/96
3,3'-Dichlorobenzidine Diethyl Phthalate	91-94-1 84-66 <i>-</i> 2	ND	000	ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND ND	330 330	ug/kg ug/kg	12/13/96
2,4-Dinitrotoluene	121-14-2	ND ND	33U 330	ug/kg ug/kg	12/13/96 12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-6(B)-7.5 AEN LAB NO: 9612094-42 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 **REPORT DATE: 12/31/96**

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	330 ı	ua/ka	12/13/96
Fluoranthene	206-44-0	ND	330 i	ia/ka	12/13/96
Fluorene	86-73-7	ND		ig/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 i	ia/ka	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 L	ia/ka	12/13/96
Hexachlorocyclopentadiene	77-47 - 4	ND	330 i	ia/ka	12/13/96
Hexachloroethane	67-72-1	ND	330 i	ia/ka	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 u	ia/ka	12/13/96
Isophorone	78-59-1	ND		g/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 u		12/13/96
Naphthalene	91-20-3	ND	330 u	a/ka	12/13/96
2-Nitroaniline	88-74-4	ND	1600 u	a/ka	12/13/96
3-Nitroaniline	99-09-2	ND	1600 u	a/ka	12/13/96
4-Nitroaniline	100-01-6	ND	1600 u	a/ka	12/13/96
Nitrobenzene	98-95-3	ND	330 u	a/ka	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 u		12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 u	a/ka	12/13/96
Phenanthrene	85-01-8	ND	330 u	a/ka	12/13/96
Pyrene	129-00-0	ND	330 u	a/ka	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 u	a/ka	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 u	a/ka	12/13/96
2-Chlorophenol	95-57-8	ND	330 u	a/ka	12/13/96
2,4-Dichlorophenol	120-83-2	ND	330 u	a/ka	12/13/96
2.4-Dimethylphenol	105-67-9	ND	330 u		12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 u	a/ka	12/13/96
2.4-Dinitrophenol	51-28-5	ND	1600 u	a/ka	12/13/96
2-Methylphenol	95-48-7	ЙD	330 u	a/ka	12/13/96
4-Methylphenol	106-44-5	ND	330 u	a/ka	12/13/96
2-Nitrophenol	88-75-5	ND	330 u	a/ka	12/13/96
4-Nitrophenol	100-02-7	ND	1600 u		12/13/96
Pentachlorophenol	87-86-5	ND	1600 u	a/ka	12/13/96
Pheno1 '	108-95-2	ND	330 u	a/ka	12/13/96
2,4,5-Trichlorophenol	95-95-4	ND	330 u	ia/ka	12/13/96
2.4.6-Trichlorophenol	88-06-2	ND	330 u	ia/ka	12/13/96

ND = Not detected at or above the reporting limit \star = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9(B)-5.0 AEN LAB NO: 9612094-44 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	4.7		S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/09/96
Arsenic	EPA 7060	3.7 *	0.5	mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/09/96
Lead	EPA 6010	9 *	1	mg/kg	12/10/96
Zinc	EPA 6010	560 *	1	mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethane 1.1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	ND N	3000 3000 5000 50000 50000 3000 3000 5000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000 3000	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	12/12/96 12/12/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9(B)-5.0 AEN LAB NO: 9612094-44 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	37,000 *	3000	ua/ka	12/12/96
1,1,1-Trichloroethane	71-55-6	37,000 ND	3000	ug/kg ug/ka	12/12/96
1,1,2-Trichloroethane	79-00-5	ND	3000	ug/kg ua/ka	12/12/96
Trichloroethene	79-01-6	ND	3000	ug/kg ug/ka	12/12/96
Vinyl Acetate	108-05-4	ND	30000	ug/kg ug/ka	12/12/96
Vinyl Chloride	75-01-4	ND	5000	ug/kg ug/ka	12/12/96
Xylenes Total	1330-20-7	21.000 *	5000		12/12/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/09/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	33000	ug/kg	12/13/96
Acenaphthylene	208-96-8	NĎ	33000	ug/kg	12/13/96
Anthracene	120-12-7	ND	33000	ug/kg	12/13/96
Benzidine	92-87-5	ND	160000	ug/kg	12/13/96
Benzoic Acid	65-85 - 0	ND	160000	ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND	33000	ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	33000	ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	33000	ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	33000	ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	33000	ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	66000	ug/kg	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	33000	ug/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	33000	ug/kg	12/13/96
Bis(2-chloroisopropyl) Ethe	er 108-60-1	ND	33000	ug/kg	12/13/96
Bis(2-ethylhexyl) Phthalate		ND	33000	ug/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	33000	ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	33000	ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND	66000	ug/kg	12/13/96
2-Chloronaphthalene	91-58 - 7	ND	33000	ug/kg	12/13/96
4-Chlorophenyl Phenyl Ether		ND	33000	ug/kg	12/13/96
Chrysene	218-01-9	ND	33000	ug/kg	12/13/96
Dibenzo(a,h)anthracene	53-70-3	ND	33000	ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	33000	ug/kg	12/13/96
Di-n-butyl Phthalate	84-74 - 2	ND	33000	ug/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND	33000	ug/kg	12/13/96
1,3-Dichlorobenzene	541-73-1	ND	33000	ug/kg	12/13/96
1.4-Dichlorobenzene	106-46-7	ND	33000	ug/kg	12/13/96
3.3'-Dichlorobenzidine	91-94-1	ND	66000	ug/kg	12/13/9
Diethyl Phthalate	84-66-2	ND	33000	ug/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	33000	ug/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND	33000	ug/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	33000	ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9(B)-5.0 AEN LAB NO: 9612094-44 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT U	DATE INITS ANALYZEI
Di-n-octyl Phthalate	117-84-0	ND	33000 ug/k	g 12/13/96
Fluoranthene	206-44-0	ND	33000 ug/k	ğ 12/13/96
Fluorene	86-73-7	ND	33000 ug/k	g 12/13/96
Hexach]orobenzene	118-74-1	ND	33000 ug/k	g 12/13/96
Hexachlorobutadiene	87 - 68-3	ND	33000 ug/k	g 12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	33000 ug/k	g 12/13/96
Hexachloroethane	67-72-1	ND	33000 ug/k	g 12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	33000 ug/k	g 12/13/96
Isophorone	78-59-1	ND	33000_ug/k	g 12/13/96
2-Methylnaphthalene	91-57-6	ND	33000 ug/ki	
Naphthalene	91-20-3	ND	33000 uğ/ki	
2-Nitroaniline	88-74-4	ND	160000 ug/k	g 12/13/96
3-Nitroaniline	99-09-2	ND	160000 ug/k	
4-Nitroaniline	100-01-6	NĎ	160000 ug/k	g 12/13/96
Nitrobenzene	98-95-3	ND	33000 ug/k	g 12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	33000 ug/k	g 12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	33000 ug/k	
Phenanthrene	85-01-8	ND	33000 ug/k	
Pyrene	129-00-0	ND	33000 ug/k	
1,2,4-Trichlorobenzene	120-82-1	ND	33000 ug/ki	
4-Chloro-3-methylphenol	59-50-7	ND	33000 ug/k	g 12/13/96
2-Chlorophenol	95-57-8	ND	33000 ug/k	g 12/13/96
2.4-Dichlorophenol	120-83-2	ND	33000 ug/k	g 12/13/96
2.4-Dimethylphenol	105-67-9	ND	33000 ug/k	
4.6-Dinitro-2-methylphenol	534-52-1	ND	160000 ug/k	g 12/13/96
2,4-Dinitrophenol	51-28-5	ND	160000 ug/k	g 12/13/96
2-Methylphenol	95-48-7	ND	33000 ug/k	g 12/13/96
4-Methylphenol	106-44-5	ND	33000 ug/k	
2-Nitrophenol	88-75-5	ND	33000 ug/k	g 12/13/96
4-Nitrophenol	100-02-7	ND	160000 ug/k	g 12/13/96
Pentachlorophenol	87-86-5	ND	160000 ug/k	g 12/13/96
Phenol	108-95-2	ND	33000 ug/k	g 12/13/96
2.4,5-Trichlorophenol	95-95-4	ND	33000 ug/k	g 12/13/96
2.4.6-Trichlorophenol	88-06-2	ND	33000 ug/k	

RLs elevated for EPA 8270 due to high levels of non-target compounds; RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

* = Value at or above reporting limit

ND = Not detected at or above the reporting limit

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LEVINE-FRICKE-RECON

SAMPLE ID: GP-9(B)-7.5 AEN LAB NO: 9612094-45 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.1	Ç	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	F	Prep Date	12/09/96
Arsenic	EPA 7060	170 *	0.5 n	ng/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-	F	Prep Date	12/09/96
Lead	EPA 6010	4 *	. 1 m	ng/kg	12/10/96
Zinc	EPA 6010	140 *	1 n	ng/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.1-Dichloroethane 1.2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1.1.2.2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	200 * ND N	5 5 10 0 10 10 10 10 10 10 10 10 10 10 10 1	ig/kg ig/kg ig/kg ig/kg	12/16/96 12/16/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9(B)-7.5 AEN LAB NO: 9612094-45 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE Analyzed
Toluene	108-88-3	5 *	· 5	ug/kg	12/16/96
1.1.1-Trichloroethane	71-55-6	NĎ		ug/kg	12/16/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/kg	12/16/96
Trichloroethene	79-01-6	ND	5	ug/kg	12/16/96
Vinyl Acetate	108-05-4	ND	50	ug/kg	12/16/96
Vinyl Chloride	75-01-4	ND	10	ug/kg	12/16/96
Xylenes Total	1330-20-7	ND	10	ug/kg	12/16/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/10/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND		ug/kg	12/13/96
Anthracene	120-12-7	ND		ug/kg	12/13/96
Benzidine	92-87-5	ND	1600	ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600	ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND		ug/kg	12/13/96
Benzo(b)fluoranthene Benzo(k)fluoranthene	205-99-2	ND	330	ug/kg	12/13/96
Benzo(g,h,i)perylene	207-08-9	ND ND	330	ug/kg	12/13/96
Benzo(a)pyrene	191-24-2 50-32-8	ND ND		ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND ND		ug/kg ug/kg	12/13/96 12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND		ug/kg	12/13/9
Bis(2-choroethyl) Ether	111-44-4	ND		ug/kg	12/13/9
Bis(2-chloroisopropy1) Ethe		ND ND	330	ug/kg	12/13/9
Bis(2-ethylhexyl) Phthalate		ND		ug/kg	12/13/9
4-Bromophenyl Phenyl Ether	101-55-3	ND	330	ug/kg	12/13/9
Butylbenzyl Phthalate	85-68-7	ND	330	ug/kg	12/13/9
4-Chloroaniline	106-47-8	ND	660	ug/kg	12/13/9
2-Chloronaphthalene	91-58-7	ND	330	ug/kg	12/13/9
4-Chlorophenyl Phenyl Ether		ND	330	ug/kg	12/13/9
Chrysene	218-01-9	ND	330	ug/kg	12/13/9
Dibenzo(a,h)anthracene	53-70-3	ND		ug/kg	12/13/9
Dibenzofuran	132-64-9	ND		ug/kg	12/13/9
Di-n-butyl Phthalate	84-74-2	ND -		ug/kg	12/13/9
1,2-Dichlorobenzene	95-50-1	ND	330	ug/kg	12/13/9
1,3-Dichlorobenzene	541-73-1	ND	330	ug/kg	12/13/9
1.4-Dichlorobenzene	106-46-7	ND		ug/kg	12/13/9
3.3'-Dichlorobenzidine	91-94-1	ND		ug/kg	12/13/9
Diethyl Phthalate	84-66-2	ND		ug/kg	12/13/9
Dimethyl Phthalate	131-11-3	ND		ug/kg	12/13/9
2.4-Dinitrotoluene	121-14-2	ND		ug/kg	12/13/9
2.6-Dinitrotoluene	606-20-2	ND	330	ug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-9(B)-7.5 AEN LAB NO: 9612094-45 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug	/kg	12/13/96
<u>F</u>]uoranthene	206-44-0	ND	330 ug	/kg	12/13/96
Fluorene	86-73-7	ND	330 ug	/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug	/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 uğ.	/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 uğ.	/kď	12/13/96
Hexachloroethane	67-72-1	ND	330 ug.	/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug.	/ka	12/13/96
Isophorone	78-59-1	ND	330 ug.	/ka	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug.	/ka	12/13/96
Naphthalene	91-20-3	ND	330 ug.	/ka	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug.	/ka	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug.	/ka	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug.	/kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug.	/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/	/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/	/kg /ka	12/13/96
Phenanthrene	85-01-8	ND	330 ug/	/kg /ka	12/13/96
Pyrene	129-00-0	ND	330 ug/	/kg /ka	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug/	/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND ND	330 ug/	/kg /kg	12/13/96
2-Chlorophenol	95-57-8	ND ND	330 ug/	/kg	12/13/96
2.4-Dichlorophenol	120-83-2	ND	220 ug/	/kg /kg	
2,4-Dimethylphenol	105-67-9	ND ND	330 ug.	/kg /ka	12/13/96
4,6-Dinitro-2-methylphenol	534-52-1	ND ND	330 ug.	/kg	12/13/96
2.4-Dinitrophenol	51-28-5	ND UN	1600 ug.	/ Kg /kg	12/13/96
2-Methylphenol	95-48-7		1600 ug.	/kg	12/13/96
4-Methylphenol		ND	330 ug.		12/13/96
2-Nitrophenol	106-44-5	ND	330 ug.	/kg	12/13/96
4-Nitrophenol	88-75 - 5	ND	330 ug.	/kg	12/13/96
	100-02-7	ND	1600 ug.	/ Kg	12/13/96
Pentachlorophenol Phenol	87-86-5	ND	1600 ug	/kg	12/13/96
	108-95-2	ND	330 uğ	/kg	12/13/96
2.4.5-Trichlorophenol	95-95-4	ND	330 ug	/kg	12/13/96
2,4,6-Trichlorophenol	88-06-2	ND	330 ug	/kg	12/13/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-3.5 AEN LAB NO: 9612094-46 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT .	REPORTING LIMIT UNITS	DATE Analyzed
Soil pH measured in water	EPA 9045A	8.3	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date	12/09/96
Arsenic	EPA 7060	4.7 *	0.5 mg/kg	12/11/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date	12/09/96
Lead	EPA 6010	56 *	1 mg/kg	12/10/96
Zinc	EPA 6010	67 *	1 mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	NDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	500 ug/kg 30 ug/kg 30 ug/kg 30 ug/kg 30 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 50 ug/kg 30 ug/kg	12/17/96 12/17/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-3.5 AEN LAB NO: 9612094-46 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE Analyzed
Toluene	108-88-3	ND	30 11	ig/kg	12/17/06
1,1,1-Trichloroethane	71-55-6	ND	30 0	ig/kg ig/kg	12/17/96
1.1.2-Trichloroethane	79-00-5	ND	30 u	g/kg g/kg	12/17/96 12/17/96
Trichloroethene	79-01-6	ND	30 u	g/kg g/kg	12/17/96
Vinyl Acetate	108-05-4	ND	300 u	g/kg a/ka	
Vinyl Chloride	75-01-4	ND	500 u	g/kg g/kg	12/17/96 12/17/96
Xylenes Total	1330-20-7	210 *	50 u	g/kg g/kg	12/17/96
#Extraction for BNAs	EPA 3550	-	Ε	xtrn Date	12/10/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330 u	a/ka	12/13/96
Acenaphthylene	208-96-8	ND	330 u	a/ka	12/13/96
Anthracene	120-12-7	ND	330 u	a/ka	12/13/96
Benzidine	92-87-5	ND	1600 u	a/ka	12/13/96
Benzoic Acid	65-85-0	ND	1600 u	a/ka	12/13/96
Benzo(a)anthracene	56-55-3	ND	330 u	a/ka	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330 u	a/ka	12/13/96
Benzo(k)fluoranthene	207-08-9	ND	330 u	a/ka	12/13/96
Benzo(g.h.i)perylene	191-24-2	ND	330 u	g/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	330 u	g/kď	12/13/96
Benzyl Alcohol	100-51-6	ND	660 u	q/kq	12/13/96
Bis(2-chloroethoxy)methane	111-91-1	ND	330 u	a/ka	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND	330 u	₫/kď	12/13/96
Bis(2-chloroisopropyl) Ethe		ND	330 u	g/kg	12/13/96
Bis(2-ethylhexyl) Phthalate		ND	330 u	g/kg	12/13/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	330 u	g/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330 u	g/kg	12/13/96
4-Chloroaniline	106-47-8	ND	660 u	g/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330 u	g/kg	12/13/96
4-Chlorophenyl Phenyl Ether		ND	330 u	g/kg	12/13/96
Chrysene	218-01-9	ND	330 u	g/kg	12/13/96
Dibenzo(a.h)anthracene	53-70-3	ND	330 u	g/kg	12/13/96
Dibenzofuran	132-64-9	ND	330 u	g/kg	12/13/96
Di-n-butyl Phthalate	84-74-2	ND	330 u	g/kg	12/13/96
1,2-Dichlorobenzene	95-50-1	ND	330 u	g/kg	12/13/96
1.3-Dichlorobenzene	541-73-1	ND	330 u	g/kg	12/13/96
1,4-Dichlorobenzene	106-46-7	ND	330 և	g/kg	12/13/96
3,3'-Dichlorobenzidine	91-94-1	ND	660 u	g/kg	12/13/96
Diethyl Phthalate	84-66-2	ND	330 u	g/kg	12/13/96
Dimethyl Phthalate	131-11-3	ND	330 u	g/kg	12/13/96
2.4-Dinitrotoluene	121-14-2	ND	330 u	g/kg	12/13/96
2.6-Dinitrotoluene	606-20-2	ND	330 u	g/kg	12/13/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-3.5 AEN LAB NO: 9612094-46 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 **REPORT DATE: 12/31/96**

NALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Di-n-octyl Phthalate	117-84-0	ND	330 ug	j/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug	j/kg	12/13/96
Fluorene	86-73-7	ND	330 ug	ı/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug	ı/kg	12/13/96
Hexachlorobutadiene	87 - 68-3	ND	330 ug	ı/kġ	12/13/96
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330 ug	ı/kg	12/13/96
Hexachloroethane	67-72 - 1	ND	330 ug	ı/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug	i/kǧ	12/13/96
Isophorone	78-59-1	ND	330 ug	i/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 uğ	i/kǧ	12/13/96
Naphthalene	91-20-3	ND	330 ug	i/kď	12/13/96
2-Nitroaniline	88-74-4	ND	1600 ug		12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug		12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug	/ka	12/13/96
Nitrobenzene	98-95-3	ND	330 ug		12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug	i/ka	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug	i/ka	12/13/96
Phenanthrene	85-01-8	ND	330 ug	i/ka	12/13/96
Pyrene	129-00-0	ND	330 ug	ı/ka	12/13/96
1,2,4-Trichlorobenzene	120-82-1	ND	330 ug	i/ka	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug	ı/ka	12/13/96
2-Chlorophenol	95-57-8	ND	330 ug	ı/ka	12/13/90
2.4-Dichlorophenol	120-83-2	ND	330 ug		12/13/90
2,4-Dimethylphenol	105-67-9	ND	330 ug		12/13/90
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug		12/13/9
2,4-Dinitrophenol	51-28-5	ND	1600 ug		12/13/9
2-Methylphenol	95-48-7	ND	330 ug	1/ka	12/13/9
4-Methylphenol	106-44-5	ND	330 ug	y/kg	12/13/9
2-Nitrophenol	88-75-5	ND	330 ug		12/13/9
4-Nitrophenol	100-02-7	ND	1600 ug		12/13/9
Pentachlorophenol	87-86-5	ND	1600 ug		12/13/9
Phenol	108-95-2	ND	330 ug	9/ N9 1/ka	12/13/9
2.4.5-Trichlorophenol	95-95-4	ND	330 u		12/13/9
2,4,6-Trichlorophenol	88-06-2	ND ND	330 u	∃′\Y ⊓/ka	12/13/9

RLs elevated for EPA 8240 due to high levels of non-target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-5.0 AEN LAB NO: 9612094-47 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.0	S	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	ŀ	Prep Date	12/09/96
Arsenic	EPA 7060	3.5 *	0.5 n	ng/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	F	Prep Date	12/09/96
Lead	EPA 6010	7 *	1 m	ng/kg	12/10/96
Zinc	EPA 6010	44 *	1 п	ıg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	9.200 * ND N	30 L 30 L 50 L 50 L 50 L 30 L	ıg/kg ıg/kg ıg/kg ıg/kg	12/17/96 12/17/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-5.0 AEN LAB NO: 9612094-47 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	G UNITS	DATE ANALYZED
Toluene	108-88-3	ND	30	ug/kg	12/17/96
1.1.1-Trichloroethane	71-55-6	ND		ug/kg	12/17/96
1,1,2-Trichloroethane	79-00-5	ND	30	ug/kg	12/17/96
Trichloroethene	79-01-6	ND	30	ug/kg	12/17/96
Vinyl Acetate	108-05-4	ND	300	ug/kg	12/17/96
Vinyl Chloride	75-01-4	ND	50	ug/kg	12/17/96
Xylenes Total	1330-20-7	130 *	50	ug/kg	12/17/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/10/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	330	ug/kg	12/13/96
Acenaphthylene	208-96-8	ND	330	ug/kg	12/13/96
Anthracene	120-12-7	ND	330	ug/kg	12/13/96
Benzidine	92-87-5	ND	1600	ug/kg	12/13/96
Benzoic Acid	65-85-0	ND	1600	ug/kg	12/13/96
Benzo(a)anthracene	56-55-3	ND		ug/kg	12/13/96
Benzo(b)fluoranthene	205-99-2	ND	330	ug/kg	12/13/96
Benzo(k)fluoranthene	207-08-9	ND		ug/kg	12/13/96
Benzo(g,h,i)perylene	191-24-2	ND	330	ug/kg	12/13/96
Benzo(a)pyrene	50-32-8	ND	330	ug/kg	12/13/96
Benzyl Alcohol	100-51-6	ND	660	ug/kg	12/13/96
Bis(2-chloroethoxy)methane		ND	330	ug/kg	12/13/96
Bis(2-choroethyl) Ether	111-44-4	ND		ug/kg	12/13/96
Bis(2-chloroisopropyl) Eth		ND		ug/kg	12/13/96
Bis(2-ethylhexyl) Phthalat		ND		ug/kg	12/13/96
4-Bromophenyl Phenyl Ether		ND		ug/kg	12/13/96
Butylbenzyl Phthalate	85-68-7	ND	330	ug/kg	12/13/96
4-Chloroaniline	106-47-8	ND		ug/kg	12/13/96
2-Chloronaphthalene	91-58-7	ND	330	ug/kg	12/13/90
4-Chlorophenyl Phenyl Ethe		ND	330	ug/kg	12/13/96
Chrysene	218-01-9	ND	330	ug/kg	12/13/90
Dibenzo(a,h)anthracene	53-70-3	ND		ug/kg	12/13/96
Dibenzofuran	132-64-9	ND	33U	ug/kg	12/13/9
Di-n-butyl Phthalate	84-74-2	ND		ug/kg	12/13/9
1,2-Dichlorobenzene	95-50-1	ND		ug/kg	12/13/9
1,3-Dichlorobenzene	541-73-1	ND		ug/kg	12/13/9
1.4-Dichlorobenzene	106-46-7	ND ND		ug/kg	12/13/9
3,3'-Dichlorobenzidine Diethyl Phthalate	91-94-1 84-66-2	ND ND		ug/kg	12/13/9
Dimethyl Phthalate	84-66-2 131-11-3	ND ND		ug/kg	12/13/9
2,4-Dinitrotoluene	121-14-2	ND		ug/kg ug/kg	12/13/9 12/13/9
2.6-Dinitrotoluene	606-20-2	ND ND		ug/kg Lug/kg	12/13/9

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-5.0 AEN LAB NO: 9612094-47 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04

DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE Analyzed
Di-n-octyl Phthalate	117-84-0	ND	330 ug/kg	12/13/96
Fluoranthene	206-44-0	ND	330 ug/kg	12/13/96
Fluorene	86-73-7	ND	330 ug/kg	12/13/96
Hexachlorobenzene	118-74-1	ND	330 ug/kg	12/13/96
Hexachlorobutadiene	87-68-3	ND	330 ug/kg	12/13/96
Hexachlorocyclopentadiene	77-47-4	ND	330 ug/kg	12/13/96
Hexachloroethane	67-72-1	ND	330 ug/kg	12/13/96
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330 ug/kg	12/13/96
Isophorone	78-59-1	ND	330 ug/kg	12/13/96
2-Methylnaphthalene	91-57-6	ND	330 ug/kg	12/13/96
Naphthalene	91-20-3	ND	330 ug/kg	12/13/96
2-Nitroaniline	88-74-4	NĎ	1600 ug/kg	12/13/96
3-Nitroaniline	99-09-2	ND	1600 ug/kg	12/13/96
4-Nitroaniline	100-01-6	ND	1600 ug/kg	12/13/96
Nitrobenzene	98-95-3	ND	330 ug/kg	12/13/96
N-Nitrosodiphenylamine	86-30-6	ND	330 ug/kg	12/13/96
N-Nitrosodi-n-propylamine	621-64-7	ND	330 ug/kg	12/13/96
Phenanthrene	85-01-8	ND	330 ug/kg	12/13/96
Pyrene	129-00-0	ND	330 ug/kg	12/13/96
1.2.4-Trichlorobenzene	120-82-1	ND	330 ug/kg	12/13/96
4-Chloro-3-methylphenol	59-50-7	ND	330 ug/kg	12/13/96
2-Chlorophenol	95-57-8	ND	330 ug/kg	12/13/96
2.4-Dichlorophenol	120-83-2	ND	330 ug/kg	12/13/96
2,4-Dimethylphenol	105-67-9	ND	330 ug/kg	12/13/96
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600 ug/kg	12/13/96
2.4-Dinitrophenol	51-28-5	ND	1600 ug/kg	12/13/96
2-Methylphenol	95-48-7	ND	330 ug/kg	12/13/96
4-Methylphenol	106-44-5	ND	330 ug/kg	12/13/96
2-Nitrophenol	88-75-5	ND	330 ug/kg	12/13/96
4-Nitrophenol	100-02-7	ND	1600 ug/kg	12/13/96
Pentachlorophenol	87-86-5	ND	1600 ug/kg	12/13/96
Phenol	108-95-2	ND	330 ug/kg	12/13/96
2.4.5-Trichlorophenol	95-95-4	ND	330 ug/kg	12/13/96
2.4.6-Trichlorophenol	88-06-2	ND	330 ug/kg	12/13/96

RLs elevated for EPA 8240 due to high levels of target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-7.5 AEN LAB NO: 9612094-48 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE S ANALYZED
Soil pH measured in water	EPA 9045A	5.3	S.U.	12/10/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Dat	te 12/09/96
Arsenic	EPA 7060	17 *	0.5 mg/kg	12/10/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Dat	te 12/09/96
Lead	EPA 6010	6 *	1 mg/kg	12/10/96
Zinc	EPA 6010	45 *	1 mg/kg	12/10/96
Volatile Organic Compounds Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene Chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethene	EPA 8240 67-64-1 71-43-2 75-27-4 75-25-2 74-83-9 78-93-3 75-15-0 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 75-43-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 100-41-4 591-78-6 75-09-2 108-10-1 100-42-5 79-34-5 127-18-4	32.000 * ND	1000 ug/kg 1000 ug/kg 1000 ug/kg 3000 ug/kg 3000 ug/kg 3000 ug/kg 1000 ug/kg 1000 ug/kg 3000 ug/kg 3000 ug/kg 1000 ug/kg	12/17/96 12/17/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(B)-7.5 AEN LAB NO: 9612094-48 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Toluene	108-88-3	38,000 *	1000	ug/kg	12/17/96
1,1,1-Trichloroethane	71-55-6	ND	1000	ug/kg ug/kg	12/17/96
1,1,2-Trichloroethane	79-00-5	ND	1000	ug/kg ua/ka	12/17/96
Trichloroethene	79-01-6	ND	1000	ug/kg ua/ka	12/17/96
Vinyl Acetate	108-05-4	ND	10000	ug/kg ua/ka	12/17/96
Vinyl Chloride	75-01-4	ND	3000	ug/kg ua/ka	12/17/96
Xylenes Total	1330-20-7	59,000 *	3000	ug/kg	12/17/96
#Extraction for BNAs	EPA 3550	-		Extrn Date	12/10/96
Semi-Volatile Organics	EPA 8270				
Acenaphthene	83-32-9	ND	1700	ua/ka	12/14/96
Acenaphthylene	208-96-8	ND	1700	ug/kg	12/14/96
Anthracene	120-12-7	ND	1700	ua/ka	12/14/96
Benzidine	92-87-5	ND	8000	ua/ka	12/14/96
Benzoic Acid	65-85-0	ND	8000	ua/ka	12/14/96
Benzo(a)anthracene	56-55-3	, ND	1700	ua/ka	12/14/96
Benzo(b)fluoranthene	205-99-2	ND	1700	ua/ka	12/14/96
Benzo(k)fluoranthene	207-08-9	ND	1700	ua/ka	12/14/96
Benzo(g,h,i)perylene	191-24-2	ND	1700	ua/ka	12/14/96
Benzo(a)pyrene	50-32-8	ND	1700	ua/ka	12/14/96
Benzyl Alcohol	100-51-6	ND	3300	ua/ka	12/14/96
Bis(2-chloroethoxy)methane	111-91-1	ND	1700	ua/ka	12/14/96
Bis(2-choroethyl) Ether	111-44-4	ND	1700	ug/kg	12/14/96
Bis(2-chloroisopropyl) Ether		ND	1700	ua/ka	12/14/96
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	1700	ug/kg	12/14/96
4-Bromophenyl Phenyl Ether	101-55-3	ND	1700	ug/kg	12/14/96
Butylbenzyl Phthalate	85-68-7	ND	1700	ug/kg	12/14/96
4-Chloroaniline	106-47-8	ND	3300	ug/kg	12/14/96
2-Chloronaphthalene	91-58-7	ND	1700	ug/kg	12/14/96
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	1700	ug/kg	12/14/96
Chrysene	218-01-9	ND	1700	ug/kg	12/14/96
Dibenzo(a,h)anthracene	53-70-3	ND	1700	ug/kg	12/14/96
Dibenzofuran	132-64-9	ND	1700	ug/kg	12/14/96
Di-n-butyl Phthalate	84-74-2	ND	1700	ug/kg	12/14/96
1.2-Dichlorobenzene	95-50-1	ND	1700	ug/kg	12/14/96
1,3-Dichlorobenzene	541-73-1	ND	1700	ug/kg	12/14/96
1.4-Dichlorobenzene	106-46-7	ND	1700	ug/kg	12/14/96
3.3'-Dichlorobenzidine	91-94-1	ND	3300	ug/kg	12/14/96
Diethyl Phthalate	84-66-2	ND	1700	ug/kg ·	12/14/96
Dimethyl Phthalate	131-11-3	ND	1700	ug/kg	12/14/96
2.4-Dinitrotoluene	121-14-2	ND	1700	ug/kg	12/14/96
2,6-Dinitrotoluene	606-20-2	ND	1700	ug/kg	12/14/96

LEVINE-FRICKE-RECON

SAMPLE ID: GP-14(8)-7.5 AEN LAB NO: 9612094-48 AEN WORK ORDER: 9612094 CLIENT PROJ. ID: 3042.95.04 DATE SAMPLED: 12/05/96 DATE RECEIVED: 12/06/96 REPORT DATE: 12/31/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZEI
Di-n-octyl Phthalate	117-84-0	ND	1700 ug/kg	12/14/96
Fluoranthene	206-44-0	ND	1700 ug/kg	12/14/96
Fluorene	86-73-7	ND	1700 ug/kg	12/14/96
Hexachlorobenzene	118-74-1	ND	1700 ug/kg	12/14/9
Hexachlorobutadiene	87-68-3	ND	1700 ug/kg	12/14/96
Hexachlorocyclopentadiene	77-47-4	ND	1700 ug/kg	12/14/9
Hexachloroethane	67-72-1	ND:	1700 ug/kg	12/14/9
Indeno(1.2.3-cd)pyrene	193-39-5	ND	1700 ug/kg	12/14/9
Isophorone	78-59-1	ND	1700 ug/kg	12/14/9
2-Methylnaphthalene	91-57-6	ND	1700 ug/kg	12/14/9
Naphthalene	91-20-3	ND	1700 ug/kg	12/14/9
2-Nitroaniline	88-74-4	ND	8000 ug/kg	12/14/9
3-Nitroaniline	99-09-2	ND	8000 ug/kg	12/14/9
4-Nitroaniline	100-01-6	ND	8000 ug/kg	12/14/9
Nitrobenzene	98-95-3	ND	1700 ug/kg	12/14/9
N-Nitrosodiphenylamine	86-30-6	ND	1700 ug/kg	12/14/9
N-Nitrosodi-n-propylamine	621-64-7	ND	1700 ug/kg	12/14/9
Phenanthrene	85-01-8	ND	1700 uğ/kğ	12/14/9
Pyrene	129-00-0	ND	1700 ug/kg	12/14/9
1,2,4-Trichlorobenzene	120-82-1	ND	1700 uğ/kğ	12/14/9
4-Chloro-3-methylphenol	59-50-7	ND	1700 ug/kg	12/14/9
2-Chlorophenol	95-57-8	ND	1700 uğ/kğ	12/14/9
2,4-Dichlorophenol	120-83-2	ND	1700 uğ/kğ	12/14/9
2.4-Dimethylphenol	105-67-9	ND	1700 ug/kg	12/14/9
4,6-Dinitro-2-methylphenol	534-52-1	ND	8000 ug/kg	12/14/9
2,4-Dinitrophenol	51-28-5	ND	8000 ug/kg	12/14/9
2-Methylphenol	95-48-7	ND	1700 ug/kg	12/14/9
4-Methylphenol	106-44-5	ND	1700 ug/kg	12/14/9
2-Nitrophenol	88-75-5	ND	1700 ug/kg	12/14/9
4-Nitrophenol	100-02-7	ND	8000 ug/kg	12/14/9
Pentachlorophenol Pentachlorophenol	87-86 - 5	ND	8000 uğ/kğ	12/14/9
Phenol	108-95-2	ND	1700 ug/kg	12/14/9
2,4,5-Trichlorophenol	95-95-4	ND	1700 ug/kg	12/14/9
2.4.6-Trichlorophenol	88-06-2	ND	1700 ug/kg	12/14/9

RLs elevated for EPA 8270 due to high levels of non-target compounds; RLs elevated for EPA 8240 due to . high levels of target compounds. Sample run dilute.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

AEN (CALIFORNIA) QUALITY CONTROL REPORT

AEN JOB NUMBER: 9612094

CLIENT PROJECT ID: 3042.95.04

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

<u>Definitions</u>

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

- D: Surrogates diluted out.
- #: Indicates result outside of established laboratory QC limits.

METHOD: EPA 8240

AEN JOB NO: 9612094 AEN LAB NO: 1210-BLANK DATE ANALYZED: 12/10/96 INSTRUMENT: 13

MATRIX: SOIL

Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Acetone	67-64-1	· ND	100
Benzene	71-43-2	ND	
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5 5 5 10
Bromomethane	74-83-9	ND	
2-Butanone	78 - 93-3	ND	100
Carbon Disulfide	75-15-0	ND	10 5 5 10
Carbon Tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl Vinyl Ether	110-75-8	ND	10
Chloroform	67-66 - 3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1.1-Dichloroethene	75-35-4	ND	5
cis-1.2-Dichloroethene	156-59-2	ND	5
trans-1.2-Dichloroethene	156-60-5	ND	5
1.2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-bichloropropene	10061-02-6	ND	, p
Ethy1benzene	100-41-4	ND	_5
2-Hexanone	591-78-6	ND	50
Methylene Chloride	75-09-2	ND	20
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	þ
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND ND	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Toluene	108-88-3	ND	5ِ
1,1,1-Trichloroethane	71-55-6	ND	
1.1.2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND ND	5
Vinyl Chlorido	108-05-4	ND ND	50
Vinyl Chloride	75-01-4	ND ND	10
Xylenes, Total	1330-20-7	ND	10
1.1.2-Trichloro- trifluoroethane	76 10 1	ME	10
ci i i ruoi decilalle	76-13-1	ND	10

METHOD: EPA 8240

AEN JOB NO: 9612094 AEN LAB NO: 1211-BLANK DATE ANALYZED: 12/11/96 INSTRUMENT: 13

MATRIX: SOIL

	TICCHOO DIGI	iX	
Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Acetone Benzene	67-64-1 71-43-2	ND ND	100 5
Bromodichloromethane	75-27-4	ND	5 5 5
Bromoform	75-25 - 2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon Disulfide	75-15-0	ND	10
Carbon Tetrachloride Chlorobenzene	56-23-5	ND	5 5 10
Chloroethane	108-90-7	ND	5
2-Chloroethyl Vinyl Ether	75-00-3 110-75-8	ND ND	10 10
Chloroform	67-66-3	ND ND	10 5
Chloromethane	74 - 87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
1.1-Dichloroethane	75-34-3	ND	š
1,2-Dichloroethane	107-06-2	ND	5
1.1-Dichloroethene	75-35-4	ND	5
cis-1.2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5
1,2-Dichloropropane cis-1,3-Dichloropropene	78-87-5	ND	5
trans-1,3-Dichloropropene	10001-01-5	ND ND	5
Ethylbenzene	100-41-4	ND ND	ວ ຮ
2-Hexanone	591-78-6	ND	50
Methylene Chloride	75-09-2	ND	20
4-Methyl-2-pentanone	108-10-1	ND	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Styrene	100-42-5	ND	5
1.1.2.2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	
1.1.1-Trichloroethane 1.1.2-Trichloroethane	71-55-6	ND	5
Trichloroethene	79-00-5 79-01-6	ND	5 5 5
Vinyl Acetate	79-01-6 108-05-4	ND ND	5 50
Vinyl Chloride	75-01-4	ND ND	10
Xylenes, Total	1330-20-7	ND	10
1,1,2-Trichloro-	2000 20 ,	.10	10
trifluoroethane	76-13-1	ND	10

METHOD: EPA 8240

AEN JOB NO: 9612094 AEN LAB NO: 1212-BLANK DATE ANALYZED: 12/12/96 INSTRUMENT: 13

MATRIX: SOIL

Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5 5 5 10
Bromomethane	74-83-9	ND	
2-Butanone	78-93-3	ND	100
Carbon Disulfide	75-15-0	ND	10
Carbon Tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5 5 10
Chloroethane	75-00-3	ND	10
2-Chloroethyl Vinyl Ether	110-75-8	ND	10
Chloroform	67-66-3	ND	.5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	<u>5</u>
1.1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	10 55 55 55 55 55 55 55
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND ND	5
trans-1,2-Dichloroethene	156-60-5	ND ND	þ
1,2-Dichloropropane	78-87-5	ND ND	ב
cis-1,3-Dichloropropene	10061-01-5	ND ND	ב
trans-1,3-Dichloropropene	10061-02-6	ND ND	ב ק
Ethylbenzene	100-41-4	ND ·	5
2-Hexanone	591-78-6	ND ND	50
Methylene Chloride	75-09-2	ND	20 50
4-Methyl-2-pentanone	108-10-1	ND ND	50
Styrene	100-42-5	ND ND	
1,1,2,2-Tetrachloroethane Tetrachloroethene	79-34-5	ND	ა ქ
Toluene	127-18-4 108-88-3	ND ND	ວ ເ
1.1.1-Trichloroethane	71-55-6	ND ND	50 5 5 5 5 5
1,1,2-Trichloroethane	79-00-5	ND	
Trichloroethene	79-00-5 79-01-6	ND ND	5 5
Vinyl Acetate	108-05-4	ND	50
Vinyl Chloride	75-01-4	ND	10
Xylenes, Total	1330-20-7	ND	10
1,1,2-Trichloro-	1000 20 7	NU	10
trifluoroethane	76-13-1	ND	10
of the fact occinate	, O 10 1	NO	10

METHOD: EPA 8240

AEN JOB NO: 9612094 AEN LAB NO: 1216-BLANK DATE ANALYZED: 12/16/96 INSTRUMENT: 13

MATRIX: SOIL

Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5 5 5 10
Bromomethane	74-83-9	ND	
2-Butanone	78-93-3	ND	100
Carbon <u>D</u> isulfide	75-15-0	ND	10
Carbon Tetrachloride	56-23-5	ND	5 5
Chlorobenzene	108-90-7	ND	. 5
Chloroethane	75-00-3	ND	10
2-Chloroethyl Vinyl Ether	110-75-8	ND	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	þ
1.1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane 1,1-Dichloroethene	107-06-2	ND	, 5
cis-1,2-Dichloroethene	75-35-4	ND ND	ב
trans-1,2-Dichloroethene	156-59-2	ND ND	
1,2-Dichloropropane	156-60-5 78-87-5	ND ND	
cis-1,3-Dichloropropene	/0-0/-0 10061	ND ND	5
trans-1,3-Dichloropropene	10001-01-3	ND ND	ت ت
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene Chloride	75-09-2	ND	20
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1.1.2.2-Tetrachloroethane	79-34-5	ND	, S
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	. 5
1.1.1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5 5
Vinyl Acetate	108-05-4	ND	5Ŏ
Vinyl Chloride	75-01-4	ND	10
Xylenes, Total	1330-20-7	ND	$\overline{10}$
1.1.2-Trichloro-			
trifluoroethane	76-13-1	ND	10

METHOD: EPA 8240

AEN JOB NO: 9612094 AEN LAB NO: 1217-BLANK DATE ANALYZED: 12/17/96 INSTRUMENT: 13

MATRIX: SOIL

Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5 5 5 10
3romomethane	74-83-9	ND	
2-Butanone	78-93-3	ND	100
Carbon Disulfide	75-15-0	ND	10 5 5 10
Carbon Tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND ND	5
Chloroethane	75-00-3	ND ND	10
2-Chloroethyl Vinyl Ether Chloroform	110-75-8	ND ND	10 5
Chloromethane	67-66-3 74-87-3	ND ND	ວ 10
Dibromochloromethane	124-48-1	ND	10 5
1.1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	10555555555555555555555555555555555555
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene Chloride	75-09-2	ND	20
4-Methy1-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	þ
1.1.2.2-Tetrachloroethane	79-34-5	ND	þ
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND ND	ב כ
1,1,1-Trichloroethane 1,1,2-Trichloroethane	71-55-6 79-00-5	ND ND	
Trichloroethene	79-00-5 79-01-6	ND ND	5 5
Vinyl Acetate	108-05-4	ND	50
Vinyl Chloride	75-01-4	ND ND	10
Xylenes, Total	1330-20-7	ND	10
1,1,2-Trichloro- trifluoroethane	76-13-1	ND	10

METHOD: EPA 8240

AEN JOB NO: 9612094 INSTRUMENT: 13 MATRIX: SOIL

Surrogate Standard Recovery Summary

				Percent Recov	ery
Date Analyzed	Client Id.	Lab Id.	1.2-Dichloro- ethane-d₄	Toluene-d ₈	p-Bromofluoro- benzene
12/10/96 12/10/96 12/10/96 12/10/96 12/10/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/11/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/12/96 12/17/96 12/17/96 12/17/96	GP-6-3.5 GP-7-2.5 GP-7-6.0 GP-7-7.0 GP-8-2.5 GP-8-5.5 GP-8-7.5 GP-10-2.5 GP-10-5.5 GP-10-7.5 GP-11-2.5 GP-11-7.5 GP-12-2.5 GP-12-5.0 GP-12-7.5 GP-12-7.5 GP-13-5.0 GP-13-7.5 GP-15-3.5 GP-15-3.5 GP-15-3.5 GP-15-7.5 GP-15-7.5 GP-15-7.5 GP-14(b)-7.5 GP-14(b)-7.5 GP-14(b)-7.5	47	94 106 93 96 109 107 83 92 94 78 72 79 85 91 83 85 89 94 106 86 77 99 74 98 70 92 83 81 81	95 105 96 93 106 90 106 94 91 89 82 88 88 88 90 100 92 85 86 86 86 94 100 99 91	91 83 92 92 76 83 92 91 87 85 76 84 83 87 91 91 83 89 77 82 92 80 85 80 94 95 98
QC Limits:			70-121	81-117	74-121

METHOD: EPA 8240

AEN JÓB NO: 9612094 DATE ANALYZED: 12/10/96 SAMPLE SPIKED: 9612094-17 INSTRUMENT: 13 MATRIX: SOIL

Matrix Spike Recovery Summary

	Spika			QC Limi	ts
Analyte	Spike Added (ug/kg)	Percent Recovery	RPD	Percent Recovery	RPD
1,1-Dichloroethene Trichloroethene Benzene Toluene Chlorobenzene	50 50 50 50 50	100 114 118 94 103	12 5 10 5 2	59-155 71-157 37-151 47-150 37-160	25 25 25 25 25 25

DATE ANALYZED: 12/11/96 SAMPLE SPIKED: 9612094-29 INSTRUMENT: 13

Matrix Spike Recovery Summary

	C = i -			QC Limi	ts
Analyte	Spike Added (ug/kg)	Percent Recovery	RPD	Percent Recovery	RPD
1,1-Dichloroethene Trichloroethene Benzene Toluene Chlorobenzene	50 50 50 50 50	86 116 109 96 95	5 6 <1 3	59-155 71-157 37-151 47-150 37-160	25 25 25 25 25 25

QUALITY CONTROL DATA

METHOD: EPA 8270

AEN JOB NO: 9612094 AEN LAB NO: 1209-BLANK DATE EXTRACTED: 12/09/96 DATE ANALYZED: 12/12/96 INSTRUMENT: 10 MATRIX: SOIL

Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Acenaphthene Acenaphthylene Anthracene Benzoic Acid Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(g,h,i)perylene Benzo(a)pyrene Benzo(a)pyrene Benzyl Alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Bis(2-ethylhexyl)phthalate 4-Bromophenyl phenyl ether Butylbenzyl phthalate 4-Chloroaniline 2-Chloroaniline 2-Chlorophenyl phenylether Chrysene Dibenzo(a,h)anthracene Dibenzofuran Di-n-butylphthalate 1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.3-Dichlorobenzene 3.3'-Dichlorobenzidine Diethylphthalate Dimethylphthalate 2.4-Dinitrotoluene 2.6-Dinitrotoluene 0i-n-octylphthalate	117-81-7 101-55-3 85-68-7 106-47-8 91-58-7		330 330 330 1600 1600 330 330 330 330 330 330 330 330 330

QUALITY CONTROL DATA

METHOD: EPA 8270

AEN JOB NO: 9612094 AEN LAB NO: 1209-BLANK DATE EXTRACTED: 12/09/96 DATE ANALYZED: 12/12/96

INSTRUMENT: 10 MATRIX: SOIL

Method Blank (Cont.)

Analyte ————————————————————————————————————	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Fluoranthene	206-44-0	ND	330
Fluorene	86-73-7	ND	330
Hexachlorobenzene	118-74-1	ND	330
Hexachlorobutadiene	87-68-3	ND	330
Hexachlorocyclopentadiene	77-47-4	ND	330
Hexachloroethane	67-72-1	ND	330
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330
Isophorone	78-59-1	ND	330
2-Methylnaphthalene	91-57-6	ND	330
Naphthalene	91-20-3	ND	330
2-Nitroaniline	88-74-4	ND	1600
3-Nitroaniline	99-09-2	ND	1600
4-Nitroaniline	100-01-6	ND	1600
Nitrobenzene	98-95-3	ND	330
N-nitrosodiphenylamine	86-30-6	ND	330
N-nitroso-di-n-propylamine	621-64-7	ND	330
Phenanthrene	85-01-8	ND	330
Pyrene_	129-00-0	ND	330
1.2.4-Trichlorobenzene	120-82-1	ND	330
4-Chloro-3-methylphenol	59-50-7	ND	330
2-Chlorophenol	95-57-8	ND	330
2.4-Dichlorophenol	120-83-2	ND	330
2,4-Dimethylphenol	105-67-9	ND	330
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600
2.4-Dinitrophenol	51-28-5	ND	1600
2-Methylphenol	95-48-7	ND	330
4-Methylphenol	106-44-5	ND	330
2-Nitrophenol	88-75-5	ND	330
4-Nitrophenol	100-02-7	ND ND	1600
Pentachlorophenol	87-86-5	ND ND	1600
Phenol	108-95-2	ND	330
2.4.5-Trichlorophenol	95-95-4	ND NO	330
2,4,6-Trichlorophenol	88-06-2	ND	330

QUALITY CONTROL DATA

METHOD: EPA 8270

AEN JOB NO: 9612094 AEN LAB NO: 1210-BLANK DATE EXTRACTED: 12/10/96 DATE ANALYZED: 12/13/96 INSTRUMENT: 10

MATRIX: SOIL

CAS #	Result (ug/kg)	Reporting .Limit (ug/kg)
83-32-9 208-96-8 120-12-7 92-87-5 65-85-0 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 100-51-6 111-91-1 111-44-4 r 108-60-1 117-81-7 101-55-3 85-68-7 106-47-8 91-58-7 7005-72-3 218-01-9 53-70-3 132-64-9 84-74-2 95-50-1 541-73-1 106-46-7 91-94-1 84-66-2 131-11-3		330 330 1600 1600 1600 330 330 330 330 330 330 330 330 330
606-20-2 117-84-0	ND ND	330 330 330
	83-32-9 208-96-8 120-12-7 92-87-5 65-85-0 56-55-3 205-99-2 207-08-9 191-24-2 50-32-8 100-51-6 111-91-1 111-44-4 r 108-60-1 117-81-7 101-55-3 85-68-7 106-47-8 91-58-7 7005-72-3 218-01-9 53-70-3 132-64-9 84-74-2 95-50-1 541-73-1 106-46-7 91-94-1 84-66-2 131-11-3 121-14-2 606-20-2	83-32-9 ND 208-96-8 ND 120-12-7 ND 92-87-5 ND 65-85-0 ND 56-55-3 ND 205-99-2 ND 207-08-9 ND 191-24-2 ND 50-32-8 ND 111-91-1 ND 111-44-4 ND r 108-60-1 ND 117-81-7 ND 106-47-8 ND 91-58-7 ND 7005-72-3 ND 218-01-9 ND 53-70-3 ND 132-64-9 ND 53-70-3 ND 132-64-9 ND 541-73-1 ND 541-73-1 ND 106-46-7 ND 91-94-1 ND 84-66-2 ND 121-14-2 ND 84-66-2-2 ND

METHOD: EPA 8270

AEN JOB NO: 9612094 AEN LAB NO: 1210-BLANK DATE EXTRACTED: 12/10/96 DATE ANALYZED: 12/13/96 INSTRUMENT: 10

MATRIX: SOIL

Method Blank (Cont.)

Analyte	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Fluoranthene	206-44-0	ND	330
Fluorene	86-73-7	ND	330
Hexachlorobenzene	118-74-1	ND	330
Hexachlorobutadiene	87-68-3	ND	330
Hexachlorocyclopentadiene	77 - 47 - 4	ND	330
Hexachloroethane	67-72-1	ND	330
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330
Isophorone	78-59-1	ND	330
2-Methylnaphthalene	91-57-6	ND	330
Naphthalene	91-20-3	ND	330
2-Nitroaniline	88-74-4	ND	1600
3-Nitroaniline	99-09-2	ND	1600
4-Nitroaniline	100-01-6	ND	1600
Nitrobenzene	98-95-3	ND	330
N-nitrosodiphenylamine	86-30-6	ND	330
N-nitroso-di-n-propylamine	621-64-7	ND	330
Phenanthrene	85-01-8	ND	330
Pyrene	129-00-0	ND	330
1,2,4-Trichlorobenzene	120-82-1	ND	330
4-Chloro-3-methylphenol	59-50-7	ND	330
2-Chlorophenol	95-57-8	ND	330
2,4-Dichlorophenol	120-83-2	ND	330
2.4-Dimethylphenol	105-67-9	ND	330
4.6-Dinitro-2-methylphenol	534-52-1	ND	1600
2.4-Dinitrophenol	51-28-5	ND	1600
2-Methylphenol	95-48-7	ND	330
4-Methylphenol	106-44-5	ND	330
2-Nitrophenol	88-75-5	ND	330
4-Nitrophenol	100-02-7	ND	1600
Pentachlorophenol	87-86-5	ND	1600
Pheno1_	108-95-2	ND	330
2.4.5-Trichlorophenol	95-95-4	ND	330
2,4,6-Trichlorophenol	88-06-2	ND	330

METHOD: EPA 8270

AEN JOB NO: 9612094 DATE(S) EXTRACTED: 12/09/96; 12/10/96 INSTRUMENT: 10

MATRIX: SOIL

Surrogate Standard Recovery Summary

					Perc	ent Recovery		
Date Analyzed	Client Id.	Lab Id.	2-Fluora- phenal	Phenol-d _s	Nitro- benzéne-d _s	2-Fluoro- biphenyl	2,4,6-Tri- bromophenol	Terphenyl- d ₁₄
12/13/96	GP-6-3.5	14	75	85	71	104	54	130
12/12/96	GP-7-2.5	15	64	68	59	96	92	109
12/13/96	GP-7-6.0	16	86	91	75	98	111	122
12/12/96	GP-7-7.0	17	73	75	69	102	102	123
12/12/96	GP-8-2.5	18	66	70	59	89	83	112
12/13/96	GP-8-5.5	19	83	93	75	133	113	97
12/13/96	GP-8-7.5	20	D	Ď	Ď	D	D	Ď
12/11/96	GP-9-2.5	21	Ď	Ď	Ď	Ď	Ď	Ď
12/12/96	GP-10-2.5	22	68	77	62	97	79	113
12/12/96	GP-10-5.5	23	79	81	70	99	101	119
12/14/96	GP-10-7.5	24	73	79	65	96	101	109
12/13/96	GP-11-2.5	25	95	100	89	117	120	130
12/13/96	GP-11-5.0	26	82	90	76 -	112	122	118
12/13/96	GP-11-7.5	27	90	98	82	116	129	107
12/13/96	GP-12-2.5	28	84	97	94	130	98	135
12/13/96	GP-12-5.0	29	86	88	80	106	107	131
12/13/96	GP-12-7-5	30	58	58	52	75	88	134
12/13/96	GP-13-2.5	31	85	76	70	108	80	114
12/13/96	GP-13-5.0	32	66	67	56	99	84	115
12/13/96	GP-13-7.5	33	78	85	72	105	122	125
12/13/96	GP-15-3.5	35	79	90	71	108	117	127
12/13/96	GP-15-5.0	36	86	87	79	101	113	126
12/13/96	GP-15-7.5	37	82	87	71	107	114	131
12/13/96	GP-6(b)-7.5	42	97	102	84	119	110	130
12/13/96	GP-9(b)-5.0	44	90	81	74	111	78	119
12/13/96	GP-9(b)-7.5	45	57	58	52	86	99	110
12/13/96	GP-14(b)-3.5	46	78	81	69	96	95	114
12/13/96	GP-14(b)-5.0	47	78	80	69	99	97 97	119
12/14/96	GP-14(b)-7.5	48	68	69	60	87	96	107
QC Limits:			40-108	43-116	35-99	59-137	43-148	71-153

D: Surrogates diluted out.

METHOD: EPA 8270

AEN JOB NO: 9612094 DATE EXTRACTED: 12/09/96 DATE ANALYZED: 01/06/97 SAMPLE SPIKED: LCS INSTRUMENT: 10 MATRIX: SOIL

Laboratory Control Sample Recovery

Spike Added (ug/kg)	Percent Recovery	QC Limits Percent Recovery
2940 2980 2970 2750	66 93 85 93	41-125 45-132 24-126 60-129 38-123
2960 2790 2960 3810 2770	108 93 99 106 82	49-145 50-129 29-139 53-127 13-171 40-130
	Added (ug/kg) 2940 2980 2970 2750 3290 2960 2790 2960 3810	Added (ug/kg) Recovery 2940 66 2980 93 2970 85 2750 93 3290 96 2960 108 2790 93 2960 99 3810 106 2770 82

METHOD: EPA 8270

AEN JOB NO: 9612094 DATE EXTRACTED: 12/10/96 DATE ANALYZED: 12/13/96 SAMPLE SPIKED: LCS INSTRUMENT: 10 MATRIX: SOIL

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/kg)	Percent Recovery	QC Limits Percent Recovery
Phenol 2-Chlorophenol 1.4-Dichlorobenzene N-Nitrosodi-n-propylamine 1.2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2.4-Dinitrotoluene Pentachlorophenol Pyrene	2940 2980 2970 2750 3290 2960 2790 2960 3810 2770 3580	64 75 72 78 88 93 102 78 83 78	41-125 45-132 24-126 60-129 38-123 49-145 50-129 29-139 53-127 13-171 40-130

AEN JOB NO: 9612094 SAMPLE SPIKED: SAND DATE(S) ANALYZED: 12/10-30/96 MATRIX: SOIL

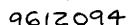
Method Blank and Spike Recovery Summary

		Blank	Spike			QC Limits		
Analyte	Inst./ Method	Result (mg/kg)	Added (mg/kg)	Percent Recovery	RPD	Percent Recovery	RPD	
As. Arsenic Pb. Lead Zn, Zinc	4000/7060 V12/7420 ICP/6010	ND ND ND	10 50 50	104 108 99	4 <1 <1	77-141 80-119 90-115	15 11 10	

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3	042	. 45.04			Projec	Project Location: Eneryville, Ca. Date: 12-6-96							Serial No			
Project Name:	Rifk	in Pr	operty		Field	Logboo	k No).1						N₂	1003	
Sampler (Signa		Kento	- Dec					/			ANA	LYSES		Samplers	: KAG	
			SAMPLES					/5 .	0			130	7 / 7	/		
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. O CON TAINE	SAM	PLE PE	4.40	45. V.	00000	04270	T KUN	"Ve A	no kilsk	REMARI	<s< td=""></s<>	
GP-1-2-5	12-5-46		CIA	1	5011	>	<u>. </u>	×	×	×	<u> </u>	X	- compo	rite all a	voups	
GP-2-2.5			ASO					_ }			4	X	<u> </u>	1, b; c; 6; 6	2 4 3 5 1 3	
GP-7-5.0			03A				-	+	+		- -b -	×	for 7	TCLP analy	Mar	
GP-2-7.5			04A						+	$+$ \downarrow	<u> </u>	×	<u> </u>			
3p-3-2.5	<u> </u>		· 05A	 					+	+	9	X	- reason	· · · · · · · · · · · · · · · · · · ·	sed for	
çρ-3-5.5			· 06A				\vdash	+	+		ا ط	×	TUL	anilysis_	• • • • • • • • • • • • • • • • • • •	
P-3-7.5			· 07A	 			-		+ +		C	×				
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SP-5-2.5	<u> </u>		<u>• nA</u>				├ ──┼-		+		a	×	- nea	ulto to		
3P-5-5.0	ļ .		112A		+			+		- -	b	<u>×</u>		/	- Bee	
38-5-7.5			13A			-	!		+ +	+	<u> </u>	X		- Para-	, , , , , , ,	
GP-6-3.5			14A	 		-		+	+ +	┿┈╂┈	4			0 -	A	
3P-7- 2.5			15A		- 1			-	+ + + -	+ +	<u> d </u>		440	mere !	5-da	
3P-7-6.0	-	<u> </u>	IGA	_ 4 /_			$V \perp$	Ψ_	V	$\perp V$	<u>e</u>			TOST . 12	Jan 1	
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RELINQUISHED E (Signature)	3Y:			D	ATE	TIN	ΛE			IVED BY nature)	<u></u>			DATE	TIME	
RELINQUISHED E (Signature)	BY:			D	ATE	TIN	1E			IVED BY nature)	<u> </u>	•	· <u></u>	DATE	TIME	
METHOD OF SHIP	PMENT:			Đ	ATE	TIN	1E		LAB C	OMMEN	ITS:					
Sample Collecto	r:	1900 Po	FRICKE•RECON well Street, 12th le, California 946 2-4500	Floor	7				Analy	tical La	boratory:	AEN	TCLP11 96121	ork on	AEN	

CHAIN OF CUSTODY / ANALYSES REQUEST FORM



Project Location: Emeryville, Ca. Project No.: 3042,95.04 2-6-96 Date: Serial No.: Nº 1001 Project Name: Rifkin Property Field Logbook No.: Kasta See Samplers: KAC **ANALYSES** Sampler (Signature): SAMPLES RUSH HOLD NO. OF LAB SAMPLE CON-SAMPLE TIME SAMPLE NO. DATE REMARKS NO. TYPE TAINERS Soil GP-7-7.0 12-5-96 17A ď GP-8-2.5 ISA. GP-8-5.5 19A # 1 GP-8-7.5 20A GP-9-2.5 ZIA GP-10-2.5 **22**A e G8-10-5.5 23# 4 GP-10-7.5 24A 9 25A GP-11- 2.5 26A h GP-11 - 5.0 GP-11-7.5 27A 9 GP-12- 2.5 ZBA h GP-12-5.0 294 GP-12-7.5 30A 9 GP-13-2.5 BIA GP-13-5.0 32A DATE 2-6-96 TIME RECEIVED BY: Venta Sa DATE RELINQUISHED BY: TIME 1435 (Signature) Romald C. gensen 12/6/96 (Signature) 14:35 TIME RECEIVED BY: DATE DATE TIME RELINQUISHED BY: (Signature) (Signature) TIME RECEIVED BY: DATE DATE TIME RELINQUISHED BY: (Signature) (Signature) TIME LAB COMMENTS: DATE METHOD OF SHIPMENT: Analytical Laboratory: LEVINE•FRICKE•RECON Sample Collector: AEN 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500

Page 3 d 3 9612094

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 304	12.9	5.04			Proje	ect Lo	cation	: En	ner-j	vill	le,	Ca,			Date:	12-	6-96		Serial No	.:
Project Name: R			operty		Field	Logi	ook N	0.:									· · ·		Nº	1002
Sampler (Signatur	e):	Conta	See						$\overline{/}$				ANA	LYSE					Samplers	KAG
			SAMPLES					65	⁄ه				/	17/2	13			/		
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON- TAINER	SAM	IPLE PE	X	30/3	433	790	3779	₹/ <i>x</i>	(L)	\\ }		HOLD	RUSH		REMARK	s
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P-14-8.0			34A 35A		}							9			X			•		
P-15 - 5.0			36A									٨			· · · · · · · · · · · · · · · · · · ·					
P-15-7.5			37 <i>A</i>									_ i								
P-1(b)-3.0			38A		-			ļļ.	ļ			_			<u>X</u>					
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-14(6)-7.5			48A	7	V		V	V		,	\ <u>/</u>	i					73.			
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ELINQUISHED BY: (Signature)	:			DA	TE		TIME		—		ED B'	Y:						DAT		TIME
ELINQUISHED BY: (Signature)				DA	TE		TIME				ED B				 -	-		DAT	E	TIME
ETHOD OF SHIPM	IENT:			DA	TE		TIME		LAI	в со	MME	NTS:						!		
ample Collector:		1900 Po	FRICKE•RECON well Street, 12th le, California 946 2-4500	Floor					An	alyti	cal La	aborat	ory:	ļ	4E/	V				
pping Copy (White)		Lab Copy	(Yellow) File	Copy (Pinl	() F	ield C	ору (Сс	oldenro	d)										(COC.CDR 10159

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda
Project: I.D.#3042.95.04

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-3-2.5

Spl#: 111340 Matrix: SOIL Sampled: December 5, 1996 Run#: 4618

Analyzed: December 19, 1996

			2		,
ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	RESULT	SPIKE	DILUTION FACTOR
ACETONE	N.D.	48000	N.D.		484
BENZENE	N.D.	2400	N.D.	113	484
BROMODICHLOROMETHANE	N.D.	2400	N.D.		484
BROMOFORM	N.D.	2400 2400 2400 2400	N.D		484
BROMOMETHANE	N.D.	4800	N D		484
METHYL ETHYL KETONE	N.D.	48000	N D		484
CARBON DISULFIDE	N.D.	4800	N D		484
CARBON TETRACHLORIDE	N.D.	2400	N D		484
CHLOROBENZENE	N.D.	2400	N D	112	484
CHLOROETHANE	N.D.	4800	N D		484
2-CHLOROETHYLVINYLETHER	N D	4800	N D		484
CHLOROFORM	N D	2400	N D		484
CHLOROMETHANE	N D	4800	N D		484
DIBROMOCHLOROMETHANE	N D	2400	N D		484
1.1-DICHLOROETHANE	N D	2400	N D		484
1.2-DICHLOROETHANE	N D	2400	N.D.		484
1.1-DICHLOROETHENE	N D	2400	N.D.	105	484
1.2-DICHLOROETHENE (CIS)	N D	2400	N.D.	. 105	484 484
1.2-DICHLOROETHENE (TRANS)	N D	2400	N.D.		484
1.2-DICHLOROPROPANE	и.р.	2400	N.D.		484
CIS-1.3-DICHLOROPROPENE	N D	2400	N.D.		404
TRANS-1 3-DICHLOROPPOPENT	M D	2400	N.D.		484
ETHYLBENZENE	N D	2400	N.D.		484
2-HEXANONE	N.D.	2400	N.D.		484
METHYLENE CHLORIDE	M.D.	24000	N.D.		484
4-METHYL-2-DENTANONE (MIDK)	N.D.	24000	N.D.		484
STYPENE	N.D.	24000	N.D.		484
1 1 2 2-TETRACHLOPOETHAND	M.D.	2400	N.D.		484
TETPACHI OPORTUDNO	M.D.	2400	N.D.		484
TOTHENE	N.D.	2400	N.D.		484
F 1 1 1 TPICULADADTURNE	2300	2400	M.D.	TT7	484
1 1 2 TOTCHIOROGIAME	M.D.	2400	N.D.		484
T, T, Z - INTONOCIONE	M.D.	2400	M.D.	106	484
VINVI. ACETATE	M.D.	2400	N.D.	106	484
VINIU ACCIALO NINVI CULODIDO	מיש.	24000	N.D.		484
TOTAL VILDE	N.D.	4800	N.D.		484
ACETONE BENZENE BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE METHYL ETHYL KETONE CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE 2-CHLOROETHYLVINYLETHER CHLOROFORM CHLOROMETHANE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE CIS-1,3-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE 2-HEXANONE METHYLENE CHLORIDE 4-METHYL-2-PENTANONE (MIBK) STYRENE 1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE TOLUENE 1,1,1-TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHANE TRICHLOROETHENE VINYL CHLORIDE TOTAL XYLENES	м.р.	4800	и. D.		484

Chip Poalinelli Operations Manager

Eric Tam

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda Project: I.D.#3042.95.04

Project#: P.O.#9612094

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-3-5.5

Spl#: 111341
Sampled: December 5, 1996

Matrix: SOIL Run#: 4618

Analyzed: December 19, 1996

			3		,
		REPORTING	BLANK		DILUTION
\$ 172 F 1700	RESULT	LIMIT	RESULT	SPIKE	FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	
ACETONE	N.D.	100000	N.D.		1000
BENZENE	N.D.	5000	N.D.	113	1000
BROMODICHLOROMETHANE	N.D.	5000	N.D.		1000
BROMOFORM	N.D.	5000	N.D.		1000
BROMOMETHANE	N.D.	10000	N.D.	- -	1000
METHYL ETHYL KETONE	N.D.	100000	N.D.		1000
CARBON DISULFIDE	N.D.	10000	N.D.		1000
CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE	N.D.	5000	N.D.		1000
CHLOROBENZENE	N.D.	5000	N.D.	112	1000
	N.D.	10000	N.D.		1000
2-CHLOROETHYLVINYLETHER	N.D.	10000	N.D.	- -	1000
CHLOROFORM	N.D.	5000	N.D.		1000
CHLOROMETHANE	N.D.	10000	N.D.		1000
DIBROMOCHLOROMETHANE	N.D.	5000	N.D.		1000
1,1-DICHLOROETHANE	N.D.	5000	N.D.		1000
1,2-DICHLOROETHANE	N.D.	5000	N.D.		1000
1,1-DICHLOROETHENE	N.D.	5000	N.D.	105	1000
1,2-DICHLOROETHENE (CIS)	N.D.	5000	N.D.		1000
1,2-DICHLOROETHENE (TRANS)	N.D.	5000	N.D.		1000
1.2-DICHLOROPROPANE	N.D.	5000	N.D.		1000
CIS-1,3-DICHLOROPROPENE	N.D.	5000	N.D.		1000
TRANS-1,3-DICHLOROPROPENE	N.D.	5000	N.D.		1000
ETHYLBENZENE	N.D.	5000	N.D.		1000
2-HEXANONE	N.D.	50000	N.D.		1000
METHYLENE CHLORIDE	N.D.	20000	N.D.	- -	1000
4-METHYL-2-PENTANONE (MIBK)	N.D.	50000	N.D.		1000
STYRENE	N.D.	5000	N.D.		1000
1,1,2,2-TETRACHLOROETHANE	N.D.	5000	N.D.		1000
TETRACHLOROETHENE	N.D.	5000	N.D.		1000
TOLUENE	140000	5000	N.D.	111	1000
1,1,1-TRICHLOROETHANE	N.D.	5000	N.D.		1000
1,1,2-TRICHLOROETHANE	N.D.	5000	N.D.		1000
TRICHLOROETHENE	N.D.	5000	N.D.	106	1000
VINYL ACETATE	N.D.	50000	N.D.	100	1000
VINYL CHLORIDE	N.D.	10000	N.D.		1000
TOTAL XYLENES	N.D.	10000	N.D.		1000
		10000	11.17.	-	

Chip Poalinelli Operations Manager

Eric Tam

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04

Project#: P.O.#9612094

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-3-7.5

Spl#: 111342

Matrix: SOIL

Sampled: December 5, 1996

Run#: 4618

Analyzed: December 19, 1996

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ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT	BLANK RESULT (ug/Kg)	SPIKE	DILUTION FACTOR
ACETONE					
	N.D.	2400	N.D.	117	491
BROMODICHLOROMETHANE	N.D.	2400	N.D.	113	491
BROMOFORM	N.D.	2400	M.D.		491
BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE METHYL ETHYL KETONE CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE 2-CHLOROFORM	N.D.	49000 2400 2400 4900 4900 4900 2400 4900 49	N.D.		491
METHYL ETHYL KETONE	N.D.	4900	N.D.		491
CARRON DISHLETDE	N.D.	49000	N.D.	- +	491
CARRON TETRACHLORIDE	N.D. N.D. N.D.	2400	N.D.		491
CHLOPORENZENE	M.D.	2400	N.D.		491
CHIOROPHANE	N.D.	4000	N.D.	112	491
2_CHLOROBITIANE 2_CHLOROFTUVI VINVI ETUED	N.D.	4900	N.D.		491
2-CHLOROETHYLVINYLETHER CHLOROFORM CHLOROMETHANE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS) 1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE 2-HEXANONE METHYLENE CHLORIDE 4-METHYL-2-PENTANONE (MIBK)	N.D.	4900	N.D.		491
CHIOROPORM	N.D.	2400	N.D.		491
DIRDOMOCUI ODOMETURNE	N.D.	4900	N.D.		491
	N.D.	2400	N.D.		491
1,1-DICHLOROEIRANE	M.D.	2400	N.D.		491
1,2-DICHLOROEIRANE	M.D.	2400	N.D.		491
1,1"DICHEOROEIRENE (GTG)	N.D.	2400	N.D.	105	491
1,2 DICHLOROETHENE (CIS)	N.D.	2400	N.D.		491
1,2-DICHLOROETHENE (TRANS)	N.D.	2400	N.D.		491
CIC 1 2 DIGHT ODODDODDOD	N.D.	2400	N.D.		491
TRANC 1 3 DICHLOROPROPENE	N.D.	2400	N.D.		491
TRANS-1,3-DICHLOROPROPENE	N.D.	2400	N.D.		491
CIMILIBENZENE	N.D.	2400	N.D.		491
Z-HEXANONE	N.D.	24000	N.D.		491
METHILENE CHLORIDE	N.D.	9800	N.D.		491
	N.D.	24000	N.D.		491
STYRENE	N.D.	2400	N.D.		491
1,1,2,2-TETRACHLOROETHANE	N.D.	2400	N.D.		491
TETRACHLOROETHENE	N.D.	2400	N.D.		491
TOLUENE	3000	2400	N.D.	111	491
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHENE VINYL ACETATE VINYL CHLORIDE TOTAL XYLENES	N.D.	2400 2400 2400 2400 2400 2400 2400 2400	N.D.		491
1,1,2-TRICHLOROETHANE	N.D.	2400	N.D.		491
TRICHLOROETHENE	N.D.	2400 2400 24000	N.D.	106	491
VINYL ACETATE	N.D.	24000	N.D.		491
VINYL CHLORIDE	N.D.	T)00	N.D.	 	せフエ
TOTAL XYLENES	N.D.	4900	N.D.		491

Chip Poalinelli Operations Manager

Eric Tam

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

Project#: P.O.#9612094

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-4-5.5

Spl#: 111344

Matrix: SOIL

Sampled: December 5, 1996

Run#: 4618

Analyzed: December 19, 1996

			•		-,
ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)		DILUTION FACTOR
ACETONE	9600	9500	N.D.		94
BENZENE	N.D.	470	N.D.	113	$9\overline{4}$
BROMODICHLOROMETHANE	N.D.	470	N.D.		94
BROMOFORM	N.D.	470	N.D.		94 94
BROMOMETHANE	N.D.	950	N.D.		94 94
METHYL ETHYL KETONE	N.D.	9500 9500	N.D.		
CARBON DISULFIDE	N.D.	950			94
CARBON TETRACHLORIDE	N.D.		N.D.		94
CHLOROBENZENE	M.D.	470	Ŋ.D.		94
CHLOROETHANE	N.D.	470	N.D.	112	94
2-CHLOROETHYLVINYLETHER	N.D.	950	N.D.		94
Z-CHLOROETHILVINILETHER	N.D.	950	N.D.		94
CHLOROFORM	N.D.	470	N.D.		94
CHLOROMETHANE	N.D.	950	N.D.		94
DIBROMOCHLOROMETHANE	N.D.	470	N.D.		94
1,1-DICHLOROETHANE	N.D.	470	N.D.		94
1,2-DICHLOROETHANE	N.D.	470	N.D.		94
I, I-DICHLOROETHENE	N.D.	470	N.D.	105	94
1,2-DICHLOROETHENE (CIS)	N.D.	470	N.D.		$9\bar{4}$
1,2-DICHLOROETHENE (TRANS)	N.D.	470	N.D.		94
1,2-DICHLOROPROPANE	N.D.	470	N.D.		94
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	470	N.D.		94
TRANS-1,3-DICHLOROPROPENE	N.D.	470	N.D.		94
ETHYLBENZENE	N.D.	470	N.D.		94
2-HEXANONE	N.D.	4700	N.D.		94
METHYLENE CHLORIDE	N.D.	1900	N.D.		94 94
4-METHYL-2-PENTANONE (MIBK)	N.D.	4700	N.D.		94 94
STYRENE	N.D.	470	N.D.		
1,1,2,2-TETRACHLOROETHANE	N.D.	470	N.D.		J- <u>T</u>
TETRACHLOROETHENE	N.D.		M.D.		94
TOLUENE	N.D. 910	470	Ŋ.D.		94
1 1 TOTALL ADAPTEMENT		470	N.D.	111	94
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHENE	N.D.	470	N.D.		94
T, I, Z-IKICHLOKOLIHANE	N.D.	470	N.D.		94
INICHLOROETREME	N.D.	470	N.D.	106	94
VINYL ACETATE	N.D.	4700	N.D.		94
VINYL CHLORIDE	N.D.	950	N.D.		94
TOTAL XYLENES	N.D.	950	N.D.		94

Chip Poalinelli Operations Manager

Eric Tam Laboratory Director

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda Project: I.D.#3042.95.04

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-4-2.5

Spl#: 111343
Sampled: December 5, 1996

Matrix: SOIL

Run#: 4618 Analyzed: December 19, 1996

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)		DILUTION FACTOR		
BENZENE	N.D.	470	N.D.	113	94		
BROMODICHLOROMETHANE	N.D.	470	N.D.	110	$9\overline{4}$		
	N.D.	470	N.D.		94		
BROMOMETHANE	N.D.	940	N.D.				
BROMOFORM BROMOMETHANE METHYL ETHYL KETONE	N.D.	0400	N.D.				
CARRON DISHLETDE	N.D.	9400	N.D.		94 94		
CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE 2-CHLOROETHYLVINYLETHER	M.D.	940 940 470 470 940		112	94		
CULODODENZEME	N.D.	470	N.D. N.D.		94		
CULOROBENZENE	N.D.	4 / 0	N.D.	112	94		
	N.D.		N.D.				
2-CHLOROETHILVINILETHER	N.D.	940	N.D.		94		
CHLOROFORM	N.D.	470	N.D. N.D. N.D. N.D.		94		
CHLOROMETHANE	N.D.	940 470	N.D.		94		
DIBROMOCHLOROMETHANE	N.D.	470	N.D.				
1,1-DICHLOROETHANE	N.D.	470	N.D.		~ ~		
1,2-DICHLOROETHANE	N.D.	470	N.D.		94		
1,1-DICHLOROETHENE	N.D.	470	N.D.	105	. 94		
CHLOROFORM CHLOROMETHANE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHENE 1,2-DICHLOROETHENE 1,2-DICHLOROETHENE (CIS) 1,2-DICHLOROETHENE (TRANS) 1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE	N.D.	470	N.D. N.D. N.D. N.D. N.D. N.D. N.D.		94		
1,2-DICHLOROETHENE (TRANS)	N.D.	470	N.D.		94		
1,2-DICHLOROPROPANE	N.D.	470	N.D.		94		
CIS-1,3-DICHLOROPROPENE	N.D.	470	N.D.		94		
TRANS-1,3-DICHLOROPROPENE	N.D.	470	N.D.		0.4		
ETHYLBENZENE	730	470	N.D		94		
2-HEXANONE	N.D.	470 4700 1900	N D		94		
METHYLENE CHLORIDE	N.D.	1900	N D	 	94		
4-METHYL-2-PENTANONE (MIBK)	8200	4700	N D				
STYRENE	N.D.	470	N.D.		J-1		
1,1,2,2-TETRACHLOROETHANE	N.D.		N.D.		94		
TETRACHLOROETHENE		470	N.D.		94 94		
TOLUENE		470		111	94 94		
	N.D.	470 470 470 470	N.D. N.D.	T T T	94		
1,1,1-IRICHLOROEIHANE	N.D.	470	N.D.		94		
TOLUENE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE TRICHLOROETHENE VINYL ACETATE VINYL CHLORIDE TOTAL XYLENES ACETONE	N.D.	4/0	Ŋ.D.		94		
TATOTHOROFINENE	N.D.	470	N.D.	106	94		
VINIL AUSTATE	Ŋ.D.	4700	N.D.		94		
VINYL CHLORIDE	N.D.	940	N.D. N.D.		94		
TOTAL XYLENES	4300	940	N.D.		94		
ACETONE	N.D.	47000	N.D.		472		

Chip Poalinelli Operations Manager

Eric Tam

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda Project: I.D.#3042.95.04

Project#: P.O.#9612094

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-4-7.5

Spl#: 111345
Sampled: December 5, 1996

Matrix: SOIL

Run#: 4618 Analyzed: December 19, 1996

	10011111 . 1	J10 ,41	maryzeu. De	.cember r	J, 1990 1
	RESULT	REPORTING LIMIT	RESULT	SPIKE	DILUTION FACTOR
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	į
BENZENE	N.D.	490	N.D.	113	98
BROMODICHLOROMETHANE	N.D.	490	N.D.		98 .
BROMOFORM	N.D.	490	N.D.		98
BROMOMETHANE	N.D.	980	N.D.		98 7
METHYL ETHYL KETONE	N.D.	9800	N.D.	- -	98
CARBON DISULFIDE	N.D.	980	N.D.		98
CARBON DISULFIDE CARBON TETRACHLORIDE	N.D.	490	N.D.		98
CHLOROBENZENE	N.D.	490	N.D.	112	98
CHLOROETHANE	N.D.	490 490 980 980	N.D.		98
2-CHLOROETHYLVINYLETHER	N.D.	980	N.D.	- -	98
CHLOROFORM	N.D.	490	N.D.		98
CHLOROMETHANE	N.D.	980	N.D.		98
DIBROMOCHLOROMETHANE	N.D.	490	N.D.	<u> </u>	98
1,1-DICHLOROETHANE	N.D.	490	N.D.		98
1,2-DICHLOROETHANE	N.D.	490	N.D.		98
1,1-DICHLOROETHENE	N.D.	490	N.D.	105	98
1,2-DICHLOROETHENE (CIS)	N.D. N.D.	490 490 490 490	N.D.		98
1,2-DICHLOROETHENE (TRANS)	N.D.	490	N.D.		98
1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE	N.D.	490	N.D. N.D.		98
CIS-1,3-DICHLOROPROPENE	N.D.	490	N.D.		98
TRANS-1,3-DICHLOROPROPENE		490	N.D.		98
ETHYLBENZENE	N.D.	490	N.D.		98
2-HEXANONE	N.D.	4900	N.D.		98
METHYLENE CHLORIDE	N.D.	2000	N.D. N.D.		98
4-METHYL-2-PENTANONE (MIBK)	N.D.	4900	N.D.		98 '
STYRENE	N.D.	490	N.D.		98
1,1,2,2-TETRACHLOROETHANE	N.D.	490	N.D.		98
TETRACHLOROETHENE	N.D.	490	N.D.		00
TOLUENE	1100	490	N.D.	111	98 `
1,1,1-TRICHLOROETHANE	N.D.	490	N.D.		98
1,1,2-TRICHLOROETHANE	N.D.	490	N.D.		98 1
1,1,2-TRICHLOROETHANE TRICHLOROETHENE	N.D.	490	N.D.	106	98
VINYL ACETATE	N.D.	4900 980	N.D.		98 '
VINYL CHLORIDE	N.D.	200	N.D.		98
TOTAL XYLENES	N.D.	980	N.D.		98
ACETONE	N.D.	49000	N.D.		492
					•

Chip Poalinelli Operations Manager

Eric Tam Laboratory Director

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda
Project: I.D.#3042.95.04

Project#: P.O

P.O.#9612094

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-5-2.5

Spl#: 111346 Sampled: December 5, 1996

Matrix: SOIL

Run#: 4618

Analyzed: December 19, 1996

	NK DILUTION
RESULT LIMIT RESULT SPI	KE FACTOR
ANALYTE (ug/Kg) (ug/Kg) (ug/Kg) (%)	
ACETONE N.D. 9600 N.D	
BENZENE N.D. 480 N.D. 11	
BROMODICHLOROMETHANE N.D. 480 N.D	
BROMOFORM N.D. 480 N.D	
BROMOMETHANE N.D. 960 N.D	- 96
METHYL ETHYL KETONE N.D. 9600 N.D	-
CARBON DISULFIDE N.D. 960 N.D	
CARBON TETRACHLORIDE N.D. 480 N.D CHLOROBENZENE N.D. 480 N.D. 11 CHLOROETHANE N.D. 960 N.D	
CHLOROBENZENE N.D. 480 N.D. 11:	
CHLOROETHANE N.D. 960 N.D	20
2-CHLOROETHYLVINYLETHER N.D. 960 N.D	
CHLOROFORM N.D. 480 N.D	- 96
	- 96
DIBROMOCHLOROMETHANE N.D. 480 N.D 1,1-DICHLOROETHANE N.D. 480 N.D 1,2-DICHLOROETHANE N.D. 480 N.D	- 96
1,1-DICHLOROETHANE N.D. 480 N.D	
1,2-DICHLOROETHANE N.D. 480 N.D	
1,1-DICHLOROETHENE N.D. 480 N.D. 10	
1,2-DICHLOROETHENE (CIS) N.D. 480 N.D	
1,2-DICHLOROETHENE (TRANS) N.D. 480 N.D	2.0
1,2-DICHLOROPROPANE N.D. 480 N.D	
CIS-1,3-DICHLOROPROPENE N.D. 480 N.D	J U
TRANS-1,3-DICHLOROPROPENE N.D. 480 N.D	
ETHYLBENZENE N.D. 480 N.D	J 0
1,2-DICHLOROETHENE (TRANS) N.D. 480 N.D. - 1,2-DICHLOROPROPANE N.D. 480 N.D. - CIS-1,3-DICHLOROPROPENE N.D. 480 N.D. - TRANS-1,3-DICHLOROPROPENE N.D. 480 N.D. - ETHYLBENZENE N.D. 480 N.D. - 2-HEXANONE N.D. 4800 N.D. - METHYLENE CHLORIDE N.D. 1900 N.D. -	- 96
METHYLENE CHLORIDE N.D. 1900 N.D	- 96
4-METHYL-2-PENTANONE (MIBK) N.D. 4800 N.D	- 96
STYRENE N.D. 480 N.D	- 96
[1,1,0,0 1011010010011111110 11,01 1,00 11,0,	- 96
TETRACHLOROETHENE N.D. 480 N.D. $-$	- 96
TOLUENE N.D. 480 N.D. 11	1 96
1,1,1 1,10,100,100,100,100,100,100,100,1	- 96
1) 1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 96
TRICHLOROETHENE N.D. 480 N.D. 10 VINYL ACETATE N.D. 4800 N.D	- 96
VINYL CHLORIDE N.D. 960 N.D	- 96
TOTAL XYLENES 1200 960 N.D	- 96

Chip Poalinelli Operations Manager Eric Tam

Laboratory Director

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04

Project#: P.O.#9612094

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-5-5.0

Spl#: 111347 Sampled: December 5, 1996

Matrix: SOIL Run#: 4618

Analyzed: December 19, 1996

<u> </u>	1.011// 1	OIO A	taryzed. De	scemet T	3, 1330 j
ANALYTE	RESULT	REPORTING LIMIT	BLANK RESULT	SPIKE	DILUTION FACTOR
ACETONE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)	
BENZENE	N.D.	4700	N.D.		47
BROMODICHLOROMETHANE	Ŋ.D.	240	N.D.	113	47
BROMOFORM	Ŋ.D.	240	N.D.		47
BROMOMETHANE	N.D.	240	N.D.		47 1
METHYL ETHYL KETONE	Ŋ.D.	470	N.D.	. 	47
CARBON DISULFIDE	N.D.	4700	N.D.		47
CARBON DISULFIDE CARBON TETRACHLORIDE	Ŋ.D.	470	N.D.		47
CHLOROBENZENE	N.D.	240	N.D.		47
CHLOROBENZENE CHLOROETHANE	N.D.	240	N.D.	112	47
CHECKOE I MANE	N.D.	470	N.D.		47
2-CHLOROETHYLVINYLETHER CHLOROFORM	N.D.	470	N.D.	 ·	47
	N.D. N.D.	240	N.D.		47
CHLOROMETHANE	N.D.	470	N.D.		47
DIBROMOCHLOROMETHANE	N.D.	240	N.D.		47
1,1-DICHLOROETHANE	N.D.	240	N.D.		47
1,2-DICHLOROETHANE	N.D.	240	N.D.		47
1,1-DICHLOROETHENE	N.D.	240	N.D.	105	47
1,2-DICHLOROETHENE (CIS)	N.D.	240	N.D.		47
1,2-DICHLOROETHENE (TRANS)	N.D.	240	N.D.		47
1,2-DICHLOROPROPANE	N.D.	240	N.D.		47
CIS-1,3-DICHLOROPROPENE	N.D.	240	N.D.		47
TRANS-1,3-DICHLOROPROPENE	N.D. N.D.	240	N.D.		47
ETHYLBENZENE	N.D.	240	N.D.		47
2-HEXANONE	N.D.	2400	N.D.		$\bar{47}$
METHYLENE CHLORIDE	N.D.	950	N.D.		47
4-METHYL-2-PENTANONE (MIBK)	N.D.	2400	N.D.		47
STYRENE	N.D.	240	N.D.	- -	$\bar{47}$
1,1,2,2-TETRACHLOROETHANE	N.D.	240	N.D.		$\bar{47}$
TETRACHLOROETHENE	N.D.	240	N.D.		47
TOLUENE	N.D.	240	N.D.	111	47
1,1,1-TRICHLOROETHANE	N.D.	240	N.D.		47
1,1,2-TRICHLOROETHANE	N.D.	240	N.D.		47
TRICHLOROETHENE	N.D.	240	N.D.	106	47
VINYL ACETATE	N.D.	2400	N.D.		47
VINYL CHLORIDE	N.D.	470	N.D.		47
TOTAL XYLENES	610	470	N.D.		47
		•			- ' 1

Chip Poalinelli Operations Manager

Eric Tam

Laboratory Director

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04 Project#: P.O.#9612094

Received: December 18, 1996

re: One sample for Volatile Organics by GC/MS analysis.

Method: SW846 METHOD 8240A Nov 1990

Client Sample ID: GP-5-7.5

 Spl#:
 111348
 Matrix:
 SOIL

 Sampled:
 December 5, 1996
 Run#:
 4618

Analyzed: December 19, 1996

ANALYTE	RESULT (ug/Kg)		RESULT (ug/Kg)		DILUTION FACTOR
ACETONE	N.D.	4500	N.D.		45
BENZENE BROMODICHLOROMETHANE	N.D.	230	N.D.	113	45
PROMORORM	Ŋ.D.	230	N.D.		45
	N.D.	230 450	N.D.		45
BROMOMETHANE METHYL ETHYL KETONE	N.D.	450	N.D.		45
MEINIL ETHIL KETONE	N.D.	4500	N.D.		45
CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROETHANE 2-CHLOROETHYLVINYLETHER	Ŋ.D.	450	N.D.		45
CHI ODODENIZENE	N.D.	230	N.D.		45
CHLOROBENZENE	N.D.	230	N.D.	112	45
COLUNC I HANE	N.D.	450	N.D.		45
CHLOROETHANE 2-CHLOROETHYLVINYLETHER CHLOROFORM CHLOROMETHANE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE	N.D.	450	N.D.	- -	45
CILODOMERIANE	N.D.	230	N.D.		45
CHLOROMETHANE	N.D.	450	N.D.		45
DIBROMOCHLOROMETHANE	N.D.	230	N.D.		45
1,1-DICHLOROETHANE	N.D.	230	N.D.		45
1,2-DICHLOROETHANE	N.D.	230	Ŋ.D.		45
1,1-DICHLOROETHENE	N.D.	230	N.D.	105	45
1,2-DICHLOROETHENE (CIS)	N.D.	230	N.D.		45
1,2-DICHLOROETHENE (TRANS)	N.D.	230	N.D.		45
1,2-DICHLOROPROPANE	N.D.	230	N.D.		45
UDANG 1 2 DICHLOROPROPENE	й.Ď.	230	N.D.		45
1,2-DICHLOROETHENE (TRANS) 1,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE ETHYLBENZENE	N.D.	230	N.D.		45
2-HEXANONE	11	230	N.D.		45
METHYLENE CHLORIDE	Ŋ.D.	2300	N.D.		45
4-METHYL-2-PENTANONE (MIBK)	Ŋ.D.	910	Ŋ.D.		45
STYRENE	N.D.	2300	N.D.		45
	Ŋ.D.	230	N.D.		45
1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE	N.D.	230	N.D.		45
	N.D.	230	N.D.		45
TOLUENE	N.D.	230	N.D.	111	45
1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE	N.D.	230	N.D.		45
TRICHLOROETHENE	N.D.	230	N.D.		45
VINYL ACETATE	N.D.	230	N.D. N.D. N.D.	106	45
VINIL ACEIATE VINYL CHLORIDE	N.D.	2300	N.D.		45
MOMBI WILL DITTO	N.D.	450	11.10.		45
TOTAL XYLENES	580	450	N.D.		45

Chip Poalinelli Operations Manager

Eric Tam

Laboratory Director

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04

Received: December 18, 1996

Project#: P.O.#9612094

re: Blank spike and duplicate report for Volatile Organics by GC/MS analys!

Method: SW846 METHOD 8240A Nov 1990

Matrix: SOIL Lab Run#: 4618

Analyzed: December 19, 1996

Spike Amount Found Spike Recov Spike Amount BSP Dup BSP Dup **BSP** Dup Control % **Analyte** (uq/Kq) (ug/Kg) (%) (%) Limits RPD BENZENE 100 100 113 110 113 110 69-129 2.69 CHLOROBENZENE 100 100 112 111 112 111 61-121 0.89 20 1,1-DICHLOROETHENE 100 100 105 100 65-125 4.88 70-130 5.56 105 100 20 TOLUENE 100 100 105 111 105 111 20 20 TRICHLOROETHENE 100 100 106 98.2 74-134 7.64 106 98.2

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04

Received: December 18, 1996

Project#: P.O.#9612094

re: Surrogate report for 9 samples for Volatile Organics by GC/MS

Method: SW846 METHOD 8240A Nov 1990

Lab Run#: 4618 Matrix: SOIL

			8	Recovery
Sample#	Client Sample ID	Surrogate	Recovered	
111340-1		4-BROMOFLUOROBENZENE	99.7	74-121
111340-1	GP-3-2.5	D4-1,2-DICHLOROETHANE	105	70-121
	GP-3-2.5	D8-TOLUENE	98.1	81-117
	GP-3-5.5	4-BROMOFLUOROBENZENE	93.8	74-121
111341-1	GP-3-5.5	D4-1,2-DICHLOROETHANE	80.8	70-121
111341-1	GP-3-5.5	D8-TOLUENE	97.9	81-117
	GP-3-7.5	4-BROMOFLUOROBENZENE	102	74-121
111342-1	GP-3-7.5	D4-1,2-DICHLOROETHANE	99.4	70-121
	GP-3-7.5	D8-TOLUENE	100	81-117
111343-1	GP-4-2.5	4-BROMOFLUOROBENZENE	99.2	74-121
	GP-4-2.5	D4-1,2-DICHLOROETHANE	92.5	
	GP-4-2.5	D8-TOLUENE	97.1	81-117
	GP-4-2.5	4-BROMOFLUOROBENZENE	91.7	74-121
	GP-4-2.5	D4-1,2-DICHLOROETHANE	89.5	70-121
	GP-4-2.5	D8-TOLUENE	95.7	81-117
	GP-4-5.5	4-BROMOFLUOROBENZENE	104	74-121
	GP-4-5.5	D4-1,2-DICHLOROETHANE	92.2	70-121
	GP-4-5.5	D8-TOLUENE	94.6	81-117
	GP-4-7.5	4-BROMOFLUOROBENZENE	101	74-121
	GP-4-7.5	D4-1,2-DICHLOROETHANE	94.3	70-121
111345-1	GP-4-7.5	D8-TOLUENE	103	81-117
	GP-4-7.5	4-BROMOFLUOROBENZENE	101	74-121
111345-2	GP-4-7.5	D4-1,2-DICHLOROETHANE	106	70-121
111345-2	GP-4-7.5	D8-TOLUENE	104	81-117
111346-1	GP-5-2.5	4-BROMOFLUOROBENZENE	97.3	74-121
	GP-5-2.5	D4-1,2-DICHLOROETHANE	96.4	70-121
	GP-5-2.5	D8-TOLUENE	100	81-117
	GP-5-5.0	4-BROMOFLUOROBENZENE	103	74-121
111347-1	GP-5-5.0	D4-1,2-DICHLOROETHANE	89.5	70-121
111347-1	GP-5-5.0	D8-TOLUENE	99.0	81-117
•				

V056 QCSURR1229 CHIP 23-Dec-96 16:31

Environmental Services (SDB)

December 23, 1996

Submission #: 9612239

page 2

AMERICAN ENVIRONMENTAL NETWORK

Atten: Bill Svoboda

Project: I.D.#3042.95.04

Project#: P.O.#9612094

Received: December 18, 1996

re: Surrogate report for 9 samples for Volatile Organics by GC/MS

Method: SW846 METHOD 8240A Nov 1990

 Lab Run#: 4618
 4-BROMOFLUOROBENZENE
 97.3
 74-121

 111348-1
 GP-5-7.5
 D4-1,2-DICHLOROETHANE
 89.8
 70-121

 111348-1
 GP-5-7.5
 D8-TOLUENE
 97.4
 81-117

	_		8	${f Recovery}_{f L}$
Sample#	OC Sample Type	Surrogate	Recovered	Limits
111976-1	Reagent blank (MDB)	4-BROMOFLUOROBENZENE	92.5	74-121
111976-1	Reagent blank (MDB)	D4-1,2-DICHLOROETHANE	92.4	70-121
111976-1	Reagent blank (MDB)	D8-TOLUENE	97.7	81-117
111978-1	Spiked blank (BSP)	4-BROMOFLUOROBENZENE	96.7	74-121
111978-1	Spiked blank (BSP)	D4-1,2-DICHLOROETHANE	80.6	70-121
111978-1	Spiked blank (BSP)	D8-TOLUENE	102	81-117
111980-1	Spiked blank duplicate		95.6	74-121
111980-1	Spiked blank duplicate		100	70-121
111980-1	Spiked blank duplicate	(BSD) D8-TOLUENE	95.6	81-117

V056 QCSURR1229 CHIP 23-Dec-96 16:0

1. Client: Address	BILL SVOBODA	- 1147 A	J440 VIIIC	Phone (5	Pleasant Hi 10) 930-909 0) 930-025	90	etwo 94523	7 k	Lab .	A Z	mber:	•		QUES		Page Page PAGE PAGE	
Alt. Co	ntact: ROBIN BYARS										les Shi	pped	: <u> 17</u>	/18	96		PLEASANIU
Address Re	eport To:	Se	nd Invoice To:					_		ontac					1		
2. <u>-</u>		3.	#1					_	Date Clien	Repor	s Requ t Requ e No.: No.:	ired:					
Client P.O.	rt To: ① or 2 (Circle one) No.: <u>9612094</u> Clier am Mernber (s)	nt Project I.D. N	o: <u>304</u> 2 _	2,95	.04	-			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			SU CL DU	IEN E:	#: ' T: (-	AEN 127	2239 REP: S	- /
Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	0					.r #	:31a /	#63 /	per / Comments	Chup comession
	GP-3-2.5		12/05/96	8	COLD	1	JAR	\boxtimes								PLEASE FAX	RESULTS AS
	GP-3-5.5							X		\bot						SOON AS AVA	
	GP-3-7.5							X						Т		INCLUDE P.C	1
	GP-4-2.5							X								PROJECT LD	
	GP-4-5.5					$oxed{oldsymbol{oldsymbol{oldsymbol{eta}}}$		X		<u> </u>	1					BOTH REPO	1
	GP-4-7.5			<u> </u>		$\sqcup \bot$		X								INVOICE.	37 77142
	GP-5-2.5			<u> </u>		23	B	X									
	GP-5-5.0					KI		M									
	GP-5-7.5	V	<u>V</u>	_\	R		.,	×					_		+		
	* RUN SAM	PLES	WIT	\ \ \ \ \	HO	20	TII	10	= .	*							
Relinquish (Signature)		ne	DATE 12-18	96	TIME 1400)	Receive (Signatu	d by: ire)	5	<u> </u>	ide	<u>۲</u>	<u>S</u> ;	dhú		DATE 12/18/196	TIME 14:00
Relinquish (Signature)	ed by:	ally	DATE	196	TIME 1500		Receive (Signatu		1	<i>A</i>)		1	-	DATE	TIME
Relinquish (Signature) Method of	ed by:		DATE		TIME		Receive (Signatu Lab Con	ıre)		rel	14	n	M	7		DATE 18/96	TIME
		Comple tupe (S		m 0.8 un	MCEE 2)	25mm	0.8 um h	ACEE	3) 25	nm 0.4			4. £11				

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter

4) PVC filter, diam. _____ pore size _____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample

10) Other _____ 11) Other _____ 11) Other _____ PINK - CLIENT

CHROMALAB, INC. SAMPLE RECEIPT CHECKLIST

Client Name ACN	Date/Time Received	12/18/96 1400
Project 9412094	Received by SMM	Pate 5 / Time
Reference/Subm # 3/2/63/96/2239	Carrier name	
Checklist frompleted 12/19/9/	Logged in by MP	1418/90
Signature / Date	Matrix Soll Ini	tials / Date
Shipping container in good condition?	NA _.	Yes No
Custody seals present on shipping contain	er? Intact Broken	Yes No
Custody seals on sample bottles?	Intact Broken	Yes No
Chain of custody present?	•	YesNo
Chain of custody signed when relinquished	and received?	YesNo
Chain of custody agrees with sample labels	5?	YesNo
Samples in proper container/bottle?		YesNo
Samples intact?		Yes
Sufficient sample volume for indicated tes	st?	YesNo
VOA vials have zero headspace?	_AM	Yes No
Trip Blank received?	NA_	
All samples received within holding time?		YesNo
Container temperature? 6.10C		
pH upon receiptpH adjusted	Check performed b	y: NA
Any NO response must be detailed in the applicable, they should be marked NA.	comments section below	. If items are not
Client contacted?	Date contacted?	
Person contacted?	Contacted by?	
Regarding?		
Comments:		
· · · · · · · · · · · · · · · · · · ·		
Corrective Action:	· · · · · · · · · · · · · · · · · · ·	

SMPLRECD.CK

9612094

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3	Project Location: Emeryville, Ca.							D	ate:	-6-96	Serial No	>.:				
Project Name:			operty		Field Log	gbook N						_			Nº	1003
Sampler (Signa	ture):	Cento	- Bee								ANAL			/	Samplers	" KAG
			SAMPLES					.o/			/ /	13,70				7 7 0
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON- TAINERS	SAMPLE TYPE	4.	7.7	30.00	מייים מייים מייים	30/	100 m	٠٠٠٠	YOU	RIJEH	REMAR	KS
GP-1-2-5	12-5-96		OIA	1	50:1	 			د_	x.	4_	_;	.	Composi	te all a	\Ou
CP-2-2-5			OZA	·				I		-4	4		ــــــاــــــ	y as	156878	5 4.3 .5
GP-2-5.0						+	+	+		├	- -		.	In T	(10 mil	, , , , , , , , , , , , , , , , , , ,
GR 2 - 7.5			0 4 A	_		- [┵		-			1 .	×	100		
Ge-3-25			05A		.	1	+	+			L		<u> </u>	- necons	l leuil.	
GP-3-5-5			OGA		- 									-unlesis	700	
GP-3-7-5	<u> </u>		07A		1 1	 	- -				<u> </u>		د ا 		7	
GP-4-25			OBA		 -	1 1	+	┼┼	μ· /		a	>	<u> </u>		U Banales	- lan
GP-4-5,5			09A		 		- - -	Litre analysis 10								70
GR 4- 7.5	.		10A		+			+	+	$\vdash\vdash$				· · · · · · · · · · · · · · · · · · ·	1	
GP-\$-2-5			11A		+ + -	 -	╌		\dashv		~	×	' 	· - rean	lto to	
GP-5-5.0				-	 	+ +		+		├ ── 	₽	- ->			· /- 1	~ /2u_
GR 5 - 7.5	 		 13 A		 	+ +	+	++-	+	$\vdash\vdash$	-	X			(and	7200
Gr. 6 - 3.5			14A		 	+ +	╌╂╌	1	$\dashv\dashv$	┝┼╸	4	 			0	
GP-7-2.5	 		15A		+	+ +		++	+		 	- -	-		mak	5-4
GP-7-6.0	L ↓		IGA	4	_ ₩	₩	⊥-Ψ-	- \		K	-		!		+cip	/
RELINQUISHED	BY: 1/	into S	7	DA		TIME	λ.		EIVED Ignatur	-1					DATE	TIME
(Signature)	\(c	vestor)	<u> </u>	เา	-6-96	14	17 St.	+ , ,	9	~ , , , ,	me	11.	sen	<i></i>	12/6/96	14:35
RELINQUISHED I (Signature)	BY:			DA	re ·	TIME			EIVED ignatur	U1.					DATE	TIME
RELINQUISHED ((Signature)	BY:			DA	TE	TIME	Æ		EIVED ignatur						DATE	TIME
METHOD OF SHI	PMENT:			DA	ΓE	TIME		LAB	СОММ	ENTS:	_			TD_{∞}		
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500								Ana	lytical	Labora	atory:	AE	· N	TCL PM 961216	oork on	AEN

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.:		Project Location: Emeryville, Ca. Date: 12-6-96									Serial No.	_								
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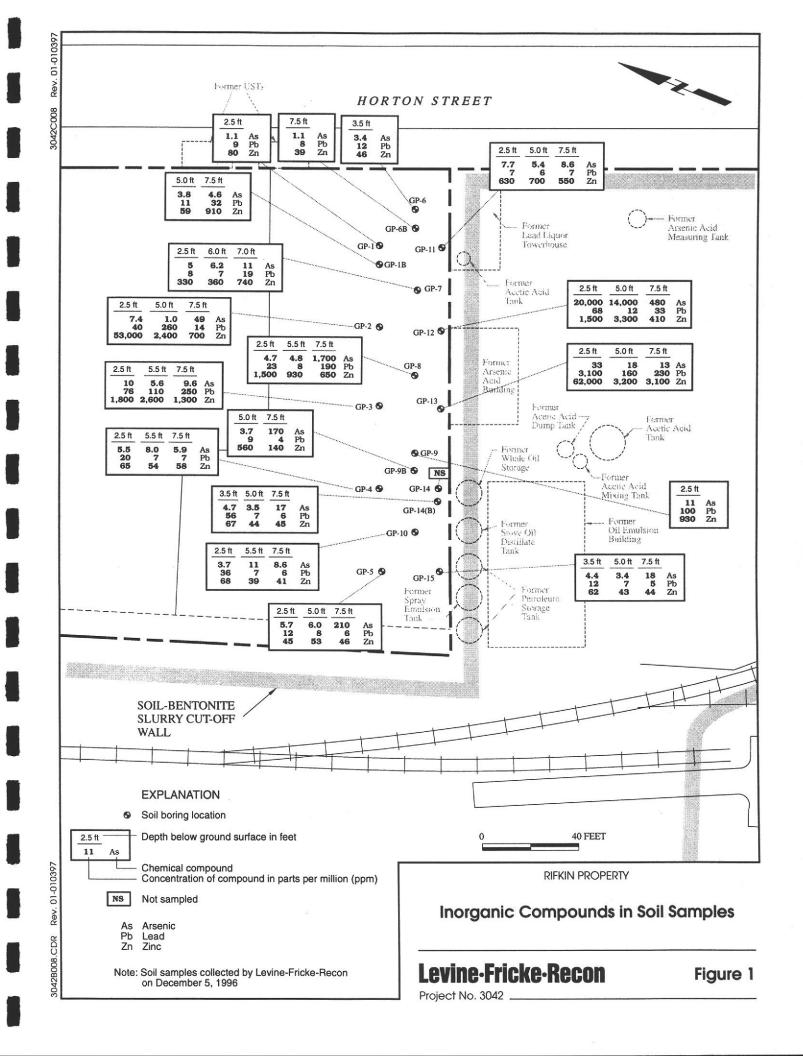
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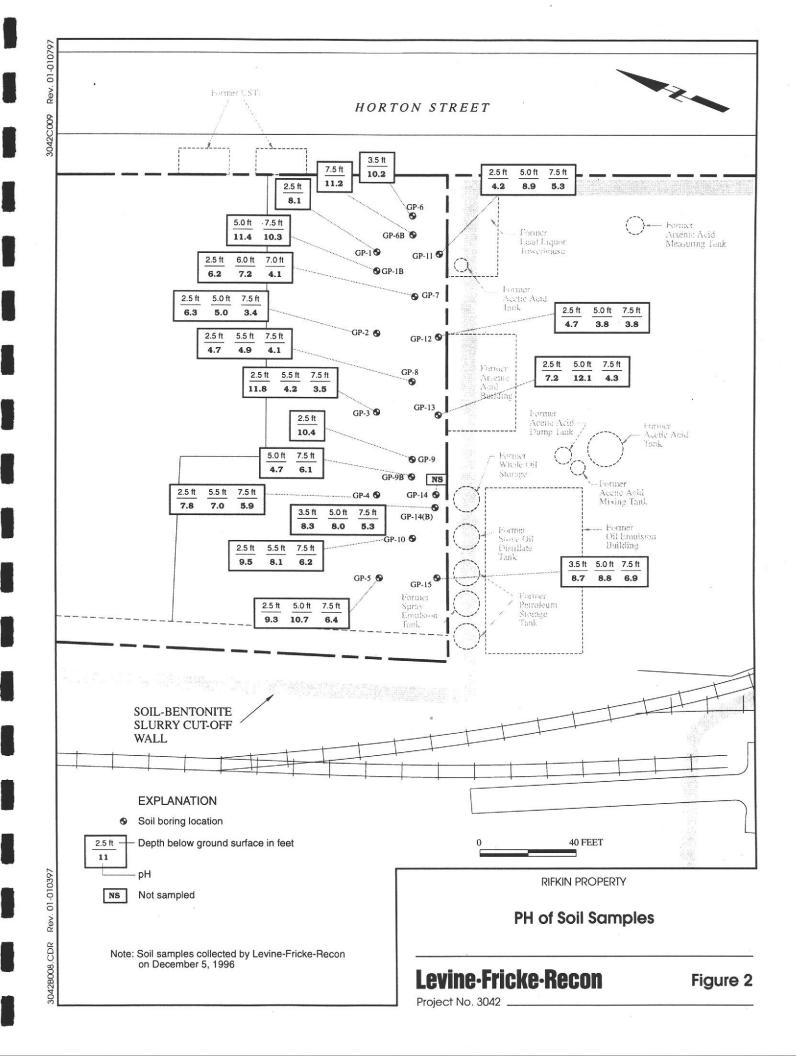
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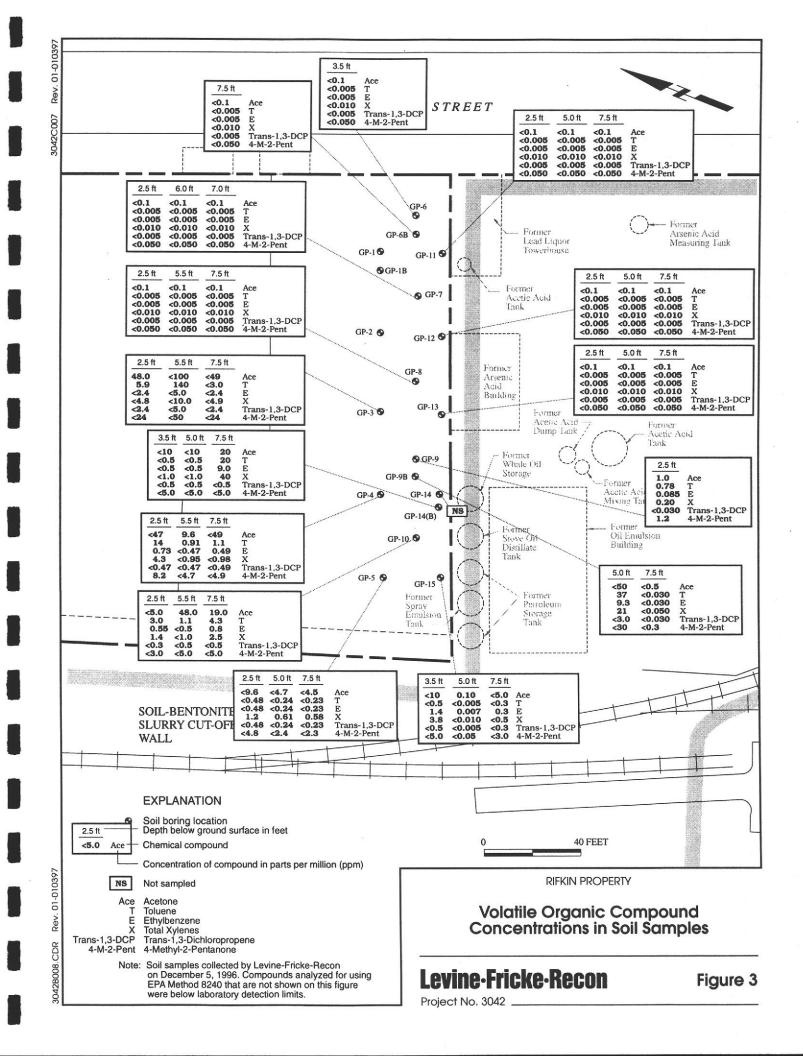
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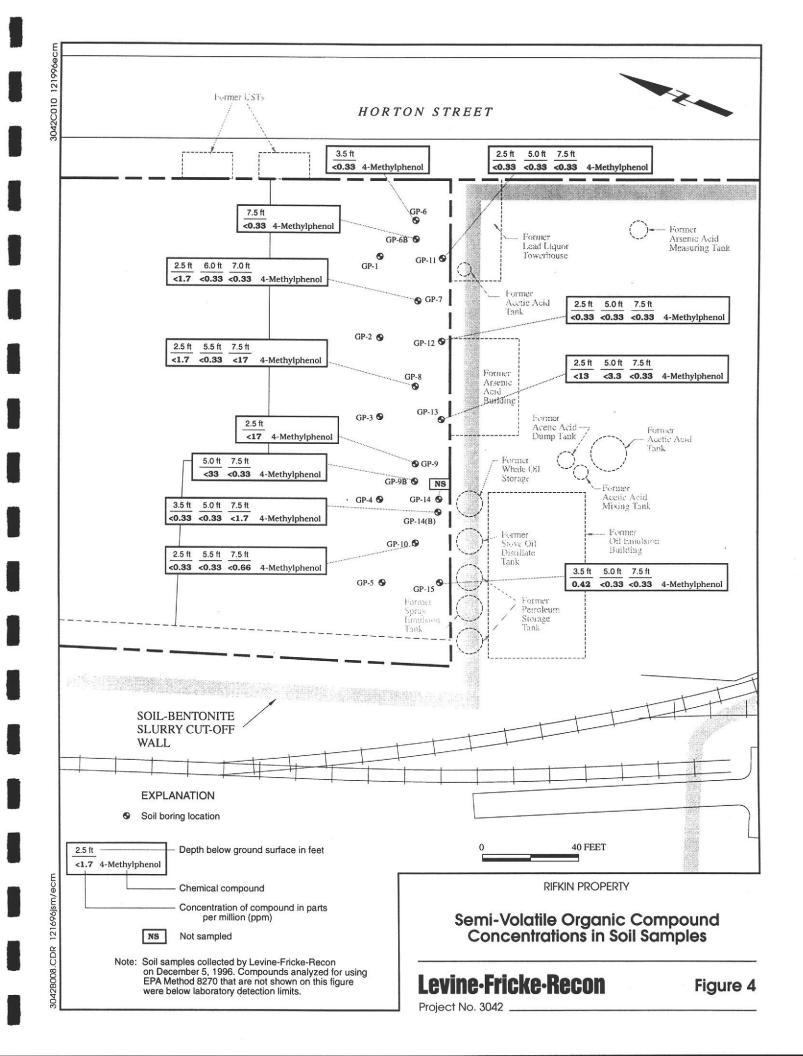
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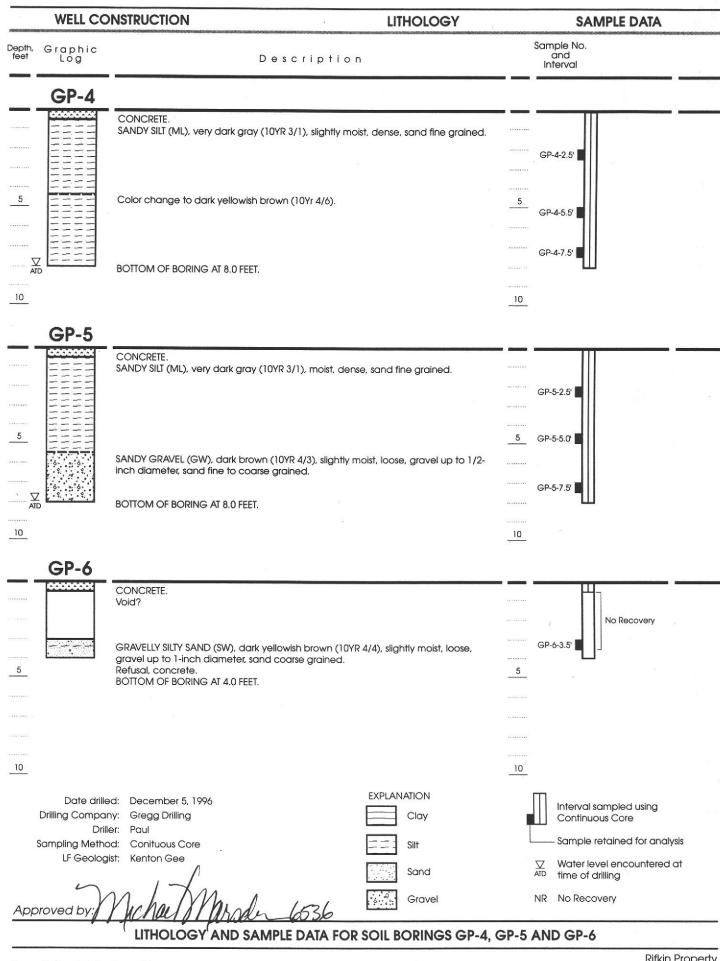




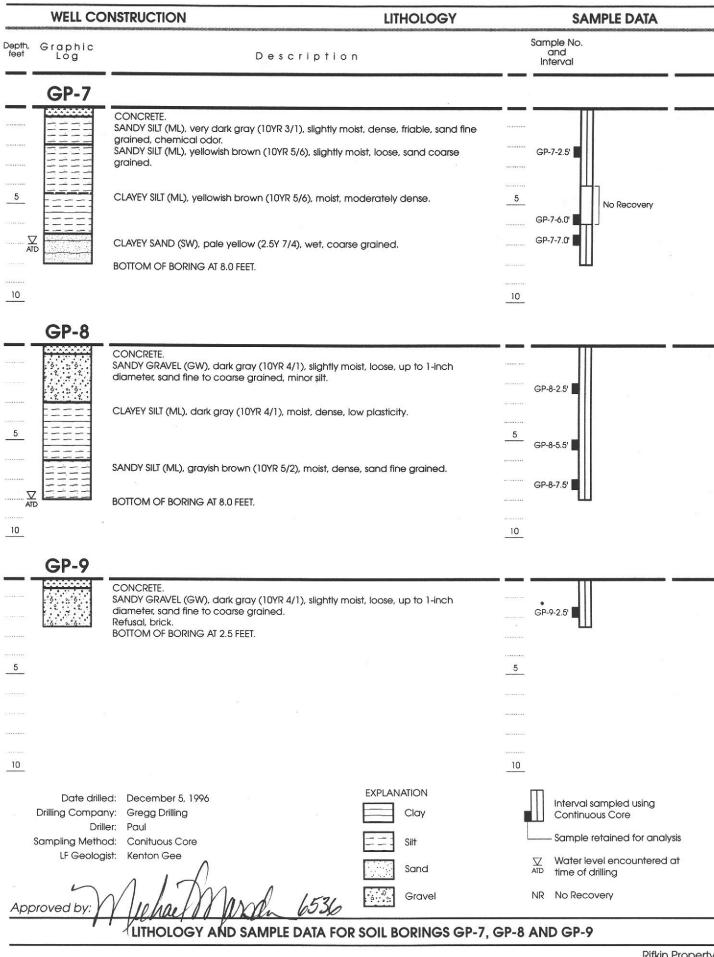


	WELL CO	NSTRUCTION LITHOLOGY	LITHOLOGY								
Depth, feet	Graphic Log	Description		Sample No. and Interval	*						
	GP-1	CONCRETE.  GRAVELLY SILT (ML), brownish yellow (10YR 4/6), slightly moist, loose, gravel up inch diameter.  Refusal, concrete.  BOTTOM OF BORING AT 4.0 FEET.	5	GP-1-2.5							
10	GP-2	CONCRETE.									
AI	7	CLAYEY GRAVEL (GC), very dark gray (10YR 3/1), moist, dense, up to 1-inch di minor sand, minor brick fragments.  GRAVELLY SAND (SW), pale yellow (2.5Y 7/4), moist, loose, coarse grained, gray to 1-inch diameter, chemical odor.  SANDY SILT (ML), pale yellow (2.5Y 7/4), moist, dense, sand fine grained, chemodor.  SANDY GRAVEL (GW), very dark grayish brown (10YR 3/2), wet, up to 1-inch disand fine to coarse grained.  BOTTOM OF BORING AT 8.0 FEET.	ovel up 5 nical 5	GP-2-2.5' GP-2-5.0' GP-2-7.5'							
10	GP-3		_10_								
		CONCRETE. GRAVELLY SILT (ML), brownish yellow (10YR 6/6), slightly moist, loose, gravel up inch diameter, wood fragments.  SANDY SILT (ML), very dark gray (10YR 3/1), moist, dense, sand fine grained, m gravel.  CLAYEY SILTY SAND-SANDY SILTY CLAY (SW-CL), light olive brown (2.5Y 5/3), modense, very low plasticity, sand fine grained.	inor	GP-3-2.5' GP-3-7.5'							
Z A1		SANDY SILT (ML), very dark grayish brown (10YR 5/2), wet, dense, sand fine grayish DOTTOM OF BORING AT 8.0 FEET.	ained.	- The state of the							
		od: Conituous Core		Continuou Sample re  Water leve time of dri	tained for analysis						

**Levine-Fricke-Recon**Project No. 3042

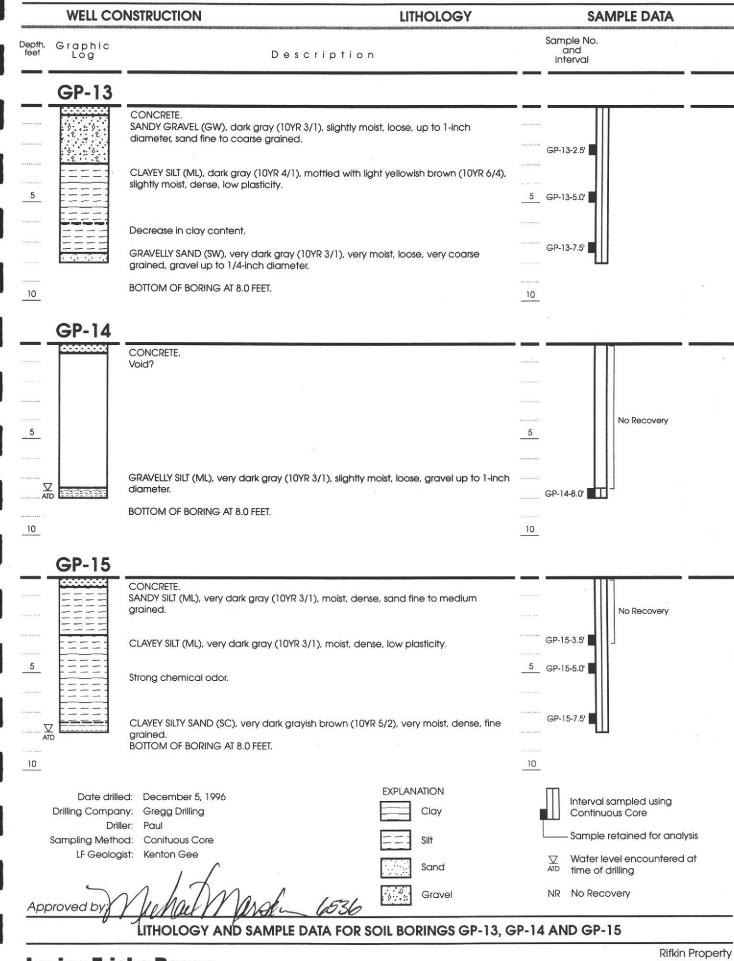


Levine-Fricke-Recon



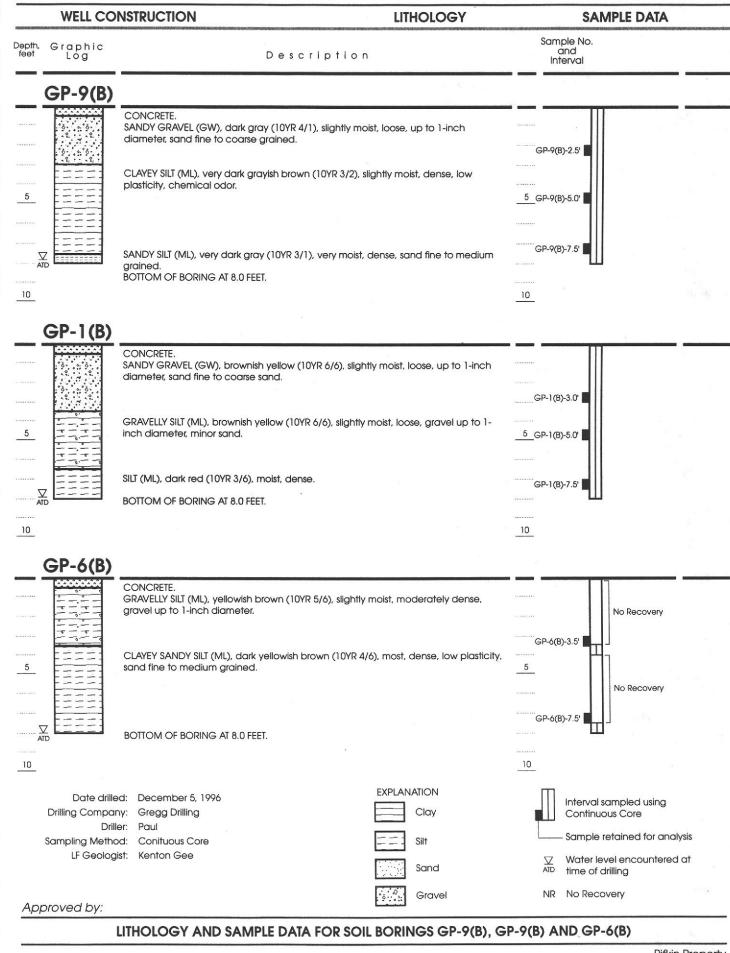
WELL CO	NSTRUCTION	LITHOLOGY		SAMPLE DATA	
Depth, Graphic feet Log	Description		Sampl an Inter	nd .	
GP-10		5			
\$	CONCRETE. SANDY GRAVEL (GW), dark gray (10YR 3/1), slightly modiameter, sand fine to coarse grained.  CLAYEY SILT (ML), very dark gray (10YR 3/1), slightly mosand.		GP-10-2	2.5'	
5	Increase in sand content, strong chemical odor.		5 ——— GP-10-5	]	
√ ====================================	BOTTOM OF BORING AT 8.0 FEET.		GP-10-7	.5	
— GP-11					
	CONCRETE. SANDY SILT (ML), yellowish brown (10YR 5/6), slightly moist, loose, sand medium to coarse grained.  CLAYEY SILT (ML), dark yellowish brown (10YR 4/6), slightly moist, dense, low plasticity.		GP-11-2	5' ■	
5	Very moist.		5 GP-11-5		
10	BOTTOM OF BORING AT 8.0 FEET.		10	ш.	
GP-12	CONCRETE.				
9,000	SANDY GRAVEL (GW), dark gray (10YR 3/1), slightly moi diameter, sand fine to coarse grained.  GRAVELLY SILT (ML), very dark gray (10YR 3/1), slightly m		GP-12-2	.5 <b>-</b>	
5	diameter, minor coarse sand.  SANDY SILT (ML), grayish brown (10YR 5/2), moist, dense, sand fine grained.		5 GP-12-5	o.or	
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Date drille Drilling Compa		EXPLANATION  Clay  Silt		nterval sampled using Continuous Core ample retained for analysis Vater level encountered at	
Approved by:	Nichar March 6536	Sand  Gravel	ATD †į	me of drilling	
	LITHOLOGY AND SAMPLE DATA FOR SO	OIL BORINGS GP-10, G	P-11 AND	GP-12	

**Levine-Fricke-Recon**Project No. 3042

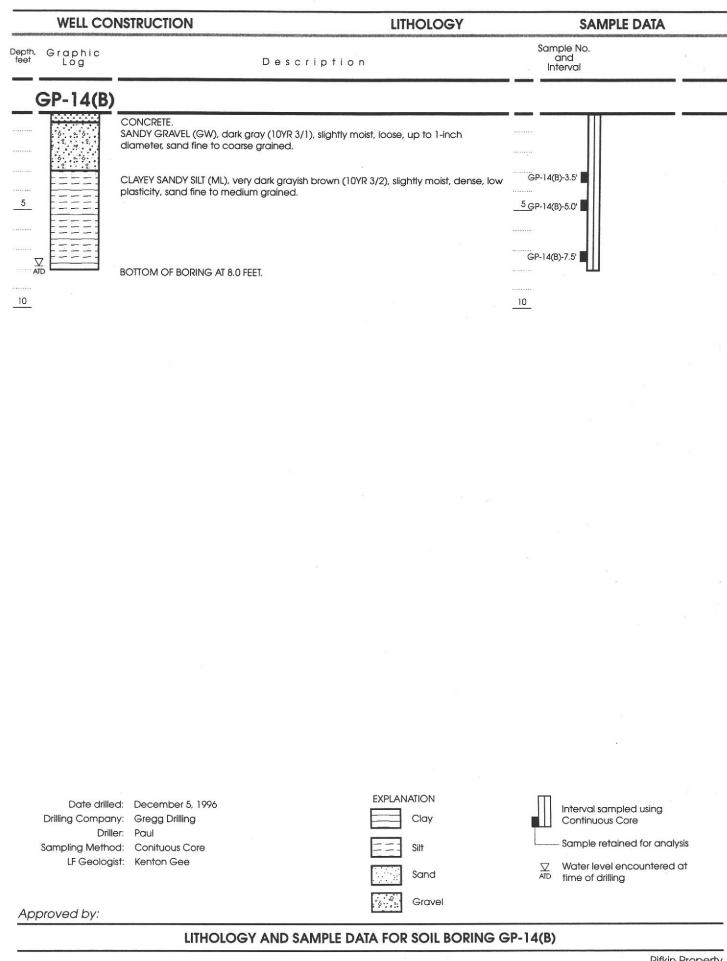


Levine-Fricke-Recon Project No. 3042

**Figure** 



Levine-Fricke-Recon



Levine-Fricke-Recon

Project No. 3042

Rifkin Property

**Figure** 

Appendix C

Revised Work Plan for Additional Soil and Groundwater Investigations, Dated March 28, 1997

Revised Work Plan for
Additional Soil and Groundwater Investigations
Rifkin Property
4525 to 4563 Horton Street
Emeryville, California

March 28, 1997 3042.95-004

Prepared for The Sherwin-Williams Company 101 Prospect Avenue Cleveland, Ohio 44115



### INTRODUCTION

This work plan is submitted per Sherwin-Williams' request for additional investigations of soil and groundwater at the Rifkin Property, located at 4525 to 4563 Horton Street in Emeryville, California. It describes the proposed scope of work for conducting these additional investigations at the Rifkin Property.

One of the goals of the work plan is to obtain necessary data to allow Chiron to move promptly forward with their building demolition. As a result, the work will be conducted in phases, with sampling in the southern area of the property taking highest priority before building demolition. This work was completed as described in Task 5 of the November 20, 1996, Work Plan (amended December 2, 1996). In addition, physical building constraints may require that the remaining work within the Rifkin building be conducted after building demolition. The schedule for drilling and sampling will be worked out with Chiron after approval of the scope of work.

### **OBJECTIVES**

The primary objectives of the activities described in this work plan are to:

- conduct a visual analysis of the property, assess past industrial activities and review
  data from previous investigations in order to identify potential source areas for soil
  and groundwater contamination (Task completed.)
- verify the extent of the arsenic groundwater plume from the Sherwin-Williams property including assessment of whether arsenic is migrating in sand stringers beneath the currently installed wells RP-1 - RP-5
- confirm locations of other sources of contamination through selective sampling of soil and groundwater in order to fill in data gaps and/or confirm results from previous investigations
- define the extent of chemical migration in the vadose zone soil from the Sherwin-Williams property onto the Rifkin property at the southern Sherwin-Williams
  /Rifkin property boundary in order to determine whether soil removal is appropriate and, if so, to what extent (*Task completed*.)
- collect groundwater samples in wells upgradient from Rifkin and downgradient from the South BGR property (former Shell development property) to verify the extent of contaminated groundwater migration from the South BGR property onto the Rifkin property

#### **SCOPE OF WORK**

Based upon the objectives previously listed, the proposed scope of work includes the following tasks:

- Task 1: Site Walk and Review of Historical Data (Task completed.)
- Task 2: Pre-Field Work Activities
- Task 3: CPT Borings
- Task 4: Soil and Groundwater Sampling at CPT Boring Locations
- Task 5: Soil Sampling in the Vicinity of the Southern Sherwin-Williams/Rifkin Property Boundary (Task completed.)
- Task 6: Installation, Development, and Sampling of Monitoring Wells
- Task 7: Report Preparation

Detailed descriptions of the services to be provided under each work task are presented below.

### Task 1: Site Walk and Review of Historical Data

(Task 1 has been completed. For more information about the scope of work, refer to Levine Fricke Recon Inc.'s November 20, 1996 Work Plan.)

#### Task 2: Pre-Field Work Activities

The appropriate permits will be obtained from the City of Emeryville and from Alameda County Flood Control and Water Conservation District (Zone 7) before subsurface investigations and monitoring well installation activities begin. These permits would include any well drilling permits, as well as access right-of-way for drilling in Horton Street or the adjacent sidewalk.

A private underground utility locator will identify the locations of subsurface structures and utility lines at each proposed CPT and monitoring well location before subsurface investigation activities commence. Underground Services Alert (USA) also will be notified before initiation of subsurface investigations and well installation activities, so that the locations of public utilities can be identified.

### Task 3: CPT Borings

An estimated 18 CPT borings will be drilled at the Rifkin Property under the supervision of a LFR geologist where deemed necessary. Based on preliminary review of the site data, LFR has tentatively identified these locations, as shown in Figure 1. CPT borings will be extended to a depth of 30 ft bgs, and the data collected from the

Page 2

CPT borings will be used to select discrete intervals in the subsurface to collect soil and groundwater samples as described in Task 4.

CPT provides identification of lithologic units, using an instrumented probe with a conical tip and friction sleeve, to measure various geologic, geotechnical, and hydrologic parameters. This is accomplished by correlating resistance on the cone tip, frictional resistance along the cylindrical friction sleeve, probe inclination, and pore water pressure. The data generated from the CPT measurements will be used to identify changes in subsurface lithology and aid in assessing potential intervals in the subsurface for the collection of soil and groundwater samples.

The CPT probe, which is attached to a string of steel pipe segments, will be pushed into the ground using a truck-mounted hydraulic ram with a maximum reaction of 25 tons. The probe will be advanced at an approximate rate of 2 centimeters per second, while measurements are recorded continuously and relayed directly to an on-board computer. Lithologic and hydrologic data based on cone tip resistance, sleeve friction, probe inclination, and pore water pressure measured by the cone-tipped probe are printed out by the computer as the probe advances. Upon completion, the CPT boring will be grouted through a tremie pipe immediately after the probe is removed from the ground.

Drilling all the CPT borings prior to building demolition may not be feasible due to physical building constraints. As a result, LFR will drill the CPT borings after demolition.

## Task 4: Soil and Groundwater Sampling at CPT Boring Locations

The lithologic and hydrologic data will be reviewed after completion of the CPT borings, in order to determine discrete soil and groundwater sampling intervals at each CPT boring location.

Under the supervision of a LFR geologist, a hydraulically driven push-rod sampling rig will be used to collect a soil sample (if deemed necessary) at two different depths above the groundwater table at each CPT location. The boring location for the push-rod sampling rig will be within an approximate 1-foot radius of each CPT boring location.

At each boring location, following collection of the soil samples, a discrete groundwater sampling tool will be attached to the hydraulically driven push-rod sampling rig and groundwater samples will be collected from below the groundwater surface. At each boring location, two groundwater samples will be collected within the A-zone groundwater at the site. One of the groundwater samples will be collected between the top of the groundwater surface and 15 feet below ground surface (bgs); the other groundwater sample will be collected between 15 feet bgs and 30 feet bgs. Where appropriate, samples will be collected where sand intervals are identified in the boring.

### Soil Sampling Field Methods

Boreholes will be advanced by hydraulically driving a 1-1/2 inch diameter core-rod, lined with brass tubes inside a 1-5/8 inch diameter hollow steel sampling tube. This sampling system allows soil samples to be collected from a selected interval. When the desired sampling depth is reached in each boring, the lowermost sample will be preserved by placing aluminum foil-lined plastic caps over the ends of the brass tubes; the samples will then be stored in a chilled cooler. Each sample will be labeled with the borehole identification and depth of the sample, the time and date of sample collection, the analysis requested, and the name of the individual who collected the sample.

The soil sample collected above for chemical analyses will be lithologically described using the Unified Soil Classification System. Lithologic descriptions will be recorded in the field on borehole log forms. Soil samples collected from the well borings for lithologic description will be field screened, using an organic vapor meter (OVM), for the presence of VOCs. Additional soil samples will be collected for possible chemical analysis based on visible staining and/or high OVM measurements.

All downhole testing and sampling equipment will be decontaminated between locations using a steam cleaner.

Investigation derived soil waste will be placed in 55-gallon drums and stored on the Sherwin-Williams property. Selected soil samples will be composited and the TCLP will be determined for arsenic, lead, zinc, VOCs and SVOCs. An appropriate disposal site will be determined based on the analytical results.

### **Groundwater Sampling Field Methods**

The 1-1/2 inch rods will be removed from the boring for collection of a groundwater sample, in order to obtain groundwater samples at a discrete depth. A discrete interval sampling tool will then be inserted and the 1-5/8-inch-diameter rods will be removed. The discrete groundwater sampling tool will then collect a groundwater sample in appropriate containers. Filled sample bottles will be labeled, stored on ice in a cooler, and submitted to the analytical laboratory. Chain-of-custody forms will accompany the shipment of samples. After sample collection, the completed boreholes will be backfilled to the ground surface with neat cement grout containing a maximum of 3 to 5 percent bentonite.

All downhole testing and sampling equipment will be decontaminated between locations using a steam cleaner.

Wastewater generated during steam cleaning and other activities will be discharged into the GWETS at Sherwin-Williams.

### Laboratory Analysis

Soil and groundwater samples will be submitted to American Environmental Network of Pleasant Hill, a California-certified laboratory, for chemical analysis on a standard laboratory turnaround schedule of two weeks. Soil and groundwater samples will be analyzed for arsenic, lead, and zinc using EPA Method 6000/7000 series, SVOCs using EPA 8270, VOCs using EPA Method 8240, TPHg using EPA Method 5030 GCFID, TPHd using EPA Method 3510/3550, and for pH. Soil samples will also be analyzed for PCBs using EPA Method 8080. The groundwater samples will be filtered in the laboratory prior to all metals analyses.

# Task 5: Soil Sampling in the Vicinity of the Southern Sherwin-Williams/Rifkin Property Boundary

(Task 5 has been completed. For more information about the scope of work, refer to Levine·Fricke·Recon Inc.'s November 20, 1996 Work Plan, with modifications to Task 5 described in the December 2, 1996 letter to the RWQCB.)

## Task 6: Installation, Development, and Sampling of Monitoring Wells

## Installation of Monitoring Wells

Four A-zone monitoring wells will be completed to a depth of 15 to 20 feet bgs at the locations shown on Figure 1. The locations of these monitoring wells may be adjusted based on the historical site data review under Task 1 and the CPT results under Task 4.

All wells will be installed by the hollow-stem auger drilling method. All augers and sampling equipment will be steam cleaned before use at each well location. Soil samples will be collected continuously, and will be used to characterize the subsurface lithology. Soil samples and drill cuttings will be monitored with an organic vapor meter (OVM) to test for the presence of volatile organic compounds (VOCs) in the soil for health and safety purposes.

Monitoring wells will be completed with 2-inch diameter polyvinyl chloride (PVC) casing in an 8-inch diameter borehole, with a maximum of 10 feet of slotted screen

After the well casing has been placed in the completed borehole, the well annulus opposite the perforated interval will be backfilled with clean sand to a height of approximately 2 feet above the top of the perforations. The grain-size distribution of the sand pack will be selected to be compatible with the selected slot size of the well screen. Approximately 2 feet of bentonite pellets will be placed above the sand pack to isolate the perforated interval from material above and inhibit the entrance of grout into the sand pack. A cement-bentonite grout will be placed in the remainder of the borehole. A locking cover will then be placed over the top of the casing to protect the integrity of the well.

Soil cuttings generated during drilling will be stored in 55-gallon drums and left on site until an appropriate disposal method is determined pending analytical results.

Top-of-casing measurements and horizontal location for the new wells will be collected by a licensed surveyor.

### Development and Sampling of Monitoring Wells

Collection of water-level measurements and development of the newly-installed wells will take place following installation.

The groundwater level measurements will be measured from the top of the casing to the groundwater surface using an electronic water-level probe attached to a measuring tape graduated to 0.01 foot intervals.

The newly installed wells will be developed by bailing, swabbing, and pumping to remove sediment from around the well and to enhance hydraulic communication with the surrounding formation.

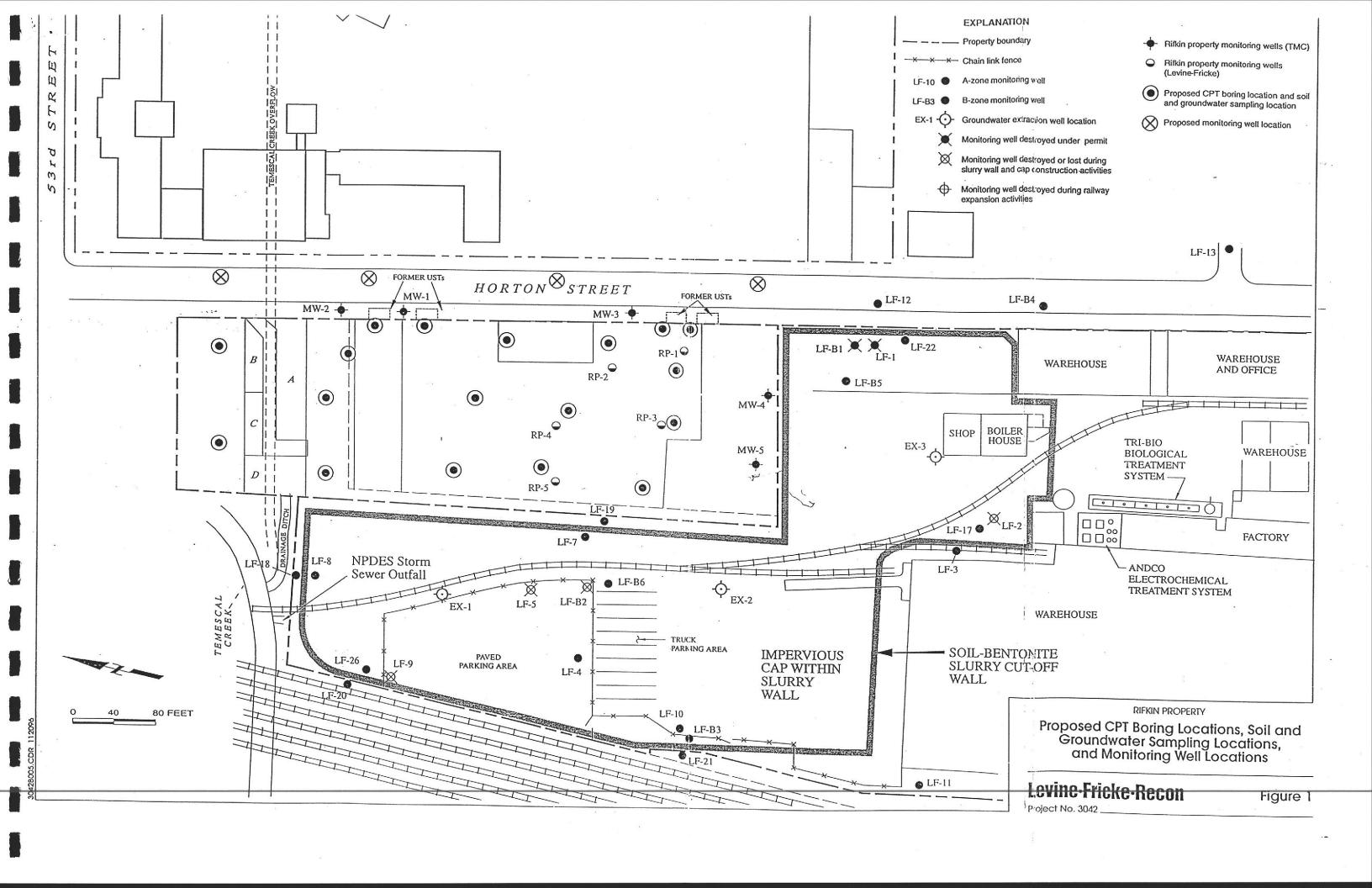
During well development, approximately 10 well volumes of water will be removed from each well. Specific conductance, pH, and temperature will be measured during this purging process to aid in evaluation of groundwater quality. Observations concerning quantity and clarity of water withdrawn will be recorded during this process. After well development, the water level in the well will be measured. All developing and sampling equipment will be steam cleaned before use at each well.

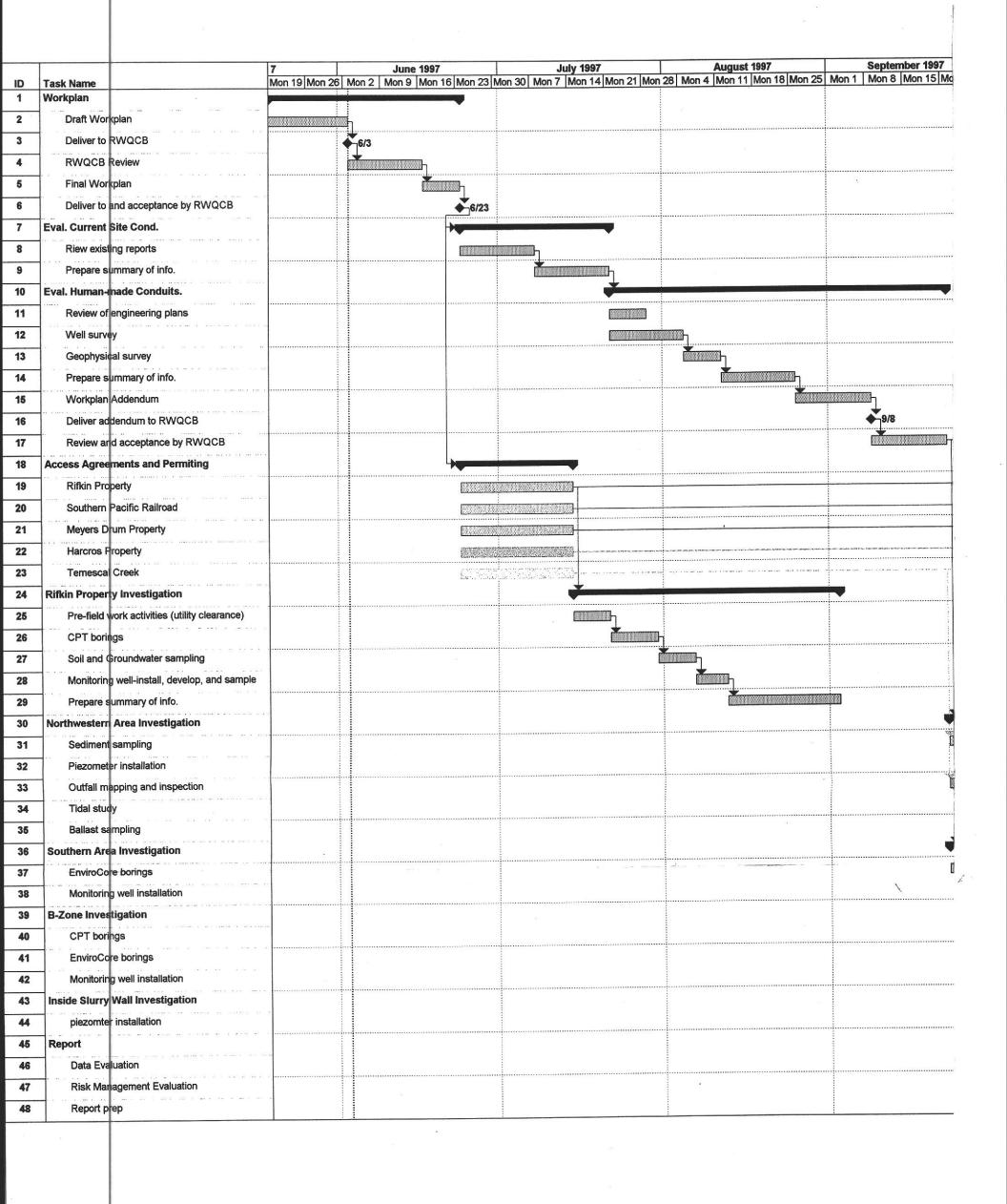
Groundwater samples will be collected from the new wells and submitted to American Environmental Network for analysis of arsenic using EPA Method 6000/7000 series, VOCs using EPA Method 8240, TPHg using EPA Method 5030 GCFID, TPHd using EPA Method 3510/3550, and SVOCs using EPA 8270.

Groundwater generated from the well development and sampling activities will be discharged to the Sherwin-Williams GWETS.

## Task 7: Data Report Preparation

A data report will be prepared summarizing investigation activities. The report will include a description of site activities conducted, results of chemical analysis (foundation materials, soil, and groundwater) presented in tabular form, site maps showing concentrations of chemicals detected in foundation materials, soil and groundwater, data collected during CPT activities, lithologic logs prepared during soil and groundwater sampling activities, and laboratory data reports.





 
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 tation Schedule

Appendix D

Work Plan for Expansion of Existing Groundwater Remedial System, Dated November 7, 1996



November 7, 1996

3042.95-005

via Federal Express

Mr. Sumadhu Arigala California Regional Water Quality Control Board San Francisco Bay Region 2101 Webster St., Suite 500 Oakland, California 94612

Subject:

Work Plan for Expansion of Existing Groundwater Remedial System on Former Rifkin

Property, Emeryville, California

#### Dear Sum:

Levine Fricke Recon Inc. (LFR; formerly Levine Fricke and Recon Environmental) has prepared this work plan on behalf of the Sherwin-Williams Company (Sherwin-Williams). This work plan presents the scope of work associated with the expansion of the existing groundwater remedial system on the former Rifkin Property in Emeryville, California ("the Site"). The existing groundwater remedial system is currently in operation at the Sherwin-Williams facility adjacent to the Site. The existing groundwater remedial system consists of a groundwater extraction and treatment system (GWETS) operated in conjunction with a slurry wall that serves as a physical hydraulic barrier to contain affected groundwater at the Sherwin-Williams facility.

For the purposes of this work plan, a remedial option has been proposed for immediate implementation at the Site (Figure 1). The selected remedial option consists of an expansion of the existing Sherwin-Williams GWETS to the Site to act as a hydraulic barrier, as well as extraction of contaminated groundwater. This expansion requires the installation of three groundwater extraction wells, conveyance piping for extracted groundwater, supplied air to operate the groundwater extraction pumps, and associated equipment and appurtenances such as well vaults and valves.

The GWETS expansion will be installed during the period of property development after the demolition of the Rifkin building but prior to construction of the surface parking lot.

#### TASKS

The scope of work associated with the expansion of the existing groundwater remedial system includes the following tasks:

- groundwater flow modeling
- engineering design for GWETS expansion
- extraction well installation and development
- · regulatory interface and permitting
- · system construction



- start up of expanded GWETS
- · disposal of waste soils from well installation
- · project management and reporting

### Task 1: Groundwater Flow Modeling

The objective of this task is to delineate the required area of capture for the proposed groundwater extraction wells in order to contain the arsenic plume at the Site. The selection of the proposed locations of the groundwater extraction wells was based on the limited access for well placement due to physical constraints and plans for future development of the Site. Existing data will be analyzed and used to create a two-dimensional groundwater flow model. The model will simulate capture areas to evaluate two different extraction well pumping schemes. A short memorandum will be prepared to describe the results of the model simulations and the estimated area of capture for each scheme.

### Task 2: Engineering Design for GWETS Expansion

This task includes the following activities:

- layout and design of a conveyance piping network for supplied air and extracted groundwater, which will be connected to the existing GWETS
- specification of pneumatic extraction well pumps, valves, pulse counters, piping, hoses, and other appurtenances
- design of wellheads and junction boxes
- · design of connection to existing GWETS
- · design of trenches, backfill, and resurfacing as necessary
- · design of modifications to the existing GWETS
- preparation of engineering plans and specifications

# Task 3: Extraction Well Installation and Development

A subcontractor who locates underground utilities will identify the locations of subsurface structures and utility lines in the vicinity of each proposed well location before drilling activities begin.

Three A-zone extraction wells (EX-4, EX-5, and EX-6) will be completed to a depth of approximately 25 feet below ground surface (bgs) using the hollow-stem auger drilling method. Soil samples will be collected continuously for characterization of subsurface lithology. Soil samples and drill cuttings will be monitored with an organic vapor meter (OVM) to assess for the presence of volatile organic compounds (VOCs) in the soil for health and safety purposes. Drilling and sampling equipment will be steam cleaned before use at each well location.

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A-zone extraction wells will be completed with 5-inch-diameter stainless steel casings in 10-inch-diameter boreholes, with a maximum of 20 feet of slotted screen extending from approximately 5 to 25 feet bgs. After a well casing has been placed in a completed borehole, the well annulus opposite the perforated interval will be backfilled with clean sand to approximately 2 feet above the top of the perforations. The grain-size distribution of the sand pack will be selected for compatibility with the selected slot size of the well screen. Approximately 2 feet of bentonite pellets will be placed above the sand pack to isolate the perforated interval from material above and inhibit the entrance of grout into the sand pack. A cement-bentonite grout will be placed in the remainder of the borehole. A locking, traffic-bearing cover will then be placed over the top of the casing to protect the integrity of the well.

Soil cuttings generated during drilling will be stored at the Sherwin-Williams site in 55-gallon drums until an appropriate disposal method can be determined pending analytical results.

Top-of-casing measurements and horizontal location for the new extraction wells will be recorded by a licensed surveyor. Collection of water-level measurements and development of the newly installed wells will occur after well installation. Groundwater levels will be measured from the top of the casing to the groundwater surface using an electronic water-level probe attached to a measuring tape graduated to 0.01-foot intervals.

The newly installed wells will be developed by bailing, swabbing, and pumping to remove sediment from around the well and to enhance hydraulic communication with the surrounding formation.

During well development, approximately 10 well volumes of water will be purged from each well. Specific conductance, pH, and temperature will be measured and observations concerning the quantity and clarity of purged water will be recorded during purging to assist in the evaluation of groundwater quality. After well development, the water level in the well will be measured. All developing and sampling equipment will be steam cleaned before use at each well.

Groundwater generated from well development will be discharged into the existing groundwater treatment system.

# Task 4: Regulatory Interface and Permitting

This task includes preparation of permit applications and other documents, coordination with agency representatives, response to agency comments, and addressing regulatory issues that arise during construction and design of the system expansion.

These will include: (1) permits from the Alameda County Flood Control and Water Conservation District (Zone 7) before drilling and installation of the proposed extraction wells begins; and (2) a building permit (if required) from the City of Emeryville. The California Regional Water Quality Control Board (RWQCB) will be notified of the GWETS expansion; however, modification to the NPDES permit is not expected to be required because the overall treatment system flow should not exceed 12 gallons per minute.

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### Task 5: System Construction

This task includes preparation of bid and contract documents, selection of a general contractor to install the expansion to the existing GWETS, preparation of a health and safety plan, installation of the GWETS expansion at the Site, and monitoring of construction activities.

The general contractor will install the well vaults and junction boxes, pneumatic extraction well pumps and other wellhead components, valves, piping, hoses, and connection to the existing GWETS. A construction engineer will be at the Site for the start of construction work and periodically during field construction activities. The construction engineer will monitor the contractor's work to verify that the requirements of the contract documents are fulfilled.

The construction engineer will prepare construction reports describing the progress of the contractor's work, equipment, personnel, weather conditions, and other pertinent information applicable to construction. The construction engineer will also prepare correspondence to the contractor regarding technical and contractual issues, as necessary. Photographs will be taken to further document the progress of the contractor's work. The resident engineer will review shop drawings and submittal data on materials and equipment supplied by the contractor to confirm that these items comply with the specifications.

### Task 6: Start Up of Expanded GWETS

This task will provide for the start up of the expanded GWETS. Engineering technicians will implement necessary modifications to the existing GWETS prior to start up of the expanded GWETS. Necessary modifications may include the installation of additional filters and valves, and the implementation of control modifications at the treatment system.

Upon start up, technicians will observe the condition and flow rate of groundwater extracted from each of the new extraction wells at the Site. Influent samples will be collected from each well and submitted to a California-certified laboratory for analysis. Based on this data, operational parameters at the treatment system will be adjusted to maintain effective treatment of groundwater from the expanded extraction system. Increased operation and maintenance will be required during this initial start-up period.

# Task 7: Disposal of Waste Soils from Well Installation

This task will provide for the characterization and disposal of waste soils that will be produced during the construction of the expanded GWETS.

Soil cuttings generated during well installation will be stored on-site in 55-gallon drums. A composite sample will be collected from the drums and analyzed by a California-certified laboratory for characterization. An appropriate disposal method for the soil will be determined based on the analytical results.

This task will not provide for the disposal of waste soils from trenching activities on the Rifkin Property. It is assumed that trenching will be performed in relatively shallow soils above groundwater at the Site and that activities at the Sherwin-Williams facility have not impacted these soils. The waste soil from trenching activities will be utilized for backfill of the piping to be placed in the trench.

# Task 8: Project Management and Reporting

This task will allow for project management and reporting associated with the expansion of the GWETS. Typical project management tasks include scheduling, project oversight, client updates, additional regulatory interface, budget management and cost tracking, subcontractor and vendor management, and interface with Chiron Corporation. The reports to be prepared include a GWETS expansion construction report and a start-up report for the expanded GWETS for submittal to the RWQCB.

Please feel free to contact me at (510) 652-4500 or Dave Gustafson of Sherwin-Williams at (216) 566-3144 if you have any comments or questions about this work plan.

Sincerely,

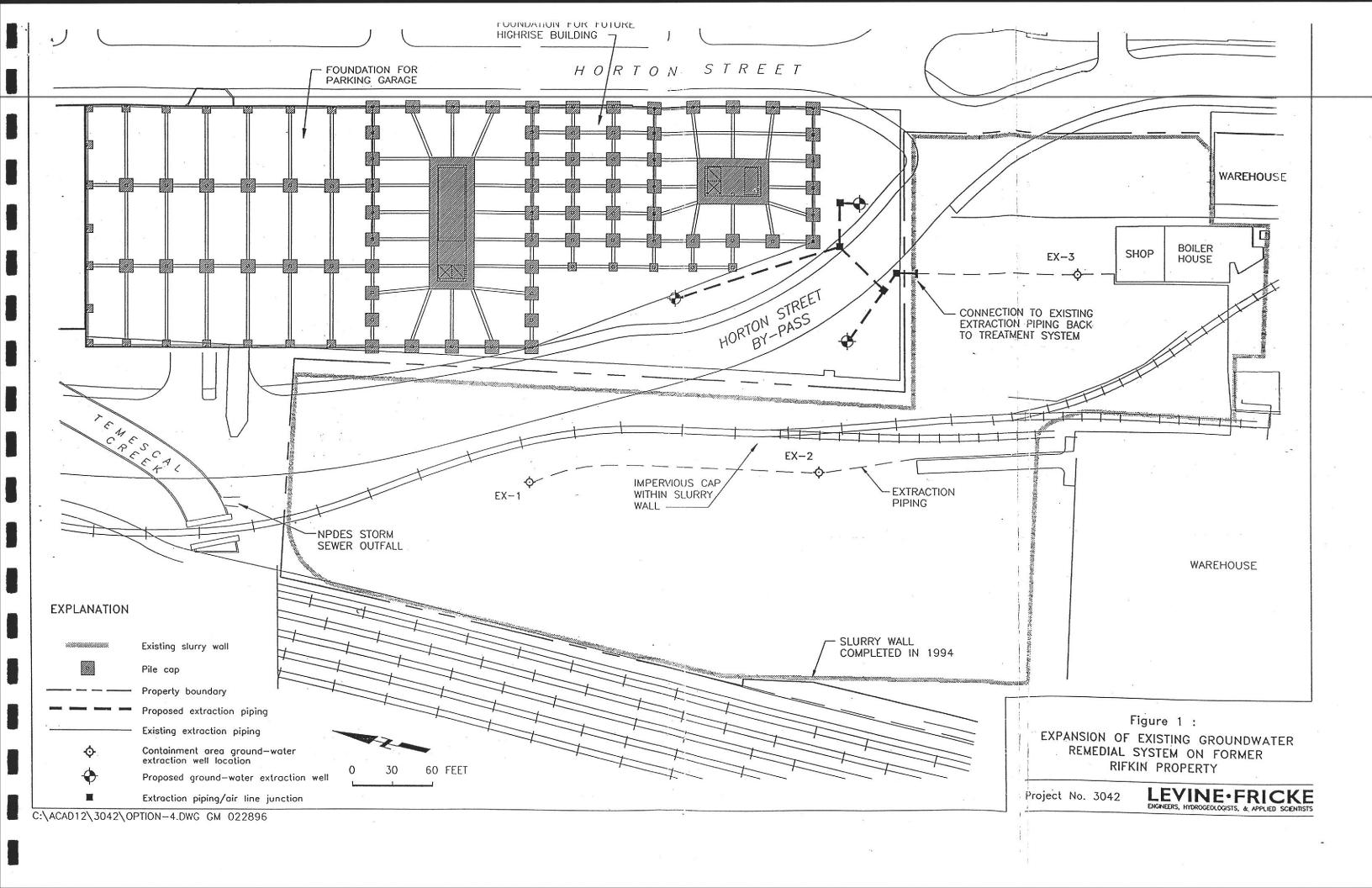
Mark D. Knox, P.E.

man D. Knox

Principal Engineer

Enclosure

cc: Dennis Mishek, RWQCB
Steve Morse, RWQCB
Susan Hugo, Alameda County Health Agency
Ric Notini, Chiron
Vera Nelson, EKI
Dave Gustafson, Sherwin-Williams
Larry Mencin, Sherwin-Williams



# APPENDIX E STANDARD OPERATING PROCEDURES

### 1.0 INTRODUCTION

This appendix provides detailed descriptions of Standard Operating Procedures (SOPs) to be used during the field investigation to be conducted at the Site. These SOPs are intended to be used by the field investigation team for field activities conducted at the Site. The Work Plan describes the specific field activities that will be performed at the Site. This appendix is to be read in conjunction with the Work Plan and the other appendices in the Work Plan.

### 2.0 CONE PENETRATION TESTING BORINGS

Cone penetration testing (CPT) borings will be advanced to assess physical characteristics of the following shallow and deeper sediments at the Site. Data collected from CPT borings are used to identify lithologic units using an instrumented probe, with a conical tip and friction sleeve. These devices measure various geologic, geotechnical, and hydrologic parameters, by correlating resistance on the cone tip; frictional resistance along the cylindrical friction sleeve; probe inclination; and pore water pressure. The data generated from the CPT borings will be used to identify changes in subsurface lithology.

The CPT probe, which is attached to a string of steel pipe segments, will be advanced using a truck-mounted, hydraulic ram with a maximum reaction of 25 tons. The probe will be advanced at an approximate rate of 2 centimeters per second, while measurements are recorded continuously and relayed directly to an on-board computer. Lithologic and hydrologic data based on cone tip resistance, sleeve friction, probe inclination, and pore water pressure measured by the cone-tipped probe are printed out by the computer as the probe advances. When the desired depth is reached, the CPT probe and the string of steel pipe segments will be removed from the borehole and the open CPT boring will be grouted to approximately 1 to 2 feet bgs with a cement/bentonite slurry using a tremie pipe. The remainder of the boring will be filled with topsoil or pavement to provide an even surface.

For CPT borings drilled into deeper zones, the "grout collar" method of backfilling the boring will be used as an extra precautionary measure, in an attempt to prevent potentially affected materials in shallow groundwater from being transported to deeper groundwater zones during the advancement of the CPT boring. The "grout collar" method is implemented by placing a rubber seal at the ground surface of the borehole. Grout is then injected from the CPT tip as the CPT cone and rods are advanced through the sediments. Grout is also injected as the CPT cone and rods are removed from the borehole to approximately 1 to 2 feet bgs with a cement/bentonite slurry using a tremie pipe. The remainder of the boring will be filled with topsoil or pavement to provide an even surface.

# 3.0 SOIL BORING AND SOIL SAMPLING PROCEDURES USING THE HOLLOW-STEM AUGER DRILLING METHOD

Soil borings will be advanced using the hollow-stem auger drilling method. All equipment that will be used in the borehole during the drilling process will be washed with high pressure hot water (steam cleaned) before use at each investigation location.

### 3.1 Soil Boring Drilling Procedures

The hollow-stem auger drilling method consists of a truck-mounted, drill rig rotating tubular steel augers into the soil. The augers consist of a hollow axle with steel flights spirally welded on the outside. A hollow drill bit is attached to the first auger that is advanced into the soil. The hole in this bit is plugged during drilling with a solid steel plug or a continuous core barrel soil sampler. As the augers are rotated into the soil, the sediments encountered in the middle of the boring are forced into the continuous core barrel sampler, and the sediments encountered on the outer edges of the bit and lead auger are cut and conveyed to the ground surface via the outer flights of the auger. The continuous core barrel which is connected to the drill rig by steel drill rods or cable, is extracted from the bit and lead auger whenever a new section of auger is added (typically every 5 feet), or more often depending on the soil sampling procedures and on the recovery success experienced. This drilling method allows soil sampling and completion of the monitoring well to be conducted inside the augers while the boring remains open. The augers are slowly removed from the borehole as the monitoring well casing, sand, bentonite, and/or grout are added from the bottom up.

After all of the soil samples have been collected and the lithology of the boring is logged, the boring will be abandoned and sealed with a cement/bentonite slurry. Depending on the total depth of the boring the slurry will be pumped into the boring through a tremie pipe placed in the bottom of the boring or poured into the top of the open boring, and the boring will be filled to approximately 1 to 2 feet bgs. The remainder of the boring will be filled with topsoil or pavement to be provide an even surface.

# 3.2 Soil Sampling

Subsurface soil samples will be collected during hollow-stem-auger drilling for chemical analysis, physical parameter analysis, field screening for organic vapors using a photoionization detector (PID), and/or lithologic description. Soil samples to be analyzed for their physical parameters or the presence of chemicals will be collected using a continuous core barrel sampler and/or a modified California sampler lined with clean clear acetate or brass tubes. Soil samples collected for field screening and lithologic description will be collected in an unlined continuous core barrel sampler.

During drilling, soil samples will be collected on a continuous basis using a nominal 60-inch-long continuous core barrel of appropriate diameter. At locations where soil

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samples may be retained for laboratory analyses, the continuous core barrel will be lined with 6-inch-long clear acetate or brass tubes. Continuous soil samples will be collected as the soil boring is advanced. The shoe of the sample barrel will extend out in front of the lead auger bit as the boring is advanced, allowing the sample barrel to be filled with relatively undisturbed material during the drilling process.

When the continuous core barrel is extracted from the borehole, each core will be opened to expose the acetate or brass tubes. The core will be examined and lithologically logged. Soil will be lithologically logged either by extruding the soil from the tube or, if the sediment cannot be extruded, examining and logging both ends of the tube. Samples retained for chemical or physical analysis will be capped.

Soil samples for possible laboratory analysis and/or lithologic description will be collected at regular intervals, to be determined by the project manager, using a split-spoon sampler at borings drilled using the hollow-stem-auger drilling method. The split spoon sampler will be either 18 or 24 inches long and either 2 or 3 inches in diameter. The sampler will be lined with either a brass, stainless steel, or butyl sampling tube. The choice of sample tube will be determined based on the analyses requested. To collect the samples, the sampler will be driven 18 or 24 inches into undisturbed soil using a nominal 140 pound hammer dropped 30 inches. Blow counts required to drive the sampler 6-inches will be recorded on the lithologic log form. Samples will be handled and retained using the same methods described for samples collected using the core barrel.

### 4.0 ENVIROCORE SAMPLING

Soil and groundwater samples are proposed to be collected using the EnviroCore sampling method. Samples will be collected by pushing hollow steel rods into the subsurface using a hydraulic jack hammer system. The hollow rods consist of an inner sampling rod and an outer rod, which serves as a temporary drive casing. During soil and groundwater sampling, these two sets of rods will be nested together and driven into the soil simultaneously. The inner sampling rod will obtain and retrieve the soil cores. The outer rod will remain in place during sampling to prevent collapse of the boring.

# 4.1 Soil Sampling

Soil samples for lithologic description and possible chemical analysis will be collected from the borings advanced using the EnviroCore technique. Samples collected during drilling will be screened for organic vapors using a PID and described using the Unified Soil Classification System. The PID readings and soil descriptions will be recorded on field boring log forms.

Soil samples will be collected for lithologic description and possible chemical analysis using a clean 3-foot-long sample barrel attached to the inner sampling rods. Dependent on the analyses requested, the sample barrel will be lined with either a brass, stainless, or butyrate liner. After the sample barrel has been driven 3 feet into the soil, the soil sample will be retrieved using a hydraulic winch. After sample retrieval, a new, clean sample barrel will be attached and the inner rods will be placed back into the borehole. Additional 3-foot-sections of inner and outer rods will then be attached and the sampler driven another 3 feet into the soil.

After collection, the soil sample contained in the liners will be removed from the sampler. The sample will be visually inspected and logged by cutting open the butyrate liner at specific intervals. The soil sample liners retained for chemical analysis will be immediately sealed with Teflon tape, fastened with a plastic cap, labeled, and placed into a chilled ice chest for transport to the analytical laboratory following strict chain-of-custody protocols.

After the desired depth has been reached, the borehole will be sealed with cement/bentonite grout. The grout will be pumped into the borehole through a small tube inserted into the outer rods. The outer rods and tubing will then be removed as the grout fills the borehole from the bottom to the ground surface.

### 4.2 Groundwater Sampling: First Encountered Groundwater

When the first groundwater bearing zone is encountered during EnviroCore sampling, the sample barrel and inner rods will be removed and the drive casing will be pulled up approximately 3 feet to allow groundwater to flow into the borehole. A grab groundwater sample will then be collected by lowering a clean Teflon or stainless steel bailer into the groundwater.

Groundwater samples will be poured from the bailer into laboratory-supplied sample containers, labeled with the boring identification number, the time and date of collection, the analysis requested, and the name of the sampler. The samples will be stored in a chilled ice chest, and maintained under strict chain-of-custody protocols until submitted to the analytical laboratory.

# 4.3 Groundwater Sampling: Deeper Groundwater

When the deeper groundwater bearing zones are encountered during EnviroCore sampling, samples are proposed to be collected in the following manner: At each deeper interval, the sample barrel and inner rods will be removed and nominal 1-inch diameter polyvinyl chloride (PVC) well casing and screen (5 to 10 feet in length) will be inserted through the drive casing to the base of the boring. The drive casing will be pulled up approximately 3 feet to allow groundwater to flow into the PVC screen. A grab groundwater sample will then be collected by lowering a clean Teflon or stainless steel bailer into the PVC casing.

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APPEND-E.DOC

Groundwater samples will be poured from the bailer into laboratory-supplied sample containers, labeled with the boring identification number, the time and date of collection, the analysis requested, and the name of the sampler. The samples will be stored in a chilled ice chest, and maintained under strict chain-of-custody protocols until submitted to the analytical laboratory

### 5.0 LITHOLOGIC LOGGING AND DOCUMENTATION

Continuous soil cores and soil samples will be collected for lithologic description. Soil type and characteristics will be examined and described by a geologist or engineer, who will maintain a complete record of these descriptions on a lithologic log. Sediments will be described in accordance with the Unified Soil Classification System. At a minimum, the following information will be recorded, as appropriate, on the log:

- project name and location
- soil boring location
- sampling depth
- sediment classification
- sediment color
- moisture condition of the sediment
- percentage of fine-grained material (clay and silt), sand, and/or gravel, if it is present
- sediment odor (if noticed incidentally and consistent with health and safety precautions)
- PID or flame ionization detector (FID) field measurements
- descriptive comments, including obstacles encountered or other drilling difficulties
- depth to first encountered groundwater
- depth to stabilized groundwater (if possible)
- depth of fill material (if present)
- depth to bedrock (if encountered)
- supervising geologist/engineer's signature and date

A California Registered Geologist or Professional Engineer will review and approve the lithologic logs.

### 5.1 Field Screening of Soil Samples

Selected soil samples will be field screened for the presence of organic vapors. The concentration of organic vapors will be measured with portable field monitoring equipment and will provide semi-quantitative data. Portable field monitoring equipment may include, but is not restricted to, a PID or an organic vapor analyzer (OVA) equipped with a FID.

The selected soil sample will be placed in a glass jar or plastic bag. The lid of each jar will have a hole slightly larger than the PID or FID probe. After the jar with the soil sample is shaken and allowed to stabilize for approximately 5 minutes, the PID or FID probe will be inserted into the hole in the lid and through the aluminum foil sheet. If the plastic bag is used, the soil sample will be shaken and allowed to stabilize for approximately 5 minutes, and the PID or FID probe will be placed directly through the bag. The maximum reading detected by the PID or FID will be noted in the bound field log book and on the lithologic logs.

### 5.2 Soil Sampling For Laboratory Analyses

The continuous core barrel sampler and modified California sampler will be decontaminated in accordance with the procedures in this Appendix. Only new, clean sample tubes will be used for sample collection.

Soil sampling for laboratory analyses will be performed in accordance with ASTM Method D-4547. For example, the modified California sampler (or continuous core barrel sampler) will be opened without being shaken, the liners will be separated from each other using a clean, flat tool such as a putty knife, and then removed from the sampler.

Samples will be selected for chemical analysis based on lithology, visual observations, and field instrument readings. Final decisions regarding the submittal of soil samples for fixed laboratory analysis will be based on site conditions. Teflon tape will be placed on both ends of the soil sample tubes selected for chemical analysis and a plastic cap will be sealed over each end of the tube. The sample will then be labeled and placed in an ice-chilled cooler for shipment to the laboratory under strict chain-of-custody protocol described below.

# 6.0 GROUNDWATER MONITORING WELL INSTALLATION PROCEDURES

Groundwater monitoring wells are currently anticipated to be installed in first encountered groundwater and deeper groundwater. All wells will be installed by the hollow-stem auger drilling method. Deeper wells will be double-cased with conductor casing installed to seal the shallow sediments.

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### 6.1 Groundwater Monitoring Wells: First Encountered Groundwater

When the nominal 8- or 10-inch diameter borings are advanced to the desired depth, monitoring wells will be constructed in them by placing the well casing and screen inside the hollow-stem auger. Materials used to fill the annular space between the well casing and the borehole wall, consisting of filter sand, bentonite, and cement/bentonite grout, will be added as the hollow-stem augers are removed from the boring. This process will ensure that the boring remains open and well materials are properly placed in the boring.

The annular space between the well casing and the inside of the hollow-stem augers will act as a tremie pipe for the placement of the sand pack and bentonite pellets. The cement seal will be pumped into place through a tremie pipe.

Well casings will be constructed of 2-inch diameter PVC pipe. Well screens will consist of continuous slot PVC. The sand filter pack size and the size of the well screen slots will be selected to minimize passage of sand filter pack material through the screen and inhibit movement of fine-grained material from the formation into the well. The filter pack will extend no more than 2 feet above the top of the screened interval. Approximately 2 feet of bentonite pellets will be placed on top of the filter pack and the remaining annular space above the sand pack will be completely filled by tremie grouting or pouring with a cement/bentonite seal, for the entire length of the borehole. A locking well cap will then be placed over the top of the casing to protect the integrity

### 6.2 Groundwater Monitoring Wells: Deeper Groundwater

The deeper monitoring wells will be double-cased using the hollow-stem auger method. A 12-inch-diameter borehole will be drilled to the top of the fine-grained interval which separates the shallow and deeper water-yield intervals. An 8-inch-diameter steel conductor casing will be placed in the borehole and pushed approximately one foot into the fine-grained interval to prevent potentially affected shallow groundwater from being conveyed into the deeper groundwater during well construction. The conductor casing will be assembled using carbon steel welded together in the field to the required length. The conductor casing will be cemented in place using a neat cement grout with approximately 5 percent bentonite. The cement grout will be allowed to set for approximately 24 hours before drilling resumes.

After the conductor casing annular seal grout has cured, the water or drilling material inside the conductor casing will be pumped out, and the conductor casing will be flushed with potable water. When the flushing process is completed, the remaining water will be pumped out of the conductor casing. A boring will then be drilled with 6-inch hollow-stem augers through the conductor casing into the deeper zone, estimated to be 40 feet bgs. The deeper monitoring wells will then be completed with 2-inch-diameter PVC casing, with a maximum of 10 feet of slotted screen to approximately 40 feet bgs using methods as described for the shallow wells.

### 7.0 MONITORING WELL DEVELOPMENT

All newly installed wells will be developed a minimum of 12 hours after well installation. Wells will be developed by first surging the screened interval using a surge block and then bailing the well to remove the suspended sediment. This process will be repeated until the well shows significant decrease in sediment.

Wells will then be purged with 2-inch submersible pumps. During well development, field parameters (pH, temperature, conductivity, and turbidity) will be monitored at every purge volume. Well development will be discontinued when pH, temperature, and conductivity have stabilized (within 15 percent of the previous measurement), and the purge water contains relatively little sediment. Information will be recorded on water quality sampling information forms.

Groundwater purged during well development will be temporarily stored on site and pumped through the on-site groundwater treatment system. Pumps and other downhole equipment will be decontaminated between wells by steam cleaning.

### 8.0 GROUNDWATER SAMPLING

Groundwater samples will be collected from each well installed during the investigation. Existing site monitoring wells are sampled on a quarterly basis, as part of the periodic monitoring program. As new wells are installed, they may be added to the periodic monitoring program. Monitoring wells will be sampled no sooner than 24 hours after well development.

Well Purging. To assure representative sample collection, the monitoring wells will be purged of three to five well casing volumes of water using a 2-inch diameter submersible pump or by hand bailing with a stainless steel bailer, before sampling. The purging pumps will be fitted with backflow prevention valves to prevent purge water from re-entering the wells when the pump is turned off. The tubing fitted to the pump will be laboratory grade polyethylene, and will be dedicated to the specific well in which it is used. Cumulative discharge from each well will be determined either manually (e.g., by periodically filling a bucket of known volume), or through the use of a flow meter attached to the pump's discharge tubing.

Hand bailing will be performed by slowly lowering the bailer into the well on new, or dedicated nylon cord, to the point where the bailer fills with water. The bailer will then be removed from the well and discharged into a container of known volume. This process will be repeated until the desired amount of water has been purged from the well.

Samples will be collected from the discharge during purging and measured for pH, temperature, and specific conductance. These samples will be collected after approximately one well casing volume of groundwater has been purged. The sample

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containers in which these field parameters will be measured are wide-mouthed jars. If the pH, temperature, and specific conductance stabilize to within 15 percent for two successive samples after three well casing volumes of groundwater are removed, and the water is relatively clear or free of sediment, purging will stop and the groundwater sample will be collected. If the field parameters have not stabilized after five well volumes have been removed, purging will stop and the water samples will be collected. The field parameters will be recorded on the water quality sampling information form. Purged water will temporarily be stored on site and pumped into the on-site groundwater treatment system.

Samples will be collected from the monitoring wells as soon as a sufficient volume of water has recovered in the well and no more than two hours after purging. If a well is pumped dry during purging, it will be allowed to recover to 80 percent of the original volume (or after maximum of 2 hours) and will be sampled. The time required to purge a well will be recorded on the water quality sampling sheet.

Sample Collection. Following well purging, the pumps, tubing, and safety line will be removed from the well. Groundwater will be sampled using a clean Teflon, stainless steel, or new disposable polyethylene bailer. The bailer will be lowered into the well using a new length of nylon rope.

The final depth to water at the time of sample collection will be recorded on a water quality sampling information form.

The samples will be placed in appropriate sample containers, capped, labeled, and stored in a sample cooler that has been chilled to 4 degrees Celsius. The samples will be transported to the analytical laboratory following the protocol established in these SOPs.

Samples designated for laboratory analysis will be collected in appropriate laboratory-supplied containers. Collected samples will be recorded on the water quality sampling information forms. All samples will be labeled with the collector's initials, a unique sample identification number (well identification), time of sampling, date, location, sample type, analytical method, and preservative used. Complete chain-of-custody forms will accompany the samples to the designated laboratory.

#### 9.0 SAMPLE CUSTODY AND DOCUMENTATION

Sample custody and documentation consists of proper sample identification, completed sample labels and sample collection data forms, and completed chain-of-custody forms. These forms will be completed using indelible ink.

Field documentation is described in detail below.

### 9.1 Sample Containers, Preservation, and Holding Times

The appropriate sample containers and preservation will be used. All sample vials and bottles containing preservatives will be labeled by the laboratory before samples are collected. With the exception of samples that require special handling and preservation, all samples will be stored in coolers chilled to 4 degrees Celsius for shipment to the appropriate analytical laboratory. Sample containers will not be reused. All samples will be analyzed by the analytical laboratory before the holding time for the specific chemical analysis is exceeded.

### 9.3 Sample Labels

A sample label will be completed and attached to each sample container for every sample collected. Labels consist of a waterproof material backed with a water-resistant adhesive. Labels are to be filled out using waterproof ink, and are to contain at least the following information:

- sampling date and time
- · sample identification number
- investigation location
- preservatives, if any
- sampler's initials
- analyses to be conducted

# 9.4 Groundwater Sample Collection Data Forms

During ground well development, well purging, groundwater sampling, and water-level measurement field activities, appropriate field log forms will be completed by the individual collecting the data for each monitoring well. These forms will contain pertinent project and well location information.

The following information will be entered on the sample collection data form at the time of sampling:

- project name and number
- investigation location
- well identification number
- sampler's initials
- time and date of sampling
- sampling method

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- sample identification number
- volume of each sample container
- · laboratory analyses requested
- purged volume
- well depth and diameter
- observable water conditions (e.g., color, odor [if noticed incidentally and consistent with health and safety precautions], clarity)
- · groundwater level before and after sampling
- field conditions (e.g., recent precipitation, ambient temperature)
- equipment used
- indicator parameter measurements (pH, temperature, specific conductance, turbidity)

### 9.5 Chain of Custody

chain-of-custody will be prepared for groups of samples collected at a given location on a given day. Each chain-of-custody will be prepared in quadruplicate and will accompany every shipment of samples to the laboratory.

Two of the four copies (white and green) will accompany the samples to the laboratory. The yellow copy will be kept in the QA/QC file, and the pink copy will be retained in the project file. The chain-of-custody form makes provision for documenting sample integrity and the identity of any persons involved in sample transfer. Information entered on the chain-of-custody will consist of the following:

- project name and number
- field logbook number
- chain-of-custody serial number
- project location
- sample numbers
- sampler/recorder's signature
- date and time of collection of each sample
- collection location
- sample type
- analyses requested
- inclusive dates of possession
- name of person receiving the sample
- laboratory sample number
- date of receipt of sample
- name, address, and telephone number of laboratory

### 9.6 Sample Shipment

The method of shipment may be hand delivery by field personnel, laboratory courier, or commercial shipping services (such as UPS or Federal Express). The method of sample shipment will be noted on the chain-of-custody. If samples to be kept cool are to be held for longer than 24 hours, the samples will be placed in a refrigerator or similar insulated cooling container and maintained at 4 degrees Celsius.

### 9.7 Laboratory Custody Procedures

The laboratory will designate a sample custodian, who will accept custody of the shipped samples and check that the information on the sample label matches that on the chain-of-custody form(s). The custodian will then enter the appropriate data into the laboratory sample tracking system. The custodian will use the sample number on the sample label or will assign a unique laboratory number to each sample. The custodian will then transfer the sample(s) to the proper analyst(s) or store the sample(s) under refrigeration (if required) until they are analyzed.

Laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted or disposed of. Disposal of unused samples will be the responsibility of the laboratory and must comply with all applicable federal, state, and local environmental regulations. All data sheets and laboratory records will be retained as permanent documentation.

### 10.0 DECONTAMINATION PROCEDURES

# 10.1 Equipment Decontamination

All equipment used during investigation/remedial activities that could come into contact with potentially chemically affected materials will be thoroughly cleaned, before and after each use, by washing with high pressure hot water and/or washing with Alconox (a laboratory-grade detergent) and rinsing with deionized, distilled, or fresh water. Decontamination procedures may be modified and/or revised based upon the data obtained.

In between soil sampling intervals, the soil samplers will be cleaned with an Alconox solution and potable water. Before each drilling operation, any portions of the rig that may come in contact with sampling materials will be washed with high pressure hot water.

Groundwater sampling and field equipment will be decontaminated as follows:

 Accessible exterior and interior portions of groundwater pumps will be washed using high pressure hot water or washed with an Alconox solution before use at

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each sampling location. Unreachable interior pump areas will be cleaned either by flushing near-boiling clean water through the pump and discharge lines (bladder pump), or by flushing the pump and discharge lines with an Alconox solution and rinsing with clean water.

- Teflon or stainless steel bailers will be washed with high pressure hot water or
  washed with an Alconox solution and rinsed with clean water before use at each
  sampling location. Bailer ropes will be replaced after use in each boring or
  well/piezometer and, while in use, will be protected from contact with the ground
  or chemically affected equipment and/or skin.
- Well screens will be washed with high pressure hot water before use. A new well screen will be used at each location.

### 11.0 SITE SURVEYING

A ground survey will be conducted by a land surveyor licensed in the State of California. A survey and mapping coordinate system will be developed, which will include the establishment of a permanent benchmark at the Site. Site base and vicinity maps will be produced from existing site maps and site surveying activities. The survey and mapping system will be based on a grid system. Horizontal control will be based on the California Coordinate System.

All existing and new groundwater monitoring wells, extraction wells, soil borings, CPT boring locations, and other investigation locations or other pertinent investigation features will be located in both the vertical (z) and both horizontal (x, y) planes. The horizontal control will be surveyed to the nearest half (0.5) of a foot. The vertical control will be surveyed to the nearest hundredth (0.01) of a foot. In addition, the elevations of tops of well casings and tops of well monument covers will be established to the nearest hundredth (0.01) of a foot at each monitoring well. The tops of well casings will be clearly marked with a surveyed punch mark on the north side of the top of the casing of each of the monitoring wells.

### 12.0 TIDAL INFLUENCE MONITORING

Tidal influence monitoring well selection and field methods and data collection are discussed in the following sections.

# **Monitoring Well Selection and Field Methods**

For each test, a temporary surface water monitoring station will be constructed to monitor changes in the water level in Temescal Creek. Barometric pressure and published tide tables for San Francisco Bay will be included in the analysis of the tidal study data.

The criteria used to select monitoring wells for the tidal influence monitoring are proximity to Temescal Creek and existing slurry wall and well location, depth, and subsurface lithology.

Water levels in the wells and surface water station, will be measured using pressure transducers and automated data loggers and electric water level sounding instruments. Water levels will be recorded periodically over a continuous 72-hour period.

#### Water Level Data Evaluation

The water level data collected during the tests will be evaluated by constructing hydrographs for each monitoring location. These locations will be compared with the surface water monitoring station and the published tide tables for the San Francisco Bay hydrograph.

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