

SITE INVESTIGATION REPORT

**Springfield Avenue Sites
Providence, Rhode Island**

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Prepared For:

Mr. Mal A. Salvatore
Sondler Salvatore and Associates
400 Reservoir Avenue
Providence, Rhode Island 02907

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INTRODUCTION

Pursuant to Section 7.08 of the *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (DEM-DSR-01-93)*, hereinafter the *Remediation Regulations*, ATC Associates Inc. submits this Site Investigation Report. This report details the various environmental investigations performed at a collection of contiguous lots depicted on the Providence Tax Assessor's Plat Map Number 115 (the lots are listed in Table 1). These lots are located between Killingly Street, Springfield Street, and Hartford Avenue and are denoted as the Springfield Avenue Lots within this report (also referred to as the "site" or "subject property"). Physically, these lots are currently undeveloped and cleared of vegetation.

The City of Providence is planning to construct three schools at the site: one 400-pupil elementary school and two 400-pupil middle schools. The middle schools will be housed within one building complex with separate wings.

As part of the City's due diligence assessment of the site, ATC was retained to perform a Phase I Environmental Site Assessment¹. A significant finding of this study was that the site received solid waste from 1965 to approximately 1975. Based on the findings of Phase I Environmental Site Assessment, ATC recommended that a limited subsurface investigation be performed to qualify the fill that had been placed at the site. The findings of this limited subsurface assessment revealed concentrations of lead, arsenic and total petroleum hydrocarbons at concentrations exceeding the Method 1 Residential Direct Exposure Criteria in certain soil samples. Additional subsurface soil gas and groundwater sampling was performed to further quantify the characteristics of the fill material.

This Site Investigation Report documents the results of three distinct sampling programs conducted at the site and performed subsequent to the Phase I Environmental Site Assessment:

- Soil and waste material sampling,
- Groundwater sampling,
- Soil gas sampling.

¹ ATC's Phase I Environmental Site Assessment was performed in accordance with the scope and limitations of ASTM Practice E1527.

These sampling programs were conducted to characterize the potential for contaminant migration from distinct environmental media, especially in light of the intended use of the property.

ATC presents this report in three sections. The first section is formatted to closely follow the "Site Investigation Scope" requirements outlined in Section 7.03 of the *Remediation Regulations*. Section 2 presents an analysis of Remedial Alternatives as required under Section 7.04 of the *Remediation Regulations*. Section 3 is included to satisfy the certification requirements mandated under Section 7.05 of the *Remediation Regulation*.

SECTION 1 - SITE INVESTIGATION RESULTS

This section is presented in a format that closely follows the requirements for a Site Investigation Report as prescribed under Section 7.03 of the *Remediation Regulations*. Under Section 7.03, twenty-three items of interest are requested. These items are reprinted below. ATC's response to each category of requested information follows the reprinted item.

1.0 SITE INVESTIGATION OBJECTIVES

A list of specific objectives of the Site Investigation identifying all data collected to completely characterize the contaminated-site, the release, the impacts of the release and to select a remedy;

The objective of this Site Investigation is to quantify the concentrations of contaminants found at the site. Three distinct media were evaluated during this assessment: soil (including waste material), soil gas and groundwater. Table 2 identifies the samples collected as part of this assessment and the analytical parameters that were evaluated. Generally, ATC performed this site investigation in two phases. The first phase was conducted on March 2 and 3, 1999 and consisted of the excavation of twenty test pits. One soil sample was collected from each of the test pits and submitted for laboratory analysis. The second phase of the investigation consisted of a soil gas sampling program and groundwater collection. These two phases of investigation constitute the data collection scope of this investigation.

2.0 NOTIFICATION RELEASE

All information reported in a Notification of Release required by Rule 5.01. The performing party may elaborate and expand on any and all information found in those reports. The performing party must correct any incorrect information or interpretations contained in those reports prior to their incorporation into the Site Investigation Report;

On March 10, 1999, representatives of the City of Providence, O. Alhborg and Sons, Inc. (General Contractor), Northeast Engineers and Consultants, Inc. and ATC Associates Inc. met with representatives of the Rhode Island Department of Environmental Management to discuss, among other things, preliminary soil sampling results obtained from the test pit sampling program. At this meeting, ATC provided a table of the test pit soil results, along with a site plan identifying the soil sample locations. The data revealed that lead, arsenic, and total petroleum hydrocarbons were detected at concentrations that exceed the Method 1 Residential Direct Exposure Criteria and consequentially exceed the reportable concentrations for some compounds as provided under Section 5.01 of the Remediation Regulations. The meeting with the Department and the submission of the data tables and site plan was constructive notification to the Rhode Island Department of Environmental Management regarding the reportable concentrations. A Notification Form, prescribed by the Rhode Island Department of Environmental Management within the Remediation Regulations has been completed and is attached to this report as **Appendix A**.

3.0 DOCUMENTATION OF PAST INCIDENTS OR RELEASES

Documentation of any past incidents or releases (fires, spills, explosions, leaks, etc.)

In February and March 1999, ATC performed a Phase I Environmental Site Assessment of the subject property, which included a thorough examination of historic record and interviews with residents in the site area. These sources confirmed that the site was once used to dispose solid waste. The majority of the filling occurred between 1965 and 1970 and was primarily focused in the northern half of the site, and to a lesser degree in the southern portion of the site.

The Rhode Island Department of Environmental Management provided ATC with documents pertaining to the site and site area. These documents were not available during our scheduled file reviews for our Phase I Environmental Site Assessment and were provided after that report was prepared. The file information contained a number of complaints lodged with the Rhode Island Department of Health, Division of Air Pollution Control. The complaint forms are dated from 1970 to 1975 and focus mainly on odors emanating from the dumpsite. Additionally, the following complaints were also noted:

- Four complaints during this period related to smoke and odors at the site,
- One complaint concerned rats, and
- One complaint concerned the dumping of a six-foot long shark.

The Rhode Island Department of Environmental Management also conducted a limited sampling program to identify and evaluate allegations of auto fluff dumping at the site. Surficial samples were collected at several locations at the site and revealed the presence of such material. Laboratory sampling of the material and soil revealed concentrations of polychlorinated biphenyls ranging from 1.01 milligrams per kilogram (mg/kg) to 12.4 mg/kg. It is uncertain as to which results pertain to a direct sample of the material as opposed to a sample of soil in the general vicinity. The lots in which samples were collected from include the following: 261, 262, 275, 380, 412, and 418. These lots are depicted on the Providence Tax Assessor's Map Number 115.

4.0 LIST OF PAST PROPERTY OWNERS AND OPERATORS

A list of past owners and operators at the contaminated site including their past uses of the property, a sequencing of property transfers and time periods of occupancy to the extent that the information is available.

The site consists of approximately 100 individual lots that have existed for nearly 100 years². Due to the number of lots involved, it was not practical to identify the individual lot owners over

² A Providence Tax Assessors Map dated 1910 shows the lots in the same configuration as depicted in current Assessors Maps.

time. However, ATC developed the history of the site through a review of aerial photographs and historic maps and interviews with long time residents of the area.

Our review of these historical records indicates that the site was primarily undeveloped wooded land. In approximately 1965, municipal solid waste was deposited beginning in the northern portion of the site and continuing to the south. The filling was substantially completed in the mid-1970's. From this time to the present, vegetation has grown over the filled area, taking root in the cover soil that was used to entrain the solid waste.

The following sections include our specific findings, relative to the historical records consulted.

4.10 Polk City Directories

Polk City Directories list occupants of properties by address for a specific year. ATC reviewed Polk City Directories for the years 1945, 1950, 1955, 1960, 1965, 1970, 1974-5, 1980, 1985, 1990, 1993, and 1998. These directories and others are maintained at the Rhode Island Historical Society Library. The information contained in the street directories is consistent with information identified in other historical records. Specifically, no occupants are listed for the individual lots that are located along the paper roads that comprise the site. Residential property is identified along the western, southern, and eastern perimeter of the site. A former gas station, "Tom and Fred's Service Station" (1960 to 1998) preceded by "Thomas A. Tarro Gas Station" (Prior to 1945 to 1955) occupied 618 Hartford Avenue. This address corresponds to the southwestern corner of the intersection of Hartford Avenue and Springfield Avenue.

4.20 Sanborn Fire Insurance Maps

ATC reviewed Sanborn Fire Insurance Maps covering the site area from various years ranging from 1921 to 1982. The maps were reviewed at the Rhode Island Historical Society Library. The Sanborn Maps correlate with the Polk City Directories in that no development is depicted in the site area, residential properties abut the site to the west, south, and east, and a gasoline or filling station is located at 618 Hartford Avenue. No additional information is identified on the Sanborn Maps.

4.30 Aerial Photographs

ATC conducted a review of aerial photographs maintained at the Rhode Island Department of Administration's Office of State-Wide Planning. The photographs reviewed were taken over the site area in 1939, 1951, 1965, 1970, 1981, and 1992. In general, the photographs show that a significant amount of fill was placed on the site between the years 1965 and 1970. Prior to 1965 the site area is characterized on the photographs as undeveloped vegetated land. In the photographs dated 1970 through the most recent photograph dated 1992, a vegetated surface was gradually reestablished. The photographic interpretation was supplemented by a review of historic USGS topographic maps maintained at the Rhode Island Historical Society Library. The maps show a significant depression

in the northern portion of the site, approximately 20 feet below the ground surface along Hartford Avenue. Elevations in the southern portion of the site are not substantially dissimilar to the elevation contours that could be drawn today. Based on the evidence of filling adduced from aerial photographs, the historical depiction of topography on USGS maps and observations at the time of our site visit, it is likely that the depth of the fill may be in excess of twenty feet in the north-central portion of the site and less thick over the balance of the site.

Specific observations for each aerial photograph reviewed is presented below. Copies of the portion of the aerial photographs pertaining to the site area are presented in **Appendix B**.

1939

The 1939 photograph shows the site to be undeveloped and substantially vegetated. Three features are immediately evident upon first examination of the photograph. First, an unvegetated strip of land is exposed in the general location of the paper street known as Stanfield Avenue. According to Narragansett Bay Commission records a sanitary sewer line and a storm sewer line are located within the paper street. Residents interviewed as part of this assessment (refer to **Section 4.40**) indicated that prior to the filling that occurred on site these lines were located aboveground. Therefore, it is likely that the strip of unvegetated land corresponds to these aboveground sewer lines. The second feature is a roughly circular unvegetated area in the southern portion of the site. Based on the appearance of these features it was theorized that this area could potentially be a fill area. However, subsurface investigations in this area do not reveal the presence of fill. Based on the results of the subsurface assessments in this area and in further consideration of the site topography it is likely that this area is not a filled area but rather an area in which sandy materials were excavated from prior to 1939. The third feature of note is Springfield Avenue, which is depicted as a dirt road.

1951

The features depicted in the 1951 aerial photograph are similar to that depicted in the 1939 photograph, with the notable exception that the exposed ground shown along Stanfield Avenue and the roughly circular area depicted in the southern portion of the site are considerably more vegetated.

1965

The 1965 photograph shows the beginnings of filling in the northern portion of the site. This photograph depicts fill along the southern boundary of Hartford Avenue. While most of the northern portion of the site remains vegetated and undeveloped, the encroachment of the fill appears to be in a southwesterly direction beginning at the intersection of Hartford Avenue and Springfield Avenue. In the southern portion of the site, features appear to be substantially similar to those depicted in previous photographs.

1970

The 1970 photograph shows the northern portion of the property to be filled from Stanfield Avenue in the south to Hartford Avenue to the north. Filling is also evident in the southern portion of the site to the east of the roughly circular unvegetated area. The site appears to be unchanged between Stanfield Avenue and this southern area of the site.

1981 and 1992

The 1981 and 1992 photographs show the return of vegetation in the northern portion of the site and continued dumping in the southern portion of the site. The 1992 photograph shows substantially more vegetation than the 1981 photograph and no additional areas of fill are discernable over that observed in the 1981 photograph.

4.40 Interviews

ATC spoke with several residents in the site area. Mr. Raymond Mandarelli resides along the eastern side of Springfield Avenue and slightly south of the site. He has resided in the site area since 1954, but not exclusively at his present address. Mr. Mandarelli witnessed the dumping that occurred at the site, which he indicated occurred primarily between 1965 and 1967. It was at that time that the City of Providence's trash incinerator located in South Providence was closed. Municipal waste previously sent to the incinerator was then landfilled by the city in several areas within the city limits. The site was one of these areas.

Mr. Mandarelli indicated that prior to this time, the northern portion of the site was approximately 15 to 20 feet below its current elevation. Additionally, the northern portion of the site would often flood to the extent that standing water would be present for several weeks in the spring. Springfield Avenue was also considerably lower in elevation than it exists today. Manholes found within the street, were at one time extended approximately five feet above the ground surface.

Mr. Madarelli recalled common garbage trucks depositing garbage at a constant rate during those two years. When asked, Mr. Mandarelli could not recall tanker trucks or vehicles other than garbage trucks depositing fill at the site.

While Mr. Madarelli witnessed the development of the site from the east Ms. Ethyl Friedman witnessed the development from the West. Ms. Friedman resides adjacent to the site and along Woodfall Avenue. Ms. Friedman indicated that the filling generally occurred in the mid-1960's and early 1970's. The garbage dump created significant odors and was a breeding ground for rats. She, on several occasions, registered complaints to the city to that effect, and lobbied for adequate cover material to mitigate odors and to control the rat population.

5.0 PREVIOUSLY EXISTING ENVIRONMENTAL INFORMATION

All previously existing environmental information which characterizes the contaminated-site and all information that led to the discovery of a contaminated-site

Previously existing environmental information consists of limited auto fluff sampling conducted by the Rhode Island Department of Environmental Management. The results of the sampling are presented in **Section 3.0**. The information that led to the discovery of the contaminated-site is presented in **Section 4.0**.

6.0 CURRENT USES AND ZONING

A description of the current uses and zoning of the contaminated-site including a brief statement on each active operation performed therewith, a description of the processes employed, a list of all wastes generated, a list of all hazardous materials handled, and a statement summarizing any residential activity on the contaminated site;

Currently, the City of Providence is planning on constructing three schools on-site. The activities performed to date include clearing, and limited excavation. The excavation that has occurred has been limited to the southern portion of the site. In this area, a pocket of sand and gravel has been excavated and is planned to be used on-site. Soil sampling has indicated no reportable concentrations of constituents of concern in this material. During the earthwork, however, approximately 2,000 to 3,000 cubic yards of solid waste was excavated. This waste was then placed in the hole created by the excavation of the sand and gravel. The Remedial Action Plan will detail the management of this material.

Other than the limited earthwork that has been performed at the site, no wastes are generated and no hazardous materials are handled.

The site will be used as a school in the future, thus qualifying the future use as a residential activity under section 3.58 of the *Remediation Regulations*.

7.0 SITE MAP

A locus Map showing the location of the contaminated-site using the US Geological Survey 7.5 minute quadrangle map or a copy of a section of that USGS map

A site locus map is provided as **Figure 1**.

8.0 SITE PLAN

A site plan drawn to scale, showing the locations of all buildings, activities and structures on the contaminated-site including, but not limited to:

- *A North Arrow*
- *Wells*
- *Underground Injection Control systems, septic tanks, underground storage tanks, piping and other underground structures*
- *Outdoor hazardous material storage and handling areas, and the extent of paved areas*
- *The location of all environmental samples previously taken at the contaminated-site*
- *All waste management and disposal areas, active and/or historical; and*
- *Property lines*

A site plan depicting the relevant features denoted above is included as **Figure 1**.

9.0 CHARACTERIZATION OF SURROUNDING AREA

A general characterization of the property surrounding the area affected by the release including but not limited to:

- i. *The location and distance to any surface water bodies within 500 feet of the contaminated site;*

The nearest surface water body is the Woonasquatucket River located approximately 2,000 feet to the north of the site.

- ii. *The location and distance to any environmentally sensitive areas within 500 feet of the contaminated-site;*

No environmentally sensitive areas as defined under Section 3.16 of the *Remediation Regulations* are located within 500 feet of the site

- iii. *The actual sources of potable water for all properties immediately abutting the contaminated-site;*

The City of Providence provided public water to the properties surrounding the site.

- iv. *The location and distance to all public water supplies which have been active within the previous two years and within 1 mile of the contaminated-site;*

No public water supplies are located within one mile of the subject property.

- v. *A determination as to whether the release impacts any off-site area utilized for residential or industrial/commercial property or both; and*

Based on the results of this study, it is not likely that the abutting properties have been impacted by the release at the site

- vi. *A determination of the underlying groundwater classification and if the classification is GB, the distance to the nearest GA/GAA area;*

The groundwater classification for the site area is GB. The nearest GA groundwater classification area is over one-mile from the site.

10.0 GROUNDWATER AND SURFACE WATER CLASSIFICATIONS

Classification of surface water and groundwater at or surrounding the contaminated-site which could be potentially impacted by the release of hazardous materials;

Groundwater at the site and vicinity is classified as GB. No surface water bodies are located within 500 feet of the site.

11.0 DESCRIPTION OF THE RELEASE

A description of the contamination resulting from the release including, but not limited to:

i. Free liquids on the surface

Free liquids were not observed on the surface of the site

ii. Concentrations of hazardous substances which can be shown to present an actual or potential threat to human health, including, but not limited to, any concentrations of hazardous substances in excess of any of the remedial objectives listed in Tables 1 or 2 of Rule 8.02B (Method 1 Soil Objectives) or Tables 3 or 4 of Rule 8.03.B (Method 1 Groundwater Objectives)

Table 3 presents analytical results from soil samples collected during the test pit operations and from surface soil sampling performed in the southern portion of the property. The test pit results indicate concentrations of lead, arsenic and total petroleum hydrocarbons at concentrations that exceed the Method 1 Residential Direct Exposure Criteria. The test pit samples, with the exception of ATC-2, ATC-4, ATC- 5 and ATC-6 were predominately collected from the fill areas. Lead and arsenic were detected at concentrations exceeding the Method 1 Residential Direct Exposure Criteria in the following test pit samples:

- NEC-TP-1
- NEC-TP-3,
- NEC-TP-4,
- NEC-TP-9
- ATC-1,
- ATC-3,
- ATC-7,
- ATC-8,
- ATC-9,
- ATC-10,
- ATC-12, and

The following test pit samples contained only arsenic at a concentration exceeding the Method 1 Residential Direct Exposure Criteria:

- ATC-5,
- ATC-11 and ATC-11 GO
- ATC-13, and ATC-14

The following test pit samples contained only lead at a concentration exceeding the Method 1 Residential Direct Exposure Criteria:

- ATC-16

The following test pit sample contained lead, arsenic and total petroleum hydrocarbons at concentrations exceeding the Method 1 Residential Direct Exposure Criteria:

- NEC-TP-1

The test pit soil samples were generally collected at a depth of 4 to 8 feet below the ground surface and was considered to be representative of the waste material throughout the subsurface profile. Test pit logs are included in **Appendix C**

Surface soil samples were collected in the southern portion of the site to the south of the proposed elementary school. The results of the analysis indicated concentrations of arsenic, lead and total petroleum hydrocarbons at concentrations exceeding the residential direct exposure criteria in four of the seven samples collected. The results are summarized in **Table 3**.

iii. A determination/opinion as to whether the release of hazardous material has the potential to impact an environmentally sensitive area.

No Environmentally Sensitive Areas, as that term is defined under Section 3.16 of the *Remediation Regulations*, have been identified in the site area.

iv. Contamination of man-made structures

The only known man-made structure at the site is a sewer line that transects the site and is beneath the paper road named Stanfield Street. The sewer line was formerly located above grade and, the placement of fill has since buried this line. Groundwater samples collected from the site did not contain volatile organic compounds at concentrations exceeding the Method 1 GB Groundwater Quality Objectives.

v. Odors or stained soil

No odors have been observed at the site. Stained soil was identified in several areas of the site before clearing. These areas were no more than one-foot in diameter and had the appearance of paint.

vi. *Stressed vegetation*

Stressed vegetation was not identified prior to the site being cleared.

vii. *The presence of stockpiled material and an estimate of its total volume*

Material is currently stockpiled at the site. The material was generated during earthwork operations (refer to Section 6.0). A majority of this material is from a pocket of sand and gravel that is located in the southern portion of the site. While most of the sand and gravel excavated was not covered with fill material or garbage, approximately 2,000 to 3,000 cubic yards of the fill/garbage was removed from the surface to continue the excavation of the sand and gravel. The garbage/fill material was then placed in a hole created by the excavation of the sand and gravel.

viii. *Environmental Sampling locations, sampling procedures and copies of the results of any analytical testing undertaken at the contaminated-site;*

Environmental sampling locations are depicted on the Site Plan presented as **Figure 2**. Sampling procedures and the results of the sampling for each media tested is summarized below:

Soil

Subsurface soil samples were collected through the excavation of test pits performed throughout the site. The excavation was carried out with a backhoe or track-mounted excavator. During excavation, ATC recorded observations of the material being excavated. Samples were collected from zones of approximately 4 feet in thickness. Within areas of garbage or fill, ATC attempted to segregate the soil from the glass, metal, etc., found within the waste. The sample collection was also biased towards areas within the excavation that showed metallic debris or chemical containing objects (motors, drums, etc.). It should be noted that such objects were generally not uncovered during the excavation (refer to test pit logs presented in **Appendix C**). The soil samples were collected in an 8-ounce glass jar with a teflon cap and submitted to Con Test Analytical Laboratory of East Longmeadow, Massachusetts under chain-of-custody and sample preservation protocols. The results of the sampling are presented in **Table 3** and the certificates of analysis are presented in **Appendix D**.

Seven surficial soil samples were collected on March 11, 1999 in the southern portion of the site to the south of the proposed Elementary School. The samples were collected from 0 to 6 inches. The results of the analysis indicated concentrations of arsenic, lead and total petroleum hydrocarbons at concentrations exceeding the residential direct exposure criteria in four of the seven samples collected. The results are summarized in **Table 3**.

Soil Gas

Mykrowaters, Inc. of Concord, Massachusetts performed a soil gas survey at the site. The procedures for sample collection and analysis are presented in **Appendix E**. Generally,

Mykrowaters installed 12 small diameter points using vibratory drilling techniques. One John Deere tractor mounted rig was present on site to move a steel riser pipe to a depth of approximately 6 to 10 feet below the ground surface. The point was then pulled approximately one foot out of the ground to create a soil gas collection void. The pipes were equipped with rubber stoppers with a port for one-quarter-inch tubing. A peristaltic pump was then used to extract the vapor sample from the void for on-site analysis for volatile organic compounds via a gas chromatograph. Methane, oxygen and carbon dioxide were also measured on site.

The results of the on-site analysis of the soil gas samples did not reveal the selected volatile organic compounds capable of being detected. However, peaks observed on the chromatograph indicated that an unidentified compound did exist. To identify this compound or compounds, four air samples were collected within a Tedlar bag and submitted to Con-Test Laboratory for immediate analysis via EPA Method TO-14. **Table 3** summarizes the results of the analysis and **Appendix F** presents the soil gas certificates of analysis.

Groundwater

Mykrowaters, Inc. of Concord, Massachusetts installed small diameter groundwater monitoring points and collected groundwater samples therefrom. The procedures for sample collection and analysis are presented in **Appendix E**. The groundwater monitoring points were installed by pushing a slotted steel riser pipe through the ground into the water table. Groundwater samples were collected using polyethylene tubing and were analyzed on-site via the gas chromatograph. Five groundwater samples were submitted to Con Test Analytical Laboratory for volatile organic compound analysis by EPA Method 8260. None of the selected volatile organic compounds that can be identified with the gas chromatograph were detected above method reporting limits. The results of the laboratory analysis indicated the presence of naphthalene and dichlorodifluoromethane in one of the five groundwater samples submitted to the laboratory. The groundwater analytical results are summarized in **Table 5** (refer to **Appendix G** for Groundwater certificates of analysis).

ix. *A list of hazardous substances at the site.*

Hazardous substances identified at the site are listed in **Tables 3, 4, and 5**.

12.0 CONCENTRATION GRADIENTS OF HAZARDOUS SUBSTANCES

The concentration gradients of hazardous substances throughout the contaminated-site for each media impacted by the release of hazardous materials:

Soil

The concentration of lead and arsenic is relatively uniform across the fill areas on site. The following is a statistical breakdown of the concentrations of these constituents detected in soil samples collected from test pits excavated in the fill area

Constituent	Average Concentration (mg/kg)	Standard Deviation	Median Concentration (mg/kg)
Arsenic	8.56	6.6	8.23
Lead	504.37	663.80	291.00
Total Petroleum Hydrocarbons	133	363	35

The average concentrations of lead and total petroleum hydrocarbons are skewed due to one elevated concentration observed in one sample for each analyte. This is evidenced by the relative disparity between the average and median concentrations calculated. The arsenic concentrations observed are relatively consistent throughout the site. In plotting the concentrations of the constituents of concern, no readily identifiable concentration gradient is observed. The concentrations are distributed randomly throughout the fill area.

Soil Gas

Concentrations of volatile organic compounds in the soil gas were uniformly distributed over the site area. No discernable concentration gradient was observed.

Groundwater

Groundwater samples were analyzed for select volatile organic compounds with an on-site gas chromatograph and through laboratory analysis by EPA Method 8260. Napthalene and dichlorodifluoromethane were detected at 2.6 and 53.2 micrograms per liter ($\mu\text{g/l}$). The *Remediation Regulations* do not provide GB Groundwater Quality Objectives for these constituents.

13.0 BACKGROUND DETERMINATION

The methodology and results of any investigation conducted to determine background concentrations of hazardous substances identified at the contaminated-site.

During this investigation, four soil samples were collected that are likely representative of background conditions. These samples were collected from test pits ATC-2, ATC-4, ATC-5, and ATC-6. The results of the analysis of these samples revealed no concentrations of constituents of concern that exceed the Method 1 Residential Direct Exposure Criteria except for a near surface sample collected from test pit ATC-5. The soil sample collected from this location, characterized as a sandy loam, contained arsenic at 5.7 mg/kg. This sample was collected from the southernmost section of the site that is unaffected by the filling operations to the north. This sample, however, is of a different soil type than the other presumed background sample locations, as the non-arsenic containing samples were collected from the sand and gravel deposit located in the southern portion of the site.

While the concentration of arsenic in this sample exceed the Method 1 Residential Direct Exposure Criteria, it is likely that this concentration represents a naturally occurring

concentration for this element, rather than the result of filling or waste disposal activities that have affected the northern portions of the site. In a report titled *Background Levels of Priority Pollutant Metals in Rhode Island Soils*³, the Rhode Island Department of Environmental Management evaluated the results of over 100 samples collected from "background" locations to identify average concentrations of heavy metals, like arsenic, across the State. While the study identified that the state-wide statistical average⁴ of arsenic to be 1.67 mg/kg, approximately 15 % of those samples contained arsenic at concentrations exceeding 5 mg/kg. Additionally, the United States Geological Survey reports an arithmetic average concentration of arsenic in the Eastern United States at 7.4 mg/kg. Given the absence of other constituents of concern that have been identified within the waste at elevated concentrations, such as lead, it is possible that the arsenic concentration observed in this sample is a background concentration.

14.0 SITE SPECIFIC HYDROGEOLOGICAL PROPERTIES

A listing and evaluation of the site-specific hydrogeological properties which could influence the migration of hazardous substances throughout and away from the contaminated site, including but not limited to, where appropriate:

i. *The depth to groundwater*

Groundwater was identified on site at two distinct intervals. In the northern portion of the site groundwater is first encountered at 6 to 10 feet below the ground surface and within the waste material. Deep borings completed at the site identified that underlying the waste is a peat formation approximately 3 to 4 feet thick. Underlying the peat formation is a sand and gravel unit. Based on observations recorded during boring completion it is likely that the compression of the peat layer has created a partial aquitard to the underlying sand and gravel formation. Accordingly, groundwater identified in the fill is likely to be perched above the compressed peat layer. Since the peat layer is not extensive throughout the site it is also likely that there is communication between the perched water in the fill material and groundwater found in the underlying sand and gravel formation. Table 6 identifies the depth to groundwater observed during the installation of the groundwater monitoring points and during the completion of selected geotechnical borings completed in support of the school's foundation design.

ii. *The presence and effects of both the natural and man-made barriers to and conduits for contaminant migration*

The buried sewer lines underlying the site are Man-made structures that have the potential to act as conduits for contaminant migration. Based on the groundwater results collected as part of this study coupled with the groundwater classification for the site and surrounding area, no constituents of concern have been detected at concentrations exceeding Method 1 GB Groundwater Quality Objectives. Since the sewer lines are located below the apparent

³ O'Connor, Timothy, M., P.E., *Background Levels of Priority Pollutant Metals in Rhode Island Soils*, Rhode Island Department of Environmental Management, Division of Site Remediation(undated)

⁴ The statistical average was determined by applying the 95% confidence interval to the data set.

groundwater table it is likely that these lines will not act as a conduit for the constituents identified within this media.

iii. *A characterization of the bedrock*

According to the "*Geologic Map of the Providence Quadrangle, Rhode Island, Surficial Geology*" the surficial geology in the site area is characterized as Valley Train deposits which are defined as stratified sand and gravel deposited by glacial streams in the valley bottom.

Beneath the Valley Train deposits is the Mussey Brook schist bedrock formation. According to the "*Geologic Map of the Providence Quadrangle, Rhode Island, Bedrock Geology*", the Mussey Brook schist formation consists of green to greenish-gray, fine-grained, thin-bedded chlorite-quartz schist, but includes thin beds of thorneblende schist, biotite schist, quartzite, marble, greenstone, steatite, and serpentine. The map includes a narrative of the geochemical components of the formations and details the results of reported bedrock observations. The following appears in the narrative concerning the Mussey Brook Schist formation:

"Discontinuous lenses of serpentine and impure asbestos were exposed in excavations for a housing development 700 feet southwest of Hartford Avenue at the Providence city line."

No additional information was available concerning the exact location of this observation. While it is possible that such conditions exist beneath the site area, it is unlikely that persons coming into contact with the site would be exposed to asbestos since at least 40 feet of overburden material overlies the bedrock surface.

iv. *The groundwater contours, flow rates and gradients throughout the contaminated-site*

Groundwater contours are expected to be influenced by perched conditions found in the fill and the expected partial aquitard underlying the fill. However, based on the topographic features depicted on historic topographic maps and the hydrologic conditions observed in the site area, it is likely that the regional groundwater flow direction is to the north. It is also likely that subsurface pipes influence the flow of the uppermost aquifer. Based on the slope of the sewer lines in the area, a southeasterly to easterly flow direction is expected.

15.0 CHARACTERIZATION OF TOPOGRAPHY, SURFACE WATER RUN-OFF, AND FLOODING POTENTIAL

A characterization of the topography and surface water run-off flow patterns, including flooding potential, of the contaminated site.

The topography at the site is flat. A steep rise in topographic relief (approximately 10 feet) is present in the southwestern portion of the site and separates the site from the residential properties that are located along the western perimeter.

Surface water run-off at the site is highly variable and is dependent upon the shallow undulations present at the site. The overall surface water run-off flow pattern, however, is to the north and east.

According to the Federal Emergency Management Agency, Flood Insurance Rate Map depicting the site area, the subject property is located within a 100-year flood plain. It is evident based on the features depicted on this map that the flood plain determination is based on the original topography at the site, which prior to the filling reportedly supported a wetland (refer to Section 4.40). The 100-year flood plain is shown on the map as located to the north of Stanfield Avenue and to the south of Hartford Avenue. Based on the current elevations at the site, the ground surface is above the base flood elevation corresponding to the 100-year flood plain. Accordingly, the potential for flooding on-site is minimal.

16.0 VOLATILIZATION POTENTIAL

The potential for hazardous substances from the contaminated site to volatilize and any and all potential impacts of the volatilization to structures within the contaminated-site;

The soil gas study performed as part of this assessment indicated the presence of the organic gases listed in Table 4. While the *Remediation Regulations* provide numerical standards for constituent concentrations in soil and groundwater, no such standards exist for comparison to soil gas. The Rhode Island Department of Environmental Management evaluates the results as an indicator that potential contaminants may be present in soil and groundwater. The development plan for the schools involves the design and installation of a soil gas collection system coupled with the placement of an impermeable barrier to prevent vertical contaminant migration. Therefore, the potential for volatilization into structures will be substantially mitigated.

In the absence of comparable numerical criteria, ATC compared the soil gas results to soil vapor thresholds established under the Connecticut Department of Environmental Protection's Remediation Standards⁵. These standards were developed to evaluate the risk of certain volatile organic compounds present in soil gas to the inhabitants of overlying structures. The standards take into account conservative exposure assumptions, target indoor air concentrations and the current or anticipated land use (residential or industrial/commercial). If the soil gas concentration is exceeded, remediation of the condition would be required. Table 4 presents the volatile organic soil gas concentrations identified during the study through laboratory analysis and the applicable Connecticut Department of Environmental Protection Volatilization criterion for the constituent. None of the constituents exceed the Connecticut Department of Environmental Protection criteria.

Methane was evaluated during the on-site soil gas analysis. Methane was only detected at one of the soil gas monitoring points (SG-3) at a concentration of 0.2 percent. Notwithstanding the methane concentration at this location, it is likely that the relative absence of methane is due to the oxygen content also found in the subsurface. Oxygen concentrations ranged from 12.8

⁵ Section 22a-133k-1 of the Regulations of Connecticut State Agencies, Connecticut Department of Environmental Protection.

percent in SG-12 to 20.5 percent in SG-9. The oxygen concentrations suggest that microbial decomposition, if present, is occurring aerobically and methane generation would be expected to be minimal.

17.0 WIND AND EROSION EFFECTS

The potential for entrainment of hazardous substances from the contaminated-site by wind or erosion actions;

Currently, surface water run-off from the site is minimal. Stormwater falling on the site primarily infiltrates to the subsurface. Additionally, the recent wet weather in the site vicinity has mitigated the potential for wind erosion. The planned development of the site calls for the placement of a cover over the site to substantially minimize direct contact and erosion.

18.0 PROTOCOLS FOR FATE AND TRANSPORT MODELING

Detailed protocols for the fate and transport models used in the site investigation

Fate and transport modeling was not performed as part of this assessment. Based on the number of sampling locations and the various media tested coupled with the types of contaminants identified, no fate and transport modeling was warranted to characterize the site.

19.0 ANALYTICAL DATABASE

A complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation

Tables 2, 3, 4, and 5 together with the Site Plan (Figure 2), provide the information requested under this section.

20.0 MONITORING WELL DETAILS

Construction plans and development procedures for all monitoring wells. Well construction must be consistent with the requirements of Appendix I of the Groundwater Quality Regulations

Procedures for installing the small diameter groundwater monitoring points and the sample collection protocol are outlined in **Appendix E**.

21.0 MANAGEMENT OF INVESTIGATION DERIVED WASTE

Procedures for the handling, storage, and disposal of wastes derived from and during the investigation if such procedures deviate from the Department's Guidelines for the Management of Investigation Derived Waste (Policy Memo 95-01)

Investigation derived waste will be managed in accordance with Policy Memo 95-01.

22.0 QUALITY ASSURANCE AND QUALITY CONTROL EVALUATION SUMMARY REPORT

A quality assurance and quality control evaluation summary report for sample handling and analytical procedures, including, but not necessarily limited to, chain-of-custody procedures and sample preservation techniques

Quality assurance and quality control procedures were used in the handling, transportation, and analysis of all samples collected as part of this assessment. ATC, in collecting samples, followed chain of custody and sample preservation techniques. That is samples collected for laboratory analysis were duly labeled and placed on ice in a cooler pending delivery to a laboratory. The samples were in the possession and control of the sampler until signed over to the laboratory courier.

The analytic laboratories used as part of this assessment are licensed by the State of Rhode Island. The laboratories (New England Testing Laboratory and Con Test Analytical Laboratory) follow applicable federal quality assurance and quality control procedures. Refer to the certificates of analysis for additional quality assurance and quality control measures.

23.0 OTHER FACTORS

Any other site-specific factor that the Director has reason to believe is necessary to make an accurate decision as to the appropriate remedial action to be taken at the contaminated-site

No additional information or site-specific factors have been identified at this time.

SECTION II - DEVELOPMENT OF REMEDIAL ALTERNATIVES

Based on the results of the Site Investigation ATC has identified:

- Concentrations of lead arsenic and total petroleum hydrocarbons exceeding the Method 1 Residential Direct Exposure Criteria;
- Napthalene and dichlorodifluoromethane in groundwater (no standards have been developed for these compounds with respect to the GB Groundwater Quality Objectives);
- The presence of halogenated and aromatic volatile organic compounds in soil gas samples and (soil gas criteria is not established in the *Remediation Regulations*, however, criteria developed by the Connecticut Department of Environmental Protection that considers conservative exposure assumptions to occupants of a building, are not exceeded).
- Methane in soil gas in one of 12 soil gas sampling locations at 0.2 percent.

Based on this data, three Remedial Alternatives have been developed for this site.

Alternative Number 1 - No Action/Natural Attenuation

Under this alternative, no action will be taken with respect to the site and the contaminants identified thereon. This alternative is clearly undesirable considering the contaminants found (arsenic and lead) will not be mitigated through natural attenuation and this alternative will fail to comply with the Remediation Regulations. Therefore, this alternative is not discussed further.

Alternative Number 2 - Remove the Solid Waste Present at the Site and Replace the Solid Waste with Clean Fill.

This alternative is evaluated with respect to the four factors presented in Section 7.04 of the Remediation Regulations:

- **Compliance with Section 8.00 (RISK MANAGEMENT)** - This alternative when completed would comply with the requirements of Section 8.00 of the Remediation Regulations. This option envisions that all of the solid waste material currently identified at the site will be removed and the underlying soil would not contain constituents of concern at concentrations exceeding the Method 1 criteria.

- **Technical Feasibility of the Preferred Remedial Alternative** - While this alternative is technically feasible, it would be performed at great costs. ATC estimates, based on the depth of fill material identified through geotechnical borings and test pit excavations, that approximately 200,000 cubic yards or conservatively 300,000 tons of fill is present at the site. It is also estimated that approximately 50 percent of the waste is located below the water table. In material and disposal costs alone the cost of this alternative is in excess of \$25,000,000⁶. This estimated cost does not include, among other things, the costs involved in dewatering, dust mitigation, construction management, etc. The feasibility of this option also assumes that over 300,000 tons of clean fill is available in the site area. For these reasons this option is not practically reasonable.
- **Compliance with State and local laws or other public concerns** - To comply with State and local laws or other public concerns, at a minimum the following permits and/or regulations would need to be satisfied:

Diversion permits for dewatering,
Solid waste permits,
Air pollution control if dust suppression is a concern,
OSHA, etc.

Additionally, it is likely that this alternative would raise concerns with the abutting residential property owners concerning odors, safety issues, increased traffic of heavy machinery through a residential neighborhood, dust generation, etc.

- **Ability of the Performing Party to Perform the Preferred Remedial Alternative** - This alternative would be too costly to perform.

Alternative Number 3 - Engineered Cover Coupled with Soil Gas Collection Systems

This alternative is evaluated with respect to the four factors presented in Section 7.04 of the Remediation Regulations:

- **Compliance with Section 8.00 (RISK MANAGEMENT)** - This alternative when completed would comply with the requirements of Section 8.00 of the Remediation Regulations. Under this option approximately two feet of clean fill will cover the non-building areas of the site. Some areas will receive less than two feet of clean fill where an asphalt surface will be located. Under the Elementary School building solid waste material will be excavated and removed from the site, thus reducing the need for a soil gas collection system. Timber piles installed to approximately 40 feet below the ground surface will support the middle school foundation, and a soil gas collection system will be placed under the building to prevent the migration of gas through the foundation.

⁶ Assumes 300,000 tons of material to be excavated and disposed at a cost of \$75 per ton and 300,000 tons of clean fill to reestablish existing grades at a cost of \$10 per ton.

- **Technical Feasibility of the Preferred Remedial Alternative** - This alternative is technically feasible and cost effective.
- **Compliance with State and local laws or other public concerns** - This alternative will be performed in a manner consistent with State and local regulations, and will require approval from the Division of Site Remediation and the Solid Waste Division.

It is likely that this alternative will meet with public approval. The implementation of the remedy is not likely to create a nuisance in the neighborhood or generate risks associated with waste excavation, handling and transportation as would be encountered under Alternative 2. Potential risks to human health and the environment will be mitigated through the placement of cover material and soil gas will be controlled through the soil gas collection system.

- **Ability of the Performing Party to Perform the Preferred Remedial Alternative** - This alternative is feasible to perform and is cost effective.


Preferred Alternative

Based on the three proposed alternatives, Alternative 3 is consistent with Section 8.0 of the Remediation Regulations, is feasible to perform and is likely to meet with community approval. It is therefore recommended that Alternative Number 3 be selected as the remedy for the site.

SECTION III - CERTIFICATION


Person Preparing the Site Investigation Report:

I, Adam D. Sullivan of ATC Associates Inc. certify that the information contained within this report is to the best of my knowledge complete and accurate.



Adam D. Sullivan
ATC Associates Inc.

I, Alan Sepe, Director of Public Property of the City of Providence certify to the best of my knowledge that this report is a complete and accurate representation of the site and contains all known facts surrounding the release.



Alan Sepe, Director of Public Property
City of Providence

TABLES

Table 1
List of Lots Included in the Phase I Environmental Site Assessment
Springfield Avenue Lots

<u>Lot Number</u>	<u>Street Number</u>	<u>Street Name</u>	<u>Lot Area</u>
97	618	Hartford Avenue	7510
114	65	Seton Street	333
115	61	Seton Street	1220
116	57	Seton Street	2120
117	53	Seton Street	3200
118	49	Seton Street	3200
119	45	Seton Street	3200
120	41	Seton Street	3200
121	37	Seton Street	3200
122	33	Seton Street	3200
123	29	Seton Street	3200
124	25	Seton Street	3200
125	21	Seton Street	3200
126	17	Seton Street	3200
131	2	Emperor Street	2560
132	6	Emperor Street	3200
133	10	Emperor Street	3200
134	14	Emperor Street	3200
135	18	Emperor Street	3200
136	22	Emperor Street	3200
137	26	Emperor Street	3200
138	30	Emperor Street	3200
139	34	Emperor Street	3200
140	38	Emperor Street	3200
141	32	Springfield Street	3065
142	24	Springfield Street	2280
143	18	Springfield Street	1400
144	12	Springfield Street	520
145	25	Emperor Street	1120
146	21	Emperor Street	1840
147	17	Emperor Street	2740
148	13	Emperor Street	3520
149	9	Emperor Street	1755
150	25	Thornton Street	1305
151	29	Thornton Street	2864
152	33	Thornton Street	2343
153	37	Thornton Street	925
154	41	Thornton Street	3183
155	45	Thornton Street	2827
156	51	Thornton Street	7192
169	11	Woodfall Street	3576
179	56	Wright Street	2912
180	52	Wright Street	4050

Table 1
List of Lots Included in the Phase I Environmental Site Assessment
Springfield Avenue Lots

<u>Lot Number</u>	<u>Street Number</u>	<u>Street Name</u>	<u>Lot Area</u>
181	48	Wright Street	5000
182	44	Wright Street	5000
183	40	Wright Street	5000
184	36	Wright Street	5000
185	34	Stanfield Street	6900
186	30	Stanfield Street	2640
187	26	Stanfield Street	3200
188	20	Stanfield Street	3200
215	19	Stanfield Street	4805
216	25	Stanfield Street	4175
217	3	Milo Road	4000
218	7	Milo Road	4000
219	11	Milo Road	4000
234	22	Wright Street	4000
235	26	Wright Street	4000
236	29	Stanfield Street	3545
237	33	Stanfield Street	2915
239	658	Hartford Avenue	2877
240	3	Wright Street	4000
241	7	Wright Street	4000
242	11	Wright Street	4000
243	15	Wright Street	4000
244	19	Wright Street	4000
245	23	Wright Street	4000
246	27	Wright Street	4000
247	31	Wright Street	3460
248	2	Diana Road	4074
249	6	Diana Road	5350
250	10	Diana Road	4000
251	14	Diana Road	4000
252	18	Diana Road	4000
253	22	Diana Road	4000
254	26	Diana Road	4000
255	30	Diana Road	4000
256	34	Diana Road	4000
261	39	Diana Road	4000
262	35	Diana Road	4000
263	31	Diana Road	4000
264	27	Diana Road	4000

Table 1
 List of Lots Included in the Phase I Environmental Site Assessment
 Springfield Avenue Lots

<u>Lot Number</u>	<u>Street Number</u>	<u>Street Name</u>	<u>Lot Area</u>
265	23	Diana Road	4000
266	19	Diana Road	4000
267	15	Diana Road	4000
268	11	Diana Road	4000
269	7	Diana Road	4000
270	3	Diana Road	4000
271	53	Wright Street	2850
272	92	Springfield Street	2800
273	98	Springfield Street	4600
274	106	Springfield Street	4000
275	112	Springfield Street	4000
276	118	Springfield Street	4000
277	124	Springfield Street	4000
278	130	Springfield Street	4000
279	136	Springfield Street	4000
280	142	Springfield Street	4000
281	152	Springfield Street	4000
282	158	Springfield Street	4000
283	164	Springfield Street	4000
Total Square Feet			357351
Total Acres			8.20

Table 2
Site Investigation Data Summary
Springfield Avenue Lots
Providence, Rhode Island

Sample Designation	Date Sampled	Analysis Performed
Soil Sampling (Test Pit Program)		
TP-1	2/24/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
TP-3	2/24/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
TP-4	2/24/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
TP-9	2/24/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-1	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-2	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-3	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-4	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-5	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-6	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-7	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-8	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-9	3/2/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-10	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-11	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-12	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-13	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-14	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-15	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)
ATC-16	3/3/99	RCRA 8 Metals, Volatile Organic Compound (EPA Method 8260), Polychlorinated Biphenyls (EPA Method 8080), and Total Petroleum Hydrocarbons (EPA Method 8015)

Table 2
Site Investigation Data Summary
Springfield Avenue Lots
Providence, Rhode Island
(continued)

Soil Gas Sampling Program		
SG-1	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-2	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-3	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-4	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-5	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-6	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-7	3/17/99	Volatile Organic Compounds, methane, oxygen, EPA Method TO-14
SG-8	3/17/99	Volatile Organic Compounds, methane, oxygen, EPA Method TO-14
SG-9	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-10	3/17/99	Volatile Organic Compounds, methane, oxygen, EPA Method TO-14
SG-11	3/17/99	Volatile Organic Compounds, methane, oxygen
SG-12	3/17/99	Volatile Organic Compounds, methane, oxygen, EPA Method TO-14
Groundwater Sampling		
GW-1	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-2	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-3	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography and Method 8260)
GW-5	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-6	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-8	3/19/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-9	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography and Method 8260)
GW-10	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-11	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography and Method 8260)
GW-12	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-13	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-15	3/19/99	Volatile Organic Compound (On-Site Gas Chromatography and Method 8260)
GW-16	3/19/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-17	3/19/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-18	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-19	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-20	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-21	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)
GW-22	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography and Method 8260)
GW-23	3/18/99	Volatile Organic Compound (On-Site Gas Chromatography)

Table 3

**Soil Analytical Results
Test Pit Sampling¹**

*Volatile Organic Compounds, Total Petroleum Hydrocarbons,
RCRA 8 Metals, Polychlorinated Biphenyls*

<i>Analytes</i>	<i>TP-1</i>	<i>TP-3</i>	<i>TP-4</i>	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES²	
				<i>Direct Exposure Criteria³</i>	<i>GB Leachability Criteria⁴</i>
Volatile Organic Compounds	ND	ND	ND	Analyte Specific	Analyte Specific
Polychlorinated Biphenyls	0.191	0.305	0.840	10	10
Total Petroleum Hydrocarbons	1,700⁵	315	117	500 or 1000	2,500
RCRA 8 Metals					
Arsenic	2.46	8.23	8.27	1.7	No Standard
Barium	138	117	212	5,500	No Standard
Cadmium	2.01	2.52	3.66	39	No Standard
Chromium	38	134	33	390	No Standard
Lead	205	362	739	150	No Standard
Mercury	0.21	1.65	0.28	23	No Standard
Selenium	<1.16	0.69	1.02	390	No Standard
Silver	<2.23	<1.15	2.04	200	No Standard

¹ Soil samples collected on February 24, 1999. Fleet Construction Services excavated the test pits.

² State of Rhode Island and Providence Plantations, Department of Environmental Management, Division of Site Remediation, Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, March 31, 1993, (as amended August 1996).

³ The Residential Direct Exposure Criteria applies to vadose zone soil.

⁴ The site is located in a GB Groundwater Classification Area

⁵ Bold face type denotes an exceedence of the Residential Direct Exposure Criterion

Table 3

Continued

Analytes	ATC-1 ⁶	ATC-2	ATC-3	ATC-4	ATC-5	ATC-6	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES	
							Direct Exposure Criteria	GB Leachability Criteria
Volatile Organic Compounds								
m-xylene	ND	ND	ND	ND	ND	ND	110	No Standard
Isopropylbenzene	ND	ND	ND	ND	ND	ND	27	No Standard
p-isopropyltoluene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Propylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Sec-butylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
1,2,4 Trimethylbenzene	0.006	ND	ND	ND	ND	ND	No Standard	No Standard
1,3,5 Trimethylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Butylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Polychlorinated Biphenyls	ND	ND	0.234	ND	ND	ND	10	No Standard
Total Petroleum Hydrocarbons	35	24	56	9.5	ND	ND	500 or 1000	2,500
RCRA 8 Metals								
Arsenic	30.6	ND	7.5	ND	5.9	ND	1.7	No Standard
Barium	102	14.1	34.6	13.2	21.3	18.3	5,500	No Standard
Cadmium	2.8	ND	0.38	ND	0.12	0.05	39	No Standard
Chromium	28	2.39	9.58	2.18	7.42	5.02	390	No Standard
Lead	877	5.3	291	4.5	44.8	7.5	150	No Standard
Mercury	0.227	ND	0.167	ND	0.070	ND	23	No Standard
Selenium	ND	ND	ND	ND	ND	ND	390	No Standard
Silver	ND	ND	ND	ND	ND	ND	200	No Standard

⁶ Samples denoted ATC-1 through ATC-16 were collected on March 2 and 3, 1999. The test pits were excavated by Fleet Construction Services.

Table 3

Continued

Analytes	ATC-7	ATC-8	ATC-9	ATC-10	ATC-11	ATC-11 GO ⁷	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES	
							Direct Exposure Criteria	GB Leachability Criteria
Volatile Organic Compounds								
Ethyl Benzene	0.005	ND	ND	ND	ND	ND	27	1.6
xylene	0.017	ND	ND	ND	ND	ND	110	No Standard
Isopropylbenzene	0.005	ND	ND	ND	ND	ND	27	No Standard
p-isopropyltoluene	0.006	ND	ND	ND	ND	ND	No Standard	No Standard
Propylbenzene	0.010	ND	ND	ND	ND	ND	No Standard	No Standard
Sec-butylbenzene	0.009	ND	ND	ND	ND	ND	No Standard	No Standard
1,2,4 Trimethylbenzene	0.037	ND	ND	ND	0.016	0.004	No Standard	No Standard
1,3,5 Trimethylbenzene	0.020	ND	ND	ND	ND	ND	No Standard	No Standard
Butylbenzene	0.007	ND	ND	ND	ND	ND	No Standard	No Standard
Naphthalene	ND	ND	ND	ND	ND	0.004	No Standard	No Standard
Polychlorinated Biphenyls	0.334	0.128	0.59	1.44	ND	ND	No Standard	No Standard
Total Petroleum Hydrocarbons	53	24	61	86	11	17	500 or 1000	2,500
RCRA 8 Metals								
Arsenic	9.9	6.3	8.3	10.5	5.8	10.1	1.7	No Standard
Barium	92.2	85.0	206	85	44.1	129	5,500	No Standard
Cadmium	1.49	1.70	2.79	1.39	0.18	0.64	39	No Standard
Chromium	40.8	9.65	30	19.6	3.39	10.9	390	No Standard
Lead	258	163	594	848	95.6	256	150	No Standard
Mercury	0.267	0.293	0.315	0.171	0.095	0.099	23	No Standard
Selenium	10	ND	7.7	14.2	ND	6.4	390	No Standard
Silver	4	ND	2.4	ND	ND	ND	200	No Standard

⁷ Sample collected from test pit ATC-11 that exhibited a faint gasoline odor.

Table 3

Continued

Analytes	ATC-12	ATC-13	ATC-14	ATC-15	ATC-16	TP-9 ⁸	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES	
							Direct Exposure Criteria	GB Leachability Criteria
Volatile Organic Compounds								
m-xylene	ND	ND	ND	ND	ND	ND	110	No Standard
Isopropylbenzene	ND	ND	ND	ND	ND	ND	27	No Standard
p-isopropyltoluene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Propylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Sec-butylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
1,2,4 Trimethylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
1,3,5 Trimethylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Butylbenzene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Napthalene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Tetrachloroethene	ND	ND	ND	ND	ND	ND	No Standard	No Standard
Polychlorinated Biphenyls	0.75	3.44	1.15	1.01	0.890	ND	12	0.150
Total Petroleum Hydrocarbons	12	120	21	54	75	19	10	10
RCRA 8 Metals							500 or 1000	2,500
Arsenic	13	6.7	5.3	ND	ND	10.5	1.7	No Standard
Barium	288	85.4	28.1	27	121	425	5,500	No Standard
Cadmium	1.9	0.67	0.06	0.3	0.98	2.86	39	No Standard
Chromium	29.9	13.6	11.4	5.11	19.1	35.5	390	No Standard
Lead	474	115	11.9	48.8	376	2,860	150	No Standard
Mercury	0.262	0.078	0.022	0.052	0.062	0.240	23	No Standard
Selenium	ND	ND	ND	ND	ND	ND	390	No Standard
Silver	ND	ND	ND	ND	2.3	8.9	200	No Standard

⁸ Sample collected from a test pit excavated near test pit TH-9 excavated by Fleet Construction Services on February 24, 1999. TP-9 was excavated on March 3, 1999

Table 3

**Soil Analytical Results
Surficial Soil Sampling**

*Volatile Organic Compounds, Total Petroleum Hydrocarbons,
RCRA 8 Metals, Polychlorinated Biphenyls*

<i>Analytes</i>	<i>A-1</i>	<i>A-2</i>	<i>B-1</i>	<i>B-2</i>	<i>B-3</i>	<i>B-4</i>	<i>B-5</i>	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES	
								<i>Direct Exposure Criteria</i>	<i>GB Leachability Criteria</i>
Volatile Organic Compounds	ND	ND	ND	ND	ND	ND	ND	---	---
Polychlorinated Biphenyls	ND	0.474	ND	ND	ND	ND	0.071	10	10
Total Petroleum Hydrocarbons	18	460	13	ND	25	280	520	500 or 1000	2,500
RCRA 8 Metals									
Arsenic	5.79	ND	8.63	5.54	ND	ND	14.3	1.7	No Standard
Barium	13.3	127	21.7	44.3	23.5	121	262	5,500	No Standard
Cadmium	0.05	1.54	ND	0.07	0.14	0.98	1.57	39	No Standard
Chromium	3.22	21	6.16	6.57	5.75	19.1	12	390	No Standard
Lead	5.97	356	17.4	50.8	21.4	376	766	150	No Standard
Mercury	ND	0.921	0.017	0.019	0.025	0.062	0.157	23	No Standard
Selenium	ND	ND	ND	ND	ND	ND	5.2	390	No Standard
Silver	ND	1.58	ND	ND	ND	2.3	ND	200	No Standard

Table 4 Soil Gas Results

SPRINGFIELD AVENUE LOTS PROVIDENCE, RHODE ISLAND

Analyte Detected	Soil Gas Sampling Results ¹ (parts per billion)				Regulatory Comparison Connecticut Department of Environmental Protection Residential Volatilization Criteria (parts per billion) ²
	SG-07 ³	SG-08	SG-10	SG-12	
Dichlorodifluoromethane	1675	850	820	5,750	No Standard
1,2-Dichlorotetrafluoroethane	430	185	180	2,720	No Standard
Vinyl Chloride	ND	ND	0.53	ND	1,000
Trichlorofluoromethane	49	22	170	150	No Standard
Methylene Chloride	0.65	0.75	0.5	ND	1,200,000
1,1,2-Trichlorotrifluoroethane	14	23	ND	ND	No Standard
Methyl tert Butyl-Ether	40	47	31	41	No Standard
Chloroform	0.66	7.0	1.6	ND	4,500
1,1,1 Trichloroethane	1.1	9.5	42	110	1,310,000
Benzene	3.1	4.4	3.9	3.5	1,000
Carbon Tetrachloride	0.83	4.9	ND	ND	1,000
1,2 Dichloropropane	ND	0.73	ND	ND	No Standard
Trichloroethene	0.87	1.6	0.50	ND	7,000
Toluene	17	33	19	31	760,000
Tetrachloroethene	4.0	7.4	3.6	4.9	11,000
Ethylbenzene	5.5	8.5	4.4	5.3	1,650,000
M/P Xylene	22	30	18	22	500,000
O-Xylene	7.5	11	5.6	7.4	500,000
1,3,5 Trimethylbenzene	2.8	3.9	1.9	2.7	No Standard

¹ Mykrowaters of Concord, Massachusetts collected the soil gas samples. The samples were collected through the use of a peristaltic pump and tedlar bags. Soil gas samples were analyzed at Con Test Analytical Laboratory located in East Long Meadow, Massachusetts. The samples were collected and analyzed on March 19, 1999.

² Adopted from the Connecticut Department of Environmental Protection's Remediation Standards. For risk assumptions and calculative values refer to Appendix H

³ Refer to Site Plan for Soil Gas sample locations.

Table 4
Soil Vapor Analysis
Field Methane, CO₂ and O₂ Analysis
March 17 - 19, 1999
(results reported as percentage)

Soil Gas Sampling Collection Point	Methane	CO ₂	O ₂
SG-1	0.0	0.0	20.1
SG-2	0.0	0.0	20.2
SG-3	0.2	0.0	19.8
SG-4	0.0	2.9	17.0
SG-5	0.0	0.8	19.1
SG-6	0.0	0.9	18.9
SG-7	0.0	0.5	19.4
SG-8	0.0	0.9	19.4
SG-9	0.0	0.0	20.5
SG-10	0.0	1.1	17.9
SG-11	0.0	2.9	14.7
SG-12	0.0	5.2	12.8

Methane, oxygen and carbon dioxide results recorded with a Lan-Tech GA-90.

Table 5
Groundwater Results
 Springfield Avenue Lots
 Providence, Rhode Island

Constituents	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6	GW-8	GW-9	GB Groundwater Quality Objective
Total Volatile Organic Compounds, On-Site Gas Chromatograph	ND	ND	ND	ND	ND	ND	ND	ND	No Standard
Unidentified Compound Detected	No	No	Yes	No	No	Yes	No	Yes	----
Total Volatile Organic Compounds, Laboratory Analysis	Not Submitted	Not Submitted	Submitted	Not Submitted	Not Submitted	Not Submitted	Not Submitted	Submitted	----
Total Volatile Organic Compounds Detected Through Laboratory Analysis	Not Submitted	Not Submitted	ND	Not Submitted	Not Submitted	Not Submitted	Not Submitted	ND	----

Table 5
Groundwater Results
(Continued)

Constituents	GW-10	GW-11	GW-12	GW-13	GW-15	GW-16	GW-17	GW-18	GB Groundwater Quality Objective
Total Volatile Organic Compounds, On-Site Gas Chromatograph	ND	ND	ND	ND	ND	ND	ND	ND	No Standard
Unidentified Compound Detected	Yes	Yes	No	No	No	No	No	No	----
Total Volatile Organic Compounds, Laboratory Analysis	Not Submitted	Submitted	Not Submitted	Not Submitted	Submitted	Not Submitted	Not Submitted	Not Submitted	----
Total Volatile Organic Compounds Detected Through Laboratory Analysis	Not Submitted	ND	Not Submitted	Not Submitted	ND	Not Submitted	Not Submitted	Not Submitted	----
Dichlorodifluoro methane	Not Submitted	ND	Not Submitted	Not Submitted	ND	Not Submitted	Not Submitted	Not Submitted	No Standard
Napthalene	Not Submitted	ND	Not Submitted	Not Submitted	ND	Not Submitted	Not Submitted	Not Submitted	No Standard

Table 5
Groundwater Results
(Continued)

Constituents	GW-19	GW-20	GW-21	GW-22	GW-23	GB Groundwater Quality Objective
Total Volatile Organic Compounds, On-Site Gas Chromatograph	ND	ND	ND	ND	ND	No Standard
Unidentified Compound Detected	No	No	No	Yes	No	----
Total Volatile Organic Compounds, Laboratory Analysis	Not Submitted	Not Submitted	Not Submitted	Submitted	Not Submitted	----
Total Volatile Organic Compounds Detected Through Laboratory Analysis	Not Submitted	Not Submitted	Not Submitted	55.8	Not Submitted	----
Dichlorodifluoro methane	Not Submitted	Not Submitted	Not Submitted	2.6	Not Submitted	No Standard
Napthalene	Not Submitted	Not Submitted	Not Submitted	53.2	Not Submitted	No Standard

Table 6 Water Levels

Springfield Street Lots
Providence, Rhode Island

Well ID	Water Level	Depth of Well Point
GW-1	11.1	25
GW-2	6.65	12
GW-3	9.45	12
GW-4	7.50	12
GW-5	6.65	12
GW-6	6.95	12
GW-8	17.8	20
GW-9	12.8	25
GW-10	11.8	12
GW-11	9.30	25
GW-12	7.90	12
GW-13	7.55	25
GW-15	20.3	26.5
GW-16	8.90	12
GW-17	11.9	15
GW-18	12.1	15
GW-19	12.0	15
GW-20	6.50	12
GW-21	6.95	12
GW-22	7.00	12
GW-23	11.1	25

Depth to water measurements were recorded using a Slope Water Level Indicator

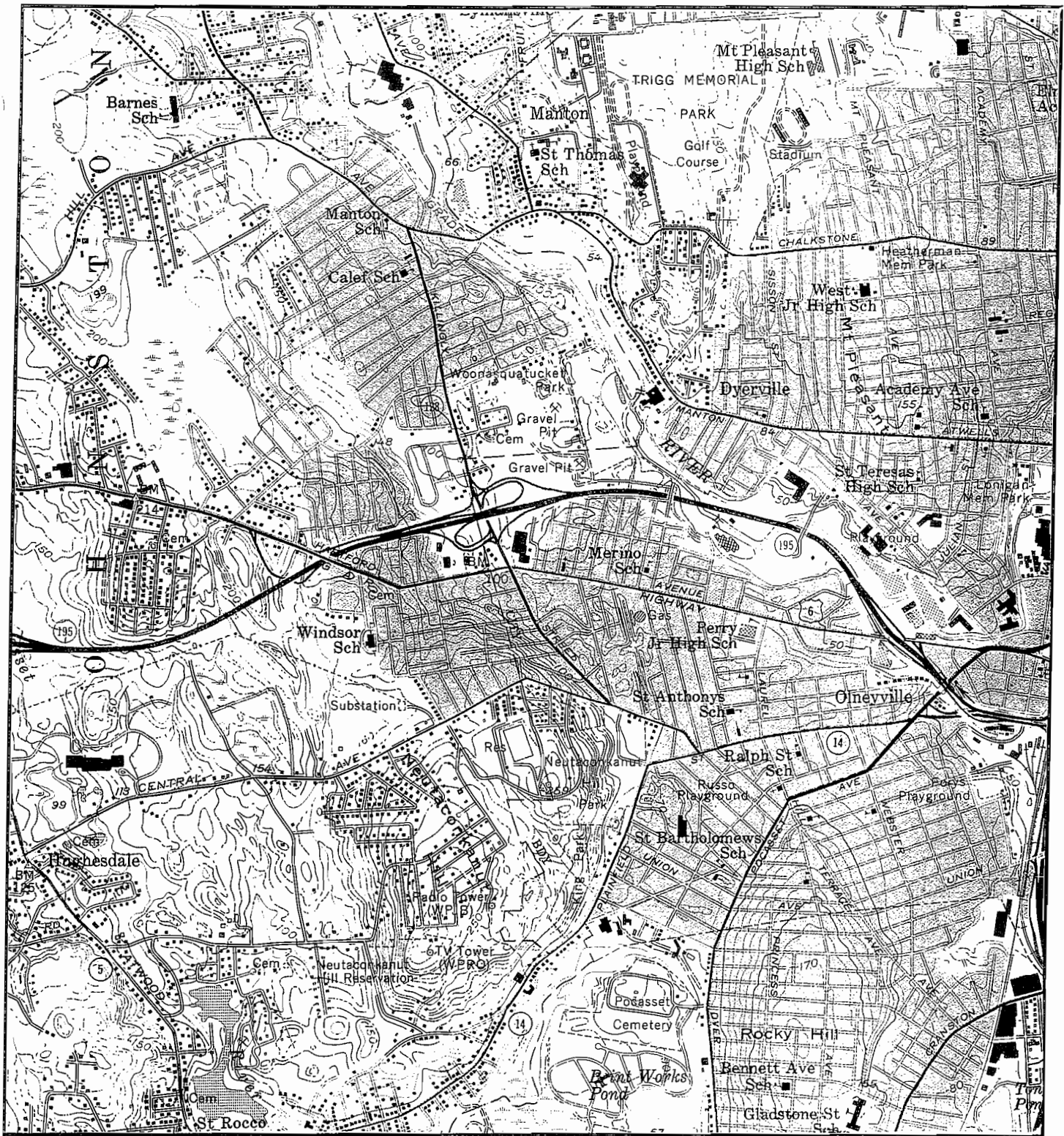


FIGURE NUMBER:
1

SITE LOCUS
Springfield Street Lots
Providence, Rhode Island

NORTH:
↑

SOURCE:
USGS Providence,
Rhode Island Quadrangle

SCALE:
1:24,000

DATE:
1957
photorevised
1970 & 1975

APPENDIX A

DIVISION OF SITE REMEDIATION HAZARDOUS MATERIAL RELEASE NOTIFICATION FORM

THIS FORM IS NOT TO BE USED TO REPORT AN IMMEDIATE HAZARD

1. Notifier Information

Name: Adam Sullivan, ATC Associates
Address: One Richmond Square, Providence, Rhode Island
Phone: 401-274-3955
Status: Owner Operator Secured Creditor Voluntary

2. Property Information

Name of Site: Springfield Avenue Lots
Site Address: Springfield Avenue, Providence, Rhode Island
Plat Lot Numbers: Refer to Site Investigation Report
Site Contact Person: None
Site Contact Phone: None
Site Land Usage Type: Residential Industrial/Commercial
Location of Release: Throughout site

3. Release Information

Date of Discovery: March 5, 1999
Source: Landfill
Release Media: Soil
Hazardous Materials and Concentrations: Refer to Site Investigation Report (Lead, Arsenic, Total
Petroleum Hydrocarbons
Extent of Contamination: Limited Areas of Site (refer to Site Investigation Report

4. Resource Information

Site Land Usage: Vacant (planned School Site)

Adjacent Land Usage: Residential

Site Groundwater Class: GB

Adjacent Groundwater Class: GB

Nearest Surface Water or Wetland: Woonasquatucket River

5. Potentially Responsible Parties:

Name: Unknown

Address: _____

Status: _____

Name: _____

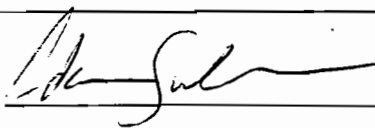
Address: _____

Status: _____

6. Measures Taken or Proposed to be Taken in Response to Release

Site Investigation Report and Remediation Plan

7. Other Significant Remarks about Release:

Signature: 

Date 3/25/99

Title: Project Engineer

1939







SITE



SITE

SITE





SITE

APPENDIX C

APPENDIX C TEST PIT LOGS

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-1	0 - 4	Garbage - bottles, shoes, cans, tires, mattress springs,
	4 - 8	
	8 - 12	
	12 - 16	
	16 - 20	End of exploration

One composite sample collected at 4 to 8 feet below the ground surface

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-2	0 - 4	Coarse sand and gravel. No garbage detected
	4 - 8	
	8 - 12	End of Exploration at 10 feet
	12 - 16	
	16 - 20	

One composite sample collected at 0 to 4 feet below the ground surface

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-3	0 - 4	Garbage
	4 - 8	
	8 - 12	SAND, coarse, brown to tan, wet at 10 feet, end of exploration at 12 feet
	12 - 16	
	16 - 20	

One composite sample collected at 0 to 4 feet below the ground surface

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-4	0 - 4	Coarse sand and gravel. No garbage detected
	4 - 8	
	8 - 12	End of Exploration at 10 feet
	12 - 16	
	16 - 20	

One composite sample collected at 0 to 4 feet below the ground surface

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-5	0 - 4	Sandy Loam
	4 - 8	Silty Sand - moist
	8 - 12	Gravel, medium to coarse, moist, end of exploration
	12 - 16	
	16 - 20	

One sample collected from 0 to 1 feet.

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-6	0 - 4	SAND, coarse brown to tan, moist at 10 feet. End of exploration
	4 - 8	
	8 - 12	
	12 - 16	
	16 - 20	

One sample collected from 0 to 1 feet.

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-7	0 - 4	SAND, coarse brown to tan,
	4 - 8	Garbage, bottles, cans, etc., water at 10 feet
	8 - 12	
	12 - 16	
	16 - 20	Peat, end of exploration at 18 feet,

One composite sample collected from 8 to 12 feet

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-8	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc., water at 10 feet
	8 - 12	
	12 - 16	
	16 - 20	Peat, end of exploration at 18 feet,

One composite sample collected from 4 to 8 feet.

Test Pit No.	Depth Below Ground Surface	Subsurface Observations
ATC-9	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc., water at 11 feet
	8 - 12	
	12 - 16	
	16 - 20	End of exploration at 16 feet,

One composite sample collected from 4 to 12 feet.

Test Pit No. and Location	Depth Below Ground Surface	Subsurface Observations
ATC-10	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc., water at 11 feet. faint hydrocarbon odor at 10 to 12 feet
	8 - 12	
	12 - 16	End of exploration at 15 feet
	16 - 20	,

One composite sample collected from 4 to 8 feet.

One composite sample collected from 8 to 12 feet.

Test Pit No. and Location	Depth Below Ground Surface	Subsurface Observations
ATC-12	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc., water at 10 feet
	8 - 12	8 to 9 feet: Garbage, water at 9 feet 9 to 12 feet: large concrete and stone blocks
	12 - 16	SAND, silty, brown
	16 - 20	

One composite sample collected from 4 to 8 feet.

Test Pit No. and Location	Depth Below Ground Surface	Subsurface Observations
ATC-13	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, drum carcass, old stove, etc.,
	8 - 12	SAND medium to coarse
	12 - 16	water at 13 feet, End of exploration at 18 feet
	16 - 20	

One Composite sample collected from 4 to 8 feet

Test Pit No. and Location	Depth Below Ground Surface	Subsurface Observations
ATC-14	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc.,
	8 - 12	8 to 9 feet Garbage including long (>20 feet) strings,
	12 - 16	9 to 15 SAND, medium to coarse water at 12 feet End of exploration at 15 feet
	16 - 20	

One composite sample at 4 to 8 feet

Test Pit No. and Location	Depth Below Ground Surface	Subsurface Observations
ATC-15	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc.,
	8 - 12	8 to 9 feet Garbage,
	12 - 16	9 to 15 SAND, medium to coarse water at 9 feet End of exploration at 15 feet
	16 - 20	

One composite sample collected from 4 to 8 feet

Test Pit No. and Location	Depth Below Ground Surface	Subsurface Observations
ATC-16	0 - 4	0 to 1 feet: SAND, coarse brown 1 to 4 feet; Garbage
	4 - 8	Garbage, bottles, cans, etc.,
	8 - 12	8 to 10 feet Garbage,
	12 - 16	10 to 15 SAND, medium to coarse water at 12 feet End of exploration at 15 feet
	16 - 20	

One composite sample collected from 4 to 8 feet

APPENDIX D

REPORT OF ANALYTICAL RESULTS

Case Number: J0301-12

Prepared for:

ATC Associates
One Richmond Square
Providence, RI 02906
Attn: Adam Sullivan

Report Date: MARCH 5, 1999

Reviewed by:

Mark H. Bishop

Mark H. Bishop
Laboratory Director

NEW ENGLAND TESTING LABORATORY, INC.

1254 Douglas Avenue, North Providence, Rhode Island 02904-5392
PROVIDENCE (401) 353-3420 TOLL FREE: 1-888-863-8522

SAMPLES SUBMITTED:

The following samples were submitted to New England Testing Laboratory on 01 MARCH 1999:

"Springfield Ave."

Soil:

1. TP-1
2. TP-3
3. TP-4

Water:

4. TP-4

The samples were assigned an internal identification code for laboratory information management purposes. The case number for this sample submission is:

J0301-12

ANALYSIS PERFORMED:

The following table details the analyses performed on the samples at the request of the client:

<u>Sample</u>	<u>Analysis</u>	<u>Method</u>
"Springfield Ave." J0301-12: Samples 1-3	PCBs	8082
	VOCs	8260B
	Total Petroleum Hydrocarbons	5030B/8015B mod.
	Total Petroleum Hydrocarbons	3550B/8015B mod.
	Total Metals	
	Arsenic	7060A
	Barium	6010B
	Cadmium	6010B
	Chromium	6010B
	Lead	6010B
	Mercury	7471A
	Selenium	7740
	Silver	6010B
4. TP-4	Total Petroleum Hydrocarbons	3510C/8015B mod.

Note: These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,
SW-846. USEPA/OSW.

QUALITY ASSURANCE/CONTROL STATEMENTS

All samples were found to be properly preserved/cooled upon receipt. All analyses were performed within EPA designated holding-times. Procedure/calibration checks required by the designated protocols were within control limits.

ANALYTICAL RESULTS.

TP-1

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>
Total Petroleum Hydrocarbons "DRO", mg/Kg*	1700	5
Total Petroleum Hydrocarbons "GRO", mg/Kg*	N.D.	2.5
Arsenic, mg/Kg*	2.46	0.33
Barium, mg/Kg*	138	1.33
Cadmium, mg/Kg*	2.01	0.33
Chromium, mg/Kg*	38	1.33
Lead, mg/Kg*	205	3.33
Mercury, mg/Kg*	0.21	0.1
Selenium, mg/Kg*	<1.16	0.33
Silver, mg/Kg*	<2.23	0.66

*Dry Weight Basis

N.D. = Not Detected

TP-3

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>
Total Petroleum Hydrocarbons "DRO", mg/Kg*	315	5
Total Petroleum Hydrocarbons "GRO", mg/Kg*	N.D.	2.5
Arsenic, mg/Kg*	8.23	0.33
Barium, mg/Kg*	117	1.33
Cadmium, mg/Kg*	2.52	0.33
Chromium, mg/Kg*	134	1.33
Lead, mg/Kg*	362	3.33
Mercury, mg/Kg*	1.65	0.1
Selenium, mg/Kg*	0.69	0.33
Silver, mg/Kg*	<1.15	0.66

*Dry Weight Basis

N.D. = Not Detected

TP-4

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>
Total Petroleum Hydrocarbons "DRO", mg/Kg*	117	5
Total Petroleum Hydrocarbons "GRO", mg/Kg*	N.D.	2.5
Arsenic, mg/Kg*	8.27	0.33
Barium, mg/Kg*	212	1.33
Cadmium, mg/Kg*	3.66	0.33
Chromium, mg/Kg*	33	1.33
Lead, mg/Kg*	739	3.33
Mercury, mg/Kg*	0.28	0.1
Selenium, mg/Kg*	1.02	0.33
Silver, mg/Kg*	2.04	0.66

TP-4

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>
Total Petroleum Hydrocarbons "DRO", ug/L	997	50

*Dry Weight Basis

N.D. = Not Detected

Sample: TP-1

Case No. J0301-12

Date Analyzed: 3/2/99

Subject: Volatile Organic Compounds

Method: EPA 8260B

<u>Compound</u>	<u>Concentration</u> <u>ug/Kg (ppb)</u>	<u>Reporting</u> <u>Limit</u>
Acetone	N.D.	250
Benzene	N.D.	50
Bromochloromethane	N.D.	50
Bromodichloromethane	N.D.	50
Bromoform	N.D.	50
Bromomethane	N.D.	50
2-Butanone	N.D.	250
n-Butylbenzene	N.D.	50
sec-Butylbenzene	N.D.	50
tert-Butylbenzene	N.D.	50
Carbon tetrachloride	N.D.	50
Chlorobenzene	N.D.	50
Chlorodibromomethane	N.D.	50
Chloroethane	N.D.	50
Chloroform	N.D.	50
Chloromethane	N.D.	50
2-Chlorotoluene	N.D.	50
4-Chlorotoluene	N.D.	50
Dibromomethane	N.D.	50
1,2-Dibromo-3-chloropropane	N.D.	50
1,2-Dibromoethane	N.D.	50
1,2-Dichlorobenzene	N.D.	50
1,3-Dichlorobenzene	N.D.	50
1,4-Dichlorobenzene	N.D.	50
Dichlorodifluoromethane	N.D.	50
1,1-Dichloroethane	N.D.	50
1,2-Dichloroethane	N.D.	50
1,1-Dichloroethene	N.D.	50
cis-1,2-Dichloroethene	N.D.	50
trans-1,2-Dichloroethene	N.D.	50
1,2-Dichloropropane	N.D.	50
cis-1,3-Dichloropropene	N.D.	50
trans-1,3-Dichloropropene	N.D.	50
Ethylbenzene	N.D.	50
2-Hexanone	N.D.	50
Isopropylbenzene	N.D.	50
p-Isopropyltoluene	N.D.	50
Methylene chloride	N.D.	150
tert-Butylmethylether	N.D.	250

Sample: TP-1

Case No. J0301-12

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
4-Methyl-2-pentanone	N.D.	250
Naphthalene	N.D.	100
n-Propylbenzene	N.D.	50
Styrene	N.D.	50
1,1,1,2-Tetrachloroethane	N.D.	50
1,1,2,2-Tetrachloroethane	N.D.	50
Tetrachloroethene	N.D.	50
Toluene	N.D.	50
1,2,3-Trichlorobenzene	N.D.	50
1,1,1-Trichloroethane	N.D.	50
1,1,2-Trichloroethane	N.D.	50
Trichloroethene	N.D.	50
Trichlorofluoromethane	N.D.	50
1,2,3-Trichloropropane	N.D.	50
1,2,4-Trimethylbenzene	N.D.	50
1,3,5-Trimethylbenzene	N.D.	50
Vinyl chloride	N.D.	50
Xylene, Total	N.D.	100

Surrogates:

<u>Compound</u>	<u>% Recovery</u>	<u>Limits</u>
Toluene d8	105	81-117
1,2-Dichloroethane d4	99	70-121
4 BFB	101	74-121

Sample: TP-3

Case No. J0301-12
Date Analyzed: 3/2/99

Subject: Volatile Organic Compounds
Method: EPA 8260B

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
Acetone	N.D.	250
Benzene	N.D.	50
Bromochloromethane	N.D.	50
Bromodichloromethane	N.D.	50
Bromoform	N.D.	50
Bromomethane	N.D.	50
2-Butanone	N.D.	250
n-Butylbenzene	N.D.	50
sec-Butylbenzene	N.D.	50
tert-Butylbenzene	N.D.	50
Carbon tetrachloride	N.D.	50
Chlorobenzene	N.D.	50
Chlorodibromomethane	N.D.	50
Chloroethane	N.D.	50
Chloroform	N.D.	50
Chloromethane	N.D.	50
2-Chlorotoluene	N.D.	50
4-Chlorotoluene	N.D.	50
Dibromomethane	N.D.	50
1,2-Dibromo-3-chloropropane	N.D.	50
1,2-Dibromoethane	N.D.	50
1,2-Dichlorobenzene	N.D.	50
1,3-Dichlorobenzene	N.D.	50
1,4-Dichlorobenzene	N.D.	50
Dichlorodifluoromethane	N.D.	50
1,1-Dichloroethane	N.D.	50
1,2-Dichloroethane	N.D.	50
1,1-Dichloroethene	N.D.	50
cis-1,2-Dichloroethene	N.D.	50
trans-1,2-Dichloroethene	N.D.	50
1,2-Dichloropropane	N.D.	50
cis-1,3-Dichloropropene	N.D.	50
trans-1,3-Dichloropropene	N.D.	50
Ethylbenzene	N.D.	50
2-Hexanone	N.D.	50
Isopropylbenzene	N.D.	50
p-Isopropyltoluene	N.D.	50
Methylene chloride	N.D.	150
tert-Butylmethylether	N.D.	250

Sample: TP-3

Case No. J0301-12

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
4-Methyl-2-pentanone	N.D.	250
Naphthalene	N.D.	100
n-Propylbenzene	N.D.	50
Styrene	N.D.	50
1,1,1,2-Tetrachloroethane	N.D.	50
1,1,2,2-Tetrachloroethane	N.D.	50
Tetrachloroethene	N.D.	50
Toluene	N.D.	50
1,2,3-Trichlorobenzene	N.D.	50
1,1,1-Trichloroethane	N.D.	50
1,1,2-Trichloroethane	N.D.	50
Trichloroethene	N.D.	50
Trichlorofluoromethane	N.D.	50
1,2,3-Trichloropropane	N.D.	50
1,2,4-Trimethylbenzene	N.D.	50
1,3,5-Trimethylbenzene	N.D.	50
Vinyl chloride	N.D.	50
Xylene, Total	N.D.	100

Surrogates:

<u>Compound</u>	<u>% Recovery</u>	<u>Limits</u>
Toluene d8	106	81-117
1,2-Dichloroethane d4	100	70-121
4 BFB	101	74-121

Sample: TP-4

Case No. J0301-12
Date Analyzed: 3/2/99

Subject: Volatile Organic Compounds
Method: EPA 8260B

<u>Compound</u>	<u>Concentration</u> <u>ug/Kg (ppb)</u>	<u>Reporting</u> <u>Limit</u>
Acetone	N.D.	250
Benzene	N.D.	50
Bromochloromethane	N.D.	50
Bromodichloromethane	N.D.	50
Bromoform	N.D.	50
Bromomethane	N.D.	50
2-Butanone	N.D.	250
n-Butylbenzene	N.D.	50
sec-Butylbenzene	N.D.	50
tert-Butylbenzene	N.D.	50
Carbon tetrachloride	N.D.	50
Chlorobenzene	N.D.	50
Chlorodibromomethane	N.D.	50
Chloroethane	N.D.	50
Chloroform	N.D.	50
Chloromethane	N.D.	50
2-Chlorotoluene	N.D.	50
4-Chlorotoluene	N.D.	50
Dibromomethane	N.D.	50
1,2-Dibromo-3-chloropropane	N.D.	50
1,2-Dibromoethane	N.D.	50
1,2-Dichlorobenzene	N.D.	50
1,3-Dichlorobenzene	N.D.	50
1,4-Dichlorobenzene	N.D.	50
Dichlorodifluoromethane	N.D.	50
1,1-Dichloroethane	N.D.	50
1,2-Dichloroethane	N.D.	50
1,1-Dichloroethene	N.D.	50
cis-1,2-Dichloroethene	N.D.	50
trans-1,2-Dichloroethene	N.D.	50
1,2-Dichloropropane	N.D.	50
cis-1,3-Dichloropropene	N.D.	50
trans-1,3-Dichloropropene	N.D.	50
Ethylbenzene	N.D.	50
2-Hexanone	N.D.	50
Isopropylbenzene	N.D.	50
p-Isopropyltoluene	N.D.	50
Methylene chloride	N.D.	150
tert-Butylmethylether	N.D.	250

Sample: TP-4

Case No. J0301-12

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
4-Methyl-2-pentanone	N.D.	250
Naphthalene	N.D.	100
n-Propylbenzene	N.D.	50
Styrene	N.D.	50
1,1,1,2-Tetrachloroethane	N.D.	50
1,1,2,2-Tetrachloroethane	N.D.	50
Tetrachloroethene	N.D.	50
Toluene	N.D.	50
1,2,3-Trichlorobenzene	N.D.	50
1,1,1-Trichloroethane	N.D.	50
1,1,2-Trichloroethane	N.D.	50
Trichloroethene	N.D.	50
Trichlorofluoromethane	N.D.	50
1,2,3-Trichloropropane	N.D.	50
1,2,4-Trimethylbenzene	N.D.	50
1,3,5-Trimethylbenzene	N.D.	50
Vinyl chloride	N.D.	50
Xylene, Total	N.D.	100

Surrogates:

<u>Compound</u>	<u>% Recovery</u>	<u>Limits</u>
Toluene d8	108	81-117
1,2-Dichloroethane d4	102	70-121
4 BFB	102	74-121

Sample: TP-1

Case No. J0301-12

Date Extracted: 3/2/99

Date Analyzed: 3/3/99

Subject: PCBs

Method: EPA 8082

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
PCB-1016	N.D.	100
PCB-1221	N.D.	200
PCB-1232	N.D.	100
PCB-1242	N.D.	100
PCB-1248	N.D.	100
PCB-1254*	191	100
PCB-1260	N.D.	100

Surrogates:

<u>Compound</u>	<u>% Recovery</u>	<u>Limits</u>
TCMX	68	40-150
DCBP	73	40-150

*The pattern for this sample is substantially similar to, but not an exact match for, Aroclor 1254

Sample: TP-3

Case No. J0301-12

Date Extracted: 3/2/99

Date Analyzed: 3/3/99

Subject: PCBs

Method: EPA 8082

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
PCB-1016	N.D.	100
PCB-1221	N.D.	200
PCB-1232	N.D.	100
PCB-1242	N.D.	100
PCB-1248	N.D.	100
PCB-1254*	305	100
PCB-1260	N.D.	100

Surrogates:

<u>Compound</u>	<u>% Recovery</u>	<u>Limits</u>
TCMX	73	40-150
DCBP	68	40-150

*The pattern for this sample is substantially similar to, but not an exact match for, Aroclor 1254

Sample: TP-4

Case No. J0301-12

Date Extracted: 3/2/99

Date Analyzed: 3/3/99

Subject: PCBs

Method: EPA 8082

<u>Compound</u>	<u>Concentration ug/Kg (ppb)</u>	<u>Reporting Limit</u>
PCB-1016	N.D.	100
PCB-1221	N.D.	200
PCB-1232	N.D.	100
PCB-1242	N.D.	100
PCB-1248	N.D.	100
PCB-1254*	840	100
PCB-1260	N.D.	100

Surrogates:

<u>Compound</u>	<u>% Recovery</u>	<u>Limits</u>
TCMX	83	40-150
DCBP	68	40-150

*The pattern for this sample is substantially similar to, but not an exact match for, Aroclor 1254

CUSTODY RECORD

J0300-12

CON-test
ANALYTICAL LABORATORY
(413) 525-2132
FAX (413) 525-6105

CHAIN OF CUSTODY RECORD

39 SPRUCE ST. • 2ND FLOOR • EAST LONGMEADOW, MA 01128

Client Name: ATC Associates Inc.
 Attn: Adam Sullivan
 Address: One Richmond Square
Providence, RI 02906
 Site Location: Springfield Ave.
 Sampled By: Adam Sullivan
 Call Results: Yes No
 Fax Results: Yes No

Telephone: (401) 274-3955
 Batch #: X
 Fax #: 421-0894
 Project #:
 Client P.O. #:
 Fax #:

Field Sample I.D.	Sample Description	Lab #	DATE SAMPLED		Composite	Grab	MATRIX					Preservative (Use Code)	Container (Use Code)	Analysis Required	
			Start Date/Time	Stop Date/Time			WASTE WATER	GROUND WATER	DKG WATER	Soil	Air				Other
TP-1	Soil 802		4/2	4/2											
TP-3	Soil 402		4/2	4/2											
TP-4	Soil 802		4/2	4/2											
TP-4	Water 402		4/2	4/2											

CONTAINER CODE
 P: PLASTIC (___ Size) V = 40 ml vial G = Glass (___ size) A = 1000 ml Amber 0 = Other ___
 Relinquished by: (Signature) Adam Sullivan Date/Time 3/1/99 3:40 PM
 Received by: (Signature) [Signature] Date/Time 3/1/99 3:40 PM
 Relinquished by: (Signature) _____ Date/Time _____
 Received by: (Signature) _____ Date/Time _____

TURNAROUND REQUESTED: 24-Hour ___ 48-Hour ___ Normal ___
 PRESERVATIVE CODE: I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₃ O = OTHER
 Analysis Required: TPH - SOILS & GRO PER DR
ZCEA8
8060 - RB ONLY
PER HAZARDS
ORO ONLY
NO VIOLS

Remarks/Comments: Metals Due 3/5



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL. 413/525-2332

ASSOCIATES - PROVIDENCE
ONE RICHMOND SQUARE TECH. CENTER
PROVIDENCE, RI 02906
ATTN: ADAM SULLIVAN

CONTACT: ADAM SULLIVAN
FIELD OFFICE: CR

REPORT DATE: 03/09/99

PROJECT NUMBER: 17646.00005

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40689
JOB NUMBER: 17646.00005

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: SPRINGFIELD AVENUE

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
TP-ATC-1	99B04225	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-1	99B04225	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-1	99B04225	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-1	99B04225	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-1	99B04225	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-2	99B04226	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-2	99B04226	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-2	99B04226	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-2	99B04226	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-2	99B04226	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-3	99B04227	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-3	99B04227	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-3	99B04227	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-3	99B04227	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-3	99B04227	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-4	99B04228	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-4	99B04228	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-4	99B04228	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-4	99B04228	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-4	99B04228	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-5	99B04229	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-5	99B04229	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-5	99B04229	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-5	99B04229	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-5	99B04229	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-6	99B04230	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-6	99B04230	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-6	99B04230	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-6	99B04230	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-6	99B04230	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-7	99B04231	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-7	99B04231	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-7	99B04231	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-7	99B04231	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-7	99B04231	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-8	99B04232	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-8	99B04232	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-8	99B04232	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-8	99B04232	SOIL	NOT SPECIFIED	pcb - soil

ATC ASSOCIATES - PROVIDENCE

ONE RICHMOND SQUARE TECH. CENTER
 PROVIDENCE, RI 02906
 ATTN: ADAM SULLIVAN

CONTACT: ADAM SULLIVAN
 FIELD OFFICE: CR

REPORT DATE: 03/09/99

PROJECT NUMBER: 17646.00005

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40689
 JOB NUMBER: 17646.00005

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
TP-ATC-8	99B04232	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-9	99B04233	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-9	99B04233	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-9	99B04233	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-9	99B04233	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-9	99B04233	SOIL	NOT SPECIFIED	tph gc (mg/kg)

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

AIHA 308	AIHA ELLAP (LEAD) 6838
MASSACHUSETTS MA100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. 15036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 3/10/99

TURE

DATE

Tod Kopyscinski
 Director of Operations

Edward Denson
 Technical Director

SULLIVAN
 ASSOCIATES - PROVIDENCE
 ONE RICHMOND SQUARE TECH. CENTER
 PROVIDENCE, RI 02906

 Contact: ADAM SULLIVAN
 Field Office: CR

 03/09/99
 page 1 of 43

Project Number: 17646.00005

 Project Location: SPRINGFIELD AVENUE
 Date Received: 03/03/99

 LIMS-BAT #: LIMS-40689
 Job Number: 17646.00005
 Sample Matrix: SOIL

 Sampled: 03/02/99
 NOT SPECIFIED
 TP-ATC-1

	Units	99804225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	BDL	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/05/99	WSD	0.006		
form	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

 Method Detection Limit
 Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

 SPEC LIMIT = a client specified, recommended, or
 regulatory level for comparison with data to
 determine PASS (P) or FAIL (F) condition of results.

03/09/99
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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-1

	Units	99804225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
 Job Number: 17646.00005
 Sample Matrix: SOIL

Sampled: 03/02/99
 NOT SPECIFIED
 TP-ATC-1

	Units	99B04225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	0.006	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	BDL	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
m-Xylene	mg/kg	ND	03/05/99	WSD	0.006		
Xylene	mg/kg	ND	03/05/99	WSD	0.002		

MDL = Method Detection Limit
 Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-2

	Units	99B04226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

= Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-2

	Units	99B04226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

MDL = Method Detection Limit
ND = Not Detected
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-2

	Units	99804226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
Benzene	mg/kg	ND	03/05/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/05/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99804227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99B04227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99B04227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
ene	mg/kg	ND	03/05/99	WSD	0.006		
o - p Xylene	mg/kg	ND	03/05/99	WSD	0.002		

BDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-4

	Units	99804228	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromoethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-4

	Units	99B04228	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

ND = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-4

	Units	99B04228	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
ene	mg/kg	ND	03/05/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/05/99	WSD	0.002		

Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99B04229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
methane	mg/kg	ND	03/05/99	WSD	0.006		
bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

... = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99804229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99B04229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
ene	mg/kg	ND	03/05/99	WSD	0.006		
o, m, p Xylene	mg/kg	ND	03/05/99	WSD	0.002		

Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-6

	Units	99804230	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-6

	Units	99804230	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

• Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-6

	Units	99804230	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
ene	mg/kg	ND	03/05/99	WSD	0.006		
o r p Xylene	mg/kg	ND	03/05/99	WSD	0.002		

... = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

03/09/99
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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99804231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	0.007	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	0.009	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99B04231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	0.005	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	0.005	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	0.006	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	0.010	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

• = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99B04231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	0.037	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	0.020	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
ene	mg/kg	0.011	03/05/99	WSD	0.006		
o + p Xylene	mg/kg	0.006	03/05/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

 LIMS-BAT #: LIMS-40689
 Job Number: 17646.00005
 Sample Matrix: SOIL

 Sampled: 03/02/99
 NOT SPECIFIED
 TP-ATC-8

	Units	99B04232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

 ND = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-8

	Units	99804232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-8

	Units	99B04232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
ene	mg/kg	ND	03/05/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/05/99	WSD	0.002		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-9

	Units	99B04233	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/05/99	WSD	0.250		
Acrolein	mg/kg	ND	03/05/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/05/99	WSD	0.038		
Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/05/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloromethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.006		
Bromoform	mg/kg	ND	03/05/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/05/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/05/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/05/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/05/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/05/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/05/99	WSD	0.048		
Chloroform	mg/kg	ND	03/05/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/05/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/05/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/05/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/05/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/05/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/05/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/05/99	WSD	0.005		

MDL = Method Detection Limit
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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-9.

	Units	99B04233	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/05/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.002		
1,2-Dichloropropane	mg/kg	ND	03/05/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/05/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/05/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/05/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/05/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/05/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/05/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/05/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/05/99	WSD	0.004		
MTBE	mg/kg	ND	03/05/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/05/99	WSD	0.075		
MIBK	mg/kg	ND	03/05/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/05/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
Styrene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.002		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/05/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/05/99	WSD	0.002		
Toluene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/05/99	WSD	0.004		

MDL = Method Detection Limit
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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-9

	Units	99804233	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/05/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/05/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/05/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/05/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/05/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/05/99	WSD	0.002		
o + p Xylene	mg/kg	ND	03/05/99	WSD	0.006		

Analytical Method(s):

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

MUL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
 Job Number: 17646.00005
 Sample Matrix: SOIL

Sampled: 03/02/99
 NOT SPECIFIED
 TP-ATC-1

	Units	99804225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	30.6	03/05/99	PM	5.00		
Barium	mg/kg	102	03/05/99	PM	0.10		
Cadmium	mg/kg	2.80	03/05/99	PM	0.05		
Chromium	mg/kg	28.0	03/05/99	PM	0.35		
Lead	mg/kg	877	03/05/99	PM	2.50		
Mercury	mg/kg	0.227	03/08/99	JER	0.009		
Selenium	mg/kg	ND	03/05/99	PM	25		
Silver	mg/kg	ND	03/05/99	PM	2.5		

Sampled: 03/02/99
 NOT SPECIFIED
 TP-ATC-2

	Units	99804226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	ND	03/05/99	PM	5.00		
Barium	mg/kg	14.1	03/05/99	PM	0.10		
Cadmium	mg/kg	ND	03/05/99	PM	0.05		
Chromium	mg/kg	2.39	03/05/99	PM	0.35		
Lead	mg/kg	5.31	03/05/99	PM	2.50		
Mercury	mg/kg	ND	03/08/99	JER	0.009		
Selenium	mg/kg	ND	03/05/99	PM	5.00		
Silver	mg/kg	ND	03/05/99	PM	0.50		

MDL = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99804227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	7.49	03/05/99	PM	5.00		
Barium	mg/kg	34.6	03/05/99	PM	0.10		
Cadmium	mg/kg	0.38	03/05/99	PM	0.05		
Chromium	mg/kg	9.58	03/05/99	PM	0.35		
Lead	mg/kg	291	03/05/99	PM	2.50		
Mercury	mg/kg	0.167	03/08/99	JER	0.010		
Selenium	mg/kg	ND	03/05/99	PM	5.00		
Silver	mg/kg	ND	03/05/99	PM	0.50		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-4

	Units	99804228	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	ND	03/05/99	PM	5.00		
Barium	mg/kg	13.2	03/05/99	PM	0.10		
Cadmium	mg/kg	ND	03/05/99	PM	0.05		
Chromium	mg/kg	2.18	03/05/99	PM	0.35		
Lead	mg/kg	4.48	03/05/99	PM	2.50		
Mercury	mg/kg	ND	03/08/99	JER	0.008		
Selenium	mg/kg	ND	03/05/99	PM	5.00		
Silver	mg/kg	ND	03/05/99	PM	0.50		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99B04229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	5.94	03/05/99	PM	5.00		
Barium	mg/kg	21.3	03/05/99	PM	0.10		
Cadmium	mg/kg	0.12	03/05/99	PM	0.05		
Chromium	mg/kg	7.42	03/05/99	PM	0.35		
Lead	mg/kg	44.8	03/05/99	PM	2.50		
Mercury	mg/kg	0.070	03/08/99	JER	0.010		
Selenium	mg/kg	ND	03/05/99	PM	5.00		
Silver	mg/kg	ND	03/05/99	PM	0.50		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-6

	Units	99B04230	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	BDL	03/05/99	PM	5.00		
Barium	mg/kg	18.3	03/05/99	PM	0.10		
Cadmium	mg/kg	0.05	03/05/99	PM	0.05		
Chromium	mg/kg	5.02	03/05/99	PM	0.35		
Lead	mg/kg	7.48	03/05/99	PM	2.50		
Mercury	mg/kg	ND	03/08/99	JER	0.010		
Selenium	mg/kg	ND	03/05/99	PM	5.00		
Silver	mg/kg	ND	03/05/99	PM	0.50		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99B04231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	9.93	03/05/99	PM	5.00		
Barium	mg/kg	92.2	03/05/99	PM	0.10		
Cadmium	mg/kg	1.49	03/05/99	PM	0.05		
Chromium	mg/kg	40.8	03/05/99	PM	0.35		
Lead	mg/kg	258	03/05/99	PM	2.50		
Mercury	mg/kg	0.267	03/08/99	JER	0.008		
Selenium	mg/kg	10.0	03/05/99	PM	5.00		
Silver	mg/kg	4.05	03/05/99	PM	0.50		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-8

	Units	99B04232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	6.34	03/05/99	PM	5.00		
Barium	mg/kg	85.0	03/05/99	PM	0.10		
Cadmium	mg/kg	1.70	03/05/99	PM	0.05		
Chromium	mg/kg	9.65	03/05/99	PM	0.35		
Lead	mg/kg	163	03/05/99	PM	2.50		
Mercury	mg/kg	0.293	03/08/99	JER	0.009		
Selenium	mg/kg	ND	03/05/99	PM	5.00		
Silver	mg/kg	ND	03/05/99	PM	0.50		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-9

	Units	99804233	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Arsenic	mg/kg	8.28	03/05/99	PM	5.00		
Barium	mg/kg	206	03/05/99	PM	0.10		
Cadmium	mg/kg	2.79	03/05/99	PM	0.05		
Chromium	mg/kg	30.0	03/05/99	PM	0.35		
Lead	mg/kg	594	03/05/99	PM	2.50		
Mercury	mg/kg	0.315	03/08/99	JER	0.009		
Selenium	mg/kg	7.66	03/05/99	PM	5.00		
Vanadium	mg/kg	2.45	03/05/99	PM	0.50		

Analytical Method(s):

Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Chromium
SW846 3050/6010

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BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

03/09/99

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SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Lead

SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Mercury

SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Selenium

SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Silver

SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-1

	Units	99804225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	ND	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	ND	03/08/99	MFF	0.500		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-2

	Units	99804226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	ND	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	ND	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99804227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99B04227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	0.234	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	0.234	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-4

	Units	99B04228	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	ND	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	ND	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99B04229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99B04229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1254	mg/kg	ND	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	ND	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-6

	Units	99B04230	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	ND	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	ND	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99B04231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	0.334	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99804231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
PCB's	mg/kg	0.334	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-8

	Units	99804232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	0.128	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	0.128	03/08/99	MFF	0.025		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-9

	Units	99804233	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	0.590	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	0.590	03/08/99	MFF	0.025		

... = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Analytical Method(s):

SW846 8080

SAMPLES ARE EXTRACTED INTO HEXANE AND ANALYZED BY GAS CHROMATOGRAPHY
WITH ELECTRON CAPTURE DETECTION.

M_{DL} = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-1

	Units	99B04225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	35	03/08/99	MFF	8.3		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-2

	Units	99B04226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	24	03/08/99	MFF	8.3		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99B04227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-3

	Units	99804227	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	56	03/08/99	MFF	42		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-4

	Units	99804228	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	9.5	03/08/99	MFF	8.3		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-5

	Units	99804229	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	BDL	03/08/99	MFF	8.3		

MUL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-6

	Units	99B04230	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	BDL	03/08/99	MFF	8.3		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-7

	Units	99B04231	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	53	03/08/99	MFF	42		

Sampled: 03/02/99
NOT SPECIFIED
TP-ATC-8

	Units	99B04232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17646.00005

LIMS-BAT #: LIMS-40689
Job Number: 17646.00005
Sample Matrix: SOIL

Sampled: 03/02/99

NOT SPECIFIED

TP-ATC-8

	Units	99B04232	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	24	03/08/99	MFF	8.3		

Sampled: 03/02/99

NOT SPECIFIED

TP-ATC-9

	Units	99B04233	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	61	03/08/99	MFF	42		

Analytical Method(s):

MODIFIED SW846 8015

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE, CONCENTRATED AND QUANTITATED AGAINST THE DIFFERENT PETROLEUM FRACTION STANDARDS. FINGERPRINTS OF SAMPLE AND STANDARD CHROMATOGRAMS ARE COMPARED.

THIS METHOD IS DESIGNED TO MEASURE MID RANGE PETROLEUM PRODUCTS SUCH AS DIESEL AND FUEL OIL. MOTOR OILS AND LUBRICATING OILS ARE DETECTABLE UNDER THE CONDITIONS OF THIS METHOD, HOWEVER RESULTS ARE NOT QUANTITATIVE. THESE COMPONENTS ARE REPORTED AS OTHER HYDROCARBONS AND QUANTITATED AS #2 FUEL OIL. RESULTS ARE NOT AN ACCURATE DETERMINATION OF THE AMOUNT OF MOTOR OR LUBRICATING OIL PRESENT IN THE SAMPLE.

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

The following notes were attached to the reported analysis:

Sample: 99B04225

Analysis: Silver

ELEVATED METHOD DETECTION LIMIT DUE TO MATRIX INTERFERENCES.

Analysis: PCB

Samples 98B04227, 98B04231, 98B04232 and 98B04233 had two incompletely resolved Aroclors present. Pattern did not match instrument individual standards exactly. Aroclor with the closest matching pattern reported.

Sample: 99B04226

Analysis: Unknown Hydrocarbons

SAMPLE AND CORRESPONDING DUPLICATE RESULTS REFLECT APPARENT NON-HOMOGENEITY OF THE SAMPLE.

M Method Detection Limit
N Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: GC/ECD-2289

Sample Id	Analysis	QC Analysis	Values	Units	Limits
99804225	Dibutyl Chlorendate	Surrogate Recovery	147.0	%	
99804226	Dibutyl Chlorendate	Surrogate Recovery	104.5	%	
99804227	Dibutyl Chlorendate	Surrogate Recovery	64.5	%	
99804228	Dibutyl Chlorendate	Surrogate Recovery	124.5	%	
99804229	Dibutyl Chlorendate	Surrogate Recovery	127.5	%	
99804230	PCB-1232	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1242	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1254	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
		Sample Amount	0.000	mg/kg	
		Matrix Spk Amt Added	0.500	mg/kg	
		MS Amt Measured	0.650	mg/kg	
		Matrix Spike % Rec.	130.000	%	
	PCB-1260	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1248	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1221	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	Dibutyl Chlorendate	Surrogate Recovery	117.5	%	
99804231	Dibutyl Chlorendate	Surrogate Recovery	80.0	%	
99804232	Dibutyl Chlorendate	Surrogate Recovery	97.0	%	
99804233	Dibutyl Chlorendate	Surrogate Recovery	83.0	%	
BLANK - 17846	PCB-1232	Blank	0.000	mg/kg	
	PCB-1242	Blank	0.000	mg/kg	
	PCB-1254	Blank	0.000	mg/kg	
	PCB-1260	Blank	0.000	mg/kg	
	PCB-1248	Blank	0.000	mg/kg	
	PCB-1221	Blank	0.000	mg/kg	
	PCB's	Blank	<0.025	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: GC/FID-2265

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99B04226	Fuels, diesel, no. 2	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
		Sample Amount	<8.3	MG/KG	
		Matrix Spk Amt Added	33.3	MG/KG	
		MS Amt Measured	27.7	MG/KG	
		Matrix Spike % Rec.	83.0	%	
	Gasoline	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
	Fuels, jet	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
	Kerosene	Sample Amount	<8.3	MG/KG	
Duplicate Value		<8.3	MG/KG		
Unknown Hydrocarbons	Sample Amount	24.1	MG/KG		
	Duplicate Value	<8.3	MG/KG		
	Duplicate RPD	105.5	%		
99B04230	Fuels, diesel, no. 2	Sample Amount	<8.3	MG/KG	
		Matrix Spk Amt Added	33.3	MG/KG	
		MS Amt Measured	39.8	MG/KG	
		Matrix Spike % Rec.	119.5	%	
BLANK-17811	Fuel oil no. 6	Blank	<16.7	MG/KG	
	Fuels, diesel, no. 2	Blank	<8.3	MG/KG	
	Gasoline	Blank	<8.3	MG/KG	
	Fuels, jet	Blank	<8.3	MG/KG	
	Kerosene	Blank	<8.3	MG/KG	
Unknown Hydrocarbons	Blank	<8.3	MG/KG		

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: GCMS/VOL-2660

Sample Id	Analysis	QC Analysis	Values	Units	Limits
99804225	1,2-Dichloroethane-d	Surrogate Recovery	70.400	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	101.600	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	85.600	%	62.000-137.000
99804226	1,2-Dichloroethane-d	Surrogate Recovery	75.600	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	103.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	88.400	%	62.000-137.000
99804227	1,2-Dichloroethane-d	Surrogate Recovery	72.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	102.400	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	89.200	%	62.000-137.000
99804228	1,2-Dichloroethane-d	Surrogate Recovery	74.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	104.000	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	87.200	%	62.000-137.000
99804229	1,2-Dichloroethane-d	Surrogate Recovery	68.400	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	104.400	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	88.000	%	62.000-137.000
99804230	1,2-Dichloroethane-d	Surrogate Recovery	70.400	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	105.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	83.200	%	62.000-137.000
99804231	1,2-Dichloroethane-d	Surrogate Recovery	70.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	105.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	83.200	%	62.000-137.000
99804232	1,2-Dichloroethane-d	Surrogate Recovery	70.000	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	99.600	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	87.600	%	62.000-137.000
99804233	1,2-Dichloroethane-d	Surrogate Recovery	73.200	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	103.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	87.200	%	62.000-137.000
BLANK-17828	Acetone	Blank	<0.250	mg/kg	
	Benzene	Blank	<0.003	mg/kg	
	Carbon Tetrachloride	Blank	<0.002	mg/kg	
	Chloroform	Blank	<0.004	mg/kg	
	1,2-Dichloroethane	Blank	<0.004	mg/kg	
	1,4-Dichlorobenzene	Blank	<0.004	mg/kg	
	Ethyl Benzene	Blank	<0.003	mg/kg	
	2-Butanone (MEK)	Blank	<0.060	mg/kg	
	MIBK	Blank	<0.044	mg/kg	
	Naphthalene	Blank	<0.005	mg/kg	
	Styrene	Blank	<0.004	mg/kg	
Tetrachloroethylene	Blank	<0.002	mg/kg		

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: GCMS/VOL-2660

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	Toluene	Blank	<0.004	mg/kg	
	1,1,1-Trichloroethan	Blank	<0.004	mg/kg	
	Trichloroethylene	Blank	<0.005	mg/kg	
	Trichlorofluorometha	Blank	<0.004	mg/kg	
	o + p Xylene	Blank	<0.002	mg/kg	
	m-Xylene	Blank	<0.006	mg/kg	
	1,2-Dichlorobenzene	Blank	<0.004	mg/kg	
	1,3-Dichlorobenzene	Blank	<0.003	mg/kg	
	1,1-Dichloroethane	Blank	<0.004	mg/kg	
	1,1-Dichloroethylene	Blank	<0.003	mg/kg	
	MTBE	Blank	<0.004	mg/kg	
	trans-1,2-Dichloroet	Blank	<0.004	mg/kg	
	Vinyl Chloride	Blank	<0.002	mg/kg	
	Methylene Chloride	Blank	<0.075	mg/kg	
	Chlorobenzene	Blank	<0.003	mg/kg	
	Chloromethane	Blank	<0.006	mg/kg	
	Bromomethane	Blank	<0.006	mg/kg	
	Chloroethane	Blank	<0.004	mg/kg	
	cis-1,3-Dichloroprop	Blank	<0.002	mg/kg	
	trans-1,3-Dichloropr	Blank	<0.002	mg/kg	
	Chlorodibromomethane	Blank	<0.002	mg/kg	
	1,1,2-Trichloroethan	Blank	<0.004	mg/kg	
	2-Chloroethylvinylet	Blank	<0.048	mg/kg	
	Bromoform	Blank	<0.006	mg/kg	
	1,1,2,2-Tetrachloroe	Blank	<0.007	mg/kg	
	2-Chlorotoluene	Blank	<0.003	mg/kg	
	Hexachlorobutadiene	Blank	<0.006	mg/kg	
	Isopropylbenzene	Blank	<0.003	mg/kg	
	p-Isopropyltoluene	Blank	<0.004	mg/kg	
	n-Propylbenzene	Blank	<0.004	mg/kg	
	sec-Butylbenzene	Blank	<0.003	mg/kg	
	tert-Butylbenzene	Blank	<0.004	mg/kg	
	1,2,3-Trichlorobenze	Blank	<0.004	mg/kg	
	1,2,4-Trichlorobenze	Blank	<0.004	mg/kg	
	1,2,4-Trimethylbenze	Blank	<0.004	mg/kg	
	1,3,5-Trimethylbenze	Blank	<0.005	mg/kg	
	Dibromomethane	Blank	<0.006	mg/kg	
	cis-1,2-Dichloroethy	Blank	<0.002	mg/kg	
	4-Chlorotoluene	Blank	<0.003	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: GCMS/VOL-2660

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	1,1-Dichloropropene	Blank	<0.007	mg/kg	
	1,2-Dichloropropene	Blank	<0.003	mg/kg	
	1,3-Dichloropropene	Blank	<0.002	mg/kg	
	2,2-Dichloropropene	Blank	<0.004	mg/kg	
	1,1,1,2-Tetrachloroe	Blank	<0.002	mg/kg	
	1,2,3-Trichloropropa	Blank	<0.006	mg/kg	
	n-Butylbenzene	Blank	<0.004	mg/kg	
	Dichlorodifluorometh	Blank	<0.005	mg/kg	
	Bromochloromethane	Blank	<0.004	mg/kg	
	Bromobenzene	Blank	<0.002	mg/kg	
	Iodomethane	Blank	<0.004	mg/kg	
	Acrolein	Blank	<0.100	mg/kg	
	Acrylonitrile	Blank	<0.038	mg/kg	
	Carbon Disulfide	Blank	<0.002	mg/kg	
	Vinyl Acetate	Blank	<0.082	mg/kg	
	2-Hexanone	Blank	<0.048	mg/kg	
	trans-1,4-Dichloro-2	Blank	<0.010	mg/kg	
	Ethyl Methacrylate	Blank	<0.004	mg/kg	
	cis-1,4-Dichloro-2-B	Blank	<0.012	mg/kg	
	Bromodichloromethane	Blank	<0.002	mg/kg	
	1,2-Dibromo-3-Chloro	Blank	<0.008	mg/kg	
	1,2-Dibromoethane	Blank	<0.004	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: HG-1004

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99B04230	Mercury	Sample Amount	<0.010	mg/kg	
		Duplicate Value	<0.010	mg/kg	
		Sample Amount	<0.010	mg/kg	
		Matrix Spk Amt Added	0.521	mg/kg	
		MS Amt Measured	0.430	mg/kg	
		Matrix Spike % Rec.	82.500	%	
BLANK-17820	Mercury	Blank	<0.010	mg/kg	
LFBLANK-07858	Mercury	Lab Fort Blank Amt.	0.500	mg/kg	
		Lab Fort Blk. Found	0.470	mg/kg	
		Lab Fort Blk. % Rec.	94.000	%	
		Dup Lab Fort Bl Amt.	0.500	mg/kg	
		Dup Lab Fort Bl. Fnd	0.448	mg/kg	
		Dup Lab Fort Bl %Rec	89.500	%	
		Lab Fort Blank Range	4.500	units	
		Lab Fort Bl. Av. Rec	91.750	%	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: ICP-3182

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99804230	Silver	Sample Amount	<0.50	mg/kg	
		Duplicate Value	<0.50	mg/kg	
		Sample Amount	<0.50	mg/kg	
		Matrix Spk Amt Added	100.00	mg/kg	
		MS Amt Measured	88.30	mg/kg	
		Matrix Spike % Rec.	87.80	%	
	Arsenic	Sample Amount	<5.00	mg/kg	
		Duplicate Value	<5.00	mg/kg	
		Duplicate RPD	200.00	%	
		Sample Amount	<5.00	mg/kg	
		Matrix Spk Amt Added	100.00	mg/kg	
		MS Amt Measured	93.80	mg/kg	
	Barium	Matrix Spike % Rec.	89.22	%	
		Sample Amount	18.27	mg/kg	
		Duplicate Value	12.67	mg/kg	
		Duplicate RPD	36.20	%	
		Sample Amount	18.27	mg/kg	
		Matrix Spk Amt Added	100.00	mg/kg	
	Cadmium	MS Amt Measured	108.75	mg/kg	
		Matrix Spike % Rec.	90.48	%	
		Sample Amount	0.05	mg/kg	
		Duplicate Value	0.05	mg/kg	
		Duplicate RPD	0.00	%	
		Sample Amount	0.05	mg/kg	
Chromium	Matrix Spk Amt Added	100.00	mg/kg		
	MS Amt Measured	86.70	mg/kg		
	Matrix Spike % Rec.	86.65	%		
	Sample Amount	5.02	mg/kg		
	Duplicate Value	5.06	mg/kg		
	Duplicate RPD	0.60	%		
Lead	Sample Amount	5.02	mg/kg		
	Matrix Spk Amt Added	100.00	mg/kg		
	MS Amt Measured	97.55	mg/kg		
	Matrix Spike % Rec.	92.52	%		
	Sample Amount	7.48	mg/kg		
	Duplicate Value	7.40	mg/kg		
	Duplicate RPD	1.08	%		
	Sample Amount	7.48	mg/kg		
	Matrix Spk Amt Added	100.00	mg/kg		

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
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BATCH QC: Lab Fortified Blanks and Duplicates
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Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: ICP-3182

Sample Id	Analysis	QC Analysis	Values	Units	Limits
		MS Amt Measured	96.30	mg/kg	
		Matrix Spike % Rec.	88.82	%	
	Selenium	Sample Amount	<5.00	mg/kg	
		Duplicate Value	<5.00	mg/kg	
		Sample Amount	<5.00	mg/kg	
		Matrix Spk Amt Added	100.00	mg/kg	
		MS Amt Measured	93.15	mg/kg	
		Matrix Spike % Rec.	93.15	%	
LFBLANK-07849	Silver	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	93.25	mg/kg	
		Lab Fort Blk. % Rec.	93.25	%	
	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	96.20	mg/kg	
		Lab Fort Blk. % Rec.	96.20	%	
	Barium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	102.12	mg/kg	
		Lab Fort Blk. % Rec.	102.12	%	
	Cadmium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	90.30	mg/kg	
		Lab Fort Blk. % Rec.	90.30	%	
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	96.60	mg/kg	
		Lab Fort Blk. % Rec.	96.60	%	
	Lead	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	94.40	mg/kg	
		Lab Fort Blk. % Rec.	94.40	%	
	Selenium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	93.25	mg/kg	
		Lab Fort Blk. % Rec.	93.25	%	
LFBLANK-07850	Silver	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	90.00	mg/kg	
		Lab Fort Blk. % Rec.	90.00	%	
	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	97.50	mg/kg	
		Lab Fort Blk. % Rec.	97.50	%	
	Barium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	98.77	mg/kg	
		Lab Fort Blk. % Rec.	98.77	%	
	Cadmium	Lab Fort Blank Amt.	100.00	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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QC Batch Number: ICP-3182

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
		Lab Fort Blk. Found	93.00	mg/kg	
		Lab Fort Blk. % Rec.	93.00	%	
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	99.70	mg/kg	
		Lab Fort Blk. % Rec.	99.70	%	
	Lead	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	96.30	mg/kg	
		Lab Fort Blk. % Rec.	96.30	%	
	Selenium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	94.60	mg/kg	
		Lab Fort Blk. % Rec.	94.60	%	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40689

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NOTES:

QC Batch No.: GC/FID-2265
Sample ID: 99804226
Analysis: OTHER HYDROCAR-MG/KG
QC Analysis: Duplicate RPD

SAMPLE AND CORRESPONDING DUPLICATE RESULTS REFLECT APPARENT NON-HOMOGENEITY
OF THE SAMPLE.



(413) 525-2112
FAX (413) 525-6405

CHAIN OF CUSTODY RECORD

39 SPRUCE ST. • 2ND FLOOR • EAST LONGMEADOW, MA 01028

LIMS-40689

Client Name: ATC ASSOCIATES, INC.
Attn: ADAM SULLIVAN

Telephone: 401-274-3455
Batch #: _____

Analysis Required

Address: One Richmond Square
Providence, RI 02906

Project #: 17646.00005

Site Location: Springfield Avenue
Sampled By: Adam Sullivan

Client P.O. #: _____

Call Results: Yes 1 No _____
Fax Results: Yes 1 No _____

Fax #: _____

Field Sample ID.	Sample Description	Lab #	DATE SAMPLED		Composite	Grab	MATRIX					Preservative (Use Code)	Container (Use Code)		
			Start Date/Time	Stop Date/Time			WASTE WATER	GROUND WATER	DKG WATER	Soil	Air			Other	
TP-ATC-1	Soil	99804225	3/2	3/2								826C	828C	TP4 3015	RCRA 3
TP-ATC-2	Soil	99804226													
TP-ATC-3	Soil	99804227													
TP-ATC-4	Soil	99804228													
TP-ATC-5	Soil	99804229													
TP-ATC-6	Soil	99804230													
TP-ATC-7	Soil	99804231													
TP-ATC-8	Soil	99804232													
TP-ATC-9	Soil	99804233													

CONTAINER CODE
P. PLASTIC () Size V = 40 ml vial G = Glass () size A = 1000 ml Amber 0 = Other _____

PRESERVATIVE CODE:
I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₈ O = OTHER

Relinquished by: (Signature) _____ Date Time _____ Received by: (Signature) _____
Relinquished by: (Signature) _____ Date Time _____ Received by: (Signature) _____

Relinquished by: (Signature) _____ Date Time _____ Received by: (Signature) _____
Remarks/Comments: Turnaround Requested: 1 24-Hour 48-Hour Normal
As soon as possible. * Results for Ties 37 held to
Remarks: gas bags dump. Some shards of glass are contained
with the sample.
some plus would confirm

MATRIX OTHER _____



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL 413/525-2332

... ASSOCIATES - PROVIDENCE
ONE RICHMOND SQUARE TECH. CENTER
PROVIDENCE, RI 02906
ATTN: ADAM SULLIVAN

CONTACT: ADAM SULLIVAN
FIELD OFFICE: CR

REPORT DATE: 03/09/99

PROJECT NUMBER: 17676.00005

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40696
JOB NUMBER: 17676.00005

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report

PROJECT LOCATION: SPRINGFIELD AVE

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
TH-9	99B04286	SOIL	NOT SPECIFIED	8260 - solid (a)
TH-9	99B04286	SOIL	NOT SPECIFIED	8260 - solid (b)
TH-9	99B04286	SOIL	NOT SPECIFIED	metals-8rcra sol
TH-9	99B04286	SOIL	NOT SPECIFIED	pcb - soil
TH-9	99B04286	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-10	99B04279	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-10	99B04279	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-10	99B04279	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-10	99B04279	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-10	99B04279	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-11	99B04280	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-11	99B04280	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-11	99B04280	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-11	99B04280	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-11	99B04280	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-11GO	99B04281	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-11GO	99B04281	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-11GO	99B04281	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-11GO	99B04281	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-11GO	99B04281	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-12	99B04282	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-12	99B04282	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-12	99B04282	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-12	99B04282	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-12	99B04282	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-13	99B04283	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-13	99B04283	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-13	99B04283	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-13	99B04283	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-13	99B04283	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-14	99B04284	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-14	99B04284	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-14	99B04284	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-14	99B04284	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-14	99B04284	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-15	99B04285	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-15	99B04285	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-15	99B04285	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-15	99B04285	SOIL	NOT SPECIFIED	pcb - soil



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ATC ASSOCIATES - PROVIDENCE

ONE RICHMOND SQUARE TECH. CENTER
PROVIDENCE, RI 02906
ATTN: ADAM SULLIVAN

CONTACT: ADAM SULLIVAN
FIELD OFFICE: CR

REPORT DATE: 03/09/99

PROJECT NUMBER: 17676.00005

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40696
JOB NUMBER: 17676.00005

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
TP-ATC-15	99B04285	SOIL	NOT SPECIFIED	tph gc (mg/kg)
TP-ATC-16	99B04287	SOIL	NOT SPECIFIED	8260 - solid (a)
TP-ATC-16	99B04287	SOIL	NOT SPECIFIED	8260 - solid (b)
TP-ATC-16	99B04287	SOIL	NOT SPECIFIED	metals-8rcra sol
TP-ATC-16	99B04287	SOIL	NOT SPECIFIED	pcb - soil
TP-ATC-16	99B04287	SOIL	NOT SPECIFIED	tph gc (mg/kg)

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

AIHA 308	AIHA ELLAP (LEAD) 6838
MASSACHUSETTS MA100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. 15036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod Kopyscinski 3/9/99
ATURE DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

SULLIVAN
 ASSOCIATES - PROVIDENCE
 ONE RICHMOND SQUARE TECH. CENTER
 PROVIDENCE, RI 02906

Contact: ADAM SULLIVAN
 Field Office: CR

03/09/99
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Project Number: 17676.00005

Project Location: SPRINGFIELD AVE
 Date Received: 03/04/99

LIMS-BAT #: LIMS-40696
 Job Number: 17676.00005
 Sample Matrix: SOIL

Sampled: 03/03/99

NOT SPECIFIED

TH-9

	Units	99B04286	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TH-9

	Units	99804286	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	0.114	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TH-9

	Units	99804286	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/06/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/06/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/06/99	WSD	0.082		
Chloride	mg/kg	ND	03/06/99	WSD	0.002		
m-xylene	mg/kg	ND	03/06/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/06/99	WSD	0.002		

MDL = Method Detection Limit
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-10

	Units	99B04279	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
Dichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

MDL = Method Detection Limit
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-10

	Units	99804279	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
2,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	BDL	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

MDL = Method Detection Limit
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-10

	Units	99B04279	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/06/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/06/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/06/99	WSD	0.082		
Chloride	mg/kg	ND	03/06/99	WSD	0.002		
m Xylene	mg/kg	ND	03/06/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/06/99	WSD	0.002		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11

	Units	99B04280	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	BDL	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloromethane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
1,1-Dichlorodifluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11

	Units	99804280	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	0.075	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11

	Units	99804280	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/06/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/06/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	0.010	03/06/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	BDL	03/06/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/06/99	WSD	0.082		
Chloride	mg/kg	ND	03/06/99	WSD	0.002		
o-xylene	mg/kg	BDL	03/06/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/06/99	WSD	0.002		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11G0

	Units	99804281	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	BDL	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
dichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
Difluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11G0

	Units	99B04281	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	BDL	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	0.008	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11G0

	Units	99B04281	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/06/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/06/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	0.004	03/06/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/06/99	WSD	0.082		
Chloride	mg/kg	ND	03/06/99	WSD	0.002		
ylene	mg/kg	ND	03/06/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/06/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-12

	Units	99804282	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloromethane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-12

	Units	99B04282	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	BDL	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

MuL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-12

	Units	99804282	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/06/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/06/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/06/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/06/99	WSD	0.002		
ene	mg/kg	ND	03/06/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/06/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-13

	Units	99B04283	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloromethane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
1,1,1-Trichlorodifluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-13

	Units	99B04283	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	BDL	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-13

	Units	99804283	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/06/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/06/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/06/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/06/99	WSD	0.082		
Chloride	mg/kg	ND	03/06/99	WSD	0.002		
ylene	mg/kg	ND	03/06/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/06/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-14

	Units	99804284	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/06/99	WSD	0.250		
Acrolein	mg/kg	ND	03/06/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/06/99	WSD	0.038		
Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/06/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/06/99	WSD	0.004		
P-dichloromethane	mg/kg	ND	03/06/99	WSD	0.002		
methane	mg/kg	ND	03/06/99	WSD	0.006		
Bromoform	mg/kg	ND	03/06/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/06/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/06/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/06/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/06/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/06/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/06/99	WSD	0.048		
Chloroform	mg/kg	ND	03/06/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/06/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/06/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/06/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/06/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/06/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/06/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/06/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-14

	Units	99B04284	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/06/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.002		
1,2-Dichloropropane	mg/kg	ND	03/06/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/06/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/06/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/06/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/06/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/06/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/06/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/06/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/06/99	WSD	0.004		
MTBE	mg/kg	ND	03/06/99	WSD	0.004		
Methylene Chloride	mg/kg	BDL	03/06/99	WSD	0.075		
MIBK	mg/kg	ND	03/06/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/06/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/06/99	WSD	0.004		
Styrene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/06/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/06/99	WSD	0.002		
Toluene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/06/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/06/99	WSD	0.004		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-14

	Units	99804284	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB's	mg/kg	1.15	03/08/99	MFF	0.500		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-15

	Units	99804285	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	1.01	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	1.01	03/08/99	MFF	0.500		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-16

	Units	99804287	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/08/99	MFF			
PCB-1232	mg/kg	ND	03/08/99	MFF			
PCB-1242	mg/kg	ND	03/08/99	MFF			
PCB-1248	mg/kg	ND	03/08/99	MFF			
PCB-1254	mg/kg	0.890	03/08/99	MFF			
PCB-1260	mg/kg	ND	03/08/99	MFF			
PCB's	mg/kg	0.890	03/08/99	MFF	0.025		

... = Method Detection Limit
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BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Analytical Method(s):

SW846 8080

SAMPLES ARE EXTRACTED INTO HEXANE AND ANALYZED BY GAS CHROMATOGRAPHY
WITH ELECTRON CAPTURE DETECTION.

ML = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TH-9

	Units	99804286	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	19	03/08/99	MFF	8.3		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-10

	Units	99804279	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	86	03/08/99	MFF	42		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11

	Units	99804280	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		

DL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11

	Units	99B04280	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	11	03/08/99	MFF	8.3		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-11G0

	Units	99B04281	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	17	03/08/99	MFF	8.3		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-12

	Units	99B04282	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	94	03/08/99	MFF	42		

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NM = Not Measured

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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-13

	Units	99804283	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	120	03/08/99	MFF	42		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-14

	Units	99804284	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	8.3		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	17		
Gasoline	MG/KG	ND	03/08/99	MFF	8.3		
Fuels, jet	MG/KG	ND	03/08/99	MFF	8.3		
Kerosene	MG/KG	ND	03/08/99	MFF	8.3		
Unknown Hydrocarbons	MG/KG	21	03/08/99	MFF	8.3		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-15

	Units	99804285	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

03/09/99
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Project Number: 17676.00005

LIMS-BAT #: LIMS-40696
Job Number: 17676.00005
Sample Matrix: SOIL

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-15

	Units	99B04285	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	54	03/08/99	MFF	42		

Sampled: 03/03/99
NOT SPECIFIED
TP-ATC-16

	Units	99B04287	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/08/99	MFF	42		
Fuel oil no. 6	MG/KG	ND	03/08/99	MFF	83		
Gasoline	MG/KG	ND	03/08/99	MFF	42		
Fuels, jet	MG/KG	ND	03/08/99	MFF	42		
Kerosene	MG/KG	ND	03/08/99	MFF	42		
Unknown Hydrocarbons	MG/KG	75	03/08/99	MFF	42		

Analytical Method(s):

MODIFIED SW846 8015

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE, CONCENTRATED AND QUANTITATED AGAINST THE DIFFERENT PETROLEUM FRACTION STANDARDS. FINGERPRINTS OF SAMPLE AND STANDARD CHROMATOGRAMS ARE COMPARED.

THIS METHOD IS DESIGNED TO MEASURE MID RANGE PETROLEUM PRODUCTS SUCH AS DIESEL AND FUEL OIL. MOTOR OILS AND LUBRICATING OILS ARE DETECTABLE UNDER THE CONDITIONS OF THIS METHOD, HOWEVER RESULTS ARE NOT QUANTITATIVE. THESE COMPONENTS ARE REPORTED AS OTHER HYDROCARBONS AND QUANTITATED AS #2 FUEL OIL. RESULTS ARE NOT AN ACCURATE DETERMINATION OF THE AMOUNT OF MOTOR OR LUBRICATING OIL PRESENT IN THE SAMPLE.

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

The following notes were attached to the reported analysis:

Sample: 99B04286

Analysis: Methylene Chloride

SUSPECTED CONTRIBUTION FROM LABORATORY BACKGROUND CONTAMINATION

Sample: 99B04280

Analysis: Methylene Chloride

SUSPECTED CONTRIBUTION FROM LABORATORY BACKGROUND CONTAMINATION

Sample: 99B04287

Analysis: Methylene Chloride

SUSPECTED CONTRIBUTION FROM LABORATORY BACKGROUND CONTAMINATION

Analysis: PCB

SAMPLES 99B04282 AND 99B04287 CONTAIN TWO INCOMPLETELY RESOLVED AROCLORS.
PATTERN DID NOT MATCH INSTRUMENT INDIVIDUAL STANDARD EXACTLY. AROCLOR
WITH THE CLOSEST MATCHING PATTERN REPORTED.

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Not Detected
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QC SUMMARY REPORT
SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

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QC Batch Number: GC/ECD-2287

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99804279	Dibutyl Chlorendate	Surrogate Recovery	43.0	%	
99804280	Dibutyl Chlorendate	Surrogate Recovery	31.0	%	
99804281	Dibutyl Chlorendate	Surrogate Recovery	26.0	%	
99804282	Dibutyl Chlorendate	Surrogate Recovery	34.0	%	
99804283	Dibutyl Chlorendate	Surrogate Recovery	68.0	%	
99804284	Dibutyl Chlorendate	Surrogate Recovery	46.0	%	
99804285	Dibutyl Chlorendate	Surrogate Recovery	70.0	%	
99804286	Dibutyl Chlorendate	Surrogate Recovery	53.0	%	
99804287	Dibutyl Chlorendate	Surrogate Recovery	29.0	%	
BLANK-17827	PCB-1232	Blank	0.000	mg/kg	
	PCB-1242	Blank	0.000	mg/kg	
	PCB-1254	Blank	0.000	mg/kg	
	PCB-1260	Blank	0.000	mg/kg	
	PCB-1248	Blank	0.000	mg/kg	
	PCB-1221	Blank	0.000	mg/kg	
	PCB's	Blank	<0.025	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

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QC Batch Number: GCMS/VOL-2657

Sample Id	Analysis	QC Analysis	Values	Units	Limits
99B04279	1,2-Dichloroethane-d	Surrogate Recovery	72.000	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	104.000	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	84.000	%	62.000-137.000
99B04280	1,2-Dichloroethane-d	Surrogate Recovery	72.000	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	102.000	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	85.600	%	62.000-137.000
99B04281	1,2-Dichloroethane-d	Surrogate Recovery	74.400	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	104.400	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	85.200	%	62.000-137.000
99B04282	1,2-Dichloroethane-d	Surrogate Recovery	70.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	98.000	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	86.000	%	62.000-137.000
99B04283	1,2-Dichloroethane-d	Surrogate Recovery	74.000	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	107.600	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	89.200	%	62.000-137.000
99B04284	1,2-Dichloroethane-d	Surrogate Recovery	72.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	103.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	84.000	%	62.000-137.000
99B04285	1,2-Dichloroethane-d	Surrogate Recovery	76.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	104.000	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	80.800	%	62.000-137.000
99B04286	1,2-Dichloroethane-d	Surrogate Recovery	76.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	103.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	81.200	%	62.000-137.000
99B04287	Benzene	Sample Amount	<0.003	mg/kg	
		Matrix Spk Amt Added	0.250	mg/kg	
		MS Amt Measured	0.245	mg/kg	
		Matrix Spike % Rec.	98.000	%	
		Duplicate Sample Amt	<0.003	mg/kg	
		MSD Amount Added	0.250	mg/kg	
		MSD Amt Measured	0.225	mg/kg	
		MSD % Recovery	90.000	%	
		MSD Range	8.000	units	
	Toluene	Sample Amount	<0.004	mg/kg	
		Matrix Spk Amt Added	0.250	mg/kg	
		MS Amt Measured	0.155	mg/kg	
		Matrix Spike % Rec.	62.000	%	
		Duplicate Sample Amt	<0.004	mg/kg	
		MSD Amount Added	0.250	mg/kg	

SAMPLE QC: Sample Results with Duplicates
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 Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

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QC Batch Number: GCMS/VOL-2657

Sample Id	Analysis	QC Analysis	Values	Units	Limits
		MSD Amt Measured	0.130	mg/kg	
		MSD % Recovery	52.000	%	
		MSD Range	10.000	units	
	Trichloroethylene	Sample Amount	<0.005	mg/kg	
		Matrix Spk Amt Added	0.250	mg/kg	
		MS Amt Measured	0.200	mg/kg	
		Matrix Spike % Rec.	80.000	%	
		Duplicate Sample Amt	<0.005	mg/kg	
		MSD Amount Added	0.250	mg/kg	
		MSD Amt Measured	0.165	mg/kg	
		MSD % Recovery	66.000	%	
		MSD Range	14.000	units	
	1,1-Dichloroethylene	Sample Amount	<0.003	mg/kg	
		Matrix Spk Amt Added	0.250	mg/kg	
		MS Amt Measured	0.280	mg/kg	
		Matrix Spike % Rec.	112.000	%	
		Duplicate Sample Amt	<0.003	mg/kg	
		MSD Amount Added	0.250	mg/kg	
		MSD Amt Measured	0.250	mg/kg	
		MSD % Recovery	100.000	%	
		MSD Range	12.000	units	
	Chlorobenzene	Sample Amount	<0.003	mg/kg	
		Matrix Spk Amt Added	0.250	mg/kg	
		MS Amt Measured	0.150	mg/kg	
		Matrix Spike % Rec.	60.000	%	
		Duplicate Sample Amt	<0.003	mg/kg	
		MSD Amount Added	0.250	mg/kg	
		MSD Amt Measured	0.140	mg/kg	
		MSD % Recovery	56.000	%	
		MSD Range	4.000	units	
	1,2-Dichloroethane-d	Surrogate Recovery	74.000	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	101.600	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	81.600	%	62.000-137.000
BLANK-17807	Acetone	Blank	<0.250	mg/kg	
	Benzene	Blank	<0.003	mg/kg	
	Carbon Tetrachloride	Blank	<0.002	mg/kg	
	Chloroform	Blank	<0.004	mg/kg	
	1,2-Dichloroethane	Blank	<0.004	mg/kg	
	1,4-Dichlorobenzene	Blank	<0.004	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

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Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

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QC Batch Number: GCMS/VOL-2657

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	Ethyl Benzene	Blank	<0.003	mg/kg	
	2-Butanone (MEK)	Blank	<0.060	mg/kg	
	MIBK	Blank	<0.044	mg/kg	
	Naphthalene	Blank	<0.005	mg/kg	
	Styrene	Blank	<0.004	mg/kg	
	Tetrachloroethylene	Blank	<0.002	mg/kg	
	Toluene	Blank	<0.004	mg/kg	
	1,1,1-Trichloroethan	Blank	<0.004	mg/kg	
	Trichloroethylene	Blank	<0.005	mg/kg	
	Trichlorofluorometha	Blank	<0.004	mg/kg	
	o + p Xylene	Blank	<0.002	mg/kg	
	m-Xylene	Blank	<0.006	mg/kg	
	1,2-Dichlorobenzene	Blank	<0.004	mg/kg	
	1,3-Dichlorobenzene	Blank	<0.003	mg/kg	
	1,1-Dichloroethane	Blank	<0.004	mg/kg	
	1,1-Dichloroethylene	Blank	<0.003	mg/kg	
	MTBE	Blank	<0.004	mg/kg	
	trans-1,2-Dichloroet	Blank	<0.004	mg/kg	
	Vinyl Chloride	Blank	<0.002	mg/kg	
	Methylene Chloride	Blank	<0.075	mg/kg	
	Chlorobenzene	Blank	<0.003	mg/kg	
	Chloromethane	Blank	<0.006	mg/kg	
	Bromomethane	Blank	<0.006	mg/kg	
	Chloroethane	Blank	<0.004	mg/kg	
	cis-1,3-Dichloroprop	Blank	<0.002	mg/kg	
	trans-1,3-Dichloropr	Blank	<0.002	mg/kg	
	Chlorodibromomethane	Blank	<0.002	mg/kg	
	1,1,2-Trichloroethan	Blank	<0.004	mg/kg	
	2-Chloroethylvinylet	Blank	<0.048	mg/kg	
	Bromoform	Blank	<0.006	mg/kg	
	1,1,2,2-Tetrachloroe	Blank	<0.007	mg/kg	
	2-Chlorotoluene	Blank	<0.003	mg/kg	
	Hexachlorobutadiene	Blank	<0.006	mg/kg	
	Isopropylbenzene	Blank	<0.003	mg/kg	
	p-Isopropyltoluene	Blank	<0.004	mg/kg	
	n-Propylbenzene	Blank	<0.004	mg/kg	
	sec-Butylbenzene	Blank	<0.003	mg/kg	
	tert-Butylbenzene	Blank	<0.004	mg/kg	
	1,2,3-Trichlorobenze	Blank	<0.004	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

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QC Batch Number: GCMS/VOL-2657

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	1,2,4-Trichlorobenze	Blank	<0.004	mg/kg	
	1,2,4-Trimethylbenze	Blank	<0.004	mg/kg	
	1,3,5-Trimethylbenze	Blank	<0.005	mg/kg	
	Dibromomethane	Blank	<0.006	mg/kg	
	cis-1,2-Dichloroethy	Blank	<0.002	mg/kg	
	4-Chlorotoluene	Blank	<0.003	mg/kg	
	1,1-Dichloropropene	Blank	<0.007	mg/kg	
	1,2-Dichloropropane	Blank	<0.003	mg/kg	
	1,3-Dichloropropane	Blank	<0.002	mg/kg	
	2,2-Dichloropropane	Blank	<0.004	mg/kg	
	1,1,1,2-Tetrachloroe	Blank	<0.002	mg/kg	
	1,2,3-Trichloropropa	Blank	<0.006	mg/kg	
	n-Butylbenzene	Blank	<0.004	mg/kg	
	Dichlorodifluorometh	Blank	<0.005	mg/kg	
	Bromochloromethane	Blank	<0.004	mg/kg	
	Bromobenzene	Blank	<0.002	mg/kg	
	Iodomethane	Blank	<0.004	mg/kg	
	Acrolein	Blank	<0.100	mg/kg	
	Acrylonitrile	Blank	<0.038	mg/kg	
	Carbon Disulfide	Blank	<0.002	mg/kg	
	Vinyl Acetate	Blank	<0.082	mg/kg	
	2-Hexanone	Blank	<0.048	mg/kg	
	trans-1,4-Dichloro-2	Blank	<0.010	mg/kg	
	Ethyl Methacrylate	Blank	<0.004	mg/kg	
	cis-1,4-Dichloro-2-B	Blank	<0.012	mg/kg	
	Bromodichloromethane	Blank	<0.002	mg/kg	
	1,2-Dibromo-3-Chloro	Blank	<0.008	mg/kg	
	1,2-Dibromoethane	Blank	<0.004	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

Page 6 of 8

QC Batch Number: HG-1004

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99B04282	Mercury	Sample Amount	0.262	mg/kg	
		Duplicate Value	0.260	mg/kg	
		Duplicate RPD	0.895	%	
BLANK-17820	Mercury	Blank	<0.010	mg/kg	
LFBLANK-07858	Mercury	Lab Fort Blank Amt.	0.500	mg/kg	
		Lab Fort Blk. Found	0.470	mg/kg	
		Lab Fort Blk. % Rec.	94.000	%	
		Dup Lab Fort Bl Amt.	0.500	mg/kg	
		Dup Lab Fort Bl. Fnd	0.448	mg/kg	
		Dup Lab Fort Bl %Rec	89.500	%	
		Lab Fort Blank Range	4.500	units	
		Lab Fort Bl. Av. Rec	91.750	%	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

Page 7 of 8

QC Batch Number: ICP-3182

Sample Id	Analysis	QC Analysis	Values	Units	Limits
99B04282	Silver	Sample Amount	<0.50	mg/kg	
		Duplicate Value	<0.50	mg/kg	
	Arsenic	Sample Amount	12.70	mg/kg	
		Duplicate Value	10.14	mg/kg	
		Duplicate RPD	22.42	%	
	Barium	Sample Amount	288.15	mg/kg	
		Duplicate Value	131.95	mg/kg	
		Duplicate RPD	74.36	%	
	Cadmium	Sample Amount	1.86	mg/kg	
		Duplicate Value	1.84	mg/kg	
		Duplicate RPD	1.08	%	
	Chromium	Sample Amount	29.90	mg/kg	
		Duplicate Value	32.96	mg/kg	
		Duplicate RPD	9.72	%	
	Lead	Sample Amount	474.45	mg/kg	
		Duplicate Value	350.35	mg/kg	
		Duplicate RPD	30.09	%	
	Selenium	Sample Amount	10.74	mg/kg	
		Duplicate Value	9.14	mg/kg	
		Duplicate RPD	16.05	%	
LFBLANK-07849	Silver	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	93.25	mg/kg	
		Lab Fort Blk. % Rec.	93.25	%	
	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	96.20	mg/kg	
		Lab Fort Blk. % Rec.	96.20	%	
	Barium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	102.12	mg/kg	
		Lab Fort Blk. % Rec.	102.12	%	
	Cadmium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	90.30	mg/kg	
		Lab Fort Blk. % Rec.	90.30	%	
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	96.60	mg/kg	
		Lab Fort Blk. % Rec.	96.60	%	
	Lead	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	94.40	mg/kg	
		Lab Fort Blk. % Rec.	94.40	%	
	Selenium	Lab Fort Blank Amt.	100.00	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/09/99

Lims Bat #: LIMS-40696

Page 8 of 8

QC Batch Number: ICP-3182

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-07850	Silver	Lab Fort Blk. Found	93.25	mg/kg	
		Lab Fort Blk. % Rec.	93.25	%	
		Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	90.00	mg/kg	
		Lab Fort Blk. % Rec.	90.00	%	
	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	97.50	mg/kg	
		Lab Fort Blk. % Rec.	97.50	%	
	Barium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	98.77	mg/kg	
		Lab Fort Blk. % Rec.	98.77	%	
	Cadmium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	93.00	mg/kg	
		Lab Fort Blk. % Rec.	93.00	%	
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	99.70	mg/kg	
		Lab Fort Blk. % Rec.	99.70	%	
	Lead	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	96.30	mg/kg	
		Lab Fort Blk. % Rec.	96.30	%	
	Selenium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	94.60	mg/kg	
		Lab Fort Blk. % Rec.	94.60	%	

CHAIN OF CUSTODY RECORD

1/2

Client Name: ATC Associates, Inc.
 Attn: Adam Sullivan
 Address: One Richmond Sq,
Prov., RI 02906
 Site Location: Springfield Ave.
 Sampled By: Adam Sullivan
 Call Results: Yes No
 Fax Results: Yes No

Telephone: (401) 274-3755
 Batch #: _____
 Project #: 176TG, 00005
 Client P.O. #: _____
 Fax #: 401-424-0894

Field Sample ID	Sample Description	Lab #	DATE SAMPLED		Composite	Grab	MATRIX				Preservative (Use Code)	Container (Use Code)	Analysis Required	
			Start Date/Time	Stop Date/Time			WASTE WATER	GROUND WATER	DKG WATER	Soil				Air
TP-ATC-10	Soil	99B04279	3/3	3/3	<input checked="" type="checkbox"/>									
TP-ATC-10	Water				<input checked="" type="checkbox"/>									
TD-ATC-11	Soil	99B04280			<input checked="" type="checkbox"/>									
TP-ATC-11		99B04281			<input checked="" type="checkbox"/>									
TP-ATC-12		99B04282			<input checked="" type="checkbox"/>									
TP-ATC-13		99B04283			<input checked="" type="checkbox"/>									
TP-ATC-14		99B04284			<input checked="" type="checkbox"/>									
TP-ATC-15		99B04285			<input checked="" type="checkbox"/>									

12 samples H₂O added to 100% H₂O as per 3/4/99 - C. M.

CONTAINER CODE: P: PLASTIC () Size V = 40 ml vial G = Glass () size A = 1000 ml Amber 0 = Other _____
 PRESERVATIVE CODE: I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₃ O = OTHER _____

Relinquished by: (Signature) [Signature] Date Time 3/3/99/11:20 Received by: (Signature) Colson
 Relinquished by: (Signature) [Signature] Date Time 3/4/99/9:30 Received by: (Signature) P.H. Brown
 Turnaround Requested: 24-Hour _____ 48-Hour _____ Normal _____
 Remarks/Comments: Run Results due Tues 3/19/99 - 12PM at port Haverhill, MA
 *MATRIX OTHER _____



(413) 525-2332
FAX (413) 525-6405

CHAIN OF CUSTODY RECORD

39 SPRUCE ST. • 2ND FLOOR • EAST LONGMEADOW, MA 01028

Client Name: ATZ Associates Inc.
 Attn: Adam Sullivan
 Address: One Richmond Sq.
Princeton RI 02904
 Site Location: Springfield Av
 Sampled By: Adam Sullivan
 Call Results: Yes No
 Fax Results: Yes No

Telephone: (401) 274-3555
 Batch #: _____
 Project #: 17646.00005
 Client P.O. #: _____
 Fax #: 401-421-0874

Field Sample I.D.	Sample Description	Lab #.	DATE SAMPLED		Composite	Grab	MATRIX					Preservative (Use Code)	Container (Use Code)	Analysis Required	
			Start Date/Time	Stop Date/Time			WASTE WATER	GROUND WATER	DKG WATER	Soil	Air				Other
TP-ATZ-15 <u>Water</u>	<u>Water</u>			<u>2/3/3</u>		<input checked="" type="checkbox"/>									
TP-ATZ-16 <u>Soil</u>	<u>Soil</u>	<u>99804286</u>				<input checked="" type="checkbox"/>									
TP-ATZ-16 <u>Water</u>	<u>Water</u>	<u>99804287</u>				<input checked="" type="checkbox"/>									

CONTAINER CODE
 P- PLASTIC (____ Size) V = 40 ml vial G = Glass (____ size) A = 1000 ml Amber O = Other _____

PRESERVATIVE CODE:
 I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₃ O = OTHER _____

Relinquished by: (Signature) _____ Date Time _____ Received by: (Signature) _____
 Relinquished by: (Signature) _____ Date Time _____ Received by: (Signature) _____

Remarks/Comments: _____
 Turnaround Requested: _____ 24-Hour _____ 48-Hour _____ Normal _____
 Other _____ Date Required _____

*MATRIX OTHER _____

RIRAS
8260
8080
TPH 8015



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL. 413/525-2332

ASSOCIATES - PROVIDENCE
ONE RICHMOND SQUARE TECH. CENTER
PROVIDENCE, RI 02906
ATTN: ADAM SULLIVAN

CONTACT: ADAM SULLIVAN
FIELD OFFICE: CR

REPORT DATE: 03/19/99

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40875
JOB NUMBER: -

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report

PROJECT LOCATION: SPRINGFIELD AVE

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
A-1	99805220	SOIL	SOIL	8260 - solid (a)
A-1	99805220	SOIL	SOIL	8260 - solid (b)
A-1	99805220	SOIL	SOIL	metals-8rcra sol
A-1	99805220	SOIL	SOIL	pcb - soil
A-1	99805220	SOIL	SOIL	tph gc (mg/kg)
A-2	99805221	SOIL	SOIL	8260 - solid (a)
A-2	99805221	SOIL	SOIL	8260 - solid (b)
A-2	99805221	SOIL	SOIL	metals-8rcra sol
A-2	99805221	SOIL	SOIL	pcb - soil
A-2	99805221	SOIL	SOIL	tph gc (mg/kg)
B-	99805222	SOIL	SOIL	8260 - solid (a)
B-1	99805222	SOIL	SOIL	8260 - solid (b)
B-1	99805222	SOIL	SOIL	metals-8rcra sol
B-1	99805222	SOIL	SOIL	pcb - soil
B-1	99805222	SOIL	SOIL	tph gc (mg/kg)
B-2	99805223	SOIL	SOIL	8260 - solid (a)
B-2	99805223	SOIL	SOIL	8260 - solid (b)
B-2	99805223	SOIL	SOIL	metals-8rcra sol
B-2	99805223	SOIL	SOIL	pcb - soil
B-2	99805223	SOIL	SOIL	tph gc (mg/kg)
B-3	99805224	SOIL	SOIL	8260 - solid (a)
B-3	99805224	SOIL	SOIL	8260 - solid (b)
B-3	99805224	SOIL	SOIL	metals-8rcra sol
B-3	99805224	SOIL	SOIL	pcb - soil
B-3	99805224	SOIL	SOIL	tph gc (mg/kg)
B-4	99805225	SOIL	SOIL	8260 - solid (a)
B-4	99805225	SOIL	SOIL	8260 - solid (b)
B-4	99805225	SOIL	SOIL	metals-8rcra sol
B-4	99805225	SOIL	SOIL	pcb - soil
B-4	99805225	SOIL	SOIL	tph gc (mg/kg)
B-5	99805226	SOIL	SOIL	8260 - solid (a)
B-5	99805226	SOIL	SOIL	8260 - solid (b)
B-5	99805226	SOIL	SOIL	metals-8rcra sol
B-5	99805226	SOIL	SOIL	pcb - soil
B-5	99805226	SOIL	SOIL	tph gc (mg/kg)



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL 413/525-2332

ATC ASSOCIATES - PROVIDENCE

ONE RICHMOND SQUARE TECH. CENTER
PROVIDENCE, RI 02906
ATTN: ADAM SULLIVAN

CONTACT: ADAM SULLIVAN
FIELD OFFICE: CR

REPORT DATE: 03/19/99

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40875
JOB NUMBER: -

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

- AIHA 308
- MASSACHUSETTS MA100
- CONNECTICUT PH-0567
- NEW YORK ELAP 10899
- AIHA ELLAP (LEAD) 6838
- NEW HAMPSHIRE 2516
- VERMONT DOH (LEAD) No. 15036
- RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE _____ DATE _____

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL 413/525-2332
 Contact: ADAM SULLIVAN 03/19/99

ADAM SULLIVAN
 ASSOCIATES - PROVIDENCE
 ONE RICHMOND SQUARE TECH. CENTER
 PROVIDENCE, RI 02906

Field Office:CR

page 1 of 35

Project Location: SPRINGFIELD AVE
 Date Received: 03/12/99

LIMS-BAT #: LIMS-40875
 Job Number: -
 Sample Matrix: SOIL

Sampled: 03/11/99
 SOIL
 A-1

	Units	99B05220	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	NL	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

MDL = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

03/19/99
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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
A-1

	Units	99805220	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
2,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

03/19/99
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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
A-1

	Units	99B05220	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/16/99	WSD	0.002		
m-xylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
A-2

	Units	99B05221	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromoethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875

Job Number: -

Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

A-2

	Units	99805221	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
2,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	0.092	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

MDL = Method Detection Limit

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875

Job Number: -

Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

A-2

	Units	99805221	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/16/99	WSD	0.002		
m-xylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

MDL = Method Detection Limit

ND = Not Detected

BDL = Below Detection Limit

NM = Not Measured

SPEC LIMIT = a client specified, recommended, or

regulatory level for comparison with data to

determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875

Job Number: -

Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

B-1

	Units	99B05222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromoethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dibromodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

MDL = Method Detection Limit
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 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875

Job Number: -

Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

B-1

	Units	99B05222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
2,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

MDL = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-1

	Units	99B05222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/16/99	WSD	0.002		
m-xylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875

Job Number: -

Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

B-2

	Units	99B05223	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dibromodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

MDL = Method Detection Limit
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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875

Job Number: -

Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

B-2

	Units	99805223	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
2,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

MDL = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-2

	Units	99805223	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
V ² Chloride	mg/kg	ND	03/16/99	WSD	0.002		
m-xylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-3

	Units	99B05224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dibromodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-3

	Units	99805224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,1-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
2,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

MDL = Method Detection Limit
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-3

	Units	99B05224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/16/99	WSD	0.002		
m-xylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-4

	Units	99805225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99

SOIL

B-4

	Units	99805225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-4

	Units	99B05225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/16/99	WSD	0.002		
ylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-5

	Units	99B05226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	mg/kg	ND	03/16/99	WSD	0.250		
Acrolein	mg/kg	ND	03/16/99	WSD	0.100		
Acrylonitrile	mg/kg	ND	03/16/99	WSD	0.038		
Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Bromobenzene	mg/kg	ND	03/16/99	WSD	0.002		
Bromochloromethane	mg/kg	ND	03/16/99	WSD	0.004		
Bromodichloromethane	mg/kg	ND	03/16/99	WSD	0.002		
Bromomethane	mg/kg	ND	03/16/99	WSD	0.006		
Bromoform	mg/kg	ND	03/16/99	WSD	0.006		
2-Butanone (MEK)	mg/kg	ND	03/16/99	WSD	0.060		
n-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
sec-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
tert-Butylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Carbon Disulfide	mg/kg	ND	03/16/99	WSD	0.002		
Carbon Tetrachloride	mg/kg	ND	03/16/99	WSD	0.002		
Chlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
Chlorodibromomethane	mg/kg	ND	03/16/99	WSD	0.002		
Chloroethane	mg/kg	ND	03/16/99	WSD	0.004		
2-Chloroethylvinylether	mg/kg	ND	03/16/99	WSD	0.048		
Chloroform	mg/kg	ND	03/16/99	WSD	0.004		
Chloromethane	mg/kg	ND	03/16/99	WSD	0.006		
2-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
4-Chlorotoluene	mg/kg	ND	03/16/99	WSD	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	03/16/99	WSD	0.008		
1,2-Dibromoethane	mg/kg	ND	03/16/99	WSD	0.004		
Dibromomethane	mg/kg	ND	03/16/99	WSD	0.006		
1,2-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.003		
1,4-Dichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.012		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	03/16/99	WSD	0.010		
Dichlorodifluoromethane	mg/kg	ND	03/16/99	WSD	0.005		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-5

	Units	99805226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	03/16/99	WSD	0.004		
1,2-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.003		
1,3-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.002		
-Dichloropropane	mg/kg	ND	03/16/99	WSD	0.004		
1,1-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
trans-1,3-Dichloropropene	mg/kg	ND	03/16/99	WSD	0.002		
Ethyl Benzene	mg/kg	ND	03/16/99	WSD	0.003		
Ethyl Methacrylate	mg/kg	ND	03/16/99	WSD	0.004		
Hexachlorobutadiene	mg/kg	ND	03/16/99	WSD	0.006		
2-Hexanone	mg/kg	ND	03/16/99	WSD	0.048		
Iodomethane	mg/kg	ND	03/16/99	WSD	0.004		
Isopropylbenzene	mg/kg	ND	03/16/99	WSD	0.003		
p-Isopropyltoluene	mg/kg	ND	03/16/99	WSD	0.004		
MTBE	mg/kg	ND	03/16/99	WSD	0.004		
Methylene Chloride	mg/kg	ND	03/16/99	WSD	0.075		
MIBK	mg/kg	ND	03/16/99	WSD	0.044		
Naphthalene	mg/kg	ND	03/16/99	WSD	0.005		
n-Propylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
Styrene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	03/16/99	WSD	0.007		
Tetrachloroethylene	mg/kg	ND	03/16/99	WSD	0.002		
Toluene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,2,4-Trichlorobenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,1,1-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		
1,1,2-Trichloroethane	mg/kg	ND	03/16/99	WSD	0.004		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-5

	Units	99B05226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	mg/kg	ND	03/16/99	WSD	0.005		
Trichlorofluoromethane	mg/kg	ND	03/16/99	WSD	0.004		
1,2,3-Trichloropropane	mg/kg	ND	03/16/99	WSD	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.004		
1,3,5-Trimethylbenzene	mg/kg	ND	03/16/99	WSD	0.005		
Vinyl Acetate	mg/kg	ND	03/16/99	WSD	0.082		
Vinyl Chloride	mg/kg	ND	03/16/99	WSD	0.002		
ylene	mg/kg	ND	03/16/99	WSD	0.006		
o + p Xylene	mg/kg	ND	03/16/99	WSD	0.002		

Analytical Method(s):

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
A-1

	Units	99B05220	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	5.79	03/15/99	PM	5.00		
Barium	mg/kg	13.3	03/15/99	PM	0.10		
Cadmium	mg/kg	0.05	03/15/99	PM	0.05		
Chromium	mg/kg	3.22	03/15/99	PM	0.35		
Lead	mg/kg	5.97	03/15/99	PM	2.50		
Mercury	mg/kg	ND	03/16/99	JER	0.009		
Selenium	mg/kg	BDL	03/15/99	PM	5.00		
ver	mg/kg	ND	03/15/99	PM	0.50		

Sampled: 03/11/99
SOIL
A-2

	Units	99B05221	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	BDL	03/15/99	PM	5.00		
Barium	mg/kg	127	03/15/99	PM	0.10		
Cadmium	mg/kg	1.54	03/15/99	PM	0.05		
Chromium	mg/kg	21.0	03/15/99	PM	0.35		
Lead	mg/kg	356	03/15/99	PM	2.50		
Mercury	mg/kg	0.921	03/16/99	JER	0.010		
Selenium	mg/kg	ND	03/15/99	PM	5.00		
Silver	mg/kg	1.58	03/15/99	PM	0.50		

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-1

	Units	99805222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	8.63	03/15/99	PM	5.00		
Barium	mg/kg	21.7	03/15/99	PM	0.10		
Cadmium	mg/kg	ND	03/15/99	PM	0.05		
Chromium	mg/kg	6.16	03/15/99	PM	0.35		
Lead	mg/kg	17.4	03/15/99	PM	2.50		
Mercury	mg/kg	0.017	03/16/99	JER	0.009		
Selenium	mg/kg	ND	03/15/99	PM	5.00		
ver	mg/kg	ND	03/15/99	PM	0.50		

Sampled: 03/11/99
SOIL
B-2

	Units	99805223	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	BDL	03/15/99	PM	5.00		
Barium	mg/kg	26.8	03/15/99	PM	0.10		
Cadmium	mg/kg	0.14	03/15/99	PM	0.05		
Chromium	mg/kg	7.74	03/15/99	PM	0.35		
Lead	mg/kg	19.7	03/15/99	PM	2.50		
Mercury	mg/kg	0.029	03/16/99	JER	0.009		
Selenium	mg/kg	ND	03/15/99	PM	5.00		
Silver	mg/kg	ND	03/15/99	PM	0.50		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-3

	Units	99805224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	5.54	03/15/99	PM	5.00		
Barium	mg/kg	44.3	03/15/99	PM	0.10		
Cadmium	mg/kg	0.07	03/15/99	PM	0.05		
Chromium	mg/kg	6.57	03/15/99	PM	0.35		
Lead	mg/kg	50.8	03/15/99	PM	2.50		
Mercury	mg/kg	0.019	03/16/99	JER	0.010		
Selenium	mg/kg	BDL	03/15/99	PM	5.00		
Silver	mg/kg	ND	03/15/99	PM	0.50		

Sampled: 03/11/99
SOIL
B-4

	Units	99805225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	ND	03/15/99	PM	5.00		
Barium	mg/kg	23.5	03/15/99	PM	0.10		
Cadmium	mg/kg	0.14	03/15/99	PM	0.05		
Chromium	mg/kg	5.75	03/15/99	PM	0.35		
Lead	mg/kg	21.4	03/15/99	PM	2.50		
Mercury	mg/kg	0.025	03/16/99	JER	0.010		
Selenium	mg/kg	ND	03/15/99	PM	5.00		
Silver	mg/kg	ND	03/15/99	PM	0.50		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-5

	Units	99805226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
Arsenic	mg/kg	14.3	03/15/99	PM	5.00		
Barium	mg/kg	262	03/15/99	PM	0.10		
Cadmium	mg/kg	1.57	03/15/99	PM	0.05		
Chromium	mg/kg	12.0	03/15/99	PM	0.35		
Lead	mg/kg	766	03/15/99	PM	2.50		
Mercury	mg/kg	0.157	03/16/99	JER	0.010		
Selenium	mg/kg	5.20	03/15/99	PM	5.00		
.....ver	mg/kg	ND	03/15/99	PM	0.50		

Analytical Method(s):

Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Chromium
SW846 3050/6010

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

mDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
A-1

	Units	99805220	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	ND	03/16/99	MFF			
PCB's	mg/kg	ND	03/16/99	MFF	0.025		

Sampled: 03/11/99
SOIL
A-2

	Units	99805221	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	0.474	03/16/99	MFF			
PCB's	mg/kg	0.474	03/16/99	MFF	0.025		

Sampled: 03/11/99
SOIL
B-1

	Units	99805222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-1

	Units	99B05222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	ND	03/16/99	MFF			
PCB's	mg/kg	ND	03/16/99	MFF	0.025		

Sampled: 03/11/99
SOIL
B-2

	Units	99B05223	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	ND	03/16/99	MFF			
PCB's	mg/kg	ND	03/16/99	MFF	0.025		

Sampled: 03/11/99
SOIL
B-3

	Units	99B05224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-3

	Units	99805224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	ND	03/16/99	MFF			
PCB's	mg/kg	ND	03/16/99	MFF	0.025		

Sampled: 03/11/99
SOIL
B-4

	Units	99805225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	ND	03/16/99	MFF			
PCB's	mg/kg	ND	03/16/99	MFF	0.025		

Sampled: 03/11/99
SOIL
B-5

	Units	99805226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
PCB-1221	mg/kg	ND	03/16/99	MFF			
PCB-1232	mg/kg	ND	03/16/99	MFF			
PCB-1242	mg/kg	ND	03/16/99	MFF			
PCB-1248	mg/kg	ND	03/16/99	MFF			
PCB-1254	mg/kg	ND	03/16/99	MFF			
PCB-1260	mg/kg	0.071	03/16/99	MFF			

MDL = Method Detection Limit
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-5

	Units	99B05226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
-----	-----	-----	-----	-----	---	-----	---
PCB's	mg/kg	0.071	03/16/99	MFF	0.025		

Analytical Method(s):

SW846 8080

SAMPLES ARE EXTRACTED INTO HEXANE AND ANALYZED BY GAS CHROMATOGRAPHY
AND ELECTRON CAPTURE DETECTION.

MDL = Method Detection Limit
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BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
A-1

	Units	99B05220	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	8.3		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	17		
Gasoline	MG/KG	ND	03/15/99	JB	8.3		
Fuels, jet	MG/KG	ND	03/15/99	JB	8.3		
Kerosene	MG/KG	ND	03/15/99	JB	8.3		
Unknown Hydrocarbons	MG/KG	18	03/15/99	JB	8.3		

Sampled: 03/11/99
SOIL
A-2

	Units	99B05221	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	42		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	83		
Gasoline	MG/KG	ND	03/15/99	JB	42		
Fuels, jet	MG/KG	ND	03/15/99	JB	42		
Kerosene	MG/KG	ND	03/15/99	JB	42		
Unknown Hydrocarbons	MG/KG	460	03/15/99	JB	42		

Sampled: 03/11/99
SOIL
B-1

	Units	99B05222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	8.3		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	17		
Gasoline	MG/KG	ND	03/15/99	JB	8.3		
Fuels, jet	MG/KG	ND	03/15/99	JB	8.3		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-1

	Units	99805222	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Kerosene	MG/KG	ND	03/15/99	JB	8.3		
Unknown Hydrocarbons	MG/KG	13	03/15/99	JB	8.3		

Sampled: 03/11/99
SOIL
B-2

	Units	99805223	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	8.3		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	17		
Gasoline	MG/KG	ND	03/15/99	JB	8.3		
Fuels, jet	MG/KG	ND	03/15/99	JB	8.3		
Kerosene	MG/KG	ND	03/15/99	JB	8.3		
Unknown Hydrocarbons	MG/KG	BDL	03/15/99	JB	8.3		

Sampled: 03/11/99
SOIL
B-3

	Units	99805224	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	8.3		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	17		
Gasoline	MG/KG	ND	03/15/99	JB	8.3		
Fuels, jet	MG/KG	ND	03/15/99	JB	8.3		
Kerosene	MG/KG	ND	03/15/99	JB	8.3		
Unknown Hydrocarbons	MG/KG	25	03/15/99	JB	8.3		

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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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LIMS-BAT #: LIMS-40875
Job Number: -
Sample Matrix: SOIL

Sampled: 03/11/99
SOIL
B-4

	Units	99805225	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	42		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	83		
Gasoline	MG/KG	ND	03/15/99	JB	42		
Fuels, jet	MG/KG	ND	03/15/99	JB	42		
Kerosene	MG/KG	ND	03/15/99	JB	42		
Unknown Hydrocarbons	MG/KG	280	03/15/99	JB	42		

Sampled: 03/11/99
SOIL
B-5

	Units	99805226	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Fuels, diesel, no. 2	MG/KG	ND	03/15/99	JB	42		
Fuel oil no. 6	MG/KG	ND	03/15/99	JB	83		
Gasoline	MG/KG	ND	03/15/99	JB	42		
Fuels, jet	MG/KG	ND	03/15/99	JB	42		
Kerosene	MG/KG	ND	03/15/99	JB	42		
Unknown Hydrocarbons	MG/KG	520	03/15/99	JB	42		

Analytical Method(s):

MODIFIED SW846 8015

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE, CONCENTRATED AND QUANTITATED AGAINST THE DIFFERENT PETROLEUM FRACTION STANDARDS. FINGERPRINTS OF SAMPLE AND STANDARD CHROMATOGRAMS ARE COMPARED.

THIS METHOD IS DESIGNED TO MEASURE MID RANGE PETROLEUM PRODUCTS SUCH AS DIESEL AND FUEL OIL. MOTOR OILS AND LUBRICATING OILS ARE DETECTABLE UNDER THE CONDITIONS OF THIS METHOD, HOWEVER RESULTS ARE NOT QUANTITATIVE.

MDL = Method Detection Limit
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BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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THESE COMPONENTS ARE REPORTED AS OTHER HYDROCARBONS AND QUANTITATED AS #2 FUEL OIL. RESULTS ARE NOT AN ACCURATE DETERMINATION OF THE AMOUNT OF MOTOR OR LUBRICATING OIL PRESENT IN THE SAMPLE.

MDL = Method Detection Limit
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BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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The following notes were attached to the reported analysis:

Sample: 99805221

Analysis: Methylene Chloride

SUSPECTED METHYLENE CHLORIDE CONTAMINATION. SEE BLANK.

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: GC/ECD-2300

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99805220	Dibutyl Chlorendate	Surrogate Recovery	69.5	%	
99805221	Dibutyl Chlorendate	Surrogate Recovery	56.5	%	
99805222	PCB-1232	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1242	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1254	Sample Amount	0.000	mg/kg	
		Duplicate Value	0.000	mg/kg	
	PCB-1260	Sample Amount	0.000	mg/kg	
			Duplicate Value	0.000	mg/kg
		Sample Amount	0.000	mg/kg	
		Matrix Spk Amt Added	0.500	mg/kg	
		MS Amt Measured	0.437	mg/kg	
		Matrix Spike % Rec.	87.400	%	
		Duplicate Sample Amt	0.000	mg/kg	
		MSD Amount Added	0.500	mg/kg	
		MSD Amt Measured	0.477	mg/kg	
		MSD % Recovery	95.400	%	
	PCB-1248	MSD Range	8.000	units	
		Sample Amount	0.000	mg/kg	
	PCB-1221	Duplicate Value	0.000	mg/kg	
		Sample Amount	0.000	mg/kg	
PCB's	Sample Amount	0.000	mg/kg		
		Duplicate Value	0.000	mg/kg	
	Sample Amount	<0.025	mg/kg		
	Duplicate Value	<0.025	mg/kg		
	Sample Amount	<0.025	mg/kg		
	Matrix Spk Amt Added	0.500	mg/kg		
	MS Amt Measured	0.437	mg/kg		
	Matrix Spike % Rec.	87.400	%		
	Duplicate Sample Amt	<0.025	mg/kg		
	MSD Amount Added	0.500	mg/kg		
99805223	MSD Amt Measured	0.477	mg/kg		
	MSD % Recovery	95.400	%		
99805224	MSD Range	8.000	units		
	Surrogate Recovery	77.5	%		
99805225	Surrogate Recovery	81.0	%		
	Surrogate Recovery	75.5	%		
	Surrogate Recovery	24.2	%		

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: GC/ECD-2300

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99B05226	Dibutyl Chlorendate	Surrogate Recovery	27.2	%	
BLANK-17996	PCB-1232	Blank	0.000	mg/kg	
	PCB-1242	Blank	0.000	mg/kg	
	PCB-1254	Blank	0.000	mg/kg	
	PCB-1260	Blank	0.000	mg/kg	
	PCB-1248	Blank	0.000	mg/kg	
	PCB-1221	Blank	0.000	mg/kg	
	PCB's	Blank	<0.025	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: GC/FID-2321

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99805222	Fuel oil no. 6	Sample Amount	<16.7	MG/KG	
		Duplicate Value	<16.7	MG/KG	
	Fuels, diesel, no. 2	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
	Gasoline	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
	Fuels, jet	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
	Kerosene	Sample Amount	<8.3	MG/KG	
		Duplicate Value	<8.3	MG/KG	
Unknown Hydrocarbons	Sample Amount	13.4	MG/KG		
	Duplicate Value	11.2	MG/KG		
	Duplicate RPD	18.1	%		
BLANK-18045	Fuel oil no. 6	Blank	<16.7	MG/KG	
	Fuels, diesel, no. 2	Blank	<8.3	MG/KG	
	Gasoline	Blank	<8.3	MG/KG	
	Fuels, jet	Blank	<8.3	MG/KG	
	Kerosene	Blank	<8.3	MG/KG	
	Unknown Hydrocarbons	Blank	<8.3	MG/KG	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: GCMS/VOL-2684

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
99B05220	1,2-Dichloroethane-d	Surrogate Recovery	67.600	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	98.800	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	82.000	%	62.000-137.000
99B05221	1,2-Dichloroethane-d	Surrogate Recovery	70.400	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	96.400	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	84.800	%	62.000-137.000
99B05222	1,2-Dichloroethane-d	Surrogate Recovery	68.800	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	97.200	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	83.200	%	62.000-137.000
99B05223	1,2-Dichloroethane-d	Surrogate Recovery	73.200	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	96.400	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	77.600	%	62.000-137.000
99B05224	1,2-Dichloroethane-d	Surrogate Recovery	75.200	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	100.400	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	81.600	%	62.000-137.000
99B05225	1,2-Dichloroethane-d	Surrogate Recovery	73.200	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	102.800	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	81.600	%	62.000-137.000
99B05226	1,2-Dichloroethane-d	Surrogate Recovery	99.200	%	56.000-128.000
	Toluene-d8	Surrogate Recovery	98.800	%	65.000-113.000
	Bromofluorobenzene	Surrogate Recovery	85.600	%	62.000-137.000
BLANK-18057	Acetone	Blank	<0.250	mg/kg	
	Benzene	Blank	<0.003	mg/kg	
	Carbon Tetrachloride	Blank	<0.002	mg/kg	
	Chloroform	Blank	<0.004	mg/kg	
	1,2-Dichloroethane	Blank	<0.004	mg/kg	
	1,4-Dichlorobenzene	Blank	<0.004	mg/kg	
	Ethyl Benzene	Blank	<0.003	mg/kg	
	2-Butanone (MEK)	Blank	<0.060	mg/kg	
	MIBK	Blank	<0.044	mg/kg	
	Naphthalene	Blank	<0.005	mg/kg	
	Styrene	Blank	<0.004	mg/kg	
	Tetrachloroethylene	Blank	<0.002	mg/kg	
	Toluene	Blank	<0.004	mg/kg	
	1,1,1-Trichloroethan	Blank	<0.004	mg/kg	
	Trichloroethylene	Blank	<0.005	mg/kg	
Trichlorofluorometha	Blank	<0.004	mg/kg		
o + p Xylene	Blank	<0.002	mg/kg		
m-Xylene	Blank	<0.006	mg/kg		

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

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QC Batch Number: GCMS/VOL-2684

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	1,2-Dichlorobenzene	Blank	<0.004	mg/kg	
	1,3-Dichlorobenzene	Blank	<0.003	mg/kg	
	1,1-Dichloroethane	Blank	<0.004	mg/kg	
	1,1-Dichloroethylene	Blank	<0.003	mg/kg	
	MTBE	Blank	<0.004	mg/kg	
	trans-1,2-Dichloroet	Blank	<0.004	mg/kg	
	Vinyl Chloride	Blank	<0.002	mg/kg	
	Methylene Chloride	Blank	0.086	mg/kg	
	Chlorobenzene	Blank	<0.003	mg/kg	
	Chloromethane	Blank	<0.006	mg/kg	
	Bromomethane	Blank	<0.006	mg/kg	
	Chloroethane	Blank	<0.004	mg/kg	
	cis-1,3-Dichloroprop	Blank	<0.002	mg/kg	
	trans-1,3-Dichloropr	Blank	<0.002	mg/kg	
	Chlorodibromomethane	Blank	<0.002	mg/kg	
	1,1,2-Trichloroethan	Blank	<0.004	mg/kg	
	2-Chloroethylvinylet	Blank	<0.048	mg/kg	
	Bromoform	Blank	<0.006	mg/kg	
	1,1,2,2-Tetrachloroe	Blank	<0.007	mg/kg	
	2-Chlorotoluene	Blank	<0.003	mg/kg	
	Hexachlorobutadiene	Blank	<0.006	mg/kg	
	Isopropylbenzene	Blank	<0.003	mg/kg	
	p-Isopropyltoluene	Blank	<0.004	mg/kg	
	n-Propylbenzene	Blank	<0.004	mg/kg	
	sec-Butylbenzene	Blank	<0.003	mg/kg	
	tert-Butylbenzene	Blank	<0.004	mg/kg	
	1,2,3-Trichlorobenze	Blank	<0.004	mg/kg	
	1,2,4-Trichlorobenze	Blank	<0.004	mg/kg	
	1,2,4-Trimethylbenze	Blank	<0.004	mg/kg	
	1,3,5-Trimethylbenze	Blank	<0.005	mg/kg	
	Dibromomethane	Blank	<0.006	mg/kg	
	cis-1,2-Dichloroethy	Blank	<0.002	mg/kg	
	4-Chlorotoluene	Blank	<0.003	mg/kg	
	1,1-Dichloropropene	Blank	<0.007	mg/kg	
	1,2-Dichloropropane	Blank	<0.003	mg/kg	
	1,3-Dichloropropane	Blank	<0.002	mg/kg	
	2,2-Dichloropropane	Blank	<0.004	mg/kg	
	1,1,1,2-Tetrachloroe	Blank	<0.002	mg/kg	
	1,2,3-Trichloropropa	Blank	<0.006	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: GCMS/VOL-2684

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	n-Butylbenzene	Blank	<0.004	mg/kg	
	Dichlorodifluorometh	Blank	<0.005	mg/kg	
	Bromochloromethane	Blank	<0.004	mg/kg	
	Bromobenzene	Blank	<0.002	mg/kg	
	Iodomethane	Blank	<0.004	mg/kg	
	Acrolein	Blank	<0.100	mg/kg	
	Acrylonitrile	Blank	<0.038	mg/kg	
	Carbon Disulfide	Blank	<0.002	mg/kg	
	Vinyl Acetate	Blank	<0.082	mg/kg	
	2-Hexanone	Blank	<0.048	mg/kg	
	trans-1,4-Dichloro-2	Blank	<0.010	mg/kg	
	Ethyl Methacrylate	Blank	<0.004	mg/kg	
	cis-1,4-Dichloro-2-B	Blank	<0.012	mg/kg	
	Bromodichloromethane	Blank	<0.002	mg/kg	
	1,2-Dibromo-3-Chloro	Blank	<0.008	mg/kg	
	1,2-Dibromoethane	Blank	<0.004	mg/kg	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/19/99

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QC Batch Number: HG-1010

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
BLANK-17982	Mercury	Blank	<0.010	mg/kg	
LFBLANK-07934	Mercury	Lab Fort Blank Amt.	0.500	mg/kg	
		Lab Fort Blk. Found	0.470	mg/kg	
		Lab Fort Blk. % Rec.	94.000	%	
		Dup Lab Fort Bl Amt.	0.500	mg/kg	
		Dup Lab Fort Bl. Fnd	0.480	mg/kg	
		Dup Lab Fort Bl %Rec	96.000	%	
		Lab Fort Blank Range	2.000	units	
		Lab Fort Bl. Av. Rec	95.000	%	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab-Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: ICP-3201

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
LFBLANK-07921	Silver	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	89.50	mg/kg	
		Lab Fort Blk. % Rec.	89.50	%	
	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	87.25	mg/kg	
		Lab Fort Blk. % Rec.	87.25	%	
	Barium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	100.56	mg/kg	
		Lab Fort Blk. % Rec.	100.56	%	
	Cadmium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	91.10	mg/kg	
		Lab Fort Blk. % Rec.	91.10	%	
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	98.55	mg/kg	
		Lab Fort Blk. % Rec.	98.55	%	
Lead	Lab Fort Blank Amt.	100.00	mg/kg		
	Lab Fort Blk. Found	91.65	mg/kg		
	Lab Fort Blk. % Rec.	91.65	%		
Selenium	Lab Fort Blank Amt.	100.00	mg/kg		
	Lab Fort Blk. Found	90.05	mg/kg		
	Lab Fort Blk. % Rec.	90.05	%		
LFBLANK-07922	Silver	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	88.85	mg/kg	
		Lab Fort Blk. % Rec.	88.85	%	
	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	102.85	mg/kg	
		Lab Fort Blk. % Rec.	102.85	%	
	Barium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	99.16	mg/kg	
		Lab Fort Blk. % Rec.	99.16	%	
	Cadmium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	105.10	mg/kg	
		Lab Fort Blk. % Rec.	105.10	%	
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	113.55	mg/kg	
		Lab Fort Blk. % Rec.	113.55	%	
Lead	Lab Fort Blank Amt.	100.00	mg/kg		
	Lab Fort Blk. Found	106.45	mg/kg		
	Lab Fort Blk. % Rec.	106.45	%		

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/19/99

Lims Bat #: LIMS-40875

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QC Batch Number: ICP-3201

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	Selenium	Lab Fort Blank Amt.	100.00	mg/kg	
		Lab Fort Blk. Found	101.25	mg/kg	
		Lab Fort Blk. % Rec.	101.25	%	

APPENDIX E

Rapid Installation Capabilities

I. Introduction

MyKroWaters, Inc., provides rapid installations of small diameter point (SDP) systems as the most effective method to determine site conditions for assessment and remediation. SDP's are utilized for:

- Mykro-monitoring wells (mykrowells)
- Soil vapor surveys
- Air sparging points
- Vacuum pressure monitoring points
- Heat injection points
- Soil sampling

SDP's are installed rapidly in unconsolidated formations using vibratory drilling techniques. Rapid identification, delineation, and remediation of contaminated soil and groundwater have become essential for environmental programs. Other drilling and sampling techniques are slow, expensive, and do not produce sufficient density of site data for adequate remedial design and often require multiple mobilizations. The SDP system in conjunction with field gas chromatography gives rapid on-site analysis of groundwater, soil and air. MyKroWaters, Inc. employs highly experienced teams which specialize in these specific technologies. These environmental service teams consist of hydrogeologists, environmental chemists, geologists, and remediation specialists uniquely capable of utilizing small diameter point system technology in complex hydrogeologic/chemical conditions both, effectively and efficiently.

Vibratory Drilling Technical Description

The vibratory drilling method utilizes an electric, pneumatic or hydraulically powered impact driver to vibrate and advance installation materials downward. Well screen and riser materials usually consist of steel or stainless steel. The internal diameter of a SDP well ranges from 0.62 to 1.0 inch (ID). The outer diameter of a SDP well ranges from 0.82 to 1.31 inches. Sections may be any length up to 21 feet. To advance the SDP below 21 feet, a riser pipe is positioned and the connections are hydraulically crimped using external water tight collars.

Powered hammers operate at 1,000 to 12,000 cycles per minute. Vibration mobilizes soil particles around the casing. Standard penetration resistance of 40 blows per foot range from five to ten feet per minute. Depths of penetration may attain more than 100 feet; often 250 feet of pipe can be installed per day. This technique does not use drilling water, or produce soil cuttings, and installations are not affected by "running sand".

Equipment for driving installations range from hand-held rotary-impact hammers to more powerful drivers mounted on a small drilling machine. Drilling machines that are mounted on ATV's have exceptional mobility in rough terrain and in soft ground or wetland areas.

Mykrowell Description

All pipe materials are steam cleaned prior to installation. The pipe being driven is well pipe which eliminates decontamination between location. The leading section is slotted screen which can be designed for any screen interval. Mykrowells typical screen length is five or ten foot sections with a hardened drive point. Vertically slotted screens consist of paired slots ranging from 0.010 to 0.020 an inch in width along the long axis of the pipe. The screen slots are on opposite sides and are off-set for continuous screening. Due to their small diameter, the wells have a small casing storage capacity. Wells can be developed and sampled quickly with reduced purge water. Typical well yields are approximately one gallon per minute.

Mykrowell Sampling

Before well development and sampling, a water level will be collected and recorded at each well location. Due to their small diameter, the wells have a small casing storage capacity. Wells can be developed and sampled quickly with reduced purge water. Once three times the standing well volume is evacuated (1/2 gallon for every 10 feet of standing water), a representative sample can be collected. Samples can be obtained with a peristaltic pump or inertia bailer utilizing polyethylene tubing. All bailers and tubing are only used once.

Soil Vapor Sampling (Lost Point Method)

Solid lengths of riser pipe are driven into the formation until the hardened drive-point reaches the bottom of the required soil vapor sampling interval. The riser is then retracted upwards, creating a void (below the point) of desirable length. A small diameter rod is lowered down the inside of the riser pipe, forcing the drive-point out of position and into the bottom of the created void. A one-hole stopper is used to create a surface seal; quarter inch tubing is inserted through the stopper, some distance down the riser. At the far end of the tubing a peristaltic pump is positioned to provide the desired suction. An in-line "T" is used as a sampling port for soil vapor. All samples are taken after a uniform time interval has elapsed.

One-site Groundwater Sample Screening

Representative groundwater samples are analyzed in the field by gas chromatography. results from each successive sampling location are used to determine where the next

location should be installed. Vertical profile information is obtained by sequential sampling as the point is driven into the subsurface. Therefore the vertical and horizontal extent of contaminants in the groundwater can be defined on-site, in real-time; and permanent monitoring or remediation points can be readily determined and installed. Additional groundwater samples can be collected for comprehensive laboratory analysis.

Soil Sampling Capabilities

Soil sampling utilizes an electric, pneumatic, or hydraulically-powered impact driver to vibrate and advance installation materials downward. Soil sampling is accomplished by vibrating a three-foot open end sampler into the ground. Extensions are connected when sampling below three feet. Soil cores are encased in PETG plastic acetate (or stainless

steel) measuring 20 to 36 inches long and approximately 1" (ID). A closed "sliding piston soil sampler" is driven to the top of a designated sampling horizon, the pistons stop pin is removed, and the sampler advanced through the zone of interest. In the process, a two foot long (1.25"OD) soil core is collected. The entire string of tools is then retrieved from the ground and the soil boring, captured in a liner and removed for logging and analysis. Soil boring locations can be backfilled with clean sand and capped with concrete. All sampling equipment for soil sampling, drive rods, and probes are decontaminated after each sampling point by washing with soapy distilled water and rinsing with distilled water. After washing, all external surfaces are wiped with clean paper towels. Plastic tubing is used only once and discarded.

Advantages to the Small Diameter Point System Methods

- Low cost and reduced installation time
- Rapid availability to multiple sites
- Access to difficult terrain
- Multiple and repeat sampling
- Immediate sampling and analytical results
- Reduce need for subsequent field mobilization to fill data gaps
- No drill cuttings and small volumes of purge water produced
- No decontamination of drilling equipment is necessary
- Dedicated installations per day, increased radius of influence for sparging
- Numerous installations per day, increased radius of influence for sparging
- Steel monitoring wells easily convert to heat injection points for rapid remediation
- Vacuum Monitoring at numerous locations for vapor extraction systems

The small diameter point system technique is an extremely powerful tool for rapid quantitative determination of the extent and source of contaminants in the subsurface, as well as an efficient method in remediation activities.

On-Site Laboratory Standard Operating Procedures

This Standard Operating Procedure (SOP) describes the instrumentation, protocols and methodology used by MyKroWaters, Inc. personnel in the operation of its mobile laboratory.

I. Instrumentation

MyKroWaters, Inc., utilizes a SRI 8610 Gas Chromatograph (GC) equipped with multiple detectors, a Photo Ionization Detector (PID), a Dry-Electrolytic Conductivity Detector (ELCD), and a Flame Ionization Detector (FID), a heated oven capable of temperature programming and a 30 meter megabore analytical column with a diameter of 0.53 mm. A four channel "Peaksimple II" Data System Software package for Windows, loaded in a portable computer, is used to collect, integrate and store the resulting chromatographic data.

The PID is extremely sensitive to aromatic molecules with detection limits in the one to four part per billion (ppb) range for water, 10 to 40 ppb range for soil and one part per million (ppm) range for soil vapor samples. MyKroWaters utilizes the PID to look for compounds such as methyl tertiary butyl ether (MTBE), benzene, toluene, ethyl benzene, xylene (BTEX), and tetrachloroethene (PCE) and its breakdown products.

The ELCD is specific for the detection of halogenated compounds, such as chlorinated compounds, polychlorinated biphenyls (PCBs), and pesticides. Detection limits for chlorinated compounds such as 1,2-dichloroethane and 1,1,1-trichloroethane are in the low ppb range for water samples. Detection limits for PCBs and pesticides are in the 1 ppm range for soils.

The FID is a general purpose detector used to detect a wide range of compounds including individual petrochemicals as well as petroleum mixtures (i.e. - gasoline, fuel oils, etc.). Detection limits are in the ppb/ppm range for individual constituents and the ppm range for mixtures.

II. Sample Collection

All samples are collected in a manner consistent with the analytes that are to be determined. Samples for field analysis are chosen based upon project objectives.

Volatiles:

Samples for VOC analysis are collected with special attention to minimize sample disturbance and associated volatilization. All samples are placed in 40 ml pre-cleaned VOA vials. Either a peristaltic pump or inertial is used for sampling and purging water samples. An inertial pump/bailer technique exerts little to no vacuum on a sample and therefore preserves the integrity of analytes sensitive to volatilization. Soil samples for volatiles analysis are collected from cores using a small diameter coring tool that minimizes sample exposure to air. Additional information regarding collection of samples for volatile analysis is located in the volatiles Field Analysis Methods.

Other Organic Parameters:

Water samples for Extractable or Total Petroleum Hydrocarbons (EPH or TPH) and Polychlorinated Biphenyls (PCBs) are collected in glass containers using an inertial or peristaltic pump or bailer, and extracted with hexane. Soil samples for EPH, TPH or PCBs are collected using a small coring device to minimize volatilization of analytes and extracted with hexane. Samples are analyzed using a flame ionization detector installed on a SRI 8610 Gas Chromatograph as specified under sample preparation and analysis.

III. Sample Handling/Documentation

Once a sample of groundwater or soil is collected by field personnel, it is immediately placed in the appropriate container and labeled using a permanent marker with the location, depth, date and time of day. The field technician is also responsible for entering the date, sample location and depth, soil type, soil moisture (qualitative), water silt content and other pertinent observations in field logs.

Samples are signed in on a Field Chain of Custody as soon as they are transferred to the on-site laboratory. Within minutes of securing the field sample, it is in the sole custody of the gas chromatography (GC) analyst. It is the analyst's responsibility to verify sample identification and commence with sample preparation for analysis.

Upon completion of sample analysis, target compound concentrations for a specific location are compiled on a field data sheet by the GC analyst. The GC analyst is responsible for interpreting each chromatogram and reporting results to field personnel for real-time decision making. A hard copy is generated of each chromatogram, including site details and integration results. All computerized chromatographic data is archived on diskette for later reference.

The GC analyst documents each **chromatogram** with the following information:

- sample identification
- sample depth
- date, time of analysis and operator
- site location and client
- column phase and length
- column temperature parameters and detector channel

A daily field **run** log is also maintained by the GC analyst to document the following site information:

- date, time of analysis and operator
- client, site location and project #
- carrier gas pressure
- column temperature parameters and detector channel
- column type, length and diameter
- weather conditions
- sample ID numbers and depth
- compound identification and concentration
- comments and observations

IV. Quality Assurance/ Quality Control

The procedures outlined in this section summarize MyKroWaters overall QA/QC program used in the collection and analysis of environmental samples.

A) Sampling Equipment Decontamination

All sampling equipment for soil sampling, drive rods and probes are decontaminated after each sampling point by washing with soapy distilled water and rinsing with distilled water. After washing, all internal surfaces are flushed with ambient air and external surfaces wiped with clean paper towels. Drive rods and well screens for mykrowells are dedicated to each location and only used once for each location and do not necessitate decontamination. Prior to sample collection all bailers and check valves are rinsed with methanol followed by distilled water. Well sampling equipment is dedicated to each sample location and discarded after use.

B) On-Site Laboratory

MyKroWaters On-Site Environmental Laboratory is situated in an area upwind of contaminated vapor sources and maintained in a stable, temperature-controlled environment.

C) Analytical Procedures

To establish and maintain the ability to generate data with accuracy and precision, the following protocols are followed by MyKroWaters personnel.

1. **Materials.** All sampling containers are used only once then disposed of in a safe and appropriate manner. Sample preparation equipment is decontaminated between each use with an appropriate solvent. All spatulas are cleaned with soapy water and rinsed with an appropriate solvent. All solvents used for extraction are pesticide residue grade.
2. **Start-Up Procedure.** At the beginning of each day's operation of the Gas Chromatograph, start-up recommendations of the manufacturer along with MyKroWaters' internal procedures are followed. These procedures include careful cleaning of the photoionization detector lamp window, visual inspection of column, leak testing of connections, checking and setting gas flow rates, setting column temperature and integration parameters and replacing the injector port septum.
3. **Blanks.** In order to check for contamination in the system, reagent and sample blanks are run during the course of each work day. An extraction blank is prepared with each set of samples at a frequency of one blank per twenty field samples. Syringe blanks are run intermittently, where necessary, to verify system cleanliness.
4. **Instrument Calibration.** All working standards are prepared from certified standards. Standards are prepared every six months, or more frequently as needed. Standards for volatiles analysis are prepared on a daily basis. Single point calibration is used in the case of analytes determined by PID and ELCD detectors because response is linear over a wide concentration range. Parameters that are to be determined by FID utilize a multi (usually three) point initial calibration curve. The initial calibration must demonstrate a r value of .990 to be considered acceptable. A continuing calibration is run on a daily basis. The percent difference from the expected value for the continuing calibration should

be

no greater than 30 percent. Deviations greater than 30 percent require re-analysis of the continuing calibration standard or a new initial calibration.

5. **Sample Analysis.** Upon delivery of the sample to the field lab, and subsequent to the start up procedures as described in Items 1, 2, 3 and 4 above, the GC analyst immediately records in the daily field log all pertinent information. Samples are cooled at 4° C if their anticipated period between sampling and preparation or analysis is greater than two hours.
6. **Duplicate Sample Analysis.** Duplicate samples are run at the discretion of the analyst to check reproducibility of the screening run. Generally, a minimum of one duplicate every ten samples is analyzed or one sample per day. Duplicate samples are considered acceptable if the % difference between duplicate analyses is less than or equal to 25%.
7. **Internal/Surrogate/Matrix Spike Recovery.** Internal standard recoveries are considered acceptable (where applicable) if the % recovery is greater than 50% and less than 200%. Surrogate percent recoveries for soil samples are considered acceptable (where applicable) if the % recovery is greater than 75% and less than 125%. matrix spike recoveries are considered acceptable (where applicable) if between 75% and 125%.
8. **Water and Soil Samples.** Water or soil samples that are not immediately prepared for analysis, are stored at 4°C.
9. **External QC Testing.** To ensure that the analytical capability is maintained and to detect any significant changes that may have occurred in accuracy and precision of the methods used, quality control samples are periodically analyzed at three to six month intervals. These samples are obtained from a chemical standards vendor such as Supelco. In addition, MyKroWaters periodically sends samples to independent laboratories for confirmatory analysis.
10. **GC and General Equipment Maintenance.** Periodic in-house maintenance is conducted of the GC such as analytical column, injection port and detector decontamination, column replacement, etc. All maintenance activities are documented in MyKroWaters' Instrument Log. Periodic in-house inspection and maintenance of the refrigerator are routinely performed. Balances used by MyKroWaters are checked for accuracy and certified by an independent firm on an annual basis.

D. Corrective Actions

In the event that an analytical system exceeds the quality control criteria, corrective action must be taken to bring the system into control prior to sample analysis. A broad array of activities are classified as corrective actions. All corrective actions are noted in the GC Run Log or the Corrective Action Logbook. Typical corrective actions are noted below.

1. **Blanks** - In the event that a blank contains target analytes at a concentration greater than the reporting limit, the blank is re-analyzed. If the re-analysis eliminates the contamination, sample analysis may resume. If re-analysis of the blank still indicates contamination the associated samples must be re-extracted and re-analyzed.
2. **Calibrations** - In the event that a continuing calibration standard does not meet the % difference criteria, routine instrument maintenance may be performed and/ or the standard must be re-analyzed. If re-analysis corrects the condition, sample analysis may proceed. If the condition persists, a new initial calibration must be performed.
3. **% Recovery** - If internal and/or surrogate standard recoveries exceed control limits the sample must be re-analyzed and/or re-extracted. If re-analysis of the sample corrects the condition the results from the second analysis are reported. If the condition persists, results from both analyses are reported and the sample is considered to exhibit a matrix effect.

Appendix A.
Field Analysis Method
Aqueous Samples for Volatile Organic Compounds (VOCs)

The following procedures outline the method utilized by MyKroWaters to conduct on-site field screening of groundwater for volatile organic compounds. Prior to analysis, the groundwater samples are collected into pre-cleaned 40 ml vials using either a peristaltic pump or inertial. An inertial pump/bailer technique is employed since this collection method exerts little to no vacuum on the sample and therefore preserves the integrity of analytes sensitive to volatilization.

Samples are analyzed on a portable GC equipped with a Photoionization Detector (PID) and/or a Dry-Electrolytic Conductivity Detector (ELCD). Analyte identification is made by comparison with known standards. The following table summarizes analytes commonly detected using this method. This method can be used to detect a wide range of additional components.

Common Analytes:

Compound	Detection Limit (PPB)
Vinyl Chloride	1
trans-1,2-Dichloroethene	2
cis-1,2-Dichloroethene	4
1,2-Dichloroethane	1
Benzene	1
Trichloroethene	4
1,1,1-Trichloroethane	4
Toluene	2
Tetrachloroethene (PCE)	4
Ethyl Benzene	4
meta & para-Xylene	4
ortho-Xylene	4
Tetrahydrofuran	10

- Equipment and Supplies:**
- 40 mL VOA vials
 - 5 mL disposable syringes
 - De-ionized water
 - Activated carbon
 - 10 mL glass syringes
 - 250 uL glass syringes
 - Traceable VOC standards

Instrumentation:

SRI Instruments Model 8610 Gas Chromatograph equipped with a 30 meter x 0.53 mm wide bore stainless steel column and dual detectors, a Photoionization Detector (PID) and/or a Dry-Electrolytic Conductivity Detector (ELCD).

Sample Preparation:

A groundwater sample is prepared by evacuating 10 mL of the sample utilizing a 10 mL glass syringe. A 5 mL syringe packed with activated carbon is inserted into the sample vial at the same time that the 10 ml of sample is removed, allowing filtered air to enter the vial. After allowing time for equilibration the sample is ready for analysis.

Analytical Conditions:

Helium carrier gas @ 8 psi,
Air reactor gas @ 2 PSI (ELCD only),
GC oven starting temp. 80 degrees C, Hold for 5.0 minutes
Ramp @ 7 degrees C/minute to 120 degrees C (~6 minutes)
Hold for 35 minutes

Sample Analysis:

Analyte identification is made using comparison with known standards. A standard is prepared by filling a clean 40 ml VOA vial with deionized water and, as with the sample vial, evacuating 10 ml of the water using the same process described above. A known quantity of a traceable VOC standard is then injected into the vial. After equilibration, 250 uL of the headspace from the vial is injected on to the GC column. Instrument response is checked to verify performance.

Once the standard is analyzed, a quantity of the headspace from the sample vial is injected onto the column. The retention times are used to determine the presence of the compounds of interest. Concentration is calculated on an external standard basis by comparing the response of the sample to the response of the standard.

Appendix B.
Field Analysis Method
Soils and Sediments for Volatile Organic Compounds (VOCs)

The following procedures outline the method utilized by MyKroWaters to conduct on-site field screening of soils and sediments for volatile organic compounds. Soil samples are collected from borings using a small scale coring device to minimize loss of volatile components. The collected samples are analyzed on a portable GC equipped with a Photoionization Detector (PID) and/or Dry-Electrolytic Conductivity Detector (ELCD). Identification of analytes is made by comparison with known standards. The following table summarizes analytes commonly detected using this method. This method can be used to detect a wide range of additional components.

Common Analytes:

Compound	Detection Limit (PPB)
Vinyl Chloride	40
trans-1,2-Dichloroethene	20
cis-1,2-Dichloroethene	40
1,2-Dichloroethane	10
Benzene	10
Trichloroethene	40
1,1,1-Trichloroethane	40
Toluene	20
Tetrachloroethene (PCE)	40
Ethyl Benzene	40
meta & para-Xylene	40
ortho-Xylene	40
Tetrahydrofuran	100

Equipment and Supplies:

- 40 mL VOA vials
- 5 mL disposable syringes
- De-ionized water
- Activated carbon
- 10 mL glass syringes
- 250 uL glass syringes
- Traceable VOC standards

Instrumentation:

SRI Instruments Model 8610 Gas Chromatograph equipped with a 30 meter x 0.53 mm wide bore stainless steel column and dual detectors, a Photoionization Detector (PID) and/or a Dry-Electrolytic Conductivity Detector (ELCD).

Sample Preparation:

A pre-cleaned, empty 40 ml VOA vial is filled with deionized water and then sealed with a Teflon faced cap. Ten mL of the deionized water is evacuated utilizing a 10 mL glass syringe. A 5 mL syringe packed with activated carbon is also inserted into the vial at the same time as the 10 mL syringe to allow filtered air into the vial. Once the water is removed, the vial is tared. A portion of the collected soil sample is collected using a disposable 5 mL syringe as a small coring device. The sample portion is then added to the VOA vial and the vial is sealed and weighed to determine the sample amount. The vial, containing the deionized water and the sample, is agitated to ensure release of volatile components. After allowing time for equilibration, the sample is ready for analysis.

Analytical Conditions:

Helium carrier gas @ 8 psi,
Air reactor gas @ 2 PSI (ELCD only),
GC oven starting temp. 80 degrees C, Hold for 5.0 minutes
Ramp @ 7 degrees C/minute to 120 degrees C (~6 minutes)
Hold for 35 minutes

Sample Analysis:

Analyte identification is made using comparison with known standards. A standard is prepared by filling a clean 40 ml VOA vial with deionized water and, as with the sample vial, evacuating 10 ml of the water using the same process described above. A known quantity of a traceable VOC standard is then injected into the vial. After equilibration, 250 uL of the headspace from the vial is injected on to the GC column. Instrument response is checked to verify performance.

Once the standard is analyzed, a quantity of the headspace from the sample vial is injected onto the column. The retention times are used to determine the presence of the compounds of interest. Concentration is calculated on an external standard basis by comparing the response of the sample to the response of the standard.

Appendix C.
Field Analysis Method
Soil Vapor and Air for Volatile Organic Compounds (VOCs)

The following procedures outline the method utilized by MyKroWaters to conduct on-site field screening of soil vapor and air for volatile organic compounds. Air samples are collected using a gas tight syringe. Soil vapor samples are collected using a peristaltic pump and dedicated tubing. The collected samples are analyzed on a portable GC equipped with a Photoionization Detector (PID) and/or Dry-Electrolytic Conductivity Detector (ELCD). Identification of analytes is made by comparison with known standards. The following table summarizes analytes commonly detected using this method. This method can be used to detect a wide range of additional components.

Common Analytes:

Compound	Detection Limit (PPM)
MTBE	2
Vinyl Chloride	2
trans-1,2-Dichloroethene	1
cis-1,2-Dichloroethene	2
1,2-Dichloroethane	1
Benzene	1
Trichloroethene	2
1,1,1-Trichloroethane	2
Toluene	1
Tetrachloroethene (PCE)	2
Ethyl Benzene	2
Total Xylenes	2

Equipment and Supplies:

- 40 mL VOA vials
- 250 uL glass syringes
- Traceable VOC standards

Instrumentation:

SRI Instruments Model 8610 Gas Chromatograph equipped with a 30 meter x 0.53 mm wide bore stainless steel column and dual detectors, a Photoionization Detector (PID) and/or a Dry-Electrolytic Conductivity Detector (ELCD).

Sample Preparation:

Air samples are collected and analyzed directly with no sample preparation. Soil vapor samples are collected after allowing for sufficient time to evacuate the tubing and soil vapor point used for sample collection. No further sample preparation is performed.

Analytical Conditions:

Helium carrier gas @ 8 psi,
Air reactor gas @ 2 PSI (ELCD only),
GC oven starting temp. 80 degrees C, Hold for 5.0 minutes
Ramp @ 7 degrees C/minute to 120 degrees C (~6 minutes)

Sample Analysis:

Analyte identification is made using comparison with known standards. A known quantity of a traceable VOC standard is then injected on to the GC column. Instrument response is checked to verify performance.

Once the standard is analyzed, samples are collected and injected onto the column. The retention times are used to determine the presence of the compounds of interest. Concentration is calculated on an external standard basis by comparing the response of the sample to the response of the standard.

Appendix D.
Field Analysis Method
Soils and Sediments for Total Petroleum Hydrocarbons (TPH)

The following procedures outline the method utilized by MyKroWaters to conduct on-site field screening of soils and sediments for total petroleum hydrocarbons. The method is based on a small scale extraction process using distilled water, methanol and hexane. The sample is analyzed on a portable GC equipped with a Flame Ionization Detector (FID). Identification is made by comparison with known standards.

Analytes:

Compound	Detection Limit (PPM)
Jet Fuel	400
Kerosene	400
Diesel Fuel	400
#2,#4 Fuel Oils	400

Equipment and Supplies:

- Pesticide residue grade hexane
- Pesticide residue grade methanol
- De-ionized water
- 2 mL glass vial w/Teflon faced septa
- 10 uL glass syringe
- Traceable Petroleum standards

Instrumentation:

SRI Instruments Model 8610 Gas Chromatograph (GC) equipped with a 30 meter x 0.53 mm wide bore stainless steel column and a Flame Ionization Detector (FID).

Sample Preparation:

A pre-determined amount of sample is weighed into a 2 mL glass vial. 100 uL of deionized water, 400 uL of methanol and 500 uL of hexane are added in the vial and introduced to the sample. The vial is agitated for at least twenty seconds. The contents of the vial are allowed to settle, and the phases separate. The top layer (hexane) is now ready for analysis.

Analytical Conditions:

Hydrogen carrier gas @ 8 psi,
Air detector gas @ 150 ml/min,
Hydrogen detector gas @ 50 ml/min,
GC oven starting temp. 60 degrees C, Hold for 0.5 minutes
Ramp @ 7 degrees C/minute to 260 degrees C (28.6 minutes)
Hold for 15 minutes

Sample Analysis:

Identification of analytes is made by comparison with known standards. To do this, a quantity (1 to 2 uL) of a traceable petroleum standard is injected onto the GC column. Instrument response is checked to verify performance. A portion of the prepared sample is then injected onto the column and the retention times and elution profile are used to determine the presence of petroleum hydrocarbons. Concentration is calculated on an external standard basis by comparing the response of the sample to the response of the standard.

Appendix E.
Field Analysis Method
Soils and Sediments for Polychlorinated Biphenyls (PCBs)

The following procedures outline the method utilized by MyKroWaters to conduct on-site field screening of soils and sediments for polychlorinated biphenyls. The method is based on a small scale extraction process using distilled water, methanol and hexane. The sample is analyzed on a portable GC equipped with a dry-electrolytic conductivity detector (DELCD). Identification is made by comparison with known standards.

Analytes:

Compound	Detection Limit (PPM)
Aroclor 1016	1.0
Aroclor 1221	1.0
Aroclor 1242	1.0
Aroclor 1248	1.0
Aroclor 1254	1.0
Aroclor 1260	1.0
Aroclor 1262	1.0

Equipment and Supplies:

- Pesticide residue grade hexane
- Pesticide residue grade methanol
- De-ionized water
- 2 mL glass vial w/Teflon faced septa
- 10 uL glass syringe
- Traceable PCB standards

Instrumentation:

SRI Instruments Model 8610 gas Chromatograph equipped with a 30 meter x 0.53 mm wide bore stainless steel column and a dry-electrolytic conductivity detector (ELCD).

Sample Preparation:

A pre-determined amount of the sample is weighed into a 2 mL glass vial. 100 uL of deionized water, 400 uL of methanol and 500 uL of hexane are added to the vial and introduced to the sample. The vial is then agitated for at least twenty seconds. and the contents are allowed to settle. The phases then separate. The top layer (hexane) is now ready for analysis.

Analytical Conditions:

Helium carrier gas @ 8 psi, Air reactor gas @ 2 PSI
GC oven starting temp. 200 degrees C, Hold for 0.5 minutes
Ramp @ 5 degrees C/minute to 240 degrees C (4 minutes)
Hold for 35 minutes

Sample Analysis:

Analyte identification is made by comparison with known standards. A quantity (1 to 2 uL) of a traceable PCB standard is injected onto the GC column. Instrument response is checked to verify performance. A quantity of the sample is then injected onto the column and the retention times and elution profile are used to determine the presence of PCBs. Concentration is calculated on an external standard basis by comparing the response of the sample to the response of the standard



39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL. 413/525-2332

ATC ASSOCIATES - PROVIDENCE
ONE RICHMOND SQUARE TECH. CENTER
PROVIDENCE, RI 02906

CONTACT: ADAM SULLIVAN
FIELD OFFICE: CR

REPORT DATE: 03/23/99

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-40984
JOB NUMBER: -

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report:

PROJECT LOCATION:

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
SG-07	99805853	AIR	NOT SPECIFIED	to-14
SG-08	99805854	AIR	NOT SPECIFIED	to-14
SG-10	99805855	AIR	NOT SPECIFIED	to-14
SG-12	99805856	AIR	NOT SPECIFIED	to-14

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

- AIHA 308
- MASSACHUSETTS MA100
- CONNECTICUT PH-0567
- NEW YORK ELAP 10899
- AIHA ELLAP (LEAD) 6838
- NEW HAMPSHIRE 2516
- VERMONT DOH (LEAD) No. 15036
- RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod Kopyscinski 3/23/99
SIGNATURE DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

Results for Method To-14

Lab ID Number: 99B05852
 Client ID Number: SG-07

LIMS Number: 40984
 Date Analyzed: 3/19/99
 Analyst: CJW

<u>Analyte:</u>	Sample Results PPBv	Sample Results UG/M3	MDL PPBv	MDL UG/M3
Dichlorodifluoromethane (freon 12)	1675	8283	50.0	125.0
Chloromethane	ND	ND	0.5	0.8
1,2-Dichlorotetrafluoroethane (freon 114)	430	2990	50.0	175.0
Vinyl Chloride	ND	ND	0.5	1.2
Bromomethane	ND	ND	0.5	2.0
Chloroethane	ND	ND	0.5	1.2
Trichlorofluoromethane (freon 11)	49	273	0.5	2.6
1,1-Dichloroethene	ND	ND	0.5	2.0
Methylene Chloride	0.65	2.3	0.5	1.8
1,1,2-Trichlorotrifluoroethane (freon 113)	14	107	0.5	4.0
1,1-Dichloroethane	ND	ND	0.5	2.0
Methyl tert Butyl-Ether	40	144	0.5	2.0
1,2-Dichloroethene	ND	ND	0.5	2.0
Chloroform	0.66	3.2	0.5	2.5
1,2-Dichloroethane	ND	ND	0.5	2.0
1,1,1-Trichloroethane	1.1	6.0	0.5	3.0
Benzene	3.1	9.9	0.5	1.6
Carbon Tetrachloride	0.83	5.2	0.5	3.0
1,2-Dichloropropane	ND	ND	0.5	2.5
Trichloroethene	0.87	4.7	0.5	2.5
1,3-Dichloropropene (cis)	ND	ND	0.5	2.2
1,3-Dichloropropene (trans)	ND	ND	0.5	2.2
1,1,2-trichloroethane	ND	ND	0.5	2.5
Toluene	17	64	0.5	2.0
1,2-Dibromoethane	ND	ND	0.5	4.0
Tetrachloroethene	4.0	27	0.5	3.5
Chlorobenzene	ND	ND	0.5	2.5
Ethylbenzene	5.5	24	0.5	2.0
M/P-Xylene	22	96	0.5	2.0
Styrene	ND	ND	0.5	2.0
O-Xylene	7.5	33	0.5	2.0
1,1,2,2-tetrachloroethane	ND	ND	0.5	3.5
1,3,5-Trimethylbenzene	2.8	14	0.5	2.5
1,2,4-Trimethylbenzene	ND	ND	0.5	2.5

Results for Method To-14

Lab ID Number:	99B05852	LIMS Number:	40984
Client ID Number:	SG-07	Date Analyzed:	3/19/99
		Analyst:	CJW

<u>Analyte:</u>	Sample Results PPBv	Sample Results UG/M3	MDL PPBv	MDL UG/M3
1,3-Dichlorobenzene	ND	ND	0.5	3.0
1,4-Dichlorobenzene	ND	ND	0.5	3.0
1,2-Dichlorobenzene	ND	ND	0.5	3.0
1,2,4-Trichlorobenzene	ND	ND	0.5	4.0
Hexachlorobutadiene	ND	ND	0.5	5.0
 Surrogate Recovery (4-Bromofluorobenzene)	 109	 %		

MDL = Minimum Detectable Limit
 ND = Not Detected
 PPBv = Parts Per Billion By Volume

Method: TO-14 (Modified)

Sampled into a Tedlar Bag. Analyzed by GCMS.

Results for Method To-14

Lab ID Number: 99B05853
 Client ID Number: SG-08

LIMS Number: 40984
 Date Analyzed: 3/19/99
 Analyst: CJW

<u>Analyte:</u>	Sample	Sample	MDL	MDL
	Results	Results	PPBv	UG/M3
	PPBv	UG/M3		
Dichlorodifluoromethane (freon 12)	850	4200	50.0	125.0
Chloromethane	ND	ND	0.5	0.8
1,2-Dichlorotetrafluoroethane (freon 114)	185	1290	50.0	175.0
Vinyl Chloride	ND	ND	0.5	1.2
Bromomethane	ND	ND	0.5	2.0
Chloroethane	ND	ND	0.5	1.2
Trichlorofluoromethane (freon 11)	22	122	0.5	2.6
1,1-Dichloroethene	ND	ND	0.5	2.0
Methylene Chloride	0.75	2.6	0.5	1.8
1,1,2-Trichlorotrifluoroethane (freon 113)	23	175	0.5	4.0
1,1-Dichloroethane	ND	ND	0.5	2.0
Methyl tert Butyl-Ether	47	169	0.5	2.0
1,2-Dichloroethene	ND	ND	0.5	2.0
Chloroform	7.0	34	0.5	2.5
1,2-Dichloroethane	ND	ND	0.5	2.0
1,1,1-Trichloroethane	9.5	52	0.5	3.0
Benzene	4.4	14	0.5	1.6
Carbon Tetrachloride	4.9	31	0.5	3.0
1,2-Dichloropropane	0.73	3.4	0.5	2.5
Trichloroethene	1.6	8.6	0.5	2.5
1,3-Dichloropropene (cis)	ND	ND	0.5	2.2
1,3-Dichloropropene (trans)	ND	ND	0.5	2.2
1,1,2-trichloroethane	ND	ND	0.5	2.5
Toluene	33	124	0.5	2.0
1,2-Dibromoethane	ND	ND	0.5	4.0
Tetrachloroethene	7.4	50	0.5	3.5
Chlorobenzene	ND	ND	0.5	2.5
Ethylbenzene	8.5	37	0.5	2.0
M/P-Xylene	30	130	0.5	2.0
Styrene	ND	ND	0.5	2.0
O-Xylene	11	48	0.5	2.0
1,1,2,2-tetrachloroethane	ND	ND	0.5	3.5
1,3,5-Trimethylbenzene	3.9	19	0.5	2.5
1,2,4-Trimethylbenzene	ND	ND	0.5	2.5

Results for Method To-14

Lab ID Number: 99B05853
 Client ID Number: SG-08

LIMS Number: 40984
 Date Analyzed: 3/19/99
 Analyst: CJW

<u>Analyte:</u>	Sample Results PPBv	Sample Results UG/M3	MDL PPBv	MDL UG/M3
1,3-Dichlorobenzene	ND	ND	0.5	3.0
1,4-Dichlorobenzene	ND	ND	0.5	3.0
1,2-Dichlorobenzene	ND	ND	0.5	3.0
1,2,4-Trichlorobenzene	ND	ND	0.5	4.0
Hexachlorobutadiene	ND	ND	0.5	5.0
Surrogate Recovery (4-Bromofluorobenzene)	109	%		

MDL = Minimum Detectable Limit
 ND = Not Detected
 PPBv = Parts Per Billion By Volume

Method: TO-14 (Modified)

Sampled into a Tedlar Bag. Analyzed by GCMS.

Results for Method To-14

Lab ID Number: 99B05854
 Client ID Number: SG-10

LIMS Number: 40984
 Date Analyzed: 3/19/99
 Analyst: CJW

<u>Analyte:</u>	Sample	Sample	MDL	MDL
	Results	Results	PPBv	UG/M3
	PPBv	UG/M3		
Dichlorodifluoromethane (freon 12)	820	4055	50.0	125.0
Chloromethane	ND	ND	0.5	0.8
1,2-Dichlorotetrafluoroethane (freon 114)	180	1250	50.0	175.0
Vinyl Chloride	0.53	1.4	0.5	1.2
Bromomethane	ND	ND	0.5	2.0
Chloroethane	ND	ND	0.5	1.2
Trichlorofluoromethane (freon 11)	170	946	50.0	130.0
1,1-Dichloroethene	ND	ND	0.5	2.0
Methylene Chloride	0.50	1.7	0.5	1.8
1,1,2-Trichlorotrifluoroethane (freon 113)	ND	ND	0.5	4.0
1,1-Dichloroethane	ND	ND	0.5	2.0
Methyl tert Butyl-Ether	31	112	0.5	2.0
1,2-Dichloroethene	ND	ND	0.5	2.0
Chloroform	1.6	7.8	0.5	2.5
1,2-Dichloroethane	ND	ND	0.5	2.0
1,1,1-Trichloroethane	42	229	0.5	3.0
Benzene	3.9	12	0.5	1.6
Carbon Tetrachloride	ND	ND	0.5	3.0
1,2-Dichloropropane	ND	ND	0.5	2.5
Trichloroethene	0.50	2.7	0.5	2.5
1,3-Dichloropropene (cis)	ND	ND	0.5	2.2
1,3-Dichloropropene (trans)	ND	ND	0.5	2.2
1,1,2-trichloroethane	ND	ND	0.5	2.5
Toluene	19	72	0.5	2.0
1,2-Dibromoethane	ND	ND	0.5	4.0
Tetrachloroethene	3.6	24	0.5	3.5
Chlorobenzene	ND	ND	0.5	2.5
Ethylbenzene	4.4	19	0.5	2.0
M/P-Xylene	18	78	0.5	2.0
Styrene	ND	ND	0.5	2.0
O-Xylene	5.6	24	0.5	2.0
1,1,2,2-tetrachloroethane	ND	ND	0.5	3.5
1,3,5-Trimethylbenzene	1.9	9.3	0.5	2.5
1,2,4-Trimethylbenzene	ND	ND	0.5	2.5

Results for Method To-14

Lab ID Number:	99B05854	LIMS Number:	40984
Client ID Number:	SG-10	Date Analyzed:	3/19/99
		Analyst:	CJW

<u>Analyte:</u>	Sample Results PPBv	Sample Results UG/M3	MDL PPBv	MDL UG/M3
1,3-Dichlorobenzene	ND	ND	0.5	3.0
1,4-Dichlorobenzene	ND	ND	0.5	3.0
1,2-Dichlorobenzene	ND	ND	0.5	3.0
1,2,4-Trichlorobenzene	ND	ND	0.5	4.0
Hexachlorobutadiene	ND	ND	0.5	5.0
 Surrogate Recovery (4-Bromofluorobenzene)	 106	 %		

MDL = Minimum Detectable Limit
 ND = Not Detected
 PPBv = Parts Per Billion By Volume

Method: TO-14 (Modified)

Sampled into a Tedlar Bag. Analyzed by GCMS.

Results for Method To-14

Lab ID Number:	99B05855	LIMS Number:	40984
Client ID Number:	SG-12	Date Analyzed:	3/19/99
		Analyst:	CJW

<u>Analyte:</u>	Sample Results PPBv	Sample Results UG/M3	MDL PPBv	MDL UG/M3
Dichlorodifluoromethane (freon 12)	5750	28400	50.0	125.0
Chloromethane	ND	ND	0.5	0.8
1,2-Dichlorotetrafluoroethane (freon 114)	2720	18900	50.0	175.0
Vinyl Chloride	ND	ND	0.5	1.2
Bromomethane	ND	ND	0.5	2.0
Chloroethane	ND	ND	0.5	1.2
Trichlorofluoromethane (freon 11)	150	834	50.0	130.0
1,1-Dichloroethene	ND	ND	0.5	2.0
Methylene Chloride	ND	ND	0.5	1.8
1,1,2-Trichlorotrifluoroethane (freon 113)	ND	ND	0.5	4.0
1,1-Dichloroethane	ND	ND	0.5	2.0
Methyl tert Butyl-Ether	41	148	0.5	2.0
1,2-Dichloroethene	ND	ND	0.5	2.0
Chloroform	ND	ND	0.5	2.5
1,2-Dichloroethane	ND	ND	0.5	2.0
1,1,1-Trichloroethane	110	600	50.0	150.0
Benzene	3.5	11	0.5	1.6
Carbon Tetrachloride	ND	ND	0.5	3.0
1,2-Dichloropropane	ND	ND	0.5	2.5
Trichloroethene	ND	ND	0.5	2.5
1,3-Dichloropropene (cis)	ND	ND	0.5	2.2
1,3-Dichloropropene (trans)	ND	ND	0.5	2.2
1,1,2-trichloroethane	ND	ND	0.5	2.5
Toluene	31	117	0.5	2.0
1,2-Dibromoethane	ND	ND	0.5	4.0
Tetrachloroethene	4.9	33	0.5	3.5
Chlorobenzene	ND	ND	0.5	2.5
Ethylbenzene	5.3	23	0.5	2.0
M/P-Xylene	22	96	0.5	2.0
Styrene	ND	ND	0.5	2.0
O-Xylene	7.4	32	0.5	2.0
1,1,2,2-tetrachloroethane	ND	ND	0.5	3.5
1,3,5-Trimethylbenzene	2.7	13	0.5	2.5
1,2,4-Trimethylbenzene	ND	ND	0.5	2.5

Results for Method To-14

Lab ID Number:	99B05855	LIMS Number:	40984
Client ID Number:	SG-12	Date Analyzed:	3/19/99
		Analyst:	CJW

<u>Analyte:</u>	Sample Results PPBv	Sample Results UG/M3	MDL PPBv	MDL UG/M3
1,3-Dichlorobenzene	ND	ND	0.5	3.0
1,4-Dichlorobenzene	ND	ND	0.5	3.0
1,2-Dichlorobenzene	ND	ND	0.5	3.0
1,2,4-Trichlorobenzene	ND	ND	0.5	4.0
Hexachlorobutadiene	ND	ND	0.5	5.0
 Surrogate Recovery (4-Bromofluorobenzene)	 107	 %		

MDL = Minimum Detectable Limit
 ND = Not Detected
 PPBv = Parts Per Billion By Volume

Method: TO-14 (Modified)

Sampled into a Tedlar Bag. Analyzed by GCMS.



(413) 525-2332
FAX (413) 525-6405

CHAIN OF CUSTODY RECORD

39 SPRUCE ST • 2ND FLOOR • EAST LONGMEADOW, MA 01108

Client Name: ATC Associates Inc.
 Attn: ADAM SULLIVAN
 Address: One Richmond Square
Providence RI 02906
 Site Location: Springfield Ave
 Sampled By: Mykrometers Inc

Telephone: (401) 274-3155
 Batch #: L1175-40984
 Project #: 17646. 0005
 Client P.O. #:
 Fax #:

Field Sample I.D.	Sample Description	Lab #	DATE SAMPLED		Grab	MATRIX					Container (Use Code)		
			Start Date/Time	Stop Date/Time		Compos	WASTE WATER	GROUND WATER	DKG WATER	Soil		Air	Other
SG-7	Air (Soil Gas)		5/17/11 1:00	5/17/11 2:05	✓								
SG-8					✓								
SG-10					✓								
SG-12					✓								

CONTAINER CODE: P: PLASTIC (___ Size) V - 40 ml vial G = Glass (___ size) A = 1000 ml Amber 0 = Other

PREPRESERVATIVE CODE: I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₃ O = OTHER

Turnaround Requested: 24-Hour 48-Hour Normal

Received by: (Signature) Date Time

Retinquished by: (Signature) Date Time

Retinquished by: (Signature) Date Time

Remarks/Comments: On-site GC identified a compound eluting 3 by 10 min before vinyl chloride.

*MATRIX OTHER

APPENDIX G

ADAM SULLIVAN
 ASSOCIATES - PROVIDENCE
 ONE RICHMOND SQUARE TECH. CENTER
 PROVIDENCE, RI 02906

39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL. 413/525-2332
 Contact: ADAM SULLIVAN
 Field Office: CR

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Project Number: 1764600005

Project Location: SPRINGFIELD AVE LOTS, PROVIDENCE, RI
 Date Received: 03/22/99

LIMS-BAT #: LIMS-40999
 Job Number: -
 Sample Matrix: GRND WATER

Sampled: 03/18/99
 NOT SPECIFIED
 GW-11

	Units	99805941	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	ug/l	ND	03/23/99	WSD	50.0		
Acrolein	ug/l	ND	03/23/99	WSD	20.0		
Acrylonitrile	ug/l	ND	03/23/99	WSD	7.6		
Benzene	ug/l	ND	03/23/99	WSD	0.6		
Bromobenzene	ug/l	ND	03/23/99	WSD	0.5		
Bromochloromethane	ug/l	ND	03/23/99	WSD	0.7		
Bromodichloromethane	ug/l	ND	03/23/99	WSD	0.4		
Bromomethane	ug/l	ND	03/23/99	WSD	1.2		
moform	ug/l	ND	03/23/99	WSD	1.2		
-Butanone (MEK)	ug/l	ND	03/23/99	WSD	12.0		
n-Butylbenzene	ug/l	ND	03/23/99	WSD	0.7		
sec-Butylbenzene	ug/l	ND	03/23/99	WSD	0.6		
tert-Butylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Carbon Disulfide	ug/l	ND	03/23/99	WSD	0.5		
Carbon Tetrachloride	ug/l	ND	03/23/99	WSD	0.5		
Chlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
Chlorodibromomethane	ug/l	ND	03/23/99	WSD	0.5		
Chloroethane	ug/l	ND	03/23/99	WSD	0.8		
2-Chloroethylvinylether	ug/l	ND	03/23/99	WSD	9.6		
Chloroform	ug/l	ND	03/23/99	WSD	0.8		
Chloromethane	ug/l	ND	03/23/99	WSD	1.2		
2-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
4-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
1,2-Dibromo-3-Chloropropane	ug/l	ND	03/23/99	WSD	1.6		
1,2-Dibromoethane	ug/l	ND	03/23/99	WSD	0.7		
Dibromomethane	ug/l	ND	03/23/99	WSD	1.1		
1,2-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
1,3-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
1,4-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
cis-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.1		
Dichlorodifluoromethane	ug/l	ND	03/23/99	WSD	1.0		

ND = Method Detection Limit
 ND = Not Detected
 BDL = Below Detection Limit
 NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-11

	Units	99805941	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	ug/l	ND	03/23/99	WSD	0.7		
1,2-Dichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.8		
1,2-Dichloropropane	ug/l	ND	03/23/99	WSD	0.6		
1,3-Dichloropropane	ug/l	ND	03/23/99	WSD	0.5		
-Dichloropropane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloropropene	ug/l	ND	03/23/99	WSD	1.4		
cis-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.4		
Ethyl Benzene	ug/l	ND	03/23/99	WSD	0.6		
Ethyl Methacrylate	ug/l	ND	03/23/99	WSD	0.8		
Hexachlorobutadiene	ug/l	ND	03/23/99	WSD	1.3		
2-Hexanone	ug/l	ND	03/23/99	WSD	9.7		
Iodomethane	ug/l	ND	03/23/99	WSD	0.8		
Isopropylbenzene	ug/l	ND	03/23/99	WSD	0.6		
p-Isopropyltoluene	ug/l	ND	03/23/99	WSD	0.7		
MTBE	ug/l	ND	03/23/99	WSD	0.8		
Methylene Chloride	ug/l	ND	03/23/99	WSD	3.0		
MIBK	ug/l	ND	03/23/99	WSD	8.8		
Naphthalene	ug/l	ND	03/23/99	WSD	1.0		
n-Propylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Styrene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	0.5		
1,1,2,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	1.4		
Tetrachloroethylene	ug/l	ND	03/23/99	WSD	0.4		
Toluene	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,2,4-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1-Trichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1,2-Trichloroethane	ug/l	ND	03/23/99	WSD	0.7		

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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

03/23/99
page 3 of 15

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-11

	Units	99805941	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	ug/l	ND	03/23/99	WSD	1.0		
Trichlorofluoromethane	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichloropropane	ug/l	ND	03/23/99	WSD	1.3		
1,2,4-Trimethylbenzene	ug/l	ND	03/23/99	WSD	0.7		
1,3,5-Trimethylbenzene	ug/l	ND	03/23/99	WSD	1.0		
Vinyl Acetate	ug/l	ND	03/23/99	WSD	16.4		
Vinyl Chloride	ug/l	ND	03/23/99	WSD	0.3		
ylene	ug/l	ND	03/23/99	WSD	1.3		
o + p Xylene	ug/l	ND	03/23/99	WSD	0.5		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-15

	Units	99B05942	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	ug/l	ND	03/23/99	WSD	50.0		
Acrolein	ug/l	ND	03/23/99	WSD	20.0		
Acrylonitrile	ug/l	ND	03/23/99	WSD	7.6		
Benzene	ug/l	ND	03/23/99	WSD	0.6		
Bromobenzene	ug/l	ND	03/23/99	WSD	0.5		
Bromochloromethane	ug/l	ND	03/23/99	WSD	0.7		
Promodichloromethane	ug/l	ND	03/23/99	WSD	0.4		
momethane	ug/l	ND	03/23/99	WSD	1.2		
Bromoform	ug/l	ND	03/23/99	WSD	1.2		
2-Butanone (MEK)	ug/l	ND	03/23/99	WSD	12.0		
n-Butylbenzene	ug/l	ND	03/23/99	WSD	0.7		
sec-Butylbenzene	ug/l	ND	03/23/99	WSD	0.6		
tert-Butylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Carbon Disulfide	ug/l	ND	03/23/99	WSD	0.5		
Carbon Tetrachloride	ug/l	ND	03/23/99	WSD	0.5		
Chlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
Chlorodibromomethane	ug/l	ND	03/23/99	WSD	0.5		
Chloroethane	ug/l	ND	03/23/99	WSD	0.8		
2-Chloroethylvinylether	ug/l	ND	03/23/99	WSD	9.6		
Chloroform	ug/l	ND	03/23/99	WSD	0.8		
Chloromethane	ug/l	ND	03/23/99	WSD	1.2		
2-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
4-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
1,2-Dibromo-3-Chloropropane	ug/l	ND	03/23/99	WSD	1.6		
1,2-Dibromoethane	ug/l	ND	03/23/99	WSD	0.7		
Dibromomethane	ug/l	ND	03/23/99	WSD	1.1		
1,2-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
1,3-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
1,4-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
cis-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.1		
Nichlorodifluoromethane	ug/l	ND	03/23/99	WSD	1.0		

MDL = Method Detection Limit
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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-15

	Units	99805942	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	ug/l	ND	03/23/99	WSD	0.7		
1,2-Dichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.8		
1,2-Dichloropropane	ug/l	ND	03/23/99	WSD	0.6		
1,3-Dichloropropane	ug/l	ND	03/23/99	WSD	0.5		
-Dichloropropane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloropropene	ug/l	ND	03/23/99	WSD	1.4		
cis-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.4		
Ethyl Benzene	ug/l	ND	03/23/99	WSD	0.6		
Ethyl Methacrylate	ug/l	ND	03/23/99	WSD	0.8		
Hexachlorobutadiene	ug/l	ND	03/23/99	WSD	1.3		
2-Hexanone	ug/l	ND	03/23/99	WSD	9.7		
Iodomethane	ug/l	ND	03/23/99	WSD	0.8		
Isopropylbenzene	ug/l	ND	03/23/99	WSD	0.6		
p-Isopropyltoluene	ug/l	ND	03/23/99	WSD	0.7		
MTBE	ug/l	ND	03/23/99	WSD	0.8		
Methylene Chloride	ug/l	ND	03/23/99	WSD	3.0		
MIBK	ug/l	ND	03/23/99	WSD	8.8		
Naphthalene	ug/l	ND	03/23/99	WSD	1.0		
n-Propylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Styrene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	0.5		
1,1,2,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	1.4		
Tetrachloroethylene	ug/l	ND	03/23/99	WSD	0.4		
Toluene	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,2,4-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1-Trichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1,2-Trichloroethane	ug/l	ND	03/23/99	WSD	0.7		

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03/23/99
page 6 of 15

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-15

	Units	99B05942	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	ug/l	ND	03/23/99	WSD	1.0		
Trichlorofluoromethane	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichloropropane	ug/l	ND	03/23/99	WSD	1.3		
1,2,4-Trimethylbenzene	ug/l	ND	03/23/99	WSD	0.7		
1,3,5-Trimethylbenzene	ug/l	ND	03/23/99	WSD	1.0		
Vinyl Acetate	ug/l	ND	03/23/99	WSD	16.4		
Vinyl Chloride	ug/l	ND	03/23/99	WSD	0.3		
ylene	ug/l	ND	03/23/99	WSD	1.3		
o + p Xylene	ug/l	ND	03/23/99	WSD	0.5		

MDL = Method Detection Limit
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NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-22

	Units	99B05943	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	ug/l	ND	03/23/99	WSD	50.0		
Acrolein	ug/l	ND	03/23/99	WSD	20.0		
Acrylonitrile	ug/l	ND	03/23/99	WSD	7.6		
Benzene	ug/l	ND	03/23/99	WSD	0.6		
Bromobenzene	ug/l	ND	03/23/99	WSD	0.5		
Bromochloromethane	ug/l	ND	03/23/99	WSD	0.7		
Bromodichloromethane	ug/l	ND	03/23/99	WSD	0.4		
bromomethane	ug/l	ND	03/23/99	WSD	1.2		
bromoform	ug/l	ND	03/23/99	WSD	1.2		
2-Butanone (MEK)	ug/l	ND	03/23/99	WSD	12.0		
n-Butylbenzene	ug/l	ND	03/23/99	WSD	0.7		
sec-Butylbenzene	ug/l	ND	03/23/99	WSD	0.6		
tert-Butylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Carbon Disulfide	ug/l	ND	03/23/99	WSD	0.5		
Carbon Tetrachloride	ug/l	ND	03/23/99	WSD	0.5		
Chlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
Chlorodibromomethane	ug/l	ND	03/23/99	WSD	0.5		
Chloroethane	ug/l	ND	03/23/99	WSD	0.8		
2-Chloroethylvinylether	ug/l	ND	03/23/99	WSD	9.6		
Chloroform	ug/l	ND	03/23/99	WSD	0.8		
Chloromethane	ug/l	ND	03/23/99	WSD	1.2		
2-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
4-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
1,2-Dibromo-3-Chloropropane	ug/l	ND	03/23/99	WSD	1.6		
1,2-Dibromoethane	ug/l	ND	03/23/99	WSD	0.7		
Dibromomethane	ug/l	ND	03/23/99	WSD	1.1		
1,2-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
1,3-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
1,4-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
cis-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.1		
Dichlorodifluoromethane	ug/l	2.6	03/23/99	WSD	1.0		

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Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-22

	Units	99805943	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	ug/l	ND	03/23/99	WSD	0.7		
1,2-Dichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.8		
1,2-Dichloropropane	ug/l	ND	03/23/99	WSD	0.6		
1,3-Dichloropropane	ug/l	ND	03/23/99	WSD	0.5		
2,2-Dichloropropane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloropropene	ug/l	ND	03/23/99	WSD	1.4		
cis-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.4		
Ethyl Benzene	ug/l	ND	03/23/99	WSD	0.6		
Ethyl Methacrylate	ug/l	ND	03/23/99	WSD	0.8		
Hexachlorobutadiene	ug/l	ND	03/23/99	WSD	1.3		
2-Hexanone	ug/l	ND	03/23/99	WSD	9.7		
Iodomethane	ug/l	ND	03/23/99	WSD	0.8		
Isopropylbenzene	ug/l	ND	03/23/99	WSD	0.6		
p-Isopropyltoluene	ug/l	ND	03/23/99	WSD	0.7		
MTBE	ug/l	ND	03/23/99	WSD	0.8		
Methylene Chloride	ug/l	ND	03/23/99	WSD	3.0		
MIBK	ug/l	ND	03/23/99	WSD	8.8		
Naphthalene	ug/l	53.2	03/23/99	WSD	1.0		
n-Propylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Styrene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	0.5		
1,1,2,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	1.4		
Tetrachloroethylene	ug/l	ND	03/23/99	WSD	0.4		
Toluene	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,2,4-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1-Trichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1,2-Trichloroethane	ug/l	ND	03/23/99	WSD	0.7		

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BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-22

	Units	99805943	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	ug/l	ND	03/23/99	WSD	1.0		
Trichlorofluoromethane	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichloropropane	ug/l	ND	03/23/99	WSD	1.3		
1,2,4-Trimethylbenzene	ug/l	1.1	03/23/99	WSD	0.7		
1,3,5-Trimethylbenzene	ug/l	BDL	03/23/99	WSD	1.0		
Vinyl Acetate	ug/l	ND	03/23/99	WSD	16.4		
Vinyl Chloride	ug/l	ND	03/23/99	WSD	0.3		
ylene	ug/l	ND	03/23/99	WSD	1.3		
o + p Xylene	ug/l	ND	03/23/99	WSD	0.5		

MDL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 176460005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-3

	Units	99B05939	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	ug/l	ND	03/23/99	WSD	50.0		
Acrolein	ug/l	ND	03/23/99	WSD	20.0		
Acrylonitrile	ug/l	ND	03/23/99	WSD	7.6		
Benzene	ug/l	ND	03/23/99	WSD	0.6		
Bromobenzene	ug/l	ND	03/23/99	WSD	0.5		
Bromochloromethane	ug/l	ND	03/23/99	WSD	0.7		
Bromodichloromethane	ug/l	ND	03/23/99	WSD	0.4		
bromomethane	ug/l	ND	03/23/99	WSD	1.2		
Bromoform	ug/l	ND	03/23/99	WSD	1.2		
2-Butanone (MEK)	ug/l	ND	03/23/99	WSD	12.0		
n-Butylbenzene	ug/l	ND	03/23/99	WSD	0.7		
sec-Butylbenzene	ug/l	ND	03/23/99	WSD	0.6		
tert-Butylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Carbon Disulfide	ug/l	ND	03/23/99	WSD	0.5		
Carbon Tetrachloride	ug/l	ND	03/23/99	WSD	0.5		
Chlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
Chlorodibromomethane	ug/l	ND	03/23/99	WSD	0.5		
Chloroethane	ug/l	ND	03/23/99	WSD	0.8		
2-Chloroethylvinylether	ug/l	ND	03/23/99	WSD	9.6		
Chloroform	ug/l	ND	03/23/99	WSD	0.8		
Chloromethane	ug/l	ND	03/23/99	WSD	1.2		
2-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
4-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
1,2-Dibromo-3-Chloropropane	ug/l	ND	03/23/99	WSD	1.6		
1,2-Dibromoethane	ug/l	ND	03/23/99	WSD	0.7		
Dibromomethane	ug/l	ND	03/23/99	WSD	1.1		
1,2-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
1,3-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
1,4-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
cis-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.1		
Dichlorodifluoromethane	ug/l	ND	03/23/99	WSD	1.0		

muL = Method Detection Limit
ND = Not Detected
BDL = Below Detection Limit
NM = Not Measured

SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-3

	Units	99B05939	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	ug/l	ND	03/23/99	WSD	0.7		
1,2-Dichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.8		
1,2-Dichloropropane	ug/l	ND	03/23/99	WSD	0.6		
1,3-Dichloropropane	ug/l	ND	03/23/99	WSD	0.5		
-Dichloropropane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloropropene	ug/l	ND	03/23/99	WSD	1.4		
cis-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.4		
Ethyl Benzene	ug/l	ND	03/23/99	WSD	0.6		
Ethyl Methacrylate	ug/l	ND	03/23/99	WSD	0.8		
Hexachlorobutadiene	ug/l	ND	03/23/99	WSD	1.3		
2-Hexanone	ug/l	ND	03/23/99	WSD	9.7		
Iodomethane	ug/l	ND	03/23/99	WSD	0.8		
Isopropylbenzene	ug/l	ND	03/23/99	WSD	0.6		
p-Isopropyltoluene	ug/l	ND	03/23/99	WSD	0.7		
MTBE	ug/l	ND	03/23/99	WSD	0.8		
Methylene Chloride	ug/l	ND	03/23/99	WSD	3.0		
MIBK	ug/l	ND	03/23/99	WSD	8.8		
Naphthalene	ug/l	ND	03/23/99	WSD	1.0		
n-Propylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Styrene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	0.5		
1,1,2,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	1.4		
Tetrachloroethylene	ug/l	ND	03/23/99	WSD	0.4		
Toluene	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,2,4-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1-Trichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1,2-Trichloroethane	ug/l	ND	03/23/99	WSD	0.7		

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Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-3

	Units	99805939	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	ug/l	ND	03/23/99	WSD	1.0		
Trichlorofluoromethane	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichloropropane	ug/l	ND	03/23/99	WSD	1.3		
1,2,4-Trimethylbenzene	ug/l	ND	03/23/99	WSD	0.7		
1,3,5-Trimethylbenzene	ug/l	ND	03/23/99	WSD	1.0		
Vinyl Acetate	ug/l	ND	03/23/99	WSD	16.4		
Vinyl Chloride	ug/l	ND	03/23/99	WSD	0.3		
ylene	ug/l	ND	03/23/99	WSD	1.3		
o + p Xylene	ug/l	ND	03/23/99	WSD	0.5		

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Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-9

	Units	99805940	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Acetone	ug/l	ND	03/23/99	WSD	50.0		
Acrolein	ug/l	ND	03/23/99	WSD	20.0		
Acrylonitrile	ug/l	ND	03/23/99	WSD	7.6		
Benzene	ug/l	ND	03/23/99	WSD	0.6		
Bromobenzene	ug/l	ND	03/23/99	WSD	0.5		
Bromochloromethane	ug/l	ND	03/23/99	WSD	0.7		
Bromodichloromethane	ug/l	ND	03/23/99	WSD	0.4		
momethane	ug/l	ND	03/23/99	WSD	1.2		
Bromoform	ug/l	ND	03/23/99	WSD	1.2		
2-Butanone (MEK)	ug/l	ND	03/23/99	WSD	12.0		
n-Butylbenzene	ug/l	ND	03/23/99	WSD	0.7		
sec-Butylbenzene	ug/l	ND	03/23/99	WSD	0.6		
tert-Butylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Carbon Disulfide	ug/l	ND	03/23/99	WSD	0.5		
Carbon Tetrachloride	ug/l	ND	03/23/99	WSD	0.5		
Chlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
Chlorodibromomethane	ug/l	ND	03/23/99	WSD	0.5		
Chloroethane	ug/l	ND	03/23/99	WSD	0.8		
2-Chloroethylvinylether	ug/l	ND	03/23/99	WSD	9.6		
Chloroform	ug/l	ND	03/23/99	WSD	0.8		
Chloromethane	ug/l	ND	03/23/99	WSD	1.2		
2-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
4-Chlorotoluene	ug/l	ND	03/23/99	WSD	0.6		
1,2-Dibromo-3-Chloropropane	ug/l	ND	03/23/99	WSD	1.6		
1,2-Dibromoethane	ug/l	ND	03/23/99	WSD	0.7		
Dibromomethane	ug/l	ND	03/23/99	WSD	1.1		
1,2-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
1,3-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.6		
1,4-Dichlorobenzene	ug/l	ND	03/23/99	WSD	0.8		
cis-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	03/23/99	WSD	2.1		
Dichlorodifluoromethane	ug/l	ND	03/23/99	WSD	1.0		

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Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-9

	Units	99805940	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
1,1-Dichloroethane	ug/l	ND	03/23/99	WSD	0.7		
1,2-Dichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	03/23/99	WSD	0.8		
1,2-Dichloropropane	ug/l	ND	03/23/99	WSD	0.6		
1,3-Dichloropropane	ug/l	ND	03/23/99	WSD	0.5		
1,1-Dichloropropane	ug/l	ND	03/23/99	WSD	0.9		
1,1-Dichloropropene	ug/l	ND	03/23/99	WSD	1.4		
cis-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	03/23/99	WSD	0.4		
Ethyl Benzene	ug/l	ND	03/23/99	WSD	0.6		
Ethyl Methacrylate	ug/l	ND	03/23/99	WSD	0.8		
Hexachlorobutadiene	ug/l	ND	03/23/99	WSD	1.3		
2-Hexanone	ug/l	ND	03/23/99	WSD	9.7		
Iodomethane	ug/l	ND	03/23/99	WSD	0.8		
Isopropylbenzene	ug/l	ND	03/23/99	WSD	0.6		
p-Isopropyltoluene	ug/l	ND	03/23/99	WSD	0.7		
MTBE	ug/l	ND	03/23/99	WSD	0.8		
Methylene Chloride	ug/l	ND	03/23/99	WSD	3.0		
MIBK	ug/l	ND	03/23/99	WSD	8.8		
Naphthalene	ug/l	ND	03/23/99	WSD	1.0		
n-Propylbenzene	ug/l	ND	03/23/99	WSD	0.8		
Styrene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	0.5		
1,1,2,2-Tetrachloroethane	ug/l	ND	03/23/99	WSD	1.4		
Tetrachloroethylene	ug/l	ND	03/23/99	WSD	0.4		
Toluene	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,2,4-Trichlorobenzene	ug/l	ND	03/23/99	WSD	0.7		
1,1,1-Trichloroethane	ug/l	ND	03/23/99	WSD	0.9		
1,1,2-Trichloroethane	ug/l	ND	03/23/99	WSD	0.7		

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03/23/99
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Project Number: 1764600005

LIMS-BAT #: LIMS-40999
Job Number: -
Sample Matrix: GRND WATER

Sampled: 03/18/99
NOT SPECIFIED
GW-9

	Units	99B05940	Date Analyzed	Analyst	MDL	SPEC LIMIT	P/F
Trichloroethylene	ug/l	ND	03/23/99	WSD	1.0		
Trichlorofluoromethane	ug/l	ND	03/23/99	WSD	0.7		
1,2,3-Trichloropropane	ug/l	ND	03/23/99	WSD	1.3		
1,2,4-Trimethylbenzene	ug/l	ND	03/23/99	WSD	0.7		
1,3,5-Trimethylbenzene	ug/l	ND	03/23/99	WSD	1.0		
Vinyl Acetate	ug/l	ND	03/23/99	WSD	16.4		
Vinyl Chloride	ug/l	ND	03/23/99	WSD	0.3		
ylene	ug/l	ND	03/23/99	WSD	1.3		
o + p Xylene	ug/l	ND	03/23/99	WSD	0.5		

Analytical Method(s):

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

MUL = Method Detection Limit
ND = Not Detected
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SPEC LIMIT = a client specified, recommended, or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/23/99

Lims Bat #: LIMS-40999

Page 1 of 3

QC Batch Number: GCMS/VOL-2690

Sample Id	Analysis	QC Analysis	Values	Units	Limits
99805939	1,2-Dichloroethane-d	Surrogate Recovery	100.0	%	56.0-128.0
	Toluene-d8	Surrogate Recovery	96.0	%	65.0-113.0
	Bromofluorobenzene	Surrogate Recovery	87.6	%	62.0-137.0
99805940	1,2-Dichloroethane-d	Surrogate Recovery	105.2	%	56.0-128.0
	Toluene-d8	Surrogate Recovery	97.2	%	65.0-113.0
	Bromofluorobenzene	Surrogate Recovery	86.4	%	62.0-137.0
99805941	1,2-Dichloroethane-d	Surrogate Recovery	106.4	%	56.0-128.0
	Toluene-d8	Surrogate Recovery	100.8	%	65.0-113.0
	Bromofluorobenzene	Surrogate Recovery	85.6	%	62.0-137.0
99805942	1,2-Dichloroethane-d	Surrogate Recovery	104.8	%	56.0-128.0
	Toluene-d8	Surrogate Recovery	99.2	%	65.0-113.0
	Bromofluorobenzene	Surrogate Recovery	84.8	%	62.0-137.0
99805943	1,2-Dichloroethane-d	Surrogate Recovery	106.8	%	56.0-128.0
	Toluene-d8	Surrogate Recovery	101.2	%	65.0-113.0
	Bromofluorobenzene	Surrogate Recovery	89.2	%	62.0-137.0
BLANK-18110	Acetone	Blank	<50.0	ug/l	
	Benzene	Blank	<0.6	ug/l	
	Carbon Tetrachloride	Blank	<0.5	ug/l	
	Chloroform	Blank	<0.8	ug/l	
	1,2-Dichloroethane	Blank	<0.9	ug/l	
	1,4-Dichlorobenzene	Blank	<0.8	ug/l	
	Ethyl Benzene	Blank	<0.6	ug/l	
	2-Butanone (MEK)	Blank	<12.0	ug/l	
	MIBK	Blank	<8.8	ug/l	
	Naphthalene	Blank	<1.0	ug/l	
	Styrene	Blank	<0.7	ug/l	
	Tetrachloroethylene	Blank	<0.4	ug/l	
	Toluene	Blank	<0.7	ug/l	
	1,1,1-Trichloroethan	Blank	<0.9	ug/l	
	Trichloroethylene	Blank	<1.0	ug/l	
	Trichlorofluorometha	Blank	<0.7	ug/l	
	o + p Xylene	Blank	<0.5	ug/l	
	m-Xylene	Blank	<1.3	ug/l	
	1,2-Dichlorobenzene	Blank	<0.8	ug/l	
	1,3-Dichlorobenzene	Blank	<0.6	ug/l	
	1,1-Dichloroethane	Blank	<0.7	ug/l	
	1,1-Dichloroethylene	Blank	<0.6	ug/l	
	MTBE	Blank	<0.8	ug/l	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 03/23/99

Lims Bat #: LIMS-40999

Page 2 of 3

QC Batch Number: GCMS/VOL-2690

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	trans-1,2-Dichloroet	Blank	<0.8	ug/l	
	Vinyl Chloride	Blank	<0.3	ug/l	
	Methylene Chloride	Blank	4.9	ug/l	
	Chlorobenzene	Blank	<0.6	ug/l	
	Chloromethane	Blank	<1.2	ug/l	
	Bromomethane	Blank	<1.2	ug/l	
	Chloroethane	Blank	<0.8	ug/l	
	cis-1,3-Dichloroprop	Blank	<0.5	ug/l	
	trans-1,3-Dichloropr	Blank	<0.4	ug/l	
	Chlorodibromomethane	Blank	<0.5	ug/l	
	1,1,2-Trichloroethan	Blank	<0.7	ug/l	
	2-Chloroethylvinylet	Blank	<9.6	ug/l	
	Bromoform	Blank	<1.2	ug/l	
	1,1,2,2-Tetrachloroe	Blank	<1.4	ug/l	
	2-Chlorotoluene	Blank	<0.6	ug/l	
	Hexachlorobutadiene	Blank	<1.3	ug/l	
	Isopropylbenzene	Blank	<0.6	ug/l	
	p-Isopropyltoluene	Blank	<0.7	ug/l	
	n-Propylbenzene	Blank	<0.8	ug/l	
	sec-Butylbenzene	Blank	<0.6	ug/l	
	tert-Butylbenzene	Blank	<0.8	ug/l	
	1,2,3-Trichlorobenze	Blank	<0.7	ug/l	
	1,2,4-Trichlorobenze	Blank	<0.7	ug/l	
	1,2,4-Trimethylbenze	Blank	<0.7	ug/l	
	1,3,5-Trimethylbenze	Blank	<1.0	ug/l	
	Dibromomethane	Blank	<1.1	ug/l	
	cis-1,2-Dichloroethy	Blank	<0.5	ug/l	
	4-Chlorotoluene	Blank	<0.6	ug/l	
	1,1-Dichloropropene	Blank	<1.4	ug/l	
	1,2-Dichloropropane	Blank	<0.6	ug/l	
	1,3-Dichloropropane	Blank	<0.5	ug/l	
	2,2-Dichloropropane	Blank	<0.9	ug/l	
	1,1,1,2-Tetrachloroe	Blank	<0.5	ug/l	
	1,2,3-Trichloropropa	Blank	<1.3	ug/l	
	n-Butylbenzene	Blank	<0.7	ug/l	
	Dichlorodifluorometh	Blank	<1.0	ug/l	
	Bromochloromethane	Blank	<0.7	ug/l	
	Bromobenzene	Blank	<0.5	ug/l	
	Iodomethane	Blank	<0.8	ug/l	

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
 Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab Fortified Blanks and Duplicates
 Standard Reference Materials and Duplicates
 Method Blanks

Report Date: 03/23/99

Lims Bat #: LIMS-40999

Page 3 of 3

QC Batch Number: GCMS/VOL-2690

Sample Id	Analysis	QC Analysis	Values	Units	Limits
-----	-----	-----	-----	-----	-----
	Acrolein	Blank	<20.0	ug/l	
	Acrylonitrile	Blank	<7.6	ug/l	
	Carbon Disulfide	Blank	<0.5	ug/l	
	Vinyl Acetate	Blank	<16.4	ug/l	
	2-Hexanone	Blank	<9.7	ug/l	
	trans-1,4-Dichloro-2	Blank	<2.1	ug/l	
	Ethyl Methacrylate	Blank	<0.8	ug/l	
	cis-1,4-Dichloro-2-B	Blank	<2.4	ug/l	
	Bromodichloromethane	Blank	<0.4	ug/l	
	1,2-Dibromo-3-Chloro	Blank	<1.6	ug/l	
	1,2-Dibromoethane	Blank	<0.7	ug/l	



(413) 525-2332
FAX (413) 525-6405

CHAIN OF CUSTODY RECORD

39 SPRUCE ST. • 2ND FLOOR • EAST LONGMEADOW, MA 01028

Lib # 409999

Client Name: ATC Associates
 Attn: Alan Sullivan
 Address: One Richmond Square Tech Ctr.
Providence RI 02906
 Site Location: Springfield Ave Lots, Providence RI
 Sampled By: Mike Cordani
 Call Results: Yes No
 Fax Results: Yes No

Field Sample I.D.	Sample Description	Lab #	DATE SAMPLED Start Date/Time Stop Date/Time	Composite	Grab	MATRIX					Preservative (Use Code)	Container (Use Code)	Analysis Required
						WASTE WATER	GROUND WATER	DKG WATER	Soil	Air			
GW-3	groundwater-3	99B05939	3/18 3/18		X	X					I/H	V	
GW-9	groundwater-9	99B05940	3/18 3/18	X	X						I/H	V	
GW-11	groundwater-11	99B05941	3/18 3/18	X	X						I/H	V	
GW-15	groundwater-15	99B05942	3/19 3/19	X	X						I/H	V	
GW-22	groundwater-22	99B05943	3/18 3/18	X	X						I/H	V	

0260

Fax #: 6017421-0894

CONTAINER CODE
 P: PLASTIC (___ Size) V = 40 ml vial G = Glass (___ size) A = 1000 ml Amber 0 = Other ___
 Relinquished by: (Signature) Michael Cordani Date Time 1250 3/24/99
 Relinquished by: (Signature) Don Date Time 1330 3/24/99
 Relinquished by: (Signature) Don Date Time 5/24/99

RECEIVED BY: (Signature) Don
 RECEIVED BY: (Signature) MJ of Atten
 RECEIVED BY: (Signature) Don

PRESERVATIVE CODE:
 I = ICED N = HNO₃ H = HCl S = NaOH T = Na₂S₂O₃ O = OTHER ___
 Turnaround Requested: X 24-Hour ___ 48-Hour ___ Normal ___
 Other ___ Date Required ___
 Remarks/Comments: looking for unknown spike - refer to red bar bag samples - same project
add and get into
 *MATRIX OTHER ___